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THE
MEDICAL RECORD

A Weekly Journal of Medicine and Surgery

EDITED BY

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Volume 33

JANUARY 7, 1888—JUNE 30, 1888

113106,
68730

NEW YORK
WILLIAM WOOD & COMPANY
1888

Trow's
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The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 1. NEW YORK, JANUARY 7, 1888 **Whole No. 896**

Original Articles.

THE NEUROTIC, WITH INDIGESTION AND LITHIASIS.

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THE subject of indigestion, in combination with the uric-acid formation, is one which must possess a high interest for American physicians, for the excellent reason that they must so constantly encounter it.

It is a malady *par excellence* of town-dwellers. It belongs to the individual of thin flank. The robust, bulky country squire, with his hands and feet deformed and unsightly from gout, has his counterpart in the lean, spare, dyspeptic town-dweller. The type represented by the massive country squire is rare in the United States, where even dwellers in the country are lean, as a rule. Taking old England, which member of the family is it who makes for the town? The neurotic member, who kicks against the monotonous life of the rustic, who chafes under that dependence upon the weather which agriculture entails. Just as the old Puritans of New England were those men who would not indorse the tyranny of Charles I., and who emigrated to face the wilderness and the red man rather than stay longer under his rule. No wonder the descendants of these men are more distinctly neurotic than their English cousins, —the children of those who were content to bide at home. If the neurotic member of the family is the one *par excellence* who chooses a town-life, he is, to my mind, not the one who endures it best; *i.e.*, himself, or his descendants. If he personally gets along well enough, his children will manifest the influence of town-life upon their physique. They are delicate in childhood; they grow up dyspeptics. Their children, despite all care, succumb to the maladies of childhood. Each generation is more markedly neurotic till it comes to that bundle of nerves with shrunken viscera—the girl whose uterus remains infantile, and who is the last of her family. It is a terrible story—is it a true story? That is the question. I am seriously afraid it is a true story.

Not that the race is growing puny. The modern Scandinavians cannot get their hands into the hilts of the swords of the old Vikings. At the Eglinton tournament nearly every man had to have his ancestor's armor "let out"—(probably this was not the term used by the armorer, but it is the modern equivalent). The measurements of ready-made clothes out in the Western States are enlarged to meet the wants of the stalwart youngsters of to-day. On the other hand, the standard of height for soldiers is falling. There are so many little men about now. Town people are undersized. The slight, active-brained neurotic spurns the country and seeks a congenial life in a town.

This neurotic townsman is usually an energetic, hard-working fellow. Certainly he is such in the United States. An affectionate husband he is, for he is distinctly erotic. He is a kind father, very fond of his bright, slight, quick-witted daughters. He likes to see his sons throw themselves heart and soul into their business. What they have to do they do with a will. This is all very well; but behind that neurotic family group a shadowy spectre can be detected by a quick eye. Nature knows nothing of extenuating circumstances. If a family leads an unnatural life they must pay the penalty. "The expansive energy of steam will slay not only the wicked engineer who has neglected his boiler, but also the innocent children playing on the deck overhead.

'Streams will not curb their pride
The just man not to entomb;
Nor lightnings go aside
To leave his virtues room.'

But the flood and the earthquake, like the wickedness of men, in so far as the arrangements of society are not yet adequate for curbing it, must be accepted with resignation as part and parcel of the events which the constitution of our universe necessitates" (Fiske's Cosmic Philosophy). It would seem that a man cannot get the inside track of the Almighty. The Creater has laid down certain laws which the created must obey, or accept the consequences. If a man forsakes the country and becomes a dweller in towns, the first step toward the extinction of his race is taken. Without fresh infusions of new blood from the country his progeny degenerates to extinction in the fourth or fifth generation. Lugol and Boudin say the third generation ends the family in Paris. Hayle Walsh and James Cantlie have found a pure bred Cockney of the fourth generation a rarity. Personally I only know one, a bright little fellow. Cantlie defied the Guildhall authorities to find a pure Cockney of the fifth generation.

The effect of town-life is to degenerate the physique; and neurotic persons are those who feel its effects the soonest and the most severely. At least this is the result of my investigations.

How stands it with the neurotic town-dwelling American when he presents himself in my consulting-room? He is a spare, worn-looking man, complaining of indigestion, acidity, and flatulence. Less commonly he has some skin eruption or other, occasionally he has asthma. He has cold hands and feet. Sometimes he tells that he has observed that he passes more water than he used to do. This evidence of shrinking kidney is accompanied by a large left ventricle, a loud aortic second sound, and a hardening artery—the phenomena of the vaso-renal change (those readers who feel interested in this subject will find it dealt with at length in "Vaso-renal Change *versus* Bright's Disease"). His nails are reedy, and there is a vascular plexus in the conjunctival aspect of the lower eyelids. Commonly the gum is retracted, and the teeth worn down. When asked if there are times when little things put him out, or perturb him out of proportion to their real importance, he replies in the affirmative. Are there sediments in his urine? Yes, pretty constantly. Such is the outline of the dyspeptic of the uric-acid formation, who finds the sipping of hot water to ease the pain in the stomach to which he is subject.

In some, in addition to these phenomena, there are very disagreeable sensations. Those around him say he is "nervous." If they felt what he feels, perhaps they would be "nervous" too. He experiences feelings which throw physical suffering into the background. Last spring my liver was out of order from overwork and east winds, and I then learned enough to comprehend his tale. The whole troop and array of distemperatures vanished (like a horde of evil spirits at the sign of the cross) as soon as an attack of gout fastened on the right foot. Articular gout is not pleasant, but there are worse things than the gout. These unpleasant feelings, to my mind, are linked with the products of later digestion. From three to four hours after breakfast was their favorite time. They would flee after a loose motion of very offensive character, with ill-smelling flatus, or would gradually pass away on getting into the air (probably the offending matters were thus oxidized away). And this personal experience chimes in with the experiences of others. The time of their oncome links them with later digestion. Skatol and indol! Their stench is not less offensive to the nostril than are they to the brain when circulating in the blood. The effect of a mercurial pill and a seidlitz rivets the bond of their association with the liver, which cannot keep them within the portal circulation, but permits of their escape into the general circulation to exercise their toxic influence upon the brain, the organ of mind.

The overworked man is too commonly an individual of sad experiences, and many a man has committed suicide as the only road of escape from his feelings. Lord Byron found Epsom salts the best means of raising his spirits when depressed, and to clear out the alimentary canal is good practice in these cases.

So much for the individual himself. How about his progeny? "What is acquired by the father is inherited by the child." So wrote George Combe. "The fathers have eaten sour grapes, and the children's teeth are set on edge," says a higher authority. The son is the father accentuated, and, as an affluent dyspeptic, at a comparatively early age makes the round of the watering-places of his own country and of Europe. In addition to his father's experience of morbid phenomena he is liable to attacks of very sharp pain in the transverse colon, or the stomach, especially if he has acquired any malarial taint.

But his daughters—the migrainous daughters of hard-working fathers—what sort of womenkind are they? *Petite*, active beings, often birdlike in their walk and movements; quick as lightning; acute, sensitive, highly strung, high-minded and quick-tempered; energetic and industrious; neat in their attire; intolerant of dirt—the sight of a cobweb is agony to them; every sense is highly strung, and, when suffering with migraine, on the stretch, till it is scarcely exaggeration to say that when lying in their bedroom they can hear the cat walking across the kitchen floor. Their complaint is of migraine, "face-ache" or "neuralgia" they call it. A one-sided headache around the eye, with pain in the eye itself, accompanied by sparks or stars, commonly ending in vomiting. They complain of palpitation, and also of an opposite condition of heart-failure, which differs from syncope in that there is no loss of consciousness. The condition is one of intense suffering. They have choking sensations at times, as if they could not get their breath. They complain of indigestion, with acidity and flatulence, while the bowels usually are constipated. They pass water in considerable quantity, especially when excited, and still more decidedly during the attack of migraine. Sometimes they pass water in less quantity, but dense, and highly charged with lithates. They constantly complain of dysmenorrhœa, usually with a scanty loss, but sometimes menorrhagia. Their internal reproductive organs are imperfectly developed, remaining more or less infantile, while the ovaries are tender. Some are quite sexless, others feebly erotic. Some are incapable of impregnation, while others can become pregnant but abort. Some can bear a feeble, delicate child or two; but, speaking broadly, they are not a fertile folk. Commonly, they have rheumatism somewhere, usually in their shoulders, because they have a habit of putting their arms out from under the bedclothes, and throwing them over their heads. These are the people who cannot swallow a pill.

They are charming patients, always attached to their physicians; never out of some doctor's hands long together. Yet they do not get much good, and rarely when they do is it lasting. It is difficult to diet them; for, though they can take good care of any one else, they seem incapable of taking sufficient care of themselves. Experience teaches them comparatively little. When feeling fairly well they forget the physician's advice and warning. They seem able to borrow from themselves to-morrow's energy. They will be the soul of a party one day, ending up with a night at the theatre—the gayest of the gay. Next day is spent in bed, in a darkened room, with a racking headache, the brow contracted with pain, begging to be left alone in their misery—the saddest of the sad. At other times they will awake with a sharp headache, improve as the day goes on, and dine out in the evening with a sense of enjoyment. Their friends and acquaintances cannot make them out, or understand them. They themselves always complain that they cannot do what other people do, and that they are not understood, and not unjustly. They are not as other people. Ardent, enthusiastic, capable of great self-denial, they are a race by themselves. They have played an active part in many modern movements.

Such persons, with highly developed nervous systems and small viscera—including an "insufficient" liver, which reverts to the uric-acid formation—are those who suffer from lithiasis and are dyspeptics. The presence of the uric acid seems to impair the gastric juice, as to its solvent properties. Sometimes the pain is experienced when the stomach is empty, and relieved by food. Here there exists a quantity of acid mucus in the stomach. An emetic gives great relief; squeezing the gastric wall and expelling a quantity of acid matter, Dr. C. J. Hare thinks. Hot water, all the better for containing a little potash or phosphate of soda, gives speedy relief. Hepatic stimulants, as ipecacuanha, euonymin, or taraxacum, steadily persisted in, raise the tone of the liver. Chloride of ammonium is often useful. An occasional mercurial pill, followed by a seidlitz powder, produces good results. If the stools are tarry, some podophyllin is indicated. For the lithiasis, lithia is the best uric-acid solvent, for these neurotics do not bear potash well. Phosphate of soda is their laxative. Some like Carlsbad salts.

As to food, they are not flesh-eaters. Animal food adds to the lithiasis. The food of the Patriarchs, "corn and wine and oil," is that best suited to them. Fish is permissible; fruit is very good for them. The sugar the cook adds to stewed fruit causes too much acidity with them. Well-prepared farinaceous matters are good. Milk puddings made without eggs are good. Cream is excellent. It can be taken with tea and coffee, or soda-water, or as creams—chocolate or other. So is cod-liver oil, especially if there coexist some lung-mischief. (I would strongly advise all readers of this article to narrowly watch the urine of their phthisical patients of the neurotic diathesis, and see for themselves how far lithates are present in it. Recent observations made at Victoria Park Hospital tell of old kidney-mischief in patients who have died of phthisis. In one case of mine the lung trouble had a history of four months, the interstitial nephritis being much older. In another lung case the constant presence of lithates caused me to pronounce for kidney-mischief. Both kidneys were extensively fatty, with adherent capsules. Prout wrote that the presence of lithates in organic disease were of evil omen. And one can readily understand that a system endowed with an "insufficient" liver, revealing its incompetence by falling back to the primitive uric-acid formation, and handicapped by old-standing interstitial nephritis, can make but a poor fight when assailed by disease.)

A very curious corroboration of what is written here about the food of these neurotics, at once dyspeptics and lithæmic, is furnished by the fact that while the wild dog is a flesh-eater, the highly bred pet dogs of to-day are quickly made ill by animal food. This fact was told me lately by an aristocrat (of the class discussed in this article), and on making inquiries it was found that this fact is well known to dog-fanciers. The collier of the north has the best of meat for his dog, even if he, his wife, and his children go without. But if the well-bred dog of distinguished lineage has meat three days consecutively he is manifestly out of sorts, and commences in the red mange, which it seems is eczema, a skin affection notoriously linked with gout. As the master is, so the dog is. The liver evidently is plebeian, and does not get on well with a patrician existence. Severe bodily exertion in the open air alone enables it to carry on urea-formation satisfactorily; or, in other words, flesh-eaters must be of active habits if they wish to avoid the uric-acid formation.

Lithæmic dyspeptics are very difficult persons to manage or treat satisfactorily, whether as regards their medicines or their dietary. Medicines are apt to disagree with them; vegetable tonics are apt to excite the vesical centres; iron upsets their liver; opium acts as an excitant rather than as a sedative. They, as a rule, dislike milk puddings; they love the sapid meat; they hate giving trouble, or having any food specially prepared for them. Anything which absorbs them makes them forget the physician, his counsel and his warnings. They throw themselves into everything with such *abandon* as leaves them no thought for anything else. Yet they are highly intelligent persons; and the female neurotic is commonly a very charming little lady. Some rustic neurotics are not *petite*, but they never are corpulent. George Eliot has a whole series of them in "Adam Bede"—the immortal Mrs. Poyser was one. I am not sure that Mr. Craig, the gardener, was not one too. When Mrs. Poyser was summing up that worthy she concluded, "It was a pity he couldn't be hatched over again, and hatched different." And a pronounced neurotic, well known to me, regrets frequently that Mrs. Poyser's suggestion cannot be carried out.

Civilization it would seem—like everything else in this imperfect world—is not an unalloyed good.

AN UNEXPECTED NEPHRECTOMY.—At a meeting of the Leeds and West Riding Medico-Chirurgical Society Mr. Hartley narrated a case in which, after beginning to operate with a view to draining an abscess in the iliac fossa, he successfully removed a tuberculous kidney (*The British Medical Journal*). The patient, a woman, aged twenty-four, three months after her second confinement, began to suffer from great irritability of the bladder, with polyuria. Six months before she came under Mr. Hartley's care, she became an in-patient of a hospital, when a swelling occupying the iliac fossa and the loin was aspirated, and afterward emptied of a large quantity of pus by a small incision above the centre of the iliac crest. For two months there was a copious continuous discharge of pus, and she fell into a condition of hectic and exhaustion so extreme that when she came under Mr. Hartley's care, in June last, it was doubtful whether she could bear any operative interference at all. In addition to a fluctuating swelling, about the size of a fœtal head, discharging fetid pus from the sinus left by the previous incision, there was felt above and behind it a hard irregular mass in the region of the kidney. A free incision was made, extending obliquely upward and backward from the sinus, evacuating about thirty ounces of very offensive pus. Upon passing the hand into the cavity, and introducing a finger through a sinus in its upper part, the kidney was found to be utterly disorganized. It was, therefore, stripped from its attachments and removed, the pedicle being transfixed and tied in three portions with stout silk; the ligatures were left long and brought out of the wound, which was left open from end to end to insure drainage. The temperature remained normal after the second day, the ligatures came away on the fourteenth, and at the end of two months the wound was healed.

THE TREATMENT OF CHOREA BY CEREBRAL REST.[1]

By J. LEONARD CORNING, M.D.,
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MR. PRESIDENT: Before proceeding to the advocacy of any special plan of treatment, I conceive it incumbent upon the physician of to-day, not only to unfold his views in the light of the clinical statistics at his disposal, but also to show the relation of *what* he proposes to the morbid physiology involved. Forty years ago this essentially scientific mode of analysis would have been impossible. Living, however, as we do at the present time, amidst the conquests of inductive thought in all branches of the healing art, we find it quite out of the question to withstand those tendencies of the day which have given us a physiology, a pathology, and a pharmacology, built upon that foundation of all true science—the experimental method.

At the risk, then, of being accounted prolix, I shall endeavor to unfold the theme before us in a systematic manner, relying upon your good nature to pardon any shortcomings.

Definition.—The term chorea (χορεία, dance), or St. Vitus' dance, dates from the second half of the fourteenth century. At that time a peculiar pandemic disorder extended throughout the region of the Rhine and Moselle. During the prevalence of the disorder in 1418, it was the custom at Strasburg to lead those affected to the chapel of St. Vitus, that they might be benefited by religious ceremonies of various kinds. Hence the origin of the term.

Much confusion has arisen from the fact that very dissimilar groups of symptoms have been included under the designation. Thus we hear of a chorea magna or Germanorum, and of a chorea minor or Anglorum, not only among the older writers, but also those of recent reputation as well. For my own part I fail to comprehend the justice of what, to say the least, appears, from an etiological and clinical standpoint, but arbitrary grouping of symptoms. Indeed, as far as can be discerned by a careful analysis of the phenomena, it appears to me quite impossible to consider the manifestations known as chorea major as constituting a separate disease by themselves. In this matter I am quite in accord with Von Ziemssen, who considers chorea major as only the product of genuine psychoses and cerebral maladies on the one hand, and of hysteria on the other.[2]

In the following description, therefore, I shall only include such phenomena as are commonly comprised under the head of chorea minor. I feel compelled to take this stand in the face of the opinions of such observers as Steiner[3] and Bodo Wenzel,[4] not by reason of any preconceived opinions as to pathology, but after careful observations in the clinic and copious references to the literature of the subject.

Symptomatology.—There is nothing specially characteristic about the prodromata. The premonitory symptoms most frequently observed are derangement of memory, irritability, and inattention. As a rule, the irregular muscular movements first occur in the face, shoulders, and hands. Sometimes the inco-ordinate contractions are confined to one side or the body; whereas in a not inconsiderable number of cases the affection is general. The irregular contractions of the muscles give rise to grotesque distortions of the face, rotation of the eyeballs, strabismus, continual to-and-fro movements of the tongue, jerking of the shoulders, and contortions of the hands and arms.

The face of an individual suffering from a severe attack of chorea presents a veritable panorama of the emotions.

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[1] Read before the Medical Society of the County of New York, December 26, 1887.

[2] Cyclopædia of the Practice of Medicine, edited by Dr. H. von Ziemssen, 1877.

[3] Jahrbuch für Kinderheilkunde, H. F., 1869. Bd. II., page 205.

[4] Schmidt's Jahrbücher, 1874. Bd. CLXII., p. 195.

The forehead is darkened by a succession of frowns; the corners of the mouth are drawn down or from side to side; the eyebrows are depressed, and the tongue protruded spasmodically. Suddenly the repulsive picture is changed; the corners of the mouth are elevated; the eyelids are rapidly opened and shut; and the brow is expanded, so that the countenance presents the appearance of demoniac laughter. The inco-ordinate condition of the muscles which gives rise to this succession of contradictory facial expressions has been aptly termed "*folie musculaire*" by Broilland, and "insanity of the muscles" by Bellingham.[1] When the symptoms are confined to one lateral half of the body (hemichorea), disorders of speech are frequently observed. The latter are more pronounced when the right than when the left side is involved. In the less severe forms the muscular contractions are comparatively moderate; but in cases where the phenomena are intense, and the muscular system generally involved, even a moderate degree of co-ordination becomes almost an impossibility. Great difficulty is experienced by the subject in maintaining the erect posture; the limbs and body oscillate to and fro, so that to the eye of the casual spectator such an individual presents much the appearance of one laboring under the effects of intoxication. In aggravated cases the choreic movements continue during sleep, giving rise to obstinate insomnia, which serves to break down the general health of the patient and render his restoration to health a matter of great difficulty. Where, however, the type of disease is less severe, the choreic movements usually cease during sleep or under the influence of an anæsthetic. The irregular movements are much increased by any attempt on the part of the patient to execute voluntary movements, or when laboring under the effects of excitement. Thus, if asked to show the tongue, he thrusts it forth in a rapid succession of jerks. When attempts are made to speak the facial muscles become distorted, and the muscles of mastication are suddenly and violently contracted, so that the tongue and walls of the mouth are often severely bitten.

More or less disturbance of psychical function is observed in the majority of cases of chorea. The subject becomes depressed, irritable, and forgetful, and is not infrequently the victim of violent outbursts of anger. By an exercise of volition the patient is able, in many instances, to suppress the spasmodic movements for a short time. Unfortunately, however, the apparent amelioration is quickly succeeded by an aggravation of the phenomena; so that the conclusion becomes inevitable that such efforts of the will are productive of increased irritability. Disturbances of sensation are sometimes encountered in chorea. Anæsthesia of one-half or of the entire body is observed in some cases, whereas in others hyperæsthesia is present. In yet other cases pressure along the course of nerve-trunks reveals painful spots; and like exploration above the spinous processes reveals a similar state of things. Usually the general health is not materially affected, except, as already noted, in severe cases, where the sleeplessness and extreme irritability finally result in exhaustion of the vital resources of the organism.

Course, duration.—The course of the disease is generally chronic, usually lasting from five to eight weeks. Severe cases may, however, continue from three to five months. Where the disease persists for a series of years, the symptoms may be owing to organic changes in the central nervous system.

In the majority of cases the disease terminates in complete recovery. Where death occurs it is usually to be assigned to some intercurrent affection. Occasionally, however, a fatal termination results from the severity of the choreic symptoms themselves.

In cases where recovery takes place, an irritable condition is sometimes observed to persist after the choreic symptoms have completely disappeared. Partial recovery is not frequent. In rare cases, however, profound mental disease or paralysis succeeds the primary affection. Death is comparatively rare among children, where there are no complications.

Etiology.—It has long been known that hereditary predisposition plays a prominent part in the development of functional disturbances of the central nervous system, and chorea constitutes no exception to the rule. The susceptibility to hereditary influences applies with special force to the co-ordinating centres of the motor apparatus. Those in whom prenatal causes have conspired to develop neurotic tendencies exhibit a peculiar susceptibility to the influence of external stimuli; they are irritable, fidgety, and easily aroused to anger by even the most trivial causes. As children, such individuals frequently excite great expectations, on account of a peculiar precocious endowment which lends plausibility to the assumption that they are possessed of unusual intellectual capacity. It is only, however, as the years of adolescence are attained that the futility of such hopes becomes apparent, and friends and guardians are reluctantly compelled to abandon the dream of greatness which, but a few short years before, they had almost looked upon as an accomplished fact.

Sée[1] has found that about one-third of the cases occur between second dentition and puberty. The same author has also found that three-fourths of the cases admitted to the Children's Hospital at Paris occurred among girls.

An endeavor has been made by several writers to exhibit the relationship existing between chorea, cardiac troubles, and rheumatism.

Todd and Addison have recorded cases in which chorea was associated with heart trouble, while Money[2] and others have adduced statistical evidence to show the relationship existing between chorea and rheumatism. Against the theory of this pathological relationship Steiner, of Prague,[3] has collected statistics, from an analysis of which he shows that, among over two hundred and fifty cases of chorea, only four occurred during the actual course of acute articular rheumatism.

The exact nature of the relationship existing between chorea and rheumatism is, therefore, by no means positively ascertained, though that in a considerable number of cases the pathological pictures of the two diseases are associated in some manner seems beyond question.

The occurrence of chorea after scarlatina has been noted by Trousseau; but of the more intimate pathological relation of the two diseases we know little.

Among the more prominent exciting causes of chorea may be mentioned: Sudden fright, protracted intellectual exertions, combined with worry; thus, I have seen choreic symptoms induced in neurotic school children, where there was a history of overwork combined with fear of punishment. A discontented, fidgety disposition of mind constitutes a favorable condition for the development of chorea. It has long been known that the persistent imitation, by apparently healthy children, of the contortions and grimaces of those affected by chorea, frequently results in the development of the disease. Phimosis, and other forms of peripheral irritation, may perpetuate choreic symptoms, and the same may be said of certain eye-difficulties. Where there is no predisposing neurotic factor involved, however, difficulties of this kind may exist without giving rise to symptoms.

Nevertheless, where peripheral difficulties exist conjointly with chorea they should be removed.

Pathology.—The data afforded by experimental observations and *post-mortem* investigations are not decisive. Still, though it is impossible to confirm those mathematical conceptions respecting the nature and location of the lesion frequently entertained, it is, nevertheless, quite within the range of possibility to form approximate conclusions as to the portions of the nervous system in which changes *may* result in the production of choreiform convulsions.

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[1] Rosenthal: Diseases of the Nervous System. 1879.

[1] Rapports du Rhumatisme et des Maladies de Cœur avec les Affections Nerveuses et Convulsives, Mémoires de l'Académie Nationale de Médecine, vol. xv., 1850.

[2] Brain, vol. v., 1882–83.

[3] Vjsche, Bd. iii., 1868.

Thus we know that when, as in Chauveau's experiments, the influence of the brain is eliminated by division of the cord below the skull, choreic movements may continue.

We also know, from the experiments of Legros and Onimus, who succeeded in arresting choreic convulsions by division of the posterior cornua, that choreic movements may emanate from that region of the cord.

Adding these results together we may say then, first, that choreiform movements may come from the cord, and secondly, that their seat, when they thus originate, is in the gray matter, and very probably in the posterior gray matter.

But, on the other hand, we know from the experiments of Rosenthal and others that choreic movements may be engendered by irritation of the gray matter of the brain, and more particularly of the basal ganglia and cortex.

In addition to this experimental knowledge, we have learned from clinical observation that, in the majority of cases of chorea, there is more or less mental disturbance. Now, since by common consent the agency of the cortex in the evolution of mental phenomena is conceded, we are justified in believing that in most cases of chorea we have indeed to do with an implication of the cerebral cortex.

Again, since the majority of cases of chorea recover under appropriate treatment, the lesion with which we are concerned is usually, in all probability, functional in character, consisting in some minute nutritive change of the protoplasm of the ganglia.

There is no logical jugglery about this pathology; for, if it be utilized as the basis of practice, experience proves that the results attained are in all respects satisfactory.

Finally, there is a small percentage of cases in which the hyper-irritability extends to the gray matter of the cord. These are the patients who are helped by calabar bean and cold applications to the spine. In a relatively insignificant percentage of cases, as shown by Elischer, Lockhart, Clark, Dickinson, and others, there is also organic disease. Of course, where such is the case, little of permanent value can be anticipated from any form of treatment.

Treatment.—The first indication which must be met is to allay the condition of cerebral erethism which is such a constant accompaniment of chorea.

If the child is at school, she should at once be removed; and even the milder kinds of intellectual work should be strictly prohibited. But these measures, though good enough in themselves, are rarely sufficient to overcome the evil already accomplished. To arrive at satisfactory results, we must afford complete rest to the exhausted and irritated ganglia. In other words, we must induce sleep, and by prolonging the state of unconsciousness to suit the morbid exigencies, enable those reparative processes to transpire in the ganglia which are essential to the complete functional restoration of the cell. The great factor in the successful treatment of this class of cases, then, is rest—perfect, undisturbed tranquillity of the thinking apparatus—not the limited amount of rest suited to the healthy brain, but a quantity greater in proportion to the degree of morbid deterioration. By prolonged sleep it is possible for the ganglia to hoard up an amount of energy proportionate to the duration and profundity of the sleep itself, or, in other words, in the ratio of the reduction of the daily output of brain-energy. Thus by slow degrees the proper correlation between integration and disintegration may be re-established. It is useless, however, to hope for any permanent results at once, for, when the perverted nutritive conditions have once become established, nothing short of prolonged rest can by any possibility result in the re-establishment of the normal nutritive processes of the cell-economy.

Where the function of sleep is affected, as it is in many cases, it is impossible to increase at once the amount of rest to a sufficient extent to meet the demands of the morbid cerebral condition. Nevertheless, by gradually increasing the duration of the sleeping period, it eventually becomes possible to afford the patient an amount of rest sufficient to neutralize by slow degrees the condition of irritation and exhaustion. The bromides should be given during the day in cumulative doses, in order to allay the condition of irritability, and to cause a progressive decline in the mental manifestations as the hour for complete repose approaches. There should be no hesitation in employing sedatives, but always with the understanding that their use is only a measure of temporary expediency.

The most difficult class of cases to manage is that in which there is present some stomachic weakness precluding the possibility of any considerable medication, and necessitating a more or less protracted discontinuance of treatment from time to time.

Where such digestive difficulties exist, no attempts at profuse medication should be made, at least not until the tolerance of the stomach has been largely increased by appropriate means. With the present resources at our command, this problem is much easier of solution than it would have been even ten years ago.

And here let me add a word respecting the method by which I seek to practically carry out the above principles of treatment, to wit: 1, Cerebral rest; 2, increased general and cerebral nutrition; 3, elimination of psychical irritation, and removal of peripheral irritation, particularly that engendered by light and sound.

The subject is secluded in a darkened room from ten to fifteen hours at a time, according to the amount of sleep which it is desired shall be had during the twenty-four hours. The amount of sleep is *progressively* increased by habit, moderate medication, and hydro-therapy, and no attempt is made to produce a sudden state of stupor by the reckless use of sedatives. When the patient awakes, as is usually the case, two or even three times during the hours set apart for rest, nourishment is administered, but always in a fluid and easily digested form. Where difficulty is experienced in again falling asleep, resort is had in the beginning to limited medication. The few hours of wakefulness are devoted exclusively to some form of amusement—reading, writing, and even the mildest forms of mental concentration being absolutely prohibited. This, in brief, is the method from which I have already seen most happy results, and from the employment of which I hope and believe much good will in future be derived. It is hardly necessary to say that the problem of cerebral rest is essentially different from and presents many more difficulties than spinal rest, as described in the earlier edition of Weir Mitchell's book. To give repose to the motor cells of the cord is comparatively an easy problem, and one which only exacts a permanent fixation of the motor apparatus for its solution, the consciousness or unconsciousness of the individual being only a matter of secondary importance. Rest, however, for those cells the function of which is the evolution of mind, can only be obtained by a prolonged period of absolute unconsciousness; and this, as a matter of course, will often tax the patience and resources of the physician to the utmost. Perseverance and the utilization of the principle of habit will usually, however, render essential assistance.

In conjunction with this system of rest, the Turkish and vapor baths may frequently be employed with advantage.

Having at length by these measures reduced the condition of cerebral erethism, alteratives may be given. At one time the sulphate of zinc was given very largely in chorea; but of late years the preparations of arsenic, which seem to exert almost a specific influence, have driven it more and more into the background.

In giving arsenic it is usually well to carry its administration up to the point of toleration. At the present moment I have a boy of fifteen under treatment, who is taking eighteen drops of Fowler's solution three times a day, without apparent detriment. The case is one of three years' standing, and the patient, a precocious, neurotic, and undersized boy, has been in the hands of various physicians.

I at once put him upon a course of thorough rest, prescribed forty grains of the bromide of sodium a day, removed him from school, and prohibited animal food, substituting for the latter a farinaceous diet with milk. This farinaceous diet was, however, only continued *for a short time*, till the cerebral erethism had disappeared.

Six weeks have now elapsed since I first began treatment. The irregular movements which were located in the left side of the face, extending to the shoulder and hand of the same side, have now ceased altogether, and only when excited or startled do they reappear. This case will, in all probability, make a complete recovery; but I shall not allow him to return to school, or to indulge in violent exercise of any kind, for fear of a relapse. At present his appetite is good, and he is taking large quantities of nitrogenous food.

In this, as in many other cases, I employed simultaneous galvanization and refrigeration of the head in the beginning of treatment.

As this is a useful mode of allaying the irritability under which these patients labor, I will describe it. A stout band of india-rubber webbing is first secured around the head, so as to interrupt the circulation in the scalp. An electrode of sponge, provided with a hollow chamber of tin, is then connected with the positive pole of a galvanic battery, and placed upon the head. The chamber is then filled with ice-water (not ice), and the negative pole having been placed in the neck, the current is made, and treatment continued for half an hour. Sometimes I still further enhance the efficacy of the procedure by the application of compression to the carotids (by means of my mechanical compressor).

Quite striking effects are sometimes observed immediately after the cold begins to make itself felt, which, of course, occurs rapidly on account of the suspension of the circulation in the scalp, by which the transmission of the cold to the cortex is greatly facilitated. Thus, some months since, I had a little girl under treatment for choreic spasms of the face. These, though not excessive, were obstinate in character, and did not yield readily to arsenic; and yet, when the above application had been made for about ten minutes the spasms invariably entirely disappeared, and remained absent as long as the treatment was continued, and sometimes for an hour afterward.

When the combined sedative action which the galvanic current and the ice exert upon the cortex is borne in mind, such prompt effects are, perhaps, not to be wondered at. To the child and his parents such results appear little short of marvellous, and the spirit of hopefulness thereby engendered constitutes a helpful factor in a protracted course of treatment.

Finally, it is well, at least in the early part of treatment, to confine the patient to a strict farinaceous diet, which, in chorea as in epilepsy, will form a helpful adjunct to treatment.

These in brief are a few of the salient features of that mode of treating the affection which I have found most efficacious in practice.

26 West Forty-seventh Street.

Manuscript in Rolls.—Contributors who honor us with their communications would confer a great favor if they would send their manuscript folded and not rolled. A voluminous manuscript which has been rolled up for a long time is a most unmanageable thing.

PUERPERAL FEVER FROM VARIOUS CAUSES.

By W. D. SCHUYLER, M.D.,

NEW YORK.

The following cases are offered as illustrations of the belief that puerperal fever may arise from various causes, and that the preventive treatment of this disease cannot be said to be complete when it aims only at the prevention of septicæmia.

There are other forms of puerperal fever than the septicæmic said to arise from or originate with the parturient act, and it is believed that these cases substantiate that view.

These cases, and other easily obtainable facts, illustrate that there are several forms of puerperal fever. There are the contagious, the septicæmic, the malarial, the phlebitic, and the pyæmic. Of these there are sub-varieties, and we have the metric, the perimetric, the endometric, and the vaginal, and preventive treatment must include the recognition of the several varieties and sub-varieties and their causes.

As a point of special interest I would direct attention to the fact, illustrated in one of the cases submitted, that it is not safe to puncture deeply through comparatively sound tissues for the relief of mammary abscesses; it is better to delay opening them until they point somewhere near the surface.

Again, I would direct attention to the fact that syringing the cavity of the womb is not so dangerous a procedure under the circumstances, in cases like those related, as it has by some been regarded.

My method is to place the woman in the Sims position, elevate her buttocks, and place a shallow bowl so that it will catch all returning fluid. I then introduce my self-retaining speculum, which dilates the cavity quadrangularly when opened, and discloses not only the cervix but the entire vaginal cavity. In this way I am enabled to judge of the exact locality of the trouble. If the uterine cavity is to be syringed, I introduce into it, one after the other, two No. 10 or 12 soft French prostatic catheters, and then with a head-mirror, if the light be insufficient, throw reflected light upon the whole field, which enables me to see all the parts, to know exactly what is being done, and what are the results. For washing out the uterine cavity I use Davidson's syringe, throwing the disinfecting fluid first through one and then through the other catheter, and continuing the process until the liquid which returns indicates that the cavity has been thoroughly cleansed and disinfected. This procedure I repeat as often during the twenty-four hours as the requirements of the case indicate.

Case I.—*Puerperal fever.*—Mrs. F. A. J——, aged thirty, multipara and healthy. Was taken in labor, December 25, 1886, at 3 A.M. Under the care of an experienced midwife. After nine hours of moderately severe pains she was delivered naturally of a female child. The midwife reports that the secundines came away shortly after the delivery of the child, and the womb contracted into a hard, round form.

On the day following the patient felt well, but did not, however, rest quite well that night.

Monday, second day after labor, at noon, the milk came in rapidly, filling the breasts full During the morning the patient was out of bed for ten minutes; after that she had two movements of the bowels. On Monday night she did not sleep at all.

On Tuesday, third day, she had a chill in the forenoon, followed by fever, which continued, and in the evening I was asked to see the patient. Found her with a flushed face, somewhat restless, severe headache. Pulse, 120; temperature, 103½° F.; tongue coated. No pain in abdomen; no trouble with water. Ordered aconite, potass. brom., potass. iodidi, M., with directions to be given every two hours until headache and fever abated. Bowels not moved to-day.

Fourth day, Wednesday, 9 A.M.—Patient feeling very much better. Headache passed off; is less restless. Pulse, 80; temperature natural (98½° F.). Treatment continued in fractional ($\frac{1}{30}$) doses. At 4 P.M. fever had returned; pulse, 120; temperature, 102½° F.; headache, but not so severe as yesterday. Ordered a cathartic and the continuation of the sedative and alterative febrifuge.

Fifth day, Thursday, 9 A.M.—Had a bad night, with quite a high fever, which abated somewhat after 1 A.M.; vomited and had pains in the abdomen, probably due to the cathartic, which caused three actions of the bowels, the second being quite free, and all being liquid. Pulse, 100 to 160. Lochia absent since yesterday. Secretion of milk diminishing; abdomen only slightly tender; no tympanites. Water scanty, but passes without pain. Uterine temperature not higher than the general temperature as taken in the axilla. In the absence of other or, especially, of uterine indications, and following the indication of the febrile manifestation, I ordered three five-grain capsules of quinine to be given before 2 P.M. At 2.30 P.M. I found the patient with no fever; pulse, 100; temperature, 98½° F. Abdomen natural; no pain or discomfort in its lower portion; no scalding of water. Advised no treatment, but to give the aconite and potash if the fever returns. At 9 P.M. patient's face is flushed; says she feels well, but the thermometer registers 103½° F. in the axilla, and pulse is 120. Though not ordered, she took four (five-grain) capsules of quinia during the day. The lochia continue, though scanty, and are not of a bad odor. The bowels have been troublesome to-day, having moved every hour or oftener, the movements being preceded by pain; stools very dark, and liquid. Ordered bismuth and Dover's powder.

Sixth day, Friday.—Patient reports she had a good night, that fever abated after my visit last evening. Bowels are checked, no abdominal pain, and urination is not painful. Pulse, 86; temperature, 100°F.; ordered quin., gr. x., at 9.30 and 11.30, and gr. v. at 2 P.M. At 3.30 P.M. took quinine as directed, but fever has come on notwithstanding. The lochia were absent and the secretion of milk ceased. From this time until the *tenth* day the pulse varied from 84 to 124, the temperature fluctuated between 100° F. and 105⅖° F., and the bowels continued irritable.

On the tenth day, having become convinced that malaria was not the cause of a fever manifesting such an irregular course—although the absence of local symptoms excepting the bowel-trouble seemed to justify such an opinion—I decided to explore and tentatively wash out the uterine cavity, and proceeded to introduce a large, soft No. 14 (American scale) catheter, the patient lying in her usual position on her back in the bed. The os was found far away, well back against the posterior vaginal wall, and the instrument was introduced with some difficulty, but as it entered the uterine cavity I was surprised by a gush of serous fluid which struck well up upon the sleeve of my undervest. I proceeded then to syringe the cavity with disinfected hot water, with a hard rubber syringe, such being the only one at hand that would operate. The syringing, which was interrupted to allow of a frequent discharge, brought away a quantity of hemorrhagic and grumous fluid and some blood-clots. Shortly after the syringing the temperature again rose to 105° F. I ordered potass. iodidi, gr. x.; liq. ammon. acet., gtt. x., M., ft. sol., every hour until I should return, and left the patient. The patient's statement was that she had had a very bad night, she was so hot. Her face was flushed but worn, the pulse soft and uncertain. It was counted with difficulty; just before I left her, at 5.30 A.M., it was 128. At 9 A.M. pulse had fallen to 92; temperature was 102° F. Had taken three doses of the potass. iodidi mixture (gr. xxx.); ordered it continued in the same dose every hour. At 9 P.M., pulse, 84; temperature, 98⅗° F. Bowels loose and give patient some discomfort, but otherwise feeling well. Has taken gr. x. quinine. Catheterized the uterine cavity, and again washed out a quantity of bloody grumous fluid and clots. After operation the thermometer registered 99½° F.; no lochia.

Wednesday, January 5th, 9 A.M.—No fever. Bowels moved four times in the night. Bismuth powders were given. Quinine and iodide of potash continued. 8.30 P.M.: Pulse, 108; temperature, 102° F.; catheterized uterine cavity.

Thursday, January 6th.—Messenger called me at 7.30 A.M. Report was that she had had a bad night, and that fever was quite as high as two nights before. Patient's appearance much worn; face flushed, lips blue, tongue coated, dry; pulse soft, uncertain, 120; temperature, 102° F. Bowels still troublesome. Stools very dark liquid. No lochia. Treatment continued with pot. iod., and bismuth powders. 10 A.M.: Pulse, 120; temperature, 103½° F. Put the patient in the Sims position, dilated the vagina with my speculum, and syringed uterine cavity thoroughly and evacuated a large amount of grumous hemorrhagic fluid. Temperature not changed by syringing. Advised waiting for two hours. 2.30 P.M.: Patient easier. Had been given one dose of the iodide mixture, and one bismuth powder. Pulse, 108; temperature, 100⅗° F. Ordered all treatment discontinued until further directed. 10 P.M.: Pulse, 92; temperature, 100° F.; syringed uterine cavity again, and removed a comparatively large quantity of hemorrhagic and necrotic fluid. Bowels less troublesome.

Thirteenth day, Friday, 7.30 A.M.—Pulse, 84; temperature, 98½° F. 10 A.M.: Pulse, 92; temperature, 100° F.; syringed uterine cavity (putting her again in the Sims position and bringing the uterine os into view with my speculum), and washed it out thoroughly for the second time, removing a large quantity of fluid containing blood, detritus, and clots. After syringing, the temperature was found ⅞° F. higher. Treatment by medicine still discontinued, and broths ordered. 3 P.M.: Pulse, 84; temperature natural, fallen from 100⅞° F. Bowels somewhat loose since yesterday. There are no natural lochia. Patient looking better. 10 P.M.: Has no fever; syringed uterine cavity.

Saturday, January 8th, 9.30 A.M.—Pulse, 76; temperature natural. Slept nearly all night. Has some appetite for the first time during sickness this morning. Lochia are reappearing naturally. Strength of pulse good. Washed uterine cavity and ordered a generous liquid diet. 2 P.M.: Patient is not so lively, but has no fever. Treatment limited to attention to diet. 8.30 P.M.: Patient has a tired feeling, and the appetite she felt yesterday has departed. Pulse, 84; temperature, 99½° F.; syringed uterine cavity—patient in Sims position—and ordered tinct. ergot., ʒ ss., with drop-doses of tinct. ipecac. and liq. fer. persulph. and gtt. ij. tinct. opii; two doses during the night and one in the morning, to prevent uterine relaxation and possible septicæmia. Bowels now moving naturally.

From this date on no special event occurred. The uterine cavity was syringed daily, and on January 14th there was no fever, the patient's appetite was improving, her bowels were moving regularly, and she was convalescent.

CASE II.—*Malarial puerperal fever.*—Mrs. G. L——, aged thirty, and a multipara, was taken in labor November 14, 1884, which continued and terminated normally at the end of thirteen hours. The uterus contracted firmly, and the condition of the mother and child was good. The child was a well-developed, healthy-looking girl.

The condition of the mother remained favorable until November 15th, when she was unable to pass her water, and it was drawn with the catheter. On November 16th she complained of severe pain in the abdomen when she coughed. On the 17th she felt cold early, and afterward was feverish. At 9 A.M. her pulse was 132; temperature, 102½° F.; she had headache, pain in the back, her tongue was coated, the abdomen was somewhat swollen and tender to touch. Coughing causes severe pain in the abdomen. Lochia natural. Bowels had not moved, and an injection was ordered. The urine, drawn with the catheter, was normal in color and odor. At 5.30 P.M. the pulse was 136; temperature, 102° F.; and cough under control by the anodyne mixture prescribed in the morning. Headache. Lochia natural. Has urinated naturally.

On November 18th the patient said that she was better, and was having her hair combed. A large quantity of gas escaped from the bowels, and the water was passed naturally. But her pulse remained at 124, with a temperature of 102° F. Tongue moister and less brown than yesterday. Abdomen swollen and tender. Bowels inactive. Ordered castor-oil and syrup of buckthorn. Lochia have more color and a foul odor.

Ordered ergot and nux vomica in small doses, to maintain tonic uterine contraction for the purpose of preventing possible absorption of septic material from the uterine cavity. Turpentine stupes, also, were applied to the abdomen.

At 8.30 P.M. the pulse was 120, and the temperature 100° F. Water passed freely and bowels moved slightly. No headache.

At 8.30 A.M., November 19th, the patient's face was flushed, her tongue was brown and dry; pulse, 132; and temperature 104° F. Lochia less abundant. Bowels moved freely in the night, and the secretion of milk increasing.

At 2 P.M. the fever was increasing; pulse, 140; temperature, 104½° F.; abdomen swollen and tender. Syringed the uterine cavity, but did not remove any considerable amount of morbid material. Uterine temperature no higher than the general temperature.

The conditions found did not confirm a local causation for the febrile state. Ordered hot applications to the abdomen, and the bromide of sodium, iodide of potassium, and aconite mixture to be continued.

8 P.M.—Fever somewhat abated. Pulse, 120; temperature, 101° F. Ordered gr. iv. quinine, gr. ⅕ of opium and ipecac, M., in capsule, every two hours, beginning at once and continued through the night, unless fever again exacerbates.

November 20th, 9 A.M.—Temperature, taken during the night every two hours, averaged 99½° F. Patient looks better, and has little or no abdominal pain. Considering the quite normal condition of the womb and, on the other hand, the daily remittent character of the fever and the fact that there was a stationary wash-basin in the room which was not free from an unpleasant odor (although the house was kept seemingly in the most wholesome state of cleanliness and order), with the additional fact that the patient had suffered from malarial poisoning the previous summer, led me to conclude that the fever, although distinctly peritoneal (inflammatory) in manifestation, was due to malaria, and so to continue the treatment by quinine. At 8 P.M. the pulse had fallen to 108, and temperature to 100½° F., and the patient was easier in every way. She had taken twenty-eight grains of quinine since previous night.

November 21st, 9 A.M.—Patient feels better this morning. Has taken twenty-four grains of quinine during the night. Pulse, 100; temperature, 99° F.; tongue moist, and partially covered with a white fur. Abdomen is tympanitic throughout upper half, painful over lower, most marked on left side. Lochia scanty; water retained and was drawn with the catheter. Ordered cold applied over lower part of abdomen. No quinine to be given to-day. 10.30 P.M.: Pulse, 108; temperature, 99½° F. Apprehensive of another rise of temperature I ordered sixteen grains of quinine to be given during the night. The bowels were moved by an injection.

November 22d, 10 A.M.—Report is, the patient had a good night. Looking very well this morning. Enemata administered caused only a slight evacuation from bowels. Water had to be drawn during the night. Pulse, 96; temperature, 97½° F. Tongue large and red, not coated. Skin cool and moist. Abdomen softer, but still somewhat tympanitic. Is not tender, and even deep pressure causes little pain. Tenderness is felt when pressure is being removed. Deep breathing is not painful; temperature and pulse indicate the need of stimulants.

On November 23d the fever had returned, and at 10 A.M. the patient's temperature was 104¼° F. There were tympanites and some abdominal tenderness. The bowels were moved with an injection. Quinine was added to the stimulants and external application of heat.

On November 24th the temperature began to rise at 7 A.M., notwithstanding the quinine, and at 8 A.M. the patient had a slight chill; at 10 A.M. her temperature was 104.5° F. Abdomen soft, and painful only when patient coughs. At 2 P.M. syringed the uterine cavity, but very little was washed away, and the temperature was unaffected by the washing. Bladder emptied with the catheter. The urine had a specific gravity of 1.018, and did not contain albumen. Ordered quinine. Tympanites and tenderness in the evening.

From this date until December 7th, the twenty-fifth day, the case went on with fluctuating temperature, tympanites, tenderness of the abdomen on pressure, and pain. Bowels were slow, and required enemata, and the catheter was used as occasion required. The uterine cavity was syringed daily, and quinine and stimulants were administered according to indications. Lochia scanty most of the time. On one occasion the patient's condition was made worse by the uterine washing. On the twenty-fifth day the case was dismissed, subject to call.

Comments.—The prominent pathological features of this case as manifested, were: A puerperal remittent fever and a concurring peritoneal inflammation or marked congestion, the considerable height to which the fever exacerbated and the profound character of the remissions, as denoted by the low temperature reached; the absence of marked uterine and also of septicæmic symptoms; the subjection of the fever principally, and ultimately wholly, by quinine; the depression of temperature after administering quinine in the moderately substantial doses given; the concurrence of atony of the bladder with depression; and lastly, the persistence of a low bodily temperature during convalescence and after quinine was discontinued.

The peritoneal complication was at first possibly excited by the irritant concussion of coughing, which the patient had been greatly troubled with for two weeks prior to the occurrence of labor, which entirely ceased during that act and for the day following, but which returned the next day, and which she then described as distressing, and felt mostly in the abdomen. It is even possible that but for this exciting cause this manifestation might not have developed with the occurrence of fever. Yet it is noticeable that it exacerbated and remitted concurrently with those actions of the fever, and hence may have been essentially due to the febrile (puerperal) cause. At no time, on the other hand, during the progress of the case did the uterine conditions, *i.e.*, the nature of the lochia or their retention, the condition of the womb, as regards a state of metritis, or an endometritis, or a condition of uterine relaxation that would favor reabsorption of fluids from its cavity, indicate that the peritoneal involvement, or the cause of the fever, was due to local conditions of or within that organ. Hence we must seek other than a uterine causation of the malady. The absence, also, of any morbid mammary manifestation would exclude the remaining possible local causation for the disease, which then must rest upon some infectious constitutional state. Septicæmia resulting from post-partum conditions as a cause of constitutional infection is to be excluded upon the grounds given, which furthermore exclude all sources of an autogenetic infection, and which therefore must arise from without. The sources of an exogenetic infectious cause are *contagion* from some other existing puerperal-fever case, also malaria. The latter may be contracted from swamp-miasm, or from decomposing organic sewage materials.

Contagion as a causation in this case is to be excluded (*a*) upon the general ground that no other existing case of puerperal fever was known of either by the patient, her friends, or by myself, and upon the fact that the patient had kept to her room very closely, facts which would render exposure most doubtful, and (*b*) upon the special ground that the course manifested by the fever was unlike that caused by contagion.

On the other hand, that a *malarial* infection was the cause is clearly shown by the distinctly remittent character both of the fever and of the peritoneal manifestation; by the fact of its control and final suppression by quinine, and finally by a history of malarial disease the previous summer.

CASE III.—*Pyæmic puerperal fever developed after lancing an inflamed breast.*—Mrs. R. A——, a multipara, aged thirty, was well up to the beginning of her labor, which came on, March 18, 1884, at 10 P.M., and was completed naturally in four hours. Her breasts began to fill on the 20th. On the 22d she had a chill, and her left breast became inflamed. Nine days afterward her attending physician lanced the breast, and pus discharged freely. He lanced it again on April 2d, and also April 5th. The fever continued, and on the 11th the patient had a severe chill, which was followed by irregular chills and fever daily with discharge from the wounds. During this time the patient was nervous, slept badly, had no appetite, and vomited all she took. Had pains in the gastric region, but bowels moved daily. An erysipelatous redness developed on one of her legs, and there was a somewhat enlarged gland in the popliteal space, but these developments did not amount to much; there was also an enlargement in left axilla. Fever and chills continued day after day, the chills occurring mostly in the afternoon. Lochial discharge was at no time very abundant, and soon ceased. Her water was passed regularly, and she had no abdominal symptom beyond vomiting and some general discomfort.

Forty-one days after confinement I saw the patient for the first time. She had recently had a chill, and felt cold, although her axillary temperature was 102.5° F. Her left breast was indurated and was slowly discharging pus from one of three incised wounds, two of which were gaping and were of considerable depth through the gland-tissue; her left arm was swollen; the side of the neck was also involved.

From April 29th to May 4th the general condition of the patient did not change materially, the pulse ranging from 120 to 132, and the temperature from 100° to 103° F. The arm, however, became greatly swollen; from the axilla down to the middle it had a boggy feel, and was very sensitive to pressure over the basilic vein, which was hard to the touch.

The womb was well contracted and the vaginal canal was free from morbid action. The urine contained no albumen and had a specific gravity of 1.010; bowels inclined to be constipated. From this date to May 9th the general treatment consisted in the use of tincture of iron, iodide of potash, chloride of ammonium, and carbonate of ammonia, with cod-liver oil and quinine.

May 13th.—Pulse, 116; temperature, 100° F. Arm less swollen, and less painful to pressure; hand less œdematous; hardness on inner surface is giving way; tongue clean, but dark red; bowels moved last night; water scanty. P.M.: Has taken twenty grains of quinine to-day; pulse, 120; temperature, 100° F.

May 14th.—Appearance improved. Very little discomfort now in throat; stools and water pass naturally; pulse, 108; temperature, 100° F. Has some appetite, and the swelling of arm and œdema of hand are diminishing.

May 24th.—Pulse, 104; temperature, 99° F.

May 25th.—Sitting up in a chair. Pulse, 100; temperature natural. Hand and arm quite natural.

June 2d.—Patient doing well; appetite good. Is sitting up every day. Pulse remains small.

In this case we have for consideration the following facts: The second day after a natural labor, occurring on March 18th, the breasts began to fill with milk, and on the fourth day the patient had a chill and the left breast became inflamed. Nine days after, the inflamed breast was lanced, and discharged freely; two days later it was lanced again, and three days later still it was lanced for the third time. Six days after the last operation the patient had a hard chill, followed by fever. After this she had a chill and fever every day (although she was at all times subjectively cold), and the wound in the breast continued to discharge until I saw her on April 28th, forty-one days after her confinement, at which time she had a pulse of 132, and a temperature of 103° F. She had just previously had a hard chill. Her breast was slowly discharging pus through one of the wounds, which was gaping, of considerable depth, and had a pale, meaty appearance. Her left arm, on the same side, was then swollen. On the second day after my first visit she complained of a fulness about the lower part of the neck and beneath the sternum on the left side, which rendered her breathing difficult and impaired her deglutition. Her mind was inactive. From this time on she had a feeling of fulness extending outward under the left clavicle, and at length making its appearance on the inner side of the arm, in the axillary space, where it was found later to be an implication and swelling of the basilic vein. This action did not cease until it had travelled well down into the median and anterior and posterior ulnar on the anterior and inner surfaces of the forearm. As a result of this swelling, which evidently was a phlebitis of the internal mammary vein, the left innominata, left subclavian, axillary, and basilic, there was a diffused hardness along the course of the veins, swelling and œdema of the arm, forearm, and hand. In the beginning of the process, and while the left innominata was involved, preventing a normal return of venous blood from the brain on that side, there was mental hebetude, and throughout there were chills and fever.

The case is clearly one of puerperal fever, due (1) to mammitis, and (2) to a resulting pyæmia and phlebitis, and had no causal relation to a deranged uterine condition or to a septicæmia arising from parturient results in that organ. The teachings it affords, are: (1) That puerperal fever is not necessarily septicæmia; and (2) that pyæmia and very grave constitutional results may occur from lancing a deeply seated mammary abscess, unless such can be done at a dependent point where free and complete drainage can easily be secured.

CASE IV.—*Puerperal fever from retained placental membranes after an abortion occurring between the fourth and fifth months of gestation.*—Mrs. D. A——, aged thirty-seven, multipara, had an abortion produced. The fœtus was expelled October 12, 1875, but the membranes and placenta were retained. On account of the latter I was sent for. On arriving I made a digital examination, and while I could feel the placental ball I was unable, on account of the contracted condition of the uterine os, to get far enough around it to effect its removal. The uterus was too small to admit my hand, and having no placental forceps with me I decided to leave the membranes and trust to their being expelled later.

On the day following the patient had some pain in the lower part of the abdomen and was feverish, the pulse being 120 and the temperature ranging from 103½° F. in the morning to 102° F. in the evening. The next day, the 14th, patient was more comfortable, the pulse and temperature being each 100° F.; the 15th, patient had some headache; the 16th, patient much better; pulse, 92; temperature natural; the 17th, 18th, and 19th I did not see her. The report was, she was quite well and was up in her chair. October 20th: While sitting up this morning she had a chill followed by fever. I saw her at 8 P.M., found her with high fever; pulse, 120; temperature, 106° F. The membranes had not been expelled. I ordered a cathartic powder, and a mixture containing aconite and liquor ammoniæ acetatis as a febrifuge.

October 21st, A M.—Bowels acted and she was relieved; pulse, 84; temperature, 99° F. 10 P.M.: Sent for. Patient had a chill at 9.30; found pulse 120; temperature, 103° F.; continued sedative mixture (bromide and chloral).

October 22d—Patient had a very good sleep after one o'clock in the morning. 8 A.M.: Pulse, 120; temperature, 101½° F.; evening temperature, 106.5° F. Knowing the membranes were retained, and as there was no lochial discharge there was no further question as to the cause of the fever, especially as the patient had been in excellent health previous to the occurrence of the abortion, hence the indication was to empty the uterus; and that failing, to keep it well disinfected internally and in a state of tonic contraction. To meet the latter indication I prescribed ergot, and for the former I resorted to disinfectant syringing according to the mode already described in Case I.

At 9 P.M. Dr. N. C. Husted saw the patient with me, and advised curetting the uterine cavity, which he proceeded to do, but brought away scarcely any membrane. After the curetting I again injected the uterine cavity, and then ordered gr. vj. quinine every two hours, with the liq. am. acet. and sedative mixtures.

October 23d, 7 A.M.—Patient easy; took during night gr. xxiv. quinine. Pulse, 104; temperature, 103½° F. 2 P.M.: Pulse, 100; temperature, 99° F. Perspiring and is easy.

October 24th, 9 A.M.—Patient had a good night; looks very well. Pulse, 84; temperature, 100° F. Syringed the uterine cavity.

October 25th, 9 A.M.—Had a good night; looks refreshed. Pulse, 100; temperature, 101½° F. Taken gr. x. quinine this morning; ordered more at once. At 11 A.M. she had another chill. At 2 P.M. her pulse was 120, and temperature 106° F. I had her put in a bath at temperature of 105° F., which was gradually reduced to 99½° F. Left her in the bath half an hour, when her temperature was found to have fallen to 103° F. Put her back into bed, and rolled her up in a pack. At 4 P.M. found temperature 105° F., and the patient subjectively easy. While in the pack, the pain in the back and headache which she had been suffering from, passed off. At 7 P.M. her pulse was 116, temperature still 105° F. I ordered quinine, gr. v., every three hours.

October 26th, 8.30 A.M.—Pulse, 100; temperature, 103½° F.; has taken gr. xxv. quinine since last night. I ordered gr. xv. more. 1.30 P.M.: Pulse, 100; temperature, 105° F. Syringed the womb and removed a larger amount than at any time before of grumous fluid.

October 27th, 9 A.M.—Has taken gr. xx. quinine since 4 A.M. Head is confused, but is otherwise feeling better. Pulse, 92; temperature, 101½° F. Syringed uterine cavity; removed some yellowish fluid.

From October 27th to November 14th the patient's temperature fluctuated between normal and 100.5° F., and the treatment consisted in the use of quinine, syringing the uterine cavity, which removed grayish mucus, muco-pus, some shreds of membrane, and reddish fluid in greater or less quantities, and the administration of anodynes, stimulants, and tonics, according to indications.

On November 15th the patient's pulse and temperature were normal, and on the 19th she was discharged, as she was up and about and feeling well.

The noticeable facts in the case are: The occurrence of an abortion after the fourth month, with expulsion of the fœtus and retention of the membranes, which were left *in situ;* the occurrence of a febrile temperature of 103¼° F. on the morning of the following day, which abated to 102° in the evening of the same day, with decrease of temperature to natural on the morning of the fourth day; no fever on the fourth, fifth, sixth, and seventh days; a chill on the ninth day, with an evening temperature of 106° F.; the resolution, and, thereafter, the partial control of this fever to the afternoon of the eleventh day, when she had a second chill, followed by a second rise of temperature, reaching 106° F., later in the evening of 106½°; the reduction of this temperature by intra-uterine syringing, performed twice that afternoon and evening, with disinfecting solutions, by substantial doses of quinine, cathartic action, and, possibly, somewhat by natural remittent action; and its control until the morning of the thirteenth day, when she had another chill, and an evening temperature of 106° F., which was temporarily reduced to 103° by placing her in a bath of a temperature of 105°, reduced to 99½° by additions of cold water, in which she was left half an hour—then she was taken out and packed—later in the evening the temperature again rose to 105° F.; a febrile temperature of 103½° to 105° F. during the fourteenth day; the continuation thereafter of a febrile temperature, ranging from 104° F. downward for twenty-three days—making about thirty days in all of fever—and its gradual reduction and final stoppage in that time, by frequent, daily or oftener, intra-uterine syringing with disinfecting water.

Comments.—This case illustrates: (1) That septicæmic puerperal fever may occur from absorption of retained decomposing membranes from a uterine cavity where no abrasions have occurred, and hence that traumatism in the course of the genital tract, as a result of labor, is not essential to its occurrence. (2) That assured prevention of this form of puerperal fever requires that all placental membranes be removed after the expulsion of the fœtus; that is, while fever may not be caused by their retention, as general experience proves, yet an assurance that it will not while they are allowed to be retained is not valid. (3) That the only reliable element of treatment of a puerperal fever, resulting from septicæmia due to absorption of retained membranes, is an efficient and continued syringing of the uterine cavity with an antiseptic fluid until all membranes are washed out. And, lastly, it demonstrates, by the many times the operation was done, without resulting harm, that the introduction of a stream of water into a womb undergoing involution is not as hazardous—as likely to pass through the Fallopian tubes and cause peritonitis—as it has generally been held to be.

THE TEETH IN CONGENITAL SYPHILIS.—At a late meeting of the London Harveian Society, Dr. J. Hutchinson, Jr., spoke on this topic. The fallacy of looking for characteristic signs in the temporary teeth was dwelt upon, their liability to premature necrosis and falling out being illustrated by specimens. Those teeth which in after-life showed syphilitic deformity in the greatest degree were those which calcified first, and which during the year lay the nearest to the gum surface, namely, the permanent incisors and first molars. The three small projections at the cutting edge of the central incisors seen in normal teeth were noticed, and the wearing away or non-development of the median one was described in connection with the formation of the semilunar notch and the narrowed cutting edge. The horizontal erosion of enamel, resulting from mercurial stomatitis in infancy, and its occasional coincidence with true syphilitic malformation of the teeth were illustrated, and stress laid on the fact that the upper central incisors were the real test teeth of inherited syphilis, though many children with the inherited disease presented perfectly normal teeth. No explanation could at present be given for the preponderance of female over male patients observed in connection with inherited syphilitic disease of the eyes and auditory system. Dr. Hughlings Jackson believed that a wide and exact knowledge in the profession of the particular and decisive signs of inherited syphilis mentioned would, by leading to early and definite treatment, save many people from terrible calamities.]

Clinical Department.

AN OBSCURE CASE.

By JOHN J. MORRISSEY, M.D.,

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The patient, a young man, about twenty years of age, employed as private secretary to the manager of an insurance company, complained, on arriving home from the office, about 5 P.M., of having suffered during the day from a succession of chills, none of them being sufficient to compel him, however, to desist from his employment before the day's business was finished. He ate quite heartily at supper, but retired early—about eight o'clock. Shortly afterward he began to vomit mixed green and yellowish-looking stuff, but as he had at odd times suffered from so-called "bilious attacks," nothing was thought of the matter, and he assured his mother that he would be all right in the morning. Occasionally during the night there was a recurrence of the vomiting, with consequent uneasiness over the abdominal region. Toward morning this increased, until his brother, who had been attending a ball, arrived home about 4 A.M., and on reaching my house, about half an hour afterward, gave me the particulars of the case as related above. He did not deem the patient in any danger, and as I had seen him in one or two "bilious attacks" before, he (the brother) thought that if I prescribed for the patient, and saw him later on in the morning, it would be sufficient. I accordingly did so, and, some four hours later, on calling at the house, found the patient, to use his own expression, "about one hundred per cent. better." There was still a generally diffused soreness over the abdomen, without being at all markedly localized in any one spot; there was no headache, no backache, no diarrhœa. On the contrary, he had not been to stool for the preceding two days, though the last movement of the bowels had been a large one. His pulse was about 90; the temperature I did not take, as he expressed himself feeling so much better that I did not deem it necessary. The stomach was still somewhat sensitive to the administration of food, so, with a parting injunction to continue the medicine, I left him. This was on Thursday morning, and I did not see him again until about ten on Friday morning. I immediately detected a change in his condition, and when I took his temperature (103.2°) and pulse (130), they confirmed my suspicions, yet, outside of this increase, there was no apparent change. He passed his urine freely, there was no œdema, and nothing indicative of kidney disease. There was still no headache, no backache, no confirmed soreness in any particular portion of the abdomen, but the general uneasiness to which attention has been drawn remained, and was increased by deep pressure. On careful examination of the heart I detected a soft, blowing murmur with the first sound. This, however, I regarded as functional rather than organic. After prescribing tr. digitalis, and arom. spts. ammon. and quinine, I left him, promising to call next day. On the evening of the day (Friday) upon which I had noticed the symptoms mentioned, about 6.30, I was hurriedly called. I immediately went to the house, and found that a great change had taken place in the patient's condition. He was in a semi-unconscious state, from which he could be, however, easily aroused. He spoke rationally when so awakened, but did not maintain his consciousness for any length of time. A profuse perspiration covered his face and hands; there was some photophobia, but not at all marked; and on being questioned concerning how he felt, he said, "Very well indeed," and constantly reiterated the expression. His pulse was 145; temperature not taken. He lay quietly, evidently paying no heed to what was going on about him, except at occasional intervals, when he would rouse himself sufficiently to take part in the conversation, and immediately relapse into his former state. His nose appeared sharpened, a slight bluish ring surrounded the mouth, yet the breathing was not at all labored or suffocative in character. I sent for Drs. Jarvis and Mayer; the former responded, and we gave the patient a hypodermic of about one-sixth grain of morphine. At the doctor's suggestion I drew the urine, and found about two tablespoonfuls, which, I regret to say, was not saved for further investigation, but immediately emptied by the patient's mother, who did not understand what important information it might have given. Just above the heart, on the left side, we found a few râles, but they were mostly confined to an area of about the size of a silver dollar; otherwise his lungs were clear.

The tremendous strain on the heart was a very characteristic factor, but from what cause produced neither Dr. Jarvis nor myself is prepared to say. About two hours after giving the morphine, I gave one-sixtieth grain sulph. strych. It did not appear to exercise any perceptible influence. Brandy had been given in two-teaspoonful doses every two hours, but as I feared overstimulation and consequent exhaustion, considering the patient's condition, I gradually lessened the amount and increased the intervals. Dr. Mayer arrived about 10.30, and by his advice the digitalis and ammonia were given more frequently. No other change was made. The patient lingered until 4 A.M., and passed quietly away. On carefully reviewing the facts, it would seem as if the patient's system had been overwhelmed by some insidious poison, typhoid or otherwise, and was not able to endure the strain, and so succumbed. The facts do not point to pulmonary embolism, but no definite diagnosis was made. No post-mortem was held. I should have stated that even to the last hour the patient continued in his semi-unconscious condition, from which, as when I saw him earlier in the evening, he could be aroused.

PAROXYSMAL TACHYCARDIA.[1]

By FRANK C. BRESSLER, M.D.,

BALTIMORE, MD.

Tachycardia is a trouble of such exceeding interest to the physician that every case occurring is worthy of being reported, and especially those which are not functional only, but associated with some distinct organic heart-lesion.

By tachycardia is meant that condition of the heart in which the heart's beats are increased in number, retaining a perfect regularity in each beat. The number of heart-beats may vary from one hundred to two hundred, or more, per minute. The period of this increased frequency of the heart may vary as to duration, lasting from a few hours to days and weeks. This condition must not be mistaken for palpitation of the heart, since palpitation is (1) induced usually by excitement, stimulants, etc.; (2) the attack is of brief duration; (3) there is absence of severe depression; and (4) there is intermittency of the heart's action.

In order to make the subject of tachycardia plainer, I beg leave to introduce the following history of a case which I have had under observation during the last twelve months:

About one year ago I was hastily summoned, one evening, about eight o'clock, to see an elderly gentleman, sixty-five years of age, about five feet six inches in height, weighing, perhaps, between one hundred and forty-five and one hundred and fifty pounds. I found him sitting in a chair, face pale, pupils moderately dilated, body covered by a profuse sweat, whole body trembling so as to suggest senile tremors, which, however, ceased on patient walking about; breathing rapid, like that seen in a person who has run rapidly for some distance, pulse so rapid as not to be counted. The temperature was not taken, as it was forgotten. The symptoms were of such a nature as to make me think of angina pectoris, or internal hemorrhage, but the attack, after lasting about two and a half hours, ceased entirely, and my patient's condition was as good as before, except a slight malaise. From the absence of pain about the præcordia, and because of the perfect and rapid recovery, both of these troubles were excluded, and a diagnosis of palpitation of the heart was made. As to the cause of this attack, none could be assigned, the patient saying "that it came upon him suddenly while sitting in the store, and that nothing had either excited or worried him to cause any nervous disturbance." He was a moderate smoker—not of cigars, but of a pipe—smoking, perhaps, four or five pipes in a day, which he had always done from youth up. The case finally passed out of my memory, when one Saturday evening, about three weeks ago, I was again sent for, and found my patient in precisely the same condition I had seen him in at my last visit. I gave him some tincture of digitalis and belladonna, but with little immediate effect. This attack lasted nearly three hours. After the attack was over, the following day I made a close examination, in order to find the cause, but all questioning elicited nothing satisfactory. From these two attacks I had seen him in, and from two others which were not so severe during the interval, I came to the conclusion that this was not a case of palpitation, but one of tachycardia, paroxysmal in nature. The most interesting part of the whole thing was that it was associated with an organic lesion, viz., mitral regurgitation.

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[1] A paper read before the Medical and Surgical Society of Baltimore, December 8, 1887.

Authors generally state that tachycardia is a functional condition, and only in rare cases associated with organic lesions. Flint, in the last edition of his work on the practice of medicine, states that he had met with but one instance of this condition, but it was not associated with any heart-lesion. I also found an article (published in THE MEDICAL RECORD, April 30, 1887) by Nothnagel, on paroxysmal tachycardia, in which he related a case in a young man, thirty years of age. During this lecture he made the statement that paroxysmal tachycardia in cases of organic heart disease was very rare, and that he did not remember a similar case in medical literature.

My patient dates his trouble to exposure, having been out on a raw, chilly night some seven years ago. Previous to this time he never had had any trouble with his heart, not so much as palpitation. He has about three or four attacks a year, which come upon him very suddenly, independent of any exciting cause: suddenly he notices his heart beginning to beat rapidly, then all the above-mentioned symptoms follow. Up to the present time his longest attack lasted four hours. So far as exciting cause is concerned, he can assign none—each attack has come upon him while engaged in such pursuits as do not generally give rise to palpitation. In his last attack he stated he was standing on the sidewalk, leaning against a box; had not spoken to anyone for at least fifteen or twenty minutes, and his mind was free from worry or thought; and, in fact, he stood outside "to kill time," showing that there was no exciting cause to induce this condition.

During the intervals of the attacks the pulse is regular and moderately full, varying from 72 to 84. Health otherwise is good, digestion perfect; sees that his bowels are regularly moved, and avoids all those things which might be injurious to him.

As to the pathology of this condition, so far from the rarity of the trouble, it is simply a matter of conjecture, as I do not think a post-mortem has been made on any of the afflicted patients. Still, with our knowledge of the nervous mechanism of the heart, we must know that it depends upon some perverted condition of the nervous arrangement; whether it is central or peripheral we cannot say. I look upon the trouble as one in which the centre which presides over the cardiac movements is temporarily inhibited; but whether this is induced by some vascular change taking place suddenly in this centre, owing to some peripheral cause, or to some disturbance at some distant part in the brain (perhaps temporarily, likewise), which fails to transmit the impulse to the centre, thus failing to stimulate it, in consequence of which the inhibitory action of the heart is interfered with, resulting in increased heart's action, I am not able to prove. But with all that, I think the trouble is situated in or near the cardiac centre—at least in that portion of the medulla wherein the centres for sweating, respiration, and cardiac movements are located, since in Nothnagel's case deep inspiration moderated the cardiac movements considerably, while other experiments had no effect on it.

SULPHIDE OF CALCIUM IN PULMONARY PHTHISIS.

By C. B. WITHERLE, M.D.,

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I WOULD like, through the columns of THE MEDICAL RECORD, to call the attention of the profession to the use of sulphide of calcium in pulmonary phthisis. My experience, though not extensive, leads me to think it of value. I have noticed improvement in nearly every case. In advanced cases this improvement has been only temporary. In two cases of commencing phthisis (one of three, one of six months' duration) there has been an entire cessation of morbid symptoms. I have also found the drug effective in several cases of obstinate cough, in which no pulmonary lesion was determined.

I begin with one-half grain in pill every two hours, increasing the dose until disagreeable symptoms (usually eructations of gas) are produced. One grain every two hours is the usual amount that can finally be taken without discomfort.

There is good evidence that sulphuretted hydrogen, or some compound of it, is absorbed into the blood when sulphide of calcium is administered, and this method has none of the disadvantages or dangers of the Bergeon treatment. I hold no theory as to the action of sulphuretted hydrogen upon the bacillus tuberculosis. If it has such action, it appears probable that it is by interfering with some nutritive condition of the bacillus peculiar to its existence within the body-tissues, and not as a direct germicide.

The idea of using sulphide of calcium was naturally suggested to me by the Bergeon treatment, and by the established use of the sulphides in certain suppurative diseases. No doubt the same idea has occurred to others. I have, however, seen no suggestion of the method of treatment that I have used, and therefore deem it worth while to lay my results, limited as they are, before the medical public. We should all be ready to catch at straws in the treatment of phthisis, and I hope that others, with greater opportunities than I have, may be induced to try the treatment that I have indicated, so that my results may be confirmed, or shown to be coincidences rather than results. I wish to emphasize the point that it is only in commencing cases of phthisis that I anticipate any marked benefit.

PERITYPHLITIC ABSCESS OF THE PERITONEUM — INCISION AND DRAINAGE — RECOVERY.

By ARTHUR A. GILLETTE, M.D.,

WESTERNVILLE, N. Y.

ON November 15, 1887, Mr. V——, aged forty-three, while engaged in chopping wood, was suddenly seized with severe abdominal pain. With the exception of some slight abdominal uneasiness for a few days previous, to which he had paid but little attention, he had been in good general health.

Physical examination two or three hours later revealed general abdominal distention, with marked tympanitic resonance, and moderate tenderness on percussion. Morphine was given freely for a few days, and the patient said he was feeling better, until the sixth day, when he said the pain had all settled in his right side. On making an examination a hardened area, two inches square, and with well-defined margins, was found just above the anterior superior spine of the ileum. It was very tender, and percussion over and around this spot gave tympanitic esonance.

The patient's condition remained about the same until the fourteenth day of the attack, when the tenderness over this area became so extreme that every movement elicited a groan, and no satisfactory examination could be made. On the evening of this day his temperature was 102° F., and pulse 100. Suspecting the formation of deep-seated pus, and having obtained Mr. V——'s consent to an operation, Dr. T. M. Flandrau, of Rome, N. Y., was sent for, and saw the patient, with me, on the morning of November 30th. Chloroform was given, but on careful examination no fluctuation could be detected. A large-sized aspirator-trochar and cannula was then plunged into the centre of the hardened spot, one inch and a quarter above the anterior superior spine of the ileum, and after some searching, about three ounces of bloody pus, having a distinct fecal odor, together with a small quantity of intestinal gas, was obtained at a depth of four inches, the cannula being directed backward and slightly inward, toward the median line. A free incision one inch and a quarter above and parallel to the crest of the ileum was then made across the tumor, and the muscles were carefully divided until the thickened peritoneum was reached; then, with the cannula (which had not been removed) as a guide, the knife was plunged into the abscess-cavity. After the escape of a quantity of foul matter, too thick to flow through the cannula, the finger was introduced, and the thickened walls of a peritoneal abscess thoroughly examined, but nothing further was found. A drainage tube was then introduced to the bottom of the cavity, and the external wound closed. The after-treatment consisted in the thorough irrigation of the abscess-cavity daily with carbolized water, until the discharge entirely ceased. The tube was withdrawn on the tenth day, and the patient has made an uninterrupted recovery, and is now in perfect health, entirely free from pain and tenderness. The wound is healed, and at the time of writing the patient is able to walk a mile in the open air.

Within an hour after the operation Mr. V——'s temperature dropped from 102° F. to 98½° F., and pulse from 100 to 60, and there has been no rise in either pulse or temperature since.

THE INTRA-NASAL PLUG.

By J. M. W. KITCHEN, M.D.,

NEW YORK.

Surgical literature has so little to say in relation to the intra-nasal plug that I judge its uses are not generally known or appreciated. This instrument has such an important place in my own practice, and fulfils so many useful purposes, that I think its virtues worthy of being brought to general notice. I use the intra-nasal plug for the following purposes: *First*, To control hemorrhage and oozing; *second*, to prevent the adhesion of opposing surfaces after intra-nasal operations; *third*, to repress too abundant tissue-formation during repair; *fourth*, as a splint; *fifth*, to gain increased space by dilatation, either without operation or in conjunction with the various drilling, cautery, and other operations; *sixth*, to apply continued medication. Several years ago I devised, and have used continually since, what I consider the *ne plus ultra* of intra-nasal plugs. It consists of a core of thin sheet-tin, cut with a stout pair of shears to the size and shape required—the requirements differing with each case. This is wound with absorbent cotton to the desired thickness—usually being padded in particular parts. This gives a plug of sufficient stiffness to be inserted into almost any part of the nasal cavities, and yet is sufficiently flexible, elastic, and thin to allow of its easy introduction. Before being placed *in situ*, the cotton is saturated with any desired medicament, is lubricated with vaseline, and is then introduced with the aid of dressing forceps. It may be allowed to remain in position two or three days if antiseptically prepared before introduction, and if the patient snuffs up cleansing solutions several times each day. This plug is usually well borne, though somewhat annoying to patients the first two days. Following the methods recommended by Mackenzie, Wagner, and others, I was never able to accomplish by intranasal dilatation any results at all satisfactory, but by the use of this plug quite remarkable results can be quickly secured. Care should be taken not to allow the patient to go beyond ready access if the plug is inserted so as to exert any great degree of pressure, as the discomfort may become intolerable. Also, pressure so great as to produce sloughing must be avoided. The aim should be to exert mild but continued pressure. By bending and shaping the tin core to suit, pressure can be made at any particular point. The ordinary plug is difficult to introduce, to adjust accurately, and to keep in place. It is also usually not well borne. The plug I have described has none of these disadvantages, nor any other of which I am aware. There are very few intra-nasal operations that I would care to undertake without the after-help of this useful addition to my armamentarium.

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DETACHMENT OF THE PLACENTA AND ALARMING HEMORRHAGE BEFORE THE BIRTH OF THE CHILD.

Dr. G. W. Squires, of East Avon, N. Y., reports the following: "I was called, December 10, 1887, at 8 A.M., to attend Cora W——, aged sixteen, unmarried, who had been in labor all the night before. I found the os well dilated, and the parts relaxed; vertex-presentation; pains every five minutes, without any advance. After waiting a while and seeing no improvement in the case, I made pressure with the hands over the uterus during pains. As no benefit followed this, I gave two small doses of fluid extract of viscum album. Another pain coming on, the nurse was directed to press on the uterus while I made an examination. The woman commenced to flow. I could feel the hot blood gush past the head at every pain. I was satisfied immediately that the placenta had been detached by outward pressure. I had my forceps in readiness, applied them as quickly as possible, and delivered the child, a nine-and-one-half-pound boy. The placenta was loose in the uterus, and was easily removed by hooking it out of the cervix and vagina with the finger. The child was floating in blood, which came with a gush at the time of delivery, but was dammed back by the placenta in the cervix. By manipulation, pressure, ergot, etc., the uterus was brought to contract and the hemorrhage was controlled. Is it a common occurrence for alarming hemorrhage to occur before the birth of the child, except from placenta prævia? and is it a safe practice to bring much pressure to bear on the uterus during labor?"

SWALLOWING PENNIES.

Dr. S. Tynberg, of this city, writes: "Having lately read of several cases where foreign bodies were swallowed by children without, as a rule, any serious consequences, I desire to contribute the facts of a case which in some instances are unique. On the 9th inst. Mr. M—— called at my office for the purpose of ascertaining whether any serious symptoms could occur from the fact of his child, a girl three years of age, having swallowed one or two copper pennies—he was not certain how many. He informed me of his intention of giving the child an emetic at the time of occurrence, but was induced by his wife to wait until the arrival of medical aid. As the child was in good spirits after the accident, and complained of no bad after-effects, I soothed the anxious parent and gave directions for the treatment of the child. I merely ordered a diet the principal constituents of which should be oatmeal-gruel and milk, hominy, rye-bread, a few figs or dates, and some stewed prunes. The child had a slight evacuation of the bowels the next morning, but the coins did not appear. I visited the child in the evening, and was about to order a cathartic, when the patient had a voluntary movement, passing the coins (two) without any pain or inconvenience. On examining these, I saw two new 'copper pennies,' closely adhering to each other, in which condition they were probably swallowed, and which relative position they maintained during the entire digestive process and circuit through the alimentary tract, the duration of the latter being about twenty-two hours. The exposed surfaces and part of the edges were covered with verdigris, while the two adjacent surfaces were untarnished, and presented the appearance of a coin recently from the mint. It is this latter fact which justifies the assumption that both pennies were swallowed simultaneously. The child was well, and is so to date."

INSUFFLATIONS OF QUININE IN WHOOPING COUGH.

Dr. W. P. Swett, of Terryville, Conn., writes: "In your remarks regarding the treatment of pertussis, the insufflation of boracic acid as used by Dr. Holloway is mentioned. I wish to call attention to the treatment by quinine insufflation as detailed by Professor Forcheimer in the January number of the *American Journal of Obstetrics* for 1882. I have in mind thirty cases, all under ten years of age, in which there was a positive and immediate change for the better after the morning and evening insufflations of the first day, the invariable result being fewer paroxysms both by day and night, better sleep and appetite, and in all the solitary cases retention of food from the first. The separation of the patients far beyond hearing distance would, in reason, very materially assist in any plan of treatment. Sulphur-fumigation was a decided help in the families in which there were two or three cases. The adults, in these families, who had a sympathetic cough all remarked the relief they themselves felt, together with the children. That better results are obtainable when the insufflations are continuously performed by the physician is true, but an ordinarily intelligent person can, and in the country must, do it, with, of course, or by the direction of the doctor—and the reports of the case, if carefully kept, will more than satisfy all concerned."

SOME TOXIC EFFECTS OF ANTIPYRINE.

Dr. C. F. Barber, of Brooklyn, writes: "The following case came under my notice but a few days since, and as illustrative of the poisonous effects of our new antifebrifuge, antipyrine, I place it before the readers of The Medical Record. The patient, a man of robust constitution, feeling slightly indisposed, took, on December 11th, a dose of compound cathartic pills. These acted with their usual promptitude, and so relieved him of his bad feelings that he attended to business on the following day. Returning home, however, about supper-time he again experienced a slight indisposition with a mild headache as the prominent symptom. He had eaten but little during the day, and that, with the effects of four compound cathartic pills, probably accounted for his ill feelings. However, having some antipyrine in the house, and having heard that it acted well in headache, he took fifteen grains, with the following result: Retired at once. Was no sooner in bed than intense itching began to annoy him, commencing on the face and extending over the whole body. Immediately following this pruritus an erythematous blush covered the body. This, in a short time, resolved itself into the characteristic lesion of urticaria. The face was so markedly swollen that the patient's features were entirely obliterated. The urgent symptoms disappeared quickly after the administration of an emetic, and after mild purgation the patient was again restored to his usual health."

A CASE OF OVARIOTOMY.

Dr. Gustavus Zulch, of New Knoxville, O., reports the following case: "Mrs. K——, forty-two years of age, the mother of eight children, had been a healthy woman up to July last, when she was taken with a diarrhœa, and hemorrhage per vaginam, and all summer she suffered from dysentery, uterine hemorrhage, vomiting, and fever. I was not called until about the middle of October, when, on examination, I found a tumor occupying the abdomen similar in extent and shape to a womb in the eighth month of pregnancy. A careful examination gave ample proof that it was pathological. My hopes that an improvement in the patient's general condition would give us a fair chance for a successful operation were not realized; I concluded to operate, nevertheless, seeing that a fatal issue would otherwise soon take place, and did so on November 19th, with the fullest consent of my patient, her temperature at the time of the operation being 102°; pulse, 120; respiration, 45. The abdominal cavity having been opened with antiseptic precautions, we found, as we had expected, a tumor, adherent to abdominal walls and intestines, but a moderate force of the hand would suffice to sever its attachments. On tapping it with Thomas' trocar a bloody fluid of a cadaverous smell, and soon becoming so thick that it blocked up the cannula altogether, was found to be its contents. The size of the tumor having been diminished but little by the tapping, I extended the abdominal incision to a sufficient extent to enable me to get it out entire. The short, fleshy pedicle was ligated, and dropped into the abdominal cavity. The wound was now closed by a double suture. The peritoneum was sewed separately with fine silk and by a continuous suture, the rest of the wound was united by a deep silver wire, and a superficial silk suture. A heavy antiseptic dressing was retained by a many-tailed bandage. The tumor, weighing fifteen pounds with its contents, consisted of one large cyst, the inner wall of which looked like a half-rotten placenta, and a few small cysts containing a colorless fluid. The patient lived forty-two hours after the operation. She suffered no pain, but her temperature was never quite up to normal; she was covered by a cold, clammy sweat, and pulse and respiration went up steadily until she died. A post-mortem showed wound and contents of abdominal cavity to be in an excellent condition. No peritonitis, no hemorrhage."

The Effect of Opium on the Higher Animals.—It has recently been observed that opium affects apes just as it does men, producing all of the physical symptoms, and strongly suggesting the presence of some, at least, of the typical psychical accompaniments. A certain ape would always follow any opium-smoker, would look for the remnants which the smoker left unused, would cry when not admitted to the room where smoking was going on, and so on. The habit takes the same possession of them that it does of men. Apes who are in the habit of getting a little opium are inactive, dull, and useless if they miss their usual dose; and a Chinese merchant is recorded as having a large ape who howls piteously when his usual ration of the drug is denied him. Similar effects have been observed in dogs, and strikingly illustrate the functional similarity of the central nervous system of the higher mammalia.—*Science.*

Progress of Medical Science.

Uterine Diseases and Insanity.—Dr. Alice M. Farnham, in *The Alienist and Neurologist*, combats the wide-spread notion that uterine disease is largely responsible for insanity. From a study of this topic she has been led to the following conclusions: While the female reproductive organs and the brain are closely associated, often acting and reacting upon each other, uterine disease alone is seldom or never the cause of mental alienation—other conditions, as hereditary predisposition to insanity, poor bodily health, or mental worries, one or all furnishing the necessary adjunct to the development of disorders of the mind. In insane women irritation of the genitalia often gives a peculiar character to the mental condition. Menstruation, like any periodic lowering of the standard of general health, frequently acts, in cases of mania, as the excitant of the most marked maniacal outbursts.

Excavating Myelitis.—Drs. Joffroy and Orchard recently read a paper before the Academy of Sciences on excavating myelitis. This morbid condition is also known under the designation of hydro-myelia, syringomyelitis, and peri-ependymal myelitis. In two cases they found evidence of a slow inflammation, and they consequently reject the view that the cavities result from enlargement of the central canal from cystic degeneration of a hemorrhagic or gliomatous focus. They believe that the distribution of the vessels to the centre of the cord explains the anatomical disposition of the cavities. According to them, the course of events is first a myelitis affecting a special site in the neighborhood of the ependyma. This inflammation causes an obstruction of the vessels supplying the gray matter around the ependyma, and consequently there results a softening which leads to excavation. The formation of a limiting wall to the cavity follows, and its pathogeny is therefore the same as that of the wall of ancient foci of cerebral hemorrhage or softening.—*La France Médicale.*

Methylal.—At a meeting of the London Medical Society, Dr. Richardson read some notes on methylal, of which the following is a summary (*The Lancet*): 1. Methylal is hypnotic and antispasmodic. 2. Its action lies between methylic alcohol and ethylic ether; it may be looked on as a volatile alcohol, and resembles closely pure methylic alcohol in action. 3. It can be administered by inhalation as vapor, by hypodermic injection, and by the mouth in aqueous solution. 4. It reduces arterial tension, and by local action excites glandular activity. 5. The sleep it produces is not profound unless the dose be excessive; it is quickly eliminated, and leaves no serious effects; it causes no vomiting or stomachic disturbance. 6. A fatal dose by inhalation kills by complete relaxation of the muscular fibres of the heart, leaving the heart distended with blood and the vascular organs intensely congested. 7. It combines with ether, alcohol, amyl nitrite, and many other remedial agents with which it acts in concert, and equalizes their action by reason of its own solubility. 8. Its tendency is to maintain the fluidity of the blood, and it may therefore be of service in combination with ammonia. 9. It promises to yield a safe and effective anæsthetic mixture in combination with ether. 10. It reduces the animal temperature, but not to the same degree as common alcohol. 11. Used as an anodyne, it passes out of the body without producing organic injury, when not often repeated. 12. But, like all bodies of its class, it must be given in increasing quantities in order to keep up its effects, and it would soon yield evil as well as good by its habitual use in the community at large.

Colchicum for Gout.—Dr. Carter believes that colchicum should be avoided in all cases of gout attended with debility and cardiac feebleness, and that its use should be limited to early attacks of a sthenic type, and when the pulse is one of high tension. From the liability of colchicum to depress the system and to interfere with renal elimination, its administration should not be continued for a longer period than is absolutely necessary for the relief of pain. In order to prevent the employment of a larger quantity than is necessary for this purpose, it is desirable to give the drug in moderate doses, repeated at short intervals, rather than in a large single dose. There is no evidence of the curative influence of colchicum and, in spite of the relief afforded, it tends to favor recurrence, and it is safer to avoid its use altogether if possible. Dr. Carter has found that such dilators of arterioles as nitrite of amyl, nitro-glycerine, and nitrite of sodium are scarcely inferior to colchicum in affording relief to gouty inflammations. Veratria, a powerful vascular depressant, is the principal constituent in a well-known nostrum for gout (Laville's). Besides filling the cutaneous arterioles and swelling the skin, which actively perspires, with lowering of the general blood-pressure, colchicum diminishes the function of the sensory nerves, and may in this way tend to relieve pain. The sweating may also aid elimination, and relieve the kidneys from some of their work.—*Birmingham Medical Review.*

The Significance of Axillary Adenitis.—It is believed by M. Grancher that tubercular diseases of the lungs may through the mediation of the pleura infect the ganglia of the axilla (*The Lancet*). This peculiarity does not appear hitherto to have attracted much attention, and it is thought that the occurrence of such axillary adenitis may not be rare. The knowledge of these facts is regarded as having much importance, not only from a doctrinal point of view, but also from the stand-point of diagnosis. Grancher advises that henceforth every case of phthisis should be examined for axillary swellings, and, conversely, that every case of axillary adenitis should be examined for the signs of pulmonary mischief.

Benzol in Pertussis.—A correspondent of the *British Medical Journal* writes that for many years he has used benzol, and it alone, internally for this complaint. In spite of its being dispensed by many different chemists, he found great uniformity in the medicine supplied. He has great confidence in the "benzol puriss." supplied by chemists for many years past. The spasmodic cough yields, expectoration diminishes in quantity and viscidity, and is more readily brought up, while the sickness so frequently terminating an attack of cough soon disappears. The taste is certainly pungent, and at first disliked, but, after a short time, children seem to acquire a taste, and even ask for it. He has treated at least one hundred cases with it alone, nothing else internally (except added to moderate the flavor), with stimulating liniments over the thorax and nose. Since he first commenced its use he has lost only one case of whooping-cough, and this occurred in an infant, and was accompanied by convulsions: the child was aged twenty-four days at death. He gave it with mucilage and tinct. chloroform. co. in from two to ten minim doses.

Fatal Stricture of the Bile-duct without Gall-Stones.—At a meeting of the London Clinical Society (*The British Medical Journal*), Dr. Sidney Phillips reported the case of a man, aged sixty, who came under his care at St. Mary's Hospital with obstructive jaundice without obvious cause. The patient had had gout, but never syphilis, and for some years had been a very hard spirit-drinker. He had never had colic, vomiting, or any symptom of the passage or impaction of gall-stones. There was no evidence of perihepatitis. While under treatment the gall-bladder became gradually more and more distended, and the jaundice more intense. Much cutaneous irritation, with xanthelasma and purpuric blotches on the skin, was set up, and the patient, after five months, died of exhaustion. At the necropsy there was found a stricture of the common hepatic duct, much resembling a "cartilaginous" stricture of the urethra. There was no ulceration or adhesion of the mucous surface, but the stricture resulted from a tough fibrotic contraction of the outer wall of the duct. The gall-bladder was full of clear fluid. The liver was simply enlarged from the obstruction of the duct. Dr. Phillips pointed out that this case, though rare, together with three somewhat similar cases recorded by Dr. Moxon, Dr. George Johnson, and Mr. T. Holmes, contributed to establish the fact that stricture of the bile-duct might exist without any symptoms of gall-stones. This was important in the diagnosis of the cause of obstructive jaundice, and might also be of service in the treatment; for, seeing the successful results of cholecystotomy, etc., it might be possible to give an exit to the obstructed fluid, or at any rate to postpone one danger, that of rupture of the gall-bladder. Dr. Phillips submitted also that it was very probable not only that stricture was set up without symptoms of gall-stones, but also that it might arise from causes entirely unconnected with them. In favor of this, stricture sometimes occurred above the cystic duct, and in a position, therefore, where gall-stones would not pass. The absence of symptoms of gall-stones was also a presumption against their having been present, but the main point which seems to prove that the stricture was not always due to calculi was that in some cases, as in the one he had recorded, the mucous membrane was not abraded, and the stricture was formed by contraction of the outer fibrous coat of the duct. Sufficient cases had not been reported to decide what causes, if not gall-stones, would produce stricture, but possibly long catarrh might lead to stricture of the bile duct as gleet led to stricture of the urethra

Dogs in Relation to Hydatic Tumors.—Dr. Ollivier, in a communication on the subject of the relation between the *tænia echinococcus* of dogs and hydatid cysts in man, observes: "The number of hydatic cysts in a country is in direct proportion to the number of dogs." Facts seem to confirm this theory, for they show that there are more hydatid cysts in hill-districts than in the lowlands, in the country than in towns. The author cites several cases observed by him, in which the cyst was plainly traceable to previous intercourse with dogs, in patients fond of these animals. A long period, sometimes years, may elapse before the echinococcus develops itself, but the cause is none the less evident. Children are always fond of dogs, and like to play with them, and these pets are affectionate and caressing, and have a bad habit of licking; in this way the animal's tongue may prove a ready means of propagation of the eggs of tænia. It is also possible that they may be inhaled when, in very dry weather, these eggs are carried about by the wind. This would explain certain cysts in the respiratory organs. The penetration into the human organism, however, generally takes place through the digestive organs, by means of salads, green vegetables, fruit, and other aliments imperfectly cleaned; or by water from ponds, reservoirs, or wells contaminated by dogs resorting there to drink. The author points out the precautions which should be taken to diminish the danger of propagation of this parasite: greater care in the choice and cleanliness in the preparation of certain articles of food; avoidance of unfiltered water, and particularly of stagnant water of any kind; and, above all, less intimacy with dogs, particularly in the case of children, who should be carefully watched. He condemns altogether house-dogs of all kinds, as being a source of continual danger as regards the propagation of the eggs of *tænia echinococcus*.—*The British Medical Journal.*

The Treatment of Peritonitis by Laparotomy.—The idea of opening the abdomen and washing out the peritoneal cavity for peritonitis seems to have been suggested as far back as 1848, but the practice, for reasons which it is not difficult to conceive, has progressed but slowly (*The British Medical Journal*, November 12, 1887). It was first proposed for acute peritonitis, and later on it has been employed with marked success in the treatment of encysted and tubercular peritonitis. A discussion took place recently at the London Clinical Society which gives a good idea of what has so far been accomplished in this direction. So far as concerns suppurative peritonitis, the rules apply which apply to suppuration in serous cavities elsewhere, the knee-joint, for example. There is practically no alternative save the "expectant" treatment, which, with the brilliant record of cures before the profession, would be altogether unjustifiable. The only point on which opinions differ is as to the desirability of draining the peritoneal cavity through the abdominal wound. Mr. Barwell was strongly opposed to this, as useless and possibly dangerous, for mechanical reasons, but was evidently partial to the idea of draining through Douglas' pouch in female patients. The latter procedure is viewed with some disfavor by gynecologists in their abdominal operations, and appears to have dangers of its own. The question, therefore, is whether drainage is indispensable, or whether it is not. Mr. Barwell maintains that it is best dispensed with; Mr. Frederick Treves, on the contrary—and he expressed the opinion of most of the speakers—considers drainage an essential step in the operation. Experience alone will show which is right; possibly there are varieties which may require it, and others in which it is less essential. The operation has not yet been performed on a sufficiently large scale to enable definite rules of conduct to be laid down, but common sense would suggest that if drainage of any kind be thought desirable, it should be planned with due regard to the law of gravitation.

Surgeons of the old school cannot fail to be surprised at the ease and safety with which the peritoneum can be cut into, sponged, and irrigated. This is especially the case when the membrane has been the seat of chronic inflammatory changes, as in tuberculosis. The result in many cases would seem to warrant the use of the word "cure" in reference to the tuberculous condition which was proved to exist. Not only did the local tubercular lesions become quiescent, or even disappear (so far as can be judged), but any pulmonary symptoms also underwent marked improvement. In a paper read before the congress of German surgeons, recovery took place in thirty out of thirty-six cases. If the diagnosis of tuberculous peritonitis is to be accepted—and every precaution would appear to have been taken to insure its accuracy—then our views of the pathology of tuberculosis must needs be modified. This, indeed, may underlie the reluctance manifested by many eminent authorities to accept of the natural conclusion to be drawn from the startling results obtained. A more mature experience will enable us to ascertain with greater precision the indications for treatment and their bearing.

The Duality of the Brain.—In a paper read before the Académie des Sciences (*La France Médicale*, October 26, 1887), Brown-Séquard reported the results of some experiments going to show that anæsthesia, paralysis, and local elevation of temperature, caused by an organic lesion of the nervous centres, may be transferred from one to the other side of the body under the influence of a second lesion of these centres. From this he concluded that these manifestations are not necessarily the effects of the destruction of certain nervous elements possessing certain functions, but may be the results of pure dynamic actions exercised at a distance through the irritation caused by the lesion. He further concluded that one half of the brain could serve for sensation, voluntary movements, and vaso-motor actions for both halves of the body, and that the same was true for the spinal cord, at least as far as sensation and vaso-motor action were concerned.

La Lombardia quotes the following illustration of the effects of professional competition: A doctor—we presume one qualified to kill, if not to cure—advertises: "I undertake, whenever my treatment is not followed by cure, to bear half the expenses of the funeral."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, January 7, 1888.

THE CONDITION OF OUR QUARANTINE.

THE conference committee of the New York Academy of Medicine which was appointed, at the suggestion of Health Commissioner Joseph D. Bryant, to examine and report upon the present condition of our quarantine, has set forth its labors in a lengthy and formidable document of objections and suggestions. The conclusions reached are summed up in a few words, to the effect that the arrangements at quarantine are entirely inadequate for the protection of this city from disease. This is by no means surprising intelligence, and it is a matter for congratulation that the question of care of immigrants has now been fairly brought to the surface of calm discussion. The machinery of the quarantine commission has been so shamefully crippled by outside political influences that the time is opportune for some direct and effective interference on the part of the Legislature and State Executive. We are well aware that there have been many good reasons advanced for the non-effectiveness of quarantine, or rather the impossibility of perfectly carrying out its provisions. There are, it is true, a multitude of considerations bearing upon collateral conditions which have to be taken into account. Even in face of the fact that the good of the many makes it necessary to sacrifice that of the few, there is a limit to the restraint of personal liberty, as well as a latitude to the demands of commercial intercourse. It is, however, not necessary to discuss these points at this time. In the present state of professional and lay opinion, it behooves the government to get all the good it can out of quarantine, and this is still very considerable.

This brings us to the point of saying that there is no excuse to be offered by the authorities for not properly caring for the necessities and comforts of the unfortunate sick ones who are forced to be under their charge. It is more than incumbent upon the custodians of quarantined individuals to do this, as the sufferings of the subjects are entirely under control. The hospitals on Hoffman and Swinburne Islands are not fit for their purposes. Hence, we are not surprised to hear that unless radical changes be made there will be more than the ordinary danger, with the coming of warm weather, of disseminating disease throughout the city and thence throughout the country.

In any attempt at correcting abuses there is nothing like getting down to the facts of the case. The latter has been very effectively done by the committee in question, the members of which are well-known and impartial gentlemen, who have no interests save those of right and truth to subserve. Hence, their statements and suggestions are deserving of every consideration. The defects which are pointed out in the elaborate report are very serious, and we call attention to them in our summary review for the purpose more particularly of enforcing the recommendations of the committee for radical changes in the whole system. We are informed that the ground of Hoffman Island is soft, uneven, and full of recesses in which water and refuse are retained without any chance of being cleaned. The present condition of the buildings used for the residence of quarantined people is so bad that it is recommended that they be razed and remodelled. The supply of water is insufficient, and warm water is almost entirely wanting. For a population now there of more than five hundred persons, there are only about four water-closets, each closet having three or four hoppers, some of which are not flushed at all!

The cleansing and disinfecting plant is entirely inadequate, making it impossible either to cleanse the clothes or the persons of the quarantined, or to keep them clean. The arrangements of the islands are by no means such as allow of perfect isolation of the infected from the suspected. Numerous detailed suggestions are made to meet the necessary requirements, which comprise the reconstruction of the "rip raps," the building of walls of separation on different parts of the island, and of rearranging the compartments of the buildings in case it be considered necessary merely to remodel the latter.

That it should be considered necessary to recommend a proper flushing-tank for the sewers, and that "no sewage should be allowed to pass into the bay without being subjected to chemical treatment," needs no comment upon the necessity for the inspections made. The disinfecting plant, which should be situated near the waters, we are told should consist of suitable apparatus for a superheated dry temperature of 220° F., and for moist steam under 15 or 20 pounds pressure. The materials disinfected should be separated or individualized at one end, and removed from the other by separate people.

It is also recommended that a resident medical officer, who shall also be superintendent, be appointed and have under his control a full corps of competent nurses. The wards should be supplied with a large stock of vessels suitable for receiving and disinfecting the dejecta of patients before they are committed to the sewer.

A new filth-proof morgue should also be constructed, consisting of a room for storing bodies, and another to be used for their disinfection, embalming, and for autopsies. The dead bodies should be subjected to such processes as would render them before burial innocuous, and prepare them for a decay which would not imperil the living.

As we before intimated, it is impossible, and, indeed, unnecessary, to go over in detail the different recommendations as to size and situation of rooms, ventilation of pavilions and cellars, construction of laundries, arrangement for drainage, etc.; suffice it to say that they are in keeping with the advanced sanitary requirements of the day, all urgent and necessary, reasonable and possible.

We doubt not that the voice of the committee will now be heard, that the public will be satisfied that a radical reform of the whole system is called for at once, and that the time for political dickering has passed. His Honor the Mayor, the Board of Health, and the Health Officer of the Port are in perfect accord with the Committee, and nothing now remains but sufficient funds to carry out the plans. The latter can be most economically done by tearing down all the old buildings and building anew—in fact, this is the only sensible way of striking out all the objectionable conditions, and laying a broad and sure foundation of radically effective reform.

REPORT OF THE SURGEON-GENERAL OF THE ARMY.

THE annual report of the Surgeon-General of the Army for 1886–87 contains a somewhat new feature. The records of sickness and mortality among the troops are classified according to their location in different geographical divisions of the country. These divisions are very nearly the same as those used in compiling and arranging the vital statistics of the United States census, and are based upon certain common climatic conditions. The records are made more instructive by the addition of a colored map, showing these different regions. The average strength of the army in the past year was 23,572, and the number of cases of sickness recorded was 29,761, or 1,263 per 1,000. This is lower than the average for the past decade.

The death-rate was 8.8 per 1,000, which is also lower than the average, or 11.4 per cent.

The average duration of sickness was eleven days. This is about the same as that in the Prussian army, and is less than that in the English army. The average death-rate of the United States army on a peace footing is higher than that of the European armies, which range from 4.6 (Prussia) to 10.6 (Italy).

Thirteen per cent. of all the time lost by sickness was due to alcoholism and venereal diseases.

A section of the report is devoted to the hygiene of the army, and it is shown that much attention is now being given to the improvement in the sanitary condition of the quarters occupied by troops, and to such measures as would be likely to ward off sickness in general.

The Army Medical Museum has received 2,123 specimens during the year, making a total of 26,072.

The more interesting specimens added to the museum collection during the year ending June 30, 1887, were a series of plaster casts and bony preparations collected by the late Professor F. H. Hamilton, of New York; models of the heart and vessels of various fishes, mussels, etc., prepared by Auzoux, of Paris; skeletons and crania of ancient Laps and Finns: a series of corroded metal injection specimens of the vessels of the kidney, liver, and lung, and a series of old microscopes illustrating the gradual improvement in these instruments.

There were added to the Medical Library 6,824 books, 3,067 theses, and 9,955 pamphlets. Volume VIII. of the "Index Catalogue" has been issued, and the work on Volume IX. is well advanced.

It will be seen that the report of Surgeon-General Moore contains a number of interesting details, and reflects great credit upon the efficiency of the army medical service.

DEFECTS IN THE TEACHING OF ANATOMY.

THERE are few physicians who, recalling their student days and the slumberous hours of the anatomical lecture, will not admit that the methods of teaching this branch in many colleges are fundamentally wrong.

The impression still left on many from their student experience is, that lectures are somewhat superfluous academic efforts, and that all of anatomy which is really learned comes through quizzes and private study.

This is, we think, not quite a just view of the matter. The lecturer ought to be able to tell things in a way which books cannot imitate, and ought to infuse into students an interest and enthusiasm such as he can gain in no other way. The lecturer still has his uses. But that there are defects, and plenty of them, in his methods of teaching anatomy is most apparent. Some of these have been recently discussed in an article by Dr. A. H. P. Leuf (*Gaillard's Medical Journal*, December, 1887).

The criticisms made are mostly such as could only be charged against unintelligent and incompetent anatomists. There are, however, some defects which, it is believed, are common to nearly all American medical colleges. One of these is no doubt the excessive individualizing of the different parts of the body. Too many areas, triangles, subdivisions of organs, ridges, processes, are forced upon the student's attention and memory. His mind, confused with details, cannot grasp general views. Though he knows all the points of interest on the four surfaces, the greater and lesser wings, and the pterygoid processes of the sphenoid bone, he really has but a vague idea of its exact relations in the cranium. He knows, perhaps, every wrinkle on the pelvis, but has no just conception of the mutual relations of the organs inside it.

It is one of the traditions of anatomical teaching that great stress should be placed on the bones. Sir Astley Cooper's advice, "Bones at morning, bones at noon, and bones at night," has expressed the feeling of anatomical teachers for many years. This opinion, however, is of a time when bones and joints and muscles were the best known and best illustrated parts of anatomy, while the true structure of the viscera was much more imperfectly understood. Often the bones still take up a disproportionate amount of time. As medical students cannot be made to master completely all branches of anatomy, each must be taught with due regard to its practical importance. This sense of proportion has been lacking in many anatomical teachers, if we may judge from complaints that occur. The topography, structure, and relations of the abdominal and pelvic viscera are, as a result, often most imperfectly understood, while the layers of muscles on the back may be recited with the utmost glibness. It is stated by hospital examiners that few students graduate with more than a rudimentary knowledge of the nervous system.

While we cannot entirely admire its literary style, we submit Dr. Leuf's summary of the defects which he thinks exist in the present method of anatomical teaching:

"1. The instruction is special, though complete only as regards certain organs or parts of the body.

"2. It is too general as regards other organs or parts of the body.

"3. It is neither the one nor the other as regards still other organs or parts of the body.

"4. It is the custom to generally overlook these relations of organs to one another, which, if properly taught, would be very useful to remember.

"5. There is a general failure to prepare the student's mind with a proper incentive to acquire anatomical knowledge before it is imparted.

"6. Too little is said of the philosophy or principles of anatomy, which, if properly taught, would make remembrance easier.

"7. The failure to always clearly show the relations of anatomy to the other branches of medicine.

"8. Incompetent teachers, or such who, though competent, are indifferent, or have not sufficient time to do their duty."

THE SIZE OF AMERICANS.

SOME interesting statistics, collected a short time ago from hatters, seemed to show that the heads of Englishmen and of Americans were growing larger. Quite recently Mr. Edward Atkinson has collected statistics from clothiers all over the United States, and comes to the conclusion that the whole American, as well as his head, is growing bigger. In any given thousand garments Mr. Atkinson found that the average of all the returns is as follows: Chest measure, 38 inches; waist, 33½ inches; length of leg, inside, 32½ inches; average height ranging from 5 feet 8½ to 5 feet 9 in New England, up to 5 feet 10 for the average at the South and West. A few deductions of weight are given, from which one can infer that the average man weighs between 155 and 160 pounds.

Since the war the people of the South have been more active physically, and in consequence they measure fully an inch more around the chest and waist. The Southerner has comparatively a long leg and a small waist. He measures 37 inches around the chest, 32–33 around the waist, and has a limb of 33 to 34 inches in length. In Texas alone there seems to be a disproportionate increase of waist, giving the impression that the citizens of the Lone Star State are acquiring habits of indolence and ease. The Yankees resemble the Southerners in having long legs and small waists; this anatomical conformation is incorporated in the historic conceptions of Brother Jonathan, and may be considered the anatomical characteristic most common to pure Americans.

In the West, from climatological and ethnological causes, the waists are proportionately larger, and the legs shorter. A Detroit correspondent says: "We notice marked peculiarities in regions where dwell people of one nationality. The Germans need large waists and short legs, the French small waists and legs, the Yankees small waists and long legs, the Jews medium waists and short legs."

NORTHWESTERN MEDICAL AND SURGICAL SOCIETY.—At the annual meeting of the Northwestern Medical and Surgical Society of the City of New York, held December 21, 1887, the following officers were elected: President, Dr. R. C. M. Page; Vice-President, Dr. A. M. Jacobus; Secretary, Dr. Edward S. Peck. The President and Secretary form the Committee on Publication.

News of the Week.

DR. E. G. LORING writes: "A slight misconception occurs in your last issue in regard to some remarks which I made before the Practitioners' Society. It is stated in your report of the proceedings that 'it was worthy of note that nearly all the changes in the eye, in general diseases, had been recognized within the last ten years.' It should be that 'changes had been recognized in the eye, in nearly all the general diseases, in the past ten years.'"

DR. FRANK POTTER, a leading physician of Petersburg, Va., fell dead January 3d, of heart disease, while going into a drug store. He was sixty-five years old.

THEODORE H. COOPER, M.D., a member of the Assembly of New York State of 1865, died at Warwick, on Monday, January 2d, aged fifty-four years, after a short illness.

THE LITERATURE OF GYNECOLOGY in the past eight years, says Dr. Skene, has been enriched by 807 books and 7,505 journal articles and pamphlets. This makes about 2 books and 18 articles a week.

AN ANTIDOTE TO SERPENT'S VENOM.—Dr. H. C. Yarrow confirms the view of Dr. Josso, that jaborandi has decided antidotal powers to serpent venom.

ARSENIC CANCER.—Mr. Jonathan Hutchinson, after referring to the fact that arsenic, when long used, may lead to the development of soft corns on the palms or soles, states that, in his belief, arsenic may also produce, or at least be an exciting cause of, epithelial cancer. Sir James Paget held the same view. This will be joyful news to our homœopathic brethren.

THE THERAPEUTIC VALUE OF HYPNOTISM.—A correspondent asks whether hypnotism is a practical therapeutic measure. We answer decidedly, no. Only persons of a weak or unstable nervous system are amenable to hypnotic influence. This influence is itself bad, for it increases the natural nervous irritability. As a therapeutic measure it answers sometimes to relieve symptoms in the hysterical or insane, and we have known it sometimes to relieve neuralgias, sea-sickness, and spasmodic conditions. Details of the methods of its employment will be found in an article on the subject by Dr. C. L. Dana, in THE MEDICAL RECORD of July 21, 1881.

REDISCOVERY OF COW-POX.—Professor Crookshank has discovered an epidemic of cow-pox in England. It was at first thought to be the so-called scarlet fever of cows.

THE GOVERNOR'S MESSAGE.—Governor Hill in his annual message, this week, recommends the abolition of the State Board of Charities and the concentration of its powers in a single officer, and the abolition of the State Board of Health and the vesting of its powers in one official The object involved in these two measures is the concentration of official power and responsibility in some one responsible head, by which the efficiency, usefulness, and economy of the public service will be increased.

Blood and Buttons.—Beef's blood is being used in Chicago to make buttons.

The Hospital Saturday and Sunday Collection had at date of writing reached the sum of about ten thousand dollars.

Another Report on Quarantine Abuses.—The report of the Committee of the New York Academy of Medicine, on quarantine abuses, has been made to the Mayor. The members of the committee were: Dr. C. R. Agnew, Dr. E. G. Janeway, Dr. Stephen Smith, Dr. A. Jacobi, Dr. T. Mitchell Prudden, Dr. Herman M. Biggs, and Dr. Richard H. Derby. Their investigation began, December 19th. They call attention to the fact that the quarantine establishment is in the custody of the Board of Quarantine Commissioners, and that the health-officer has no other control than that of police. No opinion is expressed regarding the advisability of placing quarantine under charge of the general Government.

The Fees of the Health-officer.—A bill has been introduced into the State Legislature reducing the fees of the health-officer of this port and placing him on a salary of $10,000.

Twins, one Black and one White.—Dr. Newton Hill, of Pickensville, Ala., sends to the *Medical and Surgical Reporter* the report of the following case: "A black negro girl, about eighteen years of age, gave birth to twins at seven months, one of which was as black as the *ace of spades*, and the other as white as any white child I ever saw. This girl has been engaged as nurse in a white family a part of the year, but she has associated with both white and black. Both cords were attached to same placenta. Is this merely a freak of nature, or is it possible that they have different fathers? I would like to have the opinion of some of the brethren." A similar case is reported in Flint's "Physiology," and it is believed to illustrate the fact that there can be such a thing as superfecundation.

Concerning a Cerebral Tumor.—A lively discussion has arisen in the Irish Academy of Medicine over a case of cerebral tumor which, it is claimed, should have been operated upon and removed. The patient suffered from sensory aphasia, and local spasmodic and paralytic troubles. It was agreed that she had a tumor, but whereas Mr. Wheeler thought that it was situated immediately posterior to Broca's space, and might, without reasonable doubt, be got at by the trephine, Mr. Franks, backed by his consultant, Dr. Head, believed that it might be anywhere, that it would probably not be reached by operation, and—if reached—would be probably found to be solid and not relievable. The patient died unoperated, and on post-mortem examination a fluid cyst was found in the temporo-sphenoidal lobe, about an inch behind Broca's space. Now Mr. Wheeler claims that the patient's life might have been saved by an operation.

A Sanitary Journal Sued for Libel.—The *Annals of Hygiene* has been sued for libel by a certain "Sparkling Distilled Water Company" of New York City. The suit grows out of the publication in the December issue wherein it was stated that the water which this company places upon the market did not, upon analysis, prove to be the same as that which they claimed in their published analysis in The Medical Record. The *Annals of Hygiene* is the official organ of the Pennsylvania State Board of Health.

Can a Woman Conceive after having Gonorrhœa?—To this question, propounded in the *Medical Brief*, a number of affirmative answers are, of course, given. Mr. James Ward Scott writes: "Assuredly; why not? Miss ——, aged eighteen, among my first calls, had a 'blooming case.' At twenty married a Baptist preacher; settled down in Virginia; *eight children*. Mrs. ——, widow, fell from grace journeying to St. Louis in sleeping-car; beautiful case. Married second time, and had *twins* eleven months after. Could give many more cases, but the two mentioned will answer. Every country doctor knows that gonorrhœa will not prevent conception."

The Blood in Tuberculosis has been found, by Freund, of Vienna, to contain a peculiar body resembling cellulose. This discovery of cellulose has been confirmed by Dr. Kabrhel, of Prague. Dr. Freund also finds in the blood of the tuberculous an excess of potassium salts and decrease in phosphoric acid and sodium salts.

Microbes and Expired Air.—The expired air is optically pure and contains no microbes. Respiration purifies air, therefore, so far as microbes are concerned.

The New England Cremation Society, organized in Boston two years ago, has disbanded, because the Bostonese refused to be cremated.

Homœopathic Dosage.—The homœopaths of this city are prescribing antipyrine in fifteen-grain doses.

Ptomaines in Puerperal Fever.—Dr. L. Bourget, in an inaugural dissertation (*Thèse de Genève*, 1887), states that he has succeeded in isolating certain ptomaines from the urine of several women suffering from puerperal fever. Having studied these substances both from the chemical and biological point of view, he has arrived at the following conclusions: 1. In puerperal fever, the urine contains some bases of a very toxic nature. 2. These toxic principles seem to attain their greatest development during the acute period of the disease. Their quantity diminishes with decrease of the morbid phenomena. 3. The chemical bodies in question produce in animals (frogs and guinea-pigs) exactly the same disturbances as are brought about by certain poisonous ptomaines. 4. Various organs of a woman who had died from puerperal fever were also found to contain some toxic substances which, in their biological effects, closely resembled the toxic bases obtained from the urine. 5. All those extractive products found in the urine and organs gave all the general reactions of vegetable alkaloids and ptomaines. 6. In a chemical analysis for medico-legal purposes, they may be mistaken for a vegetable alkaloid, or, at least, may interfere with the characteristic reaction of the latter. 7. Such grave mistakes can be avoided by carefully purifying the examined material after Stas-Otto's methods.—*British Medical Journal.*

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, December 26, 1887.

LAURENCE JOHNSON, M.D., PRESIDENT, IN THE CHAIR.

DR. J. S. WARREN read a very acceptable

BIOGRAPHICAL SKETCH OF WM. M. CHAMBERLAIN, M.D.

THE PRESIDENT announced the death of C. Dixon Varley, M.D., and Thomas J. I. Ford, M.D.

DR. G. H. FOX then read a short paper on

THE VALUE OF RESORCIN IN THE LOCAL TREATMENT OF ACNE.

The chief divisions which he made of acne were, first, that form in which the vascular element was a well-marked feature, and in which local treatment was *not* indicated, but, rather, general tonic and hygienic; and, second, that form where the disease was indolent, with dilated glands and ducts and comparatively little congestion of the skin, and in which stimulating applications could be used with advantage.

Remarks were made by Dr. Lewis and the President.

DR. J. LEONARD CORNING then read a paper (see p. 3) on

THE TREATMENT OF CHOREA BY CEREBRAL REST,

in which he first referred to the history of the disease and its different names. He thought it quite impossible to distinguish chorea major as a separate disease, and included in his paper only the phenomena of what was known as chorea minor. The clinical phenomena of the affection were then described—the movement of the muscles of the face and other parts of the body, the disturbances of psychical functions and sensation, etc. In the majority of cases the disease terminated in complete recovery. He also spoke of the relations existing between rheumatism and scarlatina and chorea, and of other causes, such as fright, peripheral irritation, which, if not a direct cause, might favor its development in neurotic subjects, as seen in phimosis and some ocular troubles.

After referring to the pathology of chorea, which in most cases was a functional disturbance of the cerebral cortex, he passed to the treatment, and the chief indication was

TO ALLAY CEREBRAL ERETHISM.

The great factor in securing that end was prolonged rest. To secure that he endeavored to remove all sources of irritation, all peripheric irritation, especially that from light and sound, and gradually increased the amount of sleep by the use of the bromides and other sedatives. It had been his method to put these patients fully under the influence of the bromides, keep them secluded in a dark room, administer farinaceous diet, arsenic, etc. He had used galvanism with benefit, and a helmet, arranged so that the current was applied through ice-cold water, was exhibited.

DR. WEBSTER referred to a case of chorea laryngis, and then spoke of chorea in its relation to eye-troubles. A distinguished physician in this city had claimed that a large proportion of cases of chorea could be cured by

CORRECTING ERRORS OF REFRACTION.

Dr. Webster's experience had led him to believe that a certain proportion of cases had been benefited, and that possibly a small proportion could be cured, by that method of treatment.

Since his first paper was published, the same physician had claimed that lack of proper balance in the ocular muscles was a prominent cause of chorea, and that by cutting the muscles just enough to restore that lack the disease could be cured. Dr. Webster had had a single case in which this lack of balance in the ocular muscles existed. There was insufficiency of the externi. He divided one of the interni, and the patient claimed that she experienced great relief at once. Two or three months afterward he divided the other internal muscle, and when he saw the patient last she was not entirely cured, although she said that she was two-thirds or three-fourths cured, and he felt, to a certain extent, satisfied with the result. Doubtless the removal of the constant strain had had a good effect upon the general nervous system and, indirectly, upon the chorea.

DR. KOPLIK had treated a large number of cases of chorea by giving the patients perfect rest. Most of his patients had been children from five to twelve years of age, and many of them had had their condition aggravated by school-work, or by the harsh reproval of parents when at home. He had therefore, as much as possible, kept them from the other members of the family, had them eat by themselves, etc. He doubted the efficacy of confinement in a dark room, because of the possibility of frightening the children, although he had had no experience in applying the suggestion.

He believed that the treatment of chorea would be placed upon a better basis than it now has, were the views of Meynert kept in view, that the disease did not affect all subjects, but that there was a predisposition to other nervous diseases, as well as to chorea, in those who had the affection. Rest and improvement of the general condition were probably steps in the direction of solving the vexed problem of the pathology of the disease. He believed that special drugs did not help very much in effecting a cure.

DR. FOX spoke of the difficulty of applying galvanism through the hair, and the liability of the current to produce pain in the bare spots, as he had seen in cases of alopecia areata which he had attempted to treat with electricity.

DR. CORNING said that the hair was an obstacle, but with the wet sponge in the helmet, and the hair also wet, he had not encountered any serious impediment to its satisfactory use, although the patients did feel it more in some places than in others.

Of course, it would be objectionable to place some children in a dark room, but he always bromized his patients, which allayed the fear as a rule, and it was astonishing how much sleep could be gradually increased in that way, and the patients also increased in weight rapidly, as a rule.

THE PRESIDENT referred to two cases that showed a close relation between chorea and rheumatism,

TOO CLOSE TO BE ACCIDENTAL.

He believed that the farinaceous diet recommended by Dr. Corning was objectionable in many cases, as the patients required the most sustaining food that could be given, besides iron and other tonics. He had not been able to use arsenic in as large doses as Dr. Corning had mentioned—eighteen drops of Fowler's solution three times a day—and he also thought that the use of the bromides as suggested was rather indiscriminate. According to his experience, choreic patients showed rapidly the deteriorating influence of the bromides.

DR. CORNING said that he only carried the bromides far enough to quiet the patient, and he had found that when that had been done the disease yielded better to the treatment by arsenic. He had no doubt that there was a close relation between rheumatism and chorea, and regarded the statistics of the French writer whom he had quoted as unreliable.

DR. CARPENTER spoke of the occurrence of relapse, and of the belief of some excellent observers that arsenic had but little influence in effecting a permanent cure.

DR. CORNING said that he would not attempt to treat the very severe cases of chorea in the manner he had indicated. The question of relapse was a very important one, and should never be lost sight of.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting held, December 6, 1887.

THE PRESIDENT, DR. CHARLES L. DANA, IN THE CHAIR.

DR. WAITZFELDER presented a case of

CIGAR-MAKER'S CRAMP.

The patient was a man, thirty-eight years of age, and had been a cigar-maker for twenty years. He was first seen by the speaker six months ago. Six months before this he had commenced to notice a stiffness and awkwardness in forming the head of the cigar. This required a rotary motion of the thumb and index-finger. At first he was able to substitute his middle finger in this manœuvre, but later the stiffness extended to this and finally to the little finger. When first seen there was some anæsthesia of the skin and tonic spasm of the flexors of the fingers. These contractures were partially relieved by rest, although they never entirely disappeared. They were aggravated by any effort to work at his trade and by changes in temperature either to heat or cold. A short time ago the patient had tried varnishing, work which requires only coarse motions of the hand; but was obliged to give it up. The patient had been under treatment for six months with galvanism, faradism, strychnine, etc., without improvement. Regarding the lesion as central, the speaker suggested stretching the radial nerve with the object of inducing atrophy in the spinal cells, which might be considered the source of irritation. As Dr. Seguin had seen the case, his opinion was requested.

DR. E. C. SEGUIN saw nothing which would distinguish the case from one of aggravated professional spasm. He regarded such dyskineses of central origin and would not favor nerve-stretching. His experience had, in fact, been discouraging in any treatment for professional cramp. A case of

WAITER'S CRAMP

had come under his observation. He mentioned it, because rare. The man had been a waiter for fourteen years, carrying plates in the manner of his class until reaching a stage when he broke dishes and spilled their contents over the guests.

Dr. Seguin read a paper upon

THREE CASES OF HEMIANOPSIA

of peripheral or neural origin; with a study of the symptom hemiopic pupillary inaction, its diagnostic value, etc.

All of the cases were supposed to have a neural peripheral lesion. All presented the pupillary reaction hinted at by Von Graefe and described by Wernicke as the hemiopic pupillary reaction, a symptom never yet observed or described in this country.

CASE. I.—Was first seen October 26, 1887. Six years previously the patient had commenced to suffer from headache, mostly frontal, also nausea and vomiting. Two years previously he had suffered from more or less constant pain. For the last few months the headache had been less, but he had lost vision in the left eye. No history of syphilis had been obtained. On examination the right visual field showed temporal hemianopsia outside the point of fixation. The visual field of the left eye was completely blind. Vision was at this time, $R=\frac{20}{200}$, $L=0$. Light thrown into the left eye caused no reaction in either pupil. If thrown into the right eye in the optical axis good reaction in both pupils occurred. If the light was moved nasalward reaction was obtained in both pupils, also if moved temporalward within an angle of sixty degrees. If thrown farther toward the temporal or blind side, no reaction in either pupil occurred. The centripetal portion of the arc controlling pupillary reaction was complete only in the right eye, while the centrifugal portions were perfect in both eyes.

The lesion in this case is probably one of the chiasm, destroying both fasciculi for the left eye, and the fasciculus cruciatus for the right eye.

CASE II.—Was one of typical temporal hemianopsis with darkness also of the nasal quadrant upon the left side. The patient, forty-one years of age, was referred to the author by Dr. David Webster.

In 1866, the patient had noticed occasional headaches, with increasing failure of the left eye. There was diplopia at that time. If two objects were present, the patient saw three. Light attacks of vertigo were complained of. There was no history of syphilis in the case. The patient was first seen by the author, November 11th. The right eye showed the vertical line of separation passing through the point of fixation. This was the first case in the author's experience of either central or peripheral origin of which this has been true. There was right hemiopic pupillary reaction. If light were thrown from the temporal side at an angle more oblique than sixty degrees no reaction occurred. If thrown from the nasal side or directly into the eye, slight reaction of both pupils was obtained. In the left eye, slight reaction occurred only to central illumination. Vision, $R=\frac{8}{200}$, $L=\frac{20}{50}$. The latter was an interesting finding, as the left eye, with the better vision, had a smaller field than the right eye, showing that vision is not measured by the geometrical extent of the field, but rather by the general state of nutrition of the optic nerve.

The lesion in this case involved both fasciculi cruciati and the ventral or inferior half of the fasciculus lateralis of the left eye. A test made, December 16th, showed that color-perception was normal in the preserved half and quarter fields of vision.

CASE III.—Was twenty-five years of age, also had been referred to the author by Dr. Webster from the Manhattan Eye Department. The case was first seen, October 10, 1887. The patient had commenced to suffer from loss of vision two years previously. At the date of examination the right eye was completely blind. There was general loss of strength, but no etiology of injury and no history of syphilis. There was no paralysis, no loss of equilibrium. The dynamometer showed twenty-three degrees in the right hand, twenty in the left. At a subsequent examination the left eye showed typical temporal hemianopsia. Left vision was good. Can read No. 1 Jaeger at seven inches.

The lesion in this case involves the fasciculus cruciatus for the left eye and irregularly both fasciculi for the right eye.

The author then referred especially to the symptom common to the three cases called by Wernicke

HEMIOPIC PUPILLARY REACTION,

but which he would designate as hemiopic pupillary inaction; and its diagnostic value in hemianopsia of central or peripheral origin. The optic arc consists of the retina, especially the macula, and the optic nerves, for its centripetal portion; the anterior group of the corpora quadrigemina with the nuclei of the motor oculi nerves, the motor oculi, the ciliary nerves and the iris, for its centrifugal portion. Contraction of the whole iris follows stimulation, because the termination of the ciliary nerves is plexiform in arrangement. The path may be broken by lesion of the centripetral portion, by lesion of the reflex centre (or optic lobes), or by lesion of the centrifugal path. The termination of this—the iris—may be immobile from iritis. In the cases reported, the symptom was observed with temporal hemianopsia. If a pencil of light were directed in the optic axis or moved nasalward so as to strike upon the temporal or normal half of the retina, good reaction was obtained; also if moved temporalward up to an obliquity of sixty to seventy degrees; but if it entered at an angle of forty to sixty degrees from the horizontal, no reaction was obtained. The light experiment is not exact, because it is impossible to focus exactly the pencil of light. By focussing nearly in the optical axis, crossing of the rays and diffusion with reception upon the temporal or sensitive portion of the retina occurs. Without this diffusion inaction of the pupil would be noted as soon as the rays of light struck the nasal side of the field, and the experiment would be as exact as the perimeter test.

In making the examination the patient should be in a dark room with the gas jet or lamp behind him in the usual position for ophthalmological examination. The patient should be directed to look toward the farther side of the room, and a faint light from a plane or large concave mirror held out of focus thrown into the eye. Relative relaxation of the iris is thus obtained. A beam of light focused by the ophthalmological mirror is then thrown into the pupil from its optical centre and from various angles neuralward and temporalward, and reactions noted. It is especially important that the patient should look at a distant object, the same was true for ophthalmological examination in tabes, etc.

The author then added a number of rules for determining the location of the lesion in cases of hemianopsia.[1]

Dr. Græme Hammond presented

A CASE OF BITEMPORAL HEMIANOPSIA,

for Dr. C. H. Brown.

The patient, a woman, thirty-seven years of age, August 10, 1887, was suddenly seized with pain in the right eye, the sight of which was lost. The pain spread to the left eye and in three minutes she was totally blind. The pain continued spreading over the head to the base of the skull. The patient was in bed six weeks. November 15th she commenced to walk a little, and under the iodide treatment vision returned so that she could see an object if within two feet of the eye. She can now read newspaper headings, but effort to do more than this gives pain. Examination showed obscuration of the nasal half of the field, covering the point of fixation in both eyes.

Dr. Dana had seen the fields drawn by Dr. Francis Valk, and the obscuration was very marked. Dr. Seguin was able to give a satisfactory demonstration of hemiopic pupillary inaction in this patient.

Dr. Brill proposed three divisions for cases of hemianopsia, namely: into those of prosencephalic, mesencephalic, and peripheral origin.

Dr. Starr suggested that the society owed its thanks to Dr. Seguin for a series of three papers upon so interesting a subject. The symptom had been known and its lesions tabulated especially by Wernicke in his "Gehirnkrankheiten," but not before in the English tongue. The symptom had to be searched for carefully. The speaker referred to the fact that Ferrier, in "Brain," Vol. VI., makes the escape of the macula a diagnostic point, stating that where the lesion is located in the chiasm and tract, central vision is impaired; that where it is located in the cortex, or between the thalamus and the cortex central vision is not impaired, and had formed his new diagram in the second edition of his "Functions of the Brain" upon this theory, according to which central vision should have been impaired in all of the reported cases.

Dr. Seguin closed the discussion. He found clinical records opposed to Ferrier's classification. For the dividing line hardly ever passed through the point of fixation in any form of hemianopsia, and he failed to get light on the escape of the macula by any theory of decussation. He was rather inclined to think it dependent upon the structure of the macula, which was somewhat ganglionic in character and markedly different from that of the remainder of the retina. Before Von Gudden, Brown-Séquard had demonstrated the existence of a local mechanism for the iris contraction in lower animals, but there was no evidence that such a mechanism was active in the human eye.

Dr. Noyes then presented specimens of

COMPOSITE PORTRAITURE IN THE INSANE.

A composite taken from eight general paretics was exhibited. This showed in a marked degree the washing out of the lines of the face. Incidentally, Dr. Noyes also exhibited the college composites recently published.

Dr. Seguin suggested that the Vassar composite had a more womanly character than that of the Harvard Annex.

Dr. Birdsall agreed in this opinion. The Harvard composite figured an intellectual rather than a womanly being.

The meeting adjourned.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 22, 1887.

SECTION IN OBSTETRICS AND DISEASES OF WOMEN.

E. L. Partridge, M.D., Chairman.

Dr. M. Putnam-Jacobi read a paper on

THE NATURE AND DANGERS OF INTRA-UTERINE MEDICATION,

in which reference was made first to a paper read in January, 1885, when the opinions of forty-five eminent gynecologists were given, with forty in favor, and five opposed to the method. The most recent statistics on this point showed that the ratio for and against had changed somewhat.

The objections which had been urged against intra-uterine medication were that it was dangerous, inefficacious, or superfluous, or all three together. After referring to these briefly, the author of the paper proceeded to inquire more precisely concerning the series of clinical phenomena which followed the employment of caustics, as the paper did not consider any intra-uterine medication which was not caustic. The central purpose of the method was surgical, and for the removal of diseased tissue.

After a caustic was applied, the first effect was contraction of the muscular fibre of the uterus, attended by pallor of the tissues. The second effect was bleeding from the mucosa, and that might be considerable. Third, during several hours after the application there was a painful sensation, varying in intensity. Fourth, cramps might not occur after the application, but a diffused pelvic pain coming on at the end of fifteen minutes or an hour, and lasting a variable length of time. This implied dilatation of blood-vessels and hyperæmia, with active afflux of blood to the parts. Fifth, from thirty-six to forty-eight hours after an application, bleeding from the uterus occurred, accompanied by discharge of shreds of tissue, which was the eschar formed by the caustic. Sixth, after the cessation of the secondary hemorrhage, the leucorrhœal discharge existing previous to treatment frequently diminished, and coincidently the pelvic pain and the first menstruation were less painful in favorable cases. Sometimes an unusual painful menstruation followed first, which was regarded as unfavorable.

The next inquiry was, How did the treatment modify the metritis? The essential of all uterine therapeutics was to increase the arterial circulation in the pelvic tissues for the purpose of

DISSIPATING VENOUS HYPERÆMIA.

The difference between the active hyperæmia determined by cauterization and that resulting from disease was then pointed out, and the effect of the intra-uterine medication upon the next menstruation described.

The theory of the action of any application to the endometrium was then discussed, and its effect upon the physiological process sustained in the uterus, which made intra-uterine so surprisingly different from every other form of cauterization. The endometrium was not to be compared with mucous membrane, because it possessed the peculiarity of reproduction. It was that peculiarity which made it impossible to treat this as other chronic inflammations were treated.

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[1] For the complete paper with Diagrams *vide* Journal of Nervous and Mental Diseases, December, 1887.

The object desired was to modify the menstrual process, which was nearly continuous, and to do that the short interval must be seized, with the expectation that the effect of the application would extend through the time of the following menstrual period. Attention was then directed to the dangers of the method. The present paper was based upon fifty cases, in which cure was produced in thirty-nine without accident. In five cases accidents occurred. In two cases cure was effected in spite of the accidents. One death occurred. The details of the five cases were given.

Of all the dangers of the method none was so important as

APPROXIMATION TO THE MENSTRUAL PERIOD.

The period of danger began ten days after the close of menstruation, although in many cases the application might be made without danger much later in the month. Never make two applications in one month until the tolerance of one had been established, and the second application, as a rule, was to be milder than the first. It was very exceptional that three applications could be made in one month. At the end of three months it was advisable to suspend the treatment for two or three months. In the great majority of cases it was unsafe to make the application in the office and allow the patient to go; for she should remain in bed from six hours to six days.

INTRA-UTERINE MEDICATION SHOULD BE REGARDED AS A SURGICAL OPERATION.

The agents which the author of the paper had employed were iodized phenol, carbolic acid, and nitric acid. The treatment was indicated in fundal endometritis; endometrial catarrh always associated with parenchymatous metritis complicated by displacement, and always attended by cervical catarrh; metritis quite often with little or no catarrh, and in the text-books regarded as incapable of treatment in this manner. Peri-uterine inflammation might be said to forbid intra-uterine medication; but if it was secondary to endometritis, the method might be indicated. Finally, intra-uterine medication was to be regarded as only one part of a complex treatment for uterine disease.

Dr. W. Gill Wylie fully agreed with much that had been said in the interesting and instructive paper, but there were some points on which he was not in full accord with the writer. He was pleased to hear her speak of the application as a surgical procedure, because it was one, and he thought that that fact accounted for the lack of success it should have.

His practice had been one in which he had used intra-uterine medication a great deal, and he invariably kept a case under observation a long time

BEFORE MAKING AN APPLICATION.

Almost without exception, the cases should have preparatory treatment. He agreed with the author of the paper entirely in the statement that one thing to be accomplished was to improve the circulation of the pelvic tissues, certainly the uterine tissue. He was satisfied that preparatory treatment, by means of boro-glyceride, or the alum and glycerine mixture, should be kept up for at least one month before making an intra-uterine application. He never made an application without testing whether the uterus was dilated or contracted. If contracted in the least, he used dilators that enabled him to make a thorough and complete application, and also to secure perfect drainage, which was as important as the application itself. The old mucous plug was so readily displaced by slight dilatation that it did not cause the least trouble.

Another objection to the paper was the recommendation of the use of strong acids. He believed that the cases were exceedingly rare in which anything stronger than carbolic acid was required. In very old cases a mixture of carbolic acid and iodine might be used. He preferred to divulse and use the milder agents, and, so far as his own practice was concerned, two winters would pass probably without a single accident after intra-uterine medication.

By the preparatory treatment, he was able to adopt the method in his office or at the clinic. He might dilate slightly at the time of the application, but he never dilated unless he was thoroughly acquainted with the patient and the case.

INTRA-UTERINE MEDICATION SHOULD NEVER BE ADOPTED IN ACUTE CASES.

Keep such cases under observation until they become subacute.

It was also very essential to make the application through a cervical tube, as without that precaution not more than one-third or one-half of it ever reached the uterine cavity.

Dr. S. Baruch said it had been justly stated that intra-uterine applications were surgical procedures, and therefore he believed that the same course should be pursued as in similar conditions elsewhere, as in the treatment of bone, for example.

Three years ago he read a paper on the "Therapeutical Significance of the Cervical Follicles" (*New York Medical Journal*, 1885), in which he endeavored to show that all those diseases of the uterus classed under metritis, with or without catarrh, were most successfully treated by treating those follicles. His method was, when the disease was in the cervix, to open with a narrow bistoury, and with a sharp curette to destroy as much of the glandular structure as possible. He also treated intra-uterine catarrh with the sharp spoon. At the time he published his paper he was in doubt somewhat as to what would be the ultimate effect of removal of the mucosa, but he had since had ample evidence that the entire removal of the mucosa did not prevent its reproduction. Düvelius, Martin's assistant, had demonstrated that it was impossible to remove the glandular structure entirely, so that it would not be reproduced, and had reported sixty cases in which the woman became pregnant subsequent to thorough removal of the mucosa. It seemed to him, therefore, that thorough curetting was much more in accordance with modern surgical ideas than the repeated use of caustics. It was the practice which he had pursued during the last three years with satisfaction.

Dr. P. F. Mundé took occasion not long ago to publish his views on this subject, and he did so because he thought the tendency was to drop intra-uterine medication entirely. He believed that it had a position which it would always retain. It was a surgical procedure, and dangerous, as might be the introduction of a sound, or even a digital examination. Therefore, it must be undertaken with proper precautions. The applications should be made at the house of the patient, although probably, in the great majority of cases, it was impossible to observe that precaution.

There were three main indications for intra-uterine medication: First, intra-uterine catarrh, extending from the cervix to the fundus; second, subinvolution or hyperplasia, with or without catarrh, where it was desirable to reduce the size of the uterus; and third, to control hemorrhage.

For many years he had used the milder agents, mentioned by Dr. Wylie, but his results had not been as satisfactory as he would like to have, and he had sometimes felt that the applications were almost useless. At the same time, with proper precautions, he had been fortunate enough to escape entirely any bad consequences, except in two cases, where cellulitis followed—in one due to imprudence probably, and in the other the cause was not apparent.

FINDING THAT MILD REMEDIES DID NOT ANSWER,

he had placed his patients in bed, dilated the canal, if necessary—not much dilatation being required in chronic uterine catarrh—so that the largest uterine applicator with a pledget of cotton could be readily introduced, curetted with a dull instrument, and then swabbed the entire endometrium with a saturated solution of chloride of zinc, repeated two or three times perhaps, or until no bloody fluid oozed out of the uterine cavity. Then pack the vagina with iodoform or vaseline cotton. Keep the patient in bed two or three days, and apply an ice-bag to the abdomen for the first twenty-four hours. The next application was made at the office, but not within two weeks, and then a solution of one drachm to the ounce was used, or nitrate of silver of the same strength. The subsequent applications were made once a week. During the last two years he had succeeded much better than he did formerly, when he made half a dozen or a dozen stimulating applications. Of course, some patients would not submit to the procedure, and then the milder measures had been used.

For some time he had not used the cotton-wrapped syringe, because he had come to regard it as not perfectly safe.

For hemostatic purposes he curettes, and then plugs the uterine cavity with cotton saturated with subsulphate of iron and glycerine, equal parts, and he had never seen any bad results from the treatment. Attach a string and direct the patient to remove the plug at the end of twenty-four hours.

We should be able to practise intra-uterine medication with complete safety in the office, but had not reached that point yet. Iodoform and alum pencils, five grains each, covered with gelatine, did good in mild cases, and seldom produced discomfort. They served very well for the treatment after the use of the severe caustic. Possibly galvanism would prove to be the remedy that could be used with greatest safety.

Dr. Cushier had employed intra-uterine medication during the last ten years, with good results in young, unmarried women, when the chief symptom had been dysmenorrhœa, or pelvic pain with the menstrual period; also in chronic metritis, subinvolution, and where there were reflex symptoms from pelvic disorder not due to either uterine displacement or ovarian disease.

Her largest experience had been in the cases in which the prominent symptom had been severe dysmenorrhœa, and then it had not been employed until other means had failed; yet there had been but few cases in which the result had been unfavorable, and in many complete cure had been effected. Pelvic inflammation had not occurred in any case since the applications had been made with the precautions advocated in the paper; that is, never after ten days subsequent to menstruation, and never within ten days of the next period. Thus far she had not seen any necessity for using stronger agents than carbolic acid and iodized phenol; perhaps had been fortunate enough not to have seen the intractable cases mentioned this evening.

THE APPLICATIONS WERE NEVER MADE EXCEPT AT THE HOUSE OF THE PATIENT,

and it depended entirely upon the amount of reaction whether she should remain in bed one, two, or three days.

Nor did she believe that the results were so good as they might be if the patient was permitted to get up sooner than two or three days after the application. The benefit in some of the reflex cases had been very marked indeed. In women who had not borne children, she never resorted to intra-uterine applications until other means had failed, because she had found that the reaction was much more marked, and also that other remedies were much more effective than in women who had borne children.

Dr. Malcolm McLean had narrowed the agents he had employed down to strong carbolic acid. If applied thoroughly it would do what the stronger caustics had had claimed for them, without the risk attached to their use.

He used a ninety per cent. solution of carbolic acid, introducing just enough into the uterus to touch the diseased surface. It was very important to have

A WELL-DILATED CERVICAL CANAL,

and then, if a tube was used, a thorough application could be made. The time for making the applications, that is, within the ten or twelve days succeeding menstruation, he regarded as important. As to the necessity of the patient being at home, he had not insisted upon it, although it would be a safe precaution to take. He had not had cause to regret making the application in the office, although he had insisted that the patient go home at once and go to bed for a short time. He believed that in carbolic acid we had such a valuable remedy for these cases, so much safer than any other, that we should confine ourselves to its use as much as possible.

Dr. H. J. Boldt had been in the habit of making intra-uterine applications up to within a few days of the menstrual period, and had not had any accidents. He indorsed the statement that the application should be regarded as a surgical procedure, and that it was dangerous if proper precautions were not observed. The preparatory treatment he regarded as one of the most important points, and when the susceptibility of the endometrium to irritation was well known, intra-uterine medication could be adopted safely in office practice. The cervical canal must be dilated so as to give free drainage. In old cases he used the curette. He had used the cotton-wrapped syringe without accident. He had not employed strong caustics, but had not hesitated to make two applications a week, beginning a few days after menstruation and continuing up to within a few days of the next period. He had used galvanism only in private practice, but had found that certainly not above fifteen milliampères could be employed.

Dr. A. F. Currier thought it important to keep in mind the fact that there was a great difference in the tolerance of patients with regard to intra-uterine medication, and, therefore, no fixed rule could be laid down applicable to all cases. It was probable that where it was used without regard to precautions it not only did no good, but did harm. Without the precaution of having the canal open, it could not reach the endometrium. He had seldom seen dysmenorrhea benefited by the applications. In cases of hemorrhage what was done must be done at once, and in subinvolution and other chronic conditions he had found but little need of long preparatory treatment. He used carbolic acid with iodine to the exclusion of almost everything else, except a strong solution of nitrate of silver. He had used electricity in cases of endometritis and sterility, with satisfactory results, and

CONCEPTION HAD FOLLOWED IN TWO CASES.

Dr. Putnam-Jacobi, in closing the discussion, said that the question of preparatory treatment should not have been omitted in the paper, as she never adopted intra-uterine medication without two or three months acquaintance with the patient. The question of drainage, also, was important, and the applications should never be made in cases of displacement. The substitution of curetting, as suggested by Dr. Baruch, for all other methods of treatment, she thought was inapplicable, because there were two conditions which must be taken into consideration: first the thickness of the diseased endometrium, and second, the degree of existing peri-uterine trouble. It was not intended in the paper to discuss other methods of medication or particular agents to be employed, but the effort was to attempt to investigate the theory of the action of any application made to the endometrium, and also to correlate observed facts with physiological processes sustained in the uterus. The physiological process seemed to have been overlooked entirely in the discussion. The impossibility of treating this as other inflammations were treated was one of the points which she insisted upon; that the beneficial results of intermittent treatment could not be explained without the series of phenomena developed outside of the uterus; and that the question of danger depended upon the phenomena in that invisible locality.

A remark made by Dr. Cushier should be emphasized, and that was with regard to

REST AFTER THE APPLICATION.

If the patient walked about, there was a possibility of the development of intense hyperæmia which would prevent arterial tension, the most important condition to be obtained.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE OUT-PATIENT QUESTION—PROVIDENT DISPENSARIES—ANOTHER SUCCESS FOR VISCERAL SURGERY—PNEUMO-PARESIS—THE LATE SIR GEORGE BURROWS, BART.—THE ROYAL COLLEGES AND THEIR PETITION TO THE PRIVY COUNCIL.

LONDON, December 17, 1887.

AT the larger hospitals the out-patient question continues to be a thorny subject. The expense of out-patients is, of course, trifling compared with that of the in-patients, who are boarded and lodged at the cost of the hospital. Nevertheless, where the out-patients are numbered by hundreds, the cost of the medicines supplied to them helps appreciably to swell the total of the hospital drug-bill. The unfortunate physicians and surgeons, also, who have to drudge away—not merely for a year or two, but frequently for a long term of years—in crowded out-patient departments, could say something as to the drawbacks of having too large a clinic. Careful scientific observation of cases is simply impossible where they have to be seen against time. At St. Bartholomew's Hospital, the late Mr. Wormald served for about a quarter of a century as assistant-surgeon before becoming full surgeon. Of him it was said that he was so good as an assistant that it was a pity he ever was promoted. While holding the subordinate position he actually became President of the College of Surgeons. That was many years ago, and probably no such abuse is likely to occur again, but I have known sixteen years' out-patient work done before charge of in-patients was obtained. One very promising scheme for relieving the chronic congestion of out-patient departments is the establishment of provident dispensaries in larger numbers throughout the metropolis. Many such institutions already exist, and are doing much excellent work in their respective neighborhoods, but it is suggestive that many more might with advantage be founded. A wage-limit is, of course, an essential. A great difficulty in working these institutions is to make the classes for whom they are instituted understand and adopt the provident principle. Many of the poor feel a great reluctance to pay money down in advance for future possible medical attendance. If the latter is not required they regard their subscription as wasted. The Medical Attendance Organization Committee has done good work in connection with this subject. At a recent somewhat stormy meeting a resolution accepting a scheme of provident dispensaries was proposed by Mr. Timothy Holmes and carried by a large majority. A second resolution, proposed by Mr. Bonsfield, and expressing approval of the co-operation of hospitals with provident dispensaries, was carried unanimously.

A remarkable example of successful visceral surgery was detailed before the Clinical Society, at its last meeting, by Mr. Edmund Owen. A married woman, aged thirty-four, was admitted into St. Mary's Hospital under the care of Dr. Broadbent, on account of right hypochondriac pain and constant sickness. There was great fulness, with dulness on percussion reaching from the fourth rib nearly to the umbilicus. The right lung was elevated and compressed. The hepatic tumor was smooth, hard, gave no wave on impulse, and did not move with respiration or with any change of position on the part of the patient. Several aspirations were performed and hooklets found, but the tumor increased, and as there seemed to be a danger of its bursting into the thorax, it was decided to incise and drain it. This was effected by making an incision in the eighth intercostal space, opening the pleural cavity. Air entered freely. On introducing his finger, Mr. Owen readily felt the diaphragm, which was bulging upward, but the lung was collapsed and could not be felt. The phrenic pleura was then incised, and with it the diaphragm. On passing the finger through the opening in the diaphragm the tense cyst was felt at once. From it a considerable amount of fluid was drawn by aspiration, so that some of its surface might be dragged through the opening in the diaphragm and up to the skin-wound. It was there fixed by four hare-lip pins, so that the phrenic and costal pleura might become glued together and the cyst be subsequently incised and drained without risk of leakage into the pleural space. On the fourth day the cyst was incised. Bile-stained fluid escaped, and pieces of cyst-wall which looked like rotten wash-leather. A large-flanged drainage-tube was inserted, and the cyst washed out daily with warm iodine water. Large pieces of cyst-wall came away. The patient made a complete recovery. The pneumo-thorax gradually disappeared, as also did a slight effusion of fluid into the pleural cavity. When seen by Dr. Broadbent a short time since, the patient was well and strong, and the lung had descended to its proper level.

On Monday last, at the Medical Society of London, Dr. Richardson, F.R.S., read a paper on what he termed "Pneumo-paresis." It was, he said, usually confounded with pneumonia, but there was no fever, and the disorder was preceded by a distinct chain of nervous symptoms. He described three typical cases. All three were in women, and all terminated fatally, in a few days from the onset of the disease, from asphyxia pure and simple. The physical signs were dulness, commencing usually in the bases of the lungs, but sometimes in patches, with fine crepitation at first, soon becoming moist, and in the later stages, bronchial râles. Treatment had proved useless. He had tried ergot, ammonia and nux vomica, and digitalis, in different cases, but the symptoms ran an unbroken course. Dr. Douglas Powell remarked that the cases looked like pneumonia without fever. Dr. Hughlings Jackson suggested that acute croupous pneumonia is a variety of herpes zoster. Dr. Routh said the cases which Dr. Richardson had described appeared to him to be the condition described in young persons as atelectasis pulmonis. Dr. Angel Money said he saw little reason why the cases should not be set down as cases of genuine croupous pneumonia. He objected to the title pulmonary paresis, because in any case it was not the lungs, but the vessels, that were paralyzed. The cases reminded him of what the French called "rheumatic œdema," occurring in the lungs.

Another eminent physician has just quitted our ranks—Sir George Burrows, Bart. Full of years and honors, he died on Monday last, in his eighty-seventh year.

(Those who contend that the pursuit of medicine is not favorable to the attainment of longevity will please note.) Sir George Burrows was one of the old school of physicians, and was educated at the University of Cambridge, where he distinguished himself not only as an oarsman, but also as a mathematician, graduating as tenth wrangler in 1825. He received his professional education at St. Bartholomew's Hospital, London, where he was a pupil of Abernethy, whose youngest daughter he subsequently married. After graduating in medicine at Cambridge he was appointed First Assistant-Physician at St. Bartholomew's Hospital. In due course he became Physician, an office from which he retired in 1863. In 1871 he became President of the Royal College of Physicians, and received his baronetcy three years later.

The Society of Apothecaries are petitioning the Privy Council in opposition to the Colleges of Physicians and Surgeons. The University of Cambridge is likely to do the same, so the royal colleges are likely to have a lively time of it.

OUR PARIS LETTER.

(From our Special Correspondent.)

MORE ABOUT ANTIPYRINE—TINEA DECALVANS A NERVOUS DISEASE.

PARIS, December 16, 1887.

AT the meeting of the Academy of Medicine, last week, Dr. A. Robin, the newly elected member, read a paper on the action of antipyrine on nutrition. The paper contained a continuation of the researches he had undertaken in 1885 and in 1886, and the following are the conclusions arrived at by the author: Antipyrine always diminishes the quantity of urine in healthy subjects. In typhoid fever this diminution is more marked than in the normal state. In chronic conditions the same is the case, and the diminution is the more considerable the more the nutrition is compromised. There is also a diminution of the quantity of urea. In the normal state antipyrine augments the secretion of lithic acid; it diminishes the quantity of the phosphates. In acute conditions it diminishes phosphoric acid, and also urea. The sulphuric acid of the sulphates is sensibly diminished, as is also the sulpho-conjugate acid. To sum up, antipyrine diminishes the quantity of urine, the solid materials, urea, the total nitrate, the relation of the nitrate of urea to the total nitrate, the chlorides, phosphoric acid, the sulphuric acid of the sulphates, and the sulpho-conjugate acid. It increases lithic acid, the relation of phosphoric acid to the nitrate of urea, phosphorus incompletely oxidized and its divers relations, sulphur incompletely oxidized and potash. These phenomena would place antipyrine among the medicamentous series which diminish the waste of tissue, and to which Professor Germain Sée has given the name of "médicaments d'épargne." The nitrate being eliminated in smaller quantity, this signifies that antipyrine diminishes the disintegration of the nitrate materials; it now remains to be seen what becomes of these materials in the economy. Antipyrine augments the excretion of the phosphorated materials, and of potash. This potash in excess cannot come from the muscles, nor from the red globules; it therefore appears rational to give it the nervous system as its origin. But at the end of two days this augmentation of the potash gives place to a diminution of its elimination at the same time, which augments the elimination of the phosphorus incompletely oxidized. Antipyrine acts, therefore, in slackening the nervous oxidations; it does not act in an equal manner on all the organs of the economy; it acts above all on the organs rich in nitrogeneous and in phosphorated materials. This would explain the election of antipyrine for the nervous system. Antipyrine produces a depression of the nervous activity; the anæsthetics which head the list of depressors of the nervous activity have a chemical action similar to that of antipyrine.

The deductions from these researches may be summarized as follows: 1. Antipyrine first acts on the nervous system, the excitability of which it moderates, not in a purely dynamical manner, but in acting on its elementary nutrition. 2. It diminishes the organic disintegration, and still more lowers the organic oxidations, whence the production of an excess relative to the lithic acid and of the nitrogeneous extractive materials, which are less soluble, and consequently with more difficulty eliminated than urea. It is probable that this influence on the general nutrition is the immediate consequence of the effects of antipyrine on the nervous system, as almost all depressing medicaments of the nervous activity act nearly in the same manner. 3. Antipyrine possesses also an antiseptic property very marked, even at a feeble dose, and which appears to be as manifest in the organism, and without any injury to it, as in the experiments of the laboratory. The author further observes that these three propositions indicate what should be the applications of antipyrine. It acts against pain, against painful cardiopathies and angina pectoris. As regards its administration in the treatment of fevers, Dr. Robin considers it very much compromised, as its beneficial action in these cases is very doubtful. Thus, for instance, while endeavoring to diminish disintegration, we must do everything to favor the oxidation of the disintegrated products, because the oxidations give birth to soluble residues. As antipyrine does not fulfil this indication, it should not be employed in this or any other fever. From these considerations, and from its special action on the element pain, Dr. Robin suggests that the substance now known by the name of antipyrine would be more correctly termed "analgesine," or "neurasthenine." Professor Verneuil observed that he had been rather successful in the treatment of surgical septicæmic fevers by antipyrine, which Dr. Robin, however, considers a corroboration of his conclusions respecting the therapeutic properties of this drug.

At the same meeting of the Academy Dr. Ollivier read a paper in which he endeavored to prove that "pelade," or tinea decalvans, was a non-contagious and non-parasitic malady, and that its origin was purely nervous. He therefore considered it inexpedient, and even cruel, to prevent pupils affected with the malady from attending their schools, and sometimes for a lengthened period, much to the detriment of their studies, and perhaps of their future career, particularly as even dermatologists are divided among themselves as to whether the malady is contagious or not. Professor Hardy, the well-known dermatologist, took up the subject, and stated that although he never discovered a parasite peculiar to the malady in question, yet from his vast experience he had every reason to believe that it was contagious, and this hypothesis was confirmed by the fact that since measures have been taken to exclude children so affected from schools the cases have become much less frequent in them. Dr. Cornil, the distinguished histologist, does not believe in the contagiousness of tinea decalvans in the majority of cases, for no one as yet has discovered either a mushroom or a micro-organism which may be looked upon as the peculiar agent of the disease. To this Dr. Hardy retorted that it does not follow that because no micro-organism was discovered in tinea decalvans it can be affirmed that this affection was not contagious, for although the microbe of measles and of scarlatina has not been seen, no one will contest the contagious nature of these maladies.

THE MEDICAL ACT FOR NEW YORK STATE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: One of your correspondents, in a recent letter, signed "Medicus Erraticus," suggests the need of amending the recent medical act by prefixing the word "but" to the fourth section, so as to make it congruous with the third.

Your correspondent has been also mine, as he admits. He says, too, that he has corresponded with the Secretary of State in this matter. He concedes that both the Secretary of State and myself have advised him that there is no need of such an amendment, without which the statute is perfectly plain. Nevertheless, he seems to think the amendment should be made, because the clerk of an adjacent county has chosen to construe the law in such fashion as to absolutely distort the plain meaning of a provision more carefully examined by some of the best lawyers in the Legislature than any other in the act.

There is absolutely no need of this amendment, and it would be absurd to introduce a bill for the sole purpose of making it, although there are some other amendments by which the statute might be improved and made clearer.

The annoyance of your correspondent is very natural, and not to be wondered at, but I have already advised him that he can compel the county clerk by mandamus to obey the law. This, however, he may reasonably consider not worth the while. But, as a practical question, he is not likely to suffer any inconvenience, and if he should, the county clerk would be responsible for it in damages.

Under the law of 1880 the clerk of another adjoining county undertook in the same way to construe the law contrary to its clear intent, but his opinion, although ostensibly supported by that of two judges of the Supreme Court—not sitting as such, however—to whom he had not clearly presented the facts, was shown to be absurd in three cases where the courts were called upon to pass upon the question.

This is another such case, where it seems impossible to supply with an intelligent idea of the statute "a wise fellow; and, which is more, an officer; and one that knows the law—go to!"

Yours very truly,
W. A. Purrington,
Counsel New York County Medical Society.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from December 18 *to December* 31, 1887.

Biart, Victor, Captain and Assistant Surgeon. Relieved from further duty in Department of Dakota. S. O. 293, A. G. O., December 17, 1887.

Swift, Eugene L., First Lieutenant and Assistant Surgeon. Ordered for duty at Fort Spokam, Wash. Terr. S. O. 293, A. G. O., December 17, 1887.

Baxter, J. H., Colonel and Chief Medical Purveyor. Ordered to inspect the Medical Purveying Depôt at St. Louis, Mo. S. O. 296, A. G. O., December 23, 1887.

Banister, William B., First Lieutenant and Assistant Surgeon. Ordered to proceed to Fort Lowell, Ariz., and report to Commanding Officer for duty, upon the arrival of Surgeon P. J. A. Cleary, at Fort Wingate, N. M. S. O. 135, Department of Arizona, December 20, 1887.

Official List of Changes in the Medical Corps of the United States Navy for the week ending December 31, 1887.

Biddle, C., Passed Assistant Surgeon. Detached from the Marine Rendezvous, Philadelphia, and placed on waiting orders.

Cleborne, C. J., Medical Director. Detached as member of Medical Examining Board, December 31st, and ordered to Norfolk Naval Hospital, January 5, 1888.

Bradley, M., Medical Inspector. Detached from Naval Hospital, Norfolk, January 5, 1888, and placed on waiting orders.

Clark, J. H., Medical Inspector. Detached from special duty at Portsmouth, N. H., and ordered as member of Examining Board at Washington.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 31, 1887:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	8	5
Scarlet fever	139	16
Cerebro-spinal meningitis	2	0
Measles	42	9
Diphtheria	153	59
Small-pox	0	0
Yellow fever	0	0
Cholera	0	0

The Consumption of Alcohol on Mortality and Health.—Dr. Walter F. Morgan, of Leavenworth, Kan., referring to the observations of M. de Flaix, reported in a recent issue of The Medical Record, writes: "Allow me to call attention to what seems a very important omission of M. de Flaix in considering the effects of alcohol, viz., the influence of climate. It seems superfluous to call to mind the rule, to which there are few exceptions, that it has ever been in the coldest and dampest regions of the earth where most alcohol is used, and where most can be endured by mankind. Statistics should be handled with much circumspection when used to batter down an opposing dogma, otherwise they may, like the boomerang, belabor the hand that wields them. Still, the general fact will, I think, remain unshaken, that *climate* has much to do with the quantity of alcohol used, or that can be used, without great and manifest injury, among the civilized nations. The experience of the English in India sheds much light upon this point. There are other factors which M. de Flaix, in his ingenious *résumé*, has forgotten to consider; for instance, in comparing Italy with Spain. Among the causes which have produced the anomalous and unfortunate condition of the latter country, described in so graphic and masterly a way by Backle, he makes no mention of the use or non-use of alcohol as a cause of the degeneracy of that nation. I hope that the esteemed author will pursue these investigations still further, and inform us of the probable effect on the physical and moral condition of Italy; for example, should her inhabitants consume for the next fifty years as much alcohol *per capita* as is now consumed in Russia. If to the Italian's fiery climate and more fiery temper were added this extra amount of 'fire-water,' does it require a prophet to foretell the disastrous results? The degradation, the ruin, and the almost total extinction of our own aborigines, too surely point to alcohol as one of their chief causes to permit us to doubt. M. de Flaix does not take into his account how much the 'richest and most vigorous nations' may be indebted to the potent accidents of climate, soil, laws, religion, etc., as factors in their development."

The Provident Dispensary Plan in Germany.—Sickness insurance is meeting with some favor in Leipzig and other German cities. The law authorizing the operation of such companies permits the insurance to all classes of handworkers except clerks and salesmen, but these may be included by local authority. The action of this law is very noticeable in the tax for maintaining the sick poor, it being decreased 21,673 marks in Hamburg in one year. The total number insured under the law is 4,294,173, or 91.7 per 1,000 of the population.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 2. New York, January 14, 1888. Whole No. 897

Original Articles.

ON SOME POINTS IN THE SURGERY OF THE URINARY ORGANS.[1]

By REGINALD HARRISON, F.R.C.S.,

SURGEON TO THE LIVERPOOL ROYAL INFIRMARY, AND LECTURER ON CLINICAL SURGERY IN THE VICTORIA UNIVERSITY.

Lecture I.

URINE FEVER AND TOXIC URINE—THE FORMATION OF STRICTURE TISSUE IN REFERENCE SPECIALLY TO THE TREATMENT OF URETHRAL STRICTURE.

Mr. President and Fellows: Let me, in the first place, thank you for permitting me to address your ancient and learned society in the capacity of Lettsomian Lecturer for the present session. At the same time, and with a full consciousness of my inability to approach you as I would desire, let me also ask your indulgence while I attempt to follow in the direction selected by many who, in preceding me in this chair, have so largely contributed to the practical advancement of medicine and surgery.

As I have already indicated, I propose making some observations relative to certain points arising out of the surgery of the urinary organs. It is now some years since my attention was directed to the circumstances under which fever was occasionally seen in connection with various lesions involving the urinary tract. It appeared to me that the subject had scarcely received the attention it deserved, and that a further knowledge of the etiology of what I would speak of as urine fever, as opposed to ordinary wound fever, might be of service to us as practical surgeons.

Let me, for the sake of clearness and comparison, briefly illustrate in a familiar way what I mean, and then I can the more easily deduce the points upon which I desire to lay stress this evening.

In surgical practice we have long been accustomed to recognize, after injuries and operations, a form of excitement which is generally known as wound or traumatic fever. It varies in degree according to circumstances, it is generally attended with some elevation of temperature, and it usually declines without proving either serious or fatal. Since the due recognition of those principles upon which Listerism is based, the development of this kind of fever has been considerably restricted, if not entirely abolished.

In striking contrast with this we have a distinctive form of fever, not unlike ague in many important respects, which is alone seen in lesions involving the urinary tract. Let us take, for example, the simple operation of internal urethrotomy. Here an incision, limited to a few lines in length, is made in the urethra, which the patient for some two or three hours is probably unconscious of. Then he is seized with a rigor, which terminates in fever and an elevation of temperature. As a rule, these symptoms decline in the course of a few hours, possibly to be repeated. More rarely the rigor and fever are followed by suppression of urine, convulsions, and speedy death, post-mortem examination failing to discover any reasonable or recognized explanation for these phenomena. These symptoms, though, as a rule, in only slight degree, more frequently follow internal urethrotomy, accidental wounds of the urethra, and the introduction of a catheter or a bougie. Even the last-mentioned operation, simple as it usually is, has proved fatal in the course of a few hours, with little or nothing to show in explanation. Here, then, as I have said before, we have a train of symptoms resembling ague, which are only called into existence in connection with lesions involving the urinary tract. In order that I may be perfectly understood as to the phenomena referred to, let me briefly illustrate the kind of case alluded to by narratives from my own practice.

Some years ago, in a case of extremely tight stricture, I performed an internal urethrotomy on a young and otherwise healthy male; three hours afterward he had a rigor, followed by high temperature, convulsions, and suppression of urine, and in forty-six hours he was dead. Post-mortem examination failed to prove anything except that the operation had been properly performed.

In the course of last year I saw a boy, eleven years of age, who, having ruptured his urethra by a fall, had retention of urine for thirty hours before I visited him in consultation. A catheter was passed with some difficulty along the lacerated canal and retained, the retention being in this way relieved. On the following morning he was visited, and found to have passed a restless night, with a temperature of 102° Fahr. About four o'clock the same day his usual medical attendant, Dr. Davies, was summoned, and found the patient in severe convulsions, and absolutely unconscious. The temperature was then 105° Fahr. He could not swallow; the fits recurred with much violence, attended with opishtotonos, and he became comatose and died at midnight; that is to say, about twenty-four hours after I first saw him and the catheter was passed.

I could not help observing that so long as this patient had retention he was comparatively safe; when, however, an opportunity was afforded to the urine of coming and continuing in contact with the laceration in the urethra by means of the retained catheter, then a process of acute poisoning seemed to commence, which speedily terminated in death.

In 1874 a healthy middle-aged man was under my care for a tight urethral stricture, for which, in the course of treatment preliminary to dilatation, a metal instrument carefully passed was followed by some very slight bleeding. Four hours after this he had a rigor, and his temperature went up to 103° Fahr.; this was followed by a succession of rigors, at intervals of from eight to twelve hours, with occasional vomitings. For over fifty hours the amount of urine excreted was only four ounces. During this period the pulse was quick and thready, the tongue dry and brown; there was a tendency to drowsiness, with occasional delirium, and death appeared to be imminent. After remaining in this serious condition for ten days he ultimately completely recovered, though he complained of muscular pains and much prostration for some time afterward.

Illustrations such as these, and others that I could quote, seemed to indicate that the presence of urine in a wound, under certain circumstances, was capable of generating an aguish form of pyrexia, which I shall speak of henceforth as urine fever. I am aware that some authorities are accustomed to speak of all the phenomena I have just illustrated under the one name of urethral fever. Such a term I think is misleading, inasmuch as it seems to connect the symptoms produced with the precise part, rather than with the process, for wherever throughout the urinary tract urine can be placed under certain conditions, there can all the phenomena usually associated with the term urethral fever be produced. With the view of endeavoring to throw some light on the causation of this, I determined, some years ago, to investigate (1) the relationship between urine and a wound which leads to the development of urine fever; and (2) the probable nature of the influence or material producing it.

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[1] The Lettsomian Lectures, delivered before the Medical Society of London, January, 1888.

To the elucidation of these two important practical points I would now desire to direct your attention.

In the first place, it appeared to me that the development of urine fever might be traceable to the kind of contact that existed between a wound and the urine. I thought I would test it in the following way. Taking a number of cases of subpubic urethral stricture, which were unfitted for treatment by dilatation, I adopted the following procedure:

Internal urethrotomy having been performed, and all obstruction being removed, so that a full-sized grooved staff could be passed into the bladder, the patient was placed in the lithotomy position, and a median cystotomy was performed, quite independent of the previous internal operation, so as to admit a full-sized drainage-tube, such as I usually employ for this purpose, to be passed into the bladder. By this combination of internal and external urethrotomy I treated a considerable number of urethral strictures of the worst type, with results which time has already shown have been eminently satisfactory, both so far as the immediate comfort of the patient was concerned and the permanency of the relief that was afforded.

After a number of trials of this kind I soon found that as was my drainage so was my freedom from fever; urine fever only occurred where the former was imperfect. When urine, even in very small quantities, was pent up in a recent wound, fever resembling ague invariably followed. When, on the other hand, urine was allowed to escape freely and continuously, as after a lateral lithotomy, no such symptoms were developed. But, further than this, in connection with the operative treatment of stricture, it was observed with much uniformity that, in cases where it was impossible to obtain perfect urine drainage, the urine might, so to speak, be sterilized by local or general measures. This tended considerably to prevent the urine undergoing changes and yielding products which were calculated by their absorption to produce this special kind of fever. For instance, I found that, after an internal urethrotomy, certain antiseptic precautions, directed toward the wound as well as the bladder, for the purpose of acting upon the contents of the latter, considerably reduced both the frequency of these attacks as well as their severity. This was chiefly in connection with the use of solutions of corrosive sublimate for irrigating the wound, as well as for retaining within the bladder. Further, it was impossible not to recognize the importance of certain drugs which, by their elimination in some degree through the urine, seemed to render the latter less capable of exciting a specific fever where it remained in contact with a recent wound. This was most marked in the case of quinine, which is so largely eliminated by the urinary apparatus. In some cases of internal urethrotomy that were observed, the production or not of urine fever could be largely influenced by the administration of quinine. As bearing upon the sterilization of urine in connection with operative procedures on the urinary apparatus, I will refer to a passage from a recent writer who, in bearing testimony to the value of boracic acid as a prophylactic against urethral fever, states that in some forty urethrotomies he had had but one case of urethral fever, and that occurred in an instance where the precaution of sterilizing the urine by the administration of boracic acid had been accidentally omitted. The consequence of this was a violent chill on the third day after the operation, with a high temperature. These observations, then, taken collectively, seemed to me clearly to indicate that the kind of contact between fresh urine and a recently made wound was in itself sufficient to determine the occurrence of urine fever as a consequence.

I will now pass on to notice, in the second place, the probable nature of the influence or material by which the fever is actually produced.

During the last few years some important investigations have been made relative to the development of animal alkaloids, both in the dead and living, by Messrs. Gautier, Peter, and Bouchard in France, and by Drs. Lauder Brunton and A. M. Brown in this country. An address of much interest on this subject, in its relation to practical medicine, has also been recently delivered by Sir William Aitkin. To all these gentlemen we are indebted for much valuable information. From these investigations I do not think there can be any doubt in coming to the conclusion that the secretions of living beings are capable of forming leucomaines—alkaloid bodies having poisonous properties—and that many phenomena connected both with health and disease may thus be accounted for; "for," as Gautier remarks,[1] "of all the extractive composite residua, the alkaloids of animal origin are worthy of the deepest interest. It is only now that they have become familiar to us. They claim our special study from the fact of their constant presence in normal secretions, and must be classed with the most active agents known." From my observations in connection with the surgery of these parts, it seems probable that the development of urine fever is really due to the absorption of some such poisonous compound as an alkaloid which is derived either from urine, or tissue, or wound decomposition, or from all combined, and I would base this conclusion not from any chemical discovery that, so far as I know, has hitherto been made, but from the following deductions, which seem to be warrantable from what I have already stated:

1. That the presence of urine in relation with a recent wound is necessary for the production of what I have spoken of as urine fever.

2. That mere contact of urine with a wound is not sufficient for its production.

3. That the retention of fresh urine within the area of a recent wound is almost invariably followed by its development in a greater or lesser degree.

4. That where urine is placed under such circumstances as have been last mentioned, the liability to the development of urine fever is greatly diminished when it is sterilized by local or general means.

5. That the retention of fresh urine, blood, and the débris of damaged tissue in the confines of a recent wound for a certain time, at a temperature of somewhere about 100° Fahr., could hardly be possible without chemical changes taking place in the constituents referred to.

6. That there is a common origin for urine fever is rendered probable by the uniformity of the symptoms attending it, which, though differing in degree, are identical, whether following a surgical operation or an accidental wound.

As some may not be prepared to accept from me, though fortified with the reasons I have urged, that urine or urethral fever is the product of a definite poison introduced into the system, let me occupy your time for a few moments while I quote from the last essay[2] of one of the most original thinkers the medical world ever produced; I refer to the late Dr. Austin Flint, of New York.

"Analytical Chemistry," he observes, "carries investigation beyond the limits of microscopical observation.

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[1] Professor Armand Gautier's Introduction to the Animal Alkaloids. By Dr. A. M. Brown.

[2] Medicine of the Future: Address written for the Annual Meeting of the British Medical Association, 1886.

The latter, at the present moment, both in pathology and physiology, seems to promise most; but is it not a rational anticipation to look for future results from chemical analysis of the components of the body, in health and disease, which in brilliancy and practical utility may surpass those of the labors in this field of investigation during the past half-century? The medical semi-centenarian can recall the enthusiasm aroused by the labors of Liebig. Histology is now in the ascendant, but it is safe to predict that before the lapse of another half-century there will be another era in organic chemistry, and that light will penetrate dark recesses which histology cannot reach. . . . The supreme objects of study in pathology at the present time are the discovery of micro-organisms and their natural history. But these agents, it is probable, are pathogenetic, not directly, but indirectly, by means of the toxical products of their activity. What are these products, and how do they give rise to the phenomena of disease? We may ask the same question of certain of the poisons introduced from without the body. How is it that fractional quantities of morphia, hyoscyamin, strychnia, aconitia, atropia, and other alkaloids produce their lethal effects? It conveys no adequate information to say that they act upon the nervous system. This is merely the statement of a fact, not an explanation. For the latter we must look to the organic chemistry of the future."

But objection may be raised against the views I am advocating relative to the way in which urine or urethral fever is developed by the fact that it sometimes arises under circumstances where it may be difficult to prove that any actual breach of surface in the urinary tract has been inflicted. For instance, as I have already said in illustration, some degree of urine fever frequently follows the passing of instruments along the urethra, as in the treatment of urethral stricture. It would not be difficult to illustrate every degree of this complication, from the most transient rigor with slight febrile excitement to the severest form of septic intoxication, rapidly terminating in death. And this leads me to speak of the influence of the epithelial lining of the urethra in making the canal water-tight, or, more correctly speaking, urine-tight. And out of this will necessarily arise some remarks on the pathology of urethral stricture and abscess with extravasation of urine. Let me take an illustration of what I mean by the protecting power of the epithelial lining. A patient with a stricture, I will say, has a catheter or bougie passed; this may be followed in the course of a short time with a rigor and some fever, and no further inconvenience is experienced. What has actually taken place is that the epithelial lining has been scraped off at one or more points, and this has permitted urine leakage and absorption to take place at the points injured. If further proof of this is required, take instances where prolonged attempts to pass catheters in cases of urethral stricture have been made and proved futile. Then, in consequence of the degree of retention, and as an alternative, an inspirator-needle is introduced above the pubes, and the urine is drawn off in this way without coming in contact, or remaining so, with any portion of the urethra which may have been wounded by the attempts made to give relief by catheterism. I have never known rigors or fever follow the relief of retention by supra-pubic aspiration, though the extent to which the urethra has been lacerated by attempts at catheterism has been considerable as well as sanguinary. There can be no other explanation for the absence of characteristic rigors and fever under these circumstances than the fact that urine has not been allowed to come and remain in contact with a freshly made wound. And in connection with this point I cannot help remarking that in the protecting power which the epithelial lining of the urinary apparatus exercises, we may probably have an explanation of certain phenomena which have been observed but not accounted for. Some have concluded that the bladder is capable of absorbing some of its contents, while others, on the contrary, not only have denied the possibility of such an inference being drawn, but have pointed out how serious might be the consequences if there was any liability to such a contingency. It seems that both of these conclusions may be true, and the explanation I would offer is that by injury to, or disease of, its epithelial coat, the bladder may be rendered capable of absorbing what it contains, to the detriment of the individual, as we see in those cases now often referred to by the name of catheter fever. In recognizing the power of the epithelium to prevent or permit absorption, I am in agreement with other observers, among whom I may mention Dr. London, of Carlsbad, who has made some investigations upon this point.[1] Further, it is important to notice that when a urine fistula is transformed into a permanent urine channel, as after Cock's operation, we find the passage becomes lined, like the urethra, with epithelium, and thus it acquires the power of transmitting urine without leakage. We could not have more positive evidence than this in support of the view that the epithelial coat is a necessary part of any canal which has to perform the function of transmitting urine.

Applying, however, these remarks to the pathology of urethral stricture, let us see how this is brought about, and how the protecting influence of the urethral epithelium may thus be demonstrated.

A stricture of the urethra is generally considered to be due to more or less prolonged inflammation of the lining membrane of the canal, which ultimately leads to the deposition of organized lymph in the peri-urethral tissues. This ultimately is converted into a dense connective tissue, which subsequently shows a remarkable tendency to become contractile. Thus the escape of urine from the bladder is interfered with by the degree to which these contractile masses prevent the expansion of the canal to anything like its normal extent. Now, all this may be very true on the whole, but it does not enter into details with which we should be acquainted for the prevention and treatment of the disorder.

It will be convenient to take an illustration for the purpose of tracing more gradually the process of stricture-making, as a consequence of a specific urethritis or gonorrhœa, which is generally admitted to be the common cause of the former affection. The acute form of the disorder, unless care is taken, is very apt to become merged into the condition commonly known as chronic granular urethritis. By the latter term we are to understand that at one or more spots within the urethra the epithelium has become so damaged, as a consequence of the prolonged inflammation, that it ceases to render the canal urine-tight, and a slow process of escape of some of the constituents of the urine into the tissues comprising the urethra and surrounding it, takes place. As a consequence of this and to prevent urine soaking further into the tissues, inflammatory exudation is excited, and barriers of lymph, which ultimately become organized, are thrown out opposite the places where the leakages take place. Thus splints of plastic tissue are formed, corresponding with the spot or spots where the epithelium has been so damaged by persisting inflammation as to cease to discharge its normal function. In this strengthening of the urethra we recognize, in the first instance, a conservative action; eventually, however, as in other compensating processes, certain inconveniences follow which constitute, as it were, an independent disease. In addition to the careful observations which have been made relative to the pathology of gleet, and the changes that are induced by chronic inflammation in the epithelial lining of the urethra, by Dr. Oberlaender,[2] of Dresden, there are other considerations which seem to indicate that an excessive form of plastic exudation in the tissues around the urethra is probably excited by the interstitial leakage or exosmosis of some of the constituents of the urine through the walls of the canal.

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[1] Berlin. Klin. Wochen., No. 11, 1881.

[2] Vierteljahr: für Dermatologie und Syphilis. Wien, 1887.

Among those I would mention are: (1) That though the mucous membrane is the tissue chiefly involved in the primary inflammation, it is, as a rule, only secondarily implicated in the stricture-forming process. In many instances it will be found after death that the dimensions of the mucous membrane are not permanently altered, and that it is possible to split a stricture without necessarily damaging the lining membrane of the canal; (2) that the plastic exudation which makes up a stricture differs from other exudations provoked in other parts of the body by inflammation in the degree of its density and tendency to contract. There is no tissue I am acquainted with in the human body—except perhaps that found after scalds and burns, where the original tissues are entirely destroyed—which is so tenacious and resisting as that constituting the usual form of urethral stricture, nor do I know of any other canal or duct which, either as a consequence of injury or disease, is liable to be involved in such changes as a strictured urethra represents; (3) the character of the cicatrix which is formed in connection with ruptures and lacerations of the urethra unmistakably shows the effect produced in the healing process of a recent wound which is constantly submitted to the action of more or less pent-up urine. Here we have a cicatrix formed, which of all strictures is the most resisting and contractile. At the present time, when we are so much occupied in devising means for the radical cure of hernia, one cannot sometimes help thinking and wishing that it were possible to transplant the process of tissue-thickening and contraction, as observed in connection with the formation of traumatic urethral strictures, to the parts constituting the weak points we are desirous of consolidating in the abdominal parietes. Here it would be serviceable instead of being detrimental.

Further, the form in which stricture-tissue is deposited, and ultimately exercises contractile pressure on the urethral passage, is strongly suggestive that in the first instance it served the purpose of strengthening the wall of the canal, and thus preventing further leakage of some of the constituents of the urine taking place at points where the epithelial coat had been more or less permanently damaged. Most strictures are the result of organized lymph which has been deposited in the sub-mucous tissue in an irregular form. An annular stricture is comparatively rare, except when due to traumatic causes, such, for instance, as an injury to the whole calibre of the urethra.

It may, however, be urged that the view I am advocating is open to objection on the grounds that urine leakage is invariably followed by acute forms of inflammation, such as we see when extravasation has taken place. In reply to this I would say that, so far as I have been able to observe, the process of urine transition through the mucous membrane of the urethra, which has been deprived of the protecting influence of its epithelial lining, is extremely gradual, so far as the process is concerned, and does not necessarily imply that all the constituents of the urine are distributed among parts which are not adapted to receive them. Where a pathological process is slow, time is permitted for that adaptation which the human tissues are proved to be so capable of. But the exudation which a damaged epithelium may permit of does not necessarily imply that all the constituents of the tissue are thus brought into contact with tissue under circumstances where the most active and destructive forms of inflammatory mischief must inevitably be aroused. Some years ago I recorded the following case, which, at the time, seemed to me of much importance in reference to the subject now under consideration. It was as follows: The case was one of stricture, with extravasation of urine, occurring in a person suffering from Bright's disease of the kidneys. Though the extravasation had come on suddenly, and had existed for twenty-four hours unrelieved, there were no signs of acute inflammatory action and commencing gangrene, such as are usually expected. However, the tension being considerable, I incised the parts involved in the extravasation. As the fluid escaped from the incisions, I noticed that it had not that strong ammoniacal odor which is so perceptible in such cases. Subsequently I treated the stricture, which was exceedingly tight, and kept in abeyance the more threatening urinary symptoms. I was somewhat puzzled for an explanation, as I felt sure that the case was one of extravasation, and not acute scrotal œdema. How was it then that extravasation and confined urine failed to excite gangrene? I collected some of the urine as it trickled through the wounds and compared it with some subsequently drawn off by the catheter. I found them identical, and in both there was an almost complete absence of urea. This, then, to my mind solved the mystery, and explained that as there was no urea to decompose there was no source for the production of the ammonia by which the destruction of tissues in connection with extravasated urine is effected. By the absence of urea the urine was rendered chemically harmless to the tissues with which it came in contact. In the same way, and by a process of leakage, I apprehend may be explained some of those rare cases which have been described as scrotal or perineal urinary cysts, where a urinous fluid with little or no direct connection with the urethra is retained within a fairly well-developed envelope.

In illustration of the formation of stricture by urine leakage, due to epithelial desquamation or abrasion, I would point especially to those cases of multiple stricture caused by spots of induration in various parts of the canal. In a patient who was recently under my care, almost the whole length of the urethra was strictured by a series of nodular deposits, chiefly in relation with the floor of the canal. These could only be explained on the supposition that the urethra had almost entirely lost its normal power of conducting urine in the course of a long gleet, and that these numerous centres of induration and contraction marked the spot where leakage of some of the constituents of the urine had been permitted to take place. It will not be necessary for me to extend these views for the purpose of explaining certain facts observed in connection with peri-urethral abscess and extravasation of urine, which in practice we are all familiar with. What applies to the plastic form of exudation applies equally to the suppurative. In this way, however, is explained the fact that in these cases, when suppuration occurs and the matter is evacuated by incision from the perineum, the urethra is found passing through the abscess-cavity, completely isolated, and without showing any direct connection with the suppurating focus. It is under these circumstances that the unsupported canal occasionally gives way under the expulsive powers of micturition, and the urine is first forced into the abscess-cavity prepared to receive it, and subsequently among those tissues where it may be the more easily extravasated.

There are one or two practical points relative to the treatment of stricture and injuries of the urethra arising out of what I have thus ventured to bring under your notice to which I should like to refer before concluding. In the first place, the knowledge that certain relations between a wound and the urine may cause and keep up urine fever will prove of service to us in practice, as I will illustrate in the following way. Not long ago I treated a case of urethral stricture by Holt's method of rapid divulsion. Contrary to my usual experience of the operation, the patient had a severe rigor three hours afterward, and a temperature of 105° Fahr. On the following day this was repeated with, in addition, almost complete suppression of urine. As it appeared to me that the patient would die if he absorbed any more toxic material from the wound, I had him placed in the lithotomy position, and, passing a grooved staff, I performed a free median cystotomy, and put a drainage-tube into the bladder. I should add that there was nothing to indicate that suppuration had occurred; the time was too short for its development, the symptoms being clearly due to urine-poisoning. After this was done there was neither rigor nor fever, and urine was again rapidly excreted. By thus suddenly altering the relations of the wound with the urine the whole complexion of the case was immediately changed for the better, and the patient made a good recovery.

In the next place, a due recognition of the function of the epithelial lining of the urethra shows that there is a right and a wrong way in making use of dilatation in the treatment of strictures. I am sure that more good follows the daily introduction of a bougie which passes quite easily, than when a larger size is less frequently used, but where, in fact, the principle of the mechanical wedge is aimed at by the process. In this way rigors and other inconveniences associated with the treatment of stricture by bougies is avoided. I have made a large number of observations bearing upon this subject.

Thirdly, when a stricture has become, or is, so contractile and dense as to render dilatation out of the question, if not impossible, then, I believe, the open method of treatment is the safest and affords the best permanent results. In fact, excepting the earlier forms of stricture which are satisfactorily treated by dilatation, the open method has furnished the largest proportion of permanent cures that have come under my observation in the collecting and noting of many hundred cases of stricture taken indiscriminately. And, in reference to this point, I must take exception to a statement which is frequently made to the purport, "Once stricture, always stricture." I could furnish many examples following the open treatment which are quite at variance with such a conclusion. In order that I may not be misunderstood in using the word "cure," I mean that a contractile stricture necessitating the constant use of the bougie has been so influenced by what has been done as to render any further use of this instrument unnecessary, and that after a lapse of time of some years' duration the urethra can be proved both to be structurally and functionally normal. The majority of these cases have occurred where the perineum has been opened for stricture complicated with abscess and extravasation of urine. Here it by no means infrequently happens, if the artificial drainage made by the surgeon is free and direct, that a healthy scar, such as we see after lithotomy, takes the place of the dense contractile stricture which has sloughed by the acuteness of the inflammation that has been aroused. I should meet with no difficulty in fully illustrating this point. By the open treatment of stricture, of course, I mean the perineal section of Syme, or a modification of it, to meet some special circumstances, such as the double operation of external and internal urethrotomy combined, as I have already described. It must, however, be borne in mind that a perineal section is seldom resorted to until the urethra is largely impregnated, so to speak, with old cicatricial tissue of a contractile nature. Hence, although you may put into the urethra by your operation a longitudinal splice of good, sound tissue, such as fills up the wound made in lithotomy, and so bring up the canal to its normal dimensions, you do not succeed in removing the tissue which you have merely divided. This still remains behind to contract and to mar to some extent results which, under other conditions, would be obtained. Still, in spite of the impossibility of removing the cicatricial tissue by a mere section of it, the results of perineal section, so far as I have observed them in cases where dilatation was insufficient, have proved both safe and satisfactory. The conditions, however, which the operation must necessarily fulfil are complete division of the stricture and thorough urine drainage. The difference between the wound of a lateral lithotomy and a perineal section is only this, that in one case you operate upon sound textures, while in the other they have been rendered permanently and almost hopelessly contractile. Still, on the other hand, when the conditions I have mentioned are fulfilled, the cicatricial splice of sound tissue which perineal section introduces into a bad stricture often proves of the greatest and most permanent advantage in cases suited for this proceeding.

Fourthly, that in wounds of the urethra, made either accidentally or in the course of surgical operations, which, by the nature of circumstances, have to be treated without due regard for urine drainage, means should be more systematically taken to prevent the development of urine fever, as well as the formation of a dense contractile cicatrix. I found, after repeated trials, in the case of internal urethrotomies, that much might be done by irrigation, locally and through the agency of drugs which were largely eliminated by the urine in promoting these objects.

Lastly, we must remember that the prevention of stricture is within our scope. If, as I have urged, the dense cicatricial material which constitutes a stricture is the result of urine leakage occurring in the process of a chronic inflammatory affection by the interior of the canal in one instance, while in another it is brought about by the constant contact of the excretion with an internal wound, as in accidental rupture of the urethra, then the importance in one case of irrigation as a part of the treatment, and free urine drainage in the other, is at once evident.

It is, however, in connection with ruptures of the urethra, such as are caused by blows and falls on the perineum, where the canal is more or less lacerated, that we see exemplified the most disastrous effects of permitting a wound to heal subject to the irritation that constant contact with pent-up urine is capable of exercising. Fortunately, as a rule in these cases, retention of urine for a time averts the liability to acute septic intoxication, such as I have already illustrated in an earlier part of this lecture. Though the future of these cases, relative to the kind and degree of stricture that follows, is in some measure determined by the character of the injury inflicted upon the urethra; whether, for instance, the canal is entirely torn across, or partially, either obliquely, longitudinally, or transversely, I have not the least doubt, from a careful observation of a considerable number of these cases, that those do best which are treated by perineal section and drainage without reference to the question of extravasation. When a catheter can be passed under these circumstances, and there is no evidence of urinary extravasation, it is often, I admit, very tempting to be content with this procedure, and to wait until there are further indications as to the necessity for incision. Such a course is almost invariably followed by the formation of a stricture of the most dense and contractile nature. Where incision is practised, as in those instances where there is evidence of extravasation, and the laceration proves to be only of a partial nature, the wound heals with a scar which shows but little tendency to subsequent contraction. In these cases we have remarkable illustrations of the damage that the presence of urine under certain circumstances is capable of exerting while the process of repair in a wound is going on. And what applies to the healing of wounds inflicted accidentally upon the urethra internally applies equally to others similarly inflicted on the canal for surgical purposes. I have elsewhere stated that for many years past I have taken some pains in collecting and noting cases of urethral strictures with the view of estimating the permanency or otherwise of the treatment to which the patient may have been previously submitted by various surgeons. The testimony that I have thus gathered from the examination of many hundred cases is certainly not favorable either to the permanency or the character of the relief that internal urethrotomy usually affords. Among the worst cases of stricture that I have thus met with have been those which have been treated by an internal section. If there is any force in the observations I have brought before the society this evening, I do not think there should be any difficulty in explaining how this happens, and of recognizing the importance of applying to the treatment of wounds of all kinds involving the urethra those principles which are the basis of Listerism—namely, drainage and cleanliness. There is no part of the human body to which disregard of these conditions is more likely to be attended with disastrous consequences, whether we have regard to the present or to the future. In conclusion, gentlemen, most speakers commence their discourse with a text; I prefer concluding with one: Urine can spoil tissue as well as blood.

ON THE IMMEDIATE APPLICATION OF THE PLASTER-OF-PARIS SPLINT IN THE TREATMENT OF CLUB-FOOT.

By PROF. GEORGE E. POST, M.D.,

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WHILE many surgeons use plaster of Paris during the treatment of club-foot, I believe that it is usual, after the tenotomy, to postpone the application of the plaster of Paris for at least a week, often much longer. On asking surgeons the reason for this delay, the writer has been told that it was to avoid risk of swelling, and to allow ready access to the wound in case of necessity. An experience of fifteen years in its use, and a large number of cases, have satisfied him that with proper care the plaster may be used from the first, with considerable shortening of the time of treatment, and no risk to the patient.

The wound caused by tenotomy of the tendo Achillis or of the plantar fascia, with thorough antiseptic precautions, will heal by the first intention, if measures be taken to keep in coaptation the whole track of the incisions, plus the gap made by stretching the parts in the effort to restore the foot and ankle to their normal positions. This is best accomplished by a pad of aseptic or medicated cotton wool, which makes soft and even, but most effective, pressure, and prevents a vacuum into which air can be sucked or in which blood can be pocketed. The wounds so treated unite readily and as quickly as any other wounds in the deeper parts. As there is no swelling of a wound which heals by the first intention, there is no reason from this cause why a plaster bandage may not be at once applied.

Swelling is most apt to occur from pressure over the metacarpo-phalangal joints of the great and little toes and the dorsum of the foot just anterior to the ankle, and the inner aspect of the tibia just above the internal malleolus. Care in padding with cotton wool these places, where the strain from the bandage is felt, will prevent undue pressure and the œdema which is sure to result from it.

Of course, swelling will result from too forcible torsion of the foot, and undue straining of the ligaments of the complicated tarsal and tarso-metatarsal joints. Experience and the tactus eruditus alone can inform the surgeon correctly of the amount of strain to put upon these tissues at the first dressing. But it is safe to say that the existence of the tenotomy wounds, if properly treated, does not increase the risk of the first torsion of the foot. It is furthermore true that a considerable amount of stretching, or even laceration, of these ligamentous tissues will be borne with inconsiderable swelling, or with swelling at points little pressed by the bandage and plaster, and that a plaster splint, which has been properly padded at the points where bony prominences are thinly covered by skin, will seldom have to be removed because of œdema of the foot.

The practice of the author is as follows:

The foot and leg, as far as the knee, are thoroughly cleansed with soap and water, and rendered antiseptic by sponging with a three per cent. solution of carbolic acid. The hands of the surgeons and assistants, and all the instruments and accessories, are carbolized. The necessary tenotomies are done in the usual manner, but while the instrument is doing its work a wad of aseptic cotton wool is pressed over the surroundings of the wound in such manner as to press the skin and subjacent tissues into the hollow formed by the separation of the cut subcutaneous tissues, at once arresting hemorrhage, and bringing about immediate coaptation of the whole of the divided tissues. If more than one tenotomy is necessary, an assistant carefully holds the cotton pad over one wound while the other is being made.

Supposing the deformity to be in the right foot, the patient is laid on his back, with the affected leg projecting from the knee beyond the edge of the table. An assistant grasps the calf just below the knee, and holds it firmly to the edge of the table, managing the thumb and forefinger of his hand so as to form a ring at right angles to the axis of the limb, and allow of the application of the bandage as high up as possible. The surgeon, sitting at the side of the table, with the left hand everts and flexes the foot so as to overcome as far as possible the deformity, and applies an absorbent aseptic bandage beginning at the inner border of the foot, crossing the sole outward, and surrounding the metatarsus twice. Between the first and second turns of the bandage a pad of cotton wool is placed along the outer border of the metatarsus and first phalanx of the little toe, overlapping a little the sole and dorsum, and a similar one along the metatarsus and first phalanx of the great toe. A pad of cotton wool is then laid over the instep, and then a turn of the bandage carried from the outer edge of the foot, across the pad and instep, to the inner aspect of the tibia above the malleolus, which is also protected by a pad of cotton wool. The bandage is then carried once or twice around the leg, so as to cover the wound and make equable pressure on the pad over it, and then carried from the outer aspect of the leg obliquely over the dorsum to the inner aspect of the foot, and by repeated figure-of-eight turns around the foot and lower part of the leg, with suitable reverses, the whole, including the heel, is covered. The roller is then carried up to the upper part of the leg and pinned or sewed. During all this process the surgeon's left hand has maintained the foot in the desired position, a point of no little importance, to prevent the movement of the wounds, which will cause oozing of blood and introduction of air. As the left hand can render but inefficient aid in the passing of the roller, it is very desirable to have a clever assistant, who will pass and repass it to the right hand of the surgeon. The right hand of the assistant who holds the leg will be the best for this purpose. I lay considerable stress on the surgeon's retaining the manipulation of the foot, that he may judge of the exact position that it is to assume. The co-operation of the two hands of one man is always more perfect than that of two persons.

A plaster bandage about two inches broad, and four to six yards long according to the size of the limb, previously well soaked in water, is now to be neatly applied, but never stretched on, and whatever pressure is made in redressing the position of the foot should be by the left hand of the surgeon, never by pulling the plaster bandage. Both the original roller and the plaster bandage should simply retain what is gained. If necessary a second bandage may be applied, and then the surface covered with a thick cream of plaster. If the bandages have been skilfully applied, the foot will give very little when the left hand of the surgeon is taken off.

The second phalanx of the great toe, and the third of the other toes, should be left out. It is very important that no crowding of the metatarso-phalangal joints should result. The natural line of the toes should be preserved.

The child should be kept on the table, and prevented from moving the leg until the plaster has hardened. The mother or nurse should carry the child, with the leg held up, and not allowed to dangle, for three days, or until time has been given for the healing of the wounds, and to be sure that there is no swelling.

If the child is old enough to walk, and the deformity has been sufficiently overcome to bring the sole of the foot nearly into position, he may be allowed to begin to use his foot after three days. If, however, the deformity is only partially overcome, or there is a little swelling of the toes, it is well to wait until another splint has been applied, which may be after a week or ten days, according to the judgment of the surgeon.

Two to four applications of a plaster splint are usually enough to bring about a cure in children under five, who have not very bad club-feet calling for resection of the tarsus, or who have not large callosities from long walking on the dorsum of the foot or on its outer edge.

TWO CASES OF RAYNAUD'S DISEASE, WITH REMARKS.[1]

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My first case was that of a young man, whose family history presented nothing noteworthy except that apoplexy was common in the branch of the family which he resembled in physique. He himself, prior to the development of his Raynaud's disease, had always been healthy, though not remarkably robust. He had never had any severe disease. He was not neurotic; had been subject to chilblains in boyhood, and suffered from frost-bitten auricles on a short exposure on a very cold windy day. The disease never went beyond the "dead-finger" stage. When about eighteen years old, being then a student in college, he used to suffer from "dead fingers" from time to time if he studied in a room a little below a comfortable temperature. The attacks amounted to only a trifling inconvenience, no discomfort being felt beyond a slight prickling on return of the circulation. The attacks ceased to occur later on, possibly owing to more robust physical development, and have never recurred. Since that time he has had marantic thrombus, with embolic pneumonia, when run down in general health, owing to a combination of depressing influences, but is now, at the age of about thirty-four years, in robust health. There has been no return of the "dead fingers" since his college days.

My second case, a woman, came under my observation when she was fifty years of age. Apoplexy on her mother's side was the only morbid condition which was prominent in her family history. The patient herself has suffered from malarial fever from time to time for years. She had some kind of fever, of short duration, in childbed, nineteen years ago. She has suffered always from occasional sick headache, and regards herself as "nervous." She was always thin up to six years ago. After that she gained flesh until six months ago. Since then she has been loosing flesh and strength, and suffering considerably from dull headache, the only apparent cause for which was some defects in the plumbing in the house into which she moved at the beginning of her recent trouble. For the last thirty years she has suffered from "dead fingers." The right forefinger was the first to be affected. The trouble has become gradually worse, until now, at times, all the fingers are affected. She suffers also from cold feet, and the toes present the same waxy pallor that the fingers do. The pallor never extends above the fingers. Slight chilling on putting the hands in cold water, or handling ice, brings on an attack even in warm weather. During the attack the fingers are cold, numb, and somewhat stiff. Circulation is easily restored by using the hands, or plunging them in warm water. No unpleasant sensation, beyond a slight tingling on the return of the circulation, is experienced. Until the development about to be described, the matter had not amounted to more than a trifling inconvenience. In addition to the finger phenomena the patient occasionally had numb feelings in her lower extremities, particularly in the left thigh, above the knee, and tingling in the arm and leg. I was called to see the patient on November 4, 1887. She had been suffering from an onychia of the right ring-finger, which had almost healed, and which did not present any unusual features. The right forefinger presented a slight break in the cuticle, along the outer edge of the nail, the skin being swollen and tender at this point. The end of the finger was numb and white, the nail blue. There was slight aching of the finger, but no great amount of pain. In the course of a few days some drops of pus came out from alongside of the nail. The whole finger became slightly swollen and painful, but no deep phlegmonous process developed. It soon became evident that the whole thickness of the skin, on the anterior surface of the finger, from the middle of the first phalanx to the tip, was entirely necrotic, together with the underlying pulp. She had not noticed any unusual frequency of attack of syncope in the affected finger. In fact, her attention was being directed almost entirely to the ring-finger, the numbness and whiteness of the part of the forefinger, which afterward became necrotic, being little regarded. The sensation of fingers and toes, except the necrotic portion, seemed perfect both for touch and temperature.

The skin of the finger was slightly dry and rough, a condition which she says exists all over her body. Sphygmographic tracings of the radial arteries showed a pulse the same on both sides, of normal tension, and showed also that the vessels were of normal elasticity. Physical examination of the heart was negative. The urine was normal, containing neither albumen nor sugar. From the time that I explained to her the probable connection between the necrosis of the end of the phalanx and the "dead-finger" phenomenon, she was able to avoid the recurrence of the latter for days at a time by avoiding its exciting cause.

The first of these cases is of a type which is probably not very uncommon. It may escape observation from the fact that it so little inconveniences the patient that attention is not called to it. It is of interest to recall this. Dieulafoy[1] states that it is a very frequent symptom in all forms and all stages of Bright's disease. The second case is remarkable because the malady had never reached the stage of local asphyxia spoken of by Raynaud as intermediate between that of local syncope or pallor and gangrene, but gangrene developed after a very slight inflammatory trouble. The absence of the burning and tearing pains, which also are said to be present before the gangrene shows itself, was also remarkable. It may be objected that in this case an inflammatory trouble preceded the gangrene. This, however, was limited to the side of the nail, not more than eight or ten drops of pus ever collected, and the necrosis of the skin extended over almost the whole width of the end of the phalanx. The gangrene may therefore, I think, fairly be associated with the local syncope.

The recent literature of Raynaud's disease has made some important additions to our knowledge.

Pitres and Vaillard,[2] in 1884, obtained autopsies on two cases. The first case was that of a female, twenty-four years of age, who had always been stupid, and whose mind became very much impaired toward the last. Tremor, and finally contractures, preventing walking, occurred in the lower limbs. There was also tremor on voluntary motion. Passive motion of the legs was possible only within very narrow limits, and was very painful. Both feet became first blue, cold, anæsthetic, and finally gangrenous a few weeks before death. Neither sugar nor albumen was found in the urine. Late in the disease sloughs occurred over the glutei and on several spots of the body. Autopsy showed internal hydrocephalus, and an old affection of the cerebral pia mater. The internal organs, including the heart and blood-vessels, showed no abnormality, except slight fatty change in the liver. The microscope showed the spinal ganglia to be normal, slight sclerosis of the dorso-lumbar region of the cord, and more or less extensive inflammatory changes in the peripheral nerves of the gangrenous parts. The second case was that of a fifty-six-year-old rag-picker, who had no hereditary taint, and was always healthy until final illness. For four months she had a peculiar anæsthesia of the soles of her feet, without motor disturbance. Both soles then became blistered after a long walk. Later, both feet became swollen and tender, then blue, anæsthetic, ecchymotic, and finally gangrenous. The patient was suffering from a very severe diarrhœa during the development of her severe local symptoms. The autopsy showed normal brain, cord, lungs, liver, kidneys, and heart. The aorta was slightly atheromatous, but both veins and arteries coming from the feet were normal. Neuritis of the nerves of the affected parts was found.

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[1] Paper read before the Neurological Section of the New York Academy of Medicine, December 9, 1887.

[1] Dieulafoy: Cont. à l'étude Clin. de la Mal. de Bright, Gaz. Hebdom., 1886, xxxiii., 25, 26, 27.

[2] Arch. de Physiol., January, 1885, 3d sér., v., p. 103.

These cases were controlled by the examination of the nerves in a case of senile gangrene, in which the nerve-structure was found normal, even in the gangrenous parts.

The authors conclude: 1st, That cases of symmetrical gangrene are often seen in the extremities which cannot be explained by any cause heretofore recognized, such as heart- and vessel-disease, ergotism, septic infection, etc.

2d. In such cases, above the mortified parts, in an extent of from twenty to thirty ctm., exist profound alterations of the peripheral nerves, which show the histological character of a parenchymatous neuritis.

3d. The nerve-disease appears not to be caused by the mortification, for it is not found in gangrene caused by vessel changes. It is probable that the neuritis causes the gangrene.

4th. In addition to the usual forms of spontaneous gangrene a neurotic gangrene must be classified, which, in its development and symptomatology, is to be likened to other trophic diseases, which occur after inflammation of peripheral nerves.

A third case of symmetrical gangrene, accompanied by neuritis, was presented by Wigglesworth[1] to the London Pathological Society early in the current year. Almost equally instructive is the clinical case of Weiss.[2] This case suffered from neuralgic pains in anus, attended after a while by "dead fingers" and superficial sloughs on finger-tips. In course of the disease the patient suffered from swelling of finger-joints and of the left knee and elbow. The finger-nails became misshapen. Sloughs occurred implicating the left side of the nose, several phalanges, the nates, and the left cheek. Paræsthesia of temperature-sense, delayed sensory conduction, and a symptom-complex resembling progressive muscular atrophy developed in the arms. Atrophy of the left cheek, and a typical paralysis of the left cervical sympathetic also occurred. The striking points for our present purpose, in this case, are the facts that gangrene occurred in the fingers, where there was cyanosis; in the buttocks, where there was no obvious vaso-motor disturbance; and in the left cheek, in which the vessels were largely dilated in consequence of the paralysis of the sympathetic. Weiss argues that the vascular contraction in the fingers was not the cause of the gangrene, because gangrene occurred also in parts of the body where there was no evidence of vascular contraction, or where there was even marked vascular dilatation. He therefore regarded the gangrene as trophic, a view strengthened in his case by the other trophic disturbances. He assumed that the morbid condition was in the posterior columns of the spinal cord. His observation was published, however, three years before the above quoted autopsies. As strengthening his position, it should also be noted that in Pitres' two cases there is no history of paroxysmal local syncope or asphyxia.

Other clinical cases might be quoted in which there were marked indications of peripheral neuritis.[1] In Raynaud's own description of symmetrical gangrene,[2] the severity of the burning, tearing pain, radiating through the whole limb, is emphasized. Pitres calls attention also to the gangrene which has followed certain cases of direct injury to nerves.[3]

As an offset to this mass of evidence pointing to peripheral neuritis as the probable cause of symmetrical gangrene, and its frequent preliminary symptoms of local syncope and asphyxia, may be cited two cases of Raynaud[4] in which dimness of vision, accompanied by manifest contraction of the retinal arteries, occurred, in one case alternately, in the other simultaneously, with attacks of local asphyxia in the hands. These cases Raynaud thought spoke decisively for a central location of the disease. Two[5] cases in which paroxysmal hæmaturia occurred seem to point in the same direction.

A review of all this evidence seems to me to suggest that the phenomena of local syncope and asphyxia, while due undoubtedly in the first case to arterial spasm, and in the second either to arterial spasm with venous reflex (Raynaud), or to spasm of the venous radicals (Weiss), may have lesions differing in character and possibly in site in different cases.

The symptom-complex in which these phenomena occur differs very much in different cases. It is not to be denied that a very close association exists between the vascular spasm and the gangrene. This was especially prominent in my own second case, in which, beyond occasional slight numb feelings and tingling in the extremities, there was only the "dead-finger" phenomena and the gangrene; there was none of the great pain often described, and no other symptoms of nervous derangement, unless the dryness and slight roughness of the skin could be so regarded. It is also worthy of note that the patient did not notice any pallor of the affected skin, except at the necrotic portion, during the development of the gangrene, and for days avoided any appearance of the local syncope by avoiding exposure to cold.

The conclusions which I draw from the evidence which I have thus briefly brought before you are:

1. That local syncope and asphyxia may possibly occur as symptoms of more than one morbid condition.

2. That symmetrical gangrene is to be regarded as a tropho-neurosis, in which peripheral neuritis is the only lesion yet demonstrated.

3. That while the close association between vascular spasm and symmetrical gangrene is not to be denied, the two phenomena are to be regarded rather as results of a common cause than as cause and effect.

With regard to treatment, the recommendation of the constant current to the spine, or locally, made originally by Raynaud, has been sustained by some other observers.[6] Good results obtained in other cases may be summed up by stating that they seem to have resulted from the successful treatment of concomitant disorders.[7] In my own second case I attempted nothing more than a general tonic treatment, the result of which is not yet decided.

106 West 122d Street.

Note.—In discussing this paper, Dr. M. Allen Starr mentioned a case of his own of typical Reynaud's disease, upon which electricity had no appreciable effect whatever.

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[1] Report of Meeting of the London Path. Soc., Lancet, January 8, 1887.

[2] Ueber symetrische Gangrene, Wiener Med. Presse, 1882.

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[1] For instance, Englisch: Wien. Med. Presse, 1878, xix., p. 35.

[2] Nouveau Dict. de Méd. et de Chir. Prat., 1872.

[3] Duret: France Méd., 1876, p. 7, Gangrene of Fingers Supplied by Median Nerve after Injury.

[4] Archives Générales de Médecine, January, 1874.

[5] Southey: London Clinical Soc. Trans., 18 3; Barlow: London Clinical Soc. Trans., 1883.

[6] Barlow: London Clin. Soc. Trans., v., 16 and 18; Nothnagel: Arch. f. klin. Med.

[7] Raynaud: Dict. de Méd. et Chir. pratiques, Art. Gangrêne Symètrique: Vulpian: Clin. Mèd. de la Charité, 1879, p. 879.

A CASE OF COMPLETE ADHESION OF THE SOFT PALATE TO THE PHARYNX, WITH AN OPERATION FOR ITS CURE.

By E. HARRISON GRIFFIN, M.D.,

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Patient S——, aged forty-four; occupation, seaman; a native of France, applied to me November 29, 1883, complaining of shortness of breath. He wanted to know if anything could be done to restore his speech. He was able to utter a sound, but he could not turn this sound into words.

He had contracted syphilis twenty years previous; he was married, and his wife had miscarried three times. One child was born living, and is now twelve years of age, and is apparently in fair health.

This communication was made on paper, as the patient was unable to talk.

His nose was entirely eaten away down to the nasal bones, so that all that remained was a small opening in the face. The nasal fossa would fill up with large green crusts, which he dislodged with a hair-pin every morning and evening. The stench from these crusts was exceedingly offensive. I took out two, which were fully two and a half inches in length and shell-like in form.

The patient's mouth was so closed up by syphilitic adhesions that I could pass in my two fingers only, with great difficulty, by stretching the mouth to its utmost capacity.

A laryngoscopic view or a complete view of the throat at this stage was impossible. The first operation I undertook was enlargement of the mouth, which was done by means of a knife. Afterward little wooden stretchers, or gags, were inserted, to prevent the wounded surfaces from growing together again.

After this was accomplished I found that the uvula and the lower part of the soft palate were entirely destroyed, and the remaining part of the palate was firmly adherent to the pharynx, so that the upper pharynx was completely separated from the lower pharynx.

The complete occlusion of the two pharynges is extremely rare. I have met with it in only three cases. It is by no means rare in tertiary syphilis of the throat to find a partial adhesion of the parts; but it is extremely rare to find a complete adhesion. Often a small opening can be discovered, sometimes only large enough to admit a small probe, but still large enough to admit a small current of air.

In this case I covered the lower pharynx with iodoform and filled the nasal fossa with water. My iodoform was not moistened. I now determined to liberate the palate from the pharynx, so that I could give my patient nasal breathing, and also give the nasal cavity an outlet into the throat. I first passed a silver probe down through the nose to the pharynx, and with a tenotomy knife cut where the palate bellied. After I had thoroughly separated the palate from its attachment, with no little difficulty, the parts were sprayed with a solution of tannin. No anæsthetic of any kind was used.

I now began to pass the largest sound I could obtain through the opening into the upper pharynx. I afterward had a sound made after the following description: The body of the instrument was about two inches in length and was blunt-pointed at the end, and gradually widened as it reached the base; it was somewhat similar to a triangle in shape. The base was an inch and a half in width. To the broad end of the instrument was attached a long handle, so that it could be manipulated in the throat. I found that with this instrument I could keep the opening the required size, and prevent it from closing.

Had the wound not been treated with sounds after cutting, the opening would have filled up in a very short time. This is a peculiar characteristic of syphilitic tissue, where we seek to enlarge an opening, whether it be in the pharynx or nasal fossa.

In a case of nasal stenosis, now under observation, I have seen the parts close completely after opening the nasal canal three times, every time giving the patient complete breathing space, taking out at each operation a large piece of cartilage at the point of union. In a short time the parts were firmly adherent again.

The parts in this operation healed nicely, and within four days absolutely no pain was felt from the passage of the instrument. An examination of the larynx showed complete paralysis of the abductors of the vocal cords, and the whole mucous membrane lining the larynx was in a state of hyperæmia; this accounted for his loss of voice.

At the beginning of my operations I had placed my patient under iodide of potassium, but I was compelled to give him one hundred grains, three times a day, before I could produce any effect. I do not consider this an unusually large dose in cases of tertiary syphilis of the throat or nose, and have often given larger doses and maintained them during a longer time. This was given in water; his stomach stood it nicely, and I kept this amount of iodide up for two weeks, when the amount was gradually reduced. Later I gave him only tonic doses.

Within a month and a half from the time of the first operation on the mouth, the patient had entirely regained his voice, and had increased something like fifteen pounds in weight. His voice was now quite clear and strong. I had an artificial nose made by Tiemann & Co., which supplied his missing member very well. I gave him one of the sounds above described, and told him to use it once or twice a week for a year.

I often hear from him, and he reports the breathing through his artificial member excellent, and his voice good.

The Physical Condition of the Masses Improving.—In an article published in the *Fortnightly Review*, Mr. Charles Roberts deals with the question of the physical degeneracy of our town populations. The inquiry is chiefly concerned with the condition of the laboring classes, though, in contrasting variations of death-rate, average-weight, stature, and the like, there is an inseparable reference to the vital state of whole communities, without regard to rank (*The Lancet*). The author of this paper is not one of those prophets of evil in whose eyes the future of our poorer townsfolk wears only an aspect of unbroken gloom. It is true he does not ignore the fact that causes hostile to the natural and vigorous development of human life are more largely present in cities than in rural districts; but while admitting this, he justly objects to the wholesale acceptance of evidence derived from statistics which are still necessarily imperfect, and he acknowledges the certain past and probable future success of efforts in the direction of sanitary reform. The food question, though probably incapable of a wholly satisfactory solution, occupies a position much advanced beyond that which it held in the earlier half of the present century. The influence of this and other allied matters of nearly equal moment, a decided and general rise in wages, diminished cost of clothing, of house-rental, and of living as a whole, have, according to Mr. Roberts, exercised a most beneficial effect in checking that process of retrograde change which many regard, not without a reason, as a possibility of the future. Thus far, however, we feel a certain satisfaction that the evil of decadence is more visionary than real; but, at the same time, we must recognize the practical truth that continued future prosperity is compatible only with a vigilant observance of those laws of healthy life which nature constantly defends by imposing on those who disregard them the penalties of physical enfeeblement and final extinction.

Clinical Department.

A CASE OF RESECTION OF THE FEMUR FOR UNUNITED FRACTURE, WITH SOME POINTS OF INTEREST.

By C. C. JACOBS, M.D.,

FROSTBURG, MD.

On February 1, 1887, a patient, aged thirty, sustained a compound fracture of the lower third of the femur. The limb was treated in a wire suspension- and extension-splint until April 22d, when the case came into the writer's hands. The limb was placed in a plaster-of-Paris spica, extending from the toes to the perinæum, in which dressing it was kept till June 2, 1887, when there was found to be no union. On this date, assisted by my partner, Dr. Dorsey P. Fitch, and Drs. Price, Mason, and Getty, I performed resection in the following manner:

The patient having been anæsthetized, and the part to be operated upon prepared in the usual way for an antiseptic operation, an incision nine inches long was made on the outer aspect of the thigh, beginning at the knee-joint. The sharp end of the upper fragment, which had thrown out no callus, was found just under the integument, having perforated the vastus externus and cruræus at the time of injury. These muscles were divided, and by means of the chain-saw about one and three-quarters inch of the bone removed, which allowed of its easy reduction. The next step was to find and elevate the lower fragment, which was strongly flexed by the action of the gastrocnemius in pushing the popliteal vessels to one side. This fragment had thrown out some callus, which was pared off with a strong knife; then a hole was drilled in the end of the bone with a surgical engine, and a silver wire, threaded through the hole, served as a bridle, by means of which the bone was easily elevated into juxtaposition with the upper fragment, which was also drilled, and the two pieces of bone were firmly bound together with silver-wire sutures. The superior external articular was the only vessel ligated, but there was free oozing from the sawed end of the bone and surrounding tissues, which were very vascular. The wire was cut off short. Without waiting for the oozing to stop, the wound was closed with superficial silk and deep catgut sutures. A Levis' metallic patella splint was placed under the limb, and secured by a spica bandage, and the patient was put to bed. Next day the dressings and bed were saturated with blood, but the hemorrhage had stopped. Clean dressings were applied by Dr. Fitch, and the wound was not again exposed until the sixth day, when it was found perfectly healed throughout, without the formation of a single drop of pus.

The patient was seen every day, and at no time did his temperature go above 99° F.

The result was in every way satisfactory, and the patient has a firm femur, with about two inches of shortening.

The points of interest in this case relate, first, to the feasibility of the operation; secondly, to the safety of closing so large a wound before oozing has stopped; and thirdly, to the method of securing the bones in apposition.

First, as to the feasibility of the operation:

In consulting the text-books on the subject of resection of the femur, I was confronted with a melancholy array of statistics. Of 175 cases of resection of the femur, for gunshot injury, tabulated by Drs. Otis and Huntington, no less than 116 proved fatal, a percentage of 69.4. But we have a right to expect better results in civil practice.

In the "International Encyclopædia of Surgery," on the subject of resection of the femur, Ashhurst says: "Resection may be performed for the relief of ununited fracture, but in this part of the body is both a doubtful and a dangerous remedy; and should milder means fail to secure a union, the patient will, as a rule, do well to be satisfied with the adoption of some mechanical means of support, such as that devised by Professor H. H. Smith, of Philadelphia, rather than undergo the risks of a resection."

Fortunately, the above-quoted statistics and opinion were written before the days of antiseptic surgery as practised at the present time. I wish to say in this connection that this operation was performed under the strictest antiseptic precautions, and the wound was known to be absolutely aseptic when it was closed; and I believe that if, in such cases, in a healthy subject, the operation is performed in a strictly antiseptic manner, and the bones firmly sutured, the wound cannot go wrong, and the bones must unite.

Secondly, as to the safety of closing so large a wound before oozing has stopped:

This is a point of much interest to the rural surgeon, who often has to go to the country to operate, necessitating absence from his office for several hours, in many instances for a whole day. By closing the wound, as in the above instance, many hours of valuable time can often be saved.

Whether or not the blood thus imprisoned becomes absorbed, or enters into the new formation of bone, it is not the object of this paper to discuss; but the point that interests the practical surgeon is, whether or not such a wound can be sealed up and left so for days with safety to the patient. I believe, if the wound is perfectly aseptic, that it is absolutely safe; and a number of cases could be cited from my own experience that would verify the statement. There is one case, in particular, worthy of mention, as touching this point—it is the case of a shoulder-joint amputation for malignant disease of the humerus, in which the flaps were extremely vascular, eighteen arteries being ligated, but general oozing continued. The wound was closed and antiseptic dressings applied. The patient was seen every day. On the eighth day the wound was examined for the first time, and found to be perfectly healed, with not a drop of pus to be seen. This patient never had a temperature above 98.5° F.

Thirdly, as to the method of securing the bones in apposition:

I claim no originality in the method of this operation, it being, I believe, the way in which the operation is usually performed; but it may be of interest to compare it with the operation of Dr. Lemoyne, as described by him in a very interesting paper on the subject, read before the International Medical Congress at Washington, the following synopsis of which was published in THE MEDICAL RECORD of September 17, 1887:

"The bones were cut down upon, and the ends found to be overlapping nearly three inches. The ends were sawed off, the upper fragment in the form of a wedge; from the lower one a wedge-shaped piece of bone was removed, so that the upper fragment fitted into it. A hole was drilled in both bones about an inch and a half from the fractured ends. A stiff, flat, steel bar, with a prong at both ends, was placed lengthwise on the surface of the bone, so that the prongs were inserted into the holes; a stout piece of wire was then passed around the clamp and femur at both ends, and twisted close up, holding the clamp in position. The wires and clamp remained there nine weeks, when the wound was reopened and the clamp removed. The bone was firmly united, but the limb is two and one-half inches shorter."

The result in this case seems to be all that could be desired, but the points of objection are, first, it involves the sacrifice of an unnecessary amount of bone; secondly, it necessitates a second operation, at a time when, if the bones had been secured by wire sutures, and, if need be, by a splint, the patient ought to be cured and ready to leave his room. In this connection the attention of the profession is called to the question as to whether the wire sutures should be left long and brought out at the wound, and the latter kept open until the bone becomes united, and be then removed, or whether they should be cut short and allowed to become embedded in the callus, as was done in the case now reported.

It is now more than six months since this operation was performed. The man is walking on his leg, and there is not the slightest indication of irritation from the sutures or other causes.

ANTIPYRINE IN NEURALGIC HEADACHE.

Dr. R. R. Ball, Assistant Surgeon, U. S. Army, of Fort Riley, Kan., reports the following case: "A few days ago I had occasion to use antipyrine in the case of Miss K. F——, a young lady who, for several years, has been subject to violent neuralgic headaches. She had never gotten relief from anything she had tried. I gave her ten grains of antipyrine, directing her, if pain continued, to repeat this dose in half an hour. Fortunately for me, idiosyncrasy stepped in to prevent my directions being obeyed. In about five minutes after taking the ten grains she turned deathly pale, experiencing complete loss of strength, with violent palpitation of the heart and slight nausea. She immediately took to the bed, and summoned a physician. A few minutes later a peculiar and intense itching and burning of the fauces, of the conjunctiva, and of the lining membrane of the nose and middle ear occurred, making her feel, as she expressed it, that if she could scratch the inner membrane of her throat out she would be relieved. This condition was rapidly followed by intense burning and itching of the skin on the upper portion of the body, running on into fully developed urticaria. No emetics were used, as some time had elapsed before she was seen, half an ounce of brandy had been given, and in about two hours, with perfect rest in bed, the untoward symptoms passed off. In this case, as in many others, the headache was completely relieved—though I had never met such idiosyncrasy before. I can only account for the symptoms on the supposition of an idiosyncrasy, which is strengthened by the fact, as I learn, that her mother has been so affected by other things. She is also unable to eat strawberries and some other fruits. Perhaps it would be well if we always inquired more fully into the peculiarities of families. Certainly, I shall, in future, regarding antipyrine."

Antipyrine in Obstetric Practice.—Dr. Charles Milne, of this city, writes: "Referring to the letter of Dr. Hays, in a recent issue of The Medical Record, on the use of antipyrine and antifebrine as hypnotics, permit me to say that I have been in the habit of using the former for the past six months, not only as a soporific but as an anodyne, and I now use it almost exclusively, instead of opium or its alkaloids, to relieve pain and produce sleep, chiefly for the reason that it produces refreshing sleep, and alleviates suffering without producing any unpleasant after-effects. I find it especially useful in cases of wakefulness due to over-fatigue, or exhaustion following cases of protracted labor. It is also, I find, an excellent remedy for after-pains. I usually give it in doses of fifteen to twenty grains, and repeat in two hours if necessary, but the first dose nearly always produces the desired result. My experience with antifebrine has been too limited to enable me to express any opinion as to its merits in similar cases."

Leyden's Crystals without Asthma.—Dr. Pfuhl reports in the *Militärärztliche Zeitschrift* a case of a soldier suffering from a severe chronic bronchitis, in whose sputum Leyden's crystals were found in great numbers. The patient had not the slightest suspicion of asthma, but the sputum had the peculiar odor of spermatic fluid, which is said to be always noticed when Leyden's crystals are present.

Progress of Medical Science.

Gravity as an Expectorant.—It is claimed that in cases of pneumonia where there is great embarrassment of breathing from accumulation of secretion in the bronchial tubes, great benefit may often be derived by inverting the patient and having him cough violently while in this position. It is easily accomplished by a strong assistant standing on the patient's bed, seizing the sick man's ankles, turning him with his face downward, and then lifting his feet four or five feet above the level of the mattress. If the patient, with his face over the edge of the bed and his legs thus held aloft, will cough vigorously two or three times, he will get rid of much expectoration that exhaustive efforts at coughing failed to dislodge when not thus aided by gravity. Life has been saved by repeated performances of this manœuvre in pneumonia accompanied with great cyanosis due to inundation of the bronchial tubes with mucous secretion. It, of course, will have no effect on the exudate in the vesicles. Gravity is of value in a similar way in emptying the lungs of mucus during etherization.—*Polyclinic.*

The Treatment of Poisoned Wounds.—Dr. A. de Noé Walker has addressed a letter to *The British Medical Journal* in which he expresses the opinion that if Burnett's fluid, diluted with one-third of water, is at once poured on the abraded surface of penetrating wounds, whether inflicted by a venomous spider, hornet, scorpion, cobra, rattlesnake, or rabid dog, the patient may consider himself safe. The poisons of various venomous animals, however, differ widely in composition. Those of the spider, hornet, and scorpion are as yet not thoroughly investigated; but that of the cobra, along with other ophidians, is of proteid nature. That of the rabid dog is—at least recent researches would prove it so—of microbic origin, and bears no comparison with the others. It is not to be supposed that the same treatment is applicable to all. Alkaline lotions are usually the best for the venomous insects; we know of no antidote for snake-poison when it has once entered the system, and Burnett's fluid or chloride of zinc will not act any better than simple washing the wound with water. The antidote to rabies is probably not to be found in any chemical application. "Reducing" or "decomposing" agents can be found for all the poisons of chemical nature, but if the venom is at all intense, for example, snake-poison, the unfortunate part of it is that the amount of antidote requisite to neutralize or destroy the poison would be sufficient to destroy every tissue in the body it came in contact with, and thus, though a poison may be quite easily neutralized in the laboratory (for example, snake-poison by permanganate of potash), it cannot be effected when it has entered the system. Immediate washing of a poisoned wound under a tap of water will effect more than any application of Burnett's or other fluid. As to cobra-poison, when once a lethal dose has entered the circulation, no antidote or treatment will save the patient.

The Action of the Alkaloids of Veratrum.—Our knowledge of the action of the alkaloids of veratrum has hitherto been gained solely from the observations made with the amorphous substance veratrine, a body in reality not simple, but a compound of two bases, entirely differing in their properties. Lissauer has therefore deemed it advisable to repeat these observations with the perfectly pure crystalline substance veratrine. The results obtained in warm-blooded animals he sums up as follows: 1. Vasomotor paralysis, probably of central origin, although perhaps due in part to the direct action of the alkaloid on the muscular fibres of the small arterioles. 2. Slowing of the heart's action, usually only slight—occasionally, although only temporarily, very marked; the result being unaccompanied by any weakening of the heart's action when moderate doses are given.

3. Disturbance in respiration; slowing, with finally complete cessation, and death. 4. Disturbances in connection with the alimentary system; in the case of rabbits, salivation; in other mammals, in addition, vomiting and diarrhœa. 5. With large doses, convulsions of cerebral origin. 6. Changes in temperature, probably of secondary origin, and dependent on the vaso-motor disturbance.—*The Practitioner.*

Litholopaxy in Male Children.—Dr. Walsham believes (*The British Medical Journal*) that if proper precautions be taken, litholopaxy will be found as simple and as safe in children as it is in adults. As regards the performance of the operation, the same rules apply to both classes of patients. But the following points are, according to him, worthy of special notice: 1. That the lithotrite should be fully fenestrated, and the female blade well bevelled, so that no detritus may be retained between the blades, and the risk of nipping the mucous membrane of the bladder may be avoided. 2. That the evacuating catheter should be furnished with an accurately fitting stylet, in order that any fragment fixed in the eye may be displaced before the catheter is withdrawn. 3. That the meatus should be incised, and no force used in passing either the lithotrite or the evacuating catheter. 4. That the stone should be very thoroughly crushed, as the small size of the evacuating catheter will only allow the removal of small fragments. 5. That every particle of stone should be removed at one sitting. 6. That the first crushing should be as thorough as possible, so as not to necessitate the frequent passage of the lithotrite and evacuator. 7. That a small aspirator should be employed, to avoid any risk of over-distention or rupture of the bladder.

The Lesions of Morphomania.—Dr. Ball, at a meeting of the Paris Academy of Medicine, spoke on the subject of the lesions observed in persons addicted to the excessive use of morphine. The topic was suggested to him by the case of a woman who entered his service at St. Anne voluntarily, in order to get cured of the habit of taking morphine. She took daily about sixteen grains. At first immediate suppression of the drug was ordered, but the patient fell into such a state of collapse that a more moderate and progressive treatment was adopted. Sleeplessness and agitation were combated by enemata of bromide of potassium and chloral. Four grains daily of sparteine had to be given for the heart. The treatment lasted forty-two days, and, at the end of that period, the woman seemed to have quite recovered. But when about to leave the hospital she died suddenly. The autopsy revealed fatty degeneration of almost all the internal organs, especially of the heart, and the presence of morphine in the nervous centres.

The Physiological and Therapeutical Actions of Solanin.—According to Clarus, solanin is a narcotic poison which has the property of paralyzing the spinal cord and vagus endings, and of exciting the peripheric nerves (*The Therapeutic Gazette*, December 15, 1887). In former years Geneuil experimented with the drug, and came to the conclusion that solanin exerted its narcotic properties on the medulla oblongata, spinal cord, and nerve-branches, and thereby caused a paralysis of the extremities and of the sensitive and motoric nerves. Capparoni has recently conducted a series of experiments with solanin on man. His results are as follows: A very small dose of solanin (1.54 grain) will cause (especially in individuals with a sensitive stomach) a sensation of burning in the stomach, salivation, and nausea. All these symptoms prove that the drug causes a local irritation. When the drug is given where the stomach has been previously anæsthetized, or when it is administered hypodermically, this irritation does not take place. The same dose causes a lessening of the pulse's frequency and of the respirations, and a decrease of the reflex activity of the excito-motor tendency of the spinal cord and medulla oblongata. Solanin does not seem to have any influence on the brain-centres; it is not a hypnotic; the pupils do not undergo any change. In the circulatory system small doses of solanin lessen the rapidity of the heart's action and increase the pressure of blood in the arteries. Toxic doses, however, cause the pulse to increase greatly, and lessen the arterial pressure, and also increase the respirations. Solanin is thrown off by the kidneys, but has no effect on the secretion of urine, neither is it a diaphoretic. As to its therapeutical action, the author has found it of great value in cases where it was necessary to reduce the irritability of the spinal cord; also in asthma, in difficulties in walking, and muscular spasms of a peripheric origin, in tremor, etc. The author usually gave 0.15 to 0.30 gram ($2\frac{1}{3}$ to $4\frac{3}{5}$ grains) daily, divided into a lesser or greater number of doses, according to the special needs of the case.

The Relation of Tea-drinking to Nervous Disorders.—A paper on this subject, from the pen of Dr. W. N. Bullard, appears in the "Medical Communications of the Massachusetts Medical Society." The author has reached the following conclusions: 1. Chronic tea-poisoning produces a condition of irritability or hyperexcitability of the nervous system, and does this both directly by the action of the tea upon the nervous system, and indirectly by the production of gastric derangement. 2. Tea, taken frequently and in moderate doses for a considerable period of time, tends therefore to place the nervous system in a condition in which it is more easily affected injuriously by slight external influences. It therefore favors the production of many forms of functional neuroses, and, if such neuroses already exist, aids in their continuance. 3. There is no evidence that tea taken in the manner described causes any organic nervous lesion, but it is probable that if such nervous lesion should exist, tea thus taken might tend to cause an aggravation and continuance of certain symptoms. 4. There is no evidence that chronic tea-poisoning produces unaided any serious functional neuroses in persons not in any way specially predisposed thereto. It does, however, in the manner above described, act as an important factor in the production of neuralgia, hysteria, and allied affections. 5. When taken constantly in very large doses, dyspeptic symptoms usually intervene before irreparable harm is done to the nervous system. 6. In hemicrania, and possibly some other functional neuroses, there is probably a craving on the part of the nervous system for a slight stimulation, which is better afforded by tea than by any other equally accessible article, and for this reason patients with hemicrania are so frequently tea-drinkers.

The Elimination of Uric Acid by the Skin, and the Difficulty of Detecting Minute Quantities of that Acid.—Dr. Tichborne has made a study of this subject, the results of which he published in the *British Medical Journal.* He says that Dr. Garrod denied to the skin the power of eliminating uric acid. But the fact that the skin acts in this way has been demonstrated. Dr. Tichborne, continuing, says, concerning the murexide test, that from the description given in text-books one would imagine that nothing could be more simple in its application, and nothing more striking than the phenomenon produced, and when dealing with ponderable quantities of the acid it probably is so, but if we are seeking for minute quantities in a complex mixture, it is quite the reverse. The tests are *bien prononcés* with coarse quantities, but treacherous when dealing with traces. The three essentials which are requisite to the development of the murexide or purpurate of potassium test are the following: 1. The proportion of nitric acid to the uric acid present should never be in excess; it will be at once perceived that this presents a great difficulty when dealing with an unknown trace. 2. The amount of dilution requisite for the development is of considerable importance. 3. That there is no reducing substance present capable of reacting on the nitric acid. This is what he terms interference. All the following substances, which, unfortunately, are more or less mixed up with the secretions, interfere with the murexide test —lactic and sarcolactic acids, albumen, and sugar. He points out the necessity of separating these from the uric-acid residue before testing for that substance. Calculating that we are dealing with a saturated solution of uric acid in the cold, namely, one containing 1-15000th, it will be found that five parts of ten per cent. diluted nitric acid to twenty of the uric-acid solution is as much as can be used, while five to thirty is a better proportion. In practice, however, it is impossible to hit this off, and thus the numerous failures in detecting uric acid when it is present. However, he has adopted a plan of extreme simplicity, which, like a great number of simple arrangements, makes all the difference between success and failure. It consists in adding the ten per cent. nitric acid in a definite proportion as near as we could infer would represent the relative quantities given above, and evaporating the mixture in a water-bath at 100° C., without moving or stirring. Again, this evaporation must be performed in a very concave watch-glass. These two last precautions are the essential parts of the test; under exactly similar proportions it will be seen that, on trying it upon the ordinary flat glass, no results are obtained. But on the concave glass, the partially oxidized uric acid is gradually deposited upon the surface in what we may view as rings, which are concentrating as they go on. The remaining liquid is also gradually concentrating in acidity, until at some stage of the evaporation a circle is deposited just of the right concentration and relative proportion to form the murexide. The result in nine cases out of ten is the production of a halo of color, the edges of the glass and the centre being colorless. The edges represent the part where the substances are not sufficiently concentrated to react. The colorless centre represents the condition where the nitric acid has become too concentrated. If the uric acid is present in considerable quantities, a central circle of color is produced. The author obtained marked indications of uric acid in sweat collected by Dr. Meldon at the Turkish baths, by operating in the following manner: The perspiration was rapidly evaporated to a small bulk, and while warm, passed through a small filter. It was then acidulated by a few drops of hydrochloric acid, and allowed to stand some days. Traces of uric acid require time to be thoroughly deposited. The whole was then thrown upon a filter, and, when thoroughly drained, the filter was moistened with a few drops of alcohol, and then washed thoroughly with ether. The uric acid is insoluble in ether, while the lactic acid, etc., are washed away. This enables the murexide test to indicate the uric acid if applied in the manner given above.

CHLORIDE OF METHYLENE WITH THE ACTUAL CAUTERY.—M. Bailly, who is a great partisan of the actual cautery in different local affections, such as hydrarthrosis, incipient tuberculosis, and certain scrofulous affections, gave an account, before the Société de Thérapeutique, of the methods he has tried to render the operation painless. Ice with marine salt gave but little relief, and cocaine, with or without carbolic acid, gave also unsatisfactory results. Not so, however, is the case of the spray of chloride of methylene, which deadens all the sensitiveness of the derm in from two to four seconds. As soon as the skin whitens the operation can begin.—*Medical Press.*

NAPHTHOL AS AN ANTISEPTIC MEDICAMENT.—Bouchard has communicated to the French Academy of Sciences the results of a series of researches, from which it appears that naphthol, one of the derivatives of naphthaline, is an excellent antiseptic, surpassing even iodoform. Kaposi, several years ago, called attention to the value of this agent in the treatment of certain diseases of the skin, and particularly of scabies. He employs naphthol in a ten per cent. alcoholic solution, or in the form of ointment, and says that one or two applications will cure the most inveterate cases of common itch. For this purpose an ointment may be made with one part of naphthol and ten of vaseline. He has had equal success with naphthol in psoriasis, eczema, and ichthyosis, and there is nothing better, he says, to allay the tormenting itching of prurigo. Hensinger also speaks in high praise of naphthol as an external agent (alcoholic lotion or pomade) in the skin diseases mentioned above, in lupus erythematosus and in chancres. Under its use sores of a phagedenic character rapidly take on a healthy action. Van Harlingen, moreover, has seen favorable results from naphthol in obstinate cutaneous affections. The experiments to which allusion has been made have led Bouchard to regard naphthol as one of the best and safest of antiseptics. According to these a three per cent. solution markedly retards the development of the typhoid bacillus, as well as that of the bacillus tuberculosis. The same solution is fatal to the microbes of several of the parasitic diseases of animals, and prevents fermentations. Bouchard gives naphthol internally in typhoid fever, and believes that, if it does not abort this disease, it certainly renders its course milder. He regards a dose of forty-five grains a day as realizing the conditions of intestinal antisepsis, and affirms that in such doses there is no antiseptic agent which is more innocuous. This use of naphthol in typhoid fever has been followed to some extent in this country, with apparently favorable results. —*The Boston Medical and Surgical Journal*, November 17, 1887.

TREATMENT OF THORACIC ANEURISM BY THE INTRODUCTION OF WIRE.—M. Charmeil, of Lyons, has collected the details of fifteen cases of aortic aneurism, in which "Moore's method," as he terms it, was employed, from the original case in the Middlesex Hospital to three previously unpublished cases in the practice of M. Lépine (*The Lancet*, December 3, 1887). Although not one of the fifteen cases has resulted in the cure of the aneurism, M. Charmeil concludes that the practice itself does not involve any direct danger to the patient, and that the results ascertained at the necropsies have been encouraging. Clinically the treatment has nearly always been followed by local improvement, as well as by relief of subjective symptoms. He therefore thinks the method is justifiable and worthy of continued trial, and indicates as essential to its favorable practice a preliminary exploration of the aneurism by means of acupuncture needles, the use of the watch-spring of Bacelli introduced through a flattened cannula, and the most rigid adoption of antiseptic precautions. At the same time recourse should be had to Tufnell's dietetic treatment.

HYDROCHLORIC ACID IN GASTRIC JUICE.—A satisfactory reaction for hydrochloric acid in gastric juice appears still to be an unsupplied want. M. Ewald has brought forward a new reagent for the detection of free hydrochloric acid. It is composed of one part of vaniline, two parts of flucoglycine, and thirty of alcohol. On warming slowly the liquid to which the reagent is added, there appears a beautiful crimson-red color if the liquid contains hydrochloric acid in not less proportion than .05 gramme per litre. Lactic acid does not give this reaction.—*The Lancet*, December 3, 1887.

DANGER IN UNCOOKED MILK.—According to *The Lancet* milk epidemics of typhoid fever, scarlet fever, and diphtheria have repeatedly shown how severely the incidence of the disease has been felt upon those using uncooked milk. It has been shown that the cow may suffer from a disease which at present is rarely, if ever, regarded as of any importance by dairymen, and which may give to the milk a power of producing scarlet fever in those who consume it in its raw state.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, January 14, 1888.

IMAGINARY ULCERS OF THE TONGUE.

AT a meeting of the Paris Academy of Medicine, held on September 27th, M. Verneuil related some cases of imaginary ulcers of tongue. He had seen but five cases, and thought the condition was a rare one. The affection was characterized by acute pain in a circumscribed portion of the tongue, at the junction of the posterior with the middle third of the organ, at about the situation of the last lenticular papilla. The patients always believed that there was an ulcer at this point, and most of them thought that there was cancer of the organ. The movements of the tongue were free, though sometimes painful. Careful examination revealed absolutely no lesion. All the patients were between thirty-five and fifty years of age and were robust, with, seemingly, a rheumatic tendency. Various modes of treatment had been tried, but none of them had produced any amelioration.

In the discussion that followed the reading of this paper, several of the members stated that they had met with similar cases in their practice, and although the books were silent on the subject, the delusion referred to would seem not to be of very special rarity.

In the *Bulletin Médicale* for October 9, 1887, Dr. Poyet contributes an article on the same subject, in which he also takes the view that the affection is by no means so rare as might be supposed. The delusion, he says, may almost always be referred to one of four causes. In the first class of cases, to which those reported by M. Verneuil belonged, there is a neuralgia of the tongue, and the pain leads the sufferers to believe that ulceration exists. In the second class are patients who have read or heard of some person afflicted with cancer, and have been led thereby to examine their own tongues. They notice, perhaps, a somewhat prominent papilla, and their fears lead them to the conclusion that it is the edge of an ulcer or a commencing cancer. Others are hypochondriacs pure and simple, and are so convinced that there is an ulcer present that no amount of argument or demonstration can convince them of their error. Finally, certain patients with lingual psoriasis discover the white patch on their tongue and think that ulceration is present. When there is simply an enlarged papilla, the patient may make applications of one kind or another in the hope of curing the supposed growth, and the result will be pain, which serves only to confirm him in his delusion.

The treatment of these patients is in large measure a moral one. The patient's confidence must be gained, and he must be persuaded to abandon his delusion. When neuralgia is present much relief may sometimes be obtained by applications of cocaine or aconite. In the case of a hypochondriac, M. Poyet advises the use of the actual cautery or of some other painful application, for its moral effect. But, in any case, the cure of imaginary ulceration of the tongue, as of other imaginary diseases, is often most difficult, and at times impossible.

ELECTRICITY AND EMBRYONAL DEVELOPMENT.

SOME interesting experiments, which may possibly contain the germ of a valuable discovery in embryology, have recently been made by Dr. Giuseppe Fasola. These experiments, as related in the *Archivio per le Scienze Mediche*, vol. xi., No. 4, 1887, consisted in the passage of a weak induced current through frogs' eggs with a view to determine the effect of electricity upon the development of the embryo. The experiments were apparently conducted with great care, and every precaution wss taken to exclude all sources of error. The method of procedure was briefly as follows :

Several couples of strong and healthy frogs were taken and placed each in a separate compartment, and there kept until the deposition of the eggs was complete. The mass of eggs was then divided as nearly as possible into from four to six equal parts, some of which were submitted to the electrical currents, and others were kept under the same conditions, but without electricity, in order to serve for comparison. The conditions as to the size of the vessels, the temperature of the water, the amount of light received, etc., were the same in all the cases. The length of time that the eggs were exposed to the induced current varied in different experiments from one to sixty minutes. In some cases only one application of the electricity was made ; in others three or four in as many successive days. The ages of the eggs at the time the current was passed through them also varied from one to six days.

The first movements of the larvæ, as well as their complete liberation, took place in the eggs which had been submitted to the action of the electricity from twelve to thirty-six hours before they did in the other eggs which had not been so treated. In these eggs, however, there was a large proportion of failures. In many of them there was an early arrest of development, probably at the time of the application of the electricity, but in the greater number the larvæ were formed, but had failed to reach maturity. Possibly, as the author intimates, this was due to weakness resulting from the too rapid development of the ovum.

As to the mode of action of the electricity in thus accelerating the development of these frogs' eggs, Dr. Fasola suggests three hypotheses. It is possible, he says, that the action of the currents upon the mucin enveloping the eggs may have produced sufficient heat to effect this result ; or the elective affinities of certain of the chemical elements may have been so increased as to render their reciprocal action more prompt ; or, finally, the electricity may have promoted the particular molecular arrangements which are supposed to be concerned in the production of vital phenomena. In whatever way brought about, however, the acceleration did take place, and the results of his experiments, the author thinks, serve to render more probable the hypothesis that electricity and magnetism have a very important function in the most intimate and delicate of vital processes.

EPIDEMIC WINTER ITCH.

Dr. E. A. Neely, of Memphis, Tenn., states (*Mississippi Valley Medical Monthly*) that for the past three winters there has existed in Memphis and vicinity an affection of the skin which, from its great prevalence, might be considered epidemic. It begins usually in October, and lasts until spring. It is characterized by distressing itching, burning, and smarting sensations. The skin presents no lesion whatever, except that it is universally dry, harsh, and furfuraceous. The symptoms are worse at night, or on exposure to heat, and they increase and diminish with the fall or rise of the temperature. The favorite localities are the extensor surfaces of the thighs and legs, arms and forearms. It rarely attacks the body, and never the face, scalp, feet, or hands. It attacks persons of all ages, and is equally frequent among males and females. The majority of the sufferers appear to possess excellent health. It is not apparently contagious; nor, according to Dr. Neely, can it be traced to the presence of a parasite.

It is not identical with the so called "Michigan itch," but is probably the same affection as that described by Dr. Duhring, in 1874, as "pruritus hiemalis." This latter disease was described as having a predilection for the inner surface of the thighs, the popliteal spaces, and the calves.

It is generally stated that the disease is not due to any constitutional condition, and is not influenced by internal treatment. Defective action and nutrition of the skin, owing to the cold, is believed to constitute the basis of its pathology.

Dr. Tilbury Fox, however, states, and we believe correctly, that in many cases there is a gouty condition, or, at least, a deficiency in the excretion of nitrogeneous matters and bile products. It is to be regretted that some careful examinations bearing upon this point were not made by Dr. Neely. It is plain that there must be some other element than simply the action of the cold, for otherwise we cannot account for the fact that, among persons equally exposed, some suffer and others do not.

Treatment is not very effectual. The use of vaseline, with alkaline baths and carbolic acid, is most efficacious.

A NEW MICROBE OF SYPHILIS.

Syphilis is not transferable to lower species, with the exception, perhaps, of the ape, which animal Klebs and Martineau and Hammonic claim to have successfully inoculated. Despite this, there come from Japan reports that a new micro-organism has been found in the blood of syphilitics, that this has been cultivated, and that lower animals have been successfully inoculated. The disease resulting is not claimed to be identical with human syphilis, but it bears a very close relation to it. Hereditary syphilis, so called, was also produced, as shown by examination of the placental and of the fetal offspring of inoculated animals.

Dr. Disse and Mr. K. Takaki, Professors of Anatomy in the Tokio University, are gentlemen who claim paternity to the new microbe.

According to *The Lancet*, they examined chiefly the blood of syphilitic persons, especially of such as had been cured of all manifestations of the disease. They selected the skin of the face, on account of its great vascularity, of course cleaning it very carefully with antiseptics before making the necessary puncture. In most of the cases spherical bodies, nearly 0.001 mm. in diameter, which could be stained by Gram's method, were found; these occurred singly or in groups between the blood-corpuscles. They were not easy to be distinguished unless the layer of blood was extremely thin. A magnifying power of three hundred and fifty diameters was used, an oil-immersion lens and a good illumination being indispensable. They were, the writers believe, invested with an envelope. In non-syphilitic subjects, whose blood was examined with similar precautions, these bodies could not be found. From blood containing these organisms cultures were prepared, various media being employed. Of the cultures attempted about three-fourths were successful. Of course, extraneous organisms made their appearance, but with care pure cultures were obtained. When they were examined microscopically, there were found: 1. Simple spherical forms, having a diameter of 0.0008 mm. 2. Double spheres, looking like short rods with rounded ends; the length of these was 0.0018, and the breadth rather less than half the length. 3. Chains and groups really formed of the double spheres. 4. Occasionally three spheres in line, measuring 0.0027 mm. All these forms were invested with envelopes which did not take the stain, and therefore were difficult to distinguish. In one culture an ovoid bacterium, with a clear spot in the centre, was found on the third day, but subsequently this had apparently changed into the ordinary form.

From a study of the report of Dr. Disse and his associate, one concludes that they have made a thorough and careful bacteriological study, but that their claim to have found a specific microbe is not established.

THE NATURAL INSTINCTS IN EDUCATED WOMEN.

There has been running through the recent issues of the *Medical and Surgical Reporter* a curious and not altogether savory controversy as to the comparative intensity of the sexual feeling in men and women. Some of the correspondents were medical women, and presumably had specially good opportunities for obtaining physiological data. The general tenor of the statements made was in conformity with the prevailing view, that the sexual feelings are less active in women, and that the wife is sometimes injured by the excessive sensuality of the husband. Some striking illustrations of the reverse were, however, alleged to occur.

In the New York *Medical Journal* for December 3d, Dr. Louise Fiske-Bryson takes up a somewhat similar topic. An inquiry was instituted in order to see whether education and cultivation tend to lessen the sexual and maternal instincts in American women. The data obtained are lacking in preciseness, but are sufficiently interesting. Twenty-five "cultivated women," of average or superior intelligence, excellent education, and good social positions, were questioned. Four were physicians, three were engaged in literature, one was "a royal beauty admired of two continents," and three were dignified matrons. They had all been married between the ages of nineteen and thirty-five, and nearly all were mothers. They varied greatly in height, weight, and physique.

Inquiry showed that twenty possessed maternal instincts, eleven possessed both sexual and maternal instincts, fourteen seemed to have no definite knowledge of the sexual instinct or feeling, nine possessed the maternal instinct but not the sexual, while five possessed neither sexual nor true maternal feeling.

Of the twenty-five, only eleven, therefore, possessed capacity for both maternal and sexual feeling. The conclusion drawn by Dr. Bryson, therefore, seems rather a *non sequitur*, for it is this: "Cultivated women of the highest type and of most value to the world are in no wise deficient in natural instincts."

Since fifty-six per cent. of the cultivated women about whom the inquiry was made lacked in sexual instincts, the most obvious inference is that this class of women may have a fully developed nature, but, as a rule, they do not. It is inferred, but not stated, that the eleven fully equipped matrons were the best of the twenty-five, and that among the others there was an element of frivolity in the character which placed them on a lower plane.

It is well known that civilization tends to retard complete functional development, and the inquiries of Dr. Bryson show that the average age at which the (sexual?) instincts were recognized was twenty-seven.

THE ACTION OF MEDICINES AT A DISTANCE.

ABOUT two years ago Drs. Bourru and Burot, Professors in the School of Medicine at Rochefort, published the results of some experiments with hypnotized patients, in which they claimed that certain drugs produced physiological effects when simply brought near the patients. Even toxic effects were noted. Their observations received very little credit, as it was believed that some errors in method must have been made.

In the *Revue de L'Hypnotisme* for October 1, 1887, these gentlemen reiterate the claims they made for a valid discovery, and give some diffuse and inapposite illustration in order to make it appear less improbable.

In *L'Encephale* for September and October, 1887, Professor J. Luys reports somewhat similar experiments. The details are given with great preciseness. The subjects are hypnotized and placed in the stage of lethargy, with neuro-muscular hyperexcitability. Various drugs are placed in different vials, hermetically sealed and numbered. One is taken out of the basket which holds them, the operator not knowing at the time its contents, and placed near or in contact with some part of the subject's person. Peculiar effects result, depending upon the location of the drug and its nature. From the descriptions and illustrations so far given, it does not appear that the specific effects of the drug are always obtained, though this is sometimes the case. We cannot see, in fact, from the evidence at present given, that the subjects do more than experience certain hallucinations, the character of which is purely accidental. It is a significant fact that Professor Charcot refused to serve on the commission appointed to investigate the claims of Professor Luys.

The possibility that drugs can act at a distance in the way they are asserted to do by Bourru, Burot, and Luys is, *a priori*, extremely slight. We have, however, known of a patient who, when a little ill, always sent for his doctor, got the medicines prescribed, set the bottles on the dressing-case, and in a few days was completely cured. This patient argued that such a procedure was the surest way of securing health and, at the same time, promoting the interests and prosperity of the medical art.

FECAL ANÆMIA.

THIS is the title of a paper read recently by Sir Andrew Clark before one of the London societies. The essential ideas expressed were not new, but their grouping was somewhat novel. Under the heading of fecal anæmia the writer discussed the question of anæmia occurring in young girls about the time of the establishment of menstruation. We have usually been taught to regard these blood-changes as due to the general systemic disturbance incident to the inauguration of a new and most important function. We have recognized the exciting causes as well. On these general grounds we have been content to let the matter rest.

Sir Andrew Clark takes up one aspect of the case, and elaborates therefrom a novel and highly probable theory. He alludes to the profound mental and emotional changes occurring in the female sex at the time of puberty. The young girl, who has been only a creature full of mere animal spirits, becomes shy and retiring. Questions of personal physiology force themselves upon her. She shrinks from the contemplation even of matters relating to the hygiene of the pelvic organs, much more from their performance. The importance of regular evacuations is not recognized, and, unless friendly maternal counsel is at hand, she speedily becomes the victim of obstinate constipation. However great the bodily discomfort therefrom may be, she suffers in silence, not daring to ask for relief. As a result of this perversion, or, rather, abeyance of function, the system speedily becomes clogged, effete materials accumulate in the bowel, and there remaining they undergo chemical change. Poisons of the ptomaine and leukomaine classes are formed. These are absorbed into the circulation, and set up a form of systemic infection. This runs a slow chronic course, evincing its presence in the usual clinical picture of paleness, headache, dyspnœa, palpitation, dyspepsia, and the other customary features of anæmia. The old idea made constipation simply one feature of its condition; the new makes it the direct cause.

Of course all cases of anæmia cannot be brought under this category, nor does Sir Andrew Clark make any such claim. Experience shows, however, the correctness of his views in a large proportion of cases. The marked relief that follows from a thorough cleaning out of the bowel is a matter too well known or more than mention. It ensues even before any blood-forming tonics are given, and often the patient seems to improve about as rapidly without as with the latter. The constant absorption of poison being checked, nature regains the upper hand and the vital machinery once more runs smoothly.

It is in such cases as these that excellent results have been obtained by the use of cascara. This drug is distinctly a tonic-laxative, of which the dose can be gradually reduced instead of increased, as is usually the case with laxatives. It restores the normal vitality of the muscular fibre of the gut, exhausted by over distention.

FOLIE GYNÉCOLOGIQUE.

The fact that certain women develop a kind of mania for uterine treatment is well known. These cases haunt the dispensaries or pursue the physician in his office. They are never content unless a vaginal examination is made; and the topical application of iodine to the cervix is to them what a "nip" is to the confirmed toper. They possess a kind of inebriety for local treatment. The condition is sometimes due to a morbid sexual erythism, but oftener perhaps it is a purely mental disorder, and belongs to the "habits." The French call it "folie gynécologique," and the Germans "Mutterleib Krankheit-wahnsinn." It is evidently a disorder coextensive with, and also the product of, modern gynecology. In the West these cases, as we learn from the *Medical Age*, go by the purely Saxon name of "wombcranks." They are utilized by clinical teachers, and are made victims of by dishonest physicians.

What they need is isolation from the doctor.

ANTIFEBRIN AS AN ANODYNE.

Antifebrin appears to have properties that will make the drug valuable as a remedy in the pains attending many nervous affections. Lépine was one of the first who used acetanilide in the painful paroxysms of locomotor ataxia. Dr. Demiéville, in the *Revue Médicale de la Suisse Romande*, gives his experience with the drug in over eighty cases in which fever was absent. He often used fifteen grains in the twenty-four hours, and did not observe any ill effects therefrom. He found that digestive disturbances were quite infrequent. Sweating sometimes occurred, but depression only quite exceptionally.

The anodyne effect of antifebrin was at times noticeable in fifteen minutes, though generally an hour or two elapsed before it occurred. Somnolence was commonly observed.

The author found that the effect of the drug would wear off after its prolonged use, but after being discontinued for several days it acted as promptly as before. Dr. Demiéville employed the drug in cases of sciatica, lumbago, neuralgia of the fifth nerve, intercostal neuralgia, in headaches of various kinds, in pains of obscure origin, in dysmenorrhœa, in tabes, and even such grave conditions as ostitis and uterine cancer. He claims that antifebrin often succeeds when other nervines fail, and warmly advocates its employment in most painful affections, whether accompanied by fever or not.

A New Hospital for Children's Diseases is to be erected in Paris by the Government.

News of the Week.

Dr. Charles H. May has been appointed Visiting Ophthalmic and Aural Surgeon to Randall's Island Hospital, New York.

Extirpation of the Larynx.—At a recent meeting of the Berlin Medical Society, Dr. Hahn gave a demonstration of specimens of laryngeal carcinoma from cases in which he had excised the whole or a portion of the larynx, and at the same time summed up the ultimate results of his operations. He had performed extirpation, partial or total, in fifteen cases. Two of these are to be considered as cured; one was operated upon seven years ago, being then sixty-nine years of age, and he is still living and well. The operation involved the removal of the cricoid cartilage, the greater part of the thyroid, and part of the hyoid bone and epiglottis, the disease being one of carcinoma keratodes. The other patient was operated upon in May, 1886; here the disease was limited, and the removal confined to one-half the larynx. Dr. Semon, under whose care this patient is, wrote to Dr. Hahn that a small prominence had appeared at the site of the tracheotomy wound, which it is hoped is only a keloid of the cicatrix, but it would, of course, be carefully observed. A later report from Dr. Semon said that it had undergone no change. Of the remaining cases, there was only one of which Dr. Hahn had no recent information, but the last accounts were very unfavorable. All the others were known to be dead; but it must be remembered that in all the cases, with the exception of the one alluded to above, the operation had been resorted to late in the course of the disease. He had that day (November 16th) operated on a patient only thirty-six years of age, the youngest of his cases, whose ages ranged from forty to sixty-nine—mostly over forty years. This patient had been suffering from laryngeal trouble for a year, and had been under the care of Dr. Krause. The diagnosis of carcinoma was made by the microscope, and a unilateral excision was performed. (On the 28th Dr. Hahn reports that this case was doing well.) Among the preparations which Dr. Hahn showed at a meeting was one where there had been nine previous operations for recurrence of the growth within the space of eighteen months; yet even to the end the lymphatic glands were never involved in this case. Indeed, he remarked that lymphatic infection is unusually late in laryngeal cancer. The most favorable cases are those of carcinoma keratodes; the least, the softer and infiltrating forms. The latter cases had better not be treated by excision of the larynx, but reserved for tracheotomy when occasion arises.—*Lancet.*

MM. Foà and Bordoni-Uffreduzzi have studied the Microbe of Cerebro-spinal Meningitis (meningococcus), and have found that it is identical with that obtained by Steinberg with saliva cultivations, and described by Fränkel as the pneumonia microbe. The authors invariably met with this micro-organism in cerebro-spinal meningitis. If it is transplanted daily, this microbe becomes a perfect saprophyte at the end of one hundred and fifty days; it will develop in the surrounding atmosphere, and is then harmless. Before this period, and immediately before death, it may be employed for inoculations; these inoculations preserve rabbits from the effects of subsequent and more virulent inoculations. The infection is confined to the region where the virus is inoculated; it assumes an acute or chronic form according to the virulence of the cultivations inoculated. Attenuated virus merely produces inflammation of the noduli, which resembles tuberculosis. MM. Foà and Bordoni-Uffreduzzi believe that this microbe produces a form of pseudo-tuberculosis in human beings.—*British Medical Journal.*

Relative Longevity of Americans and English.—Americans of the middle and upper classes, *i.e.*, those who can afford to get their lives insured, are healthier and longer lived than Englishmen. Such is the result arrived at from a study of the life insurance statistics of both countries covering the period of years since 1874. At twenty the expectation of life of American males is 42.1 years, of English males, 41.1; of American females it is 40.8 years, which is precisely the same as that for English women. After the age of twenty, the expectation of life among American women slightly exceeds that of English women up to the age of forty-seven. After the age of thirty-five the expectation of life of English women is better than that of Englishmen, but in America women have a 6.0 lower expectation rate than men.

A New Combination of Cocaine.—Under date of January 7, 1888, Dr. Andrew H. Smith writes: "Observing the strong acid property of saccharine, it occurred to me that it could be made to take the place of an acid in combination with the alkaloid cocaine, and thus avoid the extremely bitter and disagreeable taste of the muriate, the salt usually employed. With the aid of Mr. B. Frank Hays, the well-known pharmacist of this city, a salt was obtained which is freely soluble in water, and has an agreeable, sweet, fruity taste—a valuable property when the drug is to be employed in the throat, especially in the case of children. The molecular number of saccharine (a better name would be *saccharinic acid*) is 183, that of cocaine 303; combined in these proportions a neutral salt is formed having about eighty per cent. of the alkaloidal strength of the muriate, a five per cent. solution of the first being equal to a four per cent. solution of the second. Experiments are being made with combinations with other alkaloids."

The Gastric Juice in Cancer of the Stomach.—Dr. V. Netschaien, of St. Petersburg, has examined twenty-two cases of cancer of the stomach and œsophagus, and in all instances found that hydrochloric acid was absent from the gastric juice. This confirms the opinion originally put forth by Velden in 1879.

Treatment of Hepatic Colic.—Olive-oil in large quantity is vaunted as a certain cure for hepatic colic due to gall stones. Dr. Just Touatre, of New Orleans, has written an interesting account of self-cure of biliary colic and gall-stones, in the second number of a bi-monthly Roumanian journal (*Archives Roumanies de Médecine et de Chirurgie*), whose editor is M. Georges Assaky. The method of procedure was as follows: At seven in the evening a blue pill of the weight of fifteen centigrammes was taken, and this was followed twelve hours later by the taking, in one draught, of twelve table spoonfuls of olive-oil; a quarter of an hour later a similar dose of olive-oil was taken, and then the patient addressed himself to sleep on his right ride. At nine o'clock the blue pill acted, producing a copious biliary evacuation, but no gall-stones. Three o'clock in the afternoon saw another bilious stool without stones, but from seven in the evening till midnight six stools were passed; the first two contained seventeen calculi of the size of a large pea, of conical shape, grayish-yellow aspect, and soft consistence. Altogether sixty stones were evacuated, and six of these had the volume of an olive, and were of a black color. The passage of these calculi by the cystic and biliary canals was for the most part unattended with pain, a few spasms being felt probably at the time of the movement of the large calculi. An inexpressible relief was obtained from the pains over the liver and shoulder, which had previously caused much distress; the liver also diminished in size. For three months Dr. Touatre enjoyed perfect health, when the trouble commenced again; the olive-oil was repeated in similar fashion, and with the result that eighteen more calculi were discharged by the bowel. Since then he has enjoyed excellent health. He admits that some courage is required to swallow the large doses of olive-oil.—*Lancet.*

Pasteur's Method Simplified.—Dr. Högyes, of Buda-Pesth, has published in the *Orvosi Hetilap* an account of some researches he has made on the protection of dogs from rabies by a somewhat simpler method than that employed by Pasteur. He, too, makes use of the spinal cord of an infected rabbit, but instead of drying it to a gradually increasing extent to obtain various degrees of activity, he merely rubs it up with water containing chloride of sodium so as to make solutions varying in strength from one-tenth to one-five-thousandth. The dog to be protected is injected successively with these, beginning with the weakest. The results appeared to be quite satisfactory, and a complete immunity from rabies to be secured by six of these injections.—*Lancet.*

The Subject of "The Medical Treatment in Aid of the Dying" is one that may easily evoke some cynical comments; for Dr. Munk has written a book on this subject, and a book to show how medical treatment can aid the dying might seem at first glance somewhat superfluous. Dr. Munk's object, however, is chiefly to discuss "euthanasia," and the extent to which physicians may contribute to it, when dealing with incurable and painful disorders. Dr. Munk does not believe that the physician should produce euthanasia in any case, but should simply contribute, by anodynes, etc., to its peaceful approach. This is the view which is ordinarily and rightly taken by the profession.

"Acute Pulmonary Paresis."—At the last meeting of the Medical Society of London, Dr. B. W. Richardson called attention to a class of cases presenting such peculiar features as to warrant, in his opinion, the belief that the symptoms are due to a loss of nerve-power, resulting in acute vaso-motor paralysis of the vessels in the pulmonary area. Though not common, most practitioners, he says, must be able to call to mind cases, diagnosed as pneumonia, where the patient rapidly dies of asphyxia in spite of all that can be done to check the morbid process. The cases alluded to by Dr. Richardson were mostly in women of a neurotic type. Under the influence of a physical or moral shock, not necessarily of any great intensity, nervous phenomena of a hysterical type manifest themselves, followed by intense prostration of body and mind. In the course of a day or two examination reveals the advent of pneumonic râles, and then, without fever, for the most part without pain, and without many of the characteristic signs and symptoms of ordinary pneumonia, the patient rapidly succumbs. Treatment in every case is utterly without avail.

Dr. Richardson's view of the pathology of these cases is incorrect, because the pulmonary vessels have no vasomotor nerves.

THE ALUMNI ASSOCIATION OF THE WOMAN'S HOSPITAL IN THE STATE OF NEW YORK.—The third annual meeting of this body will be held at the New York Academy of Medicine, January 18, 1888.

DR. PETER PARKER died at his residence in Washington, after a lingering illness, on January 10th, in the eighty-fourth year of his age. Dr. Parker was United States Minister to China thirty years ago, and has resided in Washington since his return to this country in 1858. He held the office of Regent of the Smithsonian Institution for many years. While in China Dr. Parker did much work as a medical missionary, and was in fact a pioneer among this class of laborers.

A FURTHER INVESTIGATION as to the germicidal properties of iodoform has been made by Dr. J. Amory Jeffries, at the laboratory of the Harvard Medical School (*American Journal of the Medical Sciences*). Dr. Jeffries, as a result of his experiments, concludes that iodoform has no direct action as a germicide, a result agreeing with Heyn and Rovsing; also, that germicidal products are, probably, not derived from it in the presence of growing bacteria. On the other hand, the experiments with bouillon showed that the presence of iodoform markedly retards the growth of bacteria, an action not before proven, and diminished the foul odors of putrefaction. The diminution in odor cannot be ascribed to the action of iodoform on the bacteria. Looked at from the clinical side, the following rules may be accepted: 1. Iodoform not being a germicide, is not a fit substance to use to procure asepsis of instruments, materials, or wounds. 2. Iodoform is allowable, with the present state of our pharmacopœia, in infected wounds where the true germicides are contra-indicated, as by danger of poisoning or impracticability. 3. As has long been known, iodoform has a decided tendency to stop serous oozing, and, therefore, may be indicated in wounds where the moisture threatens the integrity of the aseptic or antiseptic dressing.

THE SALIVA AND THE LIVER.—Dr. Samuel Fenwick has published a series of lectures in which he reports the results of his examination of the saliva for the sulphocyanide of potassium. The larger or smaller amount of this salt bears some relation, in Dr. Fenwick's opinion, to the digestive and assimilative processes. The saliva was tested by the quantitative color-test in some thousands of cases, and it was found that in the course of febrile diseases, such as typhoid fever, a sudden increase in the quantity of sulphocyanide generally preceded a rapid improvement and a short convalescence, while a small quantity indicated the reverse. The same phenomenal increase was noticed when sudden demands for reparative needs threw an increased increment of duty on the assimilative functions, as, for example, after copious hemorrhage. Under these circumstances it would naturally be expected that the sulphocyanide would be deficient whenever the digestive organs are unable to supply the nutriment sufficient to meet the requirements of the system, and this was found to be the case in the vast majority of patients dying from wasting diseases.

DENTAL CARIES IN CLARIONET-PLAYERS.—In the *Vratch*, Nos. 30 and 31, 1887, Dr. P. Reformatsky, of Ekaterinoslav, publishes a valuable contribution to the study of professional diseases of the teeth. The author, who is surgeon to the Simferopolsky Infantry Regiment, has examined the teeth in bandsmen of his own and four other regiments. He found dental caries in about fifty per cent. of the men, but he was especially struck with the great frequency of a characteristic caries of the upper central incisors which was present in fifteen of twenty clarionet-players belonging to two regiments. In playing, the mouthpiece of the instrument is pressed against the outer surface of the lower lip, which then forms a kind of soft protecting cover for the lower teeth, while the upper aspect of the mouthpiece is kept in direct contact with the upper incisors.—*British Medical Journal.*

THE COLD WAVE which struck this city lately has been followed by an unusual amount of bronchitis and pneumonia. According to the theory of Dr. Baker, of Michigan, those who wish to avoid pneumonia should eat but little salt.

THE HANDS OF SAN FRANCISCO DOCTORS call for some severe criticism on the part of the *Pacific Record of Medicine and Surgery.* Speaking of the many persons lacking in refinement and education who undertake the study of medicine, the editor says: "Take some of the physicians in our city; look only (for example) at their hands. What woman would like to have one of them introduced into her vagina? See the finger ends and the nails, swollen and dirty, and if she is educated in the modern bacterial physiology, she will understand that under the finger nails may lurk the streptococci or bacilli, which will inoculate her with a disease that will insure the doctor many visits and consequent fees. The hands, feet, and facial expression mark the man of gentle birth, externally. The tender sympathy, the gentle touch, the instantly conveyed magnetism, that does not shock the most sensitive fibre of the female economy, but yet gives the assurance of perfect *rapport* with her trouble, mental and physical, and which opens the way to a perfect understanding of her needs and sufferings; shows to her the workings of the man's consciousness. Who shall dare enter into the temple of a woman's soul, but a man with 'clean hands, and a pure heart?' How few graduates of our medical colleges can stand in those 'holy places?'"

HUMIDITY, COLD, AND HIGH WINDS, are the three agents that chiefly promote the prevalence of pneumonia, according to Dr. Seibert, and February is its carnival month.

Obituary.

WESLEY M. CARPENTER, M.D.,

NEW YORK.

> "To live in hearts we leave behind,
> Is not to die."

When Death enters a circle, we are more than ever impressed with the awe and mystery of his presence. It brings us closely to the veil which drops between mortality and eternity, and leaves us with the yearning for another word, another look, another touch. It is therefore with an inexpressible sadness of heart that we are called upon to record the departure of our old and beloved friend, and our honored and trusted associate. The hundreds who knew him personally and the thousands who knew him by reputation will join in saying that one of the most conscientious and faithful workers in medical journalism has passed away. It is indeed difficult to estimate the loss which has been sustained. For fifteen years he has been a member of The Record family, and a continuously active worker on its staff. His facile and tireless pen has been busy in various departments, but more particularly in that devoted to society reports. His skill and aptitude in the latter were never equalled, as every one who ever read a paper or discussed a topic before a medical society can abundantly testify. Every speaker felt himself more than safe in his hands. Dr. Carpenter was always proud of this trust, and always did his best to deserve it. The soul of truth and honor, he knew no friends or foes in a discussion, but was always ready to tone down asperities by a loving charity for all. Firm in his convictions as to duty, his constant aim was to be truthful and just, and so he was to the end one,

> "Whose yesterdays look backward with a smile."

Dr. Carpenter was born in Erieville, N. Y., August 2, 1839. In his early youth he assisted his father in work upon his farm; but becoming imbued with the love for study, prepared himself for and afterward entered an academy in the neighborhood. After this training he began the study of medicine, in Ann Arbor, Mich., completing his course and graduating at the College of Physicians and Surgeons (1863). Subsequent to this he practised medicine in Erieville, N. Y., in partnership with Dr. Greenwood. He was elected to the Assembly in 1869, and served the term.

The labor and exposure of a country practice being too severe for his delicate health, he moved to this city in 1872, with a determination to devote himself to literary work, for which he had a great aptitude. It was then that we first met him. His offer of services to The Record was gladly accepted, and from that time until his death he was our faithful helper, and tried friend. His universally recognized ability as an accurate and accomplished short-hand reporter peculiarly fitted him for his many duties as chief of our reportorial staff. There was no work in his line, however difficult or abstruse, with which he could not be trusted, and for years his was the familiar presence at every City, State, or National medical gathering of any importance. It was enough for us to know that Carpenter was there; and no matter what were the obstacles, a truthful and accurate report by mail or the telegraph would always be forthcoming and timely.

His greatest work in this line was the full report of the late meeting of the International Medical Congress, which stands alone as the most complete and most accuràte account of any scientific meeting that has ever been held. It was in reality a volume prepared in a few days, a triumph of enterprise even in this age of telegraphy and rapid reporting. His wide and careful training in medicine fitted him for such an undertaking; and his rare judgment for selection of the useful always served his purpose of focalizing the gist of any discussion, or of formulating the practical points of any author.

His varied talents as a ready writer were always in demand, and he became in time practically, if not in fact, a universal and omnipresent secretary to almost all the leading medical societies. He was Secretary to the New York Pathological Society, Corresponding Secretary to the New York Academy of Medicine, Secretary to the Medical Society of the County of New York, and Acting Secretary to the Practitioners' Society of New York.

With a view of varying his duties and obtaining recreation, which he did only by change of work, he accepted the position of Curator to the Bellevue Hospital, became Instructor in Histology, and, lastly, Clinical Professor of Medicine in the Medical Department of the University of New York.

He was, besides, author of the "Index of Medicine," which has become a very popular work with busy practitioners, and which contains more practical and well-digested information than any work of its size ever published. He was also the editor-in-chief of the *Epitome of American Medicine and Surgery*, which, under his guidance, assumed a new rôle of usefulness and an extended patronage. Busy as he was, he also found time to contribute articles to the "International Cyclopædia of Surgery," to edit "Wood's Handbook of Medicine" and "The Medical Record Visiting List."

In 1879 he married Mrs. C. F. Shorey, who shortly after removed to Paris to complete the musical education of her daughter Nettie, who assumed her step-father's name, and who has since taken a position as a leading violiniste in Mr. Abbey's concert troupe. Mrs. Carpenter and daughter were temporarily absent in Providence when the doctor's death occurred.

Dr. Carpenter was never robustly healthy, but none of his friends suspected that he was suffering from serious disease until his sudden death occurred. At the autopsy, disease of the kidney was found to be the cause. His passing away was peaceful and sudden, he having been found dead in his bed on Saturday morning, January 7, having retired the evening before apparently in his usual health. His sleep merged itself so quietly into the lasting one that Death said not,

> "Good night, but in some brighter clime
> Bade him, 'Good Morning.'"

The funeral services, which were largely attended, were held at the Methodist Episcopal Church, corner of Twenty-second Street and Fourth Avenue, of which he was a member, and his remains were interred in the Cemetery of the Evergreens, N. Y.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN SURGERY.

Stated Meeting, December 12, 1887.

ROBERT F. WEIR, M.D., CHAIRMAN.

DR. CHARLES A. POWERS presented a specimen of

BLADDER RUPTURED BY FRACTURE THROUGH THE RAMUS OF THE PUBIS.

The patient, a boy aged fifteen, fell thirty feet through an open hatchway, and was immediately carried to the Chambers Street Hospital. He was in profound shock, and was found to have a fracture of the left humerus, fracture through the horizontal ramus of the left pubis just without the symphysis, and fracture through the left ilium just outside the sacrum. A catheter introduced into the bladder withdrew six ounces of bloody urine, the blood being well diffused.

Weir's method of testing the bladder was employed, about ten ounces of warm water injected and allowed to remain ten minutes, and then withdrawn. All but about two drachms returned. There were no evidences of other injury.

The patient never completely rallied from the shock, but continued in a state of profound exhaustion, and died in sixty-four hours. The hæmaturia had completely disappeared at the end of twenty-four hours.

At the autopsy the viscera, with the exception of the bladder, were found to be normal. The bladder was the seat of a punctured wound of a size admitting a small probe, and situated in the anterior wall at about its middle, just to the left of the median line. It had been produced by a sharp spicula of bone from the ramus of the pubis. The wound was occluded by lymph. There was no degenerative inflammation.

The case was of interest as showing that in a wound of this size the bladder would hold water even when well distended.

Dr. Powers also presented specimens of

RUPTURED SPLEEN, KIDNEY, AND LIVER.

They were taken from the body of a woman fifty-two years of age, who was admitted to the Chambers Street Hospital on the evening of September 17, 1887, with history of having fallen from a second-story window to the ground fifteen minutes previously. When admitted she was in a state of intoxication, but her general condition was otherwise good. She had sustained a compound comminuted fracture of the left elbow-joint, and a fracture of the neck of the left femur. Examination of abdomen and thorax revealed no evidences of lesion. The urine contained about ten per cent. of albumen.

The following morning she was conscious; her general condition was perfectly good; the pulse was 90; temperature, 99° F.; respiration, 16.

The elbow-joint was excised by Langenbeck's method.

During the two succeeding days her condition continued good; the pulse averaged 84, but the temperature and respiration were normal. She slept considerably, but was easily roused, and made no complaint.

On the afternoon of the third day she suddenly became restless and weak, the pulse became rapid and feeble, the temperature went up, and in a few hours she died.

Upon autopsy, the abdominal cavity was found to be full of clotted blood and bloody serum. All viscera were normal except the spleen, liver, and kidneys.

The spleen presented one rupture two inches long on its antero-external surface, and another one and a half inch long just within this.

The liver presented several small intra-capsular ruptures on its superior surface, while on its inferior surface were several small lesions extending through the capsule.

The left kidney presented a deep transverse rupture on its posterior surface, together with several smaller ruptures.

Dr. Powers thought the case interesting as showing that a patient could live three days with such severe internal hemorrhage and visceral lesions, but with absolutely no guiding symptoms. It also shows that a deep rent of the kidney may exist without hæmaturia.

THE CHAIRMAN said that the mere introduction of a quantity of water into the bladder and then measuring that which returned was an old method. But the distention of the rectum recommended by Petersen, together with the bladder-distention, were what enabled him to mark the rise of the bladder above the pubis, which was the most important point, and it was to that point he had called attention in his paper.

DR. R. T. MORRIS remarked that it was necessary for the water to remain in the bladder for at least half an hour to permit any of it to escape, in case of punctured wound of the bladder.

DR. DIXON JONES then opened the discussion on

THE TREATMENT OF OBSTINATE CLUB FOOT BY OPEN INCISION.

He first described the factors pathological and mechanical which entered into the production of this deformity, and which showed the difficulties to be overcome in the treatment of these cases. The shortened soft parts retained the distorted foot in its abnormal position, and each structure must receive the proportionate share in the treatment. He believed that these tissues could be best dealt with by the open incision, the method devised by Dr. Phelps, and practised by Schede, Volkmann, and others. He laid special stress upon the importance of the preliminary manipulation, softening the tissues, etc., before the operation, which he then described in detail, reported illustrative cases, and presented patients with photographs of the feet before and after the operation.

DR. C. T. POORE said that the astragalus in the infant differed in shape from that of the adult in that the long axis of the neck pointed much more inward in the former than in the latter. Measurements made by Parker and Shattuck showed that in eleven specimens taken from infants with normal feet the obliquity of the neck had a mean angle of 38°, while in twenty measurements of the adult bone the mean angle of obliquity was only 10.65°, the majority being under 10°.

It was evident, then, that during growth the angle at which the neck was set upon the body of the bone changed from a mean of 38° to 10°, which might be called the normal development of the astragalus. All children at birth exhibit a certain amount of varus.

Dr. Poore then presented a specimen with photograph, loaned to him by Dr. J. B. Bissell, which showed the form of the astragalus in a child eight months old with normal feet. The head and neck were set upon the body of the bone at an angle of 28°.

Another specimen from the foot of a boy ten years o age, with normal feet, showed an obliquity of 14°. In this case the bone presented the adult peculiarities.

Another specimen from Dr. Bissell's collection, taken from a child eight months old,

WITH MARKED CONGENITAL TALIPES VARUS,

showed that the bone differed in a marked degree from that of the normal foot. The neck was set upon the body at an angle of 60°, and it presented other marked peculiarities.

In the two feet of children with varus, exhibited by Dr. Phelps at the last meeting of the Section, the astragalus varied from the normal type, and the os calcis exhibited an abnormal curvature with the convexity looking outward and the anterior articulating surface looking forward and inward.

Dr. Poore then described the condition of the astragalus in other cases in which Parker and Shattuck had made measurements; also the changes in the ligaments and tissues on the inner aspect of the foot in varus.

When the period had been reached in which the astragalus and os calcis had ceased to be cartilaginous, and then the shortened tissues upon the inner aspect of the foot were relieved either by division or stretching, it would be found that the front of the foot was swung on the elongated os calcis as a centre, so that the scaphoid was drawn away from the position that the head of the astragalus should occupy and a permanent restitution of the foot was a mechanical impossibility. He then exhibited, by the kindness of Dr. R. J. Hall, an astragalus removed by Dr. Sands from a child six years of age for the relief of congenital talipes varus. The neck was set upon the body at an angle of fifty-five degrees, and there was also a deformity of the neck downward. It was evident from the specimen that correction of the deformity without a radical operation was impossible. Other specimens and photographs were exhibited.

In speaking of the infantile astragalus, he did not intend to convey the impression that he would advocate an osteotomy in a child six years of age, his purpose being only to prove changes in the shape of the bones was an element in congenital talipes varus.

In a paper read before the Surgical Society, December 8, 1886, and published in the New York *Medical Journal* for January 15, 1887, on "The Treatment of Inveterate Talipes Equino-varus by Osteotomy," he said that the real deformity in this class of cases was behind and not in front of the medio-tarsal joint; and, 1. That the inability to correct the deformity was due to changes taking place in the astragalus and os calcis. 2. That, in order to bring the anterior portion of the foot into its normal position, the curvature in the os calcis must be removed and the neck of the astragalus shortened, so as to allow its head to point in its normal direction and thus carry with it the scaphoid and other tarsal bones. The operation consisted of removing a **V**-shaped section from the anterior portion of the os calcis base outward and shortening the neck of the astragalus by the removal of a wedge-shaped piece so as to allow the head to point in its normal direction; in other words, to restore, as far as possible, that bone to its adult shape.

He thought that, from the specimens exhibited both by Dr. Phelps and himself, as well as from the anatomy of the deformed bone recorded by Adams and others, there was in most cases a marked variation from the normal type in the astragalus, and that it was an element, if not of the cause yet of the persistence of this deformity in children over four years of age; that the reason why either a division or a stretching of the shortened structures on the inner aspect of the foot was necessary for the permanent correction of the deformity was due to the fact that it released the head and neck of the astragalus from the confined position in which these tissues bend and hold them, and thus gave the bone a chance to grow and develop.

There was a question whether as free an incision as was advocated at the last meeting was a necessity, or whether a subcutaneous section of the shortened tissue would not be all that was required.

Dr. Lewis Hall Sayre thought that the cases presented by Dr. Jones were not relevant to the discussion, because Dr. Phelps proposed to adopt the open incision only in such obstinate cases as had resisted manipulation and mechanical treatment. He regarded Dr. Phelps' operation as safer than Dr. Poore's section of the os calcis or tarsotomy, etc.

From what he had seen of

RELAPSING CLUB FOOT,

there were two classes of cases: First, those in which tenotomy had not been properly performed; and second, those in which it had been held that the talipes was cured by the operation.

It should be borne in mind that in talipes there was not only shortening of all the tissues on one side of the foot, but a relaxed and weakened condition of the muscles and other tissues upon the opposite side, and not until, by appropriate treatment, those weakened structures had been so restored as to enable the patient voluntarily to bring the foot into its normal position and retain it there could the case be said to be cured. If allowed to go, after an operation, without treatment, relapse would take place in a very large proportion of cases.

In one or two of Dr. Jones' cases he had noticed a slight varus, very slight, it was true, and to be easily overcome, but it might possibly become a serious deformity.

He had, in some cases, divided the skin freely where it seemed to be the tissue that resisted the proper correction of the deformity, and as already stated he favored Dr. Phelps' operation by open incision rather than the more formidable ones of tarsotomy, etc.

Dr. V. P. Gibney said that the question of what tendons or muscles or ligaments should be cut could be safely left to the individual judgment of the surgeon. The only suggestion which he wished to offer in addition to what had already been said concerning operative measures was that

TOO MUCH STRESS COULD NOT BE LAID UPON AFTER-TREATMENT.

Whatever might be the claims concerning bony deformity, it must be assumed that there was an immense amount of work to be done to produce atrophy on the outer side and hypertrophy on the inner side of the foot. If Dr. Phelps, by his operation, could remove the pressure from these bones, which were growing then, it was a justifiable and good operation. He thought that the brilliancy of many operations tempted to the omission of subsequent mechanical treatment. It was all well enough to talk about pressure produced by braces and pads, etc., but the sooner mechanical and operative treatment could be combined the better would be the results ultimately obtained.

In Dr. Jones' second case, as Dr. Sayre had said, there remained some varus; but the child was not sufficiently old to know enough to turn the toes out when it walked, and the only way to impress the child with that necessity was to apply some apparatus which would prompt this movement, and in time produce atrophy of the hypertrophied bones and compensatory hypertrophy on the inner side of the foot.

The remarks made by Dr. Poore on the necessity of recognizing the osseous element in these cases were very pertinent, and he would also say that it was his intention to employ Dr. Phelps' method in certain cases. He wished to reiterate that to retain the foot in the best possible position for two, three, or five years, after operative treatment was very essential to obtaining ultimately good results in these cases.

Dr. N. M. Shaffer sent his views in writing, which were read by the Secretary. He maintained that the inveterate cases of club foot yielded to simple traction, although apparently simple cases sometimes required operative treatment. Surgeons looked upon the subject from widely different stand-points, and he thought they were frequently inclined to adopt pessimistic views concerning other methods employed in these cases. The open incision was advocated almost exclusively by Dr. Phelps. But it was also very exceptional to find a case of congenital club foot which had not been operated upon, although failure was the rule after tenotomy and other conventional methods. It was not surprising, therefore, that osteotomy and the open incision should be employed to correct the deformity. But in his opinion, based upon his own experience and study, neither the open incision nor osteotomy was required to effect a cure.

He divided club foot into three distinct varieties: (1) Muscular, (2) ligamentous, and (3) bony. It was exceedingly difficult to differentiate between these, and, even if we could, the extreme measures of treatment would be called for only rarely. His method was to employ traction, and if that failed to divide tendons and other resisting structures and then apply traction, and so go on until it became certain that the case could not be cured by that method of treatment.

Dr. A. G. Gerster said that his experience was not sufficiently large to enable him to formulate any permanent conclusions, as he had operated by the open incision in only six cases, two of which were too recent to enter into the calculation.

The several gentlemen who had given their views, it seemed to him, had spoken with a remarkable degree of unanimity. Dr. Shaffer had given the position which most surgeons occupied, inasmuch as he had said that a great many cases will yield to mechanical treatment, that others require tenotomy, and that still others may require osteotomy. All cases, as pointed out by Dr. Gibney, will require long-continued treatment to achieve permanent results.

He could not conceive that in those cases in which the operation was not fully indicated that it would be performed, or if there was any serious cause for opposition to it. With the aid of antiseptic surgery the method by open incision could be adopted without special danger, but it was not so easy to decide concerning the operation. Everyone would acknowledge that it was extremely difficult to say when the operation in these cases was or was not justifiable, because at present there was lack of exact criteria by which it could be said that this case would require operation and that one would yield to mechanical treatment.

The great advantage of operative treatment was that it enabled the surgeon to accomplish with the knife at once what could be done otherwise only by a great expenditure of time and patience and money. The question had been properly raised, Should such a long trial by mechanical means be gone through with? As a surgeon, he would say that as the operation did not involve any serious danger it was unnecessary to first resort to traction and mechanical treatment, and he was inclined to try the open incision to test its value. He warmly indorsed the long-continued after-treatment. To speak of the method of allowing the wound to fill with blood to become organized as Schede's or Morris-Schede's, he thought should be modified somewhat, inasmuch as Schede had simply shown that

CAVITIES DO BETTER BY ALLOWING THEM TO FILL WITH BLOOD-CLOT TO BECOME ORGANIZED.

The organization of blood-clot was known as far back as 1874, was described by Volkmann in 1875, and it had also been described by Lister. Schede had proved by autopsy that, notwithstanding the gaping to the extent of an inch or an inch and a half, union of the divided parts took place in the physiological order, muscle with muscle, tendon with tendon, etc.

Dr. A. B. Judson preferred to take the strongest possible ground against the operative treatment of club foot. If every case, congenital or acquired, were treated mechanically, as it ought to be, there would be no question of an operation. And after the operation was performed the necessity of painstaking, thorough, and prolonged mechanical treatment was as urgent as it was before. He had never seen a case in which the mechanical treatment had not seemed to him of more importance than any possible operation. He thought that the question of the success of an operation for obstinate club foot could not be determined until a long time had elapsed after its performance. The condition itself was the result of neglect on the part of the parents. What guarantee was there in the performance of an operation that the neglect would cease, and that another would not be added to the large number of cases of obstinate club foot which persisted after repeated operations?

Dr. Reginald H. Sayre directed attention to the principle laid down by his father, which would serve as a guide in deciding when to operate, and it was that when any contractured tissue was put upon the full stretch, and point-pressure upon it while thus made tense caused spasm, that tissue could not be stretched any further, but must be divided either with the knife or by mechanical force. He believed that section was preferable to rupture, and whether that should be made openly or subcutaneously must be decided by the operator. He thought that cases such as the one Dr. Phelps operated on at the last meeting of the Section would do as well under subcutaneous section as the open incision. In older persons the operation was undoubtedly an excellent one, and should have its place among others as one of the

ADVANCES IN SURGERY.

Some of the patients presented he had noticed showed considerable valgus, and he feared that when they had grown up they would be travelling about with a broken arch.

The Chairman said that, from his experience and what he had seen of Dr. Poore's and Dr. Phelps' methods, he felt it was well to proceed with operative interference without waiting a long time. His preference would be, in doubtful cases, to adopt Dr. Phelps' method first, on the general basis that operations involving bone were more liable to be followed by mishaps, even with the benefits which antiseptic surgery afforded, than those in the soft parts.

Dr. Gibney wished to correct a possible misapprehension by saying that he did not believe in prolonged mechanical treatment. If the deformity could not be rectified soon, he called to his aid operative measures, and then used such simple mechanical apparatus as could be readily managed by the parents or friends, thus obviating the necessity of his seeing the patients oftener than once in three to six months.

Dr. Gerster said that he spoke as he did simply because some of the gentlemen had said that operative treatment was not necessary. He knew very well that Dr. Gibney practised operative interference. He had, however, seen cases treated by mechanical appliances for a long time without the least improvement.

Dr. Phelps, on account of ill-health, was unable to enter into the discussion, and simply reported that the patient operated upon was doing well. His effort had been to place before the profession a method of treatment by which the deformity was unravelled, beginning with the skin and going on step by step, and terminating with osteotomy if necessary. All that was necessary was to get

THE FOOT INTO A POSITION READY FOR TREATMENT,

as the treatment of club foot did not begin until the foot was straight.

Dr. Robert T. Morris then read a paper on

FRACTURE OF THE FIBULA FROM ADDUCTION OF THE FOOT,

in which this injury was compared with Pott's fracture, produced when the foot was abducted with sufficient violence.

The Chairman thought the distinction should be made, although, as Dr. Morris had said, both varieties were usually recorded in hospitals as Pott's fracture.

Dr. Powers regarded the fracture as one of common occurrence and most frequently regarded as a sprain, because the patients had been able to walk.

Dr. Kearney had seen five or six cases in which fracture of both malleoli had occurred, and yet the patients had walked upon the foot for three or four days.

Dr. Girdner was surprised to hear the intimation that any surgeon might confine his patient to the bed and treat a case of fracture in a fracture-box until its termination.

THE CHAIRMAN said he could not help speaking a word of sympathy with Dr. Girdner's surprise, because he had not seen, or at least used, a fracture-box during the last ten years.

The Section then adjourned.

Correspondence.

"THE FAMILY PHYSICIAN OF THE FUTURE," AND "EUROPEAN OPINIONS OF AMERICAN PHYSICIANS."

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: No one can peruse without pleasure and advantage the paper with the first of the above headings, read by Dr. A. H. Smith before the Academy of Medicine, November 17, 1887, and published in THE MEDICAL RECORD of December 3d. Nevertheless, Dr. Smith's delineation of the family physician, as he exists in New York, does not correspond to this personage as I know him, nor, in a general practice of nearly thirty years here, have my own experiences and position been at all like those described by Dr. Smith. If they were, I should feel bound to seek at once "fresh fields and pastures new."

Admirable as is the paper referred to, it is, I think, too insular, making New York, or this country, the standard of the physician's power the world over. It describes too truthfully, alas! the limited influence, as it exists *here*, of the physician in directing matters pertaining to public hygiene, and in public life, letters, etc. But as regards the physician's position generally, I think Dr. Smith's paper is erroneous, in what manner I will endeavor to show, and also why some of the unfortunate conditions described *do* exist. I am sure, however, that even here the family physician exists with as much distinctness as does the oculist or dentist; and I believe it to be the exception when respectable families who possess good intelligence desire the aid of specialists without his suggestion or sanction, and who do not have sufficient confidence in him to leave to him the treatment of nearly everything that he considers himself competent to treat. I certainly cannot say that none of my families ever consult specialists unknown to me, but I know that as a rule they leave to my judgment the necessity of calling in aid, and I believe this to be the rule in family practice generally; indeed, the supplication, "Oh! do not send me to a specialist," is one that I often hear. Certainly, the family physician still exists in his entity, and, speaking of New York alone, I believe his opportunities of doing good in the sick-room are as great as ever, and his influence is none the less because specialists are increasing in number. When we consider how wide is the field of disease, it is apparent that the great bulk of cases which need treatment are such as naturally fall under the care of the general practitioner. The numerous ailments of children; the functional and minor organic ailments of women; the fevers; gouty, rheumatic, renal, and hepatic troubles; the affections of the thoracic and abdominal organs; the innumerable ills, in a word, "which flesh is heir to," are quite enough to make the field of the family physician a very extensive one. None of the numerous babies I have attended have yet called for a baby specialist, and it is the cry of most of my lady patients not to send them to a gynecologist.

The family physician should, as a rule, be competent to make all examinations of the lungs, heart, liver, kidneys, nervous system, etc., and to treat them, though there are many occasions when the aid and advice of a specialist might be indispensable, and no one appreciates more than myself their valuable aid in such cases.

This advantage the family physician often has: A knowledge of the habitual ailments and constitution of the patients, acquired sometimes by years of observation, and his study of the particular case often leads to a more accurate knowledge of it than is evinced by the sometimes *ad captandum* diagnosis of the specialist. I believe, however, that even here the family physician is still the honored visitor, and that the tradition of respectability attaching to his position and relations with the family have not yet disappeared.

As regards the voice of the physician in legislation: That it is not heard oftener in the legislative hall here is not that the profession *as* a profession is looked down upon or considered useless except in the direct care of the sick. In France, for instance, I remember that there were at one time at least as many as fifteen medical men in the Senate and Corps Législatif, there being in the former, at the same time, Nélaton, Rayer, and the Baron Larrey. More recently Paul Bert, Clémenceau, and Cornil have been members of the Corps Législatif. As regards general science, the Institute of France, devoted to every branch of science, and as exclusive as regards difficulty of membership as l'Académie Française, has seventy-seven members; eleven of these are medical men, among whom are Pasteur, Brown-Séquard, Charcot, Richer, and Ranvier.

The Conseil d'Hygiène Publique et de Salubrité has for its object the protection of the public health. It numbers thirty-nine members; of these twenty-four are medical men, among whom may be mentioned Bouchardat, Dujardin-Beaumetz, Ollivier, Richet, and Pasteur.

The Committee of Public Hygiene of France is composed of twenty-eight members; of these more than one-half are physicians. The Administration Générale de l'Assistance publique has entire charge of hospitals, hospices such as La Salpétrière and Bicêtre, domiciliary aid, markets, and general health. There are seven physicians in this body.

Certainly, however, the position of the family physician in London and Paris is, on the whole, better than here. In Paris the doctor is looked upon as the family friend—*l'ami de la maison*; "mon docteur" is revered as much as the priest, if not more. His bills are "preferred" and paid as a matter of honor. His directions are implicitly followed, and patients do not ask what they are taking. In London no very prominent physician, though he may have office-hours daily, can be seen except by appointment with his servant; this is very much to the patient's advantage, as he is sure of being seen without waiting much, and a certain amount of time is allotted to his case. Abroad the family physician is likely to be selected for some sort of credentials of capacity, or because he has "done something," or given evidence of work.

Here a large number of people have but a very dim idea of why they consult a particular physician; sometimes it is because he is young or old; because he drives two horses, or because he drives but one; because his charges are low, or because they are high and must necessarily indicate talent; because he is a professor, or because he is not; because his name appears often as a laudator of wines and mineral waters, but not often enough because they know him to be educated, faithful, and competent.

A principal reason of the position of the medical man in France, and especially in Paris, is that in that city the doctor of medicine is, and must of necessity be, a learned man. To matriculate in France one must be a Bachelor of Science or Arts, and in Paris must study six years before he can obtain the medical degree. The examinations are severe and public, and favoritism is impossible. To become an interne, or a physician to a hospital, or a professor agrégé in the faculty, making him eligible to a full professorship, there are more theses or more examinations, no matter how renowned the candidate. In France no medical grade can he obtain except for merit and distinction, and usually by competition. The medical atmosphere there is clearer. Abortions by medical men (though happily rare here) are almost unknown, and the recommendation of foods, waters, etc., except in medical journals, almost, if not quite, unknown. There are in all France but six bodies entitled to confer the right to practise, namely, the Faculties of Paris, Lille, Lyon, Nancy, Montpellier, and Bordeaux.

In the United Kingdom there are about eighteen, while in the United States there are not far from one hundred. In France the number admitted to the medical degree is small, and is growing smaller; in 1883 there were 662 diplomas conferred; in 1884, 590; in 1885, 575; in 1886, only 546. Here it is enormous and needless. The band of music, the address on medical topics by a layman—usually a clergyman—the swell and swagger at our medical Commencements are well known. As long, however, as most of our colleges are dependent on the fees of students, and so long as it is easy for any reputable body of men to establish a medical college under the general law, and as long as students are matriculated without preliminary examinations, and can be graduated often after only two years' study, so long will exist the present disparity between position of the medical man here and abroad. In New York there is one physician to about 400 people; in Paris one to about 1,475. In the whole of France there is about one physician to 3,000 inhabitants; in England one to every 1,500, and in the United States one to every 750.

The result here is often anarchy among our patients. I believe our growing and important Academy of Medicine could undertake no more useful task than to use its influence in making the right to practise medicine less accessible. The medical schools should all require entrance examinations, in which, among other things, a good knowledge of Latin should be included, and there should be a graded course of not less than three years. All of these reformations must come in time, however, and some of our colleges are setting, and have set, a noble example of thoroughness in every essential. I believe the power to practise should be conferred only by a State Board after examination, the medical colleges bestowing, however, the doctor's degree. This restriction of their functions would in nowise interfere with their dignity, influence, nor income.

The same number of THE MEDICAL RECORD which contained Dr. Smith's paper contains also a letter by Dr. Louis Fischer, entitled "European Opinions of American Physicians." Numerous visits and a great deal of time passed abroad, some of it in practice in Paris, have not shown me that the American physician is regarded with the contempt that Dr. Fischer states. Our system of medical education; absence, as a rule, of proper qualifications for admission; professors as numerous all over the land as colonels; short terms of study, and the easy examinations that prevail in many colleges are certainly regarded with contempt, tempered, however, by some incredulity. Nevertheless, the fact is recognized abroad, at least in Paris, that many American physicians have had, or have made, opportunities, and are regarded with respect and deference. Especially is this the case in France, to my mind the most liberal and catholic of all countries in science. Any one who is well acquainted with the leading French physicians will bear witness to the fact that they recognize here many zealous and able *confrères* in medical work. They weed out the tares, however, and are not imposed upon by simple compilers of books, professorships *et præterea nihil*, nor would the reputation that a physician had a large practice have much weight. But I have repeatedly heard our brilliant specialists spoken of in the most eulogistic terms by men whose praise is worth having. As I cannot mention all the former I will mention none, but will say that among those who have passed away the names of Sims, Gross, and Carnochan are held in great honor. I do not know many German physicians, but I know that in Austria many here are held in the highest esteem. That "the American physician is treated in Europe with contempt, and is regarded almost as a non-entity," is an assertion quite incorrect, and, from my experience, seems quite monstrous. The large number of medical works by American authors, translated and published abroad, is a sufficient refutation of this.

Dr. Fischer also states that "every possible obstacle is laid in our way" (to the practice of medicine); but the same rules are applied to *us*, in France, for instance, that are applied to the Germans, English, etc., and to the French themselves. In order to acquire the right to practise there, the examinations of the whole course must be passed, no matter how experienced and able the practitioner. During the empire, and until within a few years, the Minister of Public Instruction could, upon suitable recommendations, give the right to practise. Sims acquired the right in this way. At present this privilege cannot be obtained except by examination. *We* are not singled out, however, as subjects for oppression. There are no more restrictions laid upon us than upon other nationalities.

FAMILY PRACTITIONER.

LOCAL TREATMENT OF PULMONARY DISEASE.

To the Editor of The Medical Record.

SIR: In your editorial of December 3, 1887, on the local treatment of pulmonary disease, you make the following statement: "The defect of the cabinet in connection with the introduction of sprays, etc., is that while these may be deeply inhaled, they are not so completely exhaled, the increased amount of air drawn into the lungs being residual rather than tidal. It seems that the ideal cabinet should have a negative pressure during inspiration, a positive during expiration. Sprays and inhalations in phthisis appear not to have been so extensively used, because of the satisfactory results obtained with the cabinet." With the cabinet it is possible to accomplish what you state to be so desirable. By means of a double valve it is very easy to modify the pressure, so that it is negative during inspiration and positive during expiration. Dr. Westbrook and myself have been accustomed to use the Evans' spray apparatus in connection with the cabinet. This vapor-like spray is delivered into the breathing-tube, and expiratory effort is instantly indicated by a puff of spray out of this tube. With the hand on the lever, the pressure can be altered so that an inch of a column of mercury, in the intra-cabinet pressure, could be made with each of the respiratory acts, if it was thought desirable. The method is one we use frequently, and is spoken of as pneumatic differentiation.

Very truly yours,
A. H. BUCKMASTER, M.D.

163 CLINTON STREET, BROOKLYN.

VACCINE AND VARIOLA.—Dr. J. B. Buist has made an exhaustive investigation into the natural history of the vaccine and variolous contagium, embodying a large series of experiments and observations. The following are the more important of his conclusions: (1) Stored lymph undergoes acid fermentation unless preserved in the dry state. (2) Vaccine contagium can be isolated and cultivated apart from the animal body in both solid and liquid media. (3) The properties of pure dried yeast and diastase are very similar to those of the vaccine contagium. (4) Artificial and natural vaccine differ widely in potency and composition. (5) Natural vaccine, containing a preponderance of embryonic germs, gives rise to perfect local results, while the presence of mature germs causes violent local, and probably constitutional, results; lastly, (6) standard vaccine lymph, propagated as at present, is the best and most convenient material for vaccination. The book is copiously and beautifully illustrated, and may pave the way to further researches on the bacteriological culture of vaccine material.

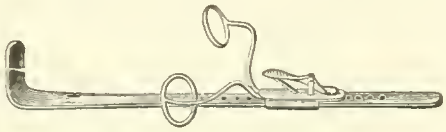
New Instruments.

A SELF-RETAINING UVULA- AND PALATE-RETRACTOR.

By W. PEYER PORCHER, M.D.,

CHARLESTON, S. C.

This instrument, as will appear from the cut, is an ordinary palate-hook, upon the stem of which a slide-attachment has been added. From the front of this slide project two arms, which end in two medium-sized rings, and at its rear is an automatic spring-catch which penetrates the perforated stem at short intervals. When in position the two rings on the arms rest on either side of the nose, just above the alveolar processes, and are easily retained there by the counter-pressure of the retracted palate. It is light in construction, weighing but four hundred and forty-five grains, easily adjusted, and releases both hands for operation and the management of the mirror. At my request, Dr. J. Allen Miles, D.D.S., made the original model, as I found the old method of operating—by means of pieces of tape or cord passed through the nostrils and clamped or tied over the upper lip—so disagreeable to the patient, as well as difficult and awkward to the operator. It lifts up and retracts the palate with perfect firmness and security. In fact, so entirely efficient has it proved, that with it operations can be performed in the posterior nasal space as easily as in any other region. It has been highly commended by distinguished laryngologists, as well as by general practitioners.



The following letter was received from Dr. J. Solis Cohen, to whom I submitted a model of the instrument, and he has kindly consented to its publication.

1421 Walnut Street, Philadelphia, September 28, 1887.

My dear Doctor: To-day is the first opportunity I have had to give the instrument you forwarded to me a trial. I was very successful in using it, and without cocaine. I like it very much indeed, and think it is the simplest mechanism I have seen.

Yours very truly,
J. Solis-Cohen, per F.

A NEW FORM OF PESSARY FOR THE RELIEF OF PROLAPSUS UTERI.

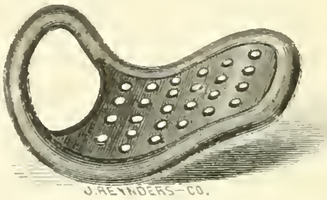
By CAROLINE R. CONKEY, M.D.,

WATERTOWN, N. Y.

No physician doubts for a moment the utility of surgical treatment for the relief of prolapse of the uterus, but it is not always possible to obtain the patient's consent to its use. Mechanical treatment is often the only sort the patient is willing to undergo, and a suggestion of surgical interference from the doctor will often cause his dismissal.

In consequence of this prejudice, I have in many different cases attempted to replace and keep in position a uterus prolapsed to the third degree by using the different supporters made for this purpose. A pessary which has to be worn for life should be free from the objection common to all pessaries with an external support, that they are a constant and increasing source of irritation to the parts. I have therefore discarded, in the treatment of such cases, those pessaries with an external support; and my best results were, from the first, obtained with a bow-pessary made by John Reynders for the treatment of retroversion, carefully fitted to meet the requirements of the case.

This would do the work satisfactorily, if it were not for the accompanying prolapsed condition of the vaginal walls, which, after the replacement of the uterus, bag down between the arms and at the sides of the pessary, and finally either push the pessary out, or cause the patient discomfort nearly equal to that of the original complaint.



In order to remedy this disadvantage in the use of the bow-pessary, I contrived one similar in curve, but of solid rubber from side to side, exclusive of the part which goes behind the cervix, the solid portion being perforated with holes to diminish the weight and allow free drainage. I introduced this five months ago in a case of prolapse, and it has since been worn constantly with the most perfect comfort. In the only other case I have had in the meantime I used the same pessary, with the same satisfactory result, and I feel justified in recommending it to the use of the profession because in these cases I had tried all other means unsuccessfully, and because I found the indications which other pessaries failed to meet supplied in this.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 1 *to January* 7, 1888.

Cleary, P. J. A., Major and Surgeon. Granted leave of absence for one month. S. O. 138, Department of Arizona, December 25, 1887.

Ebert, R. G., Captain and Assistant Surgeon. Ordered from Fort Custer, Mont., to Fort Pembina, D. T. S. O. 301, A. G. O., December 30, 1887.

Appel, A. H., Captain and Assistant Surgeon. Granted leave of absence for twenty days. S. O. 1, Department of Missouri, January 3, 1888.

Ewing, C. B., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month. S. O. 137, Department of Missouri, December 27, 1887.

Banister, William B., First Lieutenant and Assistant Surgeon. Ordered from Fort Lowell, Ariz., to Fort Wingate, N. M. S. O. 3, A. G. O., January 5, 1888.

Animal and Vegetable Diets Compared.—Dr. Baftalovski having secured the intelligent co-operation of four medical friends, proceeded to diet them and examine their secretions, in order to obtain information as to the different effects produced by various classes of food on the human organism. With purely animal diet the mean assimilation was ninety-five per cent., and the nitrogenous metabolism 108.6 per cent.; the extractive matters in the urine being more than when the diet was exclusively vegetable. With vegetable diet the assimilation was 42.5 per cent., the nitrogenous metabolism much less than with animal food, and the extractive matter four times as great as with a mixed diet. With a mixed animal and vegetable diet the assimilation was nearly as high as with the exclusively animal food, being 92.4 per cent.; but the metabolism was considerably less than with animal, but more than with vegetable, food.—*The Lancet.*

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 7, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	9	5
Scarlet fever	148	23
Cerebro-spinal meningitis	1	1
Measles	42	5
Diphtheria	181	56
Small-pox	3	0
Yellow fever	0	0
Cholera	0	0

FOR THE SUPPORT OF PHYSICIANS.—A sum of fifty thousand marks has been granted by the Saxon Government, in its new budget, toward the support of physicians who settle in the poorer districts of Saxony. A less sum is also to be granted toward the maintenance of resident veterinary surgeons.

ETHEREAL TINCTURE OF PHOSPHORUS IN THE PNEUMONIA OF INFANTS.—Dr. Rochas Faria, of Brazil, claims to have obtained excellent results from the use of an ethereal solution of phosphorus in infantile pneumonia when asphyxia is threatening. He gives a teaspoonful every hour of a mixture of eight drops of the ethereal tincture of phosphorus in four ounces of cinnamon-water and sirup. The cyanosis, he says, disappears under this treatment within twenty-four hours, the cough becomes easier, and the general condition rapidly improves. The same treatment, Dr. Faria adds, seems to give good results in senile broncho-pneumonia.—*Revue Génerale de Clinique et de Thérapeutique.*

A CURE FOR LYING.—Dr. Voisin relates the case of a girl, eleven years of age, who was a most inveterate and persistent liar, and whom he cured completely of this reprehensible habit by means of hypnotism. Here is a grand field of usefulness opened before this young science.

A CONGRESS FOR THE STUDY OF TUBERCULOSIS.—A call has been issued for a congress of physicians and veterinary surgeons, having for its object the study of tuberculosis in man and the lower animals. The meetings will be held in Paris, on July 25 to 31, 1888. All physicians and veterinary surgeons, from whatever country, may become members of the congress on the payment ot ten francs. The official language will be French. The president of the committee of organization is M. Chaveau, and the secretary-general M. L. H. Petit.

PUTREFACTION AND INFECTIOUS DISEASES.—At the recent German Congress of Natural Sciences, Dr. Hueppe delivered an address on this topic (*The British Medical Journal*). Pringle and Frank in the eighteenth century declared that "putrid fevers" were due to putrefactions going on external to the organism, and Pringle recognized a relationship between epidemics of such fevers and the depth of the water-level below the surface of the ground. Previously to this, if we except Frascatori in the Middle Ages, scarcely any attention had been directed to external influences from the time of Hippocrates, and, after him, of Diodorus. As for putrefaction itself, the idea that this was caused by the growth of low organisms was never even broached till the present century. The old view was that the term "life" connoted the absence of putrefaction, apparently because the healthy body resisted invasion by pathogenic germs. Against this view Henle strongly set himself, taking for his basis the investigations of Schwann and Cagniard Latour as regards *infusoria*, and those of Bassi and Audouin on infectious diseases. In fact, Henle's ideas were very advanced, for he thought that infective diseases were due to germs starting from without, and that these germs were due to putrefaction. Further, Henle ventured to argue that "it depends on special conditions wnat kinds of *infusoria* and plants develop, and the different kinds are not equally inimical to health." The natural development from this is that the living tissues resist pathogenic organisms during health, but that if this resistance be overcome the invading organisms develop, and decomposition goes on within the body, much as in external putrefaction, only modified in form and derivation by the tissues, and this conclusion has been confirmed by the investigations into the chemistry of bacteria by Nencki, Gautier, Selmi, and, above all, Brieger. Pettenkofer made a further step forward, for he divided the still hypothetical "infectious material" into entogenous and ectogenous. But his conceptions were too absolute. Pettenkofer held that the germs of infectious diseases were discharges from the body in an unfit, ineffective condition, and that only after a process of ripening outside the body could they again produce the original disease. We know that the case is otherwise, that, as a rule, such germs are most effective when discharged from the body, and that they do not acquire increased vigor from contact with mother earth, as certain heroes of old did, but rather tend to lose vigor and gradually perish. Nevertheless, we owe Pettenkofer a great debt for so early recognizing that many disease-organisms do go through certain stages of development outside the body—in some cases, as in the spore-formation of anthrax bacilli, only outside it. Our knowledge now begins to be more precise regarding disease-germs. Pasteur definitely established the fact that putrefaction and fermentation processes are due to the growth of the respective organisms. Next, as regards disease, F. Cohn put all the disease-producing organisms in one class apart. Davaine had already shown that anthrax bacilli were excitant of ordinary septicæmia. Koch taught us the isolation and cultivation of bacteria, and Panum showed that putrid fluids may act as poisons even when no organisms are present. By this last step, previous pathological conceptions were etiologically fixed, and "putrid intoxications" due to poisons elaborated by bacteria were distinguished from the diseases caused by the entry and development of the specific bacteria themselves within the system. It was afterward shown that the system could be intoxicated from within by bacteria. To go back for a moment to the beginning of our own century, Majendie's researches deserve mention here, because he showed that certain substances were developed in septicæmias (in animals), which, when transferred to other animals, set up a similar disease. Semmelweiss, "the well-known gifted founder of aseptic surgery," extended this observation to man, and by his success in the treatment of puerperal fever was the first to establish a beneficent prophylactic therapeutical system. It will be seen that many problems regarding disease-producing organisms were only rendered possible of solution through the attempts of Pasteur, Hallier, and Klebs—acting with ideas contrary to those of Cohn, who placed all such organisms in one class—to cultivate and separate the different kinds of bacteria, attempts which Koch carried on to a glorious fruition. It is now known as regards a whole series of pathogenic bacteria that they possess a saprophytic stage, and that their "parasitism" in the human body is not at all necessary to their existence as species, but only accidental, a view which Henle and Pettenkofer from epidemiological considerations had already strenuously advocated. Such is the substance of the historical sketch given in this remarkable address, the rest of which deals with recent systems of classification of bacteria, and of the diseases arising from them, a large part being devoted to the various organs of the body, as they are mainly involved in different diseases, especially cholera nostras, and cholera Asiatica. As regards this part, we have no space for further representations of the author's views, but some concluding remarks may be given as reflecting creditably on hygienic medicine in this country: "As long as a circulation of material goes on, as long as putrefactive processes are necessary as affording an intermediate stage between animal and plant life, so long will micro organisms exist, adapted for the destruction of albumen, or, by an alteration of the processes, for albumen-putrefaction. And so long as this occurs, organisms will continue to exist which, owing to this adaptation, are capable of setting up disease in the human body. We can never altogether conquer putrefaction—*tamen usque recurret.* But if—to quote Lord Palmerston—we regard dirt as only something in the wrong place, and regard putrefactive processes in our immediate neighborhood as in the wrong place, because uncontrollable and dangerous, we are then able to fight with those processes and their dangers without sacrificing the necessary processes for the circulation of material, together with their advantages. . . . Let these processes go on in the *humus* of the garden and the field, the meadow and the forest, where proper adaptations for plant life exist. . . . I adopt the English conception, which regards cleanliness—not a mere façade-cleanliness, though—as health itself, and the best means of fighting against infectious diseases."

Sparteine in Cardiac Affections.—Dr. Maslovsky formulates the following conclusions from his experiments made to determine the efficacy of sparteine in the treatment of heart disease (*Russkaya Meditsina*, No. xiii., 1887): 1. In moderate doses sparteine stimulates the heart, renders the pulse more full and reduces slightly the number of its beats. 2. Its action is rapid. 3. The heart's action does not become perfectly regular under the use of the drug. 4. The quantity of urine excreted is somewhat increased. 5. The drug possesses no cumulative action. The dose is from one-fifth to two-fifths grain per day.

A Safety Coffin.—An inventive German has devised a coffin for the convenience of those who have a dread of being buried alive. It is provided with a valve by means of which fresh air is admitted in quantity sufficient to support life, and there is an arrangement of wires by means of which the least movement of the body sets an electric bell to ringing.

Sir Andrew Clarke's Treatment for Anæmia and Chlorosis (Fecal Anæmia).—On first waking in the morning sip a quarter of a pint of cold water. On rising take a tepid sponge-bath, dry quickly, and follow with a brisk towelling. Clothe warmly and loosely; see that there is no constriction of the body or of the limbs. Have four simple but liberal meals daily, arranged after this fashion: *Breakfast*, 8 to 9.—Wholemeal bread and butter with one or two eggs, or some broiled fresh fish, or the wing of a cold chicken or pheasant, and toward the close of the meal half a pint of equal parts of milk and tea, not infused longer than five minutes. *Lunch* or *Dinner*, 1 to 2.—Fresh, tenderly dressed meat, bread, potato, well-boiled green vegetable, and any sort of simple farinaceous pudding, or of cooked fruit, preferably apple. Drink one glass of Burgundy, alone or in half a tumblerful of water. *Tea*, from 4 to 5.—Wholemeal bread and butter, with a cup of equal parts of tea and milk. *Dinner* or *Supper*, from 7 to 8.—This should resemble the mid-day meal, but should be less in quantity. Nothing is to be taken after this meal, nothing between meals, and nothing but what is here set down. Walk at the least half an hour twice daily, and as much more as strength and convenience will permit. Retire to bed about 10, and repeat the sponging and towelling. See that your bedroom is cool and well ventilated. Lead a simple, regular, active, occupied, purposive life, and do not notice or distrust yourself. With such instructions, modified according to individual peculiarities, I prescribe a ferruginous cathartic to be taken twice a day, about 11 A.M. and 6 P.M. Usually it is an acid mixture, somewhat as follows: ℞. Ferri sulphatis, gr. xxiv. ad gr. xxx.; magnes. sulph., ʒ vj.; acid. sulph. arom., ʒ j.; tinct. zingiberis, ʒ ij., vel syrupi zingiberis, ʒ vj.; inf. gent. co. vel quassiæ, ʒ viij. Fiat Mist. Sig.: One-sixth part twice daily, about 11 A.M. and 6 P.M. Occasionally this acid mixture produces sickness, dries the skin, and is otherwise ill-borne. In such circumstances I prescribe an alkaline cathartic mixture: ℞. Ferri sulphat., gr. xxiv. ad gr. xxx.; sodii bicarbonat., ʒ ij.; sodii sulphat., ʒ vj.; tinct. zingiberis, ʒ ij.; spt. chlorof., ʒ j.; infus. quassiæ, ℥ viij. Fiat Mist. Sig.: One-sixth part twice daily, about 11 A.M. and 6 P.M.

Discoloration of the Skin by Nitrate of Silver applied to the throat. Dr. J. Walters writes to the *British Medical Journal:* "A well-marked case of argyriasis came under my observation, some years ago, in the person of a woman sixty or seventy years of age, who, many years previously, had been supplied with a solution of nitrate of silver to apply to her throat."

The External Use of Quebracho.—The fluid extract of quebracho is recommended as an application to wounds of all sorts, but especially to the ulcers resulting from burns and frostbites. It forms a firm coating over the ulcer, under which cicatrization proceeds rapidly as under a scab. The application causes a little smarting at first, but this is slight and soon passes away.

Commodore Perry's Views of Scurvy.—In his "Life of Commodore M. C. Perry," W. E. Griffis says: Matthew Perry was among the first to discover the underlying cause of the sailor's malady—sea-scurvy. He believed it to be primarily due to malnutrition. He found the soil in which the disease grew was a compost of bad water, alcoholism, exposure, too exclusively salt diet, lack of vegetables, of ventilation, and of cleanliness on ship. The canning epoch inaugurated later by Americans, who, it is said got their notions from air-tight fruit-jars dug up from Pompeii, had not yet dawned, but Perry already put faith in succulents. Though not yet familar with the marvellous power of the onion, and the juice of limes, he endeavored at all times to secure supplies of sauer-kraut, cabbages, radishes, and fruits rich in acids and subacids. He was emulous of the success of Captains Cook and Parry who had succeeded so well in their voyages. He knew that in war more men perished by disease than in battle. He lived to see the day when a ship was made a more healthy dwelling place than the average house, and when, through perfected dietetic knowledge, and the skill of the preserver and hermetic sealer, sea-scurvy became so rare that a naval surgeon might pass a lifetime without meeting a case save in a hospital.

An International Exhibition is to be held in Brussels from May 3 to November 3, 1888. In addition to the exposition, there is to be a convention for the purpose of demonstrating how each article on exhibition can be best and most cheaply manufactured.

The Treatment of Sciatica.—Dr. N. O. Parks, of Ashton, R. I., writes: "In The Medical Record of November 12, 1887, is mentioned the treatment for sciatica, recommended by Dr. Burggraeve, of a local application of iodine, collodion, and ammonia water. I find this mixture will not work, the gun-cotton being precipitated from the collodion."

The Sign of Jove.—Dr. Napier, and other physicians of the seventeenth century, said that ℞ stood for *Responsum Raphaelis* (Reply of Raphael), and was used because the angel Raphael was supposed to impart prescriptions. This suggestion is, however, a latter-day legend, which receives no credence.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 3. NEW YORK, JANUARY 21, 1888 Whole No. 898

Original Articles.

ON SOME POINTS IN THE SURGERY OF THE URINARY ORGANS.[1]

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LECTURE II.

THE PATHOLOGY OF THE ENLARGED PROSTATE VIEWED IN RESPECT TO ITS CAUSATION AND PREVENTION, AND THE TREATMENT OF SOME COMPLICATIONS ARISING OUT OF IT.

I PURPOSE this evening speaking of the pathology of the prostate, relative to some points in connection with the prevention and treatment of certain disorders arising out of it when it becomes hypertrophied. The causes of hypertrophy of the prostate have formed the subject of much careful observation, and I feel some hesitation in again referring to them. Still, on the other hand, though my views may not prove generally acceptable, I am inclined to think that a narrative of the observations upon which they are to a large extent based may serve a useful purpose in indicating lines of thought which may result, sooner or later, through the investigations of others, in clearing up doubtful passages in the physiology and pathology of this part. In the first place, I shall speak of the prostate as forming the retentive apparatus of the male bladder, under whose influence the urine is collected and held, irrespective of any glandular function which, by the nature of other structures it may contain, it is capable of exercising. And I think it will not be difficult to substantiate the proposition that, in the human species at all events, this part may with greater propriety be designated *the prostate muscle*, rather than *the prostate gland;* for whatever function it may exercise intermittingly, relative to the process of generation in its latter sense, seems to be subservient to the physical part it is continuously playing as a portion of the retentive apparatus. In support of such a view I would draw attention to Mr. Ellis' important paper[2] "On the Muscular Arrangements of the Genito-Urinary Apparatus," wherein is remarked: "I would propose the name *orbicularis vel sphincter urethræ* for both the prostate and the prolongation around the membranous urethra, while I would confine the old term 'prostate' (without the word gland) to the thickened and more powerful part near the neck of the bladder. This orbicularis may be considered as only an advanced portion of the circular layer of the bladder, though it must have the power of acting independently of the vesical fibres." But if its muscularity is admitted, we must conclude that it, for the most part, exercises its function in conjunction with the bladder, in the form of a hollow muscle, for it would be against the nature of things for it permanently to exist in the shrivelled and contracted state it presents after death. We have been too much accustomed to regard the prostate from its post-mortem aspect; that is to say, as a mass of muscle of the size and form of a chestnut, in which is contained some secreting tissue. For concluding that it thus exists during life, I believe there are no substantial grounds, as it seems to me that under no circumstances, save the rare and momentary one when the bladder is absolutely empty, does it present such an appearance. On the contrary, the muscular fibres are spread out like a funnel, with the apex downward, so as to form a strong muscular support for the bladder and its varying amount of contents, the degree of expansion being naturally relative to what the viscus may contain. Hence the action of the prostate may be said to be just as continuous as that of the heart. In reference to this important point, it will be necessary that I should furnish some reasons for such a conclusion.

In the first place, the clinical examination of a healthy person, with varying amounts of urine in his bladder, affords no evidence that the prostate presents the contracted appearance we are accustomed to see; on the contrary, when the finger is introduced into the rectum, in the natural condition, the parts are felt to be disposed in the manner I have indicated, and providing a muscular floor for the bladder and its varying amount of contents.

But the retentive function of the prostate is more strikingly shown when we proceed to what I would speak of as actual demonstration. And for this purpose we have only to observe what follows in connection with certain surgical operations on these parts with which most of us are familiar. Incisions may be made into the male urethra, in any part of its course, as far as that point which we are accustomed to call the apex of the prostate, without any incontinence of urine following. I have seen cases of lithotomy by the median operation retain full control over the bladder during the whole period of their convalescence, in spite of the dilatation to which the prostate has been subjected by the introduction of the finger and the extraction of the stone. And this remark applies equally to cases of external urethrotomy.

When, however, the knife impinges to any appreciable extent upon the prostate, as in the lateral operation for stone and the modified median operation which I have recently drawn attention to where the prostate is divided, from that moment incontinence takes place; the patient has no command over his urine; he can neither collect nor expel it, and in this condition he remains until the healing process has made considerable advance. We have here striking evidence not only as to the habitual function of the prostate relative to the contents of the bladder, but that the action of the part must be unceasing in its character, subject to the circumstances under which it has to distribute its force over the area it supports or brings into action. How completely the prostate forms the lower section of the bladder was demonstrated to me in a striking manner only a few weeks ago, and in a way that I had not previously noted. It was a case of lateral lithotomy in a young man, where, ten days after the operation, there was some free hemorrhage. As the bleeding did not proceed from any part of the perineal wound, I had the patient put under ether on the operating-table, and, suspecting where the bleeding came from, I introduced the nozzle of a Higginson's syringe into the orifice of the urethra, expecting that the fluid would run out of the open urethra; this it certainly did, but not until it had first entered the bladder, out of which the fluid escaped, together with some old clots which had evidently collected in the viscus, just as water would do out of the side of a cask in which a hole had been made. This I was able to see, as the wound was held open with retractors under a strong light. In addition, however, to testimony of this kind, I am convinced, from a careful examination of the prostate, both before and after operations on this part, where the introduction of the finger into the bladder formed a detail of the proceeding, that the more usual condition of the healthy prostate is one of relaxation, and not of contraction, as we are accustomed to see when death has taken place.

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[1] The Lettsomian Lectures, delivered before the Medical Society of London, January, 1888.

[2] Royal Med. Chir. Trans., vol. xxii.

But further, when there are no such physical functions to perform relative to the contents of the bladder, the prostate, as a muscle, so far as I have been able to ascertain, only exists in a rudimentary form. I refer to those distressing abnormalities known as extroversion of the bladder, where, from the fissured nature of the structures, there is no receptacle for the urine which escapes from the ureters as it is excreted. Here, though the sexual sense may be normal, there is, from the nature of the parts, no necessity for any provision being made for the collection and retention of what the kidneys secrete. I have not been able to discover, though I have taken considerable pains to do so, that in these abnormalities hypertrophy of the prostate has ever been noticed. This seems to me to be a point of some significance in connection with what has been already urged. But though in an argument of this kind I would prefer to substantiate my position from positive evidence rather than by a deduction from the negative, I cannot help remarking that, if the office of the prostate was solely in relation to the sexual act, the pathology of the part would tend to indicate this more than I believe it does. It is not very uncommon to meet in practice with cases of acute suppuration commencing in the follicles of this part, where one would think that irreparable damage must have been done, and yet we have evidence to show that the individual has not necessarily been unsexed by this process. Nor can I assert, though the opportunity for doing so has now for some years been abundantly provided me in my operations, involving varying degrees of mutilating the prostate, that I ever extinguished the procreative powers.

In the next place, I would point out that adult man seems to require some special provision, such as the prostate affords, for the purpose I have just indicated, by reason of the exceptional degree of pressure to which the most dependent portion of his bladder is constantly subjected. And in making use of the words, "exceptional degree of pressure," I do so in contradistinction to what is found, so far as I have been able to observe, not only in the animal kingdom, but in other varieties of the human species which are not in exact correspondence with the type I have taken. As demand and supply in the disposition of muscular tissue are proportioned, it seemed to me that we had hitherto failed fully to recognize and appreciate all the circumstances which rendered it necessary that the adult male bladder should, as I have already pointed out, be provided with a muscular apparatus of considerable strength at its most dependent point. But in what respects, it may fairly be asked, does the adult male bladder differ from other varieties of its own species, and from those animals which in their higher organization more closely approach it? I maintain that in man the perpendicular axis, of what I would speak of as urine pressure, falls directly upon the outlet of the bladder, whereas in the female, not only are there other means of supplying muscular support to the base of the bladder, but, in consequence of the difference in the pelvic organs, a considerable portion of the weight of the viscus, especially in its more extreme degrees of distention, is borne by the pubic portion of the pelvis. Further, allowance must be made in the female sex for no provision being necessary for seminal ejaculation, in which function the muscular fibres of the prostate undoubtedly play an important but occasional part. In the higher mammalia, excepting, perhaps, in the case of dogs, the prostate is not so largely developed as in man. In reference to this point, Mr. Bland Sutton kindly informs me that, although he has conducted many thousand post-mortems, yet, except in the doubtful case of dogs, he has never seen an enlarged prostate, at all events such a one as would cause obstruction to the flow of urine. In animals, it will be observed that the perpendicular axis of urine pressure, when the bladder is tolerably full, does not fall, as in man, on the outlet, but on the parts which support the bladder according to its varying degree of distention. In the dog, it seems to me not improbable that the exceptional degree of prostatic development is related to the somewhat peculiar condition under which, in this animal, micturition is performed. As my opportunities of examining the urinary apparatus in the lower animals have been few, I feel much hesitation in making reference to any observations I may have rather casually made, so far as they related to the point under discussion. It, however, appeared to me that where the habits of the animal, as observed in some apes and marsupials, necessitated the frequent adoption of an erect position, that the males had a much greater development of the prostate muscularly than was usually found in other kinds of quadrupeds. I regret very much that we have not at our disposal more abundant means for referring to dissections illustrative of the comparative anatomy of the body. I am sure they would prove of much assistance in investigations of this kind having relation to normal and morbid human anatomy. But apart from this, if time permitted, it would not be difficult to adduce further evidence to show that in man the collection and storage of urine, if I may make use of such a term, implies a degree of muscular support to the most dependent portion of the viscus for which no such complete provision has to be made under any other condition of life I am acquainted with. I should not, however, feel at all surprised if, when the missing link is discovered, he is found paying the penalty for his assumption of the erect posture by developing in some degree an enlarged prostate.

But to proceed. If the prostate represents the chief means of retention and support for the contents of the male bladder, is it necessary to pursue the argument for the purpose of explaining why it becomes hypertrophied? Does not one follow upon the other? Are not the circumstances of individual life sufficient to explain why it happens to one person and not to another?

Many of the facts connected with the natural history of hypertrophy which have been collected for us, or with which, in our daily practice, we are familiar, seem to me to support the view I have taken relative to the function of the part. In the first place, it is not met with during those periods of life which are most remarkable for muscular activity and development; on the contrary, it is called into existence where, pathologically speaking, quantity seems to supplement deficiencies in quality.

But, as with similar changes in other parts of the body, so may prostatic hypertrophy be shown to be exactly compensatory; while in others, by an excess of the process, it may be proved to be detrimental. And in reference to this point I would remark, that we have been too much accustomed to regard prostatic hypertrophy as necessarily a morbid and hurtful process. To such a conclusion I think exception may be taken on substantial grounds. It is stated by Sir Henry Thompson that actual hypertrophy of the prostate exists in about thirty-four per cent. of men at and above sixty years of age; that it produces manifest symptoms in about fifteen or sixteen per cent. From this it would appear that the larger proportion of persons are not injuriously affected by the change, a circumstance which seems to suggest that the majority of persons with large prostates are in some way or other benefited by them; and this deduction is considerably borne out by every-day experience. I am disposed to think, from my own examinations, that the frequency of some degree of prostatic hypertrophy is thus rather under- than over-estimated. Though it is not easy to form an absolutely correct estimate of the size of these parts, relative to standard measurements, by rectal examination, my conclusion is that a far greater number of males over sixty years of age have some enlargement of the prostate, and are never in any way conscious of the alteration, than we should conclude from the figures I have just referred to. How frequently, for instance, when we are examining elderly persons, say for some disorder of the rectum, we make the discovery that their prostates are enlarged, though they have no reason to be conscious of this change. I can, at this moment, recall many instances of this in my own practice, where the persons are, in every sense of the word, in the enjoyment of the most perfect health, with an entire absence of any urinary ailment. Quite recently I was asked to examine a gentleman who, in the course of an acute bronchitis, had retention of urine for the first time in his life. This patient had an enormous prostate, which must have been in course of formation for several years. Surely, under these circumstances, in the first instance the hypertrophic change must have been called into existence for a distinctly conservative object, and had been merely disarranged by the violence of the cough from which he was suffering.

But though prostatic hypertrophy is, as I have shown, in the greater number of instances, more or less compensatory, it may, as in others, be in excess of what is required, and thus prove detrimental. In the latter category, reference, no doubt, will occur to us of those examples where the prostatic mass is made up of projections having a somewhat lobulated or nipple-like form, where the degree of irritation and obstruction excited is often very considerable, and apparently out of proportion with the cause. These I would speak of as being the structural upheavings of a frequently contracting muscular ring. In a muscle or part undergoing hypertrophic growth, and where the process is prompted by circumstances which are obviously liable to some degree of variation, tissue-production may be excessive or become unnecessary. Such excess would naturally tend, under the contraction of the part, not only to protrude itself where the resistance was least, but to assume a more lowly organized form than that which in the first instance was developed. In this way, I believe, these masses of more or less degenerated prostate tissue are formed, which subsequently cause so much vesical irritation and irritability. And this observation, whether a large prostate still remains almost entirely muscular, or has become largely converted into fibrous tissue, has an important bearing in practice in those cases where we have to express an opinion in reference to the probabilities as to whether the use of the catheter will be a temporary or a permanent expedient. For where there is evidence to the touch that fibrous tissue predominates largely over the muscular, the use of the catheter is generally perpetual; while, on the other hand, when the prostate is found soft and yielding to the touch, as when it remains muscular, a complete restoration of function may be anticipated. Thus, then, may the resistance which is constantly going on in the most dependent portion of the bladder, against that downward pressure which is exercised by the collection and retention of urine in the bladder, prove the common cause of its hypertrophy.

But this is not the only condition under which hypertrophy involving the lower section of the bladder can be studied.

In the examination of the bladder, both after death and in the course of surgical operations, it is impossible not to be struck with the altered relations which frequently exist between the body of the viscus and its neck or outlet. In early adult life the bladder may be regarded as an abdominal rather than a pelvic organ; as years advance it gradually sinks within the pelvis; while still later on, it will often be found to have become further depressed within the pelvic cavity. In this way I have seen a prominence given to the floor of the prostate which was really due, not to the development of more prostate tissue, but to the depression or partial prolapse of the posterior wall of the bladder. This artificial condition of obstruction I have endeavored to show, in some instances, not only precedes prostatic obstruction, but, further, is followed by the development of a strong muscular buttress between the orifice of the ureters, which in many instances leads to the obstruction of what otherwise would prove, by the sinking of the posterior wall of the bladder, an inconvenient pouch. Thus hypertrophy of the prostate and the adjacent part may not only be due to the natural resistance of urine pressure, but also may be called into existence for the evident purpose of supplementing a structural defect of more or less accidental origin.

It is impossible to observe the function of micturition in the child and the adult without recognizing that in the two conditions there are wide differences in the influence that the will exercises upon the merely mechanical act. In the child the process almost approaches the involuntary, the calls of nature are impulsive, and must be obeyed without hesitation. This may be illustrated in a variety of ways, both in health as well as in disease. In adult man this is to a large extent changed, as we find the process becomes much more subservient to the will than perhaps at first sight we should feel disposed to admit. That there is a wide difference in our respective powers of continence in this respect I am willing to admit. In some individuals the function of micturition seems in health but very slightly removed from a purely voluntary act. Let me illustrate what I mean. A medical man, closely approaching seventy years of age, asked me to examine his rectum for some slight ailment. In doing so I found that he had a very large, soft prostate. I mentioned this to him, when he remarked: "I could hardly believe it, as I have always had such excellent water-works. I have been in the habit of not passing urine for eight or ten hours." Here, then, is an illustration of a man who submits his bladder to the same degree of urine pressure at seventy as he did when he was twenty-seven. Again, a captain of one of our ocean steamers, in consulting me in reference to some urinary disorder clearly connected with a large prostate, in comparing his present with his past powers of retaining urine, remarked that, in consequence of remaining on the bridge of his steamer for long periods of time, particularly in thick weather, without leaving it to pass water, he had acquired a power of retention which had gradually become constant. It is remarkable that nature had thus substituted quantity for quality, and had made provision against the effects of a muscular strain which could not have been inconsiderable. We might from our daily practice multiply examples of this kind where persons, so far as was known, were not deriving anything but good from that excess of muscular tissue which we are accustomed to speak ot as the prostate gland. If we admit that the muscular fibres of which the prostate is so largely composed exercise the function I have urged relating to the contents of the bladder, I do not think we can be at a loss to understand how they become hypertrophied.

Let me, however, not be understood as implying that in the human species the prostate has no relation with the sexual act. Evidence is not wanting to show that, as a muscle, as well as by reason of its glandular element, it exercises purely physical functions relative to this important but casual function, independently of the continuous action I have laid stress upon in relation to micturition. The less important function of the glandular portion of the prostate has been, I believe, correctly described by Dr. Handfield Jones[1] in the following words: "Its part in the generative function is probably not to prepare any essential element of the fecundating fluid, but merely an appropriate viscid material, involved in which the seminal animalcules may be more securely transported on their destined route."

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[1] The London Med. Gazette, vol. v., 1847

Passing to some considerations relative to the prevention of prostatic hypertrophy, and the complications arising out of it, I would observe that more care should be systematically taken to preserve the muscular power of the bladder, and to aid it artificially when the necessity obviously arises. If a man goes on using his bladder as he would a water-bottle, from adolescence to old age, he must not be surprised if nature prevents it breaking down entirely by the process I have described. The timely use of the catheter has often, I am sure, provided the means for warding off changes which unfortunately do not always cease when they have become precisely compensatory. Nor is there anything exceptional in this, for as age advances we recognize the importance, and make use of artificial assistance in a variety of ways which I need hardly particularize. In the clinical history of most cases of hypertrophy of the prostate, we can generally trace a period when a weakness of the viscus indicated itself by a frequency in action which was subsequently corrected by an overgrowth in the part. But, unfortunately, the process of hypertrophy, as observed in the prostate, is not always precisely compensatory, it is not infrequently in excess. In by far the larger proportion of these instances the individuals are able not only to keep themselves comfortable by the use of the catheter, but I question very much whether their lives are in any way shortened by the continued inconvenience they have thus to submit to. Many of us could record some remarkable example of longevity under these circumstances. But making due allowance for this class of cases, there are others whose lives, in spite of careful and efficient catheterism, are rendered miserable and useless by what they suffer in this way. For no sooner does urine collect in their bladders to any appreciable extent than they require to get rid of it. Many expedients have been resorted to, both in the way of drugs and operative procedures, for the permanent relief of this condition, about which it would be impossible for me to speak in detail. Let me, however, refer to a case [1] which I reported some years ago, where I tapped the bladder from the perineum through the enlarged prostate, quite independently of the course of the urethra, and where a cannula was retained in this position for two months with great comfort to the patient. He was a man about eighty years of age, and had suffered much from almost all the complications that an enlarged prostate is capable of giving rise to. But the future of the case was perhaps still more interesting, for he completely recovered, and lived for several years, and in this I include the acquisition of the natural and unaided use of his bladder. Further, the explanation of this was found in the fact that during the time the cannula was retained in his bladder his prostate underwent a gradual diminution in size, which was noticed by all who had the opportunity of watching and examining him. His condition prior and subsequent to the operation proved a most remarkable and instructive contrast. I may add that this process has been repeated not only by myself, but by others, with very satisfactory results, and this tends in no slight measure to substantiate the views I have already advanced relative to the pathology of the disorder. And in connection with puncture through the prostate, I would like to say a few words in reference to cases where relief has been afforded, under similar circumstances, by an incision through the part similar in many respects to what is adopted in lateral lithotomy. There can be no doubt that prostatotomy, which affords a free and incontinent escape for urine from the bladder, has proved of very great temporary and permanent service in this class of cases. At the meeting of the International Medical Congress at Copenhagen, in 1884, I took the opportunity of illustrating this method of treatment as an alternative in cases where the catheter was of no avail in affording relief. And I will again refer to this operation, as sufficient time has now elapsed to enable me fairly to judge of the results obtained. The kind of cases to which this treatment has been applied are those of difficult micturition, due to a large prostate, which are not adequately relieved by the use of the catheter. This class, therefore, includes instances where there is unusual difficulty in introducing the catheter; where bleeding almost always attends the use of this instrument; where the withdrawal of the urine is followed by no sense of relief; and where the bladder, by the constant presence within it of pus and tenacious mucus, is converted into little else than a chronic abscess through which urine percolates. These, as well as some other forms of prostatic disease which might be included, are practically unrelievable by the catheter, and soon terminate in a painful death. For the relief of such conditions various expedients for establishing a more or less permanent communication with the bladder, other than by the urethra, have been practised; namely, puncture above the pubes, by the rectum, and from the perineum, with the retention of a cannula or tube for the discharge of urine at these several points. Excellent in design as these proceedings are, they appeared to me to fall short in one important respect—in not dealing with the cause of the obstruction. Two of these measures are open to objection on the ground that the artificial canals are inconveniently placed as permanent vents, for it would seem desirable that the urethra should, as far as possible, be utilized, and the external opening for the escape of urine be dependent. On considering various plans of treatment which had been applied under the circumstances mentioned to the obstructing prostate, it appeared to me that by combining Cock's well-known and safe operation for opening the membranous urethra with Mercier's for dividing the prostatic bar from within the urethra, as will be presently noticed, it would be possible to obtain precision with an increased freedom from risk. Such an operation was suggested by the late Mr. Guthrie, but I cannot find that he ever tested it in practice. The want of anæsthetics probably interfered with the progress of this as well as of other departments in surgery. Apart, however, from the operative procedure, it appeared to me from some experience I have had in lithotomy and other operations on the parts constituting the neck of the adult male bladder, that the means which had been subsequently adopted for rendering the prostatic section thus made permanent, were very inadequate. Further, I had been impressed with the advantage that followed the employment of suitable bougies as dilators in cases where the prostate threatened to obstruct micturition.[1] Influenced by observations of this kind, I was led to attach considerable importance to the treatment immediately following section of the enlarged prostate, with the view of rendering it more permanent than had hitherto been attempted. The necessity for prostatotomy having been determined by the symptoms presented in each case, as well as by physical examination, I will describe briefly the operation and after-treatment employed. The former consists in opening the membranous urethra from the perineum on a guide, and introducing the finger within the prostatic urethra; the obstructing portion of the prostate is then divided a little to one side of the median line, partly by incision with a curved probe-pointed bistoury from within outward, and partly by divulsion with the finger, when the latter is feasible; a large drainage-tube is then introduced into the bladder. I attach considerable importance to the prolonged use of the drainage-apparatus, as the object is to render the section of the prostate not a temporary one, as after a lithotomy, when no such provision is made, but permanent. Hence, I am in the habit of retaining these tubes for six, eight, or ten weeks. If, after such periods, on removing the tube I find that a catheter can be made to enter the bladder easily along the natural route, or if, as it sometimes happens, urine forces its way, in spite of the drainage-tube, along the natural passage, I regard these as indications that the object in view has been obtained. The perineal wound is then allowed to close. Let me briefly illustrate this by the narration of one of my earliest cases.[1]

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[1] British Medical Journal, December 24, 1881; April 8, 1882.

[1] The Prevention of Prostatic Obstruction. Churchill, London, 1881.

A man, aged sixty-three, came under my care in February, 1883, suffering from a large prostate, which was a constant source of irritation to him. The straining and forcing to urinate was but very slightly relieved by catheterism, and the only way he could get any sleep was by tying the instrument in, and this was generally followed by some cystitis. A fortnight after I saw him I opened the prostatic urethra by a median perineal incision, and incised the prostate laterally. In doing this I found that though the prostate was not very large, the orifice of the bladder was much obstructed by one of the nipple-like enlargements which are sometimes more effectual in rendering micturition difficult and catheterism uncertain than some larger masses. A drainage-tube was introduced and retained for four weeks, when it was removed, and the perineal opening allowed to heal. In this case so perfect was the drainage that the whole of the urine escaped by the apparatus, and the patient was kept absolutely dry throughout. He remained under treatment for two months after the operation. Three months after, he returned to report himself. There was a slight fistulous opening in the perineum at the lower angle of the wound, through which urine sometimes passed in drops during micturition. He could now hold his urine for several hours. Some slight enlargement of the prostate could be felt from the rectum, but this did not appear to have increased. A full-sized catheter was easily introduced without any hitch or obstruction in the prostatic urethra, or at the neck of the bladder, being felt. This patient was seen at intervals for two years after the operation, and remained perfectly well. He has since neglected to report himself. Though I advised him to pass a catheter for himself occasionally, I believe that he did not do so.

Taking the cases thus operated on, I have noted the following results: 1. The operation has merely afforded just such a temporary relief as the retention of a catheter or cannula would do as a drain, the condition of the patients, so far as recovery was concerned, being more or less hopeless at the time of operation. 2. The establishment of a permanent vent for the urine through the perineum. In two instances where this occurred the patients exchanged a life of misery for one of comparative comfort. The shorter route here proved most acceptable. 3. The substitution of easy for difficult catheterism. In one patient I thus operated on, though he had to use his catheter afterward so long as I heard of him, which was for over two years, he never had any difficulty in passing the instrument, and the bladder continued to be far more tolerant of urine than it had previously been. 4. The complete recovery of the patient, as I have just illustrated.

In discussions relative to the method of operation adopted, it has been pointed out that in some cases of this kind it must be absolutely impossible to explore the whole length of the prostatic urethra with the finger. This circumstance has never influenced me, or seriously interfered with my carrying out the object in view. I never met with a prostate of such a size or shape as to prevent a staff or guide being passed into the bladder, and where a director will go a knife may safely follow.

But to proceed. Though a more or less permanent vent or opening for the urine, either above or below the pubes, may prove of value in some instances of urethral obstruction due to prostatic hypertrophy, where ordinary catheterism is useless so far as the amount of relief that is afforded, it is not applicable to all cases of this kind. For we must remember that in the former class of cases it is merely a matter of urethral obstruction that we have to deal with, while in others the symptoms are for the most part due to the irritation that is provoked in the bladder by the protruding masses of more or less degenerated prostatic tissue. The one is to the other, as well as to the bladder, as urethral stricture is to vesical calculus. The examination of specimens of hypertrophy in connection with their clinical history clearly points in some to the mechanical irritation which protruding masses of more or less prostatic tissue excite in the interior of the bladder. In connection with the treatment of such cases, where the lives of the individuals are not only absolutely useless, but most miserable, I am glad to see there are signs that something now may be systematically done for their relief. Heretofore we have been drawing for any experience we may possess in reference to this point upon what I would speak of as the casualties of lithotomy. There is much, however, in favor of direct surgical interference in these exceptional cases of grave prostatic obstruction and irritation, as the nature of the growth, unlike cancer, renders a return of it improbable. I have now on three occasions deliberately removed, by perineal section, considerable portions of the hypertrophied prostate, with permanent relief to the patients; and I have no hesitation in recommending the adoption of this course in suitable cases, after, if possible, perineal exploration of the part with the finger. Now, three instances may seem very insufficient data for basing such a recommendation upon; but it must be remembered that this is an exceptional remedy for the purpose of meeting exceptional circumstances. No operation of this, or any other kind, would, in my judgment, be warrantable so long as a man can keep himself reasonably comfortable with the use of the catheter, and, therefore, the percentage of cases where more radical measures would seem to me to be indicated is really extremely small. But we must be provided for these, and, though they are oftener met with in the aged and feeble, with reduced powers of repair, whose chances of recovery from any operation are reduced, such means as I am referring to must not be too hastily set aside in these days when the practice of operative surgery, especially in relation to the interior of the body, has been shorn of many of its dangers, and is altogether very different from what it was even at the commencement of the present century. I am induced to make these observations partly because I think it would be a misfortune if operative procedures were extended to what I would speak of as ordinary forms of prostatic obstruction, and partly because I think the risks attending the removal of protruding portions of the prostate have been somewhat exaggerated, and thus surgeons have been debarred from undertaking operations which, in proper cases, have afforded both immediate and permanent relief. So far, I have been able to do all I desired in the way of removing more or less of the obstructing prostate by proceeding from the perineum, which I have always opened with considerable freedom. In connection with the subject of prostatectomy, or removal of portions of the prostate, under such circumstances as I have indicated, I would take this opportunity of expressing the interest with which I read the paper by Mr. McGill, and the no less instructive discussion which followed it, at a recent meeting of the Clinical Society. In this paper the author demonstrates, by instances, how portions of the prostate might be removed by scissors through a suprapubic incision. I am disposed to think that this, on still further trial, will be found the best way to deal with such cases, for it places the operator in view of those projecting masses of degenerated prostate tissue which invariably protrude toward the cavity of the bladder, and which really are the cause of the distressing symptoms of irritation which accompany them. Care, however, will be necessary, as I have just urged, in the selection of cases for operations of this kind, it being distinctly understood that they are undertaken, not because the prostate is large, but because it has induced symptoms which cannot be alleviated in any other way. You may remove the prostate entirely, but this necessarily renders the individual incontinent for life. Lobulated masses proceeding from an hypertrophied prostate, and isolated fibromas in the part, may thus be dealt with to permanent advantage; but this is a very different thing from extirpating the prostate in its entirety, or seriously mutilating the muscular ring, which, under all circumstances, is essential to the integrity of the bladder as a urine-holder.

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[1] British Medical Journal, June 9, 1883.

The following instance, which I will briefly relate, substantiates the proposition with which I opened this lecture, and as it similarly bears upon the operative point now under consideration, I may consistently close my remarks with it.

In August, 1882, a patient, aged sixty-four, came under my care with symptoms of primary carcinoma of the prostate, which caused bleeding, continuous pain, and irritability of the bladder. As no treatment afforded relief, I performed a free median cystotomy, and proceeded with my finger and a blunt gouge to enucleate the prostate and the growth connected with it. In this I succeeded, with the exception of a small portion in front which I could not get away. There was very little bleeding, and the patient made a good recovery, though he lost the power of retaining his urine. Some degree of retentive power eventually returned, but it became necessary to provide him with an apparatus for controlling the incontinent escape of urine from the bladder. He lived for fourteen months after the operation, and was able to return to his work as a stevedore. He died from a recurrence of the disease in the glands of the groin. I showed a specimen of what was removed, at a meeting of the Royal Medical and Chirurgical Society, in connection with a discussion bearing upon the subject.

CASE OF OBSTRUCTION OF THE BOWELS DUE TO ADHERENT DIVERTICULUM—ABDOMINAL SECTION—DEATH ON THE THIRD DAY FROM HEART FAILURE.[1]

By A. VANDER VEER, A.M., M.D.,

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Mr. S. V. V——, aged twenty-two; single; native of the United States; by occupation a spinner.

Family history: Nothing was learned, save that several members of the family had suffered from diseases of the heart.

Previous history: Patient had always been well and strong, never having suffered from any disease, but having sustained a fracture of the thigh four years ago.

Symptoms: On Friday evening, November 25, 1887, while at a band-meeting, being a player upon the clarinet, he was taken suddenly with severe abdominal pains, described as being like "green-apple colic" by the patient. He suffered considerably from tenesmus at this time, but had no bloody discharge from the rectum. Patient went immediately to his home, took some cathartic pills, applied hot cloths to the abdomen, and went to bed. Twenty-four hours later, no improvement having taken place, Dr. E. T. Rulison, of Amsterdam, N. Y., was called, who prescribed a cathartic and gave an anodyne.

On the following morning, Sunday, November 27th, patient had vomited during the night; no movement of the bowels; an enema was given, and a small movement came away. Patient's condition did not materially change, and on Tuesday morning I saw the case in consultation with Dr. Rulison. Large liquid and gaseous enemas, and careful watching for serious symptoms, were advised.

Patient had not suffered up to this time any severe and continuous pain. What pain he had was intermittent. There was no disturbance of the pulse or temperature.

On Thursday morning patient had the first attack of stercoraceous vomiting, immediately after which he was brought to the Albany Hospital by Dr. Rulison. When admitted to the hospital his condition was about as follows: Pulse, 88, small and soft; temperature, $99\frac{2}{10}$° F.; tongue heavily coated. Patient continually brought up gas of a feculent odor, and complained of pain in the left iliac region, with little tenderness on pressure; abdomen slightly distended with gas, but soft; slight dulness in lower part of abdomen.

During the day a large enema, five pints of emulsion of olive-oil, was given, and it returned without movement or gas. Later, lower bowels were distended with gas until very painful, carbon dioxide being used. In the evening a rectal tube was passed, apparently eighteen inches, and the injected gas withdrawn. Evening temperature, 100° F.; pulse, 96. Was given morphia, one-fourth grain, at 8 P.M. During the night patient vomited stercoraceous matter again.

Friday morning, temperature, $100\frac{2}{10}$° F.; pulse, 94. As patient was growing worse an exploration was determined upon.

Accordingly, the patient was removed to a room previously prepared, and the abdomen opened, the writer being assisted by Drs. Townsend, Boyd, Hialey, Morrow, Hoadley, and McDonald. As the parietal peritoneum was incised, a fold of intestine presented in the wound, which was dark, very much congested, and distended with gas. The wound was enlarged to admit the hand, when the constriction was found to be in the right iliac region instead of the left. The wound was still further enlarged, the whole length being eight inches. The locality of the constriction was found and brought into view. The following peculiar condition was found: About three feet from the ileo-cæcal juncture a diverticulum of the ilium was found. It was about three inches long, shaped very much like a Bartlett pear. The free end of this diverticulum was attached by adhesions to the cæcum, thus forming a triangular space into which a fold of the ilium had been caught, causing an obstruction and partial strangulation of the bowel. The strangulated bowel was also adherent to the crest of the sacrum. The free end, or base, of the diverticulum was loosened up from the cæcum, a ligature thrown around the pedicle near the ilium, and then removed. The pedicle was next invaginated in the wall of the ilium and peritoneal surfaces stitched over it, by continuous catgut sutures. The intestine was then loosened from its adhesions to the crest of the sacrum, thereby relieving all constriction. The intestine, showing no real gangrenous condition, was cleansed and returned to the abdomen, the wound closed by twelve deep and eight superficial sutures, and dressed with an iodoform strip and Gamgee pads. Patient put to bed with hot water to the extremities.

Time of operation, one hour and twenty-five minutes. Patient reacted very slowly, but he became fully conscious during the afternoon. Becoming quite restless, one-fourth of a grain of morphia was given, and repeated as necessary to procure rest and sleep. Heart's action very weak; was given digitalis and brandy at regular intervals; nutritive enemas were given every four or six hours; evening temperature, $99\frac{5}{10}$°; pulse, 110. On Saturday morning patient was very bright; temperature, 100° F.; pulse, 86. Had slept six hours. Saturday evening, temperature rose to 102° F.; pulse, 120, and thready. Heart's action again became very feeble, and hypodermics of digitalis and brandy were given at regular intervals. Patient gradually sank, and died on Sunday, December 4th, at 11 P.M.

Patient did not vomit after the operation until shortly before death. Bowels never moved, although a little gas was passed during the last day of illness.

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[1] For the history of, and notes on, this case, I am indebted to Dr. W. E. McDonald, of the Albany Hospital.

Autopsy.—Held eight hours after death. Abdomen only examined. The stitches were first removed, and wound gradually pressed apart. Very perfect union was found to have taken place; no pus. When the viscera were exposed, it was seen that the inflammatory condition presented at the operation had partially subsided; the bowels were less congested, and evenly distended with gas. No effusion into the abdominal cavity. The ilium was ligated at the ileo-cæcal juncture, and about five feet of small intestine removed. Where the diverticulum had been removed, perfect union had taken place, the edges of the wound being smooth and free from undue congestion. One inch on the small intestinal side of and from the diverticulum a circumscribed necrotic condition had taken place, leaving an ulcer, the size of a dime, which extended down through the peritoneal and muscular coats of the intestine. While lifting the intestines from the abdomen this ulcer perforated. Another patch was also found on the small intestine, where the peritoneal coat had broken for about an inch, but which had not perforated.

No further examination was made. This patient did not at any time after the operation present a good, strong pulse. Aside from this there was everything in his condition to lead to recovery. He was hopeful and cheerful to the last; he had been ready and anxious to have the operation performed.

A VERY VALUABLE LESSON FOR THOSE WHO USE ANÆSTHETICS.[1]

By JULIAN J. CHISOLM, M.D.,

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R. A——, a robust, healthy child, three years of age, was recently brought to me with a cancerous left eye. The attention of the parents was first called to the yellow appearance of the pupil eighteen months before. The gliomatous mass filled the vitreous cavity, distending the pupil, and obliterating the anterior chamber. The eye was injected and painful. The prompt removal of the eyeball was urged as the only means of protecting the child from a painful death. The operation was accepted by the parents, and the enucleation, under chloroform, accomplished after much difficulty, as the sequel will show.

The child was suffering from a bronchial trouble, but that was not deemed an obstacle to the administration of an anæsthetic. The patient was placed on the operating-table, his clothing loosened about the neck and chest, and chloroform was inhaled from a towel, folded in conical form, with open top. Deep sleep was soon induced.

When the anæsthesia was complete, the operation for the removal of the diseased eye was commenced. The conjunctiva was divided around the cornea, and the tendon of the external rectus muscle was being sought for, when respiration suddenly ceased. The face assumed a death-like pallor, the pulse disappearing at the same time from the wrist. Immediately the child was suspended by the feet, with body and head hanging down at an inclination of seventy degrees, while an assistant volunteered chest-compression for artificial respiration. After a few minutes, signs of a feeble respiratory movement were noticed, a slight throbbing of the neck-vessels was detected, and in time the child evinced its return to consciousness by crying.

He was laid on the table, but would not permit the eye to be touched without a twist of the head, evincing great irritability or sensitiveness of the conjunctiva. As the operation had to be completed, I ordered chloroform to be again administered. Chloroform narcosis was very soon re-established, but before I had time to resume the operation the child again stopped breathing and the pulse disappeared. The body, apparently of a dead child, was once more hung up by the feet, so as to allow blood to gravitate toward the anæmic head and brain, but with no further attempts at artificial respiration. Myself and four assistants watched anxiously the pale face, to catch the first evidence of returning vitality. After some minutes I noticed that the large vessels at the root of the neck showed some fulness, then a slight thrill, and after this the first attempt at a thoracic movement appeared. In ten minutes breathing was sufficiently strong to allow the child to cry again, much to the relief of all of us.

Still, the operation which was so imperatively called for, for the future safety of the child—even the saving of its life from the ravages of cancer—was uncompleted. While the father and mother, both present in the operating-room, were pleading for their child, they were made aware, by the restlessness of the patient when the eye was touched, that nothing could be done without the child going again to sleep, so I once more ordered the inhalation of chloroform. For the third time chloroform narcosis was promptly established, and was followed very soon afterward by suspended respiration and the disappearance of the pulse. Death now seemed to be complete. Immediately the child was hung up by the feet. The absolute quiet of the operating-room was broken only by the lamentations of the parents. All eyes watched the face of the child. Five minutes seemed an hour, and the ashy lips showed, so far, no response. Soon after this a faint effort at respiration was observed, which became stronger with each return of the thoracic movements, and the pulse was again felt feebly at the wrist. When respiration seemed established, complete insensibility continuing, I had the child laid upon the operating-table. As soon as the body assumed the horizontal position, the pulse, not yet strong, disappeared from the wrist, and the respiration ceased, necessitating at once a renewal of the suspension. This curious phenomenon of breathing when suspended, and becoming inanimate when the prone position was too early assumed, was repeated two or three times, respectively. For safety—for I was afraid to lay the child down—I was forced to enucleate the eye while the child was suspended with head downward, an awkward position for operating. It was some time, fully a quarter of an hour, after the operation was completed and the eye bandaged, before I could trust the child in the recumbent posture.

One of my assistants was very anxious to have whiskey injected, and had filled his hypodermic syringe for that purpose; but I declined its use, trusting to inversion alone for resuscitation. The final successful issue of this case confirmed my faith in this invaluable method, which I had used successfully on former occasions, and hence confided in it for the protection of the patient through the trying ordeal. In all, the child must have been suspended in the inverted position for fully three-quarters of an hour. After the last suspension no further trouble ensued. The next day the child was so thoroughly himself that he left the hospital with his parents. He was brought back to the dispensary for inspection, two days afterward, a picture of health.

This case cannot be too carefully studied by surgeons who must continue to use general anæsthetics. It is one of a series occurring to me now and then—I am glad to say, at long intervals—as the consequence of chloroform inhalation.

I am a strong advocate of chloroform, believing it to be the most available remedy of its class. I recognize it as a powerful agent for evil, but at the same time I believe it to be the best of the general anæsthetics. In army life and in civil practice I have had a personal experience of at least ten thousand administrations, and without a death. For thirty years I have had charge of a surgical hospital service, and my daily use of chloroform has been the subject of public professional observation. Sulphuric ether I have seldom used—not one hundred times in my life, and in most of these instances only to exhibit on patients the effects of the various anæsthetics in medical classes at the University of Maryland Hospital Clinic. In the last ten years I have not used it once. For painful operations of very short duration I use the bromide of ethyl, and for all others I use chloroform exclusively.

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[1] Paper read before the Baltimore Academy of Medicine.

At the Presbyterian Eye and Ear Charity Hospital of Baltimore City, in which institution I am the surgeon-in-chief, I have used chloroform as often as nine times in one day. The consumption of chloroform in this hospital is computed at hundreds of pounds. A pound of sulphuric ether has never been purchased among the hospital drugs, and it is not administered in the hospital.

My rule of practice has always been to do surgical work with the least possible pain, and to refuse anæsthetics to no surgical patient. In the administration of chloroform certain rules are followed. All clothing must be loose around the neck and chest. With adults, an ounce of whiskey is given in advance. In the case of persons under thirty years of age this cardiac stimulant is omitted, unless the patient be feeble. In this hospital practice no precautions as to eating can be observed. The clinic is held at two o'clock every day. Patients are frequently sent from the dispensary to the operating-room one hour after they have eaten a hearty meal. If the patient has been admitted into the hospital wards the day before operation, his dinner is withheld.

Chloroform is administered with the patient lying on his back, and as soon as narcosis is induced the pillow is taken from under his head, so that he lies in an absolutely horizontal position. Should snoring occur, indicating some difficulty in pharyngeal breathing, the chin is drawn forcibly upward. This elevation pulls the anterior wall of the pharynx, with the hyoid bone and root of tongue, forward, making for the air a clear and straight passage from the nose into the lungs. By this movement of the chin respiration becomes immediately quiet and easy. The pulling up of the chin is a much more efficient and convenient means of pulling the root of the tongue forward than by pulling out the tongue with a forceps, as is recommended by some surgeons. It is not always easy at this stage of anæsthesia to get into the mouth, as the lower jaw-muscles may not be relaxed. A proper tongue-forceps is not often at hand, and to tear the tongue-substance with sharp-toothed and yet slipping instruments, with the soreness and swelling which subsequently follow, is an abominable practice that should be abolished. The patient's chin and your own hands are always present, and it only needs knowledge of the method to apply it, and to secure prompt and speedy relief.

The instrument used for the inhalation is a towel folded in cone-form, with the apex of the cone open, so as to permit air to mingle freely with the chloroform-vapor. During the administration the face is closely watched by the surgeon. If the ears remain pink, the heart and lungs must work properly; therefore, there is no need for feeling the pulse. Any failure on the part of either of these organs can be seen in the change of the complexion more quickly than it can be felt at the wrist. When the conjunctiva is no longer sensitive, the patient is considered thoroughly anæsthetized, and the administration of chloroform is stopped. In eye-work the chloroform-administrator must now get out of the way for the surgeon, and therefore the administration of the anæsthetic cannot be injuriously continued. Herein lies one great point of safety with the ophthalmic surgeon.

As I have previously stated, I deny chloroform to no surgical patient. Prior to the discovery of cocaine as a local anæsthetic, I administered chloroform for cataract-extractions, enucleations, iridectomies, squints, lid-operations, passing of lachrymal probes, or, in fact, any painful operation whatever, and even for the examination of irritable eyes in children. These patients were of all ages, from infants to octogenarians, and of course represented every condition of disease and health. If restoration to sight could be obtained, operations were performed on the blind regardless of the diseased conditions of other organs. Some patients were strong, and some were very feeble, with lung, heart, and kidney diseases. No pathological lesion in any other part of the body deters me from the use of chloroform should an eye-operation be required.

Cataract patients are usually old; most frequently they exhibit decided senile changes. I suppose an average of sixty years of age would represent this class of patients; seventy, seventy-five, to even eighty-five, ninety, and ninety-five, are at times the respective ages; ninety-six is the extreme age at which a successful cataract-extraction has been performed under chloroform at the hospital. It is well known that fatty hearts are very frequently found in old subjects in dissecting-rooms. My cataract-operations now reach fifteen hundred. Of these, many must have had fatty hearts. Prior to the last two years, before cocaine came into use as a local anæsthetic, I gave chloroform in all cataract cases, and therefore must have given it to many patients with fatty hearts.

Very feeble heart-pulsation, with irregularity of action, I frequently met with in old patients. With such I always increased the amount of whiskey, which I administer in advance of the chloroform inhalation. I consider it much the safer practice to put whiskey into the stomach, where it is ready for use, if wanted, and where it can do no harm if not needed. I have never had occasion to inject whiskey or ether into the rectum or under the skin. The hypodermic syringe forms no part of my chloroforming apparatus.

So far, after thirty years of active surgical life, I can conscientiously say that in no single case have I had cause to regret that I chose chloroform as the anæsthetic. I always give chloroform in the presence of physicians—never alone—and most frequently with the whole surgical staff of the hospital present. Had death from chloroform occurred in my practice, it would have received, necessarily, prompt publicity. That I have never had one, and that I have never refused chloroform to any patient received into the hospital for surgical treatment, is a fact well known.

I repeat, that in my long experience I have never had a death from any anæsthetic, although I have given chloroform to over ten thousand persons of varied sanitary conditions; but I freely acknowledge that I have come very near having a fatal ending more than once. I have had four cases of sudden arrest of respiration, with failure of the heart's action, when death would have inevitably been the final result had not prompt and proper means been taken to resuscitate the patient.

Experience under these severe trials has made me a firm believer in the efficacy of inverted suspension for the restoration of life in patients apparently killed by chloroform. I feel convinced, from my own experience with this invaluable method, that many of the dead from chloroform might have been resuscitated had the surgeon hung up immediately by the feet the inanimate body, instead of wasting time in applying hypodermic injections, cold-water splashings, spanking, fanning, electricity, or even attempts at artificial respiration, the remedies which text-books on surgery recommend. Do any or all of these things if you will, but hang up the patient first, and that instantly, as soon as the heart and lungs fail. It is the horizontal position that is fatal in chloroform-poisoning, and leads to death if the body is kept in it, as all the reports of fatal cases with chloroform show.

With myself it has become a matter of faith, and in suspension alone I now place my confidence. So far it has served me most successfully. Had I not used suspension in the four cases referred to, most of them, probably all of them, would have died. Then my percentage of fatal cases would have corresponded with the average chloroform mortality: one in twenty-five hundred cases of administration.

By suspended respiration I refer to the complete arrest of all respiratory movements. I do not mean that very feeble state of heart and lung action, accompanied by pallor of face, which frightens so many physicians, and which I know only foreshadows the approaching vomiting. This condition of depression I see with a great many chloroform patients. With me it is only a signal that a basin should be in readiness. I often hear physicians, in giving their experiences, speak of their very narrow escape from a fatal chloroform-administration, meaning this stage of depression, which one familiar with chloroform, from its daily administration, would almost call normal.

Many years ago I became very much impressed by certain experiments made by Dr. Nélaton—that well-known French surgeon—to show that in chloroform narcosis the respiratory and cardiac centres were weakened by an anæmic condition of the nervous apparatus, the exposed brains of animals bleaching as chloroform-vapor was inhaled by them to complete anæsthesia. When this whitened appearance indicated such a condition as to give but little of the needful blood-stimulus to the great nerve-centres, their functions ceased in a regular order: First in volition, next in voluntary movement, then in general sensation, and finally in the arrest of involuntary or organic movements, including the action of the heart and lungs, and then death promptly ensued. In his experiments he found that when a number of rats had been thoroughly narcotized with chloroform, those which he would immediately hang up by the tail would slowly revive, while those left supine on the table died. If, when animation commenced to show itself in the hung-up animal, the rat was laid down too soon, breathing would again cease, and the rat would die, unless immediately suspended, when the respiratory and cardiac actions would be resumed. It was only after a sufficiently long suspension, giving the brain and heart ample time to have supplied to them, by gravity, a desired amount of blood, that death could be prevented. If the animal was not already dead, suspension alone would restore animation. The knowledge of this fact is daily put into use by vivisectionists in their experiments upon animals under chloroform. The case of the child which I have reported is really in the line of these experiments, and clearly shows the danger of the horizontal position when the heart and lungs fail. The suspending of the human body by the feet to restore animation in chloroform-poisoning was Nélaton's great discovery, and is known as his method of restoring patients to life when, under chloroform-anæsthesia, respiration has suddenly ceased. The knowledge of, and faith in, this method has served me well on many trying occasions. To it alone I attribute my clean record of over ten thousand cases of general anæsthesia and no death.

Eighteen months since I ordered chloroform to be administered to a patient, eighty years of age, who had his right ear a mass of epithelioma. The pinna was much enlarged, and an offensive, painful ulcer, with ragged outlines, covered nearly the whole surface. The object of the operation was to remove all of this fetid, discharging surface, and to close as much of the wound as possible, by quick union. His history, as given by himself, was quite a curious one of coincidences. He had been married twice. His first wife had a cancer of the breast for which an operation had been recommended by his family physician. She died under chloroform before any incisions were made. His second wife was brought to me six years ago, suffering from a malignant disease of the socket, involving the eyeball, the eyelids, and skin of cheek. The cervical glands at angle of jaw were secondarily infected. I declined to operate, and advised against it, as no good could possibly come from it. She returned, disappointed, to her distant home. Against my advice, the local physicians urged the operation, and in her anxiety to get rid of the cancer, she yielded to their solicitations. They undertook it, and she died during the operation—they said, from the effects of chloroform. There was no blood-relationship between himself and either of his two wives, and yet he also had a cancer for which an operation under chloroform was advised. He was of a robust frame, although eighty years of age. In his desire to get rid of the fetid discharge, he submitted without hesitation to the course recommended.

First a full dose of whiskey was taken, and then chloroform was administered by the resident physician of the hospital, aided by the medical staff. I had left the operating-room for a few minutes, to show to a medical visitor some cases of interest in the wards, when the nurse ran to inform me that the man whom I had just left was dead. I hastened with my medical friend to the operating-room. I found one of the physicians trying thoracic compression for artificial respiration on an apparently lifeless body, lying flat upon the operating-table. I had this immediately stopped, and under instructions the four doctors present, with the nurse and the brother of the patient, held up the lower end of the operating-table so as to incline the body and head at an angle of over forty-five degrees, using at the same time all of their restraining force to keep the body from sliding off the table. Nothing else was done. With the inanimate body in this way suspended, we quietly and anxiously awaited results. In a very few minutes we had the satisfaction of seeing slight thoracic movements, then the ashy, livid face lost its death-like hue. When respiration became fully re-established, the table was lowered, and the operation safely completed, no more chloroform being required in this case.

A third case occurred in my hospital experience eight years ago. It was that of a woman, forty five years of age, who had suffered frightfully from repeated attacks of irido-cyclitis. I had urged an iridectomy as a means of protection from suffering, but on account of timidity she had steadily refused to submit to it. After many sleepless nights of agony, and being worn out by the pain, she finally consented to be operated upon. Loss of sleep and the constant pain had enfeebled her very much. She was given two ounces of whiskey before being put on the operating-table. Complete anæsthesia under chloroform was soon induced. The eye-speculum was being placed in position, when respiration suddenly ceased. No one was feeling the pulse, as I was standing over the face, watching the skin-circulation. She looked dead, and we thought her so. Fortunately, there were several physicians present, and immediately she was hung up by the feet. While I watched the effects of suspension on the face, some attempts were made, by rhythmical abdominal pressure, to force air from the lungs and thereby excite a respiratory movement. This, however, was soon desisted from, being inconvenient, and, as I thought, useless. After a few minutes of suspension, respiration was gradually re-established.

The patient, brought back to life, was again laid upon the operating-table. She was perfectly relaxed, and I hoped that I could do the iridectomy without any further anæsthesia. The moment I touched the eye a flirt of the head exhibited a degree of irritability, showing very plainly that it was impossible to attempt it. As the pulse by this time seemed perfectly re-established, and the stomach contained a good quantity of whiskey (there had been no vomiting), I determined again to give her chloroform. A very few whiffs from the charged towel brought on full anæsthesia, and with every promise that the various steps of the operation could now be successfully carried out. The speculum was applied, the eyeball seized, and the cataract-knife had transfixed the cornea, when respiration and cardiac action again stopped. The patient now seemed quite dead. The eye-instruments were quickly removed, and the patient in an instant was hung up by the feet, with head down. No attempts were made at artificial respiration, nor were any other means used for resuscitation but the inversion, not even throwing open the windows for fresh air. As still as death, we watched the suspended body. After a few minutes, which seemed a very long time to us, a feeble respiratory movement was detected. This slowly developed into full breathing, and brought back the pulse, and with it life to our patient.

She was again laid on the table, utterly limp, but breathing freely. When the eye was touched the head made, again, a sudden movement, showing a degree of conjunctival irritability which rendered the completion of the eye-operation impossible. The question now before me was, whether I should leave the eye with an operation half performed, or protect the patient from future suffering by completing what I had started out to do. After consultation I concluded to perfect the operation, and, with an abiding faith in the efficacy of suspension, I ordered chloroform again to be administered. For the third time quiet sleep was quickly induced, and, fortunately, with no further complications or trouble, the operation was successfully and safely completed.

Twelve years ago, a fourth case occurred under my treatment. A gentleman brought to me his two boys, one eight, the other six, years of age, both subjects for squint-operation. Such operations I frequently perform in my office, with the aid of one professional assistant. The elder boy was put to sleep under chloroform, the tenotomy of the rectus completed without trouble,and he was laid upon a lounge, vacating my reclining operating-chair for the younger boy. He also bore chloroform apparently as well as his elder brother, and under its narcotic influence the squint-operation was speedily completed. After I had removed the eye-speculum, and cleansed the conjunctival sac of blood, respiration suddenly stopped, the pulse disappearing from the wrist, and accompanied by the death-like appearances which belong to this startling condition. Fortunately, I was sitting at the head of the patient, and I immediately tilted down my end of the operating-chair, getting my assistant to elevate the foot-end, so as to secure an inclination of forty-five degrees, with the head of patient downward. After a few minutes blood gravitated into the head. By stimulating the nerve-centres, it started into action those organs so essential to life. Breathing was finally re-established, and with it the circulation.

These four cases of sudden arrest of the respiratory functions, with failure of heart's action during chloroform-narcosis, occurring in my own individual practice, I feel assured that most of these patients would have died had they been left in the recumbent posture, regardless of what may have been done otherwise for their restoration. Fanning, fresh air, water-splashing, spanking, whiskey or ether injections, electricity, artificial respiration—all of them the remedies which physicians rely upon—go for very little, provided the patient be left supine. General experience, unfortunately, has too often shown this. In my experience with chloroform, in cases of suspended animation, all of these means for resuscitation are useless, provided the patient be hung up by the feet without any loss of time, so that blood may flow to the anæmic head and heart, and stimulate the nerve-centres before the vital spark goes altogether out. A fire cannot be rekindled by adding fuel if there be no live coals in the grate. Fortunately, suspension of the body needs no preparation nor apparatus for its immediate application. It only needs vigilance on the part of the operator. Should fright make him forget his duty, then precious minutes are lost in trying useless remedies, and these precious minutes can never be recalled.

That all of my cases of apparent death from chloroform should have recovered is not merely good luck, nor is it accidental. I know that chloroform, ether, and ethyl are powerful agents for good, and also for evil. I am sure that I can kill any patient by the abusive or careless administration of either of these invaluable remedial agents, just as I am sure that I can be burned by any kind of heating apparatus, which I am so dependent upon for genial warmth in winter.

The successful administration of an anæsthetic does not consist merely in holding before the nose of the patient a cloth with the narcotizing agent poured upon it. Skill, care, prudence, judgment, and courage in time of need are all necessary to guard the narcotized patient from danger. Too little of the anæsthetic—not enough to protect the important vital centres from the influence of painful reflex actions—is as dangerous as an overdose of the narcotic inhalant. Many of the fatal accidents occur in the hands of timid physicians or dentists who are afraid to administer enough of the anæsthetic to secure the stage of safety, the immunity from reflex disturbances, and who lose their heads in fright when the danger which their want of confidence has induced presents itself.

The lesson which I would impress upon everyone who uses chloroform, sulphuric ether, or the bromide of ethyl for general anæsthetic purposes is, that prompt suspension, with head down, is the remedy for suspended animation suddenly coming on during acquired narcosis.

No surgeon recognizing the responsibility of his work should ever give an anæsthetic without having someone present. Should there be any sudden and alarming weakening of the heart's action and of respiration—for they always go together—without a minute's delay hang up the patient. Should the patient be bulky, and should there not be force enough present to elevate the foot of the table or bed, be the patient man or woman, while you stoop, throw their legs over your shoulders, hang on to their feet in front of you, and then lift yourself. The patient's body, as you get upon your own feet, will hang from your back, with the head down. Now you have time to call for more help if you need it. Never wait for the help to come before you practise suspension, because with the moment's delay your patient may have passed from dying into death from which there will be no more earthly awakening. When too long delayed—and one minute is a fatal loss of time—suspension is as useless as the other recommended remedies, and can then do no good.

Should the case have been one of needless fright, with only weakening, and not suspension, of the vital functions, no harm has been done. The feeble pulse will always respond promptly to the suspension. It is my constant practice to use suspension for restoring strength to the heart's action after the administration of chloroform, where there is cardiac depression and weak breathing. I use this means of restoring vigor where others use the more objectionable and less efficient hypodermics of whiskey or ether, or the inhalations of nitrite of amyl. It is very instructive to observe how promptly the pallor leaves the face, and how strong the pulse will become, as blood gravitates toward the head. Should vomiting occur when the head is hanging down, this suspended position is better for the patient than when lying upon the table, because there is no fear of food-particles getting into the larynx. Inversion of the body gives the contents of the stomach free vent.

Such confidence do I feel in the value of suspension with chloroformed subjects that I am sometimes disposed to believe that the vital centres cannot fail with the head hanging down.

Not long ago, in the presence of the medical class of the University of Maryland, I removed by ligature a very large staphyloma from a child one year old. It was the result of purulent ophthalmia of the newly born. The prominence of the opaque cornea was so great that the lids could hardly close over it. The summit of the tumor was being irritated by the constant friction of the lids in winking, and its removal became necessary for the comfort of the child. Under chloroform-anæsthesia I transfixed the eyeball at the base of the tumor by two long, curved needles, placed at right angles to each other. Behind these, acting as a shoulder, I applied the ligature for the strangulation of the tumor. The medical class could not see from the benches the various steps of the operation upon so small a portion of the body, and from the large number of students present only a few could have crowded around the operating-table. After the ligature had been secured, and before the needles were withdrawn, I did not hesitate to hang up the infant by the heels, with head suspended vertically downward, and then walked with it in front of the benches, so that the students could inspect the eye. To the uninitiated this would appear a heartless and dangerous proceeding. My experience and consequent faith in suspension had taught me that this inversion was the safest position for the narcotized child during the tedious inspection.

Clinical Department.

DEATH FROM INTESTINAL HEMORRHAGE DUE TO VASCULAR TUMOR.[1]

By F. W. MERCER, M.D.,

CHICAGO, ILL.

The history of this case was communicated to me in part by Dr. Converse, the attending physician: Annie W——, single, aged thirty-four, was always considered in good health. She had menstruated regularly, without undue pain or other trouble until within the past year, when it was observed that the flow was not quite as copious as before. All the other bodily functions had been regularly performed, so far as her friends knew. She was of cheerful disposition, vivacious, and physically strong, being able to toss her sister's child (weighing about twenty pounds) up at arm's length above her head.

About a year ago she consulted a leading practitioner of this city, to whom she complained of a throbbing sensation in the left inguinal region, and also some slight digestive disorder. The doctor informed her that he considered the throbbing due to the presence of gas in the intestine, and prescribed some digestive.

After this the patient was in her usual health, not making any special complaint till the morning of October 16, 1887, when she said she felt tired and reclined upon the bed in her room. About 11 A.M. she had a movement of the bowels, consisting almost entirely of blood, but not large in amount. Dr. Converse, who examined the stool, concluded it was due to "bleeding piles." Absolute rest was ordered. At 12.30 P.M. the patient arose and entered the bath-room, where she fainted while passing another bloody stool. She was carried back to bed, and soon revived. Dr. Converse saw her again, and ordered pyrogallic acid and ergot with brandy at short intervals.

From this time till 9 P.M. there was increasing restlessness and involuntary discharges of blood at short intervals, but, as the blood was received upon cloths, any accurate estimate of its quantity was impossible. At about this time I was called to see the patient in consultation. I found her tossing from side to side of the bed, groaning, and complaining of pain over the umbilicus. Her features were shrunken and pinched, the surface blanched and clammy; the face was very cold to the touch, and the pulse was barely perceptible. In fact, the patient appeared moribund from hemorrhage. An examination of the abdomen was made, and the presence of a symmetrical tumor, of globular form, was discovered in the median line, just above the pubis. An enlarged uterus was suspected as the possible source of the hemorrhage; an examination *per vaginam* disclosed a very minute os uteri, an elongated cervix, but no indication of hemorrhage.

Hot-water bags and bottles were applied to the surface, warm blankets were packed about the body, and brandy was given subcutaneously, with aromatic spirits of ammonia by the mouth. Transfusion was thought of, but, the means not being at hand, it was not tried. Dr. E. W. Sawyer was called; but little could be done, the patient being *in articulo mortis*, death taking place a little before 10 P.M.

Section, fourteen hours after death: Dr. E. D. Converse, Dr. E. W. Sawyer, Dr. William Barry, Dr. Frank T. Andrews, and myself being present. The section was made by Dr. Frank T. Andrews. The body appeared well nourished; the rigor mortis well marked. Upon reflecting the abdominal parietes, the intestines appeared rather pale, and not unduly distended. At the lower part of the hypogastric region a tumor was found resting in the median line; it was nearly spheroidal in form, about 9 ctm. in diameter, and weighed 455 grammes; moderately firm, and attached by a slender, short pedicle to the small intestine (ileum) about fifteen inches above the cæcum. Upon section of the ileum, an oval opening was discovered upon its mucous surface, about 4 mm. by 3 mm.; this opening corresponded to the attachment of the pedicle upon the peritoneal surface, and communicated directly with an artery of about 4 mm. calibre. It was undoubtedly from this opening that the fatal hemorrhage had occurred. There were extensive old adhesions of the intestines and peritoneum. Both the right and left kidney showed a greatly reduced cortex, and the tubuli and pelves were filled with pus. The liver was very fatty and friable, breaking under pressure like old, granular tallow. The body of the uterus was converted into an irregular, lobulated mass, the whole measuring about 8 ctm. by 4 ctm. The nodules were firm and dense. The thorax was not opened. Microscopic examination of the tumors involving the uterine body showed them to be myomata having the usual character of a uterine fibroid. The intestinal tumor also proved to be a vascular myoma, the muscular tissue showing in many places the result of inflammatory action within the tumor itself.

The whole case may, I think, be considered unique; but the most extraordinary feature is, that a person suffering from such a complication of diseases, any one of which was most grave in character, should be about doing clerical work, without complaint, and should also bear the appearance of fair health.

2600 Calumet Avenue.

THE USE OF CALOMEL IN THE PREVENTION OF PITTING IN SMALL-POX.

By JOSEPH DRZEWIECKI, M.D.,

ASSISTANT PHYSICIAN IN THE UNIVERSITY CLINIC OF THE HOLY GHOST HOSPITAL, WARSAW, RUSSIA.

In order to prevent the forming of pustules, or the disfiguring marks, on the face in small-pox many methods have been recommended, but none can boast of sure and successful results.

Among the remedies which have gained great reputation may be mentioned the application of indifferent fats, collodium, tincture of iodine, a solution of carbolic acid or of corrosive sublimate, also cutting of the pustules and cauterizing them by nitrate of silver, and, finally, various forms of masks on the face, or continual cold compresses. Although the latter would seem to give the best results, it cannot be always employed, either because not everybody can support cold compresses, or because this application is troublesome to make, as it requires constant attention.

Having frequently had such cases under my care, during the small-pox epidemic of last summer at Warsaw, I convinced myself that calomel, applied as powder on the face, does not prevent the development of vesicles from the papules; but when vesicles or pustules were developed it caused them almost immediately to dry up, and in this manner prevented the formation of marks. How and why calomel acts in these cases I do not pretend to explain. However, we may suppose that pos-

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cological Society on December 16, 1887.

sibly several agents have a share in producing this result. Perhaps the calomel acts partly as calomel, partly as sublimate, or partly, perhaps, as metallic mercury, since calomel becomes decomposed into these two latter substances under the action of light; and the mercurials then act either by immediately destroying the micro-organisms or by preventing their development.

In my cases I employed calomel alone, in the form of powder, dusting it over the face, or I mixed it with starch in the proportion of twenty to thirty per cent. I suppose that, instead of calomel, the oxide of mercury might also be employed with success. As regards the strewing of calomel into the eyes, sometimes adopted with a therapeutic aim, we need not fear that it will do them any injury.

SOME OF THE USES OF ANTIPYRIN.

Dr. Wm. H. German, of Morgan Park, Ill., writes: "From March 8 to 21, 1887, I had under my care a young man suffering from the effect of a prolonged debauch. The usual sedatives had apparently lost their effect upon him, and he demanded morphia, having previously used it on similar occasions. Being unwilling to administer that drug, I gave a five-grain dose of antipyrin as a placebo. Under its influence the patient slept two or three hours, and an increase to fifteen grains produced eight hours of quiet, restful sleep.

"Since that time I have employed antipyrin in many cases of insomnia with uniformly satisfactory results, except in two cases of long standing, in which it appeared to be nearly inert.

"In trifacial neuralgia, in hemicrania, in migraine, in congestive dysmenorrhœa, in lumbago, it affords prompt relief, and in many cases is curative. In my experience it is useless in hepatic colic. A fifteen-grain dose will quiet an aching tooth for twenty-four hours. In two cases it has seemed to terminate typhoid fever, when given in full dose at the end of the second week. It diminishes and, in some cases, prevents the hectic of phthisis.

"Some recent writers in The Medical Record have mentioned the insolubility of antipyrin. There must be a mistake. It is as readily soluble as morphia. Two incidental objections lie against this useful drug—its cost, and its name."

The Various Effects of Gall-stones.—In an address on "Some of the Rarer Symptoms produced by Gall-stones," read by Dr. W. M. Ord (*The British Medical Journal*), he says that the various effects of gall-stones may well make us pause and meditate. We have to deal with biliary colic very often; to know it as a process involving intense pain, and many other distresses; to see it make its progress commonly to a satisfactory end. As regards the suffering produced, we are impelled to do all that we know toward relief; as regards the outcome, we may be generally hopeful, if not confident. Biliary colic being the most commonly apparent indication of the presence of gall-stones, we may be ready to see in gall-stones things productive of much suffering, but having in their aspect more of the troublesome than the deadly. Gall-stones, indeed, travel so commonly by the same line, that we tend to believe that, in spite of delay occurring now and then, the terminus must be reached. A permanent block occurring on the line sends the travelling stone into many by-ways of disaster. We may find the stone in such case causing intermitting abscess, causing perforation of the gall-bladder, causing pyrexia, causing glycosuria, causing distant inflammations, probably malignant disease, and certainly serious hemorrage.

He rises from the contemplation with increased respect, born of sad experience, for the gall-stone. If biliary colic be no very terrible illness, the gall-stone is to be dreaded and feared in proportion as there is less of the colic and more of accessory symptoms.

Progress of Medical Science.

The Decomposition of Potassium Iodide in the Body.—The importance of potassium iodide in medicine has led to many attempts to trace its exact action in the body. Binz, along with Kämmerer, Buchheim, and others, maintain that it is decomposed, and iodine set free by the oxidation of the potassium by nascent oxygen or else ozone. Dr. Gaglio reports at some length the results of his experiments made with a view to testing this hypothesis. Binz points out in support of his theory that when leaves have been bruised in water along with carbonic acid and potassium iodide, proof of the free iodine thus obtained is given by the blue staining of starch. Dr. Gaglio, repeating the experiment with lettuce, admits its truth so long as the green parts only of the lettuce are used, and so long as the leaves are fresh. With the inner part of the stalk, or the leaves themselves a day after they have been picked, the experiment fails, so that the oxidation-process assumed can hardly be a property of all cells—vegetable and animal—as Kühne, Haeckel, and Schultze are inclined to think. A mixture of fresh animal tissues of all kinds with carbonic acid and potassium iodide did not show any free iodine, even when the tissue was living, as in the case of some frogs used; nor even when the alkaline surroundings of a muscle were turned acid by its frequent electrical excitation. As an experiment on the oxidation of potassium iodide in the living rabbit, 15 grains of the salt was injected on one side, and 15 grains of turpentine on the other, the turpentine carrying ozone with it. The animal was killed after twelve hours, and no trace of iodine was found, in the shape of brown discoloration of the turpentine, or of the blue color of starch applied to the tissues where the salt had been injected. It has been suggested that the iodine gets free in the catarrhal secretions from mucous membranes which potassium iodide provokes. That, Dr. Gaglio thinks, is probable, for he finds free iodine result from a mixture of saliva or nasal mucus with potassium iodide and starch, if left to itself for a few days; and a similar decomposition might take place in the secretions of the body which are not too quickly disturbed.—*The Practitioner*, November, 1887.

Delivery through the Vagina in Extra-uterine Gestation.—At a late meeting of the London Obstetrical Society (*The Lancet*, December 3, 1887), Dr. Herman read a paper on this subject. The author said that no general rules could be applied alike to all cases of extra-uterine gestation and at all periods of their history. Different cases required different treatment, and individual cases required different treatment at different periods in their history. He would consider in what cases and at what time an extra-uterine gestation cyst might with advantage be emptied through the vagina. The author first related a case under his own care. The patient was forty years of age. The extra-uterine pregnancy was preceded by a long period of sterility. Symptoms like those of rupture of the sac occurred at about two months' pregnancy. Fœtal movements ceased at eight months' pregnancy. At nine months spurious labor-pains occurred, and lasted nearly a month, and these labor-pains were accompanied by spontaneous dilatation of the cervix. Then the pains went off, the breasts diminished in size, and the cervix contracted. To attain certainty as to the diagnosis, the cervix was subsequently dilated, and this dilatation was followed by febrile disturbance. The cyst was then opened per vaginam, the child removed, and the cyst frequently washed out with carbolic solution. The placenta came away on the sixteenth day. Two months and a half afterward the cyst had completely closed. The author had collected thirty-three cases in which an extra-uterine gestation cyst had been emptied by the vagina, and from an examination of them he drew the following conclusions:

1. The operation of opening an extra-uterine gestation sac by the vagina early in pregnancy, before rupture has taken place, by the cautery knife or otherwise, is a dangerous and unscientific proceeding. Abdominal section ought always to be preferred to this. 2. Soon after rupture has taken place, when interference is called for to arrest hemorrhage, abdominal section is more likely to succeed than vaginal. 3. When rupture has taken place, and the effusion of blood is followed by pyrexia, the indications for incision of the vagina are the same as those in hæmatocele from any other cause. 4. At, or soon after full term, before suppuration has taken place, there may be conditions which indicate delivery by the vagina as preferable to abdominal section. These are, 5, when the fœtus is presenting with the head, breech, or feet, so that it can be extracted without altering its position; and, 6, when it is quite certain, from the thinness of the structures separating the presenting part from the vaginal canal, that the placenta is not implanted on this part of the sac, and it is not certain that the placenta is not implanted on the anterior abdominal wall. 7 If the child cannot be delivered by the vagina without being turned, abdominal section should be performed. 8. No attempt should be made to remove the placenta. 9. The after-treatment should consist in frequent washing out of the sac. 10. After suppuration has taken place, the spontaneous opening of the sac into the vagina is one of its more favorable terminations.

Radical Cure of Hernia.—At the Société de Chirurgie M. Ferrier, speaking on the treatment of congenital hernia, said that the first thing which should be taken into consideration was the age of the patient, as congenital hernia of the child differed essentially from the same affection in the adult. In the child the hernia can be cured spontaneously or with the use of a bandage, although there are cases where an operation is necessary. In the adult the question was much more simple, being reduced to one of two conditions—either the testicle is in place or there exists an ectopia. If the former be the case the organ should be respected, but if the contrary be observed, extirpation will be necessary. He performed the operation at least thirty times without one failure. The chief difficulty was found in the dissection of the sac, but, that done, the rest was easy. Union by first intention was always sought for. M. Berger considered that congenital hernia was rarely witnessed in the adult, and further, that hernia observed after the age of fifteen and before twenty may be cured by the use of a bandage night and day. Even if the hernia persisted he found by experience that the danger of strangulation was much less than in the acquired form, and in any case the strangulation yielded much more readily to taxis and chloroform. As to the operation for radical cure, he did not consider it to be so benign as he would be led to believe, and he had arrived at the following conclusions: 1. In congenital hernia no operation should be made before the age of fifteen. 2. After that age an operation might become necessary, but every other means should be at first exhausted. 3. The existence of an ectopia would be a special indication of the operation, provided the patient had passed fifteen. M. Auger presented a man on whom he operated; he allowed the wound to suppurate in order to obtain a strong cicatrix. Several members said that no cicatrix was equal to that produced by first intention. M. Lucas thought that M. Berger was much too sanguine in respect to the treatment by bandages, or that he must have been very fortunate in his cases. M. Ferrier and himself operated more than a hundred times and never lost a case. He was of opinion that each time a patient asked to be relieved of his hernia it should not be refused him, as bandages were a great annoyance.—Paris Correspondence *Medical Press*, December 7, 1887.

The Bacillus of Whooping-cough.—Dr. Afanasieff has succeeded in finding and cultivating what he believes to be the true bacillus of whooping-cough. This microbe differs distinctly from all other bacteria which have been described. It is somewhat like Friedländer's pneumonia-bacillus, but is shorter and thinner than the latter; besides, in gelatine it does not form nail-shaped cultures, those which are produced having no hemispherical head. Its potato cultures, too, are quite different from those obtained from Friedländer's bacillus. Afanasieff's bacillus exhibits a remarkable degree of vitality, for jelly cultures that have become dry and have been kept for four months, appearing under the microscope to be more or less destroyed, are still capable of producing fresh cultures when fresh media are inoculated from the dried mass. Dr. Afanasieff's researches were chiefly made from the sputum of some of his own children, who were affected with whooping-cough. The mouth was well washed out with a permanganate solution, and the mucus coughed up after the next paroxysm or two examined. In this mucus, after staining with methyl-violet, and in the pus-corpuscles contained in it, the bacilli could be seen with a magnifying power of from 700 to 1,000 (Zeiss' eye-piece 3 or 4, $\frac{1}{12}$ oil immersion objective) as short rods, sometimes single, sometimes in twos, or even in short chains running in the direction of the mucus, sometimes again in small clusters. Their length was from 0.6 μ to 2.2 μ. Of course other bacteria were found. Pure cultures, however, were easily made on agar-agar, meat-peptone jelly, potato, etc. Dogs and rabbits were inoculated with a fluid culture mixed with chloride of sodium solution, some by means of injections into the trachea, others by direct injections into the lungs. All the animals were seriously affected, and many of them died. The symptoms were somewhat similar to those of whooping-cough, including cough, dyspnœa, and redness of the eyes. Many of the cases were complicated by broncho pneumonia. On examining the bodies of those animals which died, the mucous membrane of the air-passages was found much reddened, and coated with a tenacious clear mucus, in which, as well as in the pneumonic patches in the lungs, the bacilli were found. Similar appearances and the same bacilli were observed in the bodies of children who had died from whooping-cough. As to treatment, inhalations and spray of various antiseptic drugs would appear to afford the most ground for hope in relieving and shortening this complaint. The author points out that the quinine, benzoin, and other substances which have been used as applications to the nasal mucous membrane by Michael and others, under the idea of combating a reflex affection, are really, perhaps, beneficial from their property of destroying bacilli.—*The Lancet*, December 3, 1887.

Color-blindness a Brain Affection.—Professor Ramsay believes that the particular defect giving rise to color-blindness lies, not in the eye itself, but in the brain. Certain persons, he points out, are incapable of judging which of two musical tones is the higher, even when they are more than an octave apart. Yet, as such persons hear either tone perfectly, the defect is not one of deafness. He accordingly argues that in such persons the brain is at fault, and thence proceeds to the assumption that it may be equally true that the inability to perceive certain colors is not due to a defect in the instrument of sight by the eye, but to the power of interpreting the impressions conveyed to the brain by the optic nerve. If this is the case, the problem is no longer a physical one, it falls among those with which the mental physiologist has to deal.—*The Medical Press.*

The General Treatment here both for Primary and Secondary Syphilis is a centigramme (gr. $\frac{1}{6}$) of corrosive sublimate injected into the buttocks every other day or daily. The solution used is: Sod. chlor., 6; hydr. bichlor., 1; aq. dest., 100.—*Vienna Correspondence Birmingham Medical Review.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY
WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, January 21, 1888.

HEMATOGENOUS ALBUMINURIA.

ACCORDING to Immerwahr, whose inaugural thesis appears in abstract in the *Allgemeine Medicinische Central-Zeitung*, there is a hematogenous variety of albuminuria which is characterized by the complete absence of pathological change in the heart or kidneys. It is, perhaps, not always remembered that Bright originally explained the disease which bears his name by assuming some anomaly in the constitution of the blood-serum ; in other words, by the doctrine of hematogenous albuminuria. His later and better-known researches, by drawing attention to the histological lesions found in nephritic kidneys, quite eclipsed his older views.

Semmola, however, has recently attempted to revive the doctrine in question, but there can be no doubt that his generalizations have been too wide, and his positive assertions too dogmatic. At any rate, his opinions are not shared by the great majority of observers.

On the other hand, it has been demonstrated that such conditions as hypalbuminosis (hydremia) and hyperalbuminosis lead to the appearance of albumin in the urine. In profound cachexia and in pernicious swelling Dr. Immerwahr has also discovered a condition of "hematogenous albuminuria." We would remind the author in this connection, however, that the heart and kidneys are, as a rule, more or less profoundly affected in the conditions named, and that, therefore, his own definition of this variety of albuminuria would scarcely be applicable here.

Much has recently been said about physiological albuminuria, a term which to us has always seemed quite objectionable, for the reason that albumen, in appreciable quantities, is not a physiological ingredient of urine. Although not suggested by Immerwahr, it may be well, in future, to speak of "hematogenous" albuminuria in place of the "physiological" condition.

As regards the treatment of albuminuria without renal lesions, it does not, according to the author mentioned, differ essentially from the therapy of true nephritis. A milk-diet is advocated as applicable to most cases, and drugs are to be employed only for particular indications.

THE CURABILITY OF DIABETES.

BOUCHARDAT defines diabetes as a disease in which the urine contains constantly a notable proportion of sugar. Most writers add to this the statement that the condition is accompanied with excessive thirst, excessive or perverted appetite, progressive emaciation, muscular weakness, and languor. Glycosuria is a name once used simply to indicate that saccharine urine was being passed. Of late, however, attempts have been made to make it stand for a more or less distinct disorder in which the amount of sugar is small and the presence of it in the urine not constant. It is not possible as yet to separate diabetes and glycosuria sharply, but, for convenience, the distinction suggested by Bouloumie (*L'Union Médicale*, November 10, 1887) is a serviceable one. According to this writer, in diabetes, with or without azoturia, the sugar does not disappear from the urine when starches and sugars are withheld from the patient. In simple glycosuria, with or without azoturia, the sugar disappears when starches and sugars are withheld. The time which it takes to cause sugar to disappear in glycosuria, so called, by proper diet is from three to seven days.

In determining the effectiveness of drugs in the treatment of diabetes, the test of withholding sugars and starches must first be made. Judged by such tests, the alleged curative properties of such drugs as bromide of arsenic, ergot, opium, the salicylates, jambol, etc., would probably be estimated at a much lower value. The selection of cases no doubt affects greatly the statistics of those who have written upon the prognosis of this disease. Cantain says that diabetes is curable provided the treatment be begun early and continued for a long time. Professor Berussi says that he has never seen a case cured, and Seegen, among four hundred patients, never found one who was so much improved that he could eat carbohydrates like other people. Mr. Martineau, in a recent communication recommending lithiated arsenic, claimed to have cured 67 out of 70 cases ! Frerichs, discussing the treatment of diabetes (four hundred patients) says that cure is rare. He himself mentions 12 cures, and 250 deaths. Andral, among 84 cases, found that the sugar disappeared in a very small number of cases, and Lecorchi gives about the same opinion.

There can be very little doubt that well-established diabetes is almost, if not entirely, incurable. It may, however, run a very long course, and this is especially the case in diabetes of nervous origin and in those forms which occur during the later periods of life.

A SYMPOSIUM ON THE TREATMENT OF DYSENTERY.

"THE Treatment of Dysentery by some of the Leading Physicians of Texas" is the title of a medical symposium conducted under the auspices of the Texas *Courier-Record of Medicine*. A perusal of the various contributions under this head shows that the therapeutics of dysentery has not crystallized into any definite shape in the Lone Star State. One physician gives quinine, opium, and blue mass in repeated small doses for malarial dysentery ; salts and laudanum for that produced by indigestible substances ; in dysentery with ulcerated lower bowel, morphia and hydro-naphthol are thought indispensable. The ipecac plan is not found satisfactory. Another writer pins his faith on ipecac, giving it (after a purge) in twenty-grain doses, wetted with a drachm of laudanum. This dose is repeated on the next day, and again on the third day, if necessary. Hot fomentations to the abdo men and warm emollient injections, with quietude and proper diet, are also among the measures employed. In some epidemics quinine is the most important factor in the cure. Another contributor depends largely on ipecac, in thirty-grain doses, combined with morphia. This is, however, only in the early stages of the disease. Later, hot-water enemata, followed by hot injections of a twenty-five per cent. solution of fluid extract of hydrastis, are used, with rest and starvation. After the injections an opium suppository is given.

A fourth member of the symposium gives first a laxative consisting of two grains of calomel, followed by a saline. After this opium is given by mouth or anus, and opium is the drug chiefly trusted. At occasional intervals a dose of castor-oil is given.

A REMEDY FOR THE PLAGUE OF RABBITS.

A very large sum of money having been offered by the Government for some measure by which the rabbits can be exterminated from New Zealand and other neighboring colonies, M. Pasteur voluntarily contributes his plan for accomplishing this purpose. It consists in creating among the rabbits an epidemic of chicken cholera. This disease, according to Pasteur, affects rabbits as well as fowls, but does not harm any of the domestic animals. Pure cultures of the cholera-bacillus should be distributed over the rabbits' feeding-ground. The poison would be conveyed by them to the holes, and there would multiply faster than even rabbits can breed. The idea is a novel and bold—not to say cruel—one. The question whether the introduction of the poison of a new disease might not ultimately do more harm than good requires much consideration. Pasteur thinks that fowls could be protected by keeping them housed, or in yards. If M. Pasteur had ever raised chickens he would not, perhaps, think this so easy a matter.

The whole project is profoundly shocking to the sensibilities of *The Lancet.* Pasteur's proposal, it says, could hardly have originated in the mind of a medical man. It is "a misuse of medical knowledge," and is quite comparable to poisoning the wells in a hostile country.

Our contemporary would not, apparently, object to killing the rabbits with rat-poison, dynamite, or any legitimate explosive; but it recoils from using the bacillus of fowl-cholera.

CHRONIC HYPERSECRETION OF THE GASTRIC JUICE AND ITS TREATMENT.

Riegel regards the constant hypersecretion of gastric juice as a functional disorder in which this fluid is continually poured out, even into an empty stomach, and hence without the normal stimulus of ingestion. Most gastrological writers, not excepting such modern ones as Ewald, believe the morbid condition in question to be quite rare, although they admit the frequency of instances of simple hyperacidity. Riegel, however, holds that hypersecretion is of rather common occurrence, and in support of this view adduces the testimony of Jaworski and Gluzinski.

It would appear that many patients afflicted with hypersecretion become emaciated, anæmic, and even cachectic; so much so, indeed, as to prompt the suspicion of malignant disease. But in other cases hypersecretion may continue for years without the supervention of marked malnutrition.

In the diagnosis of chronic hypersecretion the external examination of the stomach affords only negative evidence, although dilatation is commonly found in cases of very long standing. Positive signs of the presence of this disorder may, however, be obtained by an examination of the undiluted contents of the stomach about five hours after a so-called test-meal. A large proportion of the ingested meal is generally found, and, on standing, two layers are formed, of which the lower, thicker one contains undigested starch, but scarcely any fibres of flesh. The stomach-contents are also abnormally acid, and it has been ascertained that hydrochloric acid is present largely in excess of the normal proportion. Riegel states that he has found as much as six per cent. in some of his cases. According to this observer, it is necessary, in order to make a positive diagnosis, to withdraw some of the contents of the stomach when no food is in it. To accomplish this, the entire contents may be removed at night and the stomach-tube used the following morning. If we are dealing with a case of the kind in question, then this early morning examination will yield quantities (from five to fifteen ounces) of a stringy, intensely sour fluid that responds to the tests for hydrochloric acid.

The symptomatology of this condition is not well defined. Indigestion is commonly observed. Acid eructations are frequent. Gastralgic paroxysms are apt to occur, but cases exist in which there is no pain. Vomiting of highly acid masses often takes place, and not a few patients have a constant craving for food. But in some patients there is loss of appetite; thirst is often increased. From all this, it is clear that chronic hypersecretion of the gastric juice does not in its subjective signs differ essentially from other gastric derangements.

As regards the treatment of this condition, Riegel advises systematic washing of the stomach, alkaline salts, more particularly the Carlsbad waters, and a dietetic regimen, consisting largely of albuminoid foods, in as dry a condition as possible. Starchy foods are, of course, to be eschewed as completely as possible. The only drug which has been found of value is opium, and this is to be exhibited in only moderate doses.

DISEASE-GERMS AND ENVIRONMENT.

In higher types of organisms sterility is the rule among hybrids. In the vegetable world this is different, and botanists recognize that fertile hybrids are very abundant in nature. Lichens, for example, form a fertile family, which sprung originally from an indiscretion between fungi and algæ. Many varieties of fungi are derived from elementary states of penicilium and oïdium; and it is known that there may be a variety of form amid particular pathogenic micro-organisms. There is much evidence to show that harmless micro-organisms may develop into disease-germs, and *vice versa.*

These facts have been adduced recently by Dr. E. M. Hunt, in order to show that the specific germ of disease is an elusive thing, and that, though in our search for it we get the form, the essence may still escape us. It will not be enough, he thinks, in studying pathogenesis to know the morphology and laboratory history of these organisms. We must investigate also the conditions in which the microbe developed during the prevalence of the disease it was supposed to cause. The bacteriologist's work is not alone sufficient, but must be supplemented by that of the physician and sanitarian. The question whether new diseases may not spring up, or whether there may not be certain conditions which give specific infective power to a micro-organism previously innocuous, may perhaps be settled in this way. Dr. Hunt presents the conclusions to his very suggestive paper in the following paragraphs:

1. The study of parasites, or germs, as they are called, is only one of the methods of informing ourselves as to the phenomena of disease, and in itself is not likely to be the key to rational and successful treatment.

2. Our attention should be directed, far more than now, to the study of conditions and circumstances under which new forms appear; to the influence of persons and surroundings, instead of to the mere finding of a specific form. The latter would, of course, be most valuable as one of the facts in the chain of evidence, but we should not, as now, seek so much to look to it as the cause of disease as to inquire what conditions have caused this or that particular microphyte to be present.

3. We should be able to account for the occasional occurrence of a disease independent of any previous case, and for changing types of disease and new diseases, and would come to treat diseases less by their names and more in view of their type and the effect of surroundings upon them.

4. The tendency of all this is to magnify the importance of close observation, and to lead us to feel that success in warding off disease, and in treating it when it appears, depends mostly upon close observation and that experience which is derived from actual practice.

THE SPONTANEOUS ORIGIN OF SCARLET FEVER DE NOVO.

The old question whether scarlet fever ever arises *de novo* has been started again by *Science* in a recent report on scarlet fever made by various health-officers and sanitarians to its columns. Dr. William K. Newton, the State Dairy Commissioner of New Jersey, writes:

"I have often seen isolated cases of this disease beginning at a time when no other case existed in the city. Many times I have seen a single case begin without any probability of an exposure to another case, but I do not think that we are justified in accepting the theory that the disease may arise *de novo* because of our inability to find the original case. But there is much to lead us to study this side of the question, for filth may be a possible cause."

Dr. R. B. S. Hargis, of Florida, writes:

"I have seen scarlet fever on two occasions, in an isolated house—no other cases in the city nor in the neighboring places—the source of which could not be traced to any focus of infection outside the walls of the dwellings in which the cases existed. I have also seen measles, a congener of scarlet fever, undoubtedly a contagious disease, spring up spontaneously, and spread from a single isolated place all over the city, thus apparently arising *de novo*. Upon careful and anxious inquiry in regard to the above-mentioned instances of spontaneous development of scarlet fever and measles in isolated places, I was informed that none of the parties in those houses had had any correspondence, by letter or otherwise, or purchased or received any fabrics, or indeed articles of any kind, from persons at a distance anywhere."

Dr. Samuel W. Abbott, of the Massachusetts State Board of Health, and Dr. G. C. Ashman, Health Officer of Cleveland, O., both are decidedly of the opinion that scarlet fever does not arise *de novo*. This is the general opinion of the profession. Yet many physicians can recall instances in which there seems to have been no possible way by which the disease could have been carried. Scarlet fever, however, while most amenable to quarantine, has a virus more tenacious and portable than that of any other infectious disease, unless it be smallpox. Hence this fever is often spread in an obscure and apparently mysterious manner.

PETTENKOFER AND HIS MOST RECENT VIEWS ON CHOLERA.

Pettenkofer, who is still by many regarded as a leading cholera "expert," but whose views are chiefly remarkable for their changeability, has recently proclaimed his acceptance, at least in a modified way, of Koch's doctrine. At the International Congress for Hygiene and Demography lately held at Vienna, an interesting discussion on cholera took place. Not a few of the delegates expressed their opinion to the effect that intercourse with cholera-infected persons or their belongings was not the only means of acquiring the disease, or spreading its contagion.

The condition of the soil was claimed by some, chief among whom, of course, was Pettenkofer, to play an important rôle in the spread of the malady. It is a pity that the views of these gentlemen did not get much beyond this vague notion about "something else" being necessary for the propagation of cholera besides a favorable soil for the development and multiplication of its specific microbe.

Pettenkofer himself, according to the *Medical Press*, stated that "he fully appreciated the value of bacteriology, and that it was his conviction that the etiology of infectious diseases would never arrive at its aim without bacteriological investigations. All the symptoms of cholera, however, could not be explained by the presence of the comma bacillus alone. Above all, we had to answer the question as to what was the behavior of cholera in its endemical home, in India; whether it had its point of departure in the patients affected with cholera or in the localities where cholera was present. We had an exact knowledge as to the frequency of cholera in India during the last twelve years. It was evident that the conditions of localities were of a decided influence on the spread of this epidemic, and the same was true of the influence of time. At Genoa, where nine epidemics of cholera had already taken place, the cholera period always lasted from July to November, whereas no single case of cholera occurred during the other months. He did not, however, wish to denounce bacteriological investigations by his opposition to the contagious theory; he only wished that we, at length, should abandon our narrow horizon, and that we should take into consideration also the conditions of place and time, without which the immunity of certain places against cholera could not be explained."

In reply to such reasoning, it seems scarcely necessary again to point out that the adherents of Koch have never disputed the influence of "place and time" in the production and propagation of cholera. The very life-history of the comma-bacillus was made clear only through an adequate recognition of these conditions.

It certainly appears strange that the views of Pettenkofer, who has changed his position so frequently with regard to the most vital points in the doctrine of the contagion of cholera, should still command the attention they do. Dr. McClellan has, long ago, clearly demonstrated the unreliable nature of the evidence upon which Pettenkofer built up his dogmas.[1] Nevertheless, with every advance in our understanding of the disease, Pettenkofer appears as a voluminous writer and indefatigable speaker in defence of his own peculiar notions, so modified as to accord in some measure with current doctrines. He has never added anything positive to our stock of knowledge, but he is ever ready, by opposing, to detract from the well-earned reputation of those who have. His latest attempt to bring his "subsoil" theory into harmony with Koch's doctrine cannot be regarded in any other light than that of a complete failure.

THE DEATH-PENALTY BY ELECTRICITY.

MESSRS. ELBRIDGE T. GERRY, Alfred P. Southwick, and Matthew Hale, Commissioners appointed by the Governor to investigate and report upon the most humane and practical method of carrying into effect the sentence of death, have made their report, after a year's examination of the subject. They investigated the history of the various methods of applying the death-penalty, and come to the conclusion that garroting and the guillotine are too brutal, and that hanging is clumsy and uncertain. They recommend, in conclusion, the use of electricity. Electric-light wires are to be tapped, the convict is to be placed in a chair with an electrode at the head and feet, and the connections made. The electrical current, we are told, somewhat naively, "is one hundred times swifter than nerve-force," hence, perhaps, its malignant effect. (Nerve-currents travel at the rate of about one hundred feet, electrical currents at the rate of from eighteen thousand to two hundred and eighty-eight thousand miles, a second.)

The Commission evidently recommend for the death-penalty, not currents of high potentiality and small quantity, like lightning-strokes, but currents of great strength and quantity. The practical question will be, whether such currents can be made to destroy life without burning or disfigurement. On this point perfectly satisfactory evidence is not furnished, so far as we can learn. It is easy to stun a man with a current of a few ampères strength, but to destroy life instantaneously, without cauterization, is more difficult. The human system can withstand violent shocks and heavy electrical discharges, for it is protected by non-conducting integument. The resistance of this will have to be diminished by wetting the feet, perhaps shaving the head, and by fastening the criminal tightly to the electrodes. Altogether, the technical difficulties of killing a man with electricity, *tuto, cito, et jucunde*, are considerable, and apparently have not been by any means completely studied out by the learned Commission.

ALCOHOL AS A FOOD.

IN the controversy over alcoholic beverages, which is becoming so acute and which has already assumed the proportions of a political question, the distinction between alcohol as a beverage and alcohol as a therapeutic agent is in danger of being lost sight of. With the question, as far as it is a political one, THE MEDICAL RECORD has nothing to do. It is, of course, opposed to the intemperate use of alcohol, just as it is opposed to everything that is injurious to health, but it cannot enter the field of controversy upon the question of how best to prevent this abuse. The political enemies of alcohol are not, however, we regret to say, willing to confine themselves to their own field; they see no good whatever in spirits of wine, and they decry its therapeutic worth as fiercely as they oppose its social consumption.

There is one fact, especially, the statement of which seems always to act as a most powerful nervous excitant upon the organisms of these somewhat intemperate friends of temperance. This is, that alcohol is a food. We have been taken to task, recently, for an allusion to this fact, by an esteemed correspondent, who writes, under date of January 2d, as follows: "Your somewhat oracular paragraph in last issue of your journal touching alcohol as food is, I think, open to criticism. Is it not a fact that alcohol only *temporarily* arrests or, more correctly, slows the waste of the body, just as tobacco, coca, and opium do? Are these also, on that account, foods? Prove, if you can, that a single atom of alcohol ever enters into the *making up of tissue* and your position is won. It may be true that a small moiety of the alcohol, some of its carbon molecules, are oxygenized, but if that constitutes food it is on the homœopathic side."

The mistake that our correspondent makes, and he is not alone in his error, is in regarding food simply as material concerned in "the making up of tissue," and in ignoring the fact that fats and carbohydrates are just as certainly food as are the proteids. The non-nitrogeneous principles are as necessary to the preservation of life and the production of force as are the nitrogeneous, and we can no more exist without the one than we can without the other. Preservation of animal heat is as essential to life as is the building up and repair of tissue, and the one and the other are accomplished in the same way, by the oxidation of the alimentary principles in the system.

Now, having defined food and having stated what are its chief uses in the economy, let us see what becomes of alcohol when taken into the system. It is not true that "a small moiety" only of the alcohol ingested is oxidized in the economy. On the contrary, the greater part of it disappears, and not more than sixteen per cent. escapes unchanged in the excreta. Many experimenters, indeed, put the amount so excreted as low as three or four per cent. The remaining eighty-four to ninety-seven per cent. is consumed within the body, and during its oxidation heat is evolved to maintain the normal animal temperature. By a process of oxidation the alcohol is converted into aldehyde and acetic acid, and is finally split up into carbonic acid and water, according to the following formulæ (Binz):

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[1] Vide A Treatise on Asiatic Cholera, by E. C. Wendt, M.D., pp. 139 to 143. W. Wood & Co., 1885.

1. $C_2H_6O + O = H_2O + C_2H_4O$ (aldehyde).
2. $C_2H_4O + O = C_2H_4O_2$ (acetic acid).
3. $C_2H_4O_2 + 4O = 2CO_2 + 2H_2O$.

If the more readily oxidizable alcohol is not present, the fats must be burned to supply the animal heat which is continually being lost by radiation. Alcohol, therefore, serves the same purpose as the other carbohydrates, the sugars and starches, in producing the heat and in this way preventing in a measure the consumption of fats, and also of the nitrogeneous principles, thus permitting of their being stored up in the tissues. And if it acts in the same way as food acts, not necessarily in building up the tissues directly, it must be regarded as a food. And it is a food.

These are, we know, elementary facts with which most of our readers are familiar, but we cannot hear physiological principles denied without attempting to reassert them, even at the risk of wearying the well informed. And, indeed, we feel, in this instance, that we are helping the cause of temperance in so doing. Advocates never help their cause in the long run by denying facts. Misstatements are like boomerangs, and the more there are of them the more numerous are the wounds of those that make them. We agree with the prohibitionists that, as Parkes says, "If alcohol were unknown, half the sin and a large part of the poverty and unhappiness in the world would disappear;" but we do not agree with them when they assert that alcohol is an unmitigated curse to mankind. Alcohol, when properly used, is a great blessing, and it has saved countless numbers of human beings who have lived to cheer the existence of others, and to add greatly to the sum of human happiness and to the advancement of our race.

THE NOSE THE SOURCE OF ALL OUR WOES.

At the last Congress of German Naturalists and Physicians, held in Wiesbaden, Dr. Gacy reported several cases of mental disturbance characterized by an impossibility of fixing the attention on any subject, except for a very brief period, or of prolonged mental effort of any kind whatever. This condition, to which the author gave the name of aproxia, was always associated with certain lesions of the nasal mucous membrane and obstruction to the passage of air through the nasal fossæ.

This is, we believe, the latest accusation which has been brought against the sinful nose. Headache, cough, dyspnœa, earache, neuralgia, hay fever, acne, convulsions, and syncope are only a few of the many evils which this troublesome organ is accused of having inflicted upon long-suffering man, and it bids fair to outstrip even the ovaries as a centre for morbid reflexes. As regards aproxia, however, it is said not to be a reflex, and the mechanism of its production is assumed to be a purely physical one. The lymphatic spaces beneath the dura mater have been found to be in direct communication with the mucous membrane of the nasal fossæ, and inflammation of the latter is supposed to interfere with the elimination of the waste products resulting from cerebral activity, thus leading to mental sluggishness. But whatever may be its methods, the nasal organ is evidently responsible for many, if not most, of our ills. Clearly, the nose must go.

News of the Week.

Contributors will confer a favor by writing the name and address on the first page of their communications, directly under the title. When the name and address are sent in a letter, the latter is liable to become separated from the manuscript, and then we have no clew to the author's name, and are unable to communicate with him when necessary.

The Dietetic Gazette is the new name of the former *Journal of Reconstructives*. Dr. George B. Fowler is the editor of the periodical, which is apparently devoted to physiological medicine in its widest sense. The first number makes a very creditable appearance, containing a variety of information, chiefly of a practical kind.

The Medical Record Does not Prescribe for Correspondents.—We are so constantly receiving letters from laymen for medical advice that it is necessary to state that we never prescribe for such patients, nor do we ever recommend or pass opinions upon the merits of practitioners, drugs, or apparatus. Proper advice on all these matters can be easily obtained by consulting the family physician and honestly paying his fee.

Dr. R. Van Santvoord, of this city, calls our attention to the following misprints in his recent article: Page 36, first column, last paragraph, lines 5 and 14, contains the following: "This case suffered from neuralgic pains in *anus*," and "a symptom-complex resembling progressive muscular atrophy developed in the *anus*." Instead of *anus*, both should have been *arms*. Page 36, second column, fourth paragraph, fourth line, *venous reflex* should read *venous reflux*.

Dr. John F. Ridlon has been appointed attending orthopedic surgeon to St. Luke's Hospital *vice* Dr. N. M. Shaffer resigned.

In Honor of the Lady.—A short time ago a lady in Mexico, the first of her sex in that country to attain to such a dignity, was graduated in medicine. In order fittingly to celebrate the great event, her fellow-students in the medical school organized an amateur bull-fight in her honor.

Grindelia Robusta in Pertussis.—The *Paris Médical* publishes a communication from M. Bilhaut (read at the Société de Thérapeutique) on the action of grindelia robusta in whooping-cough. The grindelia robusta is a perennial plant indigenous to Mexico and California. The active principle is a resinous substance possessing antispasmodic properties, and at the same time stimulating the mucous membrane. It is efficacious in bronchitis, and also in chronic cystitis. It is eliminated by the kidneys. The tincture, fluid extract, or syrup of grindelia robusta, in cases of whooping-cough, stop vomiting and the other painful symptoms, and transform severe whooping-cough into a mild affection of short duration. The dose is one gramme to four grammes a day for adults. For children the tincture is preferable. M. Bilhant cites ten successful cases.—*British Medical Journal.*

WHY DO THEY?—"Senex" writes: "Apropos of the remarks on left-handedness in your issue of December 24th, I should like to see a satisfactory explanation of the fact that women always (with exceedingly rare exceptions) button from right to left, and men from left to right. Personally I have remarked only four cases of exception to the rule."

DR. GEORGE A. PETERS has resigned as attending surgeon to St. Luke's Hospital, and has been appointed on the consulting staff.

OFFICERS ELECTED FOR THE NEW YORK PATHOLOGICAL SOCIETY.—The following officers of the New York Pathological Society were elected at the meeting of January 11, 1888: *President:* William P. Northrup; *Vice-President:* Frank Fergusson; *Secretary:* Walter Mendelson; *Treasurer:* J. H. Hinton; *Editor:* J. C. Peters; *Committee on Admission and Ethics:* J. C. Peters, W. H. Porter, J. Emmet Holt, J. West Roosevelt, George R. Lockwood, Jr.; *Members of the Publication Committee:* George C. Freeborn, W. R. James.

DR. JOHN A. MCCREERY has been appointed physician to the St. Vincent's Hospital, New York.

DR. FRANK T. PATTERSON.—By an error we announced the death of Dr. F. T. Potter, of Petersburg, Va., in THE MEDICAL RECORD of the 7th inst. The name should be Patterson.

IMPROVEMENTS IN THE STAFF OF THE CITY LUNATIC ASYLUMS.—We are glad to learn that, as the result of the recent agitation over the subject of our city insane asylums, a larger and much needed sum of money has been appropriated for their maintenance. Instead of having a medical staff at each asylum one-half of whose members served without pay, while the others received salaries ranging from $250 to $800, *all* the members will now be paid, and the salaries will range from $300 to $1,200. It is believed that when these facts are known, a better class of men will apply for positions than was formerly the case. The improvements in the matter of the medical staff will apply to all other branches of the asylum administration.

THE INSANE OF NEW YORK, THEIR CARE, AND MEASURES FOR THEIR COMMITMENT.—The twenty-first annual report of the State Board of Charities gives the number of insane persons in the institutions of this State on October 1st last, as 14,062, an increase in this class over last year of 524. Much of this increase in the number of insane is declared to be due to immigration. The Board advocates amendments to the Federal law regulating immigration. The article of the report relating to the commitment and detention of the insane recommends the following legislation: First, directions for commitment on certificates of the physicians in the case at the outset shall be by court decree, after examining the person in question, under provisions similar to those of the State of Massachusetts. Second, more absolute provision for the discharge of patients by the Commissioner of Lunacy, by procedure similar to that of the State of Pennsylvania. Third, the enactment of a provision of the Scotch lunacy law requiring the superintendent of every asylum for the insane yearly to make affidavit that one month prior he has reviewed the cases of all patients in custody, and that their continued detention in an asylum is necessary for their welfare or the public safety.

JURY TRIALS IN LUNACY CASES.—The Society for Promoting the Welfare of the Insane has caused a bill to be prepared for presentation to the Legislature of this State, which provides that no person alleged to be insane shall be committed to any lunatic asylum, public or private, until a jury shall have declared such person to be of unsound mind. Such a process would be clumsy, expensive, and dangerous, and is quite uncalled for.

THE DEATH OF M. ACHILLE FOVILLE is announced. The deceased was son of the celebrated author of "Traité complet de l'Anatomie et de la Pathologie du Système nerveux," and he was himself well known for his contributions to neurology and psychiatry.

CLUB DOCTORS AND DRUGGISTS' PERCENTAGES.—A correspondent writes us, calling our attention to an abuse that exists in connection with the numerous club and society doctors in this city. The number of organizations among the poorer classes, which hire a doctor to treat the families of members, is considerable. The pay, in comparison with work demanded, is a mere pittance. It is charged that many increase their small salaries by getting a percentage from the druggist, and that they prescribe an enormous amount of medicine in consequence. Our correspondent was shown seven bottles of various kinds of medicines, all ordered for one poor patient within thirty-six hours. We should be glad to learn that he is misinformed.

DR. JAMES R. NICHOLS, of Haverhill, Mass., died on January 2d. Dr. Nichols was well known, especially in New England, as founder and editor of the *Journal of Chemistry*, now the *Popular Science News*. He was sixty-nine years of age at the time of his death.

A THEORY OF OBESITY, proposed by M. Leven recently, and described before the Société de Biologie, is that it is a nervous disorder, and to be treated by avoidance of mental and physical fatigue, and a diet of eggs, soup, milk, rice, and potatoes.

BEQUESTS TO HOSPITALS.—By the will of the late William Hilton the Massachusetts General Hospital gets $50,000, the Boston Dispensary $50,000, and the Children's Hospital $20,000.

MORALS AND ART.—Mr. Anthony Comstock, as agent for the Society for the Suppression of Vice, has seized and destroyed forty-five thousand nine hundred and forty-three obscene pictures, circulars, songs, etc., and fifty-six articles of indecent or immoral use.

DECLINE OF MARRIAGE AND INCREASE OF PROSTITUTION.—According to statistics collected and reviewed in the *Pall Mall Gazette*, prostitution is gradually elbowing matrimony out of the field. The falling off in the proportion of marriages per 1,000 is shown here :

	England.	Scotland.	Ireland.	France.	Belgium.
1866	17.5	14.7	10.8	16.0	15.7
1861–80	16.4	14.2	9.8	15.8	14.6
1886	14.1	12.4	8.4	14.8	13.4

	Denmark.	Switzerland.	Austria.	Germany.	Holland.
Average 20 years	15.3	15.1	17.1	17.4	16.2
1886	14.2	13.7	15.5	15.8	13.9

The mean age at which marriage occurs has also been steadily rising since 1873. In 1886, it was 28.2 for men and 25.9 for women. The decrease in, and postponement of, marriage, mean increase in prostitution. For no one maintains that the average man of late years has become more ascetic than formerly. The figures above given apply to Europe. They may in a measure be accounted for by the emigration of people at the marrying age.

MYOPIA AND SCHOOL BOOKS.—A decree has just been issued by the Austrian Minister of Public Instruction, forbidding the use of books printed with small type in public schools, as shortsightedness is so prevalent among school-children in Austria.

A VERY SEVERE ATTACK ON THE CHICAGO MEDICAL SOCIETY appears editorially in the *Medical Standard*, which able but acid periodical says : "The Chicago Medical Society is undeniably in a decadent state. The greatly diminished attendance on its meetings is sufficient evidence of this. The reasons are self-evident. The packing of the discussion by the president, the inexcusable indictment of a conscientious investigating committee at the dictation of the 'boodlers' whom they exposed, the servility displayed toward rascally county officials by the chief official, the toadying to local diploma-mills, have all played their part. The society needs to redeem itself from its present decadence by encouraging more critical discussions, by an impartial enforcement of the five-minute discussion rule, and by tolerating less dictation by members of unsavory political and diploma-mill affiliations. The society should take a more active part in enforcing the Medical Practice Act, the Abortifacient Act, and in securing medical control of the county institutions. These topics are better worth attention than the lucubrations of germ-crammed men using their recent voyages to Europe as a personal advertisement."

ANTIPYRIN, now so largely prescribed, according to M. Robin, diminishes the total amount of urine and urea, and increases the uric acid. As it lessens the nervous excitability, it increases the elimination of phosphorus incompletely oxidized. Antipyrin lessens tissue-metabolism.

MR. LAWSON TAIT is reported to have been appointed Professor of Gynecology in Queen's College, Birmingham.

CALOMEL AND SANTONIN.—A physician in Atlanta, Ga., was last year prosecuted for homicide for administering to a child a dose of five grains each of calomel and santonin. After a full investigation and the introduction of numerous expert witnesses, the prosecution failed.

A NEW HOSPITAL, for colored people, is to be erected in Atlanta, Ga.

"THE ONE-LUNG COUNTRY" is the name popularly given to Southern California.

JABORANDI IN ERYSIPELAS.—Since he has used jaborandi in erysipelas, Dr. Waugh considers that disease of little significance, having had no difficulty whatever with a case of it for two years. He gives twenty drops of the fluid extract every two hours, until perspiration sets in. If the erysipelas shows a tendency to recur, the use of the drug is resumed.

CHICAGO AS A MEDICAL CENTRE.—A correspondent of the *Boston Medical and Surgical Journal* calls attention to the claims of Chicago as a medical centre. It has eleven medical colleges, over one hundred professors, a medical library is being started, and endowments for medical research are expected in time.

EPIDEMIC OF CRAB-LICE IN ST. LOUIS.—The Queen City of the West has successfully avoided cholera and has no small-pox, but, according to the *St. Louis Medical and Surgical Journal*, has been suffering from several small epidemics of crab-lice. The *Journal* says : "A number of the gentlemen so affected did not deem it prudent to advance the water-closet theory to their physicians, as this hypothesis is generally looked upon with more or less suspicion. A circumstance, however, arose which shed considerable light upon the origin of one little outbreak. Four or five gentlemen, some connected with a hotel, the others guests, all called upon one physician for treatment. A search being instituted, it was discovered that the hotel water-closets were infested with the little pests. In fact, one closet was literally alive with the vermin. It may be mentioned, *en passant*, that women are very apt to acquire crab-lice by sweeping them up with their skirts, and this most often in street-cars." In this connection, we clip from an exchange the following : "Crab-lice (pediculi pubis) are said to be immediately destroyed by washing the parts with ether."

OCULAR SYMPTOMS OF EPILEPSY.—The examination of a thousand cases of epilepsy by Dr. Gowers revealed but one morbid condition of frequent occurrence in the ocular fundus, and that was an unnatural equality of the size of the arteries and veins of the retina. Dr. Charles Oliver, of Philadelphia, has frequently observed a reduction of the visual fields for form and color, a granular condition of the choroid in the macular region, a dirty, red-gray degeneration of the optic nerve, and a thickening of the fibrous tissue of the retina.—*Lancet.*

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 14, 1887.

T. MITCHELL PRUDDEN, M.D., PRESIDENT, IN THE CHAIR.

DR. R. W. AMIDON presented, in behalf of a candidate, a specimen of *congenital diaphragmatic hernia.*

DR. HODENPYL presented, for a candidate, a specimen of *epithelioma of the cervix, with suppurative nephritis.*

DR. W. H. PORTER presented, in behalf of a candidate, a specimen of *incapsulated cerebral abscess, secondary to a pistol-wound.*

DR. H. P. LOOMIS presented a specimen of

PRIMARY TUBERCULOSIS OF THE KIDNEY,

with the following history: The patient was a man, thirty-two years of age, who was admitted to Bellevue Hospital, November 17, 1887, after a protracted debauch. His mother died of phthisis. He had had gonorrhœa, but there was no history of syphilis. He had suffered from gastric disorders, due to alcoholism. Six years ago he had pneumonia, and one year later rheumatism. About six months ago, after a protracted spree, he had an attack of what was diagnosticated as "acute Bright's disease," but he says he made a good recovery. About November 17, 1887, he began to have fever, and his temperature was 101° F. His abdomen began to enlarge, there was swelling of the feet, his urine contained albumen, was scanty in quantity, dark-colored, and loaded with urates; there were no casts, but some blood and pus. Bowels constipated, and skin slightly jaundiced. On November 19th he began to have cough, his difficulty of breathing and fever increased, and the physical signs led to the diagnosis of general bronchitis. He grew worse rapidly, and died on December 2, 1887, with increased anasarca and jaundice.

At the autopsy the abdominal cavity contained a large quantity of straw-colored fluid. The heart and pericardium were normal. The left lung was generally adherent; the right lung was firmly bound to the chest-wall in places. On section the lungs were found to be studded with minute, elevated, yellowish nodules, from the size of a pin's-head to a small pea. The bronchial glands were enlarged and pigmented. The left kidney was enlarged, but otherwise normal. The liver weighed seven pounds, and was cirrhotic and fatty.

The cæcum and ascending colon were adherent to the right ureter and kidney, and showed numerous broad tubercular ulcers nearly to the transverse colon. The edges of the ulcers were everted and thickened, and their bases presented a grayish appearance.

The kidney was enlarged, the capsule was non-adherent. The pelvis was dilated; the pyramids were nearly destroyed by the formation of irregularly shaped cavities which also had encroached upon the cortical substance. These cavities had ragged walls and contained yellowish caseous material. Throughout the cortical portion there were scattered small nodules which, microscopically, showed cheesy centres surrounded by an area of lymphoid cells, with numerous giant-cells.

The walls of the ureter were greatly thickened, and infiltrated with tubercles. The walls of the bladder were thickened, and the mucous membrane presented the appearances usually seen in chronic vesical catarrh, but there was no tubercular infiltration.

He regarded the case as one of primary tuberculosis of the kidney; or, better, perhaps, tubercular pyelonephritis.

It was interesting to observe how the tubercular process extended to the intestines, and, lastly, to the lungs, manifesting itself in an eruption of miliary tubercles. Another point of interest was the fact that only one kidney was involved.

DR. LOOMIS also presented a specimen of

CONGENITAL CYSTIC DEGENERATION OF THE KIDNEY,

removed by Dr. W. M. Polk from a female child, aged twenty-two months. An enlargement in the right side of the abdomen was first noticed when the child was eight months old, which was painless, and produced no symptoms subsequently except shortness of breath from pressure upward. The child was well nourished. The mass in the abdomen extended from the pelvis to the free border of the ribs upon the right side, and beyond the median line to the left.

Dr. Polk made an incision, three inches long, in the median line, below the umbilicus. It was then found that the tumor was adherent to the vermiform appendix and transverse colon, and that it was behind the peritoneum.

The abdominal incision was enlarged to within one inch of the ensiform cartilage, and the tumor brought out through the opening, when it was found that it had a pedicle about two inches in diameter. The peritoneal covering was incised and peeled off from the growth, and several adhesions were ligatured and cut. The peritoneal covering was stitched to the abdominal wall with catgut sutures, and the incision was closed with silk-worm gut, after introducing a large drainage-tube. The child reacted partially from the chloroform, but died from shock two hours after the operation. The left kidney was apparently normal. There was neither uterus nor ovaries.

The mass weighed five pounds, had irregular shape, and was enclosed in a dense fibrous capsule that sent prolongations inward. The contents consisted of an immense number of cysts, varying in size from those which were microscopical up to the size of an olive.

Microscopically the contents of one of the cysts showed a collection of epithelioid cells that presented the appearance of a uriniferous tubule. Another cyst showed a tuft of capillary vessels which were regarded as part of a Malpighian body.

DR. REGINALD H. SAYRE presented a

DISSECTING-ROOM SPECIMEN OF MORBUS COXARIUS.

The disease had not been diagnosticated, and the case had been recorded as one of myelitis. There was no external sinus. There was rupture of the capsule of the joint, with extravasation of pus and perforation of the acetabulum. No pus was found in the rectum. The disease was chiefly acetabular, and the head of the bone was in its normal position. In the seventy-four cases in which his father had performed exsection, the head of the bone had not been out of its place, and he had therefore concluded that the so-called *dislocation* of the third stage of hip-joint disease was due to rough manipulation.

DR. HODENPYL presented a heart that showed

ACUTE PERICARDITIS, WITH THE PRODUCTION OF FIBRIN AND PUS.

There was no history of the case. At the bottom of the pericardial sac was a thick layer of cheesy material. The inner surface of the pericardium and the outer surface of the heart were covered with a thin layer of fibrin.

Dr. Hodenpyl presented a second heart, that showed

CHRONIC ENDOCARDITIS.

The organ was about normal in size. The tricuspid valve was greatly thickened, and it was on that account especially that the specimen was presented. The only history was that the woman was brought into the hospital with extreme dyspnœa and cyanosis, and died soon afterward.

Dr. Hodenpyl presented a third heart, which showed

MARKED HYPERTROPHY AND DILATATION, WITHOUT FATTY DEGENERATION OF THE MUSCULAR FIBRES.

The cavity of the right ventricle was very much enlarged, and the cavity of the left ventricle to a less extent. The kidneys showed the lesions of chronic diffuse nephritis. The heart was about twice its normal size.

Dr. Van Santvoord said that the absence of degeneration of the cardiac muscle was worthy of notice. He thought it was generally believed that when there was heart failure from any cause, degeneration of the heart muscle was commonly present, but he believed that the contrary was quite often the case, and that when from the clinical history of the case there was manifest heart failure, post-mortem frequently showed that there was no lesion of the muscle itself.

Dr. W. H. Porter directed attention to

PERFORATION OF ALL THE CUSPS OF THE AORTIC VALVE

in the specimen presented, and said that according to his experience similar openings were present in forty per cent., at least, of aortic and pulmonary segments. He had seen these perforations as early as the second or third year of age, and believed them to be congenital defects. He thought the specimen was one of those hearts which illustrated that the physical signs of aortic regurgitation might occur without the rational symptoms of that lesion.

Dr. Van Santvoord remarked that the openings referred to he had frequently seen, and, as in the specimen presented, they had been immediately under the very edge of the leaflet. It certainly seemed to him that they would not prevent complete closure of the valve, as they were above the line of contact when the cusps were brought together.

The President asked Dr. Porter if in the percentage of cases he had mentioned there was corresponding cardiac hypertrophy.

Dr. Porter replied that the amount of hypertrophy depended upon the size and number of the openings. If they were large there would be some hypertrophy, but in many cases he had seen the diagnosis of aortic regurgitation made and had found only this physical condition at post-mortem to explain it.

Dr. Van Santvoord thought that if this condition existed in as high as forty per cent. of hearts, evidence of regurgitation at the aortic orifice should be more common than it was.

The President said that he had examined the heart with Dr. Hodenpyl, and it had seemed to him that the perforations were so small and so near the edge of the leaflets that they would be covered when the valve was closed, and that the kidney lesion was the more plausible explanation of the hypertrophy.

Dr. Van Gieson presented an

ABSCESS OF THE LIVER

which was interesting chiefly because during life there was tympanitic resonance over the sac which made it appear that the liver was reduced in size.

Dr. Van Gieson also presented a specimen of

ANGIO-SARCOMA OF THE LUNG, WITH CALCIFIC DEPOSITS,

removed from the body of a middle-aged woman who had an amputation at the knee five years ago for a tumor which was not diagnosticated.

One of the lungs contained a few whitish nodules, some partially calcified, varying in size from a few millimetres to two or three centimetres in diameter. At the apex of the lung there was a nodule larger than the others (five centimetres in diameter), and more markedly calcific.

Microscopically the nodules consisted of areas which presented the characteristic appearance of angio-sarcoma, and of other areas made up of connective-tissue trabeculæ, partially calcified, enclosing oval and polygonal cells.

Dr. L. Emmett Holt presented a tumor of the umbilicus which he regarded as

A PERSISTENT MECKEL'S DIVERTICULUM, COVERED WITH MUCOUS MEMBRANE.

Dr. J. S. Thacher presented an

ANEURISM OF THE THORACIC AORTA.

The patient did not have any special symptoms, except some epigastric pain, and was treated for colic. There were found nearly two quarts of coagulated blood in the connective tissue outside of the aneurismal sac. The heart showed a very large papillary muscle, which illustrated an occasional cause of cardiac murmur.

Dr. Lewis Hall Sayre presented a specimen for which he was indebted to Dr. McKahn. It consisted of

THE HEAD AND NECK OF THE FEMUR,

removed by operation from a boy, five years of age, with good family history, who, three years ago, was taken with disease of the right hip-joint, from which he recovered with anchylosis in about eighteen months. Afterward an attempt to break up the adhesions was followed by inflammation, and in about six weeks an abscess made its appearance on the outer aspect of the thigh. At that time the limb presented the deformity usually seen in the third stage of hip-disease. The abscess was opened and drained, and it was then found that there was an abscess on the inner aspect of the thigh, and when that was opened the finger could be passed through the capsule, and the characteristic gelatiniform material readily removed.

Exsection was performed last Thursday by Dr. McKahn. The periosteum was very much thickened, and had considerable new deposit of bone in it. The operation was performed antiseptically, and the patient was doing well. The gelatiniform substance had been submitted to Dr. Biggs for examination, with reference to tubercle-bacilli.

The President presented a specimen of

RUPTURE OF THE HEART THROUGH THE RIGHT VENTRICLE, AS THE RESULT OF GENERAL FATTY DEGENERATION FROM ATHEROMA OF THE CORONARY ARTERIES.

For the epitomized clinical history he was indebted to Dr. W. N. Hubbard, House Physician, First Medical Service, Bellevue Hospital.

A woman, forty-five years of age, had been under treatment for Bright's disease some months ago. She had then complained of "trouble with her heart," and had not been well since. A couple of days before admission to the hospital she became worse; had shortness of breath and a sense of oppression about the heart.

She was admitted on December 7th, in the forenoon, cyanosed, with cold extremities, delirious, restless, and very thirsty. Respiration, 34; pulse, 150, and very irregular and feeble; temperature, 100.6° F. She was unable to sit up, but when propped up by a head-rest the dyspnœa and cyanosis were somewhat relieved. She complained of great pain about the heart. The chest-resonance was good; there were many coarse râles. The area of cardiac dulness was increased; no murmurs could be heard.

She slept a little at intervals during the following night, but was most of the time very noisy and restless. She seemed to develop œdema of the lungs, and died about twenty-four hours after admission.

Autopsy.—The body was well nourished, pale, lips blue. General appearance of abdominal cavity and viscera, normal. Right pleural cavity empty; left contained about five hundred centimetres of bloody serum.

Heart.—Area of exposed pericardium very large. Pericardial sac contained about five hundred centimetres of fluid blood. When this was removed a small triangular opening was seen near the apex of the right ventricle, through which oozed dark fluid blood. This opening communicated directly with the cavity of the right ventricle. The cavities of the right heart contained fluid blood, and voluminous, soft, ragged red clots, entangled among the papillary muscles, and adherent to the walls; valves normal. The left ventricle was firmly contracted, and the left cavities were moderately dilated and nearly empty. The mitral valve was moderately thickened and contracted at the edge, and the attached chordæ tendinæ were shortened. The walls of the coronary arteries were everywhere moderately atheromatous and fatty; but not especially so in the branch supplying the region of rupture. The entire heart muscle was pale and flabby. A small triangular tongue of heart muscle lay valve-like across the opening at the seat of rupture. Microscopically the heart muscle, in all parts of the organ, was the seat of marked, though not excessive, fatty degeneration and chronic interstitial myocarditis; but the fatty degeneration was not more marked at the seat of rupture than in other parts of the heart. The aorta was, throughout, the seat of extensive atheroma and fatty degeneration, and showed patches of calcification.

Lungs.—Both showed emphysema, chronic bronchitis, and moderate œdema, while in both lower lobes, posteriorly, were several hemorrhagic infarctions, from the size of a filbert to that of a small hen's egg. In the branches of the pulmonary artery leading to the two of these infarctions which were dissected, dense, occluding fibrinous clots were found.

All of the abdominal viscera were congested; while, developed to a moderate degree, were found the lesions of chronic interstitial hepatitis and chronic diffuse nephritis, the kidneys being slightly atrophied.

The case appeared to him of interest because the patient apparently lived for several hours after the occurrence of the rupture; because the rupture was at the apex of the right, and not of the left ventricle, as is more usually the case; and finally, because the rupture was that of a universally fatty heart, and not due to a circumscribed muscular lesion, dependent upon a local obstruction of a branch of the coronary artery, as it had been in most, if not all, of the ruptured hearts recently presented before this Society.

Dr. John C. Peters had presented a similar specimen several years ago, from a man forty-five years of age, and in whom there had not been any sign of cardiac disease until an attack of angina occurred. In that case there was almost complete occlusion of one coronary artery.

The Society then went into executive session.

Pajot on Sterility.—Speaking on the subject of the obstacles to fecundity in the human species, Professor Pajot says: "Has the woman an anteversion? Say to her: 'Have the kindness, if you please, every evening when you expect to have intercourse with your husband, not to urinate for five or six hours. Don't ask why; that doesn't concern you. Only don't urinate. You wish to have children? Yes? Well, then, urinate after intercourse, and not before.' If she has a retroversion, say to her: 'Madame, when your menses are over, eat plenty of eggs and plenty of rice. Take every night for three or four days a little pill which I am going to give you.' (This little pill contains simply a third of a grain of extract of opium.) 'Manage not to go to stool for three or four days. Then have intercourse with your husband, but don't go to stool till afterward.' You will say that all this is very ridiculous; yet the whole process is entirely rational and is based upon anatomical and physiological principles."

For Sweating of Hands.—Eau de Cologne, ℥ iv.; tincture of belladonna, ℥ ss.; rub the hands two or three times a day with this solution.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE DEBATE ON COW DISEASE AND ITS RELATION TO SCARLET FEVER IN MAN—TWO HOSPITAL DISPUTES—DEATH OF DR. ARTHUR FARRE—A SURGEON'S STETHOSCOPE—A MEDICAL CENTENARIAN.

London, December 30, 1887.

A special meeting of the Pathological Society was held recently, to discuss the nature of the disease which has made its appearance among the cows at Hendon (near London) and the alleged relation of this disease to the occurrence of scarlet fever in man. Important as were the issues raised, the debate cannot be said to have done much toward settling them. I can only briefly refer to some of the more important points. The debate was based upon a paper by Professor Crookshank, of King's College, in which he expressed the opinion that the cow disease at Hendon was really cow-pox. His opinion, however, was based upon the study of the disease, not at Hendon, but elsewhere. It was urged that the cow disease studied by Professor Crookshank was not identical with that occurring at Hendon, and that in assuming it to be identical with the Hendon disease he had been misled by the published descriptions of the latter. Dr. Klein strongly opposed the view that the two diseases were the same, and certainly scored a point against Professor Crookshank by pointing out some very minute bacteriological differences between the two affections. He had not, however, seen Professor Crookshank's cases in the early stage, and Professor Crookshank had not seen the Hendon cows at all. Professor Crookshank's view that the disease he had himself seen was cow-pox was not seriously questioned, but the evidence he brought forward tending to show that it is tolerably common, and, in fact, identical with what is termed by farmers "cow-pox," will surprise many who, like Dr. Buchanan, have been for years on the lookout for genuine cow-pox. One point which came out incidentally in the course of the discussion was that our metropolitan dairies are less insanitary than many country ones. Professor Brown remarked that, since he had entered on the present inquiry, fresh country milk had ceased to have any attractions for him. The question of the transmissibility of scarlet fever from the cow to man cannot be said to have been at all advanced by the recent debate. Professor Brown cogently observed that Mr. W. H. Power's report on the cow disease at Hendon, and its supposed connection with an epidemic of scarlet fever, was based chiefly on negative evidence—viz., on the fact that no communication of scarlet fever by human agency could be traced. So far as his own observations of the cow disease went, it had not been connected with scarlet fever, though an extensive epidemic of the latter existed concurrently. It was curious to note that milk from the affected dairies went into the very districts where no scarlet fever ensued. With such a large epidemic such a coincidence might have been expected, but it did not occur.

Two hospital disputes are in progress at present. One of these is at St. John's Hospital for Skin Diseases. This institution has long had an unenviable reputation for wrangles, and the late Erasmus Wilson, who once held the post of consulting surgeon to it, withdrew from it in disgust. It appears that the Committee of Management have been carrying matters with a high hand, and conducting the hospital entirely on their own responsibility. Nominally, they are elected annually by the governors, but no meeting of the latter has been held (until lately) for more than two years. For questioning the validity of such proceedings one of the physicians has been dismissed, and two others suspended from duty. A special meeting of governors was lately called, to consider these and other abuses, and some further revelations may shortly be expected.

A tempest is also raging at the Queen's Jubilee Hospital, which, although as yet within the first year of its existence, has just figured within the law courts. One of the surgeons is also surgeon to the Margaret Street Infirmary for Consumption. At this institution it transpired, some months ago, that some of the staff were homœopaths. The matter came before the committee, who, however, upheld the homœopaths, whereupon the rest of the staff resigned. Others, however, were found to fill their places, among them being the surgeon whose action is now in question. His colleagues at the Queen's Jubilee Hospital took umbrage at his associating himself with an institution where some of the staff were homœopaths, and on his refusing to resign his appointment at Margaret Street promptly induced the committee at the Queen's Jubilee Hospital to suspend him from duty at their institution. He (Mr. Millican) has taken the matter into the law courts, and is so far (pending an appeal) victorious, having obtained an injunction against the authorities of the Queen's Jubilee Hospital. The latter, when beaten, made a plaintive appeal to the judge, urging that if Mr. Millican proceeded to extremities it would lead to the closing of their hospital. If this be true, it can scarcely be in so flourishing a state as has been currently represented.

Dr. Arthur Farre, F.R.S., died recently at the ripe age of seventy-six. He was a distinguished obstetrician, and for many years Professor of Obstetric Medicine at King's College and Physician-Accoucheur to the hospital. His appointment as Physician-Accoucheur to the Princess of Wales (and to some other members of the royal family) brought him prominently forward, and for many years no medical name was better known in the upper circles of society. He was a brother of Dr. Frederic John Farre, who died about a year ago.

At one of the West End metropolitan hospitals one of the surgeons is reputed not to confine himself very strictly to surgical practice. Meeting one of the physicians one day, he said to him, jocosely, "Ah, you don't know what I have got in this bag." "Well," said the latter, somewhat to his discomfiture, "I shouldn't wonder if it's a stethoscope."

A medical man died recently in the provinces who was within a few months of attaining his hundredth year.

OUR PARIS LETTER.

(From our Own Correspondent.)

INTERESTING OBSERVATIONS ON THE SPEECH CENTRE—THE DIAGNOSIS OF CANCER OF THE STOMACH—DEATH OF M. DALLY.

Paris, January 6, 1888.

In a lecture delivered by Dr. Mathias Duval, Professor of Zoölogical Anthropology, on the brain, he referred to the discovery of Paul Broca, viz., that each convolution would appear to be a distinct organ, and in prosecuting his researches in this direction he had more than one opportunity of verifying that which appeared a mere hypothesis. While surgeon of the Bicêtre Asylum, a man who, for several years, had lost his memory for words, was admitted into the asylum, where he died. At the autopsy M. Broca discovered that a chronic softening had destroyed, on the left frontal lobe, the posterior half of the second and third frontal convolutions. He concluded from this circumstance that the faculty of articulated language may have its seat in that region; but before pronouncing on the significance of this discovery, he wished to await the confirmation of his induction. In a short time other cases presented themselves, which favored him in his researches. A patient who had become dumb was admitted into the asylum, and it was supposed that, the tongue being paralyzed, there was simply loss of the faculty of speech. In this case also, at the autopsy, the same convolutions as those of the first patient were found injured. In fine, the post-mortem examination of eleven persons, who had been accidentally deprived during their lives, some of the faculty of speech, others of the memory for words, or that for the letters of the alphabet, removed all doubt from the mind of the celebrated anthropologist that these faculties resided in the affected convolutions. On these premises, Professor Duval believes himself authorized to announce that "the mechanism of thought, and of its expression, appears to consist of a series of distinct cerebral organs, and that we might conceive the concatenation of their action." It may be here remarked that the above is simply the system of Gall revived, with observations more precise and more scientific.

In the reopening lecture of the winter session at the Paris School of Medicine, Dr. Dieulafoy, Professor of Medical Pathology, selected for his subject the diagnosis of cancer of the stomach. After having gone over the principal signs and symptoms of this affection, he compared it with other maladies with which it is liable to be confounded, and stated that at the same time these signs and symptoms, that is to say, those that are recognized as classical, are, after all, only probabilities. There is one sign, however, that Professor Dieulafoy dwelt upon as being a most important one, and almost pathognomonic of cancer of the stomach, and that is the absence of hydrochloric acid in the gastric juice. It is true that this sign has been known to the profession for some time, but as it has not been constantly found, doubts have been entertained as to its real value as a diagnostic sign in this malady. Professor Jaccoud, however, in the latest edition of his clinical lectures, states that, for the sign in question to have an absolute value, one must establish not the momentary absence of the hydrochloric acid, but the *persistence of the absence* of this acid in the gastric juice. Dr. Dieulafoy then gave the means for testing the presence of hydrochloric acid, which is as follows: A few drops of a concentrated watery solution of bright green, dropped into a test-tube containing distilled water, communicates a blue tint to the latter. If to the distilled water a few drops of the solution of bright green be poured into normal gastric juice previously filtered, which may be easily obtained by introducing into the stomach an india-rubber tube an hour or an hour and a half after a light repast, the gastric juice assumes a green tint. If the hydrochloric acid is in excess, the coloration obtained is the same as that observed on the mixture of bright green with distilled water; that is to say, that the gastric juice is tinted blue. In cancer of the stomach, the secretion of the hydrochloric acid is always diminished; it is even sometimes entirely absent. This fact has already been brought to notice by other observers, and Dr. Debove was one of the first to have made it known in France.

The lecturer stated that for his part he had twice to resort to this means of diagnosis, and twice he had obtained precise information. It concerns two women, one of whom had the classical signs of cancer of the stomach, the other the appearances of dilatation of that organ accompanied with cachexia. In both the patients the hydrochloric acid was absent, and the autopsy confirmed, for the two cases, the diagnosis of cancer. Dr. Dieulafoy therefore looks upon this sign as the only certain one we possess at the present time for diagnosing cancer of the stomach.

At the last meeting of the Academy of Medicine, M. Riche, a distinguished chemist, read a paper on some researches he had undertaken some time ago, to ascertain whether nickel was really toxic, as has been published by some authors; and, after several experiments on animals, he was led to conclude that nickel, in rational doses, is not toxic. Its action is comparable to that of iron, which it very much approaches in chemical composition, and M. Riche believes that nickel, employed as a therapeutic agent, would give results comparable to those we obtain from iron, antimony, and arsenic, as a stimulant of nutrition.

Dr. Dally, the well-known orthopedist, has just died at the age of fifty-four years, from diabetes, from which he had been suffering, more or less, for some years. He was also a distinguished anthropologist, and was professor of ethnology at the School of Anthropology. He was the author of several remarkable works, among which may be cited "The Present State of Medical Doctrines in their Relation to Philosophy and Science," "Remarks on Lunatics and Criminals as regards Moral and Legal Responsibility," "Researches on Consanguineous Marriages and on the Pure Races," "On the Order of Primates and Transformism," "The Place of Man in Nature," "The Hair as a Characteristic of the Human Races," "New Resources of Physiological Orthopedics."

INSUFFICIENCIES OF THE OCULAR MUSCLES.

To the Editor of The Medical Record.

Sir: In your issue of December 24th, Dr. George T. Stevens complains that I did not wait for the publication of the paper itself, instead of trusting to your report of the proceedings of the section of the International Congress before which it was read. My reasons for trusting to your report was simply that a long experience had convinced me of the great accuracy of The Record, which in this case was supported by the fact that the September number of the *American Journal of Ophthalmology* contained precisely the same statements. It seemed, therefore, to me, that the place in which the statements complained of had appeared was also the most proper place for any objections to them to be made. If The Record was wrong in its report, I feel quite sure that it will insist upon making any corrections suggested by Dr. Stevens which are in accordance with the facts of the case. But I do not see that Dr. Stevens himself intimates that The Record was wrong in what it said, but only suggests that I should have waited until the paper itself was published, and that, if I had done so, I "might have had reason to suspect that there are still important problems worthy of solution, respecting the so-called 'insufficiencies of the ocular muscles.'" In answer to this, I have only to say that it was not at all in regard to what was going to be published that I raised my objections, but as to what had already appeared.

As to "there being still important problems to be explained in regard to the so-called 'insufficiencies of the ocular muscles,'" and that these will be shown in the forthcoming paper, I would say that whenever Dr. Stevens writes anything which is really new and true in regard to insufficiency, I shall be the first to congratulate him; but I may be, perhaps, allowed to remark that it must be of a very different calibre from the statement that "there could not be an insufficiency of both interni and externi at the same time," or the assertion that where there was "diplopia, homonymous of 4° at twenty feet, and crossed of 5° at two feet, there seems to be a contradiction of results and a problem to explain." There is no contradiction of results, and no problem to explain, which has not been explained a quarter of a century, more or less, ago. One might as well claim originality, as, indeed, I heard it done the other day, for the determination of the amount gained by the tenotomy, by the use of a prism immediately after the operation, and the regulation of the effect by the employment of controlling sutures, which is also about a quarter of a century, more or less, old.

Again I say, that in the face of the numerous long and exhaustive articles of Von Graefe in regard to the insufficiency, paresis, and paralysis of the muscles of the globe, in face, too, of the writings and operations of Alfred Graefe, Giraud Teulon, Woinow, Knapp, Noyes, Derby, Theobald, and a host of others, I thought the statement that the literature of the subject was very scanty, and what existed would lead one to infer that only one of the muscles was liable to insufficiency, was neither correct nor just, and that it ought not to go unchallenged.

Dr. Stevens' statement that more operations are now performed for supposed insufficiency of the muscles of the eye than formerly is, I believe, perfectly correct. The same indications are present, and the same absolute necessity for their performance, under certain conditions, exist now as they did twenty years ago, when the writer divided both externi for asthenopia, in a case in which there was no strabismus ("Transactions of Amer. Ophth. Soc.," 1869, p. 35), and pointed out the fact that, in the treatment of squint and insufficiency, "hitherto too much attention had been paid to the condition of the interni and refraction, and not enough to that of the externi and accommodation." Others had done the operation abroad before this, and it has been repeatedly performed since by my confières and myself in this country. Von Graefe and Leber years ago divided the superior rectus for insufficiency of the inferior rectus, as others as well as myself have since done. This does not look as if other muscles than the interni "had been ignored or barely mentioned," as Dr. Stevens asserts. Had Dr. Stevens written his paper for the general profession, the matter might be somewhat different, but it was written for the edification of a set of experts who had been invited from all parts of the globe.

It would be very natural, through the diffusion of knowledge, the increase in the number of operators, and the immense increase in population, that the number of these operations should also largely increase. It has not, however, struck me that this is anywhere near as much the case in ophthalmic hospitals, as alleged by Dr. Stevens, as in private practice. Thus we see, by the last report of the Manhattan Eye and Ear Hospital, just issued, that out of 5,698 eye cases, "insufficiency" of the interni, let alone operating, occurred only six times, and that of the externi only once.

But even if these operations are performed more frequently than formerly, it does not prove that it is a measure to be so frequently employed. Still, it was more in regard to the physiological laws underlying "insufficiency" that I referred than to the application of the operation, which, in some quarters, seems to be limited only by the category of disease itself, multiplied by all the muscles of the globe, multiplied by the limit of tolerance as to the number of times each muscle can be operated upon. This is, of course, a matter of individual judgment, but to me, personally, the very frequency of the operation, as it is now performed, seems to be one of the saddest pages in American ophthalmology. I want to be candid in this matter, and I readily admit that it is the failures which I see and hear of, and not the successes. As, for example, cases in which the advancing glaucoma steadily advances in spite of the operation, in which the epileptic fits still continue or grow worse, in which progressive disease of the spine goes on progressing, in which the tumor of the orbit increases in growth, in which the headaches do not get well, in which the chronic diarrhœa is not checked, while the divergence of the eye produced by the operation is added to it. All this is to me, at least, very sad, and I hope to soon see that the day for indiscriminate operations upon the muscles of the eye, where no good can possibly follow, and where much harm is often done, has passed.

With these few remarks, I will follow Dr. Stevens' advice, and patiently wait until his paper is published. This I shall read with interest, as I shall the forthcoming report of the New York Neurological Society upon these matters.

Yours truly,

Edward Loring, M.D.

128 Madison Avenue.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 8 to January 14, 1888.

Tesson, Louis S., Captain and Assistant Surgeon. Relieved from duty at Headquarters, Division of the Missouri, and as examiner of recruits at Chicago, Ill., and ordered for duty as post-surgeon at Watervliet Arsenal, New York, relieving Captain Henry G. Burton, Assistant Surgeon. S. O. 5, A. G. O., January 7, 1888.

Barnett, Richards, Captain and Assistant Surgeon. Ordered from further duty in Division of the Atlantic, to duty at Fort Riley, Kan.; to take effect at the expiration of his present sick-leave. S. O. 5, A. G. O., January 14, 1888.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 14, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	9	3
Scarlet fever	144	19
Cerebro-spinal meningitis	1	1
Measles	46	2
Diphtheria	177	50
Small-pox	6	0
Yellow fever	0	0
Cholera	0	0

Glossodynia.—Dr. Ueagitot says that this condition is met with almost always in neuropathic or asthmatic persons. It is very tenacious. The treatment should comprise bromide of potassium and hydrotherapy, and applications of cocaine or the galvano-cautery.

Dryness of the Throat from Excessive Tea-drinking.—Dr. Walker-Downie has made a number of observations on this subject, which he reports in the London *Practitioner*. Some years ago he pointed out a form of dry pharyngitis occurring in badly fed anæmic women, which he then in great part ascribed to the excessive use of cheap, and therefore inferior, tea. On inquiry it was found that those women had tea with almost every morsel of food of which they partook, and the tea, of a rank order, was not simply infused, but literally *stewed*. For a time, in addition to proscribing the use of tea (recommending the substitution of cocoa or milk), he advised the liberal use of farinaceous food with milk, and prescribed a chalybeate tonic, under which the patients rapidly recovered. After a time he prescribed no medicine, directing the change of diet indicated alone, with the same beneficial results. But patients are never thoroughly satisfied unless they get a bottle, and as preparations of iron materially assist in the cure of the accompanying anæmia, he has returned to his former prescription. Those patients when asked if they use much tea confess to it freely, but add that since the throat became so dry they have quite lost taste for it—have "turned against it." In all such cases he looks upon this form of dry pharyngitis, which does not involve the naso-pharynx as in *pharyngitis sicca*, as in great measure due to the gastric derangement—the dyspepsia—induced by the constant use of stewed tea shortly before, with, or immediately after meals, as well as to the local effect on the pharynx itself of this frequently applied astringent and irritant lotion. And just as we forbid the use of tobacco in certain inflammatory conditions of the mouth and fauces, so the total abstinence from tea should in all cases be rigorously enjoined.

Fatal Poisoning from Eating Toad-fish.—The following case is reported by Dr. Spofforth, of Sydney. The deceased was a Chinaman named Ah Wy, about forty-two years of age; he resided in a hut about fourteen miles from Manly, with another Chinaman, Ah Chin. On Saturday evening, January 15, 1887, they cooked about five fish which they had caught in the river, making a dish of soup. One of the fish was about four inches in length and nearly as broad, it was spotted on the back, it could be blown up like a bladder, and if struck would burst and make a noise like a pistol. Both men ate of the soup at 7 P.M., but Ah Chin partook only of a little of the gravy. At ten o'clock Ah Wy said that he was unwell and began to vomit; an hour afterward he asked his comrade to fetch some medicine. He went to a European's house and got some mustard and salt to form an emetic with; on his return to the hut at midnight he found Ah Wy unconscious, and at 2 A.M. on Sunday he died—seven hours after eating part of the toad fish. Ah Chin took some of the emetic. It seems that the reason for Ah Chin eating but little of the soup was that he did not consider that one of the fish used was wholesome, and he told this circumstance to his comrade; the latter, however, said he believed it to be very good. A *post-mortem* examination was made by myself, which showed that the stomach was about three-parts filled with partially digested fish, and the mucous membrane was inflamed, chiefly at its pyloric extremity. The intestines were healthy; the other organs of the body were considerably congested—otherwise healthy. The toad-fish belongs to the genus *Tetraodon*, which is poisonous. Some of the fish belonging to this order are very good eating. The coroner remarked that some years ago three children were poisoned by eating toad-fish, and died; and that part of their vomit was eaten by cats, and they also died.—*The Australian Medical Gazette.*

Subcutaneous Injections of Ammonia in Acute Alcoholism.—Inject under the skin a mixture of one part ammonia with two to six parts water. Two or three minutes after the injection an erysipelatous redness is observed around the puncture, and the next morning some soreness. Glinsky has seen a patient comatose from alcohol recover consciousness within three minutes after such an injection.

The Physiological Action of Chromium.—Dr. Pander, of Dorpat, publishes an account of some researches he has made on the physiological action of chromium. The compound which he found to answer best was the double lactate of chromium and sodium. Chromic acid and its salts produced both acute and chronic symptoms, salts of chromic oxide causing only chronic or, at most, subacute forms of poisoning. The chromic-acid compounds were found to be a hundred times more toxic than those of chromic oxide. The acute forms of poisoning show themselves by the disturbance of the respiration and of the central nervous system; chronic forms affect the skin and also the mucous membranes when air containing finely divided chromic oxide is allowed to come into contact with them. The heart's action was not directly affected by any of the preparations. The chief as well as the earliest morbid changes appeared in the kidneys under the form of parenchymatous nephritis, followed by the interstitial form; also in the gastro-intestinal tract, where inflammation, ecchymoses, and swollen follicles were found. There were also morbid appearances in the blood and the spleen. In chronic cases the spleen was shrunken and the hepatic parenchyma had a cloudy appearance. Chromium was found to be absorbed both when given hypodermically and also when administered by means of the gastro-intestinal tract, at least when soluble compounds were employed.

Chromic-acid preparations were absorbed with great rapidity, both by the skin and the stomach. When in very small quantities chromic acid and its salts were reduced to chromic oxide. The elimination of chromium took place mainly by the kidneys, but also to some extent by the liver and bowels. Death was caused in acute cases by arrest of respiration and disturbance of the central nervous system; in chronic cases by morbid changes in the blood, the kidneys, and the digestive tract. Dr. Pander was unable to find any indication as to the value of chromium as a therapeutic agent.—*The Lancet.*

A FUNGUS IN THE EAR.—Dr. Salelles describes a case of a rare vegetable parasite, *aspergillus flavescens*, obstructing the external meatus of the ear of a young man. After syringing away a quantity of black matter, a smooth glistening substance of a dirty white color with black spots was seen, which was the mycelium of the fungus studded with dark spores. All attempts to remove this with forceps provoked so much pain that they had to be given up. Glycerine was dropped into the ear, and in two days' time the patient returned in terrible suffering, the dark spores having been developed and forming a large mass. After this had been removed by syringing, alcohol and tannin were introduced, and at the next visit the mycelium was removed by the syringe, the membrana tympani becoming visible. In a month's time the fungus began to reappear, but was rapidly subdued by similar treatment, which was followed up by the daily instillation of dilute spirit for a short time. No further return occurred, and the patient entirely regained his power of hearing. The introduction of the fungus appeared to have been due to the use of some oil of sweet almonds, which had been kept for some time in an open bottle, and which the patient had been in the habit of dropping into his ear along with milk, as he suffered from otalgia.—*The Lancet.*

HOUSE POISON.—If the condensed breath collected on the cool window-panes of a room where a number of persons have been assembled, be burned, a smell as of singed hair will show the presence of organic matter; and, if the condensed breath be allowed to remain on the windows for a few days, it will be found, on examination by microscope, that it is alive with animalculæ. The inhalation of air containing such putrescent matter causes untold complaints which might be avoided by a circulation of fresh air.—*Philadelphia Bulletin.*

VERY OLD AGE.—The death is reported from Constantinople of a man named Dimitrios Antippa at the extraordinary age of one hundred and fifteen years. The deceased was born at Cephalonia in 1772, and, though in his later years he settled down as a merchant in the Turkish capital, he had passed his earlier days in Paris during the Reign of Terror, having had among his personal friends Marat, Danton, and Robespierre. To the last M. Antippa retained his clearness of intellect.

SALICYLATE OF MERCURY is recommended as an antiseptic powder for external application in the treatment of wounds, syphilitic sores, etc. It is a white amorphous powder, free from odor, tasteless, and neutral to test-paper. It is slightly soluble in water and alcohol. It contains 0.2 per cent. of water of crystallization, and fifty-nine per cent. of mercury.

A JAPANESE GIANTESS.—According to native journals, Japan can boast of a phenomenal giantess. Though only twelve years and five months of age, she is said to stand eight feet high and to weigh over two hundred and seventy pounds; her hands measure over nine inches in length, and her feet fifteen inches.

CHILDREN'S WINTER DRESS.—There is a tolerably general impression in many quarters that in order to promote the health of children it is advisable to subject them to a "hardening" process. The meaning of this term it is needless to explain further than to say that its aim is to encourage native energy by opposition, to engender strength of mind and body by early participation in the struggle for existence. The principle is in itself a wholesome one, and is not without its parallel in the history of nature's processes. Care is most necessary, however, in its application. Without such care it may be, and frequently has been, overdone. In particular must it be remembered that all success in the adoption of this plan in education depends on the possession by a child thus trained of a basis of sturdy physical vigor. A delicate child, if treated after the same method, would languish and probably succumb. We have been led into this train of observation by noting the frequency with which one finds children of both sexes and of different ages, constitutions, and positions in life treated after one uniform prescription of hardy training. We would now concern ourselves particularly with that aspect of the question which has to do with clothing during such inclement weather as prevails at present. That considerable variation of opinion should obtain among parents with regard to this subject is only to be expected. Here, it may be said with truth, is room for the wise exercise of private judgment, and here we may in many cases find occasion to apply the maxims of the hardening system. So much may safely be granted, but we must not forget that certain essentials cannot be dispensed with under any plan adopted. Among these the maintenance of bodily heat and dryness is all-important, and certain of the most prevalent customs of domestic life incline us to believe that the fact is but slightly understood. The hat, for example, is often, in the case of girls, far too light and too cool. Instead of straw, we would substitute some form of woollen material, just as boys, with few exceptions, are commonly provided with hats of wool or felt, which are at once light, comfortable, and suitably protective against weather. Underclothing is another matter which does not as yet receive adequate attention. We still find the linen shirt or chemise worn very commonly next the skin. This is an error in personal hygiene which cannot under any system be excused. Summer and winter, indeed, present no material difference as regards the choice of an undergarment. Lighter or heavier, the material certainly should vary in accordance with the degree of external cold; but throughout the year no other substance is so wholesome or so preventive of chill as a woollen fabric. Of the feet we need, perhaps, hardly speak. For them, as for the rest of the body, a casing of wool is the prime requisite; and, indeed, the use of this material as a general investment for the skin will be allowed by members of the profession generally to be the great regulating principle in arranging the dress of children, whatever the view most approved in their physical education.—*The Lancet.*

CONTRIBUTION TO THE PHYSIOLOGY OF RENAL SECRETION.—Some time ago Hermann stated that the secretion of the kidneys varied on each side. It was objected to his experiments that reflex influences consecutive to exposure of the ureters might explain the difference. Zuelzer has studied the question in a case of vesical ectopia. Iodide of potassium, given by the mouth, appeared in the urine from one ureter at a different time from that of the other side; salicylic acid showed the same difference. Chemical analysis also proved that the proportions of urea, phosphoric acid, and sulphuric acid differed on the two sides. Great differences were observed in the quantity and density of the urine discharged from the two sides respectively. This difference leads Zuelzer to think that the composition of the blood in the aorta is far from being uniform.—*The Lancet.*

CARLSBAD NOTES.—A correspondent of the *British Medical Journal*, writing about this popular resort, says, among other things: Can anyone say what is the precise physiological effect of swallowing a couple of tumblers of hot saline water early in the morning on the liver?—or on the stomach?—or on the kidneys? Can anyone distinguish between that effect—whatever it may be—when a similar solution is swallowed in like quantity at home or at Carlsbad? Can anyone say what is the physiological difference of effect between swallowing the same quantity of hot water only—or of drinking it hot or cold? These are elementary questions, and go to the bottom of any rational use of these waters, or of any scientific basis for prescribing them. Of course, I am not speaking of that dark and obscure puzzle which everyone thinks he can clarify for himself, and which he fondly calls his "clinical experience;" but to speak only of the demonstrable physiological action of the waters. I think I am not going too far when I say that, notwithstanding the scientific attainments of the Carlsbad physicians, not one of them has yet attempted to establish the physiological effects of these waters on healthy bodies as a preliminary to determining their uses in pathological conditions. We are yet in a very unscientific stage in ordinary therapeutics, but the therapeutics of "baths and wells" appear to be left, designedly, or undesignedly, as in a state of black darkness, which leaves their whole application and mode of operation in as purely hypothetical a state as in the darker ages of medical ignorance. Is it not surprising that a whole body of educated men should be willing to go on prescribing so many half-pints or pints of hot saline water without knowing what is the action on the healthy body, of one, two, or three pints of such fluid; that thirty thousand people should be every year put through the *régime* without anyone knowing the relative value of its component parts; that each spring should solemnly be inscribed with its temperature in centigrade and Fahrenheit, and that minute analyses should be paraded of the infinitesimal differences of springs, all flowing from one geological stratum, without an attempt to discriminate the physiological value of such differences? Not all patients pay the traditional respect to medical prescription which is characteristic of Carlsbad, and there is naturally a good deal of good-humored banter about the rigidity with which quantities, times, and sources of water-drinking are regulated. A little caricature which is shown in some of the shop-windows shows a grave and spectacled physician bending over a sprightly dame whose pulse he is feeling. She complains that she has not slept well last night. "Ah, then, madam," he says, "you must drink a glass less water to-morrow morning." "But, doctor," she says, "the day before yesterday, I took a glass more and I slept excellently well." "Then," he replies, "you may take an extra glass to-morrow morning." "Oh, then," she retorts, "it seems that it comes to the same thing whether you take a glass more or a glass less." "Yes, madam," is the answer; "but, only when you take it under medical advice." There is a good deal of sound philosophy in the candid answer. It is not always acted upon. A Russian gentleman, of whom I heard this year, considered that as he was paying his "*Cur Tax*," and the glasses of the water were ordered for him, he could hardly have too much of a good thing, and he put himself on a daily regimen of sixteen glasses, and he was surprised that it did not agree with him. But then he was a Russian, and he had the traditional example of Peter the Great, who visited Carlsbad in 1711, and of whom it is related that he was told to take three glasses of the waters before breakfast, but either his German or the local physician's Russian being bad, he thought three large jugfuls were meant. He succeeded in swallowing one jugful, and was choking over the second, when the physician appeared and apprised him of his error. However, he was wont to do things heroically, and his daily quantum is recorded as twenty-three glasses, which he took usually at one sitting. He wrote to his wife, the Empress Catharine: "I am well, thank God, and so we all are, only our bellies are swelled out with water, for we drink like horses, and have no other occupation." He concludes by stating that a Carlsbad cure is a very complex therapeutic agent. It is a rest cure, a diet cure, an air cure, a music cure, an exercise cure, a mind cure, and a body cure. Its efficiency is made up of a great many elements, which have by time, experience, liberal expenditure, and enlightened management, been brought together in aid of the natural treasures and territorial advantages of the place.

SULPHUR WATERS IN LARYNGEAL PHTHISIS.—Dr. Charazac, writing in the *Revue Médicale de Toulouse* for September 1, 1887, calls attention to the injurious effects of the use of sulphur waters in cases of tuberculosis of the larynx. The sulphides, he says, excite a congestion of the laryngeal mucous membrane, and if their use be persisted in, what was a nearly dormant tuberculosis of the larynx may pass into an acute miliary tuberculosis. Bergeon's method, therefore, whatever may be said for or against its value in pulmonary phthisis, would seem to be contraindicated when the larynx is involved in the morbid process.

TETANUS.—According to MM. Nocard and Brieger, tetanus is a disease transmitted to men and animals by the agency of a pathogenic organism which infects wounds or other suitable soils on the surface of the body. The organism does not penetrate far beyond the limits of its point of inoculation, but exercises its deleterious influence by means of certain products of an alkaloidal nature, and of which there are, according to Brieger, four kinds—tetanin, tetano-toxine, spasmo-toxine, and another not named. The alkaloids have a special affinity for certain parts of the motor nervous system, causing excessive discharges of nervous energy, on which the muscular spasms are directly dependent. M. Nocard found that dried blood and pus scraped from instruments which had been used to geld horses (all of which died of tetanus), when inoculated beneath the skin of rabbits and guinea-pigs, caused tetanus; and yet infusions made from the medulla oblongata and spinal cord of animals dead from tetanus were not capable of causing tetanus in other animals into whom some of the infusion was injected. The argument is not free from fallacy, but the conclusion drawn is that the spinal cord and medulla are acted upon by a strychnine-like substance, of course incapable of cultivation, but derived from the multiplication and growth of organisms elsewhere existing.—*Lancet.*

QUEBRACHO IN SURGICAL PRACTICE.—Dr. Bordeaux, of Brussels, who has used quebracho a good deal during the last year or two, speaks very highly of it as a topical application for wounds and burns. The liquid extract is the preparation employed, and it is painted with a brush over the wound like collodion. The slight pain it causes is very transient; it becomes hard in an hour's time, forming a brownish crust, which can only be loosened with the aid of hot water. This crust is quite sufficient protection, no dressing being required. It promotes healing by first intention, and greatly assists the process of granulation.—*Lancet.*

EFFECTS OF PHOSPHORUS ON YOUNG ANIMALS.—Dr. Alexander Kisel, of St. Petersburg, who has made a series of observations on the effect of small doses of phosphorus on young animals, has found that it never exerts any beneficial effect on the growth of bone, but that, on the other hand, the apparently slight disorder of the digestive functions which very small doses produce is liable to result in death. When given to puppies in doses of 0.0001 gramme per kilogramme of weight, symptoms of chronic poisoning were produced, with atrophy and disintegration of the bones. In doses of half this amount the development of the animal was retarded, but those equal to 0.000033 gramme per kilogramme of weight appeared to be innocuous and produced no effect at all upon the body.—*Lancet.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 4. NEW YORK, JANUARY 28, 1888 **Whole No. 899**

Original Articles.

ON THE CONDITIONS CONDUCIVE TO THE *EARLIEST POSSIBLE* HEALING OF OPERATION WOUNDS.[1]

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I CAN hardly hope to say much to-night that will be new to this distinguished audience of practical surgeons. But it is sometimes well to review the results of progress in various directions, to reiterate old truths, and to add, here and there, a little both in the way of practical hints and of emphasized aphorisms.

The conditions conducive to the *earliest possible* healing of operation wounds I would state as follows:

1. The use of the antiseptic method before and during the operation and at the later dressings.
2. Thorough drainage.
3. Complete approximation both of the edges and raw surfaces.
4. The use of antiseptic dressings.
5. Securing absolute rest during the period of repair.

First: The use of the antiseptic method before and during the operation and at the later dressings.—Of this I need say but little. The surgeons who do not use the method, though they may vary the means employed, are few in number and, as a rule, of little prominence. Boiling water and strict cleanliness belong as much to the antiseptic method as do corrosive sublimate and carbolic acid. My own practice in the cases I shall briefly relate has been to employ the sublimate and carbolic acid in the usual way. I may say, in passing, that I very rarely employ iodoform, partly on account of its detestable and persistent odor, and partly on account of its poor germicidal properties. That my results justify its non-use I think will be admitted.

The spray is now generally conceded to be superfluous, as a rule. We have slowly but surely learned the lesson that our instruments and sponges, our finger-nails, our dressings, and the skin of the patient are far more apt to be the sources of infection than the air; and that what does obtain access through the air can be neutralized by constant flushing of the wound with hot water or some germicide.

I desire, however, to lay some stress on the need of more thorough cleansing and disinfection of the site of the operation during the twenty-four hours before operating, especially in localities in which dirt may accumulate, as in the umbilicus and in regions covered with hair. Horsley's careful preparation of the scalp, before operating on the brain, marks, in my opinion, a distinct advance, and should be a model for our practice in other regions of the body. To shave off the hair, wash the skin with a nail-brush and soap and water, then with turpentine and ether, and then apply a wet sublimate dressing for twelve to twenty-four hours before operating, gives but little trouble; and, I have no doubt, will still further reduce the mortality, already so delightfully low.

Of course, the same antiseptic method employed at the operation should be employed at every redressing until the wound is healed.

Secondly: Thorough drainage.—As a rule, considerable blood and serum accumulate in a wound during the first twenty-four hours, while the later discharge is only bloody serum and is small in amount. Hence two separate objects are to be attained—first, to secure the escape of the more abundant, thicker, and coagulable wound-fluids of the first twenty-four hours; and, secondly, to secure the escape of the less abundant, thinner, and practically non-coagulable later fluids. In a paper read before the Philadelphia Academy of Surgery, December 1, 1884, under the caption "Combined Tubular and Capillary Drainage of Large Wounds," I stated my own practice for some years and its advantages. Rubber or other fenestrated tubes, of greater or less calibre, suffice admirably for carrying off the secretion of the first twenty-four hours; but if retained much longer these tubes not only act as setons and foreign bodies but, as granulations arise, the eyes become blocked up, and thus frustrate the very purpose for which the tubes are employed; and, if long retained in place, when removed the tubes often leave sinuses which, if long, are almost certain not to heal from the centre toward each end, but to close at two or three intermediate points, and so pen up the slight discharge and produce retention and suppuration. Decalcified bone drains have so often been disappointing, either by not being absorbed or by collapsing from too early softening, or by occasionally becoming sources of infection, that they have not answered, I think, our earlier expectations. On the whole, rubber or glass drains answer the purpose best. But they must not be left long in place.

For the later moderate serous oozing, capillary drains answer best. The material may be horsehair, catgut, or rubber threads. The capillarity of a bundle of these materials is their chief advantage—an advantage, however, that is lost if the fluids to be drained are at all thick. Considerable personal experience, extending now over about ten years, leads me quite confidently to commend again the following method of combined tubular and capillary drainage. Before the wound is closed a fenestrated rubber tube, of suitable size, is placed in the wound, and alongside of it is laid a mesh of from five to ten strands of catgut or fifteen to thirty strands of horsehair. At the first dressing, at the end of twenty-four hours, the rubber tubing is carefully removed, and the horsehair left *in situ*. At the second dressing, on the fifth day, all the horsehair may be removed, or two or three strands left in place, to be removed at the next dressing, according to circumstances. The early removal of the tubing allows the surfaces to fall together, and so prevents the formation of any tubular sinus; and if the healing process is rapid, as is generally the case, fine granulations easily penetrate between the threads of the horsehair, which thus offer little obstruction to the union of the surfaces, and yet will conduct off any slight amount of wound-fluids.

The method of removal of the horsehair is important as a minor detail, but not a little conducive to the speediest healing of the wound. If removed in mass, the mesh of horsehair may tear apart, to some extent, the slightly united surfaces. Accordingly, after separating the matted thread at both ends of the mesh of hair, I always remove them singly, and with great gentleness. This avoids all pain, and, what is more important, does not in the least disturb any slender means of union between the surfaces of the wound. Two or three hairs may be left for two or three days longer, to drain the slight temporary sinus left by the removal of the rest of the mesh, but usually this is a needless precaution.

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[1] Read at a meeting of the Surgical Section of the New York Academy of Medicine, held January 9, 1888.

The horsehair could be introduced, of course, when the tubing is removed, instead of placing it in the wound primarily, but this causes much pain, and, worse, it does mechanical violence to a wound already in the early stages of repair—a matter always to be deprecated to the utmost. So careful am I as to this detail that, after separating the matted hairs, I usually cut off the projecting threads at one end (excepting the few I intend to leave in place), so that their stiffness and the blood coagulated on the projecting ends shall do no violence to the interior of the wound while being withdrawn.

I have spoken chiefly of horsehair. If this be used, it should always be carefully washed with soap and water, then in turpentine, and, after thorough disinfection by a sublimate solution, should be kept in carbolized water till used. Care must also be taken that all short hairs are eliminated from the mesh.

The more absorbable forms of catgut I do not like, since they swell, soften early, and, being coarser than horsehair, their capillarity is less. The finer, chromic catgut, however, does not swell, is durable, and answers tolerably well. But even fine catgut is often harsh and stiff, and therefore, mechanically, much less well suited to attain our object than horsehair. With rubber threads I have no experience, but I should judge that they would not answer so well as either of the others.

Of course, the drains may be multiple if the wound requires it.

The point of exit of the drains is important. It should, of course, always be in such a position as to favor the escape of the wound-fluids by gravity, and both tubing and horsehair may often be carried, with the greatest advantage, through a button-hole at the lowest angle of the wound, as in breast cases.

The drainage of cerebral and abdominal operations is so special as to be rather beyond the province of this general paper, but I may be permitted, perhaps, to call particular attention to the advantages, in abdominal operations, of a disinfected cotton rope when inserted within the calibre of glass drainage-tubes. The cotton forms, practically, a series of capillary tubes, and so favors drainage, even against gravity (as in the abdomen), and is a distinct advance, I believe, in surgical technique. I purpose trying both cotton and horsehair and catgut, placed within the rubber tubing, in ordinary operative wounds, to see whether they may not add to the usefulness of the tubes. Possibly, also, instead of placing the mesh of horsehair or catgut alongside of the rubber tubing for the later capillary drainage, it may prove to be the better procedure to place them in the tube, and after twenty-four hours to remove the tube, leaving the horsehair or catgut *in situ*. My only fear is that they might possibly block up the tube. Experience will have to decide the question.

I feel, also, that I would be derelict were I not to allude, in this presence especially, to the efficient influence of Professor Markoe in impressing on the profession at large the importance of thorough drainage.

Thirdly: Complete approximation both of the edges and raw surfaces of wounds.—First, as to the edges: Skin should be brought in exact contact with skin, edge to edge, continuously from one end of the wound to the other. Not seldom the stitches are made so tight as to cause some overlapping. The overlapped raw surface, not being able to unite with the skin beneath, must cicatrize, and this often delays the definite cure by several days; or the opposite error is committed, of placing the sutures so far apart as to allow of several gaps, each one of which must heal by the slow process of cicatrization, instead of direct union, and so produce a similar delay of several days in the definite cure. In the days when every silk suture was, for the time, a seton, such parsimony in the number of sutures was pardonable; but now that we have the wire, and, better, the antiseptic catgut suture, it is not only allowable, but it is a duty, to put the sutures so close together that not a single point shall gap, even in a minute degree. The small, slit-like wounds of the Hagedorn needles, also, heal more quickly than those made by other needles, and, as another minor detail, are to be commended.

Secondly, as to the raw surfaces: They may be approximated either by pressure or by sutures. While pressure is, theoretically, the best method, it is often difficult of attainment in practice for mechanical reasons. When possible it should be employed; but if not, then we may employ "sutures of relaxation," so secured at one end that we can readjust their tension according to the needs of each case.

"Étage sutures," or rows of buried catgut sutures at different levels, are employed by Martin, with great advantage, in the perineum, and they have been employed for some time in closing the abdominal wall after laparotomy. I have used them with great advantage in these cases, and I venture to suggest their use in the closure of such other wounds as are mechanically suited to this procedure. I have not yet so used them in amputations, etc., but I shall certainly test their merits on the first occasion. One of the most striking uses of catgut is the possibility of using it freely in situations where it can be thus buried, and, having performed its function in the occlusion of vessels or the uniting of deep surfaces, be absorbed and never heard of again. Here, again, we may mark a step in advance—one of the many minor details all tending to perfection in results.

By such complete approximation of raw surfaces we secure a triple object—the prevention of hemorrhagic oozing, the prevention of the accumulation of any later wound-fluids (and so lessen the need for drainage, which is, at best, a necessity to be avoided wherever possible), and, finally, the promotion of immediate union of the wound-surfaces at every point.

Fourthly: The use of antiseptic dressings.—Of such dressings I shall say nothing in detail, since they are so uniformly used by all good surgeons abreast of the times. I shall only call attention to one point, in which, I think, the profession is following an incorrect practice, if we wish to secure the earliest possible healing of wounds.

The tendency of to-day and for some time past has been to retain the first dressing upon the wound until the healing process is completed, or nearly so. This I think an error. I show you here a number of primary dressings, removed by myself at the expiration of twenty-four hours, and a number of second dressings from the same cases, removed on the fifth day. Contrast them. See the amount of blood in the first dressings, rendering them harsh and stiff, alike uncomfortable to the patient and unsuited to the wound, if we desire the most favorable conditions for speedy healing. Such a saturated dressing may not be only a discomfort; without great care the fluids may become sources of putrefaction. Certainly, if this hard, harsh, and stiffened first dressing be removed after a day, and the wound lie at rest covered with a soft, smooth, flexible, and nearly dry gauze, the chances of its healing rapidly are greatly increased. In practice I have found it so, and the cases to be related, I think, will prove the assertion.

Moreover, with the method of combined tubular and capillary drainage I have proposed, it is needful to redress the wound after twenty-four hours in order to remove the drainage-tube. Not only do I redress on the first day after the operation, but I redress again, usually, on the fifth day; sometimes, in small wounds, as early as the third or fourth, and occasionally as late as the sixth, day. One reason for the redressing on the fifth day is that by this time there is no further need for capillary drainage, except, possibly, by two or three strands of horsehair; and the other threads should then be removed, lest they, too, begin to act as setons. A second reason is, that by this time the sutures often begin to cause irritation, and to cut through the tissues, even if wire or catgut be employed, especially if there have been any tension on them. Sometimes small stitch-abscesses form, which may even cause a considerable rise of temperature and delay the final cure by several days. If another reason be required, ample justification will be found in the fact that with the method outlined above and the last point directly to be mentioned, in the majority of cases, the wound will be by that time entirely healed.

It is properly called a very speedy cure when any good-sized operation wound is well in ten days to two weeks, but I have so often been able to secure this same result in *five days* that I can confidently urge a trial of the method in all its simple but important details, assured that the verdict will be most favorable. The earliest possible healing of wounds all will admit to be our highest aim. It abridges the pain; it shortens the period of apprehension both to patient and friends—and how welcome the announcement that the cure is not almost, but altogether complete; and it lessens materially the expense—an item we should never forget, even with the well-to-do, and still more in the case of those who must pinch and sacrifice in order to meet unexpected demands upon a slender purse.

In fact, when a patient now asks me how long a stay in town, or how long a cessation from business, will be required, if it be an ordinary tumor, or amputation, or similar operation, and I can get ample flaps to secure primary union, it is my custom to assign ten to fourteen days as a maximum limit. I rarely exceed the greater and most frequently secure the shorter limit, sometimes still less. This, of course, is modified by bad general health, or severe local inflammation, involvement of bones, and other such causes of delay.

Fifthly: Securing absolute rest during the period of repair.—In general this is always recognized, but many of its lesser details are overlooked. After an amputation of the breast, a careful surgeon, having secured the dressings by a chest-bandage, will always, of course, enforce absolute rest of the arm by securing it to the body by a bandage or, as I prefer, by a strip of flannel. This I secure by two rows of large safety-pins to the chest-bandage; one row placed behind the arm and the other in front of it, so as both to support the upper arm in the recumbent posture and prevent its motion, while the forearm may be held up by a sling. In any but small wounds of the extremities, and also of the neck, suitable splints should always be applied, to enforce the dictum of absolute rest. These statements may possibly seem almost superfluous to older surgeons; but I have so often seen them neglected by younger surgeons, and sometimes even by those of some experience, that I may be pardoned for alluding to them by way of re-enforcement.

Again, rest is not only to be had in this, as it were, gross way, but by the greatest gentleness in the redressings. Hence, in the removal of a dressing, there should be no rude tearing of it off, but great care should be used in softening it by hot water at adherent points, seeing that it does not adhere to the drains and thus roughly displace them. All sponging or syringing should be done efficiently but gently, and in the removal of the tubing and, later, of the horsehair it should be done slowly and carefully, the latter thread by thread. By the "scientific use of the imagination" we should look below the skin, see the tender granulation-tissue uniting the wound-surfaces, the delicate capillaries ready to be torn by the slightest sliding of one raw surface upon the other, or by even gentle tension on the horsehair drain. Such care in the first and second redressings "pays well" in the securing of the speediest possible union.

I have insisted much on minute attention to trivial details. Taken singly each one is trivial, but taken together they mean much, and their result is simply delightful, alike to the patient in speedy cure, and to the surgeon in scientific results which a few years ago were impossible, even to the best of us, but are now every-day occurrences.

One other suggestion I venture to make. Immunity from return after the removal of malignant growths, I believe, is greatly favored by such speedy healing without irritation and inflammation. If so, every single day's abridgment of the process of repair becomes a matter of vital importance that should on no account be neglected.

To illustrate and enforce the practice I have thus described, I will relate in brief a few cases, which speak for themselves, and which may prove, I hope, a justification of much that is trite in what I have said.

CASE I. *Sarcoma of right breast.*—Mrs. S——, aged eighty-three; short, stout woman, weight one hundred and eighty pounds, with very flabby breasts. Tumor size of double fist; incision sixteen inches long; skin had to be loosened and united by *glissement.* Dressed on first day after operation, when the tubing was removed. Dressed on the fifth day; horsehair and stiches removed; entire wound healed. Highest temperature, 99°. Slight gaping at one point of great tension followed removal of the sutures, but it healed in three or four days. This is the oldest case I ever operated on. She is now entirely well, one year after the operation. It would have been wiser had I left the sutures in place at the point of tension for two days longer.

CASE II. *Scirrhus of left breast.*—Mrs. S——, aged seventy-five. Dressed on first day after operation and tubing removed. Second dressing on fifth day, when horsehair and all stitches were removed; wound entirely healed. Highest temperature, 99.8°. On the eighth day she came down-stairs herself, from the third story, and admitted me. Fifteen months after the operation, is still entirely well.

CASE III. *Scirrhus of both breasts.*—Mrs. B——, aged forty-one. Right breast removed first. Dressed on first and fifth days, when respectively the tubing and horsehair and stitches were removed; wound entirely healed. Was out of bed on fourth day, and out for a walk on the tenth day. On the twelfth day the left breast was removed, and with similar treatment was well on the fifth day. Three weeks after the first operation, and nine days after the second, she dressed her own back hair (involving, of course, much tension of the pectoral regions, but without any pain) and then travelled home, over three hundred miles, writing me that on her arrival she felt better than when she started. Highest temperature, 100°. Eleven months after the operation, is still well.

CASE IV. *Scirrhus of left breast.*—Mrs. K——, aged fifty. Similarly treated; was well in five days; all stitches and drainage out. Highest temperature, 99.5°. Nine months have passed and she is still well.

CASE V. *Scirrhus of right breast.*—Mrs. A——, aged fifty nine. Similarly treated, and well in five days; stitches and drainage all out. Highest temperature, 100.2°. A year after the operation, is entirely well.

CASE VI. *Scirrhus of left breast.*—Miss. B——, aged thirty. Similarly treated, and entirely well in five days. Highest temperature, 99°. Nine months after the operation, is entirely well.

CASE VII. *Adenoma of left breast, steadily growing.*—Miss R——, aged nineteen. Similarly treated; well in seven days. No rise of temperature.

CASE VIII. *Atrophic scirrhus of right breast.*—Mrs. M——, aged sixty. Similarly dressed; entirely well in seven days. Was sitting up, out of bed, on the day after the operation, when I arrived to dress the wound; never missed a night's sleep or a meal, except on the day of the operation. No rise of temperature. Three years later a small tumor appeared in the cicatrix, which was removed, with a similarly happy result. Over five years have been passed in perfect health since then.

CASE IX. *Lymphadenoid sarcoma of left arm.*—Mr. R——, aged thirty five. Tumor as large as an English walnut just above the internal condyle of the humerus. Similarly treated, and well in seven days. Tumor returned in four months. A second operation for its removal, similarly treated, was followed by recovery in seven days. Tumor returned in two months. Amputation of the upper arm just above the middle. Similarly dressed; entirely healed in five days. Was out of bed smoking a cigar on the fourth day, and on the seventh resumed his duties at the Electrical Exhibition. No rise of temperature. Three years and four months have passed, and he is in perfect health.

CASE X. *Goitre.*—Miss H——, aged thirty-seven. Almost complete thyroidectomy; moderate hemorrhage. Tumor reached below the top of the sternum and outward to the two carotid sheaths. Highest temperature, 99.4°. Similarly dressed; all well in five days. Three days later a small collection of serum at the centre of the wound was discharged by a small opening which healed in a week. Two years and four months have elapsed without any return, and with no influence on the general health other than a beneficial one.

CASE XI. *Arterio-venous aneurism of right arm* (for details, see the *Medical News*, December 24, 1887).—Miss L——, aged eighteen. Similarly dressed after a tedious dissection, lasting one and a half hour, with many ligatures; all well in eight days. Highest temperature, 100.5°.

CASE XII. *Enlarged scrofulous glands of neck.*—Miss S——, aged twenty-two. Removed eighteen glands, by incision, reaching from the mastoid process to the clavicle. Sterno-cleido-mastoid dissected loose its entire length; operation lasted over an hour. Dressed on the first day and tubing removed. On the third day I redressed the wound, as her temperature had risen to 102°, but found everything in good condition. Again on the fifth day, when I found the wound entirely well; horsehair and stitches removed. By this time it was evident that an attack of acute articular rheumatism had set in. It ran a prolonged and severe course, but had not the least deleterious influence on the healing of the wound.

CHLOROSIS AND HEART DISEASE.—Excessive anæmia being present, and the heart not being hypertrophied, the diagnosis of the cause of heart-murmurs is frequently very difficult. M. Duclos has returned to this battlefield of clinicians, and sums up his conclusions in the following propositions: In true chlorosis, no matter the number and site of the cardiac murmurs, the basic murmur is never absent, and is most often systolic. In true chlorosis the carotid murmurs, varied and more or less marked, are always present. In genuine chlorosis the bruits are generally more intense and more extensive than in heart disease, and are markedly out of proportion to the circulatory disturbance; further, the cardiopulmonary circulation remains free, and any disturbance in it indicates the persistence of a valvular lesion, and generally of the mitral valve. We do not join issue with M. Duclos in the general tone of his arguments, which are sound enough so far as they go; but the most frequent clinical difficulty is not so much the differential diagnosis of severe chlorosis from heart disease as it is the distinction or discovery of valvular lesion in the presence of less marked anæmia.—*The Lancet*, November 5, 1887.

RACE AND THE COLOR OF THE HAIR AND EYES.—M. P. Topinard is engaged in collecting statistics concerning the color of eyes and hair in France. Over two thousand persons have consented to lend their assistance in this undertaking. Among these are naval and military surgeons, directors of workhouses and factories, doctors, chemists, etc. M. Topinard has already received over eighty-seven thousand observations from different persons. The undertaking promises to be very successful, and next year we may look for a complete map, or census, in which the different shades of hair and eyes of the French population will be indicated by arrondissements.

THE VALUE OF LIMPING AS AN AID TO DIAGNOSIS.[1]

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THE object which I have in presenting this paper for your consideration this evening is to direct your attention to the very valuable aid which we may derive, in the clinical study of certain diseases, especially when occurring in children, from the phenomenon known as limping, or claudication. It would of course be impossible, in a communication of this nature, to study in detail all the possible affections in which limping may be an occasional or constant symptom, and a mere enumeration of them would only bore you. I propose, therefore, to consider briefly the different varieties of claudication, referring to some of the more important only of the diseases which present a limp as one of their symptoms.

Many physicians, I fear, are wont to regard a limp, in a child at least, as a matter of trifling importance; especially is this the case when the limp is intermittent. It is looked upon as the expression of fatigue, or as a habit, and is dismissed as a matter of little moment. It is, however, a symptom often of the greatest importance, and frequently, indeed, is the only sign indicative of very serious lesions, the further progress of which might have been arrested by timely treatment, had not the significance of the early limp been overlooked and its warning disregarded.

In normal locomotion there are certain oscillations of the body, which vary much in character and degree in different individuals, but which are always in three directions—vertical, lateral, and antero-posterior. Just as no two persons look exactly alike, so no two walk alike, and we must avoid the error of confounding peculiarities in gait with limping. The best definition of a limp is, I think, that given by Le Dentu, in Jaccoud's "Dictionnaire de Médecine." He characterizes it as an inequality in the oscillations of the body during progression, the characteristic phenomena of the type observed being repeated at each step. As the oscillations of normal progression are in three directions—antero-posterior, lateral, and vertical—so also are the irregularities of a limp; but they may be more pronounced in one direction than in another, and this is a point often of considerable importance, as I hope to demonstrate to you later. In studying a limp it is important to note, not only the particular category to which it may belong, as regards the predominating direction of its oscillations, but also the time of its occurrence—that is to say, whether it takes place at the begining of a step or during the act. In the latter case the normal mechanism of locomotion is at fault, while in the former a mechanical cause for the limp will be found in the inequality in the length of the limbs. The rhythm of locomotion is likewise to be studied. The oscillations may be apparently normal as to degree, but the step taken with one member is seen to be of much shorter duration than that made with the other limb. This occurs frequently in painful affections, when the patient favors one limb more than the other. The constancy of the limp is also to be taken into consideration. In commencing hip disease, for example, the limp is commonly intermittent, being absent for longer or shorter periods, and returning again without apparent cause, or in consequence of some slight traumatism. Again, when there is obstruction to the blood-supply of a limb, a limp is not present at first, but becomes evident only after the patient has been exercising for a short time. Finally, the time of day at which a limp is present should be considered. In some cases claudication is noticed only in the morning, or after a period of prolonged rest, and disappears after the patient has exercised for a time; or, again, it may become noticeable only toward evening, after the patient has been on his feet all day.

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[1] A paper read before the Manhattan Medical and Surgical Society, January 7, 1888.

A limp may be caused by an inequality in the length of the two lower extremities, or by some lesion of the skin, muscles, nerves, arteries, bones, or joints of the affected limb. We will glance briefly at some of these more common causes of limping, in order the better to comprehend the clinical significance of this important symptom.

The limp due to inequality in length of the lower extremities is the simplest form of claudication, and is easily recognized, as is also its cause, which is usually self-evident. A shortened leg may, however, be compensated for, in part or wholly, by extension of the foot, and in the case of a woman, whose dress conceals the deformity, even a considerable shortening may pass unperceived by any but the most careful observer.

Lesions of the integument may occasion the limp of pain, as is seen in the case of irritable ulcers of the leg, or of corns or other painful cutaneous affections of the feet. Extensive cicatrices near a joint may give rise to a condition similar to anchylosis, and the resulting limp will be that characteristic of this impairment of articular function.

Contractures of the muscles are a not uncommon cause of claudication, the particular variety of which will depend upon the deformity produced. The characters of the limp, varying according to the joint whose motion is restricted, will be described when we come to the lameness from articular troubles. It should not be forgotten that there may be pain accompanying the muscular contractures, and in such cases active joint disease might erroneously be diagnosed.

Paralysis may cause limping in any of several ways. In the early stages, before alterations in the form and nutrition of the limb have taken place, there is the limp due to impaired function. When the flexors of the thigh are affected, the limb must be thrown forward by a rotating motion of the body around the sound side; when the muscles on the anterior surface of the thigh are involved, extension of the leg is accomplished by a sort of flail movement; in paralysis of the flexors of the foot the toes droop and the limb is practically lengthened, so that the patient is obliged either to raise himself on the sound side while bringing the affected limb forward, or to throw the latter outward and swing it around to the desired position; when the calf-muscles are the ones paralyzed, the normal extension of the foot cannot take place, and there is an inequality in the vertical oscillations during progression. After the disease has existed for a time there is more or less atrophy, and, in children, arrested growth, with its consequent shortening; usually, also, muscular contractures occur, and lead to impairment of joint-function. The most usual forms of paralysis met with in children are infantile paralysis and infantile hemiplegia. The so-called spastic paralyses and the ataxic gait of tabes dorsalis need only be referred to, since they do not cause a true limp, although they modify normal locomotion very materially.

A painful limp may be due to sciatica or other forms of neuralgia. In hysterical joint-affections the limp is similar to that caused by the true disease there simulated.

There is a peculiar form of limping, which has been well described by Charcot, Terrillon, and other French observers, which is due to obstruction in the main arterial supply of the limb. The limp is one due to pain, and is intermittent in character. The patient, on getting up in the morning, or after a prolonged rest at other times, walks well, with no suspicion of a limp; but after going about on his feet for a time, usually only a few minutes, or at most an hour, according to the amount of exercise taken, he begins to experience sharp pain in the affected member, which finds expression in a decided limp. If the walking is persisted in, this pain soon becomes so severe as to render further locomotion impossible, and the patient is forced to rest. After a time of absolute quiet he attempts to walk again, and finds that the pain and the limp have entirely disappeared; but a little more exercise brings them back again in full severity. This peculiar form of claudication has been found to be due to interference with the vascular supply of the limb, which eventually may result in gangrene and loss of the member.

Affections of the bones may cause a limp in one of several ways. In the early stages of osteitis, or periosteitis, stepping on the diseased limb causes pain; the patient favors the leg as much as he can, and endeavors to throw the weight of the body as quickly as possible over to the sound side. The rhythm of locomotion is in such case markedly altered, and there is a manifest inequality of the lateral oscillations. Here the claudication occurs during the step. In some cases of necrosis there is lengthening of the bone, due to irritation and consequent abnormal growth at the epiphyseal end. When too early union of the epiphyses has occurred from any cause, the growth in the bone is retarded and shortening results. A similar condition of shortening may follow disease of the articular end of the bone, operations, fractures with longitudinal displacement of the opposing fragments, and tumors causing a retardation of growth or loss of substance of the bone. There is here a difference in length of the two members; the limp occurs at the beginning of the step, and is marked by exaggerated vertical oscillations, without necessarily any noticeable disturbance of rhythm. This is one of the least deforming varieties of claudication, and the difference in length of the two members may, if it be not too great, be almost perfectly compensated for by extension of the foot upon the shorter side, or by the wearing of a high-soled shoe.

Lesions of the joints are among the most common causes of lameness. Here the limp may be caused by pain, by restriction to normal articular motion, or by weakness of the joint unaccompanied by either pain or restricted movements. When due to pain resulting from injury or disease, the limp is of the same character as that symptomatic of inflammatory bone-lesions, but is often more marked in proportion as the joint-sensitiveness is greater. In commencing joint disease, or in hyperæmia of the articular structures before any actual inflammation is present, there is often a limp or a "favoring" of the member, which is unaccompanied by pain, and is due to reflex influences or to nature's effort to protect the joint. The limp in this case is similar in character to that caused by painful affections, but is wholly involuntary, and the patient himself is often unable to explain why he walks lame. When the articular motion is restricted, the limp will vary in character according to the joint affected and to the variety of deformity present. In anchylosis of the hip in extension, the limp is characterized by a peculiar balancing of the body in an antero-posterior direction. As the weight rests on the sound side the anchylosed limb is thrown forward and the body backward, and then, as the weight is transferred to the anchylosed limb, the body goes on in advance while the leg on this side remains behind. Sometimes the limp consists in a sort of rotation, now to one side and now to the other, as the axis of rotation is transferred from one limb to the other. The body is turned half around on the sound limb, and then the motion is reversed by rotation on the heel of the anchylosed side. This may occur when but one hip is anchylosed, but is the only possible mode of progression without crutches when there is anchylosis in extension at both hip-joints. When one hip is stiffened in flexion, the vertical position of the body is maintained by compensatory lordosis of the lumbar spine, but the limb is shortened by reason of its position, and there is an exaggeration of the vertical and also of the lateral oscillations. When the spine is also rigid the body cannot be held erect, and there is an inclination forward. In such cases oscillations in each of the three directions occur during locomotion.

In sacro-iliac disease the patient tries to avoid, as far as possible, resting the weight of the body on the affected side. He drags the foot along, moves it slowly and only to a slight extent, and places it flat on the ground, avoiding the heel-and-toe movement. He usually leans slightly forward in walking, and in standing inclines the body over toward the sound side. Sometimes the toes are directed slightly outward.

When the knee is stiffened in extension the normal shortening produced by flexion cannot take place; the limp occurs during the step, and is characterized by increased vertical oscillations, as the patient must extend the foot more on the sound side, so as to raise the body and allow of room for the carrying forward of the stiff leg. If the joint is held in the position of flexion the limb is shortened, and claudication occurs at the beginning of the step.

In anchylosis of the ankle with extended foot (talipes equinus) the limb is elongated, and the characteristic limp of inequality in length takes place. When it is stiffened in flexion (talipes calcaneus) the limp occurs during the step, and is occasioned by absence of the normal lengthening which should take place from extension of the foot in walking. In talipes varus, in addition to the limp due to unequal length, there is usually a lateral oscillation from unsteadiness of support. In talipes valgus, besides the limp caused by imperfect extension of the foot, there is commonly also an altered rhythm in the steps, depending upon the pain felt in walking.

When joint disease is active and pain is present, as well as restriction to motion from reflex muscular spasm, there is a mixed limp, due to the elongation or shortening of the limb from position, and to the pain caused by intra-articular pressure and attempted motion. The rhythm is altered, and lateral and vertical, and sometimes also antero-posterior, oscillations are produced.

In congenital dislocation of the hip the limp is peculiar. It occurs at the beginning of the step, and is prolonged during its progress. The sinking of the body seems to continue as long as the weight rests upon the affected limb, and at the same time there is a very marked lateral deviation. In bilateral dislocation the gait is waddling and extremely awkward, but there is usually no limp, strictly speaking, since the oscillations on the two sides, though abnormal, are equal.

In cases of relaxed and weakened joints, resulting from previous inflammation, with effusion and distention of the articular structures, or from any other cause, the gait is uncertain. There is not always a true limp, but there is apt to be a more or less marked lateral or vertical oscillation, not necessarily occurring at every step, but taking place irregularly whenever the articulation gives way.

Claudication is of very common occurrence in Pott's disease of the spine. If the psoas muscle is contracted, the thigh becomes flexed and a limp is caused. Limping may also be excited by the peripheral pains of spinal caries, or there may be paraplegia, more or less complete, with consequent interference with normal locomotion.

In lateral curvature of the spine there is not uncommonly an obliquity of the pelvis, with apparent shortening of one lower extremity, and frequently there is actual shortening, occurring either as a consequence or as a cause of the scoliosis. In this case, of course, a more or less noticeable limp is present.

In conclusion, I hope you will pardon me for calling your attention once more to the great importance of this symptom of limping. It is often the first sign of a serious trouble, which may possibly be averted if discovered in time, but which will work great and lasting injury if the warning given by the limp is neglected and the disease allowed to progress untreated. This is especially true in the case of hip disease in children. A limp is almost always the first intimation which the commencing articular trouble gives of its presence; but, as the claudication is often intermittent, the parents, and even at times the physician, are wont to disregard it, or to think it is only a "bad habit," and it is not until pain and deformity supervene that the true cause of the limp is recognized. No limp, however trivial, occurring in a child, should ever be lightly passed over. The little patient should be carefully examined, and all his joints tested; and even if no disease be discovered at the time, he should be watched, so that if any trouble does exist it may be recognized in its incipiency and receive appropriate treatment.

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THE USE OF THE CURETTE FOR THE RELIEF OF HEMORRHAGE DUE TO UTERINE FIBROIDS.[1]

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Curetting the uterine cavity is such a familiar operation that it is unnecessary to refer to the ordinary indications and technique. It is my purpose in this brief paper not to suggest any new application of this useful little instrument, but simply to invite discussion of a simple method of treating a formidable condition, which, though familiar to gynecologists, does not appear to have met with the recognition which it deserves among the profession in general. Profuse hemorrhage from the non-puerperal uterus is an alarming phenomenon to the practising physician. It is noticeable that men who preserve the utmost *sang-froid* in the presence of post-partum flooding are sometimes completely at a loss in cases of menorrhagia, and, instead of searching for the root of the evil and striking at it directly, they will temporize, and rely upon medicinal treatment, hoping that the patient may by good fortune be enabled to tide over the period that elapses before the menopause, in deference to the popular idea that at this time the hemorrhage will suddenly and mysteriously cease. But this hope is more or less illusive, for not only may the presence of the fibroid prolong the climacteric period, but the tumor may actually increase in size, while the loss of blood becomes more, instead of less, profuse. In short, the patient may become gradually weaker and weaker while the attendant is waiting for nature's cure, until, when he is finally aroused to a real sense of her serious condition, and decides that a radical operation is necessary, she is no longer in a condition to submit to it. Every gynecologist is familiar with mournful examples of what "might have been" in such cases if the cause of the menorrhagia had been discovered earlier and an intelligent effort made to remove it.

There is a general opinion among practitioners that there is no middle ground in the treatment of these cases between internal medication (perhaps combined with intra-uterine applications, astringent douches, and tamponing) and a radical operation. Modern text-books are responsible for this. "The number of articles devoted to the consideration of operative measures for the cure of this affection," says Winckel, "is five times as great as that of those advocating medical treatment, and in the latter ergot and electrolysis are alone mentioned with any degree of confidence." The same conservative writer is almost the only one who alludes to the use of the curette, in these words: "But when all these remedies are no longer of avail the uterus must be sounded, or eventually dilated, in order to see whether an adenoma of the mucous membrane is present, and, if so, to remove it. It is advisable to curette the uterus in any case, and after swabbing it out with absorbent cotton wrapped upon the tip of a sound, to check the hemorrhage, if present, with solution of the sesquichloride of iron."

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[1] Read before the Obstetrical Section of the Academy of Medicine, November 23, 1887.

It is important, before proceeding to the practical part of this subject, to call attention to a few elementary facts in uterine pathology, at the risk of repeating what is already well known to my hearers. It would seem unnecessary to insist upon the fallacy of the idea that in hemorrhage from fibroid uteri the blood comes from the tumor itself, or that, except in rare cases, it is due to the rupture of blood-vessels either within the tumor or in the mucous membrane covering it. Yet we read in a recent edition of a well-known text-book on gynecology that "the loss of blood takes place from the rupture of some little vessel on the lining membrane of the canal covering the portion of the partially projecting tumor." Of course, if this explanation were correct, the treatment advocated in this paper is based on entirely erroneous principles; but it is impossible to accept this theory, even from a strictly clinical stand-point. Without dwelling on points which are sufficiently familiar, let me remind you that the hemorrhage from fibroid uteri is frequently quite out of proportion to the size of the tumor, and also to the depth of the uterine cavity as indicated by the probe. Thus, a large subperitoneal tumor, filling the abdomen, may give rise to pressure-symptoms alone, while an insignificant submucous polypus occasions exhausting menorrhagia. The difference does not lie in the relative vascularity of the growths, nor does their position alone furnish an explanation. Again, we know that the hemorrhage is apt to be most excessive from uteri which contain intramural growths that project into the uterine cavity, *i.e.*, are partly submucous. But such growths are even less vascular than the two former varieties. Now, the hemorrhage is essentially a menorrhagia, like that due to endometritis fungosa, and hence is directly referable to menstrual congestion. In neither case is it usual for a gush of blood to occur without any warning, as would be the case if it came from a ruptured vessel, but the hemorrhage begins like the normal menstrual flow, and subsequently becomes excessive. The natural inference is, that in the case of fibroid uteri also the blood comes directly from the hypertrophied mucous membrane. Lay open the uterine cavity in a typical specimen of intramural fibroid; it may be only moderately enlarged, but even on gross inspection it will be evident that the endometrium is thicker and more spongy than it is in a normal uterus, while here and there are to be seen those translucent cauliflower growths with which we are so familiar under the name "fungosities." Sections made through the uterine wall at different points will show clearly the hypertrophy of the mucosa, and accompanying it an immense increase in its usual vascular supply. Each fungosity represents a relatively enormous bleeding surface, as is daily proved clinically, as well as anatomically. Now, this hypertrophy of the endometrium is noticeable everywhere except at one point, and that is over the surface of the projecting tumor, where it is actually atrophied, in consequence of long-continued pressure, and, so far from containing large vessels which, according to the theory to which reference was made, rupture under the increased pressure of the menstrual nisus and are thus the direct source of hemorrhage, it is less vascular than normal, containing only a few dilated veins. Even in the case of polypoid growths, the bleeding is seldom from the tumor itself, unless there be complete obstruction to its venous circulation or actual ulceration. In consequence of this localized atrophy of the mucous membrane covering the tumor, according to Gusserow, there is produced collateral hyperæmia in the rest of the mucosa, leading to swelling and hypertrophy of the same, and which at the time of the menstrual congestion gives rise to profuse hemorrhage. "That, moreover [to quote from the same writer], the changes in the uterine mucosa are not always due to such purely mechanical causes as hyperæmia, from local stasis, but that inflammatory swelling of the endometrium may occur, in consequence of the irritation produced by the tumor, is proved by those occasional cases of hemorrhage, accompanying pure subperitoneal fibroids, in which we find here and there in the uterus changes that may be best described as chronic metritis, and that they are more frequent in connection with interstitial growths."

The pathological sequence is now clear. The presence of a fibroid tumor (especially of the submucous or combined submucous and intramural variety) determines an increased afflux of blood to the uterus, not so much because of the extra amount of blood required for the nutrition of the growth as by reason of the venous obstruction induced by its presence. The entire uterus hypertrophies in consequence, but this hypernutrition affects principally the endometrium, which undergoes the change so common in subinvolution, but much more marked. When to this general hyperplastic endometritis is added the collateral hyperæmia induced by localized atrophy of the mucosa covering the tumor, the true cause of the hemorrhage is presented beyond a shadow of doubt. The blood is derived from the entire mucous surface, and not from any single ruptured vessel or sinus. This explains why a tumor of insignificant size may give rise to a hemorrhage as alarming as it is apparently inexplicable, while a growth twenty times as large may cause only a slight increase in the normal menstrual flow. The difference is to be sought for, not in the difference in vascularity between the growths, nor entirely in their location, but in the condition of the endometrium in the two cases. Why the latter is much hypertrophied in one case and only slightly so in another, where the conditions are apparently similar, we cannot positively determine, any more than we can tell why the removal of the mucosa arrests the hemorrhage in one instance and not in another. We may be sure of the source of the hemorrhage, while we cannot control the ultima causa.

These simple anatomical facts, which are easily demonstrated at the operating-table and in the dead-house, are capable of a direct practical application. Can we not, by removing one of the principal links in the pathological chain, relieve the alarming symptom under consideration, even though the active cause remain? In short, if the hypertrophied mucosa is scraped away, will not the hemorrhage be lessened? I do not desire to make any sweeping assertions, based on insufficient and imperfect statistics, regarding the benefit obtained by the use of the curette in cases of hemorrhage from fibroid uteri, but I am sure that there are few gynecologists who cannot recall instances in which curetting, adopted merely as an empirical measure, has been followed by unexpected, not to say brilliant, results. It is unfortunate that no reliable tables of statistics have been compiled; those derived from hospital-records are not conclusive, since, although there is no lack of cases (at least in the Woman's Hospital) in which hemorrhage was relieved by a single operation, the after-history of the patient is seldom obtainable. Of course, the hemorrhage tends to recur, just as the lining of the uterine cavity is renewed after being thoroughly removed. Curetting is not to be regarded as other than a temporary relief under any circumstances. That it may afford relief for a long period is shown by the following typical case:

An unmarried woman, aged twenty-five, was under my care about five years ago, suffering from menorrhagia, which had reduced her to a decidedly anæmic state. She also had moderate pressure-symptoms. Examination revealed the presence of an interstitial fibroid as large as a man's head, which caused uniform enlargement of the uterus, the cavity of the organ having a depth of between four and five inches. Medication, tamponing, and injections were of slight avail, and the patient's condition was considered sufficiently serious to warrant a radical operation. As an experiment, the uterine cavity was thoroughly curetted, a quantity of hypertrophied mucous membrane, or fungosities, being removed, after which an application of tincture of iodine was made, and the same was repeated three or four times subsequently. At her next period a marked diminution in the flow was noted, and soon after she passed from under my observation. Previous to this she asked me if it would be wise for her to marry, to which I returned a decided negative, setting forth to her not only the dangers to which she would be exposed if she became pregnant, but the immediate risk of a return of the hemorrhage which might be entailed by the marriage relation. She wrote to me twice—once after an interval of three or four months, to say that her monthly flow was nearly normal in amount, and again, after a longer interval, saying triumphantly that she had been married for several months and felt better than ever before. The last news from her came in the shape of a letter from her physician, in which he stated that she had become pregnant, had aborted, and was flowing so profusely that her recovery was doubtful.

The subsequent history of the case does not concern us. The point to be emphasized is the prompt relief afforded by the use of the curette, which relief would doubtless have been long-continued, had not the patient deliberately incurred the danger against which she was warned. The excessive loss of blood which followed the early abortion was due not alone to the inability of the uterus to contract properly in consequence of the presence of the fibroid, but also to the fact that under the double influence of the tumor and pregnancy the endometrium became more hypertrophied than it was originally.

Theoretically, the objection may be raised that the simple removal of the mucosa is not a scientific method of dealing with the pathological condition as a whole. This is true ; still, it must be remembered that we are discussing the treatment of a single objective symptom—hemorrhage. Subjective symptoms, due to the mechanical pressure of the tumor on adjacent organs, ducts, or vessels, are not considered in this paper ; these alone may be so serious as to justify hysterectomy. Intrauterine growths should, of course, be removed at once ; simply scraping off the mucous membrane would be unsurgical when the polypus itself could be extirpated without serious risk. The condition in which we may hope for success from curetting is, as has been pointed out, that of an intramural growth, projecting into the uterine cavity, precisely such a sort as surgeons are sometimes tempted to attack with the spoon-saw, and occasionally with unfortunate result. The technique of curetting is quite familiar, but it is important to remember that the anatomical conditions are different from those in an ordinary case of endometritis fungosa accompanying subinvolution. In fibroid uteri the os is frequently drawn up behind the symphysis, so that it is only with the greatest difficulty that an instrument can be introduced into it ; indeed, this is often impossible. Again, the uterine cavity may be greatly elongated, but narrow and tortuous, so that a curette could never be manipulated within it. But, in my experience, the endometrium is more often atrophied than hypertrophied, under the latter circumstances, so that curetting would do no good. Clinically, it is, of course, impossible to determine whether a given case presents exactly such anatomical conditions as will justify us in predicting a favorable result from the operation, but I would expect decided benefit where the tumor was of moderate size and the uterine cavity was considerably enlarged—where the hemorrhage was out of proportion to the size of the growth, and the sound revealed a general soft, spongy condition of the endometrium. For the rest, the operation should be performed about midway between the monthly periods, the patient being thoroughly anæsthetized ; the curette should be used vigorously, and as long as any shreds of hypertrophied tissue can be removed. The caution to apply iodine to the abraded surface at intervals after the operation is especially applicable here. It seems illogical to rest content with astringent applications alone, when the desired result can be obtained by scraping away the diseased tissue, and then retarding its renewal by subsequently applying the same remedies. I do not doubt that some of the good results obtained by Apostoli in treating uterine fibroids by passing powerful currents through the intra-uterine electrode are directly due to the charring of the mucous membrane with which the latter comes in contact.

Another important point is not to give up curetting until it has received a fair trial. Suppose the lining membrane does re-form in a few months, it can easily be scraped off again, and if the patient can be kept in this way from exhausting hemorrhages until the menopause, we have reason to feel better satisfied than if we had removed her ovaries and tubes, perhaps without attaining the desired result, not to speak of the more serious operations, enucleation and supravaginal amputation. The dull-wire curette is not the exclusive property of gynecologists. No special skill is required in using it. In spite of all that has been said and written in its favor, it does not seem to be as popular among the general profession as it should be, else uterine hemorrhage would not be such a bugbear as it is. It is conceivable that much good might be accomplished if the fact could be emphasized that it is not necessary to remove the entire uterus because of hemorrhage which cannot be controlled by medication. I can recall several fatal cases of hysterectomy, performed for the relief of hemorrhage from fibroid uteri, in which an examination of the specimens showed that the source of the bleeding was clearly the *interior*, not the *exterior*, of the organs.

It may be urged in objection that the operation recommended in this paper is uncertain in its results, and that the indications are not sufficiently clear ; the same applies to removal of the tubes and ovaries, and the relative risks are widely different. Curetting involves little more danger than does an intra-uterine application, and, being such an innocent procedure, we can afford to practise it simply as an experiment. No patient will object to it, even when presented in that light, if she understands that it may enable her to avoid a more serious operation. It is hardly necessary to add that we are not justified in allowing a patient to bleed to death while we are testing the value of the palliative measure.

In conclusion, I would again express my regret that the practical deductions made in this paper do not rest upon a more solid statistical basis. Definite facts are much needed, and these can only be furnished as the result of a series of observations made in private practice and extending over a sufficiently lengthy period to make evident the remote as well as the immediate effects of the treatment described. Such statistics need not emanate from specialists alone. This is a fruitful theme for collective investigation. The following is a brief summary of the points which deserve study :

1. The hemorrhage in cases of fibroid tumor of the uterus has its source, not in the tumor itself, but in the hypertrophied endometrium.

2. The hemorrhage is not directly proportionate to the size of the tumor, but to the extent of the mucous surface. Venous obstruction and the menstrual congestion in the mucosa are the chief active causes.

3. In certain cases the hemorrhage can be diminished for a considerable period by thoroughly scraping away the hypertrophied endometrium and repeating the operation as often as may be necessary to keep the menorrhagia under control.

4. Curetting is merely a palliative measure, but it may enable the patient to survive until she is relieved at the menopause, whereas radical operations too often result fatally.

5. Curetting in these cases should be regarded as an experiment, which, however, is so harmless and so frequently successful, that we are justified in giving it a fair trial before advising oöphorectomy, myomotomy, or supravaginal amputation.

6. The use of the curette requires no special skill. It

is an operation for the general practitioner, and is much more rational than to allow the patient to become exhausted by repeated hemorrhages which medication and other palliative measures are powerless to control.

THE INDUCTION OF PREMATURE LABOR IN AMAUROSIS AND AMBLYOPIA, IN CONNECTION WITH THE ALBUMINURIA OF PREGNANCY.[1]

By THOMAS R. POOLEY, M.D.,
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Among the indications for the induction of abortion or premature labor in the albuminuria of pregnancy, disturbances of the vision have not received the attention which the great importance of the subject seems to demand.

It has long been known that pregnant women are liable to affections of vision, from slight impairment of sight to even complete and permanent blindness. This was known, too, before Bright's careful description of kidney affections and the discovery of the ophthalmoscope, and attributed to affections of the brain. It may occur at any time during pregnancy, or after labor, and may recur in several successive pregnancies; it is, however, more apt to occur in the later months. Blindness may last for weeks, and then, after labor, complete recovery ensue, or the sight may be permanently lost.

The changes occurring in the eyes, in the albuminuria of pregnancy, are essentially the same as those observed in the course of chronic nephritis. Without entering into a description of these, which is not necessary for present purposes, it will be sufficient to distinguish two ways in which the sight may be affected:

1. A sudden more or less transitory and complete loss of sight, uræmic amaurosis, without appreciable changes in the fundus oculi.

2. A gradual failure at first, not complete loss of sight, with characteristic changes in the retina and optic nerve, which in time may lead to blindness, neuro-retinitis Brightii, or albuminurica. These changes are so marked and uniform that the diagnosis of the kidney disease can be made from them alone.

These facts being so well established, it would seem strange that, until quite recently, no one had proposed the induction of premature labor solely with the view of arresting the progress of the eye disease; but such is the fact. The writer has looked over several of the more recent works on obstetrics,[2] with reference to this point, and while they mention the occurrence of visual disturbance, there is no suggestion as to this being an indication for bringing on premature delivery. We are naturally led from the foregoing facts to the consideration whether it is ever justifiable or proper to provoke premature labor for the restoration or preservation of sight alone, even when the other symptoms usually recognized as sufficient cause for this procedure may be wanting, which it is the main object of this paper to discuss.

For this reason, it seems especially desirable to consider the question before a body like this, composed of obstetricians and general physicians, rather than in a society made up of specialists alone. For the question as to the propriety of such a course, as well as the indications for its adoption, will be best settled upon a proper scientific basis by the obstetrician and oculist acting in conjunction. It will require the examination of the fundus oculi by a competent ophthalmoscopist, to decide whether the retinal mischief alone is sufficient to resort to such a serious operation, but there may be other considerations to be taken into account upon which he is not so competent to decide.

The credit of first having induced premature labor for the only reason that permanent blindness was threatened belongs to our distinguished Fellow, Dr. E. G. Loring, of this city, in an admirable paper on the subject of which we are speaking, which was published in the "Transactions of the American Ophthalmological Society" for 1883, and also reprinted in pamphlet form. Although Dr. Loring's case was not one of either uræmic amaurosis or retinitis albuminurica, in the sense in which we are now considering the subject, but of atrophy of the optic nerves, aggravated, if not caused, by rapidly succeeding pregnancies, it nevertheless deserves our consideration here as being the first case of the kind published where the operation was done for the preservation of vision.

The patient, in whom one eye was already blind, was thirty-five years of age. The vision of the other was threatened. She had had three children, and, before the birth of each, impairment of vision, so that after the third child's birth she was blind in the left eye, and in the right V. = $\frac{1}{3}$. Becoming pregnant again, and loss of the use of the remaining eye being feared, abortion was induced at the third month, and she made a good recovery, the vision becoming very much improved. Whether or not the condition of the kidneys had anything to do with the loss of vision in this case, it seems evident enough that the successive pregnancies had. The usual symptoms of albuminuria were wanting, and there were at no time evidences of albumen in the urine. But, for all this, may not the condition have been due to the effects of uræmic poisoning on the optic nerves, finally resulting in atrophy of the disks? In order to obtain the author's own opinion, a note was addressed to him, which is so interesting that we may be excused for quoting it: "I did not consider that my case depended upon kidney disease, as we are able now to recognize it. I went out of my way to insist that, after every known test had been exhausted, no sign of kidney disease could be found. Now as to whether, in this case, there was neuritis or atrophy depends, I think, on how we look at it. The ophthalmoscope certainly showed that there was some blanching of the disk—indeed, a great deal—but, on the other hand, would you say it was a case of *progressive atrophy* [a term which we had used in the letter to the doctor], which improved in vision from counting fingers in a few feet up to V. = $\frac{2}{5}$. There would seem to be, in these cases a mixture of inflammation (neuritis) and atrophy. If taken early enough, the inflammation may be reduced so that vision improves, and yet some atrophy remains, as seen by the mirror. You may speak of uræmic amaurosis, and, if so, what and where is the lesion? For example, there are cases of so-called uræmic blindness when there are no ophthalmoscopic signs at all, although in these there might have been, if death had not intervened. In a great many of them I am induced to think that there is a retro-bulbar neuritis as the initial lesion, which may show itself at a later day as an atrophy of the disk. Still, we know very little about the matter." Reference has been made already by the writer to uræmic amaurosis, but no attempt made to explain what the lesion in such cases is, as it is a mere matter of speculation, no change in the eye having been seen in such attacks. But, whatever may be the cause, there seems to be no good reason why atrophy of the nerve may not result from obscure disease of the kidney. Dr. Loring's suggestive remarks gain force when we consider that there are many cases of granular kidney in which albumen in the urine is not detected; at least, not for a long time. Aside from this very interesting case, which is briefly sketched, as the first of the kind, so far as ascertained, published, the author's paper includes the subject of disturbances of vision in the albuminuria of pregnancy, and very ably advocates the importance and propriety of the induction of premature labor in cases where loss of vision is threatened.

Since this publication would seem to justify the priority of Loring in recommending this important procedure, his case is given the first place in these remarks, and throughout this paper frequent reference to it will be made. There can be no doubt that his publication has created increased interest in the matter, as shown by another on the same subject, which soon followed, by Dr. W. O. Moore,[1] of this city, which is also a very interesting and instructive article. He shows that, although Loring's was the first published case in which premature labor was actually performed, Dr. W. J. Scott, of Cleveland, O., in 1875 called attention to the necessity of producing premature labor, but does not mention any case in which it was done. In a case reported by Dr. Holmes, of Chicago, premature labor was advised, not on account of the blindness but for the general condition of the patient, she having at the time pericardial effusion. Still more recently, the subject was quite fully discussed in a meeting of the New York Ophthalmological Society, April 11, 1887.

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[1] Read before the New York Academy of Medicine, January 19, 1888.

[2] Lusk, Mathews Duncan, Cazeaux, and Tarnier. Cyclopædia of Obstetrics and Gynecology; the seventh revised American edition. A. Charpentier, translated by E. H. Grandin, New York.

We shall now very briefly relate a series of cases, first, in which the patient was either allowed to go to full term, or where premature birth occurred spontaneously; and, second, where premature labor was induced artificially, to see whether the permanent results as to vision were improved by the procedure. By this means we can best judge of the advisability of this method of treatment.

Mrs. B——, aged thirty-six, seen by the writer, October 2, 1880, two weeks after confinement, in consultation with Dr. Lees, of this city. During pregnancy she had several attacks of dimness of vision, nausea, and headache, with albumen in the urine. Toward the latter end of the eighth month sight became more seriously affected, and continued after her confinement as a "film before the eyes." Examination of the eyes at this time showed a very well-marked, although not high, grade of neuroretinitis. There was venous hyperæmia, slight haziness of the retina, and the outlines of the nerve were indistinct; at the region of the macula lutea, several white patches, which assumed the stellate arrangement so characteristic of Bright's retinitis; albumen still in the urine, but much less than before and just after the confinement. The sight at this time was not accurately ascertained, as the patient was still in bed.

October 19th.—V. = $\frac{20}{40}$ in the left, and $\frac{20}{50}$ in the right. The ophthalmoscopic appearances had much improved, and there was still less albumen in the urine.

December 16th.—The ophthalmoscope showed a slight haziness of the retina and some dilatation of the veins; no longer any albumen. From this time on the patient made a good recovery, and the vision became normal. For a long time, however, she complained of asthenopia and blurring of objects. This lady has been under observation, occasionally, every year since this occurrence, now seven years ago; she has, fortunately, never again become pregnant, and has been in full possession of useful vision. This is one of the most fortunate recoveries which have come under our notice, and for this reason alone is here inserted. The result is hardly ever as good as this, for the later changes in the neuritis usually cause some atrophy of the nerve and retina, with corresponding loss of sight. In order to be impartial in the selection of cases, it has been reported as one in which premature labor was not induced. It will be noticed, however, that the permanent dimness of vision did not come on until the end of, or after, pregnancy. The temporary obscurations of sight were doubtless due to uræmic amaurosis, without changes in the retina or optic nerve taking place.

The following case is reported by Mr. Robert Lee, of London,[2] the particulars being furnished to him by Mr. Bowman, and is referred to in Loring's paper. On December 7th, Mr. Bowman was consulted by a lady who was pregnant, and "who had rather suddenly lost her sight in a great measure." The urine was found to be excessively loaded with albumen. At Mr. Bowman's suggestion the patient consulted Mr. Paget and Dr. West, who anticipated, Mr. Bowman says, as he did himself, "that the confinement would be attended with convulsions of a dangerous character." No ophthalmoscopic examination was reported. On January 9th, or about one month later, she had a premature confinement of a male fœtus, which was still-born. The patient regained her health and strength, but Mr. Bowman regrets to say that the sight has only partially returned. Eastlake,[1] quoted by Moore (*loc. cit.*) reports a case of a patient, aged thirty-four, who had had nine children at full term and no miscarriages. At the birth of the first child she had no ocular symptoms. On the second day after the birth of the second child, and after all her seven subsequent labors, she suddenly became totally blind in both eyes, which lasted from three to five weeks. An ophthalmoscopic examination of the eyes, long afterward, demonstrated only the existence of contracted retinal arteries and blanched optic nerves. No account of the examination of the urine was given, but the picture may have been that of the last stages of albuminuric retinitis.

Dr. Holmes, of Chicago,[2] publishes a case of which, although incomplete, inasmuch as he does not tell us whether artificial delivery, which was recommended by the attending physicians—not, however, on account of the blindness but the general condition of the patient—was actually performed, we nevertheless make use. A patient, aged thirty-five, primipara, whom he was called to see in consultation, in the sixth month of pregnacy. The retinæ were pale and œdematous, the disk indistinct, the retina scarcely visible, and the patient was totally blind in each eye, but there were none of the white exudations at the macula, or elsewhere, usually seen in Bright's retinitis. The conjunctiva was œdematous and the eyes were immovable; in the right eye a detachment of the retina was present; the patient had general anasarca, with albumen in the urine. She was seen by Dr. Holmes six years later, and showed in the left eye several light-colored patches, atrophy of choroid, bordering the disk. Could read Jaeger No. 1 at ordinary distance. In the right eye there was atrophy of the choroid, and, at the site of the former detachment, a long deposit of pigment. She had a central scotoma, and V. = $\frac{1}{3}$. The patient was totally blind for three weeks, and entirely color-blind for three months. In strong contrast to this is a case reported by Brecht, of Berlin, referred to by Loring in his paper (*loc. cit.*), in which separation of both retinæ occurred during gestation, and where readjustment of both took place after a premature birth, which occurred without any artificial intervention. In January, 1863, Mr. Lee (*loc. cit.*) saw a young lady in the third month of her pregnancy. She was suffering at that time from sensitiveness in the region of the uterus, sickness of the stomach, and general nervous irritability; the pulse, however, was not very rapid, and there was no symptom to excite alarm. On March 21st, two months later, he received a note from Mr. Bowman, desiring a consultation, as the patient had consulted him for defective vision. "The urine was loaded with albumen, and there was destructive disease going on in the coats of the eye." As the patient was in the sixth month of pregnancy, and seemed to be threatened with convulsions, and especially as the symptoms became urgent in the following three days, premature delivery was proposed by Mr. Lee, as he believed the affections of the kidneys and eyes arose from the pregnancy. Before, however, having recourse to this, it was considered proper to have a consultation with Dr. Robert Fergurson, who thought it unadvisable to induce premature labor, chiefly on the ground that the life of the child would necessarily be sacrificed. It was determined, on account of this advice, not to interfere, but to wait and see what course the disease would take. On April 10th, or three weeks later, there was an attack of convulsions, and as these were sufficient to excite apprehension that fatal puerperal convulsions would take place, it was considered proper, after a second consultation, that premature labor should be induced immediately. This was successfully performed, and, with occasional drawbacks, the patient continued to recover for the next ten days, when she could distinctly see the "figures on the dial of a watch."

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[1] New York Medical Journal, April 17, 1886.

[2] Medico-Chirurg. Transactions, vol. xlvi., p. 171.

[1] Transactions of Obstet. Society, vol. v., London, 1863.

[2] Archives of Ophthal., vol. x.

Cases of this kind in which the intervention of nature, by producing premature delivery, has shown good effects upon the impaired eyesight, by removing the cause, might be increased in number, but we turn now to those in which the production of premature labor was done upon the advice of an oculist, for the purpose of restoring or improving vision alone.

Moore (*loc. cit.*) reports the following case: A German woman, aged forty-eight, pregnant with the twelfth child, has never had any ocular symptoms during previous pregnancies. She said that, three weeks before, she had had a chill, and thought she had taken cold; since then she has not felt so well. Shortly after this chill, she had had impairment of sight in each eye; although not completely blind, yet nearly so. She came under Moore's notice, January 2, 1881, when she was anæmic; no anasarca; urine contained about one-third albumen, and some epithelial casts. The ophthalmoscope showed the media clear, the retina much swollen, and neuro-retinitis, with exudations and hemorrhages well marked, more especially in the macula of the left eye. R. V. $=\frac{1}{70}$; L. V. $=$ fingers at one foot; the field of vision so much narrowed that the patient was unable to walk alone. Upon Dr. Moore's advice, the patient was transferred from the Eye Infirmary to the New York Infirmary for Women and Children, on June 5th, where premature delivery was brought on in the eighth month of pregnancy, of a still-born child. By June 30th there was only a trace of albumen, and vision had very much improved. The patient's vision, October 8th, was $\frac{20}{50}$ in the right and $\frac{20}{70}$ in the left eye, at which point it has been maintained.

A case in which the result obtained from induction of premature labor to save the sight alone, where the result was even better than in the foregoing, was seen by the writer in consultation with Dr. Arango, of this city, November 11, 1885. The patient was a multipara, aged forty, in the seventh month of pregnancy, whose sight was so much impaired that she could scarcely find her way about; V. $=\frac{20}{200}$ $(\frac{1}{10})$, the normal in each eye. The ophthalmoscope showed neuro-retinitis, whitish exudations scattered over the fundus, especially in the macula, and numerous hemorrhages. With the exception of albumen in the urine, there were absolutely no other evidences of disease of the kidneys. The immediate induction of premature labor was advised, under the belief that if the patient were allowed to go on to full term she might become irrevocably blind. After a delay of nearly three weeks, her sight becoming still worse, this was done by Dr. Arango, on November 30th, and she was delivered of a still-born child, which had probably been dead some time. January 6th, of the succeeding year, a little more than five weeks after the operation, the patient came to my office. I found V. $=\frac{20}{70}$. There was very great improvement in the retina, although still some neuro-retinitis and exudations. The improvement in vision from this time on was such that she never came to see me again, and Dr. Arango writes, upon recent inquiry, that her sight is perfectly restored.

At a meeting of the New York Ophthalmological Society, April 11, 1887, Dr. Callan reported the case of a woman, aged twenty-three, and married. The previous August she was within two months of full term, when she became entirely blind. Premature labor was induced, and three days after she could see large objects. Two months later she had entirely recovered. She then thought she was pregnant again. V., R. E. $=\frac{20}{40}$; L. $=\frac{20}{70}$. Nerve atrophic, with white spots in the region of the macula, and she thought her sight was failing. Dr. Callan advised her to wait two months before doing anything, and asked the opinion of those present. Dr. Webster thought Dr. Callan's advice was good, and said it was like a case that he saw in consultation with Dr. Laurence Johnson in the second or third month. In the eighth month the patient had convulsions, lasting all one night; in the morning she was blind in both eyes. The ophthalmoscope showed absolutely no changes. It was probably due to uræmic poisoning. Dr. Webster then advised premature delivery. It was done within twenty-four hours. The child lived and the mother recovered; probably vision, too, was restored, although the report does not say so. Dr. Cocks said he had also reported three or four cases, and thought the prognosis was good where there is no retinitis albuminurica. Dr. Callan said that Dr. Holmes, of Scarborough, had reported a case like these, and that in the case which he had himself reported there were no doubt changes of an inflammatory nature in the retina.

Is not the lesson to be learned from these cases so clear "that he who runs may read?" Here we have cases in which the patients were allowed to go to full term, in some instances through successive pregnancies, with serious impairment of sight, and in some they became blind; others suffered permanent impairment of their sight; again, premature labor without interference occurred, with the immediate improvement of vision, while, again, in the cases where, from the classical one of Loring down to the ones more recently published, in which the induction of premature labor was resorted to, the sight was always improved in the most unpromising, and in the more favorable ones fully restored. The prognosis in all these cases, especially where there are changes in the retina, will no doubt be modified by the pre-existence of chronic nephritis; in fact, it is held by some observers—Frerich and Braun, especially—that pure puerperal convulsions, presumably also therefore, neuro-retinitis, occurs only in pregnant women already suffering from Bright's disease. This view, however, is not concurred in by Seyfert, of Prague, and many others. Be that as it may, in the cases where chronic nephritis is present, the prognosis both for life and vision is worse, for the removal of the fœtus does not cure the kidney disease, and everyone engaged in ophthalmic practice will bear me witness how fatal the prognosis for life is in chronic Bright's disease with neuro-retinitis. That, on the other hand, so many cases in pregnant women with albuminuria and retinitis get well, would seem to be a forcible argument against this opinion. Does not the argument seem a strong one, that in all those cases in which there are changes going on in such delicate structures as the optic nerve and retina, the danger of their being destroyed and blindness resulting is rendered greater by letting the labor go on to full term and waiting until very much more damage is done?

It seems as though nature herself attempts to guide us to the proper course to pursue, for it must be noticed how often the occurrence of premature labor takes place without surgical interference, and how much better the results for vision have been than when labor went on to full term. Why should not we anticipate this action of nature, especially in the last months of pregnancy, when the child is still viable? Life is often endangered when vision is, and when this is the case there can be no doubt as to the weight of authority among obstetricians being in favor of abortion or premature labor. Is not death itself preferable to blindness, and what woman, left her choice between the alternatives, would choose to become a mother at such a cost? But there are cases like those of Loring and others, in which the impairment of vision comes on earlier in gestation, and Loring points out that they are of more frequent occurrence than is generally supposed, from which circumstance the responsibility becomes infinitely greater. In these cases the impairment begins early, and continues to grow worse throughout the progress of gestation; and these symptoms recur in successive pregnancies, until eventually total blindness is the result. Dr. Howe, of Buffalo, N. Y.,[1] in an analysis of cases occurring over a space of fifteen years, says: "These tend to show that when vision begins to be impaired only in the last two weeks of pregnancy, recovery follows almost invariably. [See my case.] Of those described as being in the eighth month, or thereabouts, when the retinitis commences, not one-half recovered, and several did not materially improve. Again, where this began earlier than was estimated, as the middle of the seventh month, when nature did not interfere by bringing on a miscarriage, and when the patient escaped with her life, it was only to remain blind forever afterward."

With such figures and facts before them, who can but concur with Loring that in extreme cases, where the sight is either lost or the risk of its loss is imminent, the production of abortion is justifiable, and even demanded.

One of the most important questions in this discussion is the medico-legal one. This is so ably met by Dr. Loring that I cannot do better than quote what he says on the subject. The moral question which he refers to I shall pass by in silence. "From a legal point of view, it is hard to conceive that there can be but one opinion, and that is in favor of the operation, when the circumstances are such as to demand it. The law states that premature delivery shall not be performed except for the preservation of the life of the mother or the child, and it is precisely for the 'preservation of life' that it would be done when the eyesight is threatened, for the one is part and parcel of the other; and in operating to save the sight we are operating to save life. Thus Simpson, many years ago, declared, and the opinion is universally upheld to-day, that symptoms such as headache, giddiness, and derangement of sight are merely premonitory symptoms of puerperal convulsions, and when they are associated with albumen we may be certain of the liability of our patient to the supervention of convulsions. Moreover, it so happens that the derangement of vision occurs at a time when, as Graefe puts it, 'the prognosis for life is even worse than for sight.' Given, therefore, a pregnant woman with loss of vision or organic lesion of the retina or optic nerve as the prominent or even sole symptom, no one can say that a series of convulsions may not set in at any moment which will carry everything before them, including not only the life of the child, but also that of the mother."

It is with no desire to encourage license in the production of abortion or premature labor, which many women only want the slightest excuse to consent to, and which, alas! some unscrupulous physicians are too ready to advise, but in the firm belief that the threatened loss of one of the noblest of our faculties, the sense of vision, should be considered to be of the same importance as the other symptoms which are said to more directly threaten life, and to justify such a serious procedure as the induction of premature labor, that these lines are written.

From the facts now before us, and the cases referred to, we summarize the following conclusions:

1. That in all cases of pregnancy it is not only desirable to examine the urine from time to time for albumen, but also to examine the eyes with the ophthalmoscope, even in a routine manner, since, as Loring points out, and as is well known to oculists, "a large percentage of cases having lesions of the optic nerve and retina either have none or make no complaint of loss of vision, but which may lead, after a long interval, through the secondary or atrophic state to complete blindness;" the fact, too, that varying degrees of blindness do not usually appear until near the end of pregnancy does not show that the retinal lesion may not already have been in existence for some time, and that the timely examination of the eyes might not have saved sight and even life. Moreover, it is known that the evidences of disease of the kidneys not infrequently show themselves in the eye before they do in the urine.

2. In uræmic amaurosis, without changes in the eye visible to the ophthalmoscope, even should the usual accompanying symptoms, such as dizziness, nausea, and threatened convulsions, be absent, their supervention is soon to be feared and the induction of premature labor is indicated, without waiting until the life as well as the sight of the patient is in danger.

3. In neuro-retinitis, with grave organic lesion of the retina and optic nerve, sight impaired, and the loss of vision progressing, especially in the last months of pregnancy, and the child (if not dead from the effects of the kidney disease) may be viable, it is not only justifiable, but urgently demanded, that premature labor be resorted to. In some rare instances, where it is evident that to wait until this time would be to doom the patient to blindness, it should be done even in the earlier months of pregnancy.

4. In those instances in which in one pregnancy failures of vision have occurred which have remained permanent, abortion in the following pregnancies in which symptoms of failure of vision again occur may be rendered necessary. This conclusion is meant to cover cases like Loring's, whether it be finally ascertained that they are dependent upon kidney disease or not; the weight of the responsibility of the decision in these cases must lie with the oculist, however, since he alone, from both the objective and subjective symptoms, can conclude whether the gravity of the case warrants the operation.

5. Women having once suffered loss of or impairment of vision during pregnancy should have the danger of again becoming so, and the relation of cause and effect, fully explained to both themselves and their husbands.

THE USES OF METHYLAL.—Dr. Richardson has published his views on methylal in the *Medical Press*, November 2, 1887. He says that he has often given it in doses of from one to four drachms, combining it for the sake of the flavor with orange-flower syrup and adding water (proportions, methylal, ʒ j.; syrup of orange, ʒ ss.; water, ℥ ss.). Administered in this way by the stomach, it possesses hypnotic and antispasmodic properties of considerable value, and its grand service will be in the treatment of spasmodic and painful affections, such as asthma, angina pectoris, colic, and tetanus. Its readiest value will probably consist in its use as a menstruum for other substances of the same therapeutical action. He concludes his article with the following summary: 1. Methylal is hypnotic and antispasmodic. 2. Its action lies between ethylic alcohol and ethylic ether. It may be looked on as a volatile alcohol, and resembles closely pure methylic alcohol in action. 3. It can be administered by inhalation as vapor, by hypodermic injection, and by the mouth in aqueous solution. 4. It reduces arterial tension, and by local action excites glandular activity. 5. The sleep it induces is not profound unless the dose be excessive. It is quickly eliminated, and leaves no serious effects. It causes no vomiting or stomachic disturbance. 6. A fatal dose by inhalation kills by complete relaxation of the muscular fibres of the heart, leaving the heart distended with blood and the vascular organs intensely congested. 7. It combines with ether, alcohol, amyl nitrite, and many other remedial agents with which it acts in concert, while it equalizes their action by reason of its own solubility. 8. Its tendency is to maintain the fluidity of the blood, and it may therefore be of service in combination with ammonia. 9. It promises to yield a safe and effective anæsthetic mixture in combination with ether. 10. It reduces the animal temperature, but not to the same degree as common alcohol. 11. Used as an anodyne, it passes out of the body without producing organic injury, when not often repeated. 12. But, like all bodies of its class, it must be given in increasing quantities in order to keep up its effects, and it would soon yield evil as well as good by its habitual use in the community at large.

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[1] American Journal of Ophthalmology, vol. ii., Nos. 5 and 6.

Clinical Department.

A CASE OF MYXŒDEMA.

By ANDREW WATT, M.D., C.M.,

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The insidious symptoms and unsatisfactory treatment of that rare disease, myxœdema, has led me to report the following case lately under my own observation.

Mrs. M——, aged thirty-six, IV.-para, Scotch parentage. The family history was decidedly neurotic, as both an uncle and a brother had been under treatment in insane asylums.

The patient was well developed, and had dark hair and a sallow complexion. Over each malar bone there were vascular patches, and there was also considerable puffiness about the eyelids. The appearance of the physiognomy seemed to indicate some chronic kidney disease. There were two moles on the left side of the neck, one on the back of that shoulder, and one on the deltoidal prominence of the left arm. Apparently the thyroid body was normal.

The hands were "spade-like." The thoracic and abdominal viscera appeared to be normal, except that the action of the heart was weak, and the pulse-beat usually from sixty to sixty-five per minute. The catamenial flow was irregular and scanty, and the patient complained of chronic constipation.

Urine, sp. gr. 1.005, acid and free from albumen, the quantity about natural, and color always pale. Both legs were œdematous, but the left pitted more than the right. The pitting was distinctly characteristic of the disease, for it only appeared after a prolonged firm pressure, so very different from what is seen in ordinary œdema.

The integument was dry, translucent, and inelastic. The patient's speech was slow, the voice having a snuffling, nasal twang and a falsetto character. The temperature in the right axilla was normal, but in the left it was 97.4° F.

She complained of being very easily thrown off her balance and falling down, and she could scarcely walk a single step in the dark. She stated also that she suffered from occasional profuse perspirations.

No medicine appeared to have any good effect on the disease, which she said had begun six years before.

Myxœdema differs from sclerema only by being a progressive general malady, and there cannot be a doubt that the central nervous system is largely implicated from the first, because in all cases there is some mental disturbance, ranging from simple irritability of temper or depression of spirits up to aggressive mania and fatuity.

But the peculiar nervous symptoms characteristic of this disease are progressive, increasing with the severity of the disease. In my opinion the slowness of the transmission of nervous impulses and sensations is owing to the disturbance of the peripheral nerves from the œdema.

This woman had had a most unhappy married life, and the continual ill-treatment received from her brutal husband, combined with her sensitive, nervous disposition, had, she was sure, greatly aggravated her disease.

DIABETES MELLITUS IN AN INFANT.

Dr. W. H. Deane, of Blandford, Mass., reports the following case: "On November 20, 1887, a little girl, aged one year and three weeks, was brought to my office by her mother, who said that the child was somewhat fretful at night, seemed rather thirsty, rolled its head while sleeping, occasionally wakened from sleep with a sudden scream, and, she thought, was passing more urine than it should.

"The child was bright, fairly well nourished, with no marked evidences of any serious trouble. The child was, with some difficulty, cutting several teeth, and I considered the symptoms as due to that cause. The increased secretion of urine, which the mother had referred to, I thought very little about. In a very few days I was called to see the child, and found it in about the same condition as when at my office, except that it had begun to show some emaciation. I then asked for and, after some difficulty on account of the extreme youth of the patient, obtained a specimen of the urine, which I found, by each of the copper, indigo, and fermentation tests, to contain a considerable amount of sugar—about ten grains to the ounce. I immediately began administering codeia, and restricted all sugar from the diet. Nevertheless, emaciation rapidly progressed, digestive disturbances became more or less troublesome, the rolling of the head and crying out suddenly in sleep continued, and on January 4th the child passed into a well-marked condition of diabetic coma, and succumbed in twenty-four hours. Under my treatment the amount of urine diminished somewhat, although the specific gravity remained at 1.040, and the sugar was continually present.

"The extreme youth of the patient, the rapidly fatal termination, and the continued presence of symptoms of brain-irritation, have caused me to regard this case as one quite singular."

TOXIC EFFECTS FROM SMALL DOSES OF POTASSIUM CHLORATE.

Dr. A. F. Fuchs, of Fredonia, Wis., writes: "A robust male adult, aged forty-eight, was ordered to use a saturated solution (1 in 20) of chlorate of potassium as a gargle for diphtheria. He was directed to take a very small swallow, three times in twenty four hours, directly from the bottle, in addition to gargling every two hours. After taking the fourth dose, the urine was noticed to be dark red, and a messenger came to inform me. The chlorate was discontinued, and in thirty-six hours the urine was of ordinary appearance.

"Macroscopically, the urine presented every appearance of a hemorrhage from the kidneys, but it was much darker than in any case of hæmaturia I have seen. Analysis showed the presence of blood. There can be no doubt that the chlorate was the cause. No other drug was given immediately before, or after, or conjointly with it. Three doses of calomel had been given, the last one six hours before beginning the chlorate. The patient affirmed positively that he had not taken more than a teaspoonful at a dose, but, allowing four times that quantity, we would have forty-eight grains producing toxic symptoms."

An Accouchement in a Railway Closet.—Dr. William Osler is writing stories to the *Canada Medical and Surgical Journal*, and this appears in the latest issue of that excellent periodical: "A young woman about twenty-eight years of age, well developed, of medium size, had had two previous labors, which were not difficult. She had expected her confinement in a week or ten days, and had got on the train to go to see her husband, who was working 'down the track.' Having a slight diarrhœa she went to the water-closet, and while on the seat labor pains came on and the child dropped from her. Hearing a noise and groaning, the conductor forced open the door and found the woman on the floor in an exhausted condition, with just strength enough to tell him that the baby was somewhere on the track, and to ask him to stop the train, which was running at the rate of about twenty miles an hour. The baby was found alive on the side of the track a mile or more away, and with the mother was left at the station where I saw her. She lost a good deal of blood, and the placenta was not delivered for some hours."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, January 28, 1888.

THE INFLUENCE OF MODERATE DRINKING ON HEALTH.

UNDER the title of "The Influence of 'Nipping' upon Health," Dr. Harley, the English hepatologist and nephrologist, discusses, in the January number of the *Provincial Medical Journal*, the injurious effects of drinking alcoholic beverages "in moderation." He says that the majority of men are moderate drinkers, and, as a consequence, most of one's patients belong to this class. Dr. Harley is right in stating that the effects of alcohol taken in excess are universally known to physicians. But his other statement, that very little has been written on the consequences of drinking in moderation, can only be accepted in the qualified sense of "comparatively little." Be this as it may, the figures published by him, as taken from the Registrar-General's report, are certainly rather staggering. Comparing the mortality tables of men exposed to the temptation of frequent "nipping" with those of men not similarly exposed, the result is "startling in the extreme, more particularly as regards the proportion of liver diseases." For it would appear that the rate of mortality is six times greater among those whose business is practically inseparable from "nipping," than among those representing all the other industries combined.

It appears further, that, after the liver, the kidneys, the heart, and the nervous system become most frequently affected in moderate imbibers. Dr. Harley says that "it is not difficult to understand why the liver, of all organs in the body, should be the most affected by 'nipping,' when it is remembered that almost every drop of alcohol taken into the stomach is absorbed by the branches of the portal veins, is conveyed directly to the liver, and has to filter through its tissues, ere it can get into the general circulation, and by it become distributed to the other organs of the body." He also showed, so long ago as 1853, that the mere injection of alcohol into the portal vein in dogs is sufficient to disorder the hepatic functions to such an extent as to cause the animals to become diabetic in the short space of from two to three hours.

That the kidneys suffer less than the liver is probably due to the fact that less alcohol reaches them than the former. Nevertheless, alcohol is, in part, eliminated through those emunctories, and Harley claims to have obtained "pure alcohol" from the kidneys of persons who have died intoxicated, by the simple process of distillation.

According to the author, "the only tangible reasons, however, that we as yet possess for alcohol disordering the renal function exist (1) in the fact of its elimination causing extra work; and (2) that alcohol increases the renal circulation, just as it increases the circulation elsewhere, and no doubt at the same time causes a corresponding increase in the diameter of the renal blood-vessels by engorgement, and consequent pressure on the inter-vascular tissues."

As regards the bad effect of "nipping" upon the heart, it consists in inviting disease in the predisposed, as well as in augmenting disease which already exists.

Finally, with regard to the nervous system, Dr. Harley believes that alcohol taken in small quantities at a time, but frequently repeated, acts deleteriously by keeping the blood-vessels on the stretch, by engorging them, and causing them to press upon the nerve-cells and fibrils. This interferes both with the proper performance of their functions and with nutrition.

The nerves also suffer indirectly through the action of alcohol on the blood. For Harley has found that, even in the small proportion of five per cent., alcohol "exerts a powerful chemical effect on blood, so powerful as to entirely derange one of its most important functions—namely, the function of respiration. The alcohol seems to act like an asphyxiant, inasmuch as it not alone diminishes the power of the red corpuscles to absorb oxygen, but to exhale carbonic acid, and that, too, in the same way (though to a somewhat less extent) as morphia does. This peculiar chemical action of the alcohol on the blood nerve-pabulum may be thought to give a reasonable explanation of the paralyzing action of alcohol upon the nervous system, seeing that oxidation is the motor power of all vital action, and in direct proportion to its activity are the manifestations of life accelerated or retarded. Every breath we draw, every movement we perform, every thought we think, is but the outcome of the transformation of matter under the influence of oxygen. If, then, it be true as above shown, that alcohol possesses the power of preventing the constituents of the blood from being properly oxidized, and thereby fitted for the purposes of nutrition, it is easy to account for its producing a chain of neurotic symptoms terminating in coma and death."

THE SCHOOL-AGE AND SCHOOL-HOURS.

DR. C. W. CHANCELLOR, of the Maryland Board of Health, has recently given an interesting summary of those sanitary requirements which relate to our school-system and the public education of children (*Gaillard's Medical Journal*). So much ignorance still prevails regarding this matter, and our school-systems are yet so far from what sound educational principles demand, that articles like this of Dr. Chancellor should not go unnoticed.

The writer, after taking up the subject of school-house construction and site, discusses the question of the age at which education should begin. He cites a number of authorities, from Aristotle to Hufeland, all tending to show that the school-work should not begin until the eighth year. It would not be difficult to find authorities supporting a somewhat different view, and it cannot be asserted that the old New England school-system, which took in the children at the ages of four to six, was a pernicious one. The not very high authority of Spurzheim is quoted in support of the view that "precocity is almost always a disease." It is "an envious frost, which nips the blossoms because they appear quickly," and such statements regarding precocity are quite untrue. Nearly all men of genius, and very many men of talent, have shown decided precocity.

It is claimed that children whose systematic studies begin at eight years of age get along just as fast as others, and at, say sixteen, know just as much as if they had begun at six. Often this is true, but it has not, we think, been demonstrated to be the rule. Education, *i.e.*, mental and physical training, may begin, as Quinquillian recommends, at the third or fourth year. But while our schools are arranged as at present, it may be wise to accept the modern view, that the school-age should begin at seven or eight.

Ribot has shown that capacity to fix the attention is a characteristic of more civilized and intellectual people. So it is also of more mature minds. The infant has no such power; the child of three wearies after a few minutes' effort at following some train of thought or memorizing process.

According to Dr. Newell, "for children of ten or twelve years the capacity for bright and voluntary attention is exhausted by four varied lessons requiring mental effort of half an hour each, with intervals of relief in the forenoon. In the afternoon this capacity is reduced one-half. Two hours in the forenoon, and one hour in the afternoon, is as long a time as children can be profitably employed in school."

Dr. Chancellor supports this view, and advocates eighteen hours a week as the limit for school-children under twelve. Baginskey, author of a German work on school hygiene, takes the same view, and in demonstration of its effectiveness it is alleged that half-time pupils in the English schools learn as much as the children who are in school the full number of hours.

It would be better, according to Dr. Chancellor, from a purely hygienic point, to make Wednesday the weekly holiday rather than Saturday, and to have examinations occur at the beginning of a school-term than at the end. While this latter seems hardly practicable, the evils of the present system are undoubted, and a dividing up the examinations would certainly be more satisfactory and less injurious to the health of the children.

CARDIOCENTESIS.

Dr. I. Bruhl, of Paris, has given a history of the operation of cardiocentesis, with reports of cases in which this operation has been performed, and a general summary of the present condition of the question (*Le Progrès Médical*, Nos. 52 and 53, 1887). M. Bruhl states, correctly, that the mode in which puncture and aspiration of the heart acts is a double one. First of all, it does exactly what bleeding would do, but it has the advantage that it withdraws blood from the venous circulation after the heart has stopped beating, or is beating so feebly that there could be no blood drawn from the veins. In the second place, the puncture of the heart by the needle acts as a stimulus to the heart-muscle. Cases have been reported in which the heart has been stimulated after its apparent paralysis.

M. Bruhl's conclusions, which, it must be remembered, are based more on a study of the literature than on practical experience, are: That cardiocentesis is practicable, and, in most cases, is not dangerous. M. Rendu, however, is cited as stating that "a wound of the heart is so great a responsibility to assume that one should avoid it at any price." Such a caution may be wisely kept in mind, though numerous facts attest the harmlessness of puncturing the heart with needles.

In order to puncture the right auricle, the aspirating needle is to be passed into the third intercostal space, close to the right edge of the sternum.

To puncture the left ventricle, the needle should enter the fourth intercostal space, near the left edge of the sternum. The puncture of the ventricle is, as M. Bruhl correctly states, preferable to that of the auricle.

The indications are naturally a paralysis or paresis of the heart, with dilatation and over-distention of its cavity.

KARYOKINESIS.

The term "karyokinesis" was introduced into embryological science, some ten years ago, by Schleicher, and it has evidently come to stay. There is a certain easy rhythmical flow about this word which endears it to those who have once rolled it over their tongues, or felt its stately prosodical impact on their acoustic organs. This has been an element, no doubt, in perpetuating it in scientific language. So far as we can learn, no one has even attempted to give an equivalent or a substitute for it.

Karyokinesis is the term applied to a process of indirect division of cells in their growth and multiplication. It is quite generally agreed that the cell-body and nucleus are both of a complex structure, being made up of a fine fibrillary net-work, with a homogeneous substance in its meshes. This cell may divide directly by simple cleavage, the nucleus usually dividing first (Landois); or there may be an indirect division, or karyokinesis, the process being then limited primarily to the nucleus, as shown by the term *karyon*, nucleus, and *kinesis*, movement.

This indirect division is shown by the development in the nucleus of thread-like patterns, which are known as the karyokinetic figures. There is, as described by Dr. James (*St. Louis Medical and Surgical Journal*), a chromatic figure which takes up the coloring matter and the nucleoles, and the achromatic figure, which is colorless and composed of much finer fibrillary threads.

In the process of indirect division the threads and fibrillæ arrange themselves in a succession of different forms. These have a tolerably definite order, and have received different names. There is first a convolution of fine threads. These arrange themselves in the form of a rosette or star. The fibres finally arrange themselves about two poles or new circles, forming a double star. Between the two is a substance called the equatorial plate. Each of the polar groups gradually develops into a new nucleus, the cell divides at the equatorial plate, and two new cells are formed. In rare cases three, or even more, cells may develop from the original one. In some cases the process results only in multiplying the nuclei, the cell-body not being divided, and in this way the origin of multinuclear cells is explained. Karyokinesis is observed not only in animal, but vegetable life.

A CURIOUS AFFECTION.

In some parts of Japan a strange disease prevails, which is known popularly, from its most prominent symptom, as the "head-drop." The symptoms of the affection, as detailed by Dr. K. Nakano in the *Sei-I-Kwai Medical Journal* for November, 1887, are as follows: There are no prodromes beyond headache and slight mental uneasiness coming on a few hours before the attack. The disease begins quite suddenly with a seeming paralysis of the posterior neck-muscles, so that it is impossible to hold the head erect, and it falls forward with the chin against the sternum. In some cases there is congestion of the conjunctivæ, the pupils are dilated, and monocular or binocular diplopia is complained of. The tongue becomes stiff, the speech slow, and swallowing is difficult. The muscles of the lumbar region are very weak, and the patient walks only with the greatest difficulty. In the most severe cases the legs become paralyzed and anæsthetic. The urine, on standing, throws down a white sediment which is not redissolved by heat or acid. There is no albumen, but occasionally sugar is present.

The duration of the attack is usually from a few hours to several weeks, or even two or three months. The disease is apt to recur in those who have been once attacked, sometimes within a short period. The treatment seems not to be very satisfactory in its results. The disease disappears spontaneously, and its duration is so variable that it is difficult to say what effect treatment has upon its course. Dr. Nakano mentions as a curious fact that an attack is very apt to come upon one when he is hungry, and in such a case a hearty meal will cut it short at once.

The author regards the affection as of malarial origin. It occurs only in damp valleys where but little sunlight penetrates, and attacks exclusively farmers and those engaged in similar pursuits. Of the 63 cases observed, 37 occurred in men, and 26 in women. In addition to the unfavorable conditions of soil and climate, the fact that the inhabitants of the district live generally on poor food and drink bad water may be of some etiological significance. The disease occurs at all seasons, but especially in the late spring and early summer. When the disease prevails it does not attack all the people in a community at the same time, but seems to be more or less confined to single families. If one person in a family is attacked, the other members are usually attacked also within a short time, but the affection does not seem to be spread by contagion. Those who have suffered from frank attacks of malarial fever do not appear to be subject to head-drop.

The disease is not fatal, and consequently no opportunity has occurred to study the pathological lesions. But the symptoms would point to some temporary affection of the cord, due, possibly, to the action of the malarial poison.

THE MODERN TREATMENT OF URETHRAL STRICTURES.

Legitimate criticism on the evils of specialism applies only to the practice, not to the scientific work done in special fields. An illustration of what has been accomplished in genito-urinary surgery by the diligent ingenuity of its followers, is furnished in a recent article by Dr. F. S. Watson (*Boston Medical and Surgical Journal*, 1887, No. 26), entitled "A Comparison of Gradual Dilatation, Divulsion, Internal and External Urethrotomy, in the Treatment of Urethral Stricture." This article, taken in connection with the discussion which followed it before the Suffolk District Medical Society, shows that the general methods of practice in the treatment of strictures have become quite uniform, and that the labors of the specialist have developed the art of treating strictures so that the general practitioner can carry it out in most cases, when he has acquired a little technical skill.

The three accepted methods of treating organic urethral strictures are by gradual (or rapid) dilatation, divulsion, and urethrotomy.

Gradual dilatation is admitted to be the least efficacious, and is rarely resorted to except as a temporary or palliative measure, especially in strictures of the anterior urethra. In the deep urethral strictures, owing to its comparative safety and to the disinclination of many patients to an operation, it is oftener employed. But no surgeon promises a cure from its use. The method, according to Dr. Watson, is responsible for more bad urethras (false passages) than anything else, for the steel sound has a powerful leverage and the chronically inflamed mucous membrane is easily torn. We think, however, that harm only occurs because the clumsiness and carelessness of many patients, and perhaps a few physicians, are almost beyond belief.

Divulsion is an operation of which the mortality, according to statistics collected by Watson, is from one to five per cent. This represents the operation as much more dangerous than it really is to persons with sound kidneys and bladders. Except sometimes in early strictures, divulsion is believed never to be curative. Still, the best results have not been gotten from it by many, because the operation has not been followed by thorough dilatation. The theoretical objection that the tear made by divulsion is worse than the clean cut of the urethrotome, does not always hold good, as was shown in the discussion later by Dr. Cabot.

Internal urethrotomy is acknowledged to be, on the whole, the best and surest way of treating organic strictures not in the deep urethra. In a small percentage of cases, permanent cure is obtained. The danger is about the same as in divulsion. For strictures of the deep urethra external urethrotomy is very generally believed to be the best, and even the safest method, although gradual dilatation and divulsion are sometimes indicated.

Dr. Watson states his conclusions as follows:

"1. All strictures anterior to five inches are best treated by internal urethrotomy. Dr. Otis' operation yields the most enduring results.

"2. Divulsion should be rejected as an operation for stricture, unless it can be shown satisfactorily that, where carried sufficiently far, it yields as permanent results in as many cases as internal urethrotomy.

"3. Dilatation, where practicable, should be employed in strictures deeper than five inches.

"4. For strictures deeper than five inches not suitable for dilatation, external urethrotomy should be selected, and not reserved for an emergency operation only."

News of the Week.

DR. A. D. ROCKWELL.—A Professorship of Electrotherapeutics has been established in the New York Post-Graduate School of Medicine, and the position has been offered to and accepted by Dr. A. D. Rockwell.

SECTION ON PRACTICE, NEW YORK ACADEMY OF MEDICINE.—At the last meeting of this Section, held January 17th, Dr. R. C. M. Page was elected Chairman, and Dr. George B. Fowler, Secretary.

THE NEW YORK CANCER HOSPITAL (Eighth Avenue and 106th Street) has received a donation of $25,000 from Mr. John Jacob Astor for the endowment of five additional beds in perpetuity.

THE ALUMNI OF THE BELLEVUE HOSPITAL MEDICAL COLLEGE will have their annual dinner at the Buckingham Hotel, Fiftieth Street and Fifth Avenue, on February 14th, at 8 P.M.

THE AMERICAN MEDICAL ASSOCIATION MEETING.—The organization of the next meeting of the American Medical Association at Cincinnati, O., is being satisfactorily perfected. The Central Committee of Arrangements has been having weekly meetings, and has done much toward the work. Music Hall, a most excellent place for the meeting, has been secured, and all meetings will be held under one roof. Transportation will probably be one and one-third fare for the round trip. The Chairman of the Committee of Arrangements is Dr. W. W. Dawson, corner Third Street and Broadway, Cincinnati. Chairman Committee of Receptions: Dr. J. T. Whittaker. Finance: Dr. S. C. Ayres. Exhibits: Dr. J. C. Culbertson. Transportation: Dr. William Judkins. Invitation and Printing: Dr. G. A. Fackler. Halls: Dr. B. Stanton. Printing: Dr. J. Ransohoff. Registration: Dr. J. M. French. Arrangements are making for a reception at the Art Museum in Eden Park and a supper at the Highland House on the hill-top. A banquet will also be given, and a concert by the Apollo Club is expected. There will also be numerous other things to entertain and interest. Cincinnati being very central in its location, it is expected that the attendance will be larger than ever before.

MATERNITY HOSPITAL.—Dr. H. C. Coe has been appointed Obstetric Surgeon to the Maternity Hospital, to fill the vacancy created by the resignation of Dr. Partridge.

A NEW FORM OF FEVER IN TEXAS.—Dr. A. W. To and writes to the *Southern Practitioner* that there is a strange fever prevailing in Texas, somewhat resembling typhoid, but not involving Peyer's patches, and not influenced by quinine. Dr. Ketchum, of Palo Pinto, Tex., has also referred to this disease in *The Medical Age.*

BERLIN DOCTORS AND THE CANCER-BACILLUS.—A Berlin correspondent of the *Wiener Med. Wochenschrift* writes that when three doctors meet now the subject of conversation is sure to be the cancer-bacillus, and if the three are German doctors there are four opinions expressed! One view, which is that held especially in Berlin, under the lead of Virchow, "the father of scepticism in medicine, especially as to discoveries not made by himself," is that of utter disbelief in the discovery of the bacillus. Others hold expectant views, while a small party, led by Guttmann, enthusiastically supports the discovery and the discoverer.

A NEW DISEASE affecting swine has been discovered by MM. Cornil and Chantemesse. It has heretofore been confounded with porcine measles (*rouget*). It begins like an infectious fever and ends with a fibrinous peripneumonia. It is almost always fatal. Its microbe has been isolated and cultivated.

GENERAL ANÆSTHESIA FROM COCAINE.—M. Lafont announces to the Académie des Sciences that the local application of cocaine to certain parts of the body will cause a general anæsthesia. The part mentioned as best showing this is the pharyngeal mucous membrane. The effect is probably inhibitory, as Brown-Séquard has shown.

MENTHOL IN PHTHISIS.—Rosenberg's method of treating phthisis by menthol-injections is highly praised by Dr. A. J. Belhag in the Edinburgh *Medical and Surgical Journal.* He makes a twenty per cent. solution in warm olive-oil and injects fifteen minims into the larynx and trachea. Two or three injections are made twice daily for about two months. Menthol-injections are useful also in nasal and pharyngeal catarrhs.

MODERN ANTISEPSIS is spoken of as "the glorification of dirt."

IT IS A FACT known to neurologists that psychoses and neuroses may develop after gynecological operations, such as ovariotomy, Tait's operation, etc. Dr. Edward J Ill reports three cases of this kind in the *Pittsburg Medical Review.*

THE BROOKLYN HEALTH COMMISSIONER.—The new Mayor of Brooklyn, Mr. Chapin, has appointed Dr. John Griffin Health Commissioner of the city, in the place of Dr. Otterson. Dr. Griffin is a member of the Kings County Medical Society and of the Brooklyn Board of Education. He is a native of Ireland, forty-two years old, and came to this country in 1868.

SMALL-POX IN BROOKLYN.—Small-pox has appeared in Brooklyn, and up to date of writing about forty cases had been reported.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.—Dr. Charles McBurney read a paper on "External Perineal Urethrotomy as a Prevention of Complications after Operations upon the Urethra," which will appear in a future number of THE MEDICAL RECORD. The paper was discussed by Drs. Bangs, Abbe, and Otis, all of whom coincided in the views of the author regarding the importance of drainage, but they did not accept his view that all cases of urethral fever were due to absorption of septic material. Dr. Billington read a provisional report from the Committee on Hygiene.

THE LATE DR. WESLEY M. CARPENTER.—Dr. Daniel Lewis, at the last meeting of the Medical Society of the County of New York, read a memoir of the late Dr. Carpenter, and offered the following resolutions, which were adopted:

Whereas, In the wisdom of the Supreme Ruler, our distinguished associate, Dr. Wesley M. Carpenter, has been taken from our ranks at the very meridian of his usefulness;

Resolved, That we, as members of the Medical Society of the County of New York, hereby desire to record our appreciation of his long and faithful services as our Secretary;

Resolved, That in all things pertaining to his professional work we recognize in Dr. Carpenter's career among us a standard of life and a devotion to scientific medicine which place him among the most honored of our profession;

Resolved, That while admiring, as we do, those qualities most conspicuous in his character as a medical man, a much more intimate relation has been established between him and us, which renders his death a personal bereavement. Although time may mitigate our grief, it can never banish from our hearts the recollection of his kind and exemplary life;

Resolved, That these resolutions be spread upon a page of our minutes set apart for that purpose.

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK —REDUCED FARES FOR MEMBERS.—All physicians wishing to attend the meeting of the New York State Medical Society, to be held at Albany, February 7th, 8th, and 9th, are informed that the New York Central Railroad Company have kindly consented to issue excursion tickets at the rate of a fare and a half, $4.65, the regular rate being $6.20. It is the intention of the majority of the delegation to go to Albany, February 6th, at 3.30 P.M. If a sufficient number can be obtained for that train a drawing-room car will be furnished for their exclusive use. Drawing-room fare, $1. All gentlemen who can arrange to go on that day and train are asked to notify the Secretary of the Delegation, Dr. Clarence C. Rice, 115 East Eighteenth Street, on or before February 6, 1887. Certificates for tickets can also be had by application to him.

THE DUTY ON SURGICAL INSTRUMENTS AND APPLIANCES.—The Georgia Medical Society has issued circulars to all the medical societies in the country, asking their co-operation in urging upon Congress the need of removing the tariff upon surgical instruments and appliances. The Society thinks the interests of humanity will be subserved by the removal of all imposts upon instruments and medicines, and that Congress can be best influenced by the separate action of all the medical societies of the country in concert; the attempt has been made by the actions of large bodies, such as State associations and the American Medical Association, and the like, but has failed, largely, as it thinks, because it was the action of representative bodies, and not of their constituencies, the local medical societies and individuals of the profession. Societies are asked to pass the following resolution: "*Resolved*, That the —— —— Society would urge upon Congress that, in the cause of humanity, the *import duty* should be removed from all medicines, medical and surgical appliances, and from everything used in the treatment or diagnosis of disease."

DERMATOLOGISTS may be a little disappointing in their therapeutics, like the rest of the profession, but when it comes to giving diseases names of real, rasping, polysyllabical stridulousness, they leave other specialists, including the author of Volapük, far behind. Dr. Hyde has recently reported three cases in which the patients were affected with symmetrical and recurrent or persistent tylosis of the palmar and plantar surfaces, accompanied by hyperidrosis, alopecia, bromidrosis, and a species of onychauxe, which the author supposed to be due to the same process in the skin which produced the callosities.

Reviews and Notices.

MANUEL DE MÉDECINE OPÉRATIVE DE J. F. MALGAIGNE, Professeur de Médecine Opérative à la Faculté de Médecine de Paris; Membre de l'Académie de Médecine, etc. Neuvième Édition par LEON LE FORT, Professeur de Clinique Chirurgicale à la Faculté de Médecine de Paris; Membre de l'Académie de Médecine. Première Partie. Opérations Générales. Avec 352 Figures Intercalées dans le Texte. Paris: Félix Alcan. 1888.

MALGAIGNE'S MANUAL OF OPERATIVE MEDICINE. Ninth Edition. By LEON LE FORT. First Part. General Operations.

THIS latest edition of Malgaigne's "Manual of Operative Surgery," revised by Le Fort, has been greatly enlarged by reason of the additions necessary to bring it up to the times. The first part contains sections on anæsthetics, surgical instruments and minor operations, general operations and prothetic apparatus. M. Le Fort is no friend of Listerism, so called, and devotes considerable space in the introduction to an exposition of his own views concerning the true cause of suppuration in wounds. He insists upon the absolute surgical cleanliness of instruments and hands, but does away with all antiseptic dressings as being cumbersome and useless. The book is profusely illustrated, the descriptions are clear and concise, and the work is a most trustworthy guide in all that concerns operative surgery, the question of antiseptic dressings alone excepted. The second part, treating of special operations, is to appear during the current year.

MANUAL OF CLINICAL DIAGNOSIS. By DR. OTTO SEIFERT, Privatdocent in Würzburg, und DR. FRIEDRICH MÜLLER, Assistent der II. med. Klinik in Berlin. Third Edition, Revised and Corrected by DR. FRIEDRICH MÜLLER. Translated, with the Permission of the Authors, by WILLIAM BUCKINGHAM CANFIELD, A.M., M.D. (Berlin). With Sixty Illustrations. New York and London: G. P. Putnam's Sons. 1887.

THIS little book contains very much that will be found of value to the student of diagnostic methods. The examination of the different organs is fully treated of, and the various tests employed in the analysis of the secretions and excretions of the body are described clearly and at all-sufficient length. Numerous illustrations serve to elucidate the text where necessary. For the student and hospital interne we know of no better book, and many older practitioners will find here methods described which were unknown in their student days, and which, perhaps, they have never learned for the want of just such a convenient little manual as this.

The Principles of Theoretical Chemistry. By Ira Remsen, Professor of Chemistry, Johns Hopkins University. Third Edition. Philadelphia: Lea Brothers & Co. 1887.

The third edition of this standard work has been somewhat enlarged and thoroughly revised. A brief and instructive chapter has been added, on matters pertaining to chemical affinity, and on the connection between constitution and chemical conduct.

Lessons in Gynecology. By William Goodell, A.M., Professor of Clinical Gynecology in the University of Pennsylvania, etc. Third Edition, thoroughly Revised and greatly Enlarged, with One Hundred and Twelve Illustrations. Philadelphia: D. G. Brinton. 1887.

The former editions of this treatise were well received by the profession, and there is no doubt that the new matter added to the present issue makes it more useful than its predecessors. The work can lay no claim to being a complete treatise on the subject of which it treats; but it embodies, in a very readable way, the views of its author on many topics of interest to the general practitioner, rather than the specialist, in this department of medicine.

The Physician's Visiting List for 1888. Philadelphia: P. Blakiston, Son & Co.

This popular visiting list has come to hand in its usual shape. For its small size it contains a good deal of information that is apt to prove useful to the practitioner.

Syphilis. By Jonathan Hutchinson, F.R.S., LL.D., Consulting Surgeon to the London Hospital, and to the Royal London Ophthalmic Hospital; Vice-President of the Royal College of Surgeons. Philadelphia: Lea Brothers & Co. 1887.

The author of this excellent little manual is a leading authority on the subject with which it deals. On perusing its pages one cannot fail to be struck with the fidelity of his portraiture of the varying phases and aspects of syphilis. Dr. Hutchinson is at times rather dogmatic; but, for our part, we prefer the unequivocal enunciation of personal views, to the unsatisfactory attempts, so often made, to reconcile opposing views in a weak-minded adherence to most opinions and a strong dissent from none. This brief clinical manual is bound to be welcomed by the profession, and we predict for it a wide popularity.

Dental Caries and its Prevention. By Henry Sewill, M.R.C.S., etc. Second Edition. 12mo, pp. 93. London: Baillière, Tindal & Cox. 1888.

The particularly interesting point of this elaborate essay is the influence of micro-organisms on the production of the disease. Mr. Sewill regards them as the pathogenic factor. The predisposing causes are those which impair the integrity of the enamel, such as the acids which are the products of chemical change and fermentation set up in the fragments of organic matter lodged upon the teeth, and perverted secretions from the mucous membrane. In the author's experience, not even one per cent. of children with a syphilitic taint have had the characteristic tooth condition, first identified by Mr. Hutchinson. The book is well written, and is a valuable contribution to odontological literature.

Hydrophobia: Pasteur's System. By Renaud Suzor, M.D. 12mo, pp. 231. London: Chatto & Windus. 1887.

The writer was sent by the Governor and Council of the island of Mauritius to study the Pasteur system at Paris. His narrative is accordingly descriptive rather than critical. The bulk of the volume is occupied with translations of Pasteur's communications to the French societies. Then follows a detailed account of the technique of the method. A short history of hydrophobia opens the book. It is well written, and is a compact *résumé* of the literature of the last few years on the topic.

M. Suzor coincides with the conclusions of the French *savant.* "The prophylaxis of rabies after bites is now an established fact."

Leçons sur la Thérapeutique de la Métrite. Par L. Martineau, Médecin de l'Hôpital de Lourcine; Vice-Président de la Société d'Hydrologie; Membre de la Société Gynécologique et Obstétrique de Paris; Membre Correspondant de l'Académie Royale de Médecine de Rome, etc.; Chevalier de la Légion d'Honneur. Paris: Félix Alcan. 1887.

This work, on the treatment of metritis, contains the lectures of Dr. Martineau, delivered at the clinic of gynecology and syphilography of the Hôpital de Lourcine during the course of 1886. The subject is treated of most comprehensively, and in a very readable style.

Gynecological Diagnosis; General Gynecological Therapeusis. By R. Chrobak, M.D., Professor of Gynecology at the University of Vienna. And Electricity in Gynecology and Obstetrics. By Egbert H. Grandin, M.D., Obstetric Surgeon to the New York Maternity Hospital. New York: William Wood & Co. 1887.

These two treatises comprise the fifth volume of the "Cyclopædia of Obstetrics and Gynecology," issued by William Wood & Co. as their annual "Library" for 1887. The first part deals with the methods of gynecological examinations, and with the instruments employed. The second part treats of minor gynecological operations, the use of tampons, of the curette, of local applications, and of pessaries. In the third part Dr. Grandin, the editor of the Cyclopædia, discusses the use and mode of application of electricity in gynecological and obstetrical practice. A chapter is devoted to electrolysis and to Apostoli's method of treating uterine fibroids. There are one hundred and sixty illustrations in the two treatises. This volume forms a most excellent introduction to the science and art of gynecology as it is developed in the succeeding volumes of the series.

Nationalitet en Natuurwetenschap. Door B. J. Stokvis. Haarlem: De Erven F. Bohn. 1887.

This is an address on "Nationality and Science," delivered at the opening of the First Netherland Congress of Naturalists and Physicians, held in 1887.

Sterility: Developmental Anomalies of the Uterus. By P. Müller, M.D., Professor of Obstetrics and Gynecology at the University of Berne. And The Menopause. By E. Börner, M.D., Professor of Obstetrics and Gynecology at the University of Gratz. With Fifty Fine Wood Engravings. Edited by Egbert H. Grandin, M.D., Obstetric Surgeon to the New York Maternity Hospital; Instructor in Gynecology at the New York Polyclinic; Fellow of the Obstetrical Society, etc. New York: William Wood & Co. 1887.

This book forms the eleventh volume of the "Cyclopædia of Obstetrics and Gynecology," appearing as Wood's Series for 1887. The first part, on sterility, deals with this condition as it occurs in man as well as in woman. The subject is treated of in a scientific spirit, and without the introduction of the questionable anecdotes for which many writers on this condition seem to have such a *penchant.* For this reason lay readers will probably vote the work stupid, but their loss is the true student's gain. The second part is an interesting essay on the congenital malformations of the uterus. In the third part Dr. Börner considers the menopause, and the symptoms and complications connected therewith. This book is, perhaps, the most interesting of the series to the general practitioner.

DISEASES OF THE OVARIES. By DR. R. OLSHAUSEN, Professor of Obstetrics and Gynecology at the University of Halle. With Thirty-six Fine Wood Engravings. Edited by EGBERT H. GRANDIN, M.D., Obstetric Surgeon to the New York Maternity Hospital; Instructor in Gynecology at the New York Polyclinic; Fellow of the Obstetrical Society, etc. New York: William Wood & Co. 1887.

IN this volume, of over four hundred pages, which is the eighth of the "Cyclopædia of Obstetrics and Gynecology" (Wood's Library for 1887), the question of ovarian disease is discussed ably by Dr. Olshausen. The first half of the book is taken up with a consideration of the diseases of these organs, while the latter half treats of the operations for the removal of sound and diseased ovaries. The seeker after information on ovariotomy is doubly blest in this Cyclopædia, for Kaltenbach and Hegar discuss the same subject at length in the latter part of volume sixth.

DISEASES OF THE TUBES, LIGAMENTS, PELVIC PERITONEUM, AND PELVIC CELLULAR TISSUE; EXTRA-UTERINE PREGNANCY. By L. BANDL, M.D., Professor of Obstetrics and Gynecology at the University of Prague. And DISEASES OF THE EXTERNAL FEMALE GENITALS; LACERATIONS OF THE PERINEUM. By P. ZWEIFEL, M.D., Professor of Obstetrics and Gynecology at the University of Erlangen. With One Chromo-lithograph Plate and Eighty-eight Fine Wood Engravings. Edited by EGBERT H. GRANDIN, M.D., Obstetric Surgeon to the New York Maternity Hospital; Instructor in Gynecology at the New York Polyclinic; Fellow of the Obstetrical Society, etc. New York: William Wood & Co. 1887.

THIS is the concluding volume of Wood's Library for 1887, "The Cyclopædia of Obstetrics and Gynecology." In this most excellent series we have the best works of the best German gynecologists, and, taken together, they make up a Cyclopædia of great value to the general practitioner and to the gynecologist as well. It contains the best thought of the most advanced of Continental specialists and teachers, and, owing to the judicious and painstaking editing of Dr. Grandin, the work is made for all practical purposes a genuine American one. The editor has added copious notes, wherever needed, by reason of some slight omission of the author or because of some statement at variance with the accepted teaching of American gynecologists. The illustrations are in the main very good, and the mechanical work on the book leaves nothing to be desired.

DE L'ÉLECTRICITÉ COMME AGENT THÉRAPEUTIQUE EN GYNÉCOLOGIE. Par le DOCTEUR PAUL F. MUNDÉ, Professeur de Gynécologie à la Polyclinique de New York et au Dartmouth College; Gynécologiste à l'Hôpital du Mont-Sinaï, etc. Traduit avec l'Autorisation de l'Auteur, et Annoté par le DOCTEUR P. MÉNIÈRE, Professeur libre de Gynécologie, Rédacteur en Chef de la *Gazette de Gynécologie*, etc. Paris: Octave Doin. 1888.

THIS is a French translation of Dr. Mundé's treatise on "Electricity as a Therapeutic Agent in Gynecology."

TEXT-BOOK OF THERAPEUTICS AND MATERIA MEDICA. Intended for the Use of Students and Practitioners. By ROBERT T. EDES, A.B., M.D., Fellow of the Massachusetts Medical Society, etc. Philadelphia: Lea Brothers & Co. 1887.

THIS is a practical work, well adapted for the use of those who have already some knowledge of the principles of materia medica and of experimental therapeutics, and who wish to review their work and to fix in their minds the essentials of the drug treatment of disease. The student preparing for examination, or the hospital interne, or recent graduate, will derive great benefit from a study of this book. The author has the gift of conciseness, and has well succeeded in his endeavor to present only the practical and really useful facts of therapeutics. He is wisely conservative in his views concerning the virtues of drugs, and, while not a nihilist in therapeutics, seeks to moderate the too enthusiastic notions of the curative effects of medicines, which works on therapeutics are too apt to excite.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS. By ROBERTS BARTHOLOW, M.A., M.D., LL.D., Professor of Materia Medica, General Therapeutics, and Hygiene, in the Jefferson Medical College of Philadelphia, etc. New York: D. Appleton & Co. 1887.

A COMPARISON of this edition of Bartholow's deservedly popular treatise with the first edition of the same work, published just a decade ago, shows well the remarkable progress that has been made in therapeutics, or, more correctly speaking, in additions to the materia medica. The first edition contained less than five hundred and forty pages, while this has over eight hundred. Many new remedies, chiefly hypnotics, antiseptics, and antipyretics, have appeared since the first edition, and new uses have been discovered for many of the less recent drugs. It would be useless to review this book at any length, for it is a standard work, the excellencies of which are known to all. The only office of the reviewer is to chronicle the appearance of new editions as they succeed each other in rapid procession.

LES MÉTHODES ANTISEPTIQUES DE PANSEMENT, en Temps de Paix et en Temps de Guerre. Par le DR. JEAN HABART, Médecin Régimentaire de la Garde Royale Hongroise. Traduit de l'Allemand, avec l'Autorisation de l'Auteur, et Annoté par le DR. FREDERIC WEISS, Lauréat de la Faculté de Médecine de Nancy, Médecin Aide-major de 2e Classe de la Réserve. Paris: G. Steinheil. 1887.

THIS little book contains much valuable information on the methods most commonly employed in the antiseptic dressing of wounds, and on the best means of obtaining antisepsis in field hospitals and ambulances.

DIFFERENTIAL DIAGNOSIS: A Manual of the Comparative Semeiology of the more Important Diseases. By F. DE HAVILAND HALL, M.D., Assistant Physician to the Westminster Hospital, London. Third American Edition, thoroughly Revised and greatly Enlarged. Edited by FRANK WOODBURY, M.D., Professor of Therapeutics and Materia Medica, and of Clinical Medicine, in the Medico-Chirurgical College, etc. Philadelphia: D. G. Brinton. 1887.

THIS is a very useful book. It is of moderate size and well printed, easy to hold, and easy to read. The matter is arranged conveniently for reference, and, while not sacrificing clearness, the author and editor have been economical of words. Thus one turns to any disease and finds there a statement of all the prominent symptoms, without waste of time in weeding out the superfluous and the confusing from the important. The book is lacking, however, in one very convenient, if not essential, feature; its index is poor. It would have been easy to make a complete index, so that one could turn to it and find, without loss of time, a list of all the diseases in which any one symptom is a prominent feature. To a young practitioner such a semeiological index would have increased the practical worth of the book a hundredfold. However, the work is a very useful one as it is, and will be of great assistance to the recent graduate, and even older men may not infrequently find it serviceable in recalling to their minds some little, but important, point which had for the moment escaped them.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 19, 1888.

Abraham Jacobi, M.D., President, in the Chair.

The library of Dr. W. D. Schuyler, consisting of one hundred and seventy-six valuable volumes, the presentation of his widow, was accepted with thanks by the Academy.

Dr. A. Caillé read a paper on

A METHOD OF PROPHYLAXIS IN DIPHTHERIA.

There are, the author said, children subject each year to attacks of diphtheria, usually in the fall and spring. According to his experience such attacks recur usually in October, November, March, and April. May not these persons harbor the microbes or factors essential to the development of diphtheria in an unhealthy nasal and oral cavity? He had sought to establish the correctness or fallacy of this view of auto-infection by experiments upon eight subjects, who, prior to 1885, had had two or more attacks of diphtheria. The parents carried out the following instructions: 1. All carious teeth to be filled or extracted, the teeth to be examined by a dentist from time to time. 2. The mouth to be thoroughly rinsed three times a day, after each meal, with one of the following solutions; namely, a three per cent. solution of potassium chlorate in water, a five per cent. solution of liquor sodæ chlorinatæ, or a saturated solution of borax in water, a portion of the liquid to be drawn into the nose. In addition to these eight cases there were two infants, each aged about one year, who had never had diphtheria, who were treated by regularly dropping some of a solution of borax into the nose, especially when nasal catarrh was present. As a result, up to December, 1887, patients one, three, four, six, and eight had had several attacks of acute pharyngitis and amygdalitis, characterized by only a moderate amount of swelling of the tonsils and moderate fever, but none of these or of the other patients had true diphtheria. Patients one, two, and three, members of the same family, did not contract diphtheria, although the mother and a nurse had the disease.

While these observations were too limited to base upon them definite conclusions regarding the value of such prophylaxis, he thought we were justified in the belief that if the nasal and oral cavities could be kept clean by a mild antiseptic solution, the frequency of diphtheritic inflammation would be markedly reduced. If we admit our ignorance of the true nature and significance of so-called diphtheria, we will have to acknowledge the difficulty of differentiating clinically between the contagious and the non-contagious acute affections of the nasal and faucial mucous membranes, and we are thus led to look with suspicion upon all such changes, and to apply prophylactic measures. In the present state of our knowledge, prophylactic measures will prove of more value to the community than methods of treatment of diphtheria after it is once developed.

A few words about prophylactic measures.

We have, in the first place, general preventive measures, such as hygienic methods, relating to clothing, feeding, isolation in homes and hospitals, etc. Second, there are the prophylactic methods pertaining to the family, and directed to the individual. While public sanitation should be carried out strenuously, yet the author was convinced that the utmost importance should be attached to personal and individual preventive measures. Yet very little information on this point could be obtained in the vast amount of literature on diphtheria.

Résumé.—In a city with densely populated districts, the supervision of plumbing, the erection of air-shafts in tenements, were useful supplementary sanitary measures to individual prophylaxis against diphtheria, and physicians should instruct the people in such matters as often as opportunity presents. Overheating of school-rooms and of dwellings should be most emphatically denounced as dangerous. Isolation of the sick should be explained and insisted upon. The management of isolation-houses for the poor should be such as to readily gain their confidence. Enlarged tonsils should be reduced. Carious teeth should be removed or filled promptly. The fee of the poor therefor should be small, or nothing. Parents should inspect their children's mouths and throats each day before they go to school. Children should learn to gargle at an early age. Children suffering from simple sore throat, apparently, or from follicular amygdalitis, should not attend school until well. Kissing upon the lips should be forbidden. Children old enough to gargle should be taught to do so after each meal, with a weak solution of an antiseptic chemical, and in young children a few drops should be dropped into the nostrils.

Recognizing that it is impossible to lay bare and control all sources of diphtheritic infection, it will be more practical to teach the individual to protect himself by selecting his surroundings and striving to keep healthy those parts which are found by experience to be generally affected by diphtheria.

Dr. George T. Harrison had had such painful experience with regard to curative treatment of diphtheria that he had listened with much interest to what the author had to say regarding preventive measures. He had learned some new points. Dr. Caillé had done well in calling attention to the paper once written by the President, and published in The Medical Record, concerning amygdalitis.

Dr. Fruitnight said that often the first case of diphtheria in a family died before the physician was called in, and thus the parents learned, thereafter, to inspect the mouth and throat of their children frequently. It would be natural to suppose that a healthy mucous membrane in the nasal and faucial cavities would militate against the development of diphtheritic germs, and when the disease existed in a family it would be well for those not yet infected to use a disinfecting gargle.

Dr. Simon Baruch thought daily insufflation of a cold solution into the nose would be a dangerous procedure.

Dr. Pooley said that all medication of the nose should be lukewarm at least. With a post-nasal syringe and a warm solution almost any person could safely wash the nose.

Dr. Seibert fully coincided with the speaker of the evening. If he understood him aright, he wanted to keep the mucous membrane of the nose, mouth, and throat clean. He would add thereto the necessity for keeping the stomach in order, for with a disordered stomach the mouth, and particularly the tongue, could not be kept clean. No candy should be sold near a public school, for he had seen repeatedly attacks of diphtheria in his own children due to a spoiled stomach which began in the eating of candy at school.

The President said it was a well-recognized fact that the worst forms of septic disease are not infrequently connected with immense glandular swellings, and, indeed, the severity of many cases is manifested in the degree to which the neighboring lymphatics are affected. Everyone, he believed, would give a grave prognosis in diphtheria when there is much œdematous swelling and enlargement of the lymphatics near the angle of the jaw. He felt sure that the diphtheritic poison could remain in the mucous membrane and neighboring lymphatic bodies. As long as the mouth and pharynx are healthy, particularly the mucous membrane, diphtheria will not show itself so easily.

RENEWED ATTACKS OF DIPHTHERIA

also arise by infection from the carpets, curtains, and furniture of the room in which the sick have lain. Hence the importance of having at least two rooms, and of removing the patient from the one to the other every two or three days to admit at least of thorough ventilation and cleansing, if not of disinfection. In some cases he had found it necessary to have the children removed to another house before they would finally recover.

Dr. L. E. Holt had the impression that enlarged tonsils favor the development of diphtheria and make the disease more severe when it occurs. He inquired of the speakers whether their experience supported that view.

The President said his experience accorded therewith.

Dr. Joseph E. Winters prevented the spread of diphtheria in families, in which some member was affected, by isolation, disinfection, and enforcing hygienic rules on the other members; but, in addition to these general measures, he gives to the well children full doses of the tincture of chloride of iron three times a day, and tonic doses of quinine; also small purgative doses of calomel.

THE INDUCTION OF PREMATURE LABOR IN AMAUROSIS AND AMBLYOPIA IN ALBUMINURIA FROM PREGNANCY.

Dr. T. H. Pooley read a paper with the above title (*vide* p. 93).

Dr. Loring opened the discussion with remarks insisting upon the importance of an ophthalmoscopic examination during pregnancy. It is easy to determine with the ophthalmoscope the presence of the albuminuria retinitis. Disturbance of vision may occur from uterine disturbances in the non-pregnant. A girl eighteen years of age accidentally discovered that she was losing sight in one eye. She sufferred from menstrual disturbance. An oculist examined her eyes and said there was atrophy of one optic nerve. Every effort was made to induce return of the menstrual flow, which succeeded, but vision in that eye was lost. About a year afterward she consulted Dr. Loring, with failing vision in the other eye, and he found neuro-retinitis. Menstruation was again irregular. She married, and vision became better. Again, after nursing a child about three months vision began to fail. According to advice, she weaned the child, leeches were applied to the temple, the menses were brought on, and vision returned. Kidney disease could not be detected. She was not hysterical.

Dr. Murray thought the conclusions reached by the author were not justified even by the facts presented. The quotations of Dr. Loring showed that neuro-retinitis is present in a large percentage of pregnant women; yet the proportion of pregnant women who have eclampsia accompanying albuminuria is small, and a small proportion of these again have serious disturbance of vision. The inference is that the revelations of the ophthalmoscope when used in all cases of pregnancy give rise to needless anxiety to physician and patient. His own experience also confirmed the view that the general use of the ophthalmoscope in pregnancy is needless.

Drs. Baruch, Fruitnight, Harrison, and The President also made some remarks, and, in closing the discussion, Dr. Pooley said that the argument in his paper was in behalf of saving sight in these cases, and he thought it was evident from the facts presented that when grave organic disease of the eye exists during the albuminuria of pregnancy the chances for vision are better when pregnancy is terminated prematurely.

Pilocarpin in Bright's Disease.—Dr. Heitler stated the other day that he had never seen any good result follow the use of pilocarpin in renal disease after ascites had once set in. On further questioning him afterward he admitted that it produced its physiological effects of increased perspiration and urination, but believed these to be purely temporary and to have no beneficial result, whereas the depression consequent upon the use of the drug was not seldom alarming. He used it subcutaneously in doses of gr. $\frac{1}{6}$ administered every other day.—*Vienna Correspondence Birmingham Medical Review.*

NEW YORK NEUROLOGICAL SOCIETY.

Meeting held December 3, 1887.

The President, Dr. C. L. Dana, in the Chair.

Dr. J. C. Shaw reported

A CASE OF CEREBRAL TUMOR.

The patient was a male, aged forty-one, a jeweller by trade, temperate, and previous history good; no syphilis.

In 1879 the patient had an attack of rigidity in the night, followed by a deep sleep. March 19, 1882, he had an epileptic attack, the convulsion commencing in the left side of the face and extending to the neck, so that the head was twisted to the left side, and the eyes were turned upward. Thus far the patient was conscious, and had raised the left arm to strike upon his bench to attract help, when his arm was seized with the spasm, and he knew nothing further. The attack was followed by sleep. He had had as many as four such seizures in a week. In one attack observed by the speaker, the left side of the face and the left arm had been principally affected. There had been no loss of consciousness in this attack.

The convulsions were preceded by a peculiar, painful sensation in the roof of the mouth and teeth. There was more or less numbness of the left side, the tactile sensibility of which was diminished. Two points were recognized upon the left hand only when 4 c.c. distant, while upon the right hand two points were recognized when 1 c.c. distant.

January, 1886, headache commenced to be complained of, also nausea. Choked disk was now found. August, 1886, vision was almost lost. Headache and nausea continued and mental cloudiness was apparent. February 4, 1887, the patient would fall to the right side, there was paresis of the left arm and leg, and the patient could not tell when lightly touched. He was now weak, thin, and confined to bed. March, 1887, urine and fæces were passed involuntarily. In May a bed-sore appeared. June 21st, the patient suddenly became comatose, with puffing respiration, chiefly abdominal. After thirty-six hours he recovered from this, but July 1st died of exhaustion, extremely emaciated. The skull was found very thin, the veins of the meninges prominent. On lifting the brain the posterior fossa was found to contain fluid, the origin of which did not appear. The left hemisphere showed no gross lesion. In the right hemisphere the dura was adherent throughout a localized patch, dark-brown in color, and occupying the lower part of the motor zone, beneath which softening appeared. The basal ganglia were free.

The pain in the teeth, complained of at the commencement of the spasm, had suggested a reflex from the dura to the fifth nerve. The reader considered it not illogical to conclude that the numbness, too, was to be explained by the irradiation of this reflex to other portions of the sensory tract. The apoplectiform seizure was probably due to hemorrhage into the softened mass. The opinion of the members was requested upon this point.

Dr. Dana inquired in regard to the character of the growth.

Dr. Shaw replied that section had not yet been made, but he considered the growth a glioma.

Dr. Dana found the growth occupying only the lower part of the præcentral convolution and not involving the parietal lobe.

Dr. Seguin remarked that as the pia was *in situ*, exact location was difficult; but that, according to his judgment, the lower part of the præcentral and the posterior extremity of the second frontal and of the third frontal convolutions were involved. The fact that Dr. Shaw had observed no laryngeal symptoms was interesting.

Dr. Birdsall, referring to the sensory symptoms, remarked that the tumor was not simply a cortical lesion, it extended inward, and more central tracts had probably been involved.

Dr. Starr added that sensory symptoms accompanied motor impairment where the parietal lobe was invaded. As a rule, where cortical motor lesions were without sensory disturbance, the location of such lesions was anterior to the fissure of Rolando. Where sensory disturbances were also found, it was posterior to that fissure. In this case, however, it was not impossible that congestion posterior to the fissure would explain the symptoms.

Dr. Seguin remarked that the subject of sensory disturbance in connection with cerebral tumors was most interesting and important. In his own experience a slight diminution of sensibility had accompanied lesions of the motor-centres, even when confined to the cortex. Nothnagel, at the Congress for Internal Medicine in Germany, had referred to slight tactile anæsthesia in a large number of cases of tumor or lesion of the motor-cortical centres. These were, however, without loss of the muscular sense. It was conceded that the muscular sense was located in the parietal lobe. In a case of Dr. Weir's, with sarcoma involving the fasciculus for the face and hand, there was distinct anæsthesia of the face and hand, but no loss of the muscle-sense, as tested by passive motion and weights.

Dr. Starr presented

A CASE OF COMBINED SCLEROSIS

in connection with Dr. Putnam's paper. The patient had been under his care for nine or ten months. He was sixty-two years of age, of good family history, and no syphilis. Eight or nine years ago he had commenced to complain of dull, aching pain in the sacrum and down the legs. He had had no lightning pains, but a progressive difficulty in locomotion, until he was now markedly ataxic. There was increased tendon-reflex at the knee. The case differed from that of ordinary locomotor ataxia in the absence of lightning pains and the absence of the loss of the tendon-reflex. There had been slight enuresis, but the urine was now retained. The pupils were contracted, but were not of the Argyll-Robinson type. They reacted both to light and to accommodation, but sluggishly. The tremor of the muscles of the face referred to by Gowers was present. It was a light tremor, like that of paretic dementia.

The Chairman then introduced Dr. Putnam, of Boston, the President of the American Neurological Association.

Dr. Putnam presented a

REPORT OF THE EXAMINATION OF THE SPINAL CORD IN A CASE OF COMBINED SCLEROSIS.

The patient was a female, fifty-eight years of age, whose father had died at eighty, and mother at eighty-three years. The patient had been divorced from a first husband on account of his immoral conduct. Her second husband was also dissolute. When twenty-eight or twenty-nine years of age the patient's hair had fallen out. There had been no eruption noticed. The patient had used stimulants freely, but never in excess. Beginning in 1880, she had suffered with diarrhœa. Brown discoloration of the skin of the left arm and neck was then noticed. Subsequently the skin of the abdomen became a deep chocolate color, and the pigment of the nipples and axillæ increased and deepened. When first seen by the reader her face was as dark as that of an Indian, and roughened with scales and exudation. In 1883 she was treated for anæmia and dyspepsia, the nerve-affection not having appeared until two or three years ago. The first nerve-symptom was numbness in the fingers. In November, 1886, she had lost power in the limbs, so that her gait was unsteady. She had difficulty also in the use of her hands, and was said to have fainted at one time with her teeth clinched. Her motor inability consisted in inco-ordination rather than paralysis. She had no lightning pains, but closing the eyes increased the inco-ordination, failing to reach the spot aimed at with her hands within four inches. On account of her mental apathy her sensory condition could not be made out. Her answers to questions were not correct. She had a ravenous appetite, and the diarrhœa continued. Taste had been impaired for several years. During the following six months the legs became completely paralyzed, and the patient died, April 8, 1887, six months from the onset of the ataxia and the paraplegia. The symptoms of ataxic dementia were prominent in the ravenous appetite and disordered taste, leaving the diagnosis, perhaps, open to question, as examination of the brain was not permitted. Spitzka has found degeneration of the lateral tracts in dementia, but coincident degeneration of the pyramidal tracts was not present in these cases.

The post-mortem examination showed in the lower ileum several ulcers, apparently tubercular in origin. In the cord there was softening of all the tissues at the level of the fourth dorsal nerve. There was extreme whiteness and no trace of vascularity in this part. The cord was examined from the region of the first lumbar to that of the second cervical vertebra. The posterior columns, through their whole extent, showed a condition like that of a primary sclerosis. At the level of the twelfth dorsal vertebra there were two sclerotic areas, one external to the column of Goll, in the column of Burdach. The lateral columns appeared as described by Spitzka in his two cases of primary dementia. The septa between the nerve-spaces were broken down, so that holes appeared in the sections, with fragments of myeline and granular cells. These changes were confined to the lateral pyramidal columns, up to the middle cervical region, where the direct cerebellar tract of both sides took on the same appearance, and the diseased lateral area became less.

It was noted that the softened spot might have been due to anæmia or to myelitis. It was against the latter theory that the vessels were here shrunken, and there was no transudation of white globules to be seen. The degenerations were not in direct relation with this softened tract. The posterior nerve-roots were healthy. The anterior nerve-roots were affected with different degrees of inflammation.

The reader referred to Strümpell's and Gowers' classifications, also the general question of primary systematic sclerosis of the spinal cord.

Dr. Starr considered that the exhibition of specimens placed the diagnosis of combined sclerosis in this case beyond doubt, and, inasmuch as the case had presented symptoms not recognized as belonging to this condition, the paper was one of unusual service by enlarging our clinical picture of the disease. The exact pathological difference between the condition of vacuolization in the lateral columns, and that of the ordinary sclerosis of degeneration was a matter of interest. In these specimens the lateral columns were vacuolized, and in the posterior columns the connective tissue was increased; yet both processes were called sclerotic when they probably should be differently classed.

Dr. Starr presented sections, one from the original case of Friedreich's disease, and one from a case of ordinary sclerosis, each presenting the distinctions referred to in Dr. Putnam's paper.

Dr. Seguin considered the change in the lateral columns in Dr. Putnam's specimens in front of the region of the crossed fasciculi. In one section it was even in front of the transverse diameter. The same violation of the limits of the pyramidal fasciculi had been observed in a case of his own. In this case the paresis predominated, and the patellar and solar reflexes were exaggerated. In another case, referred to him by Dr. Hunn, of Albany, ataxia and posterior-column symptoms predominated, and there was no tendon-reflex. There was anæsthesia, fulgurating pains, and ataxia of the legs and hands, with gradual paralysis. One or the other lesion would predominate in such cases, producing variety in the symptoms. Errors in diagnosis were easy.

Nodular or insular sclerosis, if distributed in the posterior and lateral columns, would give the clinical picture of combined sclerosis. Charcot had even lectured upon a case as spastic paralysis, to find, upon autopsy, nodular or insular sclerosis. Diagnosis should be guarded.

Dr. Birdsall, referring to the specimens under the microscope, found in the posterior columns ordinary sclerosis, and in the lateral columns separation and swollen myeline sheaths, the axis-cylinders being in position in some places, and in others simply spaces between the neuroglia-elements, as though the myeline and axis-cylinders had dropped out. In judging of this condition, one had to remember the different normal structure of the two regions, the finer fibres and finer neuroglia-elements in the posterior columns. With Dr. Seguin, he found the degenerated area forward of the transverse line of the central canal, and extending even half-way up the anterior horn, taking in the region described by Gowers as the ascending cerebral tract, obtained by physiological and embryological data. The speaker inquired whether there had been any chance for post-mortem softening of the cord which would explain the vacuolization.

Dr. Putnam thought there had not been any such chance, as the specimen had been dropped into Müller's fluid within one hour after removal. The nature of the change in the lateral columns showed that it had been rapid, from the fragments of granular myeline scattered about, and it was suggested that the spaces might have been caused by albuminous fluid which had been poured out and coagulated. The section showing the degenerated area anterior to the transverse diameter had been taken from the upper cervical region, where the direct cerebellar tract carries the area forward.

Of the three varieties of mixed sclerosis, the spasmodic was represented by a case of Strümpell, the ataxic by Dr. Starr's case, and the paralytic by a case of Strümpell and by his own.

Dr. Dana had had occasion to collect and study the cases of combined sclerosis reported, with autopsy, adding two new ones. The subject was still far from being settled, but continued experience led him to much such a classification as Strümpell's. Pathologically, he thought the cases of combined sclerosis were, first, cases of diffuse dorsal myelitis, with the lateral and posterior scleroses more or less secondary. They formed, usually, the spastic type. He was inclined to think that Dr. Putnam's case might go in this category. Second, cases of atypical tabes, with extension of the sclerosis in the lateral columns. These formed the ataxic type. The speaker believed that Dr. Starr's case was one of atypical tabes. He had seen several such cases, and had found, after a time, that the spastic symptoms disappeared, and the patients were simply locomotor ataxics. The posterior lesion was at first high up, and perhaps with some extension laterally. The third class of cases was that of primary tri-fascicular sclerosis. These cases were very rare.

Dr. Putnam stated that as the degeneration was found both above and below the softened area, it could not have been secondary to it; also the involvement of the whole lateral tract would have required a focal lesion above, which was not obtained.

TREPHINING FOR EPILEPSY.

Dr. Dana presented the calvarium and brain of a young woman, trephined over the site of an old fracture for epilepsy and maniacal attacks. The operation had been done by Dr. Robert Abbe, with all antiseptic precautions, yet persistent high temperature followed, with death on the tenth day.

A small subdural cyst was evacuated at the time of the operation. The autopsy showed old leptomeningitis, with recent meningitis, and acute red softening under the injured part. The question of the safety of trephining was brought up.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 28, 1887.

William P. Northrup, M.D., Vice-President, in the Chair.

Dr. John J. Griffiths presented two specimens, which illustrated

CEREBRO-SPINAL MENINGITIS WITH PUS AND FIBRIN IN THE CEREBRAL VENTRICLES.

Case I.—Theresa C——, aged five months, was born in the New York Foundling Asylum, and had been out to a wet nurse. On November 8, 1887, she was brought to the Out-door Department, with a history of constipation and repeated convulsions. She was pale, restless, and had a moderate cough.

She was returned to the house with a diagnosis of meningitis.

Dr. Hopkins, the House Physician, furnishes a history of subsequent repeated convulsions, obstinate constipation, trismus, and unilateral convulsions. No opisthotonos. The symptoms continued four days, the patient dying on November 12th.

Autopsy by Dr. W. P. Northrup: The body was poorly nourished; hair worn off the occiput from constant rolling of the head; no eruption.

Brain.—A thick layer of greenish pus and fibrin was spread over the convexity and base, enveloping it everywhere, and extending down and enveloping the cord. The lateral ventricles were dilated to twice their normal size, and contained an abundant exudate of pus and fibrin, which also extended into the third and fourth ventricles. The central canal of the cord was not dilated. The floors and walls of the ventricles were slightly reddened, vascular, and softened.

Case II.—Josephine S——, aged four months and five days, was brought to the Out-door Department of the same institution on December 1, 1887, with a history of convulsions, opisthotonos, constipation, and left convergent strabismus. She manifested the same symptoms for the following sixteen days, and died, December 17th.

Autopsy by Dr. W. P. Northrup forty-eight hours after death: The body was extremely emaciated; no eruption.

Brain.—On opening the skull the convolutions were seen to be distinctly flattened and dry. There was no exudate upon the vertex, lateral surfaces, or base. The ventricles were dilated to three or four times their normal size, and within them were thick masses of pus and fibrin exudate, extending from the lateral into the third and fourth ventricles. The cortex was not softened; neither was the corpus callosum.

There was moderate softening of the walls of the ventricles, especially the floors.

At the level of the floor of the fourth ventricle, posteriorly, the inflammatory process seemed to have communicated with an area of cerebellar meningitis, which, in turn, extended down the cord as an ordinary spinal meningitis.

The area of cerebellar meningitis was about the size of a silver half-dollar. The central canal of the cord was not dilated.

The pus and fibrin exudate was thus found within the ventricles, upon a limited area of the cerebellum, and investing the medulla and cord.

In reviewing these cases it will be seen that both children were between four and five months old; both were wet-nursed; both females; and both gave symptoms of constipation and convulsions.

The point of special interest is thought to reside in the extensive pus and fibrin exudate in the ventricles.

In Case I. the exudate in the ventricles was associated with extensive exudate over the entire convexity of the brain and about the cord.

In Case II. the exudate in the ventricles was associated with a spinal meningitis, the two forming a continuity of lesions through the thin wall at the floor of the fourth ventricle at its lowest extremity (foramen of Magendie).

In neither case was there any dilatation of the central canal of the cord.

Dr. Northrup remarked that these two brains were the first cases in which he had seen the ventricles involved. He had seen them contain serum in moderate amount, but without dilatation. In tubercular meningitis the ependyma is frequently involved, small, discrete tubercles being easily demonstrated upon it, the ventricles being at the same time dilated and containing serum. This condition could not be called rare.

In cerebro-spinal meningitis, according to the literature of the subject, the ventricles may be dilated and contain sero-pus. This he regarded as rare.

In a moderate search through the literature he had not met with the description of any case in which the lesion had avoided altogether the convexity of the cerebrum and cerebellum, and expended itself in the ventricles of the brain and upon the meninges of the cord.

The sero-pus of the ventricles seemed to have its origin in the vessels of the velum interpositum, which are continuous with those of the pia mater.

Dr. A. Brothers presented a specimen of

CLEFT TONGUE,

with the following history: Amelia H——, aged one month, was referred to him by Dr. C. E. Denhard. At birth the midwife noticed a cleft in the palate, which has interfered with the proper feeding of the infant. Nursing was impossible, and milk poured into the child's mouth was returned through the nostrils. Although well-developed at birth it has steadily pined away, and when he saw it, on December 27th, it was evidently dying from marasmus. During the past few weeks it had suffered from diarrhœa, for which no physician was consulted. There were two older children in the family, but they were normally developed.

The specimens showed a fissure in the soft palate extending up to the hard palate, and a cleft one-eighth of an inch deep at the tip of the tongue. The lungs were œdematous, and showed hypostatic congestion at the bases. The heart was normal. The liver was very much congested. The kidneys (only one was removed) showed a small cavity, evidently a cyst.

There was a marked irregularity in the alveolar portion of the inferior maxilla, as though the gums were deficient.

The case was interesting on account of the lack of complete closure of the apex of the tongue, which he thought was quite rare.

Fissure of the palate was of interest because the child was likely to die from lack of nutrition. Had this child been properly fed from the beginning, attention having been paid to getting the milk well down into the œsophagus, so that it could not return through the nose, its life might probably have been saved.

Dr. Lewis Hall Sayre presented

THE HEAD OF A FEMUR REMOVED BY EXSECTION

at St. Vincent's Hospital. H. M. McK——, thirty years of age, a resident of Illinois, remarkably active and athletic, while being initiated in a secret society in May, 1883, was pressed upon by several men while he was bent over, causing very severe pain in the lumbar and dorsal regions, and making him fall to the floor in great agony. He recovered in a short time, and went through with the ceremony. On the next morning he felt a sensation of itching along the left side of the back, and two weeks later had pain in the right groin, and could not walk without the aid of a cane or crutch, because he was unable to bear any weight upon the right leg.

The case was diagnosticated as rheumatism, and the patient resided in Colorado and Mexico two years and four months, where he underwent treatment, but without benefit.

During this time he was always compelled to raise himself on his hands whenever, from any cause, the street-cars jolted. He then began to notice that he was getting out of shape, and went to a gymnasium for the purpose of correcting that tendency. While swinging suspended by his hands he always felt better, but whenever he came down upon his heels he suffered great pain, and, therefore, he always lowered himself very carefully. In the meantime his physicians insisted that his trouble was rheumatism.

Up to this time no knuckle had been detected in his back, although he was aware that he was

TWISTING SIDEWAYS TO THE RIGHT.

While riding on horseback he had to raise himself from the saddle by his hands whenever the horse jumped over any obstacle. In 1886 he had a brace applied, but was unable to wear it. A plaster-of-Paris jacket was also unsuccessfully applied, although it gave him some comfort. He then had another brace applied, but was unable to wear it, and finally came to Dr. Sayre for a plaster jacket, because the first one put on in Chicago by Dr. Gunn had afforded him some relief. That was on April 21, 1887, and he was then walking with a pair of crutches, and his right leg was flexed and abducted. Careful examination revealed morbus coxarius of the right side, in addition to the spondylitis of the lumbar vertebræ, which had become quite prominent. Partial suspension gave him instant and complete relief from pain. Two days afterward a "plaster-of-Paris jacket" was applied which, he said, gave him more comfort than anything he had worn. But when his back had been made easy, he felt the pain in his hip, which he had not thought of before. A weight and pulley were then applied to the limb, and the pain in his hip was relieved. A short hip-splint was then adjusted during the day, and he felt so comfortable that he left for his home in Texas, and was able to attend to his business, which required him to travel many thousands of miles.

He returned a few weeks ago, with his back nearly well, but his hip was worse. He had worn the short splint only one month. He had occasionally used extension at night; but, without the splint during the day, the disease had progressed until exsection was indicated, and the operation was performed, December 27th.

One month ago the patient's urine contained large quantities of albumen and pus, but they disappeared. The right limb was adducted, flexed at an acute angle with the thigh, and everted. There was intense pain on pressure of the head of the femur into the acetabulum. The head of the bone contained an abscess. The acetabulum was extensively carious.

Before the operation a peculiar clicking noise could be produced in the joint by manipulation, and it was found that the acetabulum contained a loose piece of cartilage that articulated with a corresponding eburnated surface upon the head of the bone, and gave rise to the peculiar sound.

Dr. Brothers asked if it was common for spondylitis and hip-joint disease to occur at the same time in one patient.

Dr. Sayre said that it was not infrequent. He had seen several cases.

The Society then went into executive session.

The types can sometimes make sad havoc with names, but rarely is the transformation so complete as in the case of Dr. Thomas H. Mays. The item started out as follows: "The prescription of thenic recommended by Dr. Thos. H. Mays for hypodermic uses;" it comes round to us now as "The prescription of thenic recommended by Dr. East, of Mayo."

Correspondence.

INCREASED PENSIONS FOR LOSS OF HEARING.

To the Editor of The Medical Record.

Sir : My attention has been directed by Captain A. G. P. Brown, acting in the interests of a large number of surviving soldiers, sailors, and marines who are suffering from the disability of deafness, to the proposed bill to be introduced this winter in the Fiftieth Congress, giving the class he represents increased pensions. The men who acquired aural disease with deafness in the line of duty have been greatly neglected, and I write this with the hope of enlisting the interest of medical men, especially those who served as medical officers themselves, in this meritorious measure ; believing that, if Congress and the President can feel assured that unjust claims can be detected, the bill will not be long delayed in its passage. Of course, deafness from natural causes among the survivors of the War of the Rebellion, of similar origin to that of persons of the same age and social condition who were not in the service, is common and must be excluded by pension-examiners ; but many soldiers came home from the field with partial loss of hearing, and managed to get on very well until their defect increased from some cause ; it may have been that one ear only was at first affected ; in this way their disability was greatly increased. There is undoubtedly a large class of men disabled in this manner worthy of pension.

Soldiers were not generally given to anticipating aid of this kind during the progress of the war, when most of them were young and strong ; but now, after the lapse of twenty-five years, existence in the decline of life requires a more severe struggle, and defects are felt which were never before taken into count ; indeed, many have been disinclined to apply for Government aid, though fairly entitled to pensions, so long as they could earn a livelihood.

The causes of deafness among men who served in the war may be included in three classes, namely : Shot-wounds involving the ear, rupture of the drumhead by explosives and injury of the inner ear by loud sounds, and exposure.

Shot-wounds involving the ear are not obscure in their nature, and were easily recognized. Injury from concussion of great guns and small arms is more difficult of recognition, especially after the lapse of many years, and claims should be fortified by evidence of exposure to injury as well as by special examination at the time of application. I have found these cases to be quite difficult. The existence of deafness from aural disease due to exposure is no more difficult of recognition than disability from diarrhœa, rheumatism, bronchitis, and the like.

Injury of the inner ear, if long time has elapsed, is difficult of recognition, and a decision must depend very much upon evidence as to the applicant's exposure. It has always seemed to the writer that exposure of the drumhead to the long-continued shock of musketry fire was injurious, though no deafness was ever traced to this cause while in the field. The following case, referred to me by Medical Director Delevan Bloodgood, U.S.N., however, seems to confirm the above conjecture. For its history I am indebted to Passed Assistant Surgeon Frank Anderson, U.S.N., U. S. Steamship Richmond.

David C——, ordinary seaman, twenty-three years of age, on October 27, 1887, was engaged in firing at a target with a Gatling gun in the bow of ship's cutter. He stood about two feet from the muzzle of the gun, passing ammunition, and to leeward of it, his back toward the bow, the left ear turned to the piece, during the firing of a thousand rounds of cartridges. The firing occupied about fifteen minutes. The discharges were in volleys of two hundred each, there being about two minutes' interval between each volley. Patient became so deaf, after about four hundred rounds had been fired, that he could no longer hear the orders given by the man feeding the gun. He therefore turned about while passing the rest of the ammunition so as to bring the right ear, which seemed less affected, toward the muzzle of the piece, turning half round when reaching for cartridges. There was a "stinging-pain" in and about the ears, extending through the head, especially the forehead. On returning aboard ship, about fifteen minutes afterward, he found that the deafness was increasing, and in about a quarter of an hour it was total. The head pained for some two weeks, and there was vertigo ; the pain behind the ears and sensitiveness to touch, especially on the left side, still continues. Tinnitus began soon after injury.

The left mastoid was blistered while on ship, where he remained three weeks after the injury. At first he was very nervous and could not sleep well on account of the noise and distress in ears and head, though he felt very drowsy. He is now in the Naval Hospital, where the left mastoid has been blistered three times and rubbed with oleate of mercury, and he is under a moderate course of iodide of potassium. The patient is of full medium size and has been in good health, though he never considered himself very strong. There is no history of any constitutional disease, and he says his hearing has always been very good. When examined by the writer (January 18, 1888), he did stagger, but occasionally felt a sensation, lasting a few moments, as if something was turning around in his head. He has lately complained of slight weakness of the left ear, but this is not marked. He is much run down and mentally depressed.

Examination of ears.—Left ear : The drumhead shows trophic changes ; at the umbo and posterior segment, radiating fibres are exposed to view. Short process very prominent. Stapes and long process of incus are plainly visible through the drumhead. There has been very decided chronic catarrhal otitis media. The entire peri-auricular region is tender to touch, though no other part of the head is. *Right ear :* Some symptoms of recent chronic catarrh are present. The drumhead is less trophic than the left. The cone of light is high up, above the umbo. Malleus plexus and tissues about the anterior superior quadrant are very decidedly injected.

Hearing.—At the sham battle which took place at Newport, after his injury, he was on deck of the Richmond and saw the action, but could hear no sound, not even the guns of his own ship, though he felt the deck tremble. The deafness is absolute ; cannot hear any impression of sound. Large vibrating tuning-fork on teeth or any part of skull not heard. Does not hear shouting or screaming into the ear through a conical conversation-tube. Patient does not hear his own voice, but speaks with very good modulation.

The importance of facing the piece in firing is shown by the result of neglecting such a precaution in this case, where the ear was presented to the muzzle—the effect of impact being greater owing to the direction of the wind. Nor were the ears protected by cotton-wool in the external auditory canals, which in this case were large. It may be remarked that the regularity and frequency of the impacts of intense sound upon the drumhead were sufficient to produce neuritis of the auditory nerve, though the drumhead was probably not ruptured. The intense vibrations of the barrels of the Gatling gun, when rapidly fired, must be very distressing to hear, even at some distance to the rear. They seem to vibrate much in the same manner as a tuning-fork.

Samuel Sexton, M.D.

12 West Thirty-fifth Street, New York.

The Hospital Saturday and Sunday Collection had reached at last report the sum of $45,000.

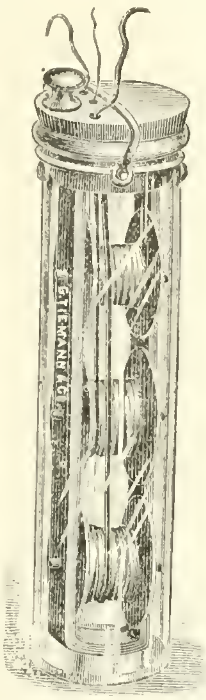
New Instruments.

A NEW ANTISEPTIC LIGATURE REEL.

By H. B. WARE, M.D.,

SCRANTON, PA.

There have been many attempts made to construct a bottle that would contain ligatures of gut and silk antiseptically, and at the same time be light and convenient to transport. But nearly all have soon been forgotten, owing to the fact that they were not antiseptic, or were so complicated that too much time was used in adjusting them.



The accompanying cut represents a bottle which does away with these faults. It is a glass bottle 3½ inches in length and ¾ of an inch in diameter, having a soft rubber stopper through which are three minute perforations. By pressing the stopper firmly into the bottle and pulling over the cap, no fluid can escape at all, and yet the ligatures can be freely drawn through. Attached to the stopper is the frame, which is entirely of hard rubber. The pins which hold the reels and the reels themselves are all hard rubber, so any antiseptic fluid may be used without in any way acting on them. A glance at the cut will show how easily and simply it is adjusted. In a minute's time a reel can be wound full of catgut or silk, and be made ready for use. Each reel holds about forty feet of No. 3 gut. The ligatures are passed through the stopper with an instrument which accompanies the bottle, or with an ordinary eyed probe.

A knot made by two strands of gut tied together will easily pass through the stopper. Thus the ligature bottle is always ready for use.

I recommend the Ligature Reel to the profession for its perfect antiseptic properties, simplicity of construction, and easy adjustment and cheapness.

Hallux Rigidus.—The symptoms of this condition, according to Dr. Cotterill, are more or less inability to dorsiflex the toe, accompanied by pain, in the early stage felt on the dorsal aspect, and later in the course of the disease in the plantar region. The author believes: 1. Hallux rigidus proper is due to the invariable combination of flat-foot and boot pressure. 2. That while no amount of flat-foot alone will cause it, a slight amount of flat-foot in combination with boot confinement is sufficient to bring it about. 3. That it exists, to a *certain extent*, in almost all cases of flat-foot occurring in persons wearing ordinary European boots. 4. Flat-foot occurring in barefooted nations, or in those who wear sabots or other such boots as provide for ample dorsiflexion of the great toe, does not cause it. 5. That the connection between it and flat-foot has been frequently denied or overlooked owing to the imperfect means of testing flat-foot. 6. That it is frequently one of the earliest manifestations of flat-foot in booted nations. 7. That while it is commonest in young boys, it occurs frequently in girls. 8. That in the early stages it may be cured by attention to the flat-foot, and by giving room for dorsiflexion of the hallux. In the later stages excision of the proximal end of the first phalanx is probably the only means of cure, though palliative treatment by fixation of the joint may give relief to pain in walking.—*The Birmingham Medical Review*, December, 1887.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 21, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	8	1
Scarlet fever	136	22
Cerebro-spinal meningitis	5	3
Measles	37	5
Diphtheria	161	58
Small-pox	3	3
Yellow fever	0	0
Cholera	0	0

Constipation among the French.—It is not surprising, considering their want of taste for out-door athletic amusements, that our French friends suffer extremely from constipation. The evil effects of fecal retention are therefore strongly marked in the inhabitants of the "gay and festive" capital, with the exception, perhaps, of the anæmia or chlorosis to which Sir Andrew Clark has just drawn attention as a result of fecal decomposition. So universal is the constipation among all classes that, if a tradesman or restaurant-keeper desires to pass off any particular article of food or drink, he claims for it that it is "*rafraîchissant*," which is the equivalent for laxative. The article is forthwith gluttonously devoured. There is, indeed, very little inducement to cultivate a regular habit of the bowels in France. The *cabinets d'aisance* are cramped and uncomfortable when they are not, as they often are, filthy and stinking. Water-closets proper are only to be found at the hotels frequented by English and American travellers, and in the homes of the few Frenchmen who have assimilated English ideas of what is comfortable and right in this respect, or who have married English heiresses. In ninety-nine cases out of a hundred the only water-supply is contained in a ewer, a few drops of which is sprinkled over the pan, the disappearance being facilitated by vigorously rubbing, with the aid of a brush or stick, a piece of furniture which is to be found in the corner of every respectable French closet. From time to time a more thorough evacuation of the bowels is felt to be imperative, and a Frenchman who respects himself will devote at least two days to this important operation. He puts himself on a rigorous diet before and after taking the medicine, and only ventures out when completely reassured as to his fate. It is a recognized case of *force majeure*, and if one wishes to put off an engagement for dinner it is only necessary to write a polite note to the effect that *monsieur* or *madame*, as the case may be, is prevented coming "*ayant à se purger*." As might have been expected, chemists vie with one another to invent the palatable and most reliable purgative, and it can hardly be denied that on the whole it is a more comfortable process than in this country. It is perhaps one of the things they do better in France.—*Medical Press.*

Ergot Valueless in Uterine Subinvolution.—Dr. Blanc has, according to the London *Medical Record*, carried out a hundred observations on the influence of ergotine on involution of the uterus. The preparation employed was the Yvon solution of ergotine injected hypodermically, and the results were controlled by both external and internal measurements. During the ten days following delivery in healthy women after normal labor he found that the process of involution did not take place more rapidly in the women to whom ergotine was administered than in those left to nature, and concludes that ergotine is without effect on uterine involution.

A Busy Practitioner.—Dr. Cotting, of Boston, in relating his personal reminiscences of fifty years' practice, says: "The greatest number of professional visits to separate houses I ever made in one day was forty-three (a few of the houses visited having more than one patient). It was one of the longest days of summer, and there was no time to rest, from early dawn to late at night. I once attended four births, in different parts of the town, within twelve hours; between twelve at night and twelve at noon following. It happened to be a February 22d, and the three boys were each called George Washington, while the girl received the name of Martha. The mothers were unknown to each other."—*Boston Medical and Surgical Journal.*

Programme of Papers and Discussions for the Eighty-second Annual Meeting of the Medical Society of the State of New York, to be Held at Albany, on the 7th, 8th, and 9th of February, 1888.—*First Day—Morning Session* (9.15 o'clock). The President's Inaugural Address. *Papers*—Medical Section: R. Hopkins Buffalo, N. Y., "Idiosyncrasy;" H. Kretzschmar, Brooklyn, N. Y., "Use of Alcohol in Certain Forms of Fever;" J. Leonard Corning, New York, "Neuro-therapeutic Memoranda;" Willis E. Ford, Utica, N. Y., "Reflex Nervous Disturbances;" William S. Ely, Rochester, N. Y. (title to be announced). Surgical Section: Henry G. Piffard, New York, "Notes on the Treatment of Lupus;" Herman Knapp, New York, "Extraction of Cataract without Iridectomy, with a Short Report of One Hundred Successful Cases;" Fessenden N. Otis, New York, "Demonstration of New Urethral and Bladder Instruments;" S. Wight, Brooklyn, N. Y., "Case of Forward Dislocation of the Ulna;" William B. de Garmo, New York, "Hernia;" Clarence C. Rice, New York, "Removal of Laryngeal Growths, with O'Dwyer's Snare, in Conjunction with Intubation of the Larynx;" Franke H. Bosworth, New York, "Action of Caustic Applications on the Nasal Mucous Membrane."

First Day—Afternoon Session (2.30 o'clock). *Discussion*—"Acute Bright's Disease." Francis Delafield, New York, "Pathology and Clinical History;" A. Jacobi, New York, "Acute Bright's in Children;" D. B. St. John Roosa, New York, "Changes in the Eye in Acute Bright's;" Richard Van Santvoord, New York, "Cardiac Changes in Acute Bright's;" Fordyce Barker, New York, and Charles Jewett, Brooklyn, N. Y., "Acute Bright's in the Puerperal State;" William S. Ely, Rochester, N. Y., "Treatment." *Papers*—Joseph O'Dwyer, New York, "Intubation of the Larynx of an Adult—Exhibition of New Instruments;" Edward F. Brush, Mount Vernon, N. Y., "Bovine Tuberculosis."

First Day—Evening Session (7.30 o'clock). *Discussion*—"Salpingitis." William Goodell, Philadelphia, Pa., and Paul F. Mundé, New York, "Pathology and Symptoms;" Charles Carroll Lee, New York, "Causes;" Matthew D. Mann, Buffalo, N. Y., "Differential Diagnosis;" George Seymour, Utica, N. Y., "Prognosis;" Frederick A. Castle, New York, "Medical Treatment;" William M. Polk, New York, "Surgical Treatment;" W. Gill Wylie, New York, and Albert Vanderveer, Albany, N. Y., "Results of Operative Treatment." *Papers*—W. Potter, Buffalo, N. Y., "Management of Pelvic Inflammations in Women;" Andrew F. Currier, New York, "Influence of Obesity in Young Women upon the Menstrual and Reproductive Functions;" William M. Polk, New York, "Vaginal Hysterectomy—with Report of Eight Cases;" Charles Carroll Lee, New York, "Treatment of Complete Procidentia of the Womb by Alexander's Operation."

Second Day—Morning Session (9.15 o'clock). *Papers*—William H. Thomson, New York, "Distinction between Functional and Organic Disease of the Nervous System;" William H. Draper, New York, "Dietetic Treatment of the Gouty Diathesis;" E. V. Stoddard, Rochester, N. Y., "Cardiac Medication;" Joseph D. Bryant, New York, "Treatment of Penetrating Gunshot Wounds of the Cranium;" John H. Girdner, New York, "Demonstration with the Induction Balance and Telephonic Probe;" A. Ross Matheson, Brooklyn, N. Y., "Extensive Compound Cranial Fracture—Considerable Loss of Brain Substance, complicated with Fungus Cerebri—Recovery;" Charles Stover, New York, "The Interdependence of Local, State, and National Health Boards—a Plea for their Unification."

Second Day—Afternoon Session (2.20 o'clock). *Discussion*—"Intestinal Obstruction." Louis A. Stimson, New York, "What Constitutes Intestinal Obstruction—its Anatomical Relations;" William C. Wey, Elmira, N. Y., "How Long should Cases be Treated Medically?" Albert Vanderveer, Albany, N. Y., "When should Operative Measures be Resorted to?" Roswell Park, Buffalo, N. Y., "Choice of Operations;" Robert F. Weir, New York, "How should the Operation be Conducted?" B. Farquhar Curtis, New York, "Results Obtained by Operative Interference." *Discussion*—"Treatment of Tubercular Affections of Joints." A. M. Phelps and Virgil P. Gibney, New York, "Mechanical;" Arpard Gerster, New York, "Surgical." *Papers.*

Second Day—Evening Session. The President's Address—Assembly Chamber of the Capitol Building, at 8.15 o'clock.

Dinner—Delevan House, at ten o'clock. (Tickets may be had of the Committee of Arrangements; price, $1.00.)

Third Day—Final Session (9.15 A.M.). *Papers*—Thomas R. Pooley, New York, "Biographical Sketch of the late Dr. Edwin R. Hutchinson, of Utica;" Prince A. Morrow, New York, "Surgical Treatment of Skin Diseases;" Daniel Lewis, New York, "Remarks on the Chian Turpentine Treatment of Cancer;" John O. Roe, Rochester, N. Y., "The Frequent Dependence of Persistent and so-called Congestive Headaches upon Abnormal Conditions of the Nasal Passages."

The meetings will be held in the Court Room of the City Hall, second floor.

The Treasurer, with the Committee on Credentials, will be at the place for meeting and prepared to register members in attendance after 8.45 A.M., on Tuesday. It is requested that as many as possible will attend to this duty before the opening of the session.

Delegates and Permanent Members will meet after the adjournment of the Tuesday morning session, and choose representatives on the Nominating Committee.

At the opening session, a motion will be made to limit the time allowed for reading papers to twenty minutes, and unannounced discussion to ten minutes.

Those intending to discuss any paper will please notify the Chairman of the Business Committee as early as possible.

Officers and Committees of the Society: President—Alfred L. Loomis, New York; Vice-President—A. M. Phelps, New York; Secretary—William Manlius Smith, Syracuse; Treasurer—Charles H. Porter, Albany. *Committees:* Of Arrangements—Samuel B. Ward, Albany, N. Y.; Edward L. Partridge, New York; F. C. Curtis, Albany, N. Y. On By-laws—William C. Wey, Elmira, N. Y.; Henry G. Piffard, New York; William Manlius Smith, Syracuse, N. Y. On Hygiene—E. V. Stoddard, Rochester, N. Y.; A. N. Bell, Brooklyn, N. Y.; H. Curtis, Albany, N. Y.; J. P. Creveling, Auburn, N. Y.; William H. Bailey, Albany, N. Y.; Edward F. Brush, Mount Vernon, N. Y. On Legislation—Laurence Johnson, New York; F. R. S. Drake, New York; Herman Bendell, Albany, N. Y. On Medical Ethics—A. Jacobi, New York; Arthur Mathewson, Brooklyn, N. Y.; John W. Whitbeck, Rochester, N. Y. On Publication—William Manlius Smith, Alfred Mercer, Syracuse, N. Y.; Charles H. Porter, Albany, N. Y. On Business—Frederick A. Castle, New York; John W. Whitbeck, Rochester, N. Y.; A. Walter Suiter, Herkimer, N. Y.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 5. NEW YORK, FEBRUARY 4, 1888 Whole No. 900

Original Articles.

ON SOME POINTS IN THE SURGERY OF THE URINARY ORGANS.[1]

By REGINALD HARRISON, F.R.C.S.,

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LECTURE III.

THE OPERATIVE TREATMENT OF STONE AND TUMORS OF THE BLADDER IN RELATION TO SOME RECENT VIEWS AND PRACTICES.

THE surgery of the bladder during the last ten years will, under all circumstances, occupy a conspicuous position in the history of our art by the introduction of litholapaxy, the revival of the supra-pubic, or high operation, under somewhat altered conditions, and by an approach to a more systematic method of treating tumors and growths connected with the interior of the viscus. It has been my privilege to watch the progress of these several procedures, not merely as a passive critic, but as an active participator with others in all the advantages these measures have proposed to confer. Within the period mentioned a vast amount of experience has already been obtained bearing upon these various proposals; and I think the time this evening cannot be better occupied than in drawing some conclusions in regard to them which seem to me may now be fairly and advantageously done. And in referring to these several procedures I will endeavor in speaking of each to indicate what appears to me to be their strong as well as their weak points, and to what extent our present experience tends to show they have justified the anticipations with which they were promulgated. In the course of these remarks I shall not trouble you with statistics relative to operative procedures, as I do not attach much importance to them. It seems to me that in drawing conclusions from figures of this kind, gathered from various sources, we are putting ourselves much in the same position as the individual who, to make sure about the weather, consults three different kinds of barometer, and is rewarded by finding them respectively indicating at the same time "stormy," "rain," and "very fine." From such variations as these most persons would be disposed to conclude, not that it was safe to go out without an umbrella, but that at least two of the instruments must in some respect be faulty. On the other hand, to the collective work of individuals carefully recorded, with all failures and successes, the greatest importance is to be attached, as indicating not only results but how these were obtained.

In the first place, I will take a brief survey of the position that the crushing operation seems to occupy at the present day. Since the procedure which is justly associated with the name of Dr. Bigelow, of Boston, was brought under notice, exactly ten years ago this month, it has been applied to almost every condition under which stone in the bladder is met with in males, females, and children. Without entering into the history of the modern crushing operation for stone, or referring to discussions as to what led up to the important changes it represents, I think most persons will be inclined to admit that the lithotrity of to-day occupies a very different position compared with what it did ten years ago. At the latter date there appeared to be a tendency to limit its application considerably, whereas now we have rather to fear its extension to conditions for which it could hardly have been intended. The removal of a stone at a single sitting, without leaving behind any cause either for its reproduction or for cystitis, represented such a desirable combination of objects as to at once place the matter before surgeons in a light which it had not previously done. Let me stop for a moment to inquire how far this has been realized. In the case of stones of a moderate size, occurring in adults in other respects healthy, I think it will be generally admitted that to these lithotrity may now be applied with a degree of success which prior to this decade had never been obtained in the history of either the cutting or crushing operations. Nor can there be any doubt, excepting children, perhaps, that by far the larger number of stone cases requiring operation occur under these circumstances. But this, unfortunately, does not represent the whole truth, as lithotrity has been and is being applied to a class of cases where the anticipations formed in reference to it in its most modern form have not been realized; and this brings me to notice what I would speak of as the weak side of this proceeding. In corroboration of this, let me read a passage from a recent address by Mr. Cadge:[1] "Although," he observes, "the immediate and direct mortality of lithotrity is small, the recurrence of stone is lamentably frequent. In my own list of one hundred and thirty-three cases there were eighteen in which recurrence one or more times took place, being about one in seven. Sir Henry Thompson, with a much larger number of cases, gives about the same proportion. I am disposed to infer, however, that recurrence is more frequent than this, because it is not likely that all who get relapse apply to the same surgeon again. Patients may, and frequently do, apply to the same operator once or twice, but after a time they either apply to their own surgeon, or they decline further treatment, and too often their subsequent history is one of painful endurance of chronic bladder disease and gradual exhaustion. If, moreover, there be added to the list those numerous cases of phosphatic deposit or concretions so frequently noticed after lithotrity, the relapses would, I believe, reach to nearly twenty per cent. This seems a heavy indictment to bring against lithotrity, but I am afraid there is no gainsaying it, and if so, it would be wrong to pass it over or make light of it."

Though with a very much less experience of lithotrity than been that to which I have just referred, I became impressed some years ago with the conviction that in certain cases we could do something more than merely remove the stone from the bladder.

It will, I believe, be generally admitted that the state of the interior of the bladder relative to its shape, its power of contraction, and the presence or absence of inflammation, has, without being more precise, a determining influence in the reproduction of stone. In the majority of instances this is merely a matter of experience deduced from observation, while in not a few this tendency is not discovered until, as it were, the experiment of removing the stone by crushing and aspiration has been tried and failed. And in connection with this observation, I think, we have been rather too much disposed, if I may judge from a good deal of the literature relative to this subject, to allow the physical properties of the stone to determine for us, as it were, the selection of the operation, irrespective of the relative conditions to which I have referred. Though a large, hard stone is, as a rule, best treated by lithotomy, this by no means implies that some small and soft ones are the less advantageously removed by a similar proceeding.

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[1] The Lettsomian Lectures, delivered before the Medical Society of London, January, 1888.

[1] Hunterian Lectures, Royal College of Surgeons, 1886.

Let me take, for instance, the case of a stone in the bladder occurring in an adult, with some chronic cystitis and enlargement of the prostate. The probabilities are that for many months, if we look at the section of such a stone after its removal, the bladder has been engaged in incasing it in a mould of phosphates just as completely as if it were done by plaster-of-Paris. Now, is it reasonable to suppose that you can suddenly stop this stone-forming process without leaving behind any contributing cause for its continuance? In connection with the subject more particularly of prostatic hypertrophy, I have examined a very large number of bladders, and, having regard to the distorted or pouched condition of the viscus which so frequently accompanies this change, as well as the condition of the mucous membrane relative to the presence or absence of phosphatic deposit upon it, it has often struck me, not that lithotrity has its failures, but that under these circumstances its successes are so numerous.

Reflections such as these induced me some years ago to gradually alter my mode of procedure in cases of this kind, where either it was clear that the stone was the effect rather than the cause of disease, or where this fact was demonstrated by the failure of lithotrity. I could not help feeling that the bladder, under these circumstances, was not unlike, in many respects, a chronic abscess with a stone in it, and that it was just as necessary to open and drain the one as the other. Let me briefly illustrate this by one of my earliest cases. It was that of a man sixty years of age, who submitted to lithotrity on three occasions in two years, when large masses of phosphatic stone were readily removed. In the intervals between the operations he never was free from vesical irritation. He could not empty his bladder completely without a catheter, the urine was more or less ammoniacal, and, in spite of careful catheterism, he suffered much from urinary irritability. He had some degree of prostatic enlargement, and some pouching or sacculation. Two years after the first crushing, I performed lateral lithotomy for him, and removed more phosphatic calculus of recent formation. I put a large drainage-tube into his bladder, and he was drained and washed for eight weeks, until he voided normal acid urine, when the tube was removed, and the wound allowed to heal, which it did in the course of a month. This patient has now been perfectly well for over three years. I would refer to this and similar instances, not as being examples of successful lithotomy, but of successful drainage.

Three years ago I brought this subject[1] under the notice of the profession, and described at length my mode of operating and of draining; and to these points I would now briefly direct attention. So far as the method of operating is concerned, my object has been to remove the stone by such an incision as will permit the bladder to be readily and efficiently drained; hence, the proceeding stands much in the same light as evacuating matter from a chronic abscess does to the important part of the treatment by drainage that is to follow.

In the performance of lithotomy in cases of this description my aim is to make a wound into the bladder which is not likely to close up before the interior of the viscus is ready for the reception and continence of the urine. Hence, I am an advocate for lateral lithotomy, which best fulfils the conditions that are required. But though the mode of opening the bladder is important, the process of draining, where the condition of the viscus or of the parts above it is such as to require this, is still more so. As a rule, cases of this kind require drainage to be continued from four to eight weeks. I have drained them as long as ten weeks before the state of the bladder, as evidenced by the urine, was such as to allow the wound to heal up. The drainage-tubes I employ for this purpose are larger than those which have been used temporarily by some surgeons after lithotomy, and some care is required in fitting them to each case. By their use, with the exception, perhaps, of the first few days after the operation, when some urine may escape by the side, I have been able to keep patients absolutely dry during the whole process of treatment, while at the same time antiseptic dressings have been applied to the perineum; but I do not attach much importance to the latter, so long as the urine-drainage is perfect.

Let me illustrate this practice by another case of somewhat recent date. It was that of a gentleman, seventy years of age, who for over four years had never passed one drop of urine except through a catheter, and who for the last two years of this period had absolutely lived with the instrument in his bladder, both day and night. I examined him in October last, and found that he had a stone in his bladder, but one that I could have quite easily removed by crushing and aspiration. However, in the presence of the symptoms mentioned, and guided by other experience of the kind to which I have referred, I selected to perform perineal lithotomy, and to drain. My colleague, Mr. Mitchell Banks, held the staff for me, and I removed three uric-acid calculi of moderate size, coated with phosphates. I made, as I usually do, a very free opening into the neck of the bladder, and put in one of my largest-sized drainage-tubes, with two or three superficial sutures in the wound to keep it in position. He was drained continuously for eight weeks, when it was found, coincidently with a much improved state of the urine, that the latter was occasionally forced out spasmodically through the normal channel of the penis. The drainage-tube was then removed, and the wound allowed to heal. Though the function of the bladder has been in abeyance for four years, he has now complete control over his urine, and can expel it spontaneously without any assistance from the catheter, which he has entirely discarded since the operation. At present he has to pass his urine more frequently than is desirable, a circumstance which is probahly due to the empty state the bladder has been in ever since he commenced to use the catheter continuously, day and night, two years ago. Notwithstanding this inconvenience, which, I believe, will improve in time, it is remarkable that the bladder should have entirely recovered its power after such a long period of inaction as four years. Had I crushed, as I could have easily and safely done in this case, I feel sure that the power of the bladder would not have returned in the way that it has.

My friend Mr. Cadge, in referring to recurrences after lithotrity, seems to think that in the matter of treatment we are placed somewhat on the horns of a dilemma; that is to say, if we crush, there is a considerable probability of the stone recurring; whereas if we cut, we adopt a harsh proceeding, and one more immediately perilous to life. As I have said before, I do not attach much importance to statistics, for, putting aside what may be due to the accidents of lithotomy, to which we are all more or less liable, and which are really responsible for no inconsiderable amount of the mortality following this operation, the results will be largely determined by the attending circumstances of the individual case. If a patient comes to be treated for a stone in his bladder with dilated ureters, and with only about one-fourth to one-tenth of his normal amount of kidney-tissue, and the balance made up of pus-cavities, I do not think it makes much matter what you do to relieve the suffering caused by the stone, as the result will be the same whether you cut or crush. Putting cases of this kind aside as being entirely outside the question, just as they are beyond repair, and taking instances where the only objection against lithotrity is that the stones are likely to return or have been proved to do so, I have not observed that the perils of lithotomy are very great.

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[1] Annals of Surgery, June, 1885.

In analyzing my experience of lithotomy, I can refer to fifteen cases where the process of opening the bladder was followed by a more or less prolonged system of drainage and irrigation, such as I have just described. Of this number, three terminated fatally in the course of from three to five weeks, by reason of the far advanced suppurative condition the kidneys were in. This was considered as probable at the time of operation, and was proved by post-mortem examination. I had no desire to operate at all in these instances, but the patients were in such a painful condition that I had no alternative but to do as they wished, and run my chance. However, as drainage was employed after the stones were removed, I must in fairness include them. In addition to observing the relief that was thus afforded to these persons, I would further remark how importantly they illustrate the disastrous consequences that may ensue when stone and cystitis are complicated with obstruction, or anything that interferes with the process of natural urine-drainage, prior to the removal of the stone. In two of these cases there was some enlargement of the prostate, while the third was complicated with an old urethral stricture. Further, they clearly point to the importance of drainage as a necessary part of the process connected with the removal of some stones. The remaining twelve persons so treated recovered, and remain well, or did so up to the time that I had cognizance of them. I think I should be pretty sure to hear of them if they had any recurrence. Three of these cases had been previously treated by crushing, to one of which I have already referred more in detail. In determining how long it is necessary to continue the drainage, I attach considerable importance to two points—first, to the condition of the urine, and, secondly, to certain muscular actions of the bladder, which become more apparent in those cases where atony pre-existed. So long as a patient goes on discharging ammoniacal or very purulent urine, so long must the drainage be continued, as to close the bladder under these circumstances is certainly to favor the reproduction of those local causes which contributed to the formation or growth of the stone. When the urine is becoming normal, one of the earliest indications that the drainage-tube may be withdrawn is the voluntary, or, I should rather say, the spasmodic, expulsion of urine along the natural passage. After three or four weeks' drainage, according to circumstances, I have allowed patients to get up for a little and sit in a chair, with a clip on the end of the drainage-tube, directing them to remove it when they feel desirous of urinating. It is under these circumstances that urine is sometimes expelled independently of the tube along the natural passage. This I have found a sure indication that the power of the bladder will be restored in those instances where it had been lost to a greater or lesser degree. And it not only applies to cases where a stone is present, as I have illustrated, but to others. This was evidenced in a remarkable way in the following case, which much impressed me at the time, in reference to what opening and draining is capable of doing. It was that of a man aged sixty-eight, who was under my care in the Royal Infirmary in 1883, for an atonied bladder and retention of urine, where the regular use of the catheter had become, in the course of time, extremely difficult by reason of the obstruction. After three weeks' trial of various plans of treatment, I performed perineal cystotomy, divided the prostate, and put in a drainage-tube. This was worn for eight weeks, when it was noticed that a certain quantity of urine forced its way along the urethra. The tube was then withdrawn, and the wound gradually closed. After this, the patient never had any further difficulty in urinating, though the power of the bladder had been entirely suspended for some months prior to the operation and drainage. Six months subsequently, he was seized with hemiplegia, which confined him to bed for the rest of his life, but I ascertained from his medical attendant that it had never been found necessary again to make use of the catheter. Other cases of the kind might be adduced in support of the practice I am now advocating.

In two instances, where the stones were very large, I had to divide both sides of the prostate. I could not help observing that these cases made very rapid progress. It is of much importance that the wound should invariably be made clean and straight, and that the relations of the parts be not unnecessarily disturbed with the finger, as thus pouches are made in which urine may lodge. I should also mention that in one case the progress toward recovery was somewhat retarded by two or three attacks of secondary hemorrhage, necessitating the use of a plug outside the drainage-tube. However, it was not sufficient to be of much importance. In another instance the patient had two or three slight attacks of orchitis, which was probably due to some imperfection in the drainage-apparatus; where the prostate is very irregular this may happen, unless care is taken in making the incision into the neck of the bladder.

In these remarks I have thus endeavored to illustrate what appears to me to be the weak aspect of lithotrity, and what alternative seems to me, from some practical experience specially directed toward this point, best adapted to meet the difficulty. Fortunately, I believe these cases are not now so frequent as they used to be, owing, no doubt, in a great measure, to the better means we possess of detecting stone in the earlier periods of its formation, when it can be dealt with by crushing with the most complete success. To eliminate the cases which are not adapted for crushing is worthy, I am sure, of our most careful attention, and as a contribution toward this I must ask you to accept these remarks.

Turning to another debatable point, I would refer to the application of lithotrity to male children. Some valuable records relating to this operation have been furnished by surgeons practising in India, among whom I may mention Dr. Freyer and Dr. Keegan. The latter gentleman has more particularly demonstrated the great success that may be obtained in boys by the crushing operation, and his testimony has been to a considerable extent corroborated by Mr. Walsham and other surgeons. Having regard to the great success of lithotomy in male children, I should not feel disposed to extend the crushing operation in this direction materially, except in the case of very small stones. It has, I know, been alleged that lithotomy means emasculation, but I am not aware that sufficient proof of this has been afforded. If this were proved to be an occasional and unavoidable consequence, the reasons for crushing in boys would be materially strengthened.

The supra-pubic operation for stone owes its recent revival in a large measure to the observations of Garson, the practice of Petersen, of Kiel, and the advocacy of Sir Henry Thompson. The fact that the bladder is usually uncovered with peritoneum immediately above the pubes has for a long period been rendered available by surgeons for tapping with impunity in cases of retention of urine. To increase this area, and to permit the bladder to be opened and stones removed without injuring or wounding the cavity of the peritoneum, is the chief feature in Petersen's method of performing the high operation. Since the introduction of this method of operating considerable discussion has been excited in reference to the circumstances under which it is applicable, and much variety of opinion has been expressed. If, however, we merely content ourselves by taking the experiences of surgeons where this measure has been practically tested, we shall have no difficulty in determining its value.

In the first place, I do not think that anyone would attempt the removal of a very large stone from the bladder by any other proceeding. We have already had several examples where large masses have in this way been successfully removed, which, judging from previous experiences of the kind, could not have been safely accomplished, even if it had been possible to effect their removal at all. And this applies equally to some cases of distorted pelvis, where the outlet is so contracted as to render perineal lithotomy impossible. I should have been very glad to have availed myself of this method of operating in one of my earliest stone cases some twenty years ago, where I performed lateral lithotomy for a boy with his hip anchylosed in an extended position.

In the second place, experience has already shown us that the supra-pubic operation is well adapted for the removal of certain foreign bodies more or less coated with phosphates from the bladder, where it is necessary that we should be able to see as well as to feel, and direct what we are desirous of doing.

In the third place, the supra-pubic incision may prove serviceable in some cases of stone in the bladder complicated with a protruding prostate, where the removal of some portion of the latter may be further contemplated.

In the fourth place, the high operation will prove to many practitioners an easier and therefore a safer access to the bladder than the lateral perineal route, and thus, for this reason, and in the best interests of their patients, many will avail themselves of it under almost all circumstances. Are not these sufficient reasons for finding a place in surgery for this method, irrespective of the value that most of us, I believe, still attach to perineal lithotomy? I have no belief in the decline of perineal lithotomy, as it seems to me to possess advantages as a ready means of entrance to as well as exit from the bladder, which no other method possesses.

In the controversy that has been recently raging in reference to the relative advantages of supra-pubic and perineal lithotomy, I cannot help thinking that much of the difficulty which some have associated with lateral lithotomy, or Cheselden's operation, is in a measure due to a wrong conception of the way this operation should be performed. The point where it seems to me some surgeons are at variance with the description laid down by authorities on this subject, is in reference to the employment of dilatation with the finger as a means of entering the bladder. I contend that such a process, whether there are grounds for its adoption, so far as the literature of the subject is concerned, or not, is not only unnecessary, but dangerous. It is unnecessary, because the opening into the bladder can be safely made with the knife, sufficient to permit of the finger being put, and not pushed, into the viscus; it is dangerous, because the risk is not inconsiderable of wrecking the operation by rupturing the urethra, especially in young children, and by destroying with the finger the natural relations of the parts. It is a misconception of this kind which alone imports an element of danger, so far as the mechanism of perineal lithotomy is concerned. Of the advantage that the latter operation affords as a means of draining the bladder I need not again speak.

But though, as I have incidentally hinted, supra-pubic cystotomy will probably commend itself to some practitioners by the comparative facility with which it can be accomplished, we must not be unmindful that experience has already shown us that it, like other procedures having the same object, has its own difficulties and dangers. Instances have been recorded where a weakened bladder, under the pressure of distention, has given way, and death has then followed; and similarly, the rectum has suffered in a corresponding manner, but without producing any serious consequences. To most of us, the simplicity and ease with which lateral lithotomy can usually be performed is such as strongly to prejudice us in its favor, in the absence of any special reason to the contrary, such as I have indicated. Still, on the other hand, as I have already said, there are places for both the high and the low operations in the practice of surgery, which they can fill with relative advantage and without fear of clashing.

In the last place, let me say a few words in reference to the treatment of tumors and growths connected with the interior of the bladder. And I would take this opportunity of acknowledging the important services Sir Henry Thompson has rendered, in both adding to and applying our knowledge in reference to this subject. In surveying the literature relating to the operative treatment of tumors of the bladder, and comparing it with some little experience of my own in cases of this kind, it seems to indicate the great caution that is necessary in the selection of cases suitable for operation.

Malignant growths connected with the interior of the bladder are, I believe, just as much beyond the reach of surgery as those which are occasionally seen involving the cavity of the nose; I have in a few instances opened the perineum and explored them with the finger, but beyond giving vent to offensive urine mixed with blood and the débris from the growth, I cannot say that I have seen any permanent good follow, and I am disposed to think, with others, they had best be let alone. If exploration with the finger from the perineum indicates, by reason of the limited connections of the growth, the expediency of attempting its complete removal, if the mass is considerable the supra-pubic incision may with advantage be proceeded with. The value of the perineal incision for drainage has already been demonstrated in several instances of this kind. Still, on the whole, the less intravesical malignant growths are interfered with the better, so far as concerns both the comfort and life of the patient. Of the curable forms of intravesical tumor of the bladder, the simple papilloma or villous furnishes us with an example, and this has undoubtedly within the present decade been brought within the reach of surgery. In the cases of this kind where I have operated, I have been able to accomplish all that I desired by a perineal incision. The following instances illustrate some of the difficulties connected with the diagnosis and treatment of tumors of the bladder. The first was that of a young man I saw in 1883, who was suffering from hæmaturia. I opened his bladder from the perineum, and removed a villous growth, which seemed to occupy the orifice of the left ureter; he was temporarily relieved, but in the course of a month he died of exhaustion in consequence of repeated attacks of hæmaturia. After death, the left ureter was found dilated, the pelvis of the left kidney was also dilated, and contained a villous growth resembling that which I had removed from the bladder.

The other case was that of a middle-aged man, who presented all the symptoms of calculous pyelitis of the left kidney. The pain was so severe that I determined to open and explore the kidney, which I did in the early part of December, 1887. I found the kidney not much larger than natural, but it was simply a bag of pus. I could find no stone or other cause for the renal obstruction. The bladder was examined, but nothing abnormal was detected. The patient had a good deal of hæmaturia after the operation. He got gradually weaker, and died about four weeks after the operation. At a post-mortem examination, a small epithelioma of the bladder was found, which had completely occluded the left ureter, and had thus led to the disorganization of the corresponding kidney. Such are illustrations of some of the difficulties which attend the diagnosis of tumors connected with the interior of the bladder; they certainly seem to indicate the great caution that is necessary in coming to a conclusion that their extirpation should be attempted.

I have now completed the task which you, in your kindness, have imposed upon me. It only remains for me to thank you for the patient and attentive hearing you have given me.

THE TELEPHONIC BULLET-PROBE.[1]

BY JOHN HARVEY GIRDNER, A.B., M.D.,

NEW YORK.

MR. CHAIRMAN AND GENTLEMEN: I first presented this instrument to the profession at a regular meeting of the Academy, on February 3d, last year. I bring it before the Surgical Section again, this evening, because, by certain improvements I have been able to make, it is now perfect, and a year's clinical experience has demonstrated its superiority over all other bullet-probes.

But I also desire to ask your attention, for the first time, to the novel and interesting principle on which the instrument is operated, viz., by a current of electricity extracted from the body of the patient himself, in whom it is desired to locate a metallic missile.

The construction of the telephonic probe is as follows: To each of the two terminals of a telephone receiver, *A* and *B*, Fig. 1, an insulated flexible wire about four feet long is connected.

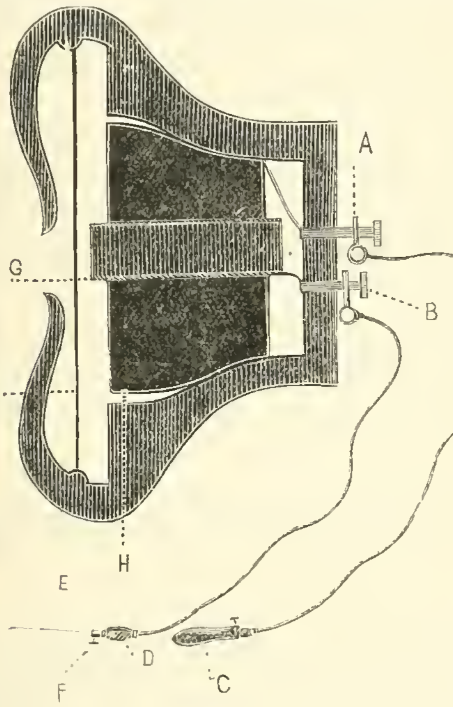

FIG. 1.

At the free end of one of these wires a hollow, bulbous piece of steel, *C*, is attached. At the free end of the other wire is a suitable handle, *D*, in which a probe, *E*, may be placed, and held by the clamp-screw *F*.

The internal arrangement of the handle must be such that a perfect electrical contact shall exist between the end of the probe and that of the wire which terminates in the handle; the same is true for the end of the other wire and the steel bulb.

The receiver R, Fig. 1, is shown in perpendicular section. The framework is of hard rubber, and the internal construction is as follows: In the centre is a small bar of soft iron, marked *G*; around this bar a coil of insulated wire, *H*, is wound; the two ends of the coil pass backward and connect with the terminals or binding-posts *A* and *B*; the end of the soft iron bar is seen to protrude a little beyond the coil, and near it, though not in contact, is suspended a metal diaphragm, marked *I*. Now if a current of electricity be passed through the coil in the receiver by means of bulb *C*, and the probe *E*, a magnet will be made of the soft iron bar *G*, and it, in turn, will attract the metal diaphragm *I*, causing it to vibrate, and each time the current is made and broken a clicking or rasping sound is heard in the receiver held to the ear.

Fig. 2 shows two such receivers as I have described, attached to a flexible steel band; the short wire seen in the cut passing from one receiver to the other is to complete the circuit between them. When the steel band is placed over the top of the head, the receivers fit snugly against both ears, as seen in Fig. 3.

This arrangement has the advantage of leaving both hands of the operator free, it also shuts out all sound except that heard when the bullet is touched. A single receiver, however, held to the ear with one hand, leaves the other free, and answers perfectly for all practical purposes. A single receiver might also be held to the ear by means of an elastic band, such as is used to hold a head mirror.

So far as I know, only the single instrument is to be found for sale in the shops at present.

We pass now to the practical application of this instrument.

To illustrate, I will describe a case seen in practice: A musket-ball had lain between the tibia and fibula for twenty-two years. A long, narrow, tortuous sinus had been discharging for a year. When an ordinary probe was passed, hard substances could be felt in many places; but you could not tell if bone or bullet was being probed. The porcelain-probe could not have been marked by the lead, owing to thick crusts of salts of lead with which the ball was covered, even if it could have been brought into contact with the bullet, which it could not, owing to narrow places in the sinus.

The telephonic-probe was now brought into requisition as follows: The steel bulb *C*, Fig. 1, was placed in the patient's mouth and the lips closed; the operator held the telephone to his ear, while at the same time he passed the steel probe *E*, of the other wire, into the sinus. Bone and other tissue were felt as the probe passed to different parts of the wound, but no response was heard in the telephone until the leaden bullet was touched, then an electric current passed through the telephone; and as often as this current was made and broken, by touching and removing the probe from the lead, so often was there a vibration of the diaphragm, and consequently a clicking and scraping sound heard in the telephone; in other words, the patient's body was converted into an electric battery; the body corresponded to the cups, its fluids and heat to the battery fluid, the

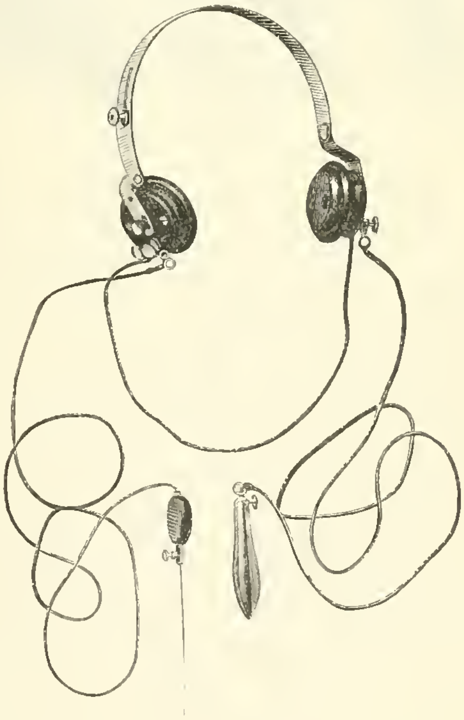

FIG. 2.

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[1] A paper read before the Surgical Section of the New York Academy of Medicine, January 9, 1888.

steel bulb immersed in the mouth to the zinc, let us say, and the lead, when it was touched, to the carbon, and thus our battery was completed, a current obtained, and the metal diaphragm made to vibrate.

In order that you may test the instrument I will place the steel bulb in this boy's mouth and a piece of lead in his moistened hand; along with the lead I also place a piece of bone in the hand, and you will observe that no response is heard when the bone is probed, but the slightest touch on the lead produces a distinct click or scraping noise in the receiver.

The steel bulb may be placed in the mouth, the rectum, the vagina, or held in the hand, provided the latter is thoroughly moistened, and grasps the steel firmly.

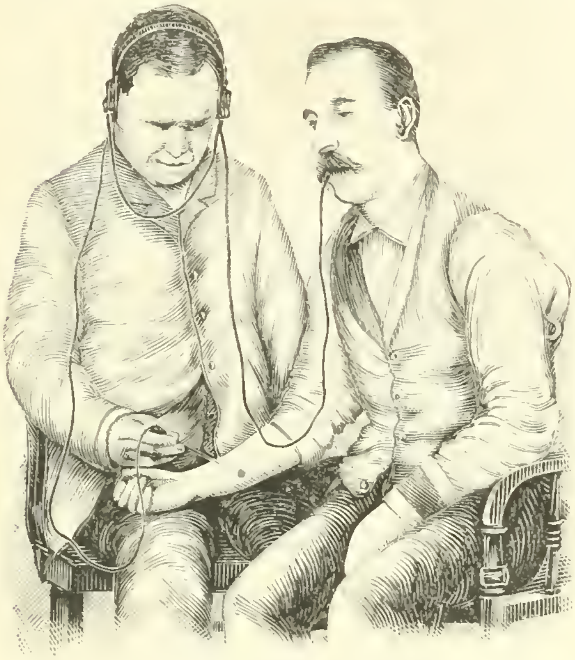

FIG. 3.

A probe or needle of any metal, shape, or character desired, may take the place of the steel probe now in the handle, provided the bulb at the end of the other terminal be of the same metal as the probe, and both differ from that of the missile to be located.

The advantages of this instrument over all others at once appear, when it is remembered, that in its use the accurate sense of hearing is substituted for that of the sensation communicated to the hand, which is always unreliable, for no one can tell if a hard substance felt in a wound be bone, metal, or some other hard tissue.

The porcelain-tipped probe was made with the hope of overcoming this difficulty; but after ample experience with the Nélaton probe, both in my own hands and in those of others in my presence, I am certain that, unless the bullet is perfectly clean from grease, lead salts, etc., and very favorably situated, it is not possible to obtain lead markings on the porcelain tip which can be relied upon to direct our operative procedure. Let any one hold a bullet in the hand, and probe it with a Nélaton probe until the markings of the lead on the porcelain point are perfectly distinct, and he will find that it requires an amount of force and pressure in rubbing the lead which he will rarely be able to make, even in the most favorable cases of gunshot-wound. None of the above conditions, which make the Nélaton probe useless, in any way interfere with the perfect working of this new probe, for you see in the experiments which you are now making on the boy, that the slightest touch of the bullet with the probe causes a loud and unmistakable sound in the telephone. Another great advantage is, that a sharp, slender, steel needle may take the place of the blunt probe now in the handle, and then no tract is necessary in probing; the needle, rendered aseptic, may be thrust into the tissues like a hypodermic needle, with little pain, and no danger to the patient, as I have verified in actual practice, and when the bullet is struck, you have only to loosen the clamp-screw and remove the handle, allowing the needle to remain fast in the tissues, with its point still in contact with the missile, and it serves as a perfect guide in cutting down on the bullet.

We have, then, in this instrument, a simple, cheap, and absolutely accurate means of determining the presence or absence of a metallic missile in a wound, for it responds equally well to iron or other metals as to lead.

Another feature of much interest to me, in connection with the instrument, is the facility with which we obtain a current of electricity, sufficiently powerful to operate the instrument, from the body of the person operated on, as you have seen in the case of this boy on whom you have been experimenting to-night.

This fact, it seems to me, opens an important field for thought and experiment. I have found already that the strength of the current, as indicated in the receiver, varies in different individuals, and in the same individual under different conditions.

When we reflect on the chemical processes which are constantly taking place in the living body, and which exceed in extent and variety those of the most powerful electric battery, the above ascertained facts seem to hold out a hope that we may yet discover such electrical differences in healthy and diseased tissues as will greatly aid in the diagnosis and treatment of diseases.

Dr. Franklin sent his kite into the clouds to obtain a spark for experimental purposes. In our day, we find that the living human body yields a current of electricity which can be utilized for a practical and humane purpose.

THE ORTHOPEDIC TREATMENT OF PARALYSIS OF THE ANTERIOR MUSCLES OF THE THIGH.[1]

By A. B. JUDSON, M.D.,

NEW YORK.

We occasionally meet with cases of infantile paralysis in which the patient has lost the power of keeping the knee stiff in the straight position. When such a patient balances himself on the affected limb, a slight blow, or a touch from behind in the popliteal region, flexes the knee and brings the patient to the ground, unless the fall is prevented by sudden action on the part of the unaffected limb. The deficiency is in the anterior muscles of the thigh. The patient, when sitting on the edge of a table, has no power to swing the foot forward, because the muscles which should act on the tibia, through the patella and ligamentum patellæ, are paralyzed. A child thus affected will sometimes manage to walk by forcibly grasping the lower part of the thigh with the hand, in order to hold the knee extended at the critical moment when the weight of the body descends on the affected limb, or he will perform locomotion in a curious manner by advancing alternately the heel and the toe of the well foot, the affected foot trailing on the floor behind. But walking, in the ordinary sense of the word, is impossible, and, unless relief is afforded, the child is thrown on crutches, and the limb is consigned to atrophy and total disability. The hip-joint, the ankle-joint, and the foot may all be well able to sustain the weight of the body, but if the knee is unable to hold itself straight the limb is utterly useless in locomotion. A defect here, like the removal of the keystone of an arch, sends the whole structure to ruin. Disuse leads to defective circulation. The hamstrings contract. The limb hangs useless, it suffers from cold and is liable to chilblains, and in various ways is such an annoyance that, when the patient reaches years of discretion, amputation is demanded and performed, as happened in two cases which I can recall. The desperate condition of these patients is further illustrated by the fact that exsection of the knee has been repeatedly performed to secure anchylosis in the straight position.[1] Dr Thomas G. Morton[2] ingeniously formed a stump for the application of an artificial leg by flexing the leg on the atrophied thigh and binding the two together, the foot being in contact with the natis. If these patients had been furnished, from the early age at which infantile paralysis occurs, with a splint which had the power to keep the knee stiff in walking, the circulation would have been encouraged, the limb would have developed to a fair degree, contraction of the hamstrings would have been prevented, and adult age might have been reached with such a degree of stability in the knee-joint that the apparatus might have been discarded.

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[1] Read before the Orthopedic Section of the New York Academy of Medicine, January 20, 1888.

I desire to present a very simple splint, designed to keep such a limb straight during locomotion. Retentive force applied at the points and in the directions indicated by the arrows in Fig. 1 will keep the limb straight, and this is accomplished by the splint which is represented in Fig. 2.

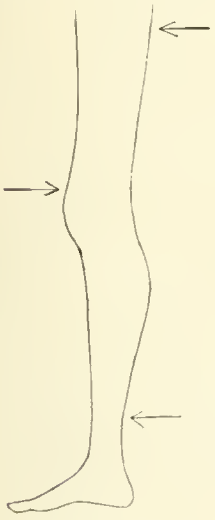
FIG. 1.

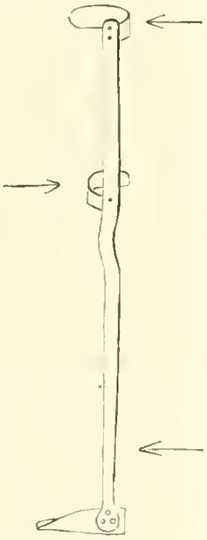
FIG. 2.

I do not say that this is not done by other splints. Some of them, however, have so many buckles, straps, movable joints, artificial muscles, and springs, that they are often inefficient and require frequent repairs. The one which is here described can hardly get out of order, and requires attention only when it is outgrown. I therefore make no apology for devoting a few lines to describing its details. In practice the details are quite as important as the principles involved.

In the first place, the splint should be made of tractable steel, so that it may be bent to fit the limb smoothly and avoid the bony prominences of the knee and ankle. The upright may lie on the outer or the inner side of the limb, the choice being decided by the condition of the ankle. As a rule, these cases show some muscular deficiency at the ankle-joint. The lower part of the splint is therefore practically a club-foot shoe, to be applied on the outer side if the foot inclines to valgus, and on the inner side if the tendency is toward varus. As in the adjustment of an ordinary club-foot shoe, buckles and webbing are to be applied to oppose whatever deformity exists at the ankle. The buckles and straps are not shown in the cut. They are to be attached at such points and in such numbers, and with such changes from time to time, as will produce the desired effect on the ankle. However applied, they will at once fasten the lower part of the splint to the foot in such a manner that when the entire apparatus is adjusted a retaining force will be exerted at the point and in the direction indicated by the lowest of the three arrows.

The upper part of the splint, as shown in the figure, is so simple that it hardly needs a verbal description. Steel bands of tolerable firmness, each long enough to more than half encircle the thigh, are riveted to the upright. The splint is readily applied by placing it against the middle of the thigh, with the upright at right angles with the femur. Then, when the upright is brought down parallel with the limb, the two bands will find bearings—the upper one against the upper and posterior, and the lower one against the lower and anterior part of the femur. The application is then completed by buckling the straps of the foot-piece. The bands will retain their hold of the limb without the help of straps and buckles. If hyper-extension of the knee is present in too great a degree, it may be opposed by the addition of two straps, one crossing the upper and anterior part of the thigh, and the other attached to the free end of the lower band, and crossing the popliteal region obliquely, to be buckled to the upright below the level of the knee. It is clear that the shape of the bands is a matter of the greatest importance. As a rule, it may be said that they should be curved in such a manner that, when the splint is looked through endwise, the lumen formed by the two bands should not very much exceed in its antero-posterior measurement the diameter of the shaft of the femur.

The bands and that portion of the upright included by them may be wound with a strip of gum-plaster to prevent rust, and then with canton-flannel, muslin, or silk. The stocking will interpose between the skin and the lower part of the splint. The foot-piece, which is covered by the patient's shoe, is to be lined with plaster and a piece of leather fastened with two rivets. When the patient grows, and the length of the limb makes it inconvenient to sit with the knee extended, a joint may be added to the splint, at the level of the knee, with some device for locking in the straight position when the patient rises.

It may be said that the steel bands should be thickly padded. In reply, I would say that, after many experiments with padded apparatus of different kinds, I have come to the conclusion that a brace is to be made comfortable, not by the addition of wadding, but rather by properly distributing the pressure which it makes. In general terms, whatever retentive pressure is to be made on the bony prominences in the vicinity of the joints should be made, not by the metallic portions of the brace, but by straps of webbing which should draw the deformed parts into a concavity formed by bending the steel frame of the brace. But when pressure is to be made on the shafts of the long bones, which are, as a rule, provided with a natural pad of muscular and cellular tissue, the metallic portion of the brace may be brought in contact with the skin, with the interposition of a slight layer of some protective material. But in such cases great pains should be taken to bend and twist the steel until the entire surface of contact is evenly applied to the bony surface.

The custom of lining braces of all kinds with pads and cushions is to be deprecated. Too often they accomplish very imperfectly what could be perfectly done by properly bending or twisting the steel frame of the brace. The best way to reconcile the patient to the inconvenience of wearing a brace is to furnish one which is of service in assisting locomotion or preventing pain. Such a brace may of necessity be heavy, unsightly, and harsh to the unaccustomed skin, but the patient will be eager to wear it as soon as he perceives the fact that the pleasure and comfort and convenience attending its use outweigh the inevitable discomforts. I have seen many instances in which thick and elaborate pads have been voluntarily discarded in favor of hard and simple coverings more in accord with the patient's own idea of comfort, cleanliness, and convenience.

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[1] Dr. Stephen Smith: Transactions of the New York State Medical Association, 1884, vol. i., pp. 322–327. Dr. Ap Morgan Vance: New York Medical Journal, November 7, 1885, pp. 512–514.
[2] Philadelphia Medical Times, April 8, 1882, pp. 473, 474.

The splint here described is not to be worn at night. It is to be applied as soon as it becomes clear that the anterior muscles of the thigh are permanently incapacitated by the paralytic attack. Without it, or its equivalent, the patient can walk only with the help of crutches, and then only with the burden of a worse than useless limb. With the splint the paralyzed limb resumes its duty and the crutches are thrown away. If, perchance, both of the lower extremities are affected in this way, a splint of this kind is to be applied to each limb. Without them locomotion is possible only by the hands and arms as the patient sits or lies on the floor, and a wheel-chair or a bearer becomes in time a necessity. But with the splints the limbs resume the power of sustaining the body in the erect position, and locomotion with crutches becomes practicable.

It is not to be expected that patients wearing a splint for paralysis of the anterior muscles of the thigh will walk with perfect ease and grace. The advantages of the use of the splint are to be found in a greater ability to walk and in the good condition of the limb, which is secured by its constant use from infancy. I have a number of patients under treatment as above described. The case which best illustrates the usefulness of this splint is the one which has been under observation the longest. A girl was attacked with infantile paralysis when two years of age, in August, 1875. In 1877 the splint was applied. At that time the patient presented a typical case of the kind under consideration. The thigh was extremely atrophied. She could not walk, nor could she, without the splint, put her weight on the affected limb. At the present time, the girl being fourteen years of age, the limb is well nourished and fairly developed. There is no contraction of the hamstrings. There is no deformity except what comes from shortening and paralytic flat-foot. She can take a few steps without the splint. The articular surfaces of the knee are broad and kept in perfect coaptation, and she is likely to have a very useful limb when she reaches maturity.

The evident simplicity, moderate cost, and durability of this splint are points in its favor. But because it is simple in its construction it does not follow that its application and proper adjustment are matters that may be lightly dismissed. We find the skeleton of the lower extremity unable to support the weight of the body, and seek to re-enforce it by a supplemental skeleton of steel, the two to be brought together with the interposition of the sensitive skin. The problem, like many which present themselves in orthopædic practice, requires time, a practised mechanical sense, and good-natured and patient attention to details.

42 East Twenty-first Street.

Gymnemic Acid.—In a London letter to the *Journal of the American Medical Association* it is stated that a new acid has been discovered, which removes temporarily the capability of tasting sweet and bitter substances. The credit of the discovery is due to Dr. D. Hooper. The acid is derived from an Indian plant, the *gymnema sylvestra*, one of the family of the *esclepiadiæ*. If a few drops of the acid, well diluted with water, be taken into the mouth, and a sweet substance be eaten two or three hours afterward, no taste of sweetness will be perceived. Under such circumstances gingerbread only tastes of ginger. If a sweet orange be eaten, only the acidity can be detected. Sulphate of quinine, taken after a few drops of the diluted acid, gave the sensation of "so much chalk" only. It has, therefore, "anti-bitter" properties, also. Dr. Hooper finds the substance similar in many respects to chrysophanic acid. The name *gymnemic acid* has been given. Dr. Hooper thinks it will be a valuable addition to the pharmacopœia in disguising the taste of nauseous drugs.

SOME CLINICAL POINTS ON GASTRECTASIA.

By A. A. SMITH, M.D.,

NEW YORK.

With a view to eliciting a discussion of the subject of dilatation of the stomach, I venture some remarks, more especially of a clinical character. I do not expect to relate the history of a case in which a pouch of the stomach was found protruding down into a scrotal hernia, although such a case has been reported; nor have I the history of a case whose stomach contained ninety pounds of matter. Such a case was related two hundred and fifty years ago. It is difficult to determine the limits of the stomach's capacity, both as to the quantity it may contain and its power to digest. I have no doubt there are many stomachs which are dilated moderately, and yet are capable of performing their functions fairly well.

All observers admit that obstruction at the pyloric extremity of the stomach, usually of a malignant nature, is the most frequent cause of dilatation. So well recognized is this, I will not dwell on it further. The obstruction may not be in the stomach itself, but is frequently only in the vicinity of the pylorus; indeed, a growth in any of the adjacent viscera may mechanically obstruct the free egress from the pylorus of the partially digested food, and in this way cause dilatation. A very unusual case of this nature occurred in the practice of the writer. A gentleman, past sixty years of age, had for many years suffered from attacks of disturbance of digestion, characterized by nausea and vomiting, severe gastric pain, and obstinate constipation. He was always relieved by the vomiting. During the last two years of his life he was under the writer's care. He had, during the first year, several of his attacks of so-called indigestion, with the characteristics named. During the last year of his life his attacks became more frequent and more prolonged. Along with this there was progressive loss of flesh, and a cachectic appearance very suggestive of malignant disease of the stomach, but there were never any physical signs of it. Dilatation of the stomach was easily recognized. During these attacks, when he had been free from vomiting for three or four days, at the end of that time I have more than once seen him, in an attack of vomiting, fill a four-quart vessel with the vomited material. As is usual in such cases, the vomited matter was always acid and of foul odor. He died from exhaustion; starved to death, as he himself suggested he was doing.

The autopsy was interesting. The stomach was enormously dilated. There was no cancer of stomach; none of intestines. The gall-bladder had become adherent to the duodenum, and the two viscera communicated by an opening three-fourths of an inch in diameter. The gall-bladder was contracted around a number of gall-stones, one of which nearly occluded the cystic duct. The gall-bladder was situated back of the ribs in such a way that it could not be detected during life. The pressure of one large gall-stone, which remained in the opening between the gall-bladder and the duodenum, diminished the size of the pyloric opening so much that the little finger could be passed with difficulty.

There are some cases of gastric dilatation in which there is no pyloric obstruction, and which, it seems to me, are of much more interest than those in which such obstruction is found. It is not always easy to discover the etiology in such cases. To say that it is due to some weakness in the muscular coats of the stomach is simply to name one of the conditions which accompany the dilatation. What may be the underlying cause is not always easy to discover; indeed, in some of them the cause cannot be discovered, and we must be content to only conjecture.

The recognized causes of dilatation, besides those named (which include mechanical obstruction at the pylorus, either from within or from without the stomach), are any interference with the peristalsis of the muscular coats, such as peritoneal adhesions either slight or over a large surface, adhesions to the surrounding viscera, the weight of a hernia, and other causes of displacement of the stomach or portions of it, and interference with the proper chemical functions. This last may always, or nearly always, be included in any one of the other causes. As long as the chemistry of digestion remains normal, dilatation cannot be considered to have progressed to a serious extent. Even where there is evident mechanical obstruction the chemical disturbance of digestion has usually, if not always, much to do with the production of dilatation.

There are still other cases in which none of the causes named can be found. I have seen two well-marked cases in rachitic children—not simply the ordinary big abdomens of rachitic children, but all the physical signs of dilatation of the stomach. In one the child, five years of age, could drink three pints of fluid and allow the marking out of a line two inches below the umbilicus. No satisfactory explanation has yet been given of the causes of dilatation of the stomach in a rachitic child. There would seem to be some loss of muscular power in the stomach-wall belonging to the disease, and this, combined with the interference with the digestive processes allowing of fermentation, causes the dilatation. We must be content in such cases with the rather indefinite explanation, malnutrition and impaired innervation.

The question of neuropathic influences in its relation to dilatation of the stomach would lead us somewhat into the domain of theory, yet it seems reasonable to suppose it may be concerned in producing it. Section of the pneumogastrics in the neck paralyzes *nearly*, but not *entirely*, the muscular coats of the stomach. When the section is made in an animal in full digestion, the stomach-digestion is almost completely arrested.

Again, injury to the splanchnics is well known to interfere with the proper natural progress of the food from the stomach. If from any cause the stomach is not able to empty itself in the usual time of digestion, and such delay is kept up constantly, it will at least favor the occurrence of dilatation, if not absolutely produce it. I have seen two cases of gastric dilatation in Bright's disease in which there was cardiac enfeeblement. To be sure, the dilatation was not to an enormous degree, but was sufficient to at times give much distress. Of course in this disease, after it has advanced to certain stages, there is almost invariably great disturbance of the chemistry of gastric digestion. May there not be some influence produced by the poison on the pneumogastric in its course, or at the point of its origin in the medulla, producing impairment of innervation to the organs to which it is distributed?

We see not infrequently moderate degrees of gastric dilatation co-existing with enfeebled heart in gouty subjects, without there being any well-defined cardiac lesion. May not impaired innervation explain both conditions, the cardiac enfeeblement and the gastric dilatation?

The diagnosis is not difficult where the dilatation is marked and due care is shown in examination; especially is this true if there be a moderate accumulation of gas in the stomach. It would hardly be in place in a paper like this, limited as to time, to discuss fully the symptomatology of gastric dilatation. I can only refer to a few prominent features. Always there are symptoms referable to the stomach, which direct our attention to it as the probable seat of trouble. Symptoms of gastric fermentative dyspepsia are prominent, but these are also present in many cases of gastric disturbance in which there may be no dilatation. Pain is rarely ever a prominent symptom of the dilatation *per se*.

Vomiting is not always present, but when present it gives strong evidence in favor of dilatation. The character of the vomited matter, the quantity and the intervals of vomiting, seem to me to give stronger evidence of dilatation than any other symptom. The quantity is very significant. In no other disease is there such a large quantity vomited at one time. The interval between the acts of vomiting is usually two to four days; this allows of the accumulations to occur. The vomiting is usually followed by temporary relief. As the dilatation becomes more marked, frequently the intervals between the acts of vomiting become longer, but the quantity greater. In the vomited matter often there will be portions of food undigested, and which was swallowed, it may be, two or three days previously. If the vomited matter contains food eaten the day before—and this occurs frequently—I am suspicious of dilatation of stomach. As to the character of the vomited matter: It gives evidences of fermentative processes. It is acid, sometimes intensely so, usually extremely offensive, contains food in various stages of digestion, and under the microscope shows presence of sarcinæ ventriculi and the yeast-fungus. We cannot, however, lay too much stress on the fermentative processes, as they occur very frequently in undilated stomachs; but, as I have already said, the chemical disturbance of digestion is a very important factor in every case of gastric dilatation, and our treatment must be chiefly directed to it.

Another prominent symptom I have observed is, in some cases, a great craving for food, even though such large quantities are taken. This is easily accounted for. The food taken is not digested, consequently the patient is practically in a condition of partial starvation.

Physical exploration, however, is usually necessary to a diagnosis. If the stomach be largely dilated and moderately distended with gas, inspection will reveal abnormal prominence in the epigastric region, more marked on the left side. If the muscular walls of the abdomen are relaxed, and the stomach is not distended with gas, there will be no evidence whatever by inspection.

Occasionally a peristaltic wave may be seen passing from left to right across the epigastric region. This is said to occur only when there is decided hypertrophy of the muscular wall of the stomach. I saw this very well marked in a case recently under observation. A slight tap on the abdomen, the application of cold, even the mere passing the hand over the abdomen, sometimes would cause it. In some cases the presence of prominence due to the large accumulation of food may be recognized by inspection, especially when the patient is in a sitting posture. The disappearance of this after an attack of vomiting or washing out the stomach may be noticed.

Palpation may give quite distinct evidences if the stomach be moderately distended with gas. Under such circumstances the sensation is something like that which one gets when pressing on an air-cushion.

If there be much fluid in the stomach, and the abdominal walls be quite relaxed by having the patient in a standing or sitting posture, fluctuation may sometimes be detected at the most dependent portion. This is sometimes so easily recognized that the lowest point to which the stomach has extended may be made out by this method.

When there are both gas and fluid in the stomach a splashing sound may be heard, and the movements of the liquid felt, if sharp, quick pressure with the hands, alternately, on the abdominal walls, be made. While much importance is attached to this by most observers, it seems to me to have but little significance. I have often observed it in healthy persons. I have again recently tried this in a number of persons in whom there was no evidence whatever of gastric dilatation, and am convinced it is a sign of but little value. I caused patients to swallow two pints of water, allowed them to move about for a while, and invariably succeeded in the recumbent, standing, and sitting posture, in getting very loud and distinct splashing sounds. I have tried it with milk with the same results. If these splashing sounds continue for five or six hours after a meal, they may be of greater significance.

If the dilated stomach be moderately distended with gas, the tympanitic percussion-sound will extend over a very large area. It does not extend far into the right hypochondrium, but does in the left, often several inches beyond the rib-border. It extends far down into the abdomen, but it is not always easy to distinguish it from a distended large intestine. I have found percussion a very useful aid in this way. When the stomach is empty let the patient drink a quart of water, percuss him in the standing position, and keep on percussing him, as he leans back over a bed or table, until he gets in an almost recumbent position, then let him resume his upright position, still percussing him. The changes from tympanitic percussion to flatness, as the water gravitates to the most dependent portion of the stomach, will enable one to mark quite accurately nearly the lowest line of distention.

I have never been able to recognize the fine crackling or sizzling sound spoken of first by Pauli.

It is important to recognize commencing dilatation, if possible. It is probably frequently overlooked. Disturbances of stomach-digestion are very frequent, dilatation of stomach comparatively rare. Fermentative gastric dyspepsia is frequent without gastric dilatation, and yet fermentative digestive disturbances are very prominent features in dilatation. In the treatment of dilatation our efforts are directed chiefly to the relief of these fermentative changes, whether they are causes or results. Even in dilatation due to mechanical obstruction, great relief may be obtained often by appropriate treatment.

In the way of prophylactic treatment (excluding, of course, mechanical obstruction and incurable organic disease) much may be done, and in the way of correcting all such habits of living as tend to cause gastric dyspepsia.

The timely and judicious management of chronic gastric catarrh, and any other form of gastric disturbance accompanied by fermentative processes and delayed digestion, is of great importance. As to food, it is difficult to lay down arbitrary rules. In a general way it may be said, food which ferments easily should be avoided. Sweets and farinaceous articles seem especially objectionable. I have found, too, milk is usually not well borne if the dilatation is marked, and the same may be said of most vegetables. Food which is easily digested, and in concentrated form, should be given, and the intervals between meals should be short. An almost exclusive meat and fatty diet has worked well in some cases. Food which has been partially digested, artificially, before administration aids in some cases.

The prevention, as far as can be, of distention of stomach by its contents, whether this be in the way of the quantity of food taken, or from gases the results of fermentation, must be favored.

Washing out the stomach has occupied a very important place in the treatment of such cases since Kussmaul first suggested its systematic use. While it has not fulfilled the promise first held out, it nevertheless is of great value in some cases. It has taken its place among means of treatment not only in this but in other forms of gastric disturbance, and is likely to remain. In far advanced cases it can only give relief, it seems to me. Its good effects in the relief of chronic gastric catarrh are well established, and as chronic gastric catarrh is almost always present in cases of dilatation, its beneficial results are often very marked. It can be considered only an aid to other means of treatment.

Electricity has as yet given negative results, and as it is used generally only in connection with other treatment, it is difficult to say whether it is of benefit.

As to medicinal agents, they can be of service only in relieving the conditions which give rise to dilatation or accompany it. There is no drug or combination of drugs which can restore the muscular power to the stomach-wall when such power is once absolutely lost.

Such as aid the digestion, especially those which aid in preventing fermentation, are useful. The salicyl series, including creasote and carbolic acid, have sometimes seemed to benefit. Mineral acids, too, sometimes, give great relief. Alkalies before the taking of food have seemed to me sometimes to be beneficial. Pepsin is of doubtful efficacy, although in some cases it seemed to aid digestion. These agents seem to be more beneficial after washing out the stomach than before, whether this be due to the fact of their having a better opportunity to act, or perhaps the benefit may be due to the washing out alone. Nux vomica, from its well-known action on muscular fibre, has more advocates than any other one remedy, but it is doubtful if its good effects can be attributed to anything more than its general tonic influence.

An occasional cathartic is beneficial, especially the cholagogues. Sometimes the saline cathartics seem to act more beneficially than any others. Those which I have found most beneficial are the Friedrichshall and Rubinat-Condal waters.

ALONZO CLARK, M.D.

A MEMORIAL READ BEFORE THE ACADEMY OF MEDICINE ON JANUARY 5, 1888.

By FRANCIS DELAFIELD, M.D.,
NEW YORK.

MR. PRESIDENT AND FELLOWS OF THE ACADEMY OF MEDICINE: It has become the custom among us that, as one after another of the leaders of the profession passes over to the majority, carried from us by relentless death, an account of the life of each should be read before the societies to which he has belonged, so that those of us who survive may profit by their examples, may avoid their errors, may be incited to emulate their achievements.

The performance of such a pious duty to-night has devolved on me—would that it had fallen to the lot of one better fitted for the task. Yet let me entreat of you to remember that the poverty of the discourse will be due not to the theme, but to the speaker.

Dr. Alonzo Clark was born in Chester, Mass., on March 1, 1807. He died in New York City on September 13, 1887. In the year 1855 he was made Professor of Pathology and the Practice of Medicine in the College of Physicians and Surgeons. In 1882 he gave his last lecture at the College.

His real life was all contained within the period of years between 1855 and 1882—the period during which he taught and practised medicine. Before this his life was one of preparation; after this only a waiting for death.

His life of preparation was that of so many other Americans. The determination to obtain a thorough education, without the necessary means for this purpose, involved with him as with others the necessity of being at the same time a scholar and a teacher—a scholar to educate himself, a teacher to earn his means of support. No better men are turned out by our colleges than those who are educated in this hard school.

With Dr. Clark the pressure of poverty was not felt until he was in his sophomore year at Williams College. But from that time until he was established as a teacher of medicine this pressure was always felt, and had its effect in moulding his character. While at college he taught for six months at a school in Northampton; after graduating he taught at Northampton and at Williamstown.

Then he came to New York to prepare himself to teach chemistry, and entered the College of Physicians and Surgeons. Still he had to teach, and did so in some of the New York schools.

The chair of chemistry, for which he had been working, was given to another, and then for the first time he resolved to embrace the profession of medicine—curiously enough, with the idea of becoming a general practitioner.

He took his degree as Doctor of Medicine at the College of Physicians and Surgeons in 1835. For two years after this he was an *interne* at the New York Hospital.

In 1837 he went to England as the medical attendant of Joseph Bonaparte, and continued his studies first at London and afterward in Paris.

In 1838 he returned to America, and then went with Mr. Arthur Baring to Madeira, where he remained five months. Then he again spent several months in Paris and London.

In 1839 he once more went to Europe, with Mr. James Boorman, and at that time travelled over many countries.

Of his life in Paris I have obtained some account from Dr. Stillé, of Philadelphia.

In the year 1836 there was gathered together in Paris a little company of American medical students, many of whom at a later time attained eminence in their profession. Drs. Bowditch, Holmes, and Shattuck, of Boston; Dr. Swett, of New York; Drs. Gaillard and Porcher, of Charleston; and Dr. Stillé, of Philadelphia, were among the number.

Even in such a company as this Dr. Clark's superiority seems to have been felt. Dr. Stillé's "Journal" speaks of him as follows:

"Clark was our senior by five or six years (he was then twenty-nine years of age), his manner was impressive, and his serious tone gave him a sort of supremacy within our little circle. I was associated with him in clinical studies, and was impressed by the laborious process through which he acquired knowledge, by its precision and accuracy. He had learned the value of time and thoroughness in the school of experience. His self-poise and absolute integrity inspired his associates with a feeling compounded of love and respect. The more so, perhaps, that in the midst of a social circle that did not allow science to exclude devotion to pleasure he never indulged in any of the dissipations which most of his companions used as a relaxation to severe study, and yet he never set himself up as a *censor morum*. His circle always gave him the title of 'Father Clark.'"

Dr. Clark's medical studies in Paris and London seem to have been prosecuted especially with reference to the knowledge of disease. The bedside and the dead-house were the places where he studied, and books and authorities, although not neglected, were as nothing compared to what he could see and hear himself.

In the year 1840 he returned to the United States and settled in New York. He made no attempt to obtain practice, but spent his time in the dead-houses of Bellevue and the New York Hospital, and in working with the microscope.

During the same year he began to lecture on chemistry in the Medical School at Woodstock, Vt., giving his courses for two months in the spring, and lecturing twice a day. In 1841 he began to lecture in the same school on pathology, and continued to do so for thirteen years.

About the same time he began to lecture on pathology in the Medical School at Pittsfield, Mass., giving his lectures there in the autumn.

The remainder of each year he spent in New York, still working in the dead-house and with the microscope.

In 1847 he was appointed Lecturer on Physiology and Pathology in the College of Physicians and Surgeons, and during the same year was made one of the attending physicians of Bellevue Hospital.

It was in the year 1855 that the real work of his life began. It was at that time that he became the Professor of Pathology and the Practice of Medicine at the College of Physicians and Surgeons, and that he formally offered his services as a consulting physician.

He was already forty-eight years of age; twenty years since his graduation had been passed in preparation for the work of his life, and this preparation had been of a remarkably complete character. He was to be a teacher, and he had been practising teaching from the time that he was a sophomore at college; he was to be a consulting physician, and for twenty years he had been living in hospitals and dead-houses; he needed a liberal education for his work, and he had travelled over many countries and known many men and many books. The toil had been long and arduous, but when he fairly commenced his life-work his success was immediate and complete.

His practice and his teaching marked an era in the history of medicine in the United States. At a time when too many physicians were ignorant even of the gross lesions of the diseases which they treated; when the treatment of disease consisted too much in traditional remedies applied according to the shrewdness of the practitioner; when fresh air and sunlight were looked upon as enemies rather than friends—when young men without education, without experience, after hearing a few lectures, were called doctors and entrusted with the lives and happiness of their fellow-citizens—at a time when everything was hazy, indefinite, uncertain, there appeared a man in New York who actually knew his own business; a man who cared nothing for traditions, or theories, or arguments, but who for year after year had been storing up, in a most retentive memory, facts—facts about the symptoms, the course, and the lesions of disease—facts about the effect of remedies—not facts colored and misrepresented by the medium of theories, but the facts of the impartial observer.

What wonder was it that the advent of such a man was hailed with relief, that students crowded to his lectures, and that his consultation practice at once assumed large proportions.

For years the place that he held in New York was such as has been held by no other physician. He was not merely one of the most eminent physicians, he was the most eminent; his word was law, his decision was final.

In later years the profession grew up to its master, and even passed him by. His authority was no longer supreme. The scholars trained in his school cared as little as their master had done for any authority but that of nature; and with this came also the natural reaction, there was a certain relief from the overshadowing influence of a single man.

From the year 1855 on, Dr. Clark's life in New York was one devoted to consultation practice, to the hospital, and to the college. His consultation practice was very large. In 1861, when I was a student in his office, his consultation visits occupied not only a large part of the day, but the greater part of every evening also. A few years later than this he told me that his practice was even larger. I think that his work of this kind must have reached its greatest development about the year 1870.

As a physician Dr. Clark was precise, exact, and methodical. Every patient was examined with a technical skill which was conspicuous, with the intuition and judgment of the born physician, and the case was illuminated by a large previous experience, always ready for use from the stores of his memory. Either he recognized at once the nature of the disease, or he avowed his ignorance, or he was content to wait for time to make all things plain.

He was not an enthusiastic therapeutist, but the plans of treatment which commended themselves to his judgment were carried out with skill and courage.

In the positive treatment of disease, his especial achievements were the treatment of peritonitis by opium, and the enforcement of the value of fresh air in the continued fevers.

But his influence for good was also widely felt in the prevention of doubtful and injurious plans of treatment.

As a consultant he gave satisfaction both to patient and physician. To the patient, confidence was given by his noble presence and benignant aspect, while the physician rested in the full assurance that in no way would his influence and authority be impaired.

But it was as a teacher of medicine that his powers reached their full development; it had become a second nature to him to acquire information, to digest it, and to communicate it to others. Curiously enough, this was done largely without the aid of writing. He could trust his memory even for the minutest details, and his mind had acquired the faculty of arranging and presenting what he had to say in an orderly and clear manner. So he was a teacher by the spoken and not by the written word. Many generations of students have felt for the rest of their lives the stamp of his teaching, but to the present world he speaks no longer. His writings were few, and not to be compared to his lectures.

In 1875 his interest in his lectures began to flag, and there were, even then, some premonitions of the disease which later destroyed his life. It was at this time that he was made president of the college in which he had taught so long.

In 1882 he resigned his position as professor in the college, and with this ended his active life.

He still saw many patients, he continued to be president for two years longer, but he was no more the same man. A chronic inflammation of the cerebral arteries was gradually affecting the functions of his brain. A most distressing vertigo constantly annoyed him. All his mental faculties became slower, even his prodigious memory began to fail.

In December, 1884, came the first decided attack—partial aphasia and partial right hemiplegia. After this came other similar attacks, all referable to the same side of the brain. Then he became completely aphasic, and would sleep away a large part of each day. Finally, on September 13, 1887, came the end.

He was a man whom nature had made on a large scale—of large frame, of commanding presence, with vigorous health, with a large brain. It is always hard to tell of how much such men are really capable. There is often something sluggish about their mental processes, and it requires external stimulants to spur them on to their utmost development. It is to such men that the United States have more than once been indebted for their preservation. Imperturbable, patient, never discouraged, capable of extreme and continuous bodily and mental exertion, and yet modest, shunning publicity, reticent of speech. Such a man was Dr. Clark. Circumstances made him a physician, and he was the first physician of his country and time. But a larger and more arduous task would have found him equally ready.

In looking back over Dr. Clark's life it seems to me that, perhaps, one of its most useful results was the influence it exerted on the medical profession. Here was a man whom everyone knew, who had attained to the highest honors in the profession, and the largest success in practice, and yet no one could accuse him of a mean or an unworthy act—no man was his enemy. He shunned publicity and notoriety in every form; medical politics were unknown to him; he appeared but rarely in the medical societies or the journals; and yet everything came to him. He never tried to do anything but to learn all he could about the science and art of medicine, and to communicate this knowledge to others; and, behold, honors, practice, wealth, were added to him. How many a struggling and discouraged physician has looked at Dr. Clark and taken heart once more to walk in the narrow and straight way of integrity.

I cannot close without adding my own tribute to the dead.

Dr. Clark was my father's friend, and he was my friend. He was my teacher, my guide, my example. In severe illnesses he cared for me; in his own last sickness I watched the courage with which he saw death approaching. It fell to me to succeed him in the college chair which he rendered so illustrious; it has been a constant incentive to exertion that his successor should not be unworthy of him. He was my father in medicine, and, as a son, I mourn his loss and revere his memory.

Clinical Department.

ASEPTIC CASES FOR SURGICAL INSTRUMENTS.

By A. HOLMBOE, M.D.,

ASSISTANT SURGEON, DR. CHR. FENGER'S CLINIC, EMERGENCY HOSPITAL, CHICAGO, ILL.

The ideal of modern surgery is perfect asepsis. The principles to be followed to reach that end are at present well established. Our method of carrying out these principles, however, is as yet very far from the ideal. When our method is perfect, our asepsis, as far as it rests with the surgeon, will also be perfect. Every detail, therefore, is important. We are to-day disinfecting everything and everybody, so to speak; the only part of our *armamentarium* so far neglected being instrument-cases of various descriptions, pocket cases, and instrument-bags. It is, *a priori*, evident that our old-fashioned appliances must necessarily become more or less infected, and act as veritable germ-carriers; the material used in their construction making disinfection impossible. To prove the correctness of this assertion, the following experiments, suggested by Dr. Fenger, were made. Two of Dr. Fenger's instrument-satchels were used, viz., (A) physician's instrument-bag in active service about two years, and (B) canvas bag (carpenter's bag) used for about three months, never in particularly septic cases, and looked upon as our absolutely "clean" bag.

Exp. 1.—Two smooth, polished scalpels, metal handles (all our instruments are provided with metal handles), were sterilized. One (*a*) was put in satchel A, and the latter was wrapped up in an antiseptic dressing to avoid air-infection. The other scalpel (*b*), which may be called the control-scalpel, was immersed in a gelatin-culture fluid.

Scalpel *a* was removed after six hours and also immersed in the gelatin fluid. Omitting the technical details, we will simply state the results here: Control-scalpel (*b*), negative result. Satchel-scalpel (*a*), after twenty-four hours, gelatin turbid, numerous colonies; after forty-eight hours, the entire gelatin mass was liquefied.

Exp. 2.—Two sterilized scalpels: One scalpel (*a*) put in satchel B; one (*b*) control-scalpel.

Control-scalpel, negative result. Satchel-scalpel (*a*), after six hours' contact with satchel B (the same precautions having been taken as in Experiment 1), after twenty-four hours, gelatin clear; forty-eight hours, gelatin turbid; fourth day, liquefaction.

Further experiments are in progress, but are not yet finished.

These experiments showed forcibly that our vehicles for carrying instruments were unsafe, because they could not be disinfected. It therefore became necessary to replace the old instrument-bags, etc., by new ones that could be disinfected by boiling, in five per cent. carbolic-acid solution, for instance. To that end the following outfit was devised, and is now in use in Dr. Fenger's hospital as well as in private practice.

1. *Instrument-towels.*—These are ordinary linen towels with a strip of the same material sewed on to form pockets for the instruments. These towels were devised about a year ago by Dr. Fenger's former assistant, Dr. Bayard Holmes, of this city. I should, perhaps, mention that the instruments, when not in use, are kept on glass shelves which are washed with five per cent. carbolic-acid solution once a week. All instruments are boiled for one hour in a similar solution once or twice a week. Instead of one old-fashioned pocket-case, six new ones were made of light canvas, with flaps to fold over the instruments, and a tape on the outside to keep it closed. The instruments are kept in position by tape-loops on the inside of the canvas.

To replace our old instrument-bags, one dozen new ones were made. They are simply bags provided with handles and straps of the same material (no leather, buckles, nor locks are used); the straps are to be knotted. A piece of hard-wood, one-fourth of an inch thick, is used to form a bottom to the bag. By keeping a large number on hand, a fresh one can be used every day, if desired.

The above designs recommend themselves to general use by enabling us to keep our instruments in, so to speak, aseptic surroundings, inasmuch as the towels, pocket-cases, and instrument-bags can, without injury, be thoroughly disinfected by boiling, thereby avoiding the danger of infection from one source, at least. They are cheap; anybody can make them; and the cost of the material needed for the whole outfit is trifling.

Progress of Medical Science.

Actinomycosis in a Woman.—Dr. Hoeffner has described the following case: A woman, aged sixty, suffered in November, 1884, and January, 1885, with pains in the right loin resembling renal colic (*The British Medical Journal*). Each attack was followed by urticaria and diabetes insipidus. In April, 1885, the attacks grew longer and more frequent; much muco-pus was passed with the urine, and there was great pain and tenderness in region of the right kidney. In November the attacks recurred, but this time resembled gall-stone colic; the pain radiated from the liver to the right shoulder. In January, 1886, a swelling resembling an abscess formed in the right hypochondrium, and was opened by Professor Boeckel in February. Instead of pus, serum with fungous tissue came away; it was sprinkled with grass-green bodies, the size of a grain of wheat. No communication could be found between the incised structure and the abdominal cavity. The wound was scraped, disinfected, and dressed with iodoform gauze. The green bodies were examined, and found to be actinomycetes. The wound slowly became cleaner; its edges remained red and indurated, and not very tender. The scanty pus which exuded was mixed with the bright green bodies. There were indurated tracts in the neighborhood; no antiseptics produced any effect. At this stage the general condition was good; the urine contained muco-pus, but the fungus could not be found in it. The wound at length became a fistulous track. In June, 1886, pleuritic effusion set in in the right side of the thorax inferiorly, with rise of temperature. On June 27th, fits of coughing brought up fetid muco-pus. In August the patient became very ill with ascites, anasarca, jaundice, and a bed-sore, yet she got stronger again till spring, 1887. An abscess then formed to the inner side of the right scapula. On incision, thick pus and actinomycetes escaped in quantities; a fistulous track was left, which, alternately with the track in the right hypochondrium, discharged the parasite. The former track on one occasion communicated with the pulmonary fistula, then the green bodies were found in the sputa; they were not so green as those escaping from the other cavities. The patient died of exhaustion on July 30, 1887. The disease thus lasted for two years and a half. A large abscess was found in the right lobe of the liver, involving adjacent viscera. It was full of the fungus; it communicated with the lumbar fistula, which was itself in communication, under a wide area of upheaved subcutaneous and muscular tissue, with the fistula in the thorax. The right suprarenal capsule adherent to the liver was infected with the fungus, but the kidney, including its capsule, was free from infection, though congested. The diaphragm and other organs were healthy. The fungus appeared to have begun its ravages from the right transverse colon, where it touches the liver. The fungus had migrated toward the surface, through the thoracic parietes, forming the first abscess; then it had made its way between the skin and the muscles toward the scapula, perforated an intercostal space, and finally entered the lung. The green coloration of the fungus appears to be peculiar to cases where the abscess is hepatic; in other cases the masses were white or yellow, and even in this patient those which were coughed up from the lung were much less green than those in the hepatic abscess.

How to Prevent the Spread of Infection.—An English health officer has formulated the following suggestions: It is supposed that a case has developed in a family, and that the patient is not to be removed from his home. The first requisite is to prepare a room in which the patient may be isolated. It should be cleared of all furniture which is not absolutely required, and the floor should be cleansed and left bare. The room should be regarded as a source of danger, and should be cut off from the rest of the house by means of a sheet, or sheets, wrung out with a disinfectant solution and kept moist therewith, suspended outside each door, and reaching to the floor. Everything taken into that room should be regarded as infected, and nothing should be removed without disinfection. Towels, pocket-handkerchiefs, soiled linen, etc., used in the room, should be boiled in a disinfectant solution. The patient should be washed with a disinfectant solution and soap and water, and in scarlet fever the body should be anointed with oil. An open fire should be kept in the room (winter and summer), and if no ventilation is provided in the house-construction, a window should always be left open a little. Dogs, cats, and other pets should be excluded from the room, as they carry infection readily. In case the patient should be so unfortunate as to die, the body should at once be swathed in disinfectant cloths, and should be sealed in a metal coffin before being removed from the room. When the room is no longer required by the patient it should be thoroughly disinfected. It should then be left open, to air thoroughly for a week. All its contents should then be washed, and all suspected articles, such as toys, should be burned.—*The Sanitary News*, December 24, 1887.

The Diagnosis of Medullary Cancer.—The subject of cancer is always before the profession. In a recent paper on the symptoms, diagnosis, prognosis, and treatment of the medullary variety of carcinoma (*The Philadelphia Medical Times*, December 1, 1887), Dr. Hyde, of Cortland, N. Y., summarizes his views on diagnosis as follows: Medullary cancer appears in early child-life, and rarely in patients over sixty years of age. Hard or scirrhous cancer is never seen in persons under twenty years of age, and rarely as early as twenty-five years of age. Medullary tumors never have the stone-like hardness of the scirrhous cancer, nor its irregular and jagged outline. The medullary, unlike the scirrhous, is highly vascular, develops rapidly, maturing in nearly half the time of the hard cancer. Persons with soft cancer do not show the cachexy so early as in the hard; it appears suddenly at the time when its diseases or degenerations are manifest, and then becomes strongly marked. The medullary, as a rule, grows more rapidly than the sarcoma, is much more vascular than the latter, its boundaries less distinct. Sarcoma is scarcely known in childhood. The medullary growths can be distinguished from the inflammatory swellings by the entire absence of the symptoms and signs of the latter during their normal life. None of the innocent tumors have so marked a preference for special localities and textures as the soft cancer. The most reliable diagnostic sign of medullary cancer is its marked elasticity, not so plainly detected in its earliest growth as a little later, when it enlarges more rapidly. As soon as the growth becomes developed sufficiently to become the subject of surgical opinion, in a large majority of the cases the elasticity can be detected.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, February 4, 1888.

THE TRANSMISSION OF INFECTIOUS DISEASES THROUGH THE MEDIUM OF RAGS.

DURING the summer of 1886, the State Board of Health of Massachusetts requested Dr. C. F. Withington to undertake an investigation of this subject, which has lately received so much attention from physicians and sanitarians. Opinions are still considerably divided as to the true state of affairs, and it appears from Dr. Withington's elaborate report ("Eighteenth Annual Report of the State Board of Health of Massachusetts," Boston, 1887) that reliable facts are difficult to obtain. We are told at the outset that it was by no means easy to collect original data, owing to the length of time that has elapsed since the general prevalence of small-pox and cholera in the State of Massachusetts.

Again, "information as to the transmission of the other acute infectious diseases, including measles and scarlet fever, is lamentably imperfect, owing to the almost constant prevalence of such diseases in manufacturing towns, so that opportunities for infection are always present. It is also doubtless true that a majority of rag-operatives have already had these diseases in their youth, and thus acquired immunity against any infection which the rags might carry."

Nevertheless, the author, by means of painstaking personal investigations, including inquiries through physicians, manufacturers, and hospitals, was able to collect a large amount of information.

It is, of course, impossible here to follow Dr. Withington in a detailed examination of the mass of evidence thus brought together. But for the information of our readers we reproduce his conclusions, which are as follows:

1. Small-pox has been transmitted through the medium of rags in a certain number of cases, small in proportion to the whole number of persons who handle rags, but absolutely numerous enough to show that unvaccinated workers in rags are exposed to an actual, if not imminent, danger of infection from this source.

2. The source of this infection is more frequently domestic than foreign rags, though the disease has been caused by the latter. This possibility of infection through imported rags accords with what is known of the tenacity of life of the variolous poison.

3. Among the rarer means whereby cholera is transmitted are textile fabrics infected with choleraic discharges. There is evidence that clothing from cholera patients, and possibly clothing merely packed in an infected locality, has, when transported to a distance and there unpacked, caused the disease in those who have handled it, thus starting a fresh cholera focus. A proper distinction exists between clothing, on the one hand, recently removed from the body and again, not long after, be put on to the body; and rags, on the other hand, which, if transported to this country, are certain to have undergone a carefully discriminative sorting and drying, and to have spent a considerable time in warehouse and on shipboard.

4. The statement that cholera has been transmitted by paper-rags rests upon a solitary case, of which the details are not complete, and on the reliability of which some of the highest authorities on cholera have cast doubt. If the case be accepted, it is one of infection by *domestic* rags, carried only fifty miles from their place of collection.

5. An epidemic affection, known as "rag-sorters' disease," appears to have broken out on three or four occasions in European paper-mills. It was probably, though not certainly, the disease called anthrax.

6. Authenticated instances are not to be found in which the other infectious diseases—typhus and typhoid fevers, scarlet fever, measles, and diphtheria—have been transmitted through rags; though it is to be said that such evidence, supposing the fact to exist, would be very difficult to get. Neither do the mortality tables, as shown by registration reports, show a preponderance of deaths from these diseases in the paper-making towns.

7. There is no evidence to show that rag-sorters as a class are, except for occasional cases of small-pox and a certain amount of pulmonary irritation from the dust of improperly ventilated rooms, less healthy than other persons engaged in in-door manual occupations.

8. Despite the fact that cholera is not known to have ever been conveyed to this or any other country in foreign-baled rags, it is a reasonable precaution to prohibit the landing in any United States port of rags gathered in epidemically infected localities, in view of the possibility that among such rags there may have been thrown articles of infected clothing which have not been sufficiently dried and aired, or have not occupied enough time in their transportation to be devoid of danger. Such prohibitions should be limited to the time and place of epidemic infection; but all necessary precautions should be taken to make sure that rags shipped from a healthy port were not gathered or baled in an infected place.

9. As the only safeguard against the occurrence of small-pox among operatives, paper-mill owners, whether "incorporated companies" within the purview of the statute or not, should make evidence of successful vaccination an absolute prerequisite to the employment of any person in the mill, and a revaccination at regular intervals (not merely on the occurrence of an epidemic in the neighborhood) a condition of being retained in their employ.

10. As the contagion of small-pox, phthisis, and perhaps other diseases, is capable of being inspired when the particles carrying it are suspended in the air in the form of dust, and as dust, even when it carries no contagion, is irritating to the respiratory passages, every mill should have, in connection with each table in the

rag-room and in the dusting-room, a ventilating system, preferably consisting of flues connected with an exhaust-fan, so that the dust, as fast as it is disengaged, may be withdrawn from the air. The success which attends the working of such an apparatus, in some mills where it is in use, is a sufficient warrant for its general introduction.

11. A law similar to that of Great Britain (Section 125 of the Public Health Act of 1875), imposing a penalty on the selling or giving away of infected rags from persons sick with any dangerous disease, seems desirable. Public institutions and private householders should be obliged (and not, as at present, simply advised) to insure the disinfection of the more valuable articles and the destruction by fire of all rags that have been thus exposed.

12. As domestic rags comprise more than half those used, and represent a still larger proportion of the infection likely to be carried, it follows that they should participate in whatever disinfection is thought necessary. This fact points to the paper-mill as the proper place for making such disinfection. The sulphur process would doubtless afford the least embarrassment to the manufacturer; the bales being opened in a tightly closed room, the rags being spread on racks, and sulphur burned in the proportion of two pounds to each one thousand cubic feet of space. The introduction of steam under pressure, the rags being similarly disposed, would be the most effective disinfection possible, but would dampen the rags to their injury, unless the moisture were dried out at once with a current of hot air.

TURPENTINE IN DIPHTHERIA.

We have, on several occasions, referred to the use of turpentine in diphtheria. Recommended originally in Germany, and claimed to be almost a specific, it was there, also, that the employment of the drug was subjected to the most severe criticism. Some recent publications have again drawn attention to the alleged value of this substance, and most remarkable among these is an article by Dr. Roese, which appeared in the *Therapeutische Monatshefte.* The author asserts that he has employed turpentine in diphtheria for the past four years. In that time he lost only five cases out of sixty that came under treatment. Two of the fatal cases concerned infants one year old, who appeared moribund when first seen, and died a few hours later. The other fatal cases were also unusually severe from the start, two dying in thirty-six hours, and one surviving five days. This is certainly a noteworthy record, as diphtheria statistics go.

The oil of turpentine was administered in drachm-doses, three times a day. Sweet spirits of nitre was used as a corrective, in the proportion of one part of the spirits to fifteen of the turpentine. Symptoms of intoxication were never observed by the author. In addition to the turpentine, a two per cent. solution of sodium salicylate was given every two hours, in tablespoonful doses. A gargle of chlorate of potash solution was likewise employed whenever possible. Under this plan of treatment rapid amelioration of local signs and constitutional symptoms was observed. Usually improvement began at once, and it was rarely necessary to push the drug beyond five or eight doses. It should be remarked in this connection, however, that a very generous and stimulating fluid diet (strong broth, port wine, milk, etc.) formed a feature of Dr. Roese's plan of treatment.

Those who are inclined to be sceptical with regard to the utility of medicines in the severer forms of diphtheria (and the profession contains many such) will scarcely accept the author's figures without challenge. On the other hand, for the very reason that violent diphtheria ordinarily justifies so gloomy a prognosis, we are ever ready to employ any means at our command which may possibly reduce its frightful mortality. There is no reason, therefore, why the turpentine treatment of this disease should not be given a fair trial.

SUPRAPUBIC PROSTATECTOMY.

The surgery of to-day is nothing if not aggressive. Not a single structure can be said to be so cryptically bestowed within our economy that the pushing blade of the operator will not some day expose it to the light of day. The newly proposed operation of prostatectomy may be taken as an illustration of these statements. In those frequent disorders of advancing years depending upon prostatic enlargement, physicians have, until recently, been content to resort to such palliation as the skilful use of the catheter, or the exhibition of drugs, could afford. Now, however, several operative procedures are already clamoring for professional recognition. The most recent measure of this kind is suprapubic prostatectomy, the more general employment of which was advocated by Mr. McGill, at a recent meeting of the London Clinical Society. The author related three cases in which the operation had been successfully performed (*The British Medical Journal*, November 19, 1887).

The operation itself consists in opening the bladder above the pubes in the usual manner, and removing with scissors and forceps that portion of an enlarged prostate which prevents the outflow of urine.

Case I. had suffered from urinary symptoms for seven years, and had not been able to pass urine without a catheter for seven months. Six calculi, weighing one hundred and seventy-four grains, and a portion of prostate as large as a walnut, were removed by suprapubic incision. The patient made a speedy recovery, and did not require the use of a catheter.

Case II.—Symptoms of prostatic enlargement for two years; acute symptoms for a fortnight, fetid urine, and frequent micturition. He was treated for three weeks by ordinary methods, without benefit. The middle lobe of the prostate, the size of a bean, was removed, with immediate benefit. He left the hospital on the twenty-seventh day, with the wound healed, and passing water without difficulty.

Case III.—Prostatic symptoms for six years; acute symptoms of more or less severity for three years. On admission into the hospital he was found to be extremely ill. He vomited all his food, had constant diarrhœa, and passed putrid urine, which deposited one-third of its bulk of pus. On opening the bladder, the ureters were felt to be much dilated. The projecting portion, the enlarged prostate, was removed. He made a quick and satisfactory recovery, and was able to micturate without difficulty.

According to McGill, the benefits derived from the operation were of two kinds: First, acute symptoms were relieved by the drainage of the bladder; and, secondly, the cause of these symptoms was removed by excision of a portion of the enlarged prostate. As yet the operation had only been practised in acute and urgent cases, but it was not improbable that in the future it might be resorted to before any acute symptoms supervened.

Of course, these cases are not sufficient to justify generalizations, and a much wider experience is necessary to teach us whether this new departure constitutes a real advance, or should be regarded merely as an innovation. Possibly it will yet appear that the principal route is, after all, safer than the suprapubic method of attacking the prostate.

THE MEDICO-LEGAL ASPECT OF PROHIBITION.

To anyone who reads the signs of the times, it must be evident that the next social question to be decided is that of intemperance. In the political world we hear less, it is true, about it than about the tariff, but the latter is a purely political issue. The thinking men of the country are divided upon it. The temperance question, however, though it may have to be settled by political measures, is not, strictly speaking, a political, but rather a social, matter. It appeals to every home, even to every individual.

In some of our States the matter has been brought directly home to individual communities. In our own State the first guns are now being fired. We do not know how long it may be before public sentiment will crystallize upon some plan of operation. One of our exchanges, the *California Journal*, contains a well-written article, in which the writer thus forcibly puts his case: "The proposition is this: Has a man a right to be a drunkard? . . . Has a man the right to have children to inherit his weakness; has he the right to transmit such tendencies to the unborn?" The belief is expressed that we shall soon consider drunkenness, inebriety, dipsomania, or whatever names we may give to excessive drinking, as a disease, just as we now regard insanity. Society claims and exercises the right to protect itself against the latter, and shuts the victim up in a proper place. It will in a similar way come to recognize its right and duty with reference to the victim of intemperance. He will be treated, in other words, as if he were insane.

This is rather advanced doctrine, and yet, as is suggested, the trend of thought in these days is all that way. The view taken is a medium one between the philanthropic and the legal. The former would regard all vice and crime as the result of inherited tendencies, and, to a great extent, excusable. The latter places drunkenness in the category of crimes brought about by the person himself, and therefore deserving of punishment. Public sentiment is not entirely in favor of either of these views. Some strongly denounce every victim of strong drink, have no sympathy for him, and would treat him as a lawbreaker. A very few recognize the fact of inherited tendencies, and occasionally their compassion assumes rather a maudlin type.

Prohibition, at least the open manufacture and unrestricted sale of liquors, will undoubtedly come in time, but we shall get to it by degrees. In the meantime certain temporary measures may have to be adopted, all looking toward the great end. Practical attempts are even now being made to solve the problem. It would be an easy solution of certain aggravated phases of it to apply the same medico-legal principle to inebriety as to insanity. It is true that drunkards are now shut up, but it is in prison, and the confinement is regarded as a punishment for an offence, and not as a means for preventing a mentally unsound person from preying upon the community or begetting children, who, when conceived in drunkenness, "have a tendency to crime and moral irresponsibility." It may be said that we could not provide accommodations enough. In reply, it can be safely alleged that there will simply be a transfer from prison to asylum. It is a well-known fact that drunkenness is the exciting cause of most capital crimes, and if intemperate men are confined early enough, much crime would thereby be prevented.

THE MEDICAL FUTURE OF THE NEGRO RACE.

A QUARTER of a century ago it was supposed that the negro problem had been completely worked out. The emancipation proclamation was regarded as a sort of Magna Charta for those just relieved from slavery. Twenty-five years have taught the politicians that their work has by no means ended, and these years have brought to the consideration of the medical profession many questions of a medical import just as interesting, and perhaps more important, as those of a strictly political nature.

Last spring, during the college-commencement season, we published an article on the exercises occurring at one of the Southern medical institutions exclusively for colored men. The evidences of progress there being made seemed to us gratifying, and we commented favorably upon them. We then expressed the idea that the medical history of the negro race could be worked out and tabulated only by those of the same race, and we see no reason to alter our opinion. The comparatively new departure seemed to us a distinct step forward.

This is a question which primarily concerns our Southern brethren, and yet is one of general interest. In view of the far-reaching consequences, we may say it is one of universal concern, if not to us, at least to the next generation. Change of environment always induces corresponding changes in the physique, mental traits, and morals of any man, or group, or even nation of men. No more striking example of this can be shown than in the changes which have occurred in the negroes since the war, to the results of which they may mostly be ascribed. For example, before the war they were much less susceptible to malarial influences than the whites, but now this difference has been nearly, if not quite, effaced. Concerning other diseases, a similar, if not quite so marked, state of affairs prevails.

We have been inclined to take, all along, an optimistic view of the matter. We observe that some of the Southern journals are not so hopeful. Their opinions deserve the most careful consideration. They are nearer the actual dangers, if such there be, than are we of the North. We cannot believe that their statements are colored by prejudice. They are too careful and scientific observers to be swayed by any such motive. One of the latest issues of *The American Practitioner and News* (Louisville, Ky.) contains some very pertinent remarks on the subject. It calls attention to the rapid birth-rate among the negroes for the decade ending in 1880, but does not believe that the next census will show for the succeeding ten years a similar ratio. Among the influences at work against a continued increase it notes the migration to cities, where the conditions of life are always unfavorable to rapid increase. It declares that the death rate of the blacks is very far above that of the whites, and that tubercular disease is decidedly on the increase. "City life," it says, "must be doubly unfavorable to the blacks. Few of them are skilled laborers, or have either the opportunities or disposition to become so. They must, therefore, when they labor at all, perform labor that commands the lowest wages, and, as a consequence, their living must be of the poorest character, and they must content themselves with the most inferior lodgings. Education does not and will not help them; it simply causes them to despise and neglect such employment as they can now get, while no avenue opens to them for better. This is notably the case with the females. It unfits them for the position of servants, and creates wants that cannot be satisfied by the earnings of the manual labor of any husband they can command. As a consequence, a very large proportion of them choose to earn what they can by lives of prostitution."

However, it looks at both sides of the question, and adds that "a certain proportion of the negro race have the stamina, the staying qualities, and the ambition to enable them to sustain themselves even alongside the average Anglo-Saxon, and as the centuries pass on, and the worthless classes that do so much to degrade the race are weeded out by disease, they will continue to come into a better position as useful and respected citizens." The question, therefore, resolves itself into this, Is there leaven enough to leaven the whole mass? We believe there is. Habits of life most definitely determine susceptibility or non-susceptibility to disease. Time must be allowed a race to subject itself to new conditions. The pendulum swings slowly, and perhaps has gone to an extreme, but it will adjust itself in time. Twenty-five years cannot undo the race peculiarities which were four hundred years in moulding. With us, the negro problem can never be what it is in the South, even from a strictly medical point of view. But we believe that another quarter of a century will show a physical progress of the negro population commensurate with the material.

PROGRESS IN MEDICAL EDUCATION IN THE UNITED STATES.

The report of the Illinois State Board of Health for 1887, of which we have recently received a summary, contains, as usual, some interesting facts.

With regard to medical colleges, there have been since 1886 two new regular schools established, while two eclectic schools have lapsed into innocuous desuetude.

As to medical students, it appears that since 1882–83 there has been a gradual decrease in the number of homœopaths from 1,204 to 1,070, while the students in regular schools, though fewer in number during 1884, 1885, and 1886, were in 1887 in excess of the numbers in any previous year, being 10,137, as against 10,075 in 1881–82. The decrease of irregular graduates in New York State has been from 113 in 1881–82, to 73 in 1886–87.

The standard of medical education shows continued signs of improvement. The report shows that there are now 114 colleges which exact an educational requirement of intending matriculates, as against 45 formerly—there being no change in this respect from the previous year; that 43 colleges now exact attendance upon three or more courses of lectures, as against 22 formerly—being a gain of two over 1886—and 57 others make provision for a three or four years' graded course; that hygiene is now taught in 114, and medical jurisprudence in 112, colleges, as against 42 and 61, respectively, prior to 1883. There is an increase in the average of lecture-terms from 23.5 weeks to 24.9 weeks during this period, and 114 colleges now have terms of five months or over, and 63 have terms of six months or over, as compared with 101 and 42, respectively. There is only one medical college that has a course less than twenty weeks, the Medical College of Georgia.

The effect of a higher standard of qualifications for graduation is further shown in the diminishing percentage of graduates to the total number of students. In 1882–83, out of every 1,000 matriculates 322 were graduated, taking both the United States and Canada and all schools of practice into the account. In 1886–87 only 294 out of every 1,000 matriculates were graduated. In the United States alone, in 1882–83, out of every 1,000 matriculates 331 were graduated, while in 1886–87 only 305 out of every 1,000 matriculates were graduated.

REGULAR MEDICINE AND THE MIND-CURE.

The Rev. Heber Newton, in a recent lecture on the mind-cure, gives the medical profession some rather superfluous advice. This is what he says:

"The 'ism' [of Christian science] is one among the many signs of the inevitable reaction from the ultra-materialism of our age of physical science. It gives us the clue to the interpretation of the miracles of Christ in the higher naturalism which seems to us a supernaturalism. Such a man must have been a walking battery of electricity. Our medical faculty, if wise, will not attempt to sneer down a curative force which they have always theoretically admitted, but which they have practically neglected. Rather will they correct the defective methods of a too purely physical science by the supplementary methods of mental science. Let them absorb what is good in this heresy, and thus they will best refute it. Let them enter in their pharmacopœia the tonics of thought and feeling. Let them administer mental and moral stimulants scientifically, as those who really believe that an idea may be the most potent of drugs."

This is all very well, and it has been said over and over again for a good many years. Very few physicians fail to learn early in their career the curative power of hope. But conscientious physicians cannot do what

Christian "scientists" do, give promise of cure to persons whom they know positively can never recover. Their faith-curing powers are limited by their honesty and their knowledge; and this must always be the case. Quacks, who are probably ignorant, and certainly dishonest, can use these powers of faith to an unlimited success. And this explains, as everyone knows, why the quack sometimes succeeds for a time with a case in which regular medicine has failed. But, on the whole, it is better for the world and society that truth, wisdom, and knowledge be our guides. And so rational medicine repudiates faith-cures as pernicious in the methods, and eventually harmful in their influence.

THE TEMPERATURE OF OUR FOOD AND DRINKS.

Of all nations the American is most in the habit of taking his food and drink at a temperature as remote as possible from that of the body. Ice-water drinking is a national habit, and ice-cream is a national dish, predilection for which runs through all classes of society, and becomes a binding force in social, and, we might add, scientific and religious gatherings. Americans should, therefore, take an interest in the experimental researches on the temperature of our food and drink made by certain foreign savants whose names are, as is usual, hyperplasic with consonants just in proportion to the rigidity of their science and the seriousness of their inquiries.

The temperature of our food and drinks was treated of by Von Späth and Kostjurin a year ago (*Münchener Medic. Wochenschr.*, 1886, p. 533), and more recently by Uffelmann, of Rostock (*Ibid.*, 1887, p. 999).

Professor Uffelmann reviews the work of his predecessors, and draws his conclusions partly from this, and partly from his own experiments. They bear first upon the temperature of ingesta in health, and the rules laid down are:

1. That, in general, a temperature of food and drink which approaches that of the blood is most healthful. For nurslings such temperature is essential.

2. For quenching the thirst, the best temperature is from 50° F. to 68° F. The favorite American temperature is, as is well known, 32° F., and an issue is raised at once between Professor Uffelmann and the American nation.

3. The ingestion of very hot or very cold food or drink in health has a damaging effect, which is increased just in proportion to the rapidity with which the hot or cold substance is taken. Hence the gulping down of ice-water or hot coffee, etc., means eventually, according to the light we are quoting, a mere ventral damnation. If a person takes a drink for the purpose of warming himself, as in cold weather, he can accomplish this by having the drink at a temperature of 116° to 120° F.

4. The use of very hot and cold substances, following or alternating, is injurious to the teeth. But the taking of cold water lessens the injurious action of extremely hot substances upon the stomach.

5. Ingestion of cold food and drinks lessens the bodily temperature, whether it be normal or febrile.

6. Cold fluids lessen the hyperirritability of the stomach.

Cold ingesta raise the tone of the stomach, increase peristalsis, and promote movement of the bowels. Cold food and drinks increase the tendency to cough, according to Uffelmann, by causing reflexly a congestion of the bronchial vessels. Hence, persons with bronchial disease ought not to indulge in cold drinks. It is, however, a common custom to give persons who suffer from pulmonary hemorrhage ice to swallow; and, according to the view stated, this would be an injurious practice.

Hot food and drinks stimulate the stomach more than cold. But after repeated use they lessen the tonus of the digestive tract, and cause congestion and dyspepsia. This condition has been observed after the so-called hot-water cure. Hot drinks tend to lessen bronchial irritation, and this is one cause, possibly, of the success in some cases of the hot-water treatment of consumption.

News of the Week.

Dr. B. Farquhar Curtis has been appointed Attending Surgeon to the St. Luke's Hospital, vice Dr. George A. Peters, resigned. We congratulate Dr. Curtis on this well-deserved honor.

The One-term Service in the New York Hospital.—The Governors of the New York Hospital at their last meeting voted against the one-term service. This action creates one vacancy in the medical, and one in the surgical, staff of the hospital, which will shortly be filled. Several candidates have already been named.

Dr. Albert Strang, aged forty-five, who lived at Yorktown, Westchester County, was brought to Bellevue Hospital, last week, suffering from dementia. He died at the hospital later from pneumonia. Dr. Strang was graduated from the Bellevue Hospital Medical College in 1867, and for two years subsequent was house surgeon at Bellevue Hospital.

The Latest Remedies for Sea-sickness are antipyrin in doses of gr. xxx. to gr. xlv. (Dupuy), and resorcin in doses of gr. xij. to gr. xxij. (J. Andeer).

Dr. H. Augustus Wilson has been elected Professor of General and Orthopedic Surgery in the Philadelphia Polyclinic and College for Graduates in Medicine.

New Insane Asylum at Ogdensburg.—The New York Assembly has passed a bill appropriating $328,700 for the new State insane asylum at Ogdensburg.

The Receipts of the Health Officer of this Port for 1886 were $51,298, and the disbursements $21,332.14. The figures for 1887 were about the same.

"Who shall decide when doctors disagree," was originally said of casuists, not of medical men.

Benzoate of Soda in Uræmia.—Starting from Cohnheim's theory of uræmia, and from the fact that benzoate of soda inhibits the formation of urea within the system, Dr. A. S. Partzevsky, of the Basmannaia Infirmary for Laborers, in Moscow, administered benzoate of soda (*Meditzinskoiè Obozreniè*, No. 5, 1887, p. 508) (*British Medical Journal*) in ten cases of uræmia, in seven of which the patients were suffering from parenchymatous, and in three from interstitial, nephritis. The drug was given every hour, in daily doses varying between one and two drachms. It was given either in a solution or in wafers, in capsules, and, where the internal administration was impossible, in enemata. Nine patients recovered, one died. Analysis of the cases has led Dr. Partzevsky to the conclusion that benzoate of soda cuts short uræmic attacks, the convulsive phenomena gradually disappearing and giving place to a deep sleep. The latter, in "a majority of cases, terminates by passing into full consciousness." Given on the first appearance of symptoms (headache, sickness, dilatation of pupils), the salt may prevent any further development of the fit. Albuminuria mostly disappears altogether. While this drug may be useful in uræmia, it is safe to say that any therapeutic procedure based on the theory that uræmia is caused by deficient excretion of urea will not prove successful.

A FIRE IN THE HOSPITAL FOR THE RUPTURED AND CRIPPLED.—On Sunday evening last, a fire occurred in this hospital, jeopardizing the lives of all the young crippled inmates. By the timely assistance of the medical staff the fire was soon controlled, and all the patients safely removed to an adjoining hotel. The damage to the building was very slight.

A SHOCKING ACCIDENT AT ROOSEVELT HOSPITAL.—A patient upon whom a trivial operation had been performed on Wednesday last, was taken to the elevator to be transferred to his ward. The orderly in charge not making sure that the elevator was in place, slid the stretcher containing the patient down the shaft, a distance of twenty-five feet. Death resulted a few hours afterward. The patient was recovering from etherization at the time the accident occurred.

MADE TO TESTIFY AGAINST A DEAD CRIMINAL.—Dr. Stewart, of Detroit, was compelled by the Court to state when, where, and for what he had treated a dead criminal. The prosecuting attorney was peremptory in demanding an answer from the witness. He said that the law did not recognize medical ethics to the extent of concealment of crime, and Dr. Stewart was bound to tell when, where, and for what he attended the dead man; but if the man were alive he need not tell what the man said if what he said would criminate him; but the man being dead, it was the doctor's duty to aid the cause of justice by telling all that passed between himself and the burglar. While there might be no objection to stating when and where a patient was treated, no physician should be compelled to testify as to what passed between the patient and himself, even after the patient was dead. Dr. Stewart's protest was eminently proper.

THE TINCTURE OF NUX VOMICA TRITURATES, each containing one minim, have proved very useful in the treatment of obstinate constipation, rapidly cleaning the furred tongue, and producing a copious action of the bowels. The tablets are also useful in dyspepsia and in the vomiting of pregnancy.—*Murrell.*

THE QUEEN'S WOMEN'S JUBILEE OFFERING, or its surplus, is to be devoted to the establishment of an institution for promoting the education and maintenance of nurses for the sick poor in their homes. The work is to be done in connection with St. Katherine's Hospital, an institution founded in 1148. We have not a queen, or a jubilee in this country, but a similar work to that indicated above has been inaugurated in this city.

THE LATE DR. WESLEY M. CARPENTER.—The Committee appointed by the New York Pathological Society to draw up resolutions upon the death of the late Secretary, Dr. Wesley M. Carpenter, presented the following, which was unanimously approved.

Whereas, it has pleased an overruling Providence to remove suddenly our honored Secretary, Dr. Wesley M. Carpenter; therefore be it

Resolved, That this Society has lost in him not only one of its most honored and gifted members, but an officer whose long, conscientious, and skilled services in its behalf have been largely and gratefully appreciated, not only by the members, but by readers of its Transactions everywhere;

Resolved, That his faithfulness and rare excellence in the performance of his responsible duties have been, and ever shall be, examples worthy of emulation by his sorrowing survivors. He taught emphatically that the best incentives for good work are a high sense of honor and a pure love of science;

Resolved, That in the death of Dr. Carpenter the members of this Society have lost a personal director and friend whose watchful care, sound judgment, and facile pen were ever ready in their behalf, and whose strict fairness and unusual correctness in reporting and guiding the proceedings of this body were never questioned;

Resolved, That while working modestly, earnestly, and successfully for the best interests of this Society, he was unconsciously, but surely, making for himself an enduring reputation as an accurate, accomplished, and classical medical writer. He not only spoke through and for others with a terseness and force which made his reports models of their kind, but often for himself with an originality and perspicuity which added greatly to the value of our records.

Resolved, That we also tender to his household and kinship our sincere sympathy for the loss of one who was taken from them and from us in the fullest tide of his extended usefulness, and join sorrowfully, though scarcely yet resignedly, with them in forced submission to the inevitable decree which comes sooner or later to all of us, but which came seemingly too early to him.

GEORGE F. SHRADY, M.D.,
JOHN C. PETERS, M.D.,
JOHN H. HINTON, M.D.,
Committee.

WALTER MENDELSON, M.D., *Secretary.*

THE CRAZE FOR ANTISEPTICS, says *The Medical Press*, still continues, though in a modified form; physicians and surgeons are still found going round with soap-flakes of various medications, showing that certain fashions die slowly. Among the most recent of these protective soaps is one containing three per cent. of biniodide of mercury, the present fashionable antiseptic. Gentlemen who still believe that medicine may be followed as a mechanical occupation, in which the scrubbing-brush, with malodorous drugs, replaces brains and experience, will find much comfort in the knowledge that, as quickly as one panacea dies out or becomes disgraced, the ingenuity of the chemist produces another, and exclaims, in the words of Hood's pedler, "The last new patent, nothing comes nigh it."

Resolutions of Thanks for Drs. G. A. Peters and Newton M. Shaffer.—At a meeting of the Board of Managers of St. Luke's Hospital, New York, held January 30, 1888, the following resolutions were adopted:

Whereas, On the 23d of December, 1887, this Board received the resignation of Dr. George A. Peters as Attending Surgeon, and at the same meeting appointed him Consulting Surgeon; and

Whereas, Dr. Peters was a member of the Medical Staff of this Hospital at its first organization, March 1, 1859, and has already served our patients for over twenty years as Attending Surgeon, and for over eight years as Consulting Surgeon; therefore,

Resolved, That in accepting the resignation of Dr. George A. Peters, this Board desire to place on record their grateful appreciation of his long and faithful service, which has left a deep impress on the professional work of this Hospital and has contributed largely to the reputation this Hospital has won for skilful and conservative surgery. The vast increase in the surgical work of this institution, as this Board believe, in no small degree is due, not only to the fact that our Hospital Staff have kept abreast of all well-ascertained improvements in method, but because a zeal for surgical achievement has always been held back from rash and venturesome experimenting by the restraint imposed by a Christian belief in the sacredness of the human body as the temple of an immortal spirit, and by a high sense of responsibility toward those helpless sufferers who submit themselves trustingly to our physicians' and surgeons' skill.

Resolved, That this Board hereby order that these resolutions be entered in full on the minutes of this meeting; that a copy of them shall be suitably engrossed and sent to Dr. Peters, and that they be published in The Medical Record.

Whereas, On the 23d of December, 1887, this Board received the resignation of Dr. Newton M. Shaffer as Orthopedic Surgeon of this Hospital, and at the same meeting appointed him to a new office, then created, that of Consulting Orthopedic Surgeon; and

Whereas, Dr. Shaffer has served this Hospital continuously for over fifteen years, having been provisionally appointed as Orthopedic Surgeon in May, 1872, and his appointment being confirmed with the unanimous approval of the Medical Staff and of the Board of Managers, May 26, 1873; and

Whereas, The method of treatment used in the New York Orthopedic Dispensary and in St. Luke's Hospital by Dr. Shaffer has now become nearly universally recognized among scientific men as the most successful mode of treatment of spinal and joint diseases, and now results in diminishing very largely the mortality from a class of diseases which were formerly regarded as practically incurable; therefore,

Resolved, That in accepting the resignation of Dr. Shaffer as Orthopedic Surgeon, with the duties of a continuous service; in his appointment as Consulting Orthopedic Surgeon, to make weekly advisory visits; and in the appointment as his successor, as Attending Orthopedic Surgeon, of Dr. John Ridlon, who has been trained for the position under his tutorship, this Board desire to express their high appreciation of the valuable services Dr. Shaffer has rendered in the wards of this institution to suffering humanity, and of the achievements his skill, fidelity, and patience have won for orthopedic surgery.

Resolved, That this Board hereby order that these resolutions be entered in full on the minutes of this meeting; that a copy of them shall be suitably engrossed and sent to Dr. Shaffer, and that they be published in The Medical Record.

(Attest,) Geo. Macculloch Miller,
Secretary.

New York Ophthalmological Society.—At the Annual Meeting of the New York Ophthalmological Society, the following officers were elected for the year: *President,* J. D. Rushmore, M.D.; *Vice-President,* W. Oliver Moore, M.D.; *Secretary,* W. S. Dennett, M.D.

"The Physiology of a Rogue" is the curious title of a paper to be read by a legal gentleman at the next meeting of the Society of State Medicine and Medical Jurisprudence, to be held at the Academy of Medicine, February 9th.

Orange Mountain, N. J., Medical Society.—The following were elected officers of the Orange Mountain Medical Society, at the Annual Meeting on January 27th: *President,* Dr. George Bayles, Orange; *Vice-President,* Dr. W. H. White, Bloomfield; *Secretary,* Dr. T. W. Harvey, Orange; *Treasurer,* Dr. T. R. Chambers, East Orange.

Dr. George A. Crosby, one of the most prominent physicians in New Hampshire, died at Manchester, on January 29th, of congestion of the brain, after a two weeks' illness. Dr. Crosby was born in Lowell, Mass., in 1831, and came from a race of distinguished physicians. He was graduated at Dartmouth in 1852. Dr. Crosby had been President of the New Hampshire Medical Society, and was a member of the Manchester Board of Health at the time of his death.

Dr. James E. King, one of the oldest physicians in Buffalo, N. Y., died recently, aged sixty-five.

A Doctor's Epitaph.—Dr. Benjamin Eddy Colting, after a professional experience of over half a century, says, in a recent address (*Boston Medical and Surgical Journal*): "If, perchance, a professional epitaph be ever sought for—to indicate a life-aim, and to conform more nearly to truth than most such tributes to the dead—let it be: '*He cured the sick without drugs.*'" Dr. Gray, the homœopath, *per contra,* once said that the epitaph on his tombstone should be "Antimony."

The Medical Society of the State of New York will commence its sessions on Tuesday of next week, at Albany. Delegates from this city are reminded that reduced rates of fare can be obtained by application to Dr. Clarence C. Rice, Secretary of the New York delegation.

A dispute has lately arisen in Paris between M. Zola and M. Sarcey over the question whether asses can vomit. Asses cannot, under ordinary circumstances, vomit. But they are not given a fair chance. Let the poor animals have read to them some of M. Zola's washtub realism, or, say one of his chapters on obstetrics, small-pox, or delirium tremens. Then observe the emesis.

Reports of Societies.

THE PRACTITIONERS' SOCIETY.

Stated Meeting, January 6, 1888.

DR. GEORGE L. PEABODY, PRESIDENT *pro tem.*

DR. BEVERLEY ROBINSON reported

TWO CASES OF HYPERTROPHY OF ADENOID TISSUE IN THE EPIGLOTTIDEAN FOSSA (TONSIL OF THE TONGUE).

In Case I. enlarged tracheal glands (?) gave signs due to pressure of the first portion of the respiratory tract. These signs were at first thought to be suspicious as regards tubercular deposit at the apex of the right lung. Careful examination of the sputa under the microscope, after staining, not revealing any bacilli, and the patient's general health having notably improved, led to the belief that phthisis was not present. During the treatment of the case, by means of chromic acid applied locally with a McCoy's applicator, excessive dyspnœa occurred. The patient's death appearing imminent, Dr. Robinson introduced one of O'Dwyer's tubes, which was rejected after a few moments, during a severe paroxysm of cough. Owing to paralysis of the right vocal cord, ineffectual attempts were made by Dr. Robinson to introduce a larger O'Dwyer's tube, on each occasion the tube being arrested apparently by impact with the fixed cord. These manœuvres, though ineffectual, afforded some relief to the patient's breathing. Within a short time she began to spit up pus abundantly, which was continued during forty-eight hours, and was accompanied and followed by great improvement of respiration. It was presumable that the passage of O'Dwyer's tube had caused an abscess of the peritracheal glands to open into the trachea, and by the relief thus obtained took away much of the dangerous pressure on the trachea. The patient was examined by several members of the Society, who recognized the enlarged mass at the base of tongue, and the paralyzed right vocal cord. Despite these conditions, however, the patient now breathes quietly, and is only conscious of difficulty of respiration when she exerts herself. The prolonged harsh inspiration and expiration can still be heard at the apex of the right lung, but with less intensity than formerly. The sounds of the voice are perhaps slightly hoarse, but certainly not to such a degree that one could diagnose the laryngeal paralysis without the aid of the laryngeal mirror.

CASE II.—A young lady, single, a teacher, came to my office this morning, and at my request wrote me out the following brief history, which I shall read to you precisely in her words:

"Until within the past four years my throat was perfectly strong, and, save occasional hoarseness, due to cold, I never had any trouble with it. I read aloud and sang without discomfort or fatigue for two or more hours at a time.

"The summer of 1884 I first began to feel a slight effort in singing; this increased, and the sound died away, or rather slipped back, in my throat. I was not very strong at the time, and attributed my weakness of voice to that fact. In the early autumn of the same year I took a severe cold, and coughed for several weeks; my throat was painful. I was very hoarse, and at times could not speak above a breath.

"When my cold left me, and I tried to talk much, and read aloud, I found my throat very weak, and often a dull ache would come. My singing voice was utterly gone, I could not make a sound. I took tonics, gargles, etc., and after some time I found I could sound the middle notes, but even this was an effort and I tried no more.

"Since then, more than three years ago, my voice has continued weak. I am unable to talk or read aloud for any length of time without fatigue. If very tired or nervously excited, my voice dies away; and on two occasions, December 10, 1887, being the last, my voice has entirely left me.

"I am twenty-six years of age.

"C. G. H."

In the case I have just reported, the hypertrophy of the adenoid tissue at the base of the tongue was very similar in amount and general appearance to that of the first case. There was, however, no accompanying condition of limited laryngeal paralysis, and it is evident, therefore, that if the peritracheal glands be enlarged, they at least do not compress to a notable degree either the recurrent nerve or the trunk of the vagus itself.

Cases similar to those I have described are infrequently met with. In fact, in my own experience, they are the only cases that I have ever recognized. Possibly I have seen such cases previously, but if so, they have passed unremarked. In my reading, my attention was first directed to the existence of this hypertrophic condition at the base of the tongue by an article in THE MEDICAL RECORD, November 8, 1884, by Dr. H. Holbrook Curtis. Dr. Curtis regards the condition as being occasioned by a wrong vocal method, and as not uncommon among professional singers in whom the voice is improperly used in speaking, and especially in singing. Before Dr. Curtis, I find, on reference to my authorities, others had remarked this peculiar hypertrophy of the lingual tonsil, and had described different symptoms connected with it. Since Dr. Curtis' article, Stoerk, Rice, McBride, Gleitsmann, etc., have written interesting communications in regard to this subject. At the end of Dr. Gleitsmann's article in THE MEDICAL RECORD of December 17, 1887, the literature of the matter, up to date, except Dr. McBride's article,[1] may be found.

So far as I know, no case at all similar to my first case has hitherto been recorded. As a matter of additional interest, I would say that my first case was examined by Mr. Lennox Browne, of London, and Dr. George M. Lefferts, of New York, who agreed substantially with me in my opinion of it. My second case was seen by Dr. H. H. Curtis.

DR. A. A. SMITH read a paper entitled

CLINICAL OBSERVATIONS ON DILATATION OF THE STOMACH [see p. 120].

DR. ROBINSON, referring to the matter of diet in this disorder, said that in his experience he found that food or drink which seemed least likely to be beneficial on physiological grounds sometimes proved to be the best. He cited the case of a patient who lived for a long time on *pâté de foie gras*; and another case in which brown stout and lager beer relieved nausea and vomiting after the usual remedial measures failed.

DR. ANDREW H. SMITH said that it was sometimes very hard to diagnosticate an enlargement of the stomach. In his experience auscultatory percussion furnished the most help.

A plan had been suggested of passing a tube into the stomach, with a rubber balloon at the end, which was then inflated. This had not practically worked very well. In treatment, washing out the stomach had done more than anything else; but in bad cases the chances of recovering the tone of the stomach were very small. Non-fermentative food should, of course, be given.

He had thought of employing

RECTAL ALIMENTATION

for a long period of time.

DR. DANA referred to the fact that the stomach may suffer from attacks of acute dilatation, just as the heart and other hollow viscera do.

He cited the case of an anæmic woman suffering from spinal irritation, who had "crises" of intense neuralgic pains, accompanied with enormous dilatation of the stomach, the attacks lasting for several days. In these cases there was, apparently, a vaso-motor paresis of other abdominal viscera, as shown by the copious discharges of pale urine.

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[1] Edinburgh Medical Journal, September, 1887.

Dr. Kinnicutt said that the acute dilatation referred to by Dr. Dana had been described by several writers on diseases of the stomach. His experience did not coincide with Dr. Smith's as to the comparatively rare existence of dilatation of the stomach. He believed that, in varying degrees, it was of frequent occurrence. A diagnosis of gastrectasia, when present, was certainly very desirable, but without a diagnosis of its probable cause we should oftener fail than succeed in attempts to relieve it. Dilatation of the stomach, aside from its production by pyloric obstruction, had its origin in retardation of digestion, through which more or less food was constantly present in the stomach. The causes of such retardation were to be found (*a*) in excessive gastric secretion; (*b*) in diminished secretion; (*c*) in abnormal fermentation; (*d*) in impaired muscular powers of the stomach-walls. Lavage was indicated in gastrectasia due to any of these causes; but it must be supplemented by other treatment. Riegel's investigations, of the past several years, afforded, it seemed to him, the only scientific basis for such supplementary therapeutics. Riegel's therapeutics were based almost wholly upon chemical examination of the secretion of the stomach. His method consisted in giving a "test meal" of mixed food, and in withdrawing the contents of the stomach, undilated, six hours later, by means of a stomach-tube. The stomach should be empty at the expiration of this time, and therefore the withdrawal of portions of undigested food after this interval would indicate a retardation of digestion. The filtrate is then submitted to a chemical examination, and its digestive power is also artificially tested. Riegel had found, in various diseases of the stomach, the following conditions:

1. An apparently normal secretion.
2. A diminution in, or an absence of, free hydrochloric acid, with an abundance of organic acids and an absence of peptic strength.
3. The presence of hydrochloric acid, with a large amount of organic acids.
4. An excessive amount of hydrochloric acid. The appropriate treatment of these varying conditions of the gastric secretion must be instituted, as they severally existed.

Dr. Kinnicutt's comparatively limited experience wholly coincided with Riegel's, Ewald's, and Gerhardt's, as to the absence of free hydrochloric acid in cases of cancer of the stomach. Its constant *presence* in large amount, he believed, *positively* contraindicated the presence of cancer. He thought that the color-tests, when carefully used, might be considered as reliable in determining the presence or absence of free hydrochloric acid.

Dr. Peabody said that one method of assisting in diagnosis was to determine the time which substances remain when taken into the stomach. In dilatation food naturally did not pass out of the stomach so rapidly as in normal states. This point could be easily determined by causing the patient to swallow a medicinal dose of salol. This drug is not soluble in any but an alkaline medium. As soon as it reaches the duodenum it splits up, becomes dissolved and absorbed, and salicylic acid soon appears in the urine, in which it can be recognized in the usual way. Ordinarily the reaction can be obtained within fifteen minutes after swallowing the salol. If it is delayed an hour it shows that the stomach does not discharge its contents so rapidly as usual.

Dr. A. A. Smith had tried this test in one case with satisfactory results. But as to the length of time in which a substance may stay in the stomach of the healthy, he thought there were great variations. He knew of a case in which a patient took quinine pills daily for six successive days. On the sixth day she vomited twenty-three of them. She had had no evidence of gastric disturbance. Riegel cited a case in which a patient vomited cherry-stones twelve months after they were swallowed.

Dr. Smith agreed with Dr. Robinson as to the uncertainty in attempting to formulate diets.

As to auscultatory percussion in the diagnosis of dilated stomach and abdominal growths, he had been disappointed with it. It was a much more satisfactory method in thoracic than in abdominal disorders. He had used rectal alimentation entirely in a case, for five weeks, with success. He referred to cases in which he made patients swallow large quantities of water (two to three pints) for purposes of diagnosis.

Dr. Kinnicutt thought it would be rather difficult sometimes to make patients drink that amount of water. He had filled the stomach by means of a siphon tube. Patients rarely objected to its use after a first trial.

Dr. J. West Roosevelt thought that in spite of the high authority for the use of the tests for the presence of hydrochloric acid in the stomach, it was a very difficult thing to do, especially when inorganic acids are present in the stomach. The tests by color are very unreliable, especially for quantitative work.

Dr. Kinnicutt said that it was not claimed that the test was quantitative. He thought they furnished valuable evidence as to whether the hydrochloric or organic acids were present or absent. They were based on high chemical authority, and have been employed thousands of times.

Dr. A. H. Smith asked at what time in the period of cancerous diseases this change takes place.

Dr. Kinnicutt said that in the beginning the acids were simply diminished, but later on the free hydrochloric acid entirely disappeared. In four or five cases in which he had applied this test the acid was absent.

Dr. Ball suggested that the fact of this acid being present in early stages of cancer, when diagnosis was most difficult, was rather against its usefulness.

Dr. Kinnicutt said that the acid was sometimes absent in cases of gastric catarrh, also when bile is in the stomach, and in certain cases of anæmia, but the strong point was that its *presence* excludes the existence of cancer.

Darwin as a Medical Student.—The late Mr. Charles Darwin belonged to a race of physicians, and in 1825 he was sent to Edinburgh to study medicine. The two sessions spent there were to him "intolerably dull," because the instruction was by didactic lectures. Dr. William Osler, writing of this subject in the *Canada Medical and Surgical Journal*, says that Darwin speaks of Dr. Munroe's lectures on human anatomy as exciting disgust, and adds "it has proved one of the greatest evils of my life that I was not taught dissecting, for I should soon have got over my disgust; and the practice would have been invaluable for all my future work." Evidently his lack of interest was due in great part to absence of practical instruction, for during the summer, in his father's office, he took the greatest pleasure in the study of cases, and at one time had at least a dozen patients. He seems to have had an instinctive horror at the sight of blood, a trait derived from his father, who, curiously enough for a practitioner in those days, "could scarcely endure to see a person bled."

Scheele's Test for Abdominal Aneurism.—To the signs and tests given by Dr. Philips we add that suggested by Scheele in the *Berliner Klin. Wochenschrift* of July and August, 1878. This consists in making firm simultaneous compression of both femoral arteries for a few seconds. If there be aneurism patients will immediately complain of pain in and around the tumor. Otherwise it will give only ordinary discomfort.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, January 11, 1888.

T. Mitchell Prudden, M.D., President, in the Chair.

The President referred to the great and irreparable loss which the Society had met with in the death of its Secretary, Dr. Wesley M. Carpenter. Dr. Carpenter had been ill for some time, but with his characteristic fortitude he had kept his ailments largely to himself. Probably the last work that he had done had been for this Society. He attended a meeting of the Board of Trustees, at the house of Dr. John C. Peters, on the evening before his death, and although apparently not feeling at all well on his return home, he had carefully written out the minutes of the Board meeting before retiring. This was not the time to express the Society's appreciation of Dr. Carpenter's work or its admiration of his character. The duties and tasks which his hands had dropped must now be taken up and carried forward as best they could.

Dr. G. C. Freeborn was then elected Secretary *pro tempore.*

Dr. J. S. Thacher, from the Committee on Microscopy, reported that the abdominal tumor presented by Dr. Lewis H. Sayre, on behalf of a candidate, December 9, 1887, showed a structure consisting of fibrous connective tissue, which was, in a few small spots, rich in small round cells. It should therefore probably be classed as a fibroma.

Dr. Ira Van Gieson presented a specimen of

MULTIPLE TUMORS FROM A DOG.

There was a brownish-white, dense nodule, about half an inch in diameter, just above the left external canthus, composed of loose fibrillar connective tissue, with numerous pigmented connective-tissue cells. Some of the mesenteric glands were enlarged, and contained soft white nodules consisting of closed, thin-walled blood-vessels surrounded by clusters of cuboidal and polygonal cells, which in places were swollen and filled with vacuoles. The anatomical diagnosis was: Pigmented fibroma of the brow; angio-sarcoma of the mesenteric glands.

Dr. Hodenpyl presented a specimen of

VERRUCOUS ENDOCARDITIS WITH ASSOCIATED LESIONS,

removed from the body of a woman forty years of age. The patient had extensive general anasarca. The pericardial sac contained four ounces of clear serum. The heart weighed five hundred grammes. There was dilatation with hypertrophy of the left ventricle. The aortic valve was much thickened and in places eroded, and some vegetations were seen on the free surface of the valve. The mitral valve was thickened and stenosed, and very rigid. There was a slight degree of calcareous degeneration in the aorta.

The left lung was enlarged and consolidated in its upper two-thirds, and on section presented a brownish-red color. The liver, which was not shown, was cirrhotic. The kidneys were enlarged and hard. The spleen was enlarged and hardened, and in one portion showed a white infarction. No bacterial examination of the heart-vegetations had been made.

The President said that not many cases of this kind had been shown to the Society of late, the specimens having been mostly of the ulcerative variety.

The President referred to a report of fourteen cases of endocarditis, seen in Vienna, in which an

EXAMINATION FOR BACTERIA

had been made. Micro-organisms had been found in twelve of these cases. These were all instances of ulcerative endocarditis, but the two cases in which no bacteria were found were examples of simple vegetative endocarditis. It would seem, from the results of medical research at the present time, that bacteria are not apt to be present in cases of simple verrucous endocarditis. The bacteria most commonly found were the streptococcus pyogenes and the staphylococcus pyogenes aureus. In some cases, in which pneumonia was present, Weichselbaum had found the pneumococcus. One or two other varieties of bacteria had also been found. He further suggested the advisability of injecting the valves in these cases. The heart-valves were not vascular, except at their bases. In vegetative endocarditis, however, the valves had been found to be vascular, but the vessels were very minute and their presence could be demonstrated only by careful injection.

Dr. Northrup recalled the fact that the President had examined a case of ulcerative endocarditis in a child last summer, and had found bacteria present.

The President said that the micro-organisms found in this case were slender bacilli. The specimen had been kept in Müller's fluid for some time during the warm weather, and he feared that possibly this fact might account for the presence of the bacilli, which may have worked their way into the large thrombus on the valves. There had, however, been two or three apparently similar cases reported in which this possible source of error had not been present.

Dr. E. C. Wendt had never heard of a case in which bacilli had been found in this form of endocarditis. He thought it was well always to bear in mind the necessity for quick work in these examinations, as mistakes might readily occur through the intrusion of bacteria from the air.

Dr J. West Roosevelt presented a specimen of

PYO-PNEUMOTHORAX DEPENDENT UPON PHTHISIS.

The specimen was removed from the body of a young man who died in Bellevue Hospital. He had suffered from the ordinary symptoms of phthisis for eight months before his death. He gave no history of sudden pain in the chest, or of shock such as usually follows perforation of the lung. The points of interest were the rather peculiar physical signs and the curious lesion. Two days before his death the patient had tympanitic resonance over the lower part of the right chest, with amphoric breathing and voice, metallic tinkle, and a marked succussion sound. To the bottom of the chest, behind, bubbling and subcrepitant râles were plainly audible. The autopsy showed, in the left lung, numerous discrete yellow nodules, the size of a pea.

Between the base of the left lung, the diaphragm, and the costal pleura was a cavity lined with a shreddy, whitish pellicle, and containing about one and a half pint of bad-smelling pus. The abscess-cavity extended upward behind the lung as a narrow channel, alongside the vertebræ, to within three inches of the apex of the lung. This channel passed between the layers of adherent pleura. At the upper part there was a space about two inches square, which was composed of pulmonary tissue, which was not covered with the pellicle. The lung-tissue was eroded and had a pitted appearance, and at this point there was communication with one of the bronchi. The eroded pulmonary tissue looked very like an old tubercular cavity.

The speaker called attention to the fact that, although the cavity contained considerable pus, it gave tympanitic resonance to the very bottom, and also beneath the fluid-level subcrepitant râles were audible. He had heard the

SUBCREPITANT RÂLES BENEATH THE FLUID-LEVEL

in several cases of pleurisy with effusion, and in one case, where the chest was full to the top, these râles were audible to the very bottom. How such sounds were produced was not clear to him. The tympanitic resonance heard seemed to have been caused by the cavity, and it was probable that, even when percussion was made over the fluid, the tympanitic sound from the air above it masked the dulness.

Another point of interest was the question whether the pyo-pneumothorax had been produced by the rupture of a cavity within the lung, or whether an empyema had first occurred, and had then burrowed up behind the lung and perforated it. This point he was unable to decide.

DR. NORTHRUP asked what explanation the speaker had to offer for absence of dulness at the base of the lung.

DR. ROOSEVELT replied that he saw no other explanation than that the fluid in the pleural cavity and the solidified lung offered a good conducting medium through which the resonance from some dilated bronchi was transmitted. A somewhat similar effect was noticed when a portion of the intestine was known to be filled with fluid, yet a tympanic resonance was transmitted through it.

DR. J. C. PETERS called attention to Skoda's work, in which an attempt was made to explain these acoustic puzzles.

The Society then went into executive session.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE ANTI-VACCINATION MOVEMENT—A NEW SUGGESTION—MR. REGINALD HARRISON ON URINE FEVER AND ITS CAUSE—PROPHYLACTICS—A MEDICAL CLUB—REPORT OF THE COMMITTEE ON THE DISPOSAL OF THE WOMEN'S JUBILEE OFFERING—THE REFLEX INHIBITORY ACTION OF CUCAINE—CUCAINE IN URETHRAL SURGERY—TEMPORARY LIGATURE OF CAROTID ARTERY—SUCCESSFUL REMOVAL OF FOREIGN BODY FROM LEFT BRONCHUS—THE DISCUSSION ON HOMŒOPATHY—A MEDICO-LEGAL CASE.

LONDON, January 9, 1888.

WITH all our efforts, the anti-vaccination movement in England is far from dead, but, on the contrary, rather on the increase. There are, it is true, Acts of Parliament rendering compulsory the vaccination of every child within three months of its birth. Penalties are imposed for non-compliance with the law and steps taken to make it known by making it a part of the duty of every registrar of births to hand to every person registering a birth a paper containing full instructions and the name and address of the nearest public vaccinator, who will perform the operation free of charge. All this sounds very satisfactory; but what is to be done in such towns as Leicester, where the bulk of the population, and nearly all the municipal officers, are opposed to vaccination? If fines be imposed, they cannot be recovered, and it is impossible to imprison the majority of the inhabitants, especially when the authorities with whom rests the duty of carrying out the law are active sympathizers with those who break it. In such districts, therefore, the law as to vaccination practically remains a dead letter, and is likely so to remain until a terrible epidemic of variola awakens the inhabitants. In this dilemma, various expedients have been proposed. I referred some time since to a suggestion made by Sir Joseph Hooker, that vaccination might be shorn of much of its terrors to fond mothers by reverting to Dr. Rigby's plan of making only one puncture instead of several. This, however, was promptly decried in the medical press. Another proposition, recently made by Dr. Bond, Medical Officer of Health for the Gloucestershire Combined Sanitary District, does not seem likely to meet with any more favorable reception from the profession. Dr. Bond proposes to extend the age within which vaccination must be performed from three months to two years, and he believes that few parents would object to the performance of the operation on children who had attained to nearly two years of age. The obvious objection to the plan is that the younger children would be left unprotected, and this point has been promptly pointed out by another medical officer of health writing to *The Times* on the subject in response to Dr. Bond's letter, which appeared in that journal. Another difficulty, and one recognized by Dr. Bond himself, is that children would pass out of sight and remain unvaccinated, a difficulty which he endeavors to minimize by the remark that they will come under observation again when they go to school. *The Lancet* seizes on this point and remarks that if attendance at school is to insure vaccination of the children it will add yet another to the objections entertained by many parents to the education of their children. I am afraid we must resume our old ground and trust to moral suasion and the spread of education. Our temperance friends have gained far more victories by these agents than by their hitherto unsuccessful endeavors to alter the liquor laws.

In his first Lettsomian Lecture, delivered before the Medical Society of London, Mr. Reginald Harrison, of Liverpool, dealt at some length with what he prefers to term "urine fever." He discards the phrase "urethral fever," as it seems to connect the symptoms produced rather with the precise part than with the process. Mr. Harrison said he believed that wherever throughout the urinary tract urine could be placed under certain conditions all the phenomena usually associated with the term "urethral fever" could be produced. He especially insisted on the action of urine in recent wounds, a matter which he tested a short time since in a series of cases in which he performed internal urethrotomy. In all of them, after performing the operation for the relief of stricture, he also performed median cystotomy and passed in a full-sized tube so as to drain the bladder without allowing any urine to flow over the wound. *Urine fever only occurred where this drainage was imperfect.* In cases where it followed catheterism, the lecturer said he thought it was due to urinary absorption at places where the epithelial lining of the urethra had been rubbed off. Where futile attempts at catheterism had been followed by supra-pubic aspiration and the urine thus drawn off without coming in contact with the injured part of the urethra, he had never known rigors or fever follow, even where the amount of injury to the urethra had been considerable. It seemed probable, he remarked, that the development of urine fever was really due to the absorption of some poisonous compound derived either from urine, or tissue, or wound-decomposition, or from all combined. An important practical point was pointed out, viz., that these toxic changes in connection with the urine might be prevented. Certain antiseptic precautions considerably reduced both the frequency and the severity of the attacks. This was chiefly noticeable in connection with the use of solutions of corrosive sublimate for irrigating the wound, as well as for retaining within the bladder. Also, certain drugs, by their elimination in some degree through the urine, seemed to render the latter less capable of exciting a specific fever where it remained in contact with a recent wound. This was most marked in the case of quinine. Boracic acid was also a prophylactic.

A medical club in London is not very promising. Some years ago we had one which held forward its characters pretty prominently by taking the name of "The Medical Club." It, however, finally expired after dragging out a precarious existence for some years. I have for some months been cognizant that an attempt was being made to start another, but the formal announcement of the "Galen Club" has only been made within the past week. I am not very sanguine as to its success. Many doctors are not club men at all—they have not the leisure. Those who frequent clubs at all would scarcely care to go to one where they would merely meet "brother chips." The Galen Club, however, is to have a social as well as a medical element, for it is to be conducted on such liberal lines as to admit, not only medical students, but actually laymen who entertain friendly feelings toward the profession. I have also heard it stated that a room is to be set apart for members with "Bohemian proclivities," whatever that phrase may be taken to imply.

The report of the committee appointed by the Queen to consider the best means of so applying the Women's Jubilee Offering as to carry out Her Majesty's wishes on the subject, viz., to apply it for the benefit of nurses and nursing institutions, has just appeared. It is signed by the Duke of Westminster, Sir Rutherford Alcock, and Sir James Paget. The report suggests that an institution be founded for promoting the education and maintenance of nurses for the sick poor in their own homes; that it have its chief centre in London, but that similar central institutions should be located in Edinburgh and Dublin, and that with these institutions should be affiliated others carrying out the objects of the foundation. They further suggest that the official work of the institution should be done in connection with St. Katherine's Hospital, an institution dating from 1148, and having assigned to it in 1351 (by the charter granted by Queen Philippa) the visitation of the sick and poor among its chief purposes.

Two papers of unusual interest were read at the last meeting of the Medical Society of London. The first was by Mr. Harry Fenwick, and dealt with the reflex inhibitory action of cucaine as observed by him in an extensive series of cases. He had found that pain in various parts of the body was temporarily relieved by the injection into the urethra of a twenty per cent. solution of cucaine. This reflex inhibitory action was demonstrated on some decapitated frogs. The leg of such a frog, when placed in a weak acid solution, was rapidly jerked out in some fraction of a second; but, if cucaine had been previously injected into the bladder or rectum, the leg was not withdrawn until after twenty or thirty seconds. This inhibitory power was only observed when weak acid solutions were used. Cucaine possessed no power of delaying the reflex excitability consequent upon stronger acid solutions. From his observations Mr. Fenwick concluded that slight nerve-irritations of any part (as neuralgias) could be relieved by injection into the urethra of a few drops of a ten or twenty per cent. solution of cucaine. Severe nerve-irritations, however, as in the pain of cancer, inflammation, etc., could not be thus relieved. Mr. Fenwick had also found these observations of use in making a diagnosis. Thus, if the urethral injection of cucaine immediately relieved a renal pain, he concluded the latter to be due to some slight irritation, as from gravel, etc. If the renal pain were unrelieved, he diagnosed more serious disorder. Illustrative cases were mentioned. Mr. Fenwick then drew attention to the value of cucaine in preventing (by its inhibitory action on the renal circulation) damage to an unhealthy kidney during operations upon the bladder and urethra. M. Tuffier's experiments upon renal congestion produced by distending the bladder or injuring its walls were mentioned, and it was suggested that this flooding of the kidney, with its consequences, might be wholly or partially prevented by the use of cucaine.

Mr. Treves then read a paper on a method of controlling hemorrhage from branches of the carotid arteries. It was usual to ligature the carotid trunk, but much might be done by applying temporary pressure to the main trunk. As this could not be done with success in the neck, he proposed to isolate the common carotid, pass a catgut loop round it, and constrict the latter so as to check the passage of blood. He had employed this method in several cases, and only one proved fatal; in all, the lumen of the artery was ultimately restored.

At the Medical and Chirurgical Society, on Tuesday last, a paper was read (of which Dr. Cheadle and Mr. Thomas Smith were joint authors) giving the history of a case in which a metal pencil-cap passed down the left bronchus. Eleven days after the accident there was marked dulness over the whole of the left side of the chest, an almost total absence of respiratory murmur on the same side (air entering only over a limited portion of the upper part in front), and great retraction of the left side of the chest. There was then no dyspnœa, as at first, but frequent short cough. The isthmus of the thyroid having been divided, tracheotomy was performed, the edges of the tracheal wound attached to the edges of the skin-wound so as to keep the trachea widely open, and the pencil-cap readily extracted by means of forceps. With the exception of a short pyrexial attack, the patient made a rapid and uninterrupted recovery. The lung slowly expanded, and fourteen days after the operation the only abnormal physical signs were slight deficiency of respiratory murmur and of expansion on the left side. By a reference to statistics it was shown that the entrance of a foreign body into the left bronchus is by no means so infrequent (compared with the right) as is commonly believed.

The recent dispute at the Queen's Jubilee Hospital has brought forward somewhat prominently before the public the question of homœopathy and its merits. Pending the appeal to the law courts, some of the parties concerned have rushed into print in the lay press, and for some days past the columns of the *Times* have teemed with lengthy letters on the subject. Most of the writers seem to have entirely lost sight of the question at issue, and have chiefly concerned themselves with defending or denouncing homœopathic principles. The latter seem to have changed somewhat since they were last taken out to be aired in public, for (oh, shade of Hahnemann!) we are informed that acceptance of the principle of infinitesimal doses is not now an integral part of the creed. The recent controversy, also, seems to have gained another friend—if not an adherent—to the homœopathic cause, for Mr. Millican, while professing himself an allopath, goes out of his way and takes considerable pains to show that, although he is not convinced of their truth, there is nothing absurd or impossible in the principle of *similia similibus curantur*, or even in that of infinitesimals. The homœopaths have appealed with considerable glee to the considerable number of homœopathic remedies to be found enumerated in the therapeutic works of Drs. Ringer and Brunton. No one supposes that either of the latter gentlemen is a homœopath, but it must be confessed that neither of them has come forward and given any satisfactory answer to the charge of having "annexed" homœopathic drugs and methods of treatment. Both of them have wisely refrained from joining in the mill in the present case. The chief attacks on the principles of homœopathy have been made by two gentlemen sheltering themselves behind the initials of "R. B. C." and "I. C. B.," respectively. The former says he appends only his initials because he does not wish for an advertisement, but as, at the same time, he remarks that those of his own profession will sufficiently recognize him by those initials, it is evident this is rather a vainglorious pretence. So far as his professional brethren are concerned, the advertisement is as great as if he signed his name, for but few will fail to recognize "R. B. C." as Mr. R. Brudenell Carter, who, by signing only his initials, escapes (with the public) the odium of persecuting the homœopaths. It is equally transparent that "I. C. B." is Dr. J. C. Bucknill. I am afraid both these gentlemen, although delivering some telling blows on their adversaries, have somewhat damaged their own cause by their warmth, and would recommend them to be satisfied, for the future, with cultivating their own special fields of ophthalmology and alienism, respectively. Lord Grimthorpe is by far the most vigorous of those who defend the homœopathic camp, although he is but a layman, and by no means so judicial and impartial in his advocacy as his forensic training would lead one to expect. Although he takes a hopelessly wrong view, it is most enjoyable to read his letters. He asserts that the "allopaths" have no scientific principles, as his party has, and quotes from various medical writers to support this conclusion. Your readers can imagine his deductions. In his last letter he winds up by praising bone-setters and referring to the incredulity displayed toward Harvey by his contemporaries.

A case of some interest to the profession was finally decided in the law courts a couple of days since. A lady who had been attended in her confinement by two medical men had had an operation performed upon her. Suppuration followed, and it was contended that the special precautions necessary in the after-treatment of the case had not been observed. The patient and her husband brought an action for malpraxis against the doctors. The latter defended the action, and obtained a verdict in their favor, the jury, however, adding, as a rider to their verdict, "that there was not sufficient medical supervision of the nurse." The counsel for the plaintiffs said this came to a verdict for them, but the judge thought otherwise, and entered the verdict for the defendants. Against this judgment the plaintiff and her husband now appealed, on the ground that the finding of the jury as to the want of proper directions to the nurse really amounted to a verdict of negligence against the medical men. The Court, however, said there was no ground for the present application, and dismissed it. Mr. Baron Huddleston said it was plain that the case now set up was not that originally set up, nor that for which the action was brought. The action was brought for alleged want of care in the defendants as to the confinement, and when the plaintiffs' case failed as to that they set up the uncleanliness of the nurse, which was her fault, not the doctors'. Mr. Justice Manisty concurred.

INSUFFICIENCIES OF THE OCULAR MUSCLES.

To the Editor of The Medical Record.

Sir: In your issue of January 21st Dr. Loring returns to his assault, reiterating his charges that there are no important problems yet to be explained respecting the insufficiencies of the ocular muscles; that the subject is well understood by the "ordinary student of ophthalmology," and that there is nothing new in what I have written in respect to it. I have shown in my reply to his former communication that the text-books in common use, and which fairly represent the status of the question, give but meagre space to this important branch of ophthalmology, and that they do, as I had stated, "practically ignore or barely mention" other insufficiencies than that of the internis. So notorious is this fact to everyone familiar with the subject of ophthalmology that the statement appeared trite, yet my critic now returns to the charge, arraying against the statement "the long and exhaustive articles" of Von Graefe, Alfred Graefe, Giraud Teulon, Woinow, Knapp, and others. We are now able to judge of the sources of authority for my critic's assumption that this subject has been fully dealt with, and I am prepared to assert that one who supposes that the writers cited above have treated this subject in an adequate manner is either ignorant of the works of these distinguished authorities, or blind to the merits of the subject itself. The writings of everyone of the authors cited fully sustain the statement that the literature of insufficiencies is inadequate, and, unless other authorities are found, it is clearly shown that prior to my own writings other insufficiencies than those of the interni had been either ignored or barely mentioned.

One could hardly select a better example of the absence of exact knowledge on this subject than the very case to which Dr. Loring points with pride as one of "insufficiency of the externi," on which he had operated twenty years before. This, according to his report, was a case in which there was homonymous diplopia of 30° at twenty feet, and diplopia even at eight inches, when the object was moved to either side of the median line.

Von Graefe, whose authority Dr. Loring appears to think good, says (*Archiv f. Oph.*, Bd. III., l., p. 177): "Strabismus signifies the inability to bring the axes of vision to intersect at a point of fixation lying in the common field of view." Dr. Loring's case, according to this authority, was one of marked strabismus, and was treated as thousands of cases of strabismus had been before it; but because the surgeon could not stand at a little distance from his patient and see one of the eyes squint under the nose, he supposed that he was dealing with a case in which "there was no actual strabismus"—a case of "insufficiency." It is this failure to comprehend the difference between strabismus and insufficiencies that leads certain ophthalmologists, who have heard of operations for strabismus sursumvergens, to suppose that there has been, during many years past, indefinite numbers of operations for "insufficiencies" of the superior or inferior recti. It is from men whose views are cloudy that the strongest opposition to innovations is to be expected, and yet these profess to see nothing really new in proposed advances, because they are incapable of comprehending the difference between the new and the old.

Dr. Loring accuses me of a want of originality, and brings evidence of the character of his case to sustain the charge. Whether my work has been original or not is of little consequence, and is certainly a question which will be settled by broader minds than that of one who reviews a scientific paper which he has not read; and it will not be decided by men unqualified to distinguish between a case of well-marked strabismus convergens and one of simple "insufficiency of the externi." But this subject of originality is a suggestive one. Is it so long ago that oculists in this country have forgotten the purchase of copies of a work on ophthalmoscopy which was supposed to contain something new, but in which, after turning over the pages of letter-press in disappointment, they found at the close a collection of colored lithographs which constituted the expensive element of the work, and which had been familiar to most of them during more than twenty years; and against this publication, of which, in the absence of an international law for the protection of authors, the rightful owners had no means of defending themselves? This part of our subject would bear considerable expansion did space permit.

Whether what I have written is new or old, it is pretty certain that no one who reads what I have written with intelligent attention will probe the nasal ducts of his patients month after month in the vain expectancy of curing the excessive lachrymation arising from hyperphoria. He will not treat his asthenopic patients indefinitely by local applications, while he fails to correct extreme grades of astigmatism and "insufficiencies." He will not attempt, in cases of strabismus sursumvergens, to correct the supposed "insufficiency of the interni" by tenotomy of the externi. A bright man who has read what I have written may make mistakes—even dull men sometimes do that—but he will not continue through months practices such as I have mentioned, which only a failure to understand essential principles could explain. Nor will such a one write up his case of strabismus as one of "insufficiency of the externi" in which there was no strabismus, nor will he quote such a case in after years as an example of the class to which it clearly does not belong.

Dr. Loring sees in the increased attention to the insufficiencies of the ocular muscles one of the saddest pages in American ophthalmology. The wail is the old wail which has been heard all down the ages, when the world has run away from some self-appointed custodian of the glory of his "illustrious predecessors," and who has taken alarm at every innovation, regarding it as a token of disrespect to their memory.

Dr. Loring asserts that years ago Von Graefe and others "divided the superior rectus for insufficiency of the inferior rectus." Will Dr. Loring point us to a single instance reported by Von Graefe, or any of those whom he has named, including himself, in which tenotomy of either the superior or inferior rectus was done in a case of non-strabismic insufficiency? Quite a number of well-informed oculists would be glad to see that report.

The doctor also longs to see the report of the Neurological Society upon these matters. Doubtless the Society will, in its own good time, furnish a report, and doubtless it will be interesting reading.

GEORGE T. STEVENS, M.D.

33 WEST THIRTY-THIRD STREET.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 22 to January 28, 1888.

BURTON, H. G., Captain and Assistant Surgeon. Granted leave of absence for one year on S. C. D., to take effect when able to travel. S. O. 19, A. G. O., January 24, 1888.

FISHER, W. W. R., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, on surgeon's certificate of disability. S. O. 4, Department of California, January 20, 1888.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 28, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	13	2
Scarlet fever	127	22
Cerebro-spinal meningitis	1	1
Measles	45	11
Diphtheria	151	53
Small-pox	4	0
Yellow fever	0	0
Cholera	0	0

A NORTH CAROLINA paper says that, from 1814 to 1820, it was as common to cut off a negro's leg as to give quinine is now. The custom arose from the fact that one doctor gained a great reputation from the amputation of a negro's leg. Jealous surgeons then took to cutting off negroes' legs for the slightest cause, as a sore heel, rheumatism, sprained ankle, or stumped toe.—*American Lancet.*

POLYMYOSITIS.—The muscular system is subject to fewer diseases than any other in the body, and is comparatively rarely the site of severe inflammation, even after injury. The observation, therefore, of a form of general myositis, probably of an infectious nature, is a point of considerable pathological interest. Inflammation of certain muscles and a peculiar form of hyaloid degeneration has been observed occasionally as a complication of typhoid fever, but acute and wide-spread myositis occurring as an independent disorder has only recently been recognized. Unverricht, who has given a description of the disease, attributes it to a specific infection, and states that the prominent symptoms are intense inflammatory swelling of the muscles, causing excruciating pain, and accompanied by extensive hemorrhagic extravasation, and by œdema, enlargement of the spleen, and fever. The disease first appears in the extensors of the limbs, and the inflammation is most intense there; but other muscles are also involved, death being due to asphyxia, due to the disease spreading to the muscles of the throat and chest, and so producing asphyxia. This "acute progressive polymyositis" has to be distinguished chiefly from trichinosis; the flexors, however, are earliest and most affected in trichinosis, and the local process was more intense and extensive.—*British Medical Journal.*

STRYCHNIA IN INSOMNIA.—Dr. T. Lauder Brunton finds small doses of strychnia very useful in neurasthenic insomnia.

"SICK HEADACHE," dependent on a bad condition of the stomach, will often disappear in half an hour under the influence of two grains of potassium iodide dissolved in water, and taken in divided doses at intervals of from three to five minutes.—*Dr. J. Aulde.*

QUININE, in doses of one-tenth of a grain, may be given to those who are unable, on account of idiosyncrasy, to take larger doses, and it will often be found that these small doses are sufficient.—*Dr. J. Aulde.*

RADICAL CURE OF HERNIA.—A long series of papers on the radical cure of hernia was read at the annual meeting at Dublin, by Dr. Mitchell Banks, Dr. Macewen, Mr. Arthur Barker, and others, which goes to prove that the method of free incision and exposure of the sac has, in the practice of most surgeons, superseded the subcutaneous method. These papers, together with their accompanying tables of cases, show the comparative safety and the general good results, so far as can be determined at present, of the more modern methods of procedure, but there is still much difference of opinion as to the treatment of the sac, and as to whether the canal and external ring should be closed by sutures or not. Dr. Banks, whose opinions on this subject demand every attention, holds, in opposition, we imagine, to many who have co-operated with him in this special work, that with regard to children operative procedures are very seldom required, and that no person should be subjected to operation who can wear a truss with comfort.—*British Medical Journal.*

CAUSE OF ANÆMIA.—Some light has recently been thrown on the causation of anæmia by the observation that certain forms are associated with intestinal parasites. Lichtheim, of Berne, in his address to the German Congress of Physicians, admitted that bothriocephalus latus has some share in the causation of some of the cases classed as pernicious anæmia; it is generally admitted that anchylostoma duodenale produces a severe form of anæmia; and it has recently been suggested by Erni, and also by Kynsey, that a certain proportion at least of the cases of beriberi were due to the presence of the same parasite, or of tricocephalus dispar. The view is fully confirmed by the effects of anthelmintic treatment. Sir Andrew Clark has advanced the opinion that the anæmia of young girls is due to fecal retention leading to reabsorption of ptomaines or other excrementitial products.—*British Medical Journal.*

THE FUTURE OF MEDICAL GRADUATES.—Of some one thousand graduates from collegiate institutions, seventy-five only make for themselves a name and prominence in their calling. About two hundred, having business qualifications, become rich by their practice, and by judicious investments. Four hundred abandon, in whole or part, their profession, for some more lucrative business, and the balance struggle with mediocre ability for a bare subsistence, and a wearying effort to keep up an appearance before the people.—*Pacific Record.*

The Late Dr. Adams C. Hoffman.—At the regular quarterly meeting of the District Medical Society for the County of Hudson, held in Jersey City, N. J., December 6, 1887, the following preamble and resolutions were unanimously adopted:

Whereas, It has pleased an All-wise Providence to remove our brother and co-worker, Dr. Adams C. Hoffman, from the scene of his earthly labors; therefore, be it

Resolved, That while we bow with humble submission to the will of the Most High, we feel more the loss of a sincere friend and a competent physician;

Resolved, That this Society tender its heartfelt sympathies to the relatives and friends of the deceased in this their sad affliction;

Resolved, That a copy of these resolutions be presented to the bereaved family, and that each of the city papers, and The Medical Record and the New York *Medical Journal*, be furnished a copy for publication.

William Perry Watson, M.D.,
I. N. Quimby, M.D.,
F. D. Gray,
Committee.

The Hypnotic Action of Antipyrin.—Dr. Edward Stubbert, of Bloomfield, N. J., writes: "Within the past few weeks I have noticed two or three articles in The Record, the authors of which refer to the hypnotic effects of antipyrin as something before unknown. In The Medical Record of May 21, 1887, page 579, is an article, over my signature, entitled "The Hypnotic Effects of Antipyrin." I believe that my paper is the first published upon the question, and if the different correspondents referred to will consult it they will learn that for some time I have used the drug as an hypnotic in the place of morphine."

Gonorrhœa and Sterility.—Dr. R. W. Smith, of Xenia, Ind., writes: "In a recent issue of The Medical Record I notice an article on 'Gonorrhœa and Sterility,' by Dr. Wm. Goodell, in which the writer says that he cannot recall a case where a woman bore a child after she had suffered from gonorrhœa. I do not claim to have had a very extensive experience in those matters, but I can recall a number of instances in which both parents were treated by me for gonorrhœa, and in which afterward the wife gave birth to healthy children, who have never manifested any signs of disease. Unless the disease has affected the ovaries there is certainly nothing to prevent conception."

Ricord's Religion.—Hon. Chas. Gayarre, in a most interesting address delivered before the N. O. Medical and Surgical Association, gives many amusing reminiscences of his acquaintance with European medical celebrities of many years ago. Mr. Gayarre has been an invalid, it appears, for somewhat over sixty years, but is still able to speak well of the Faculty. Among others, he formed a friendship for Ricord, and tells the following curious story of him: Ricord was a professed materialist, and rather delighted in asserting or arguing over his views. His immense *salons* were always full, from noon till six, of patients awaiting to see him. They were admitted in turn, and he was unapproachable during these hours except to suffering humanity. As a proof of his regard he had kindly exempted me from the rule. One day when I had something to communicate to him without delay, I called at the time I knew him to be engaged. "Pierre," I said to the servant who was in attendance, "carry my card to your master. I must have access to him without being seen by the crowd of invalids, who might complain of preference granted to me if I were admitted before those who preceded me here." He returned after a few minutes and said: "I will conduct you, according to the doctor's instructions, to his bed-chamber, which can be reached through a secret passage. There you will please to wait until I am permitted to take you to his office." Ricord, at the time, was a bachelor, and I believe has never married. What was my astonishment, when I entered a very large bedroom, of which the walls, from the high ceilings to the floor, were covered with none but magnificent oil paintings, representing sacred subjects. At the head of the bed was a sculptured oak *prie-dieu*, on which there was a superbly illustrated copy of the Gospels that was lying open. There was a red velvet cushion to kneel on at the foot of the *prie-dieu*, surmounted by a beautifully carved ivory Christ on a gilded cross. After a little while I was led to the presence of the medical philosopher, who habitually seemed to delight in being a cynical unbeliever. Guessing at what had passed in my mind, he said with a laugh, not unmixed, I thought, with some embarrassment of manner: "You are surprised, are you not?" "Certainly," I replied; "who would not? Faith, my first impression was that I had been introduced by mistake into the bed-chamber of the Archbishop of Paris." "Well, well, my friend," he said, in a half-jocose and half-serious tone, "I hear and see so many unclean things during the day that, on retiring at night, I like, before going to sleep, to refresh my eyes by looking round my room on holy objects."

Pemphigus Cured by Small-Pox.—Professor Schrötter, of Vienna, relates the following: A young woman, suffering from the chronic form of this disease, had been treated by Hebra, Neumann, and Kaposi for years with varying ill success. During a comparatively free interval, when she was well enough to be an out-patient, she was attacked with laryngeal dyspnœa, and Hebra sent her to Schrötter. The latter discovered pemphigus blebs on the larynx. Two months later she was quite recovered of her pemphigus, and has so continued up to this day. And why? asks the professor. Because she caught variola, and this destroyed the pemphigus.—*Birming. Med. Review.*

A Doctor who Doesn't like Medical Meetings.—The *Indianapolis Sentinel* quotes Dr. E. F. Hodges as follows: "I don't care much about attending medical meetings. Oftentimes they make me very weary, and I don't wonder that newspaper men dislike to report them. A physician may learn a great many things at these meetings, and also out of medical books, but good common-sense and a close observation of the various phases of the disease with which a doctor's patient is afflicted, goes a greater ways." The *Indianapolis Evening News*, next day, says: "Dr. Hodges has a big round head when he says it makes him weary to attend medical societies."

The Treatment of Diphtheria.—Dr. T. E. Hall, of Zanesboro', Minn., writes: "Many articles have appeared in the journals lately on diphtheria, and as I have had some little experience (thirteen years), allow me to say that I have used hyposulphite of soda and tannic acid, in combination, with very great benefit. What the chemical resultant of the combination is I do not know, but I do know that the results are excellent."

The Tincture of Hyoscyamus, in doses of from three to five drops, or one drop of the fluid extract, in combination with triticum repens, made up in the form of a hot tea, is an admirable remedy in cases of irritability of the bladder, with fugitive neuralgic pains about the abdomen and in the lumbar region.—*Dr. J. Aulde.*

A Case of Poisoning from the use of a dose of an ounce of oil of gaultheria is reported in the *Boston Medical and Surgical Journal*. A young woman took the oil for the purpose of inducing a miscarriage, and died some fifteen hours later with symptoms of narcosis and extreme irritation of the gastro-intestinal canal. Poisoning from this drug is rare, although it has been used to a considerable extent lately in the treatment of rheumatism.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 6. New York, February 11, 1888 Whole No. 901

Original Articles.

THE ANNIVERSARY ADDRESS BEFORE THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Delivered at Albany, February 7, 1888.

By ALFRED L. LOOMIS, M.D., President.

Gentlemen: I desire this evening to invite attention to the following problems, which are to-day engaging the attention of the profession, and for which it is asking solutions:

1. The relation of microbes to disease processes.
2. Inoculation as a means of modifying or preventing disease.
3. The causes of abnormal temperatures in disease.
4. The effects of antipyretics in the treatment of disease.

Every generation of medical workers have had their special theories and supposed discoveries, to test, to accept, or discard; but never before has the field of medical investigation been so extensive, the workers so many and able, and the methods of research so varied.

It may be interesting, as well as instructive, by way of introduction, to sketch briefly some of the methods of investigation which in different ages have held the profession, and compare them with the methods of to-day. Before instituting any comparison, however, it is but just to recognize that all knowledge is of slow growth, and that the law of development applies to mind as well as to matter; we condemn methods and means because they have been tried and found wanting, and not because of personal superiority of intellect. Nineteenth-century intellectuality must own its indebtedness to mistakes and failures which antedate the birth of Christ.

In every science results are reliable and valuable in direct ratio not only to the accuracy with which deductions are made from given data, but also to the methods of reasoning, the truthfulness of postulates, or supposed facts, and the recognition of all the relations which may exist among determined facts under varying conditions.

No one can deny to the father of medicine equal ability with himself, even while criticising and condemning many of his arguments, based upon well observed facts. He argued from but a few of the many correlated symptoms of any disease, in entire ignorance of all its primary pathological changes, and erected a system of medicine on the basis of his own observation. The earlier periods of medical history present themselves as curiosities, rather than times which we may fairly criticise or compare with our own; medical investigation so superficial could hardly lay claim to the name of method. With but little anatomical and no pathological knowledge, it is hardly to be wondered at that even the best minds were lost in the wildest forms of speculation.

We recognize most clearly that no one mind alone can advance medical knowledge but by an infinitesimal degree, and even this is the result of a mutual interchange of thought. In ages, then, when strong minds were few, and intercourse most limited, men must needs have been more than human to have accomplished more than the masters did. But ambition outran ability, for long before "ye men of Athens spent their days in hearing and telling some new thing," the same search for ultimate facts had been going on, and human minds, impatient of meagre results gained through the hard logic of facts, easily drifted into the limitless sea of theory, and quickly lost sight of the lard of truth and possibility. To speak more exactly, the deductions of theories from few and isolated facts, and the construction of entire systems of medicine upon a single and often unproved assumption, is characteristic of the earlier ages of medicine. By how much is the medical mind different to-day? Under greater restraints, by reason of sharper criticism, and with broader foundations, no such extensive speculative theories are offered for our consideration as mark the earlier history of medicine; but the same spirit remains as one of the heaviest clogs to the advancement of true medical knowledge.

When theoretical conclusions are put forth as established facts, and not as questions demanding experimental answers, then modern medicine is not only turning back to the darkness of earlier ages, but it is putting a stumbling-block for the feet of those who follow.

There is no better test of the scientific mind than its power in deciding, after any given demonstration, between legitimate corollary and unfounded inference.

In no direction, perhaps, has medicine made greater advances in the last quarter of a century than in this; give us facts not fancies—proofs, not propositions—is the demand of the medical mind of to-day; it is digested facts which nourish thought, not crude ones.

The empiricism of the Alexandrian school is perhaps the earliest system of medicine founded on a scientific basis, and offers the fairest points for comparison with the scientific empiricism of to-day. In this school anatomical and physiological investigations were recognized as essential to a thorough knowledge of disease. There was, however, a marked failure to recognize the necessity of determining the changes that were produced in organs and tissues by disease, and to connect morbid conditions with symptoms; histological pathology was an impossibility without instruments of greater precision, and even gross pathology received no attention. Such a failure to appreciate the evident results of pathological processes is the more remarkable in a school which did more than all others of ancient times to advance medical knowledge.

Under the shadows of the granite hills of New Hampshire, on the banks of the Connecticut, the last resting-place of one of the fathers of New England medicine is marked by a small white stone, having only this inscription, "The Disciple of no Man." It is not alone the description of that man, it is the key-note of modern medicine, and symbolizes one of the grandest changes which has ever revolutionized any science.

For nearly a thousand years the history of medicine may be traced by a few names. Schools were founded on men, not principles, until loyalty to one's master, the founder of a school, was stronger than loyalty to truth; and it was doubtless better both for medical science and the patient that the multitude were content to be led, and that between masters and pupils such relations should have existed. But that such a condition of affairs should have continued so long after the "period of letters" in Europe, is a cause for astonishment.

Even as late as the sixteenth century, Galen and Aristotle, and the Arabic authorities, were teachers of medicine throughout the civilized world.

When Ambrose Paré, defying the traditions of more than ten centuries, and the teachings of all authorities, took the bold step of tying an artery, he became the embodiment of that individuality and scientific scepticism which to-day are among the most striking characteristics of medical men—an individuality which thinks and decides for itself—a scepticism which doubts not for the sake of doubting, but because it has too often leaned on broken reeds, too often placed its trust in authority, only to find it like the apples of Sodom—a scepticism which demands proofs and counter-proofs, which scans faces, not men, and learns to recognize truth, whether offered from the wilds of the new world, or the literary storehouses of the old. As a legitimate result of this spirit there has been developed what is without question the greatest advance in methods ever made in medical science. It is the step which has made medicine truly scientific. From the crumbling ruins of abstruse theories and the wrecks of individual systems, overthrown by honest scepticism, comes the recognition of the fact that man is not an accident of undetermined forces—the one thing in all the grand scale, from worlds to worms, that is without plan or not subject to law—but rather the crowning glory of Infinite Wisdom, a machine of marvellous intricacy, yet subject to and obeying the laws of his being with the same certainty as the sun holds his attendant planets in their unchanging way. And what has been the result? The medical world has started afresh at the very rudiments of the science. It has taken its primer, and in the kindergarten of the laboratory it is seeking to know the laws of life and health, and the causes of disease. It has gone far beyond what antiquity ever dreamed. It has developed the empiricism of the Alexandrians, and curbed the philosophy of the Greek. It is seeking to unite scientific empiricism, with equally scientific theory, into one perfect whole; to have all theories based upon clearly determined facts, and to use such theories only as guides to the discovery of the next link in the chain which shall some day bind in eternal subjection the bacillus that walketh by day, and the coccus that rageth by night. When the medical history of the nineteenth century shall be written, it will be that of the laboratory, and the names which the twentieth century will honor are the names of those who have devoted their lives to establishing the unchanging laws of both health and disease which govern this infinitely complex machine, which Infinite Power has made in his own image.

Our first problem for discussion is, *the relation of microbes to disease-processes.*

In looking over the field of bacteriological research for the past ten years, one is struck by the continuous, painstaking investigation of a vast number of observers. Never before has there been so little theorizing with so much work, and the facts which have finally been accepted are such as have come to light only after a long series of carefully made and oft-repeated experiments. One investigator makes a statement; immediately, in a dozen different countries, and by hundreds of observers, his experiments are repeated, his statement of facts proved or disproved, and his conclusions accepted or discarded. The results which have been reached in so short a period prove the wisdom of Agassiz's principle, "That science suffers by every diversion of the energy of scientists which tends to substitute premature theorizing for continuous investigation."

It is not my purpose to consider the biology of the different varieties of bacteria, the conditions of their life, their susceptibility to be influenced by temperature, by the different media in which they grow, nor yet, in turn, how they act and react upon each other, and upon the substances which have nourished them. It must suffice merely to touch upon the practical questions presented by such studies. The life-history of some forms of bacteria have been very thoroughly worked out, but the majority have been as yet imperfectly studied. On account of their universality and their peculiar vital properties, the question which most interests us as practising physicians is, May not these microbes have the power of originating and controlling many of the morbid processes which take place in disease? When we consider the millions of microbes by which we are constantly surrounded; that the soil beneath us and the air around us are laden with them; that they enter the body in the very air we breathe, the food we eat, the water we drink, and yet their influence is baneful only under certain conditions; that it is even possible for men to live in an atmosphere and surroundings which are laden with the most pernicious forms of bacterial life, and yet be perfectly well—the question comes to us, Why is this? If this question is ever answered, it will not be until we have a fuller knowledge of the conditions of life and the inherent properties of even the most carefully studied varieties of bacterial life; nor until we are able to trace more fully the cause and manner of their disappearance after they have gained an entrance into the healthy organism which is able to resist their invasion. It may be regarded as demonstrated that when certain pathogenic microbes have gained entrance into the body and reached localities which afford certain conditions for their development they multiply and form colonies, but what these conditions are is not definitely determined. For example, if a mass containing different varieties of bacteria is introduced into an animal, some will find a suitable soil and multiply, others will die; while if a similiar mass is introduced into an animal of a different species, those bacteria which develop in the first animal will perish in the second. As the bacterial colonies enlarge or multiply they invade the surrounding tissue-cells, and in time produce degeneration and necrosis of the affected part. As a result of the disturbance of the circulation the walls of the blood-vessels are weakened and the microbes gain entrance to the blood-current. In a similar manner the lymphatics are invaded. If the blood or lymph offers conditions suitable for their growth they multiply rapidly, otherwise they perish. Their death is supposed by some to be due to the special action of the white corpuscles. Some bacteria flourish best in blood which is flowing, as the bacillus anthrax; others, as the tubercle bacillus, in blood at rest; and still others only multiply rapidly in the lymph, as the micrococcus of erysipelas. Conveyed by the blood or lymph the bacteria lodge in different organs, and there start secondary changes similar to those which have taken place at the primary seat of invasion; this is well illustrated in animals that have been inoculated with pure culture of tubercle. In this connection three questions naturally present themselves:

1. Are organisms present in all morbid processes?
2. Can they originate *de novo*, and is there a mutability of the bacteria?
3. And by far the most important question: Do microbes act as invariable and sole causes of disease, or are they the result of pathological processes instituted in their absence?

In answer to the first question, Are organisms present in all morbid processes? it may be stated that it is to-day claimed that specific micro-organisms have been demonstrated in the following diseases: Splenic fever, relapsing fever, erysipelas, tuberculosis, cholera, pneumonia, malarial fevers, small-pox, scarlet fever, measles, diphtheria, typhoid and typhus fevers, pyæmia, leprosy, acute rheumatism, ulcerative endocarditis, pyelitis, gonorrhœa, acute atrophy of the liver, and in a number of skin diseases, as herpes, sycosis, etc. And it is claimed that our inability to discover them in other diseases is no proof of their absence, for their minute size and peculiar reaction to staining agents render their demonstration very difficult, and as yet we have no general method by which we are able to recognize the spores of these organisms, which are known to be more resistant than the micro-organisms themselves. Again, our examinations may be made in the advanced stage of the disease processes, when all traces of bacteria may have disappeared, for it has been shown by experiments upon animals that by the time that tissue-changes occasioned by bacteria are complete, they themselves have disappeared. Not until our technique is more perfect can we say positively that bacteria may not be found in all diseases, especially infectious and contagious ones.

In answer to the question, Can bacteria originate *de novo*, and is there a mutability of the bacteria? it may be stated that no reliable evidence has as yet been deduced to show that microbes can originate spontaneously. The experiments of Lister and Pasteur prove almost conclusively that it is impossible for them to originate spontaneously. Koch, from his culture-experiments, concludes that one form of bacteria cannot change into another form, that micrococci can never become bacilli, nor can the innocuous varieties, by any change in the conditions of their life, become noxious. Although many observers, such as Nagel, Davine, and Buchues dispute this, still, at the present time, the weight of evidence is with Koch. There is no doubt that the properties possessed by different bacteria may be modified, increased, or diminished by changes in their external conditions; at one time they are more infectious than at another, but never do they acquire attributes differing from those possessed by the variety to which they belong. Even in bacteria there is a struggle for existence; the micrococci may be thrust aside by the bacilli.

Our third question is more difficult to answer than either of the others, viz., Are microbes the cause or effects of disease? If they can be proved to be the cause, then their presence is of the greatest importance; while if they are only the effect, our interest in them, from a medical stand-point, ceases. What, then, is the precise significance of their coexistence with diseased processes? The facts which seem to be established at the present time are as follows: Pasteur having proved by his vital theory that bacteria are the cause of all fermentation and putrefaction, students in, and believers of, the germ-theory of disease, noticing the close relation these fermentative and putrefactive processes bear to communicable diseases, reasoned by analogy that they likewise must be of bacterial origin. After carrying on a long series of experiments, such as inoculating animals with pure cultures of various species of bacteria, it was demonstrated that in some of the specific diseases bacteria are developed, and that the same micro-organism is always present in the same disease, and that these organisms could be transferred from animal to animal without changing their characteristic form—their specific physiological action—and without the presence, at any time, of any other form of bacteria. Therefore it was inferred that not only are these diseases of bacterial origin, but that each disease is developed only from its own micro-organism, recognizable under the microscope by its size and shape, its staining properties, peculiarities of growth in nutrient media, and, as has recently been demonstrated, by its chemical reaction. For example, during the past year Koch has shown that the tubular bacillus, the comma bacillus or cholera nostras, which is considered by many as identical with his comma bacillus of Asiatic cholera, can be differentiated from it, not by its size and shape, but by its reaction to nitric acid; for, by adding nitric acid to a growth of the cholera bacillus, a very characteristic red color is produced, while no reaction whatever is shown on the culture of the tubular bacillus. Thus advances are being made every day which lessen the elements of uncertainty. In this connection it must be noted that we do not as yet know why different animals behave so differently toward infectious agents; still less can we account for differences in their susceptibility, for an experimenter soon learns that there is a marked difference among the lower animals as to the degree and manner in which they are affected by microbes. One form will flourish in one species and not in another—rats are unaffected by the anthrax bacillus, while mice readily succumb to their invasions. Even among animals of the same species there is a marked difference of susceptibility to the infectious diseases, and most of the animals upon which experiments have been made are subject to but few of the diseases of man. The power of resisting inoculation is evidently far less in animals than in man; it is therefore reasoning from false premises to say that the action of microbes upon animals is the same as upon man.

While a reasonable conjecture may be reached regarding the bacterial origin of infectious diseases by our experiments upon animals, positive proof can be obtained only by studying the action of their microbes upon the human body. The only diseases in which a bacterial origin has been completely demonstrated in man are erysipelas, and splenic and relapsing fever. The proof that the tubercle bacillus is the cause of tuberculosis requires yet the crucial test of human inoculation. The explanation of the action of bacteria in disease, as given by Professor Zeigler, seems to me the most comprehensive and satisfactory which has yet been given. He says, "The factors which determine the invasion and the course of the development of bacteria within the human body are two: 1. The bacteria must be endowed with certain vital properties of a special kind. 2. There must be a certain predisposition to favor their development on the part of the system." For example, one with no phthisical predisposition, either inherited or acquired, may live in an atmosphere laden with tubercle bacilli and never develop phthisis; while one with strong phthisical predisposition, under the same conditions, furnishes a fit soil for the growth of the bacilli, and quickly succumbs to their invasion. This factor of predisposition is the important one in the problem. What it really consists in is as yet undetermined. Probably it is due to some alteration of the tissues. Often we can see what this alteration is, such as a local wound, a disturbance of the circulation, etc.; but in the majority of instances the anatomical basis of this change is an unknown quantity which is yet to be worked out. When found, then, the cycle of proof will be complete. The simple demonstration of the presence of the tubercle bacilli in phthisical processes and in the sputum is of great practical value in the early diagnosis of phthisis, but it does not determine the relationship that exists between the bacillus and the phthisical processes. We must not lose sight of the possibility that it is only after the physico-chemical constituents of the tissues have been morbidly altered, by a yet unknown agent, that the conditions are such as to allow of the growth and colonization of the different pathogenic microbes. If, in time, it shall be conclusively proved that microbes alone, or microbes plus some as yet unknown quantity, are the cause of disease processes, we can readily appreciate the great importance of the knowledge which is to-day being gained by bacteriological studies, and we may hope in the near future to be able to discover the microbes of each disease, and to destroy them, or render them harmless, and so combat early the development of many diseases that at present we are unable to control.

I will now pass to the consideration of our next problem, viz.: *Inoculation as a means of modifying or preventing disease.* This problem has been strongly brought before the profession by Pasteur's recent experiments in hydrophobia. The protection afforded by vaccination against small-pox, not only by granting immunity from the disease, but by modifying its severity when it is developed, brought first before the world the practical advantages of inoculation. The next great discovery in this direction was made by Pasteur, who found that by the prolonged culture of the anthrax bacillus, at a temperature of 42° or 43° C., and with exposure to the oxygen of the air, the virulence of the organisms decreased

Animals inoculated with the attenuated virus developed only a mild type of splenic fever, and after recovery were found to be incapable of again developing the disease, even when inoculated with virus of full strength. After repeated inoculations with attenuated virus, Pasteur found that inoculated sheep were quite unaffected by injections of a pure culture of the bacillus. A practical application of this discovery has since been made by agriculturists throughout Europe. Toussant, by cultivating the bacteria of chicken-cholera, found that each successive generation was less virulent than the preceding, and that this attenuated virus, when introduced into animals, produced a severe local lesion with but slight constitutional disturbance, and that after recovery the inoculated animals were exempt from the infection for a year or more, after which time a second inoculation was necessary. More recently, Koch has proved the immunity afforded by inoculation in another disease known as the septicæmia of mice. If a rabbit be inoculated with septicæmic blood, it will die within seventy hours; but if a weakened culture of the septicæmic bacteria be introduced into the tip of a rabbit's ear, the animal will only suffer from the local effects of the virus, and afterward will not be affected by repeated inoculations of the strongest culture. Koch also showed that such immunity could not be conferred by inoculation with attenuated virus in all infectious diseases; for instance, relapsing fever can be produced again and again in the same animals after inoculation. Experimenters, more recently, from these and other results obtained by inoculating animals with attenuated bacteria of different infectious diseases, have sought to furnish proof that similar inoculations in man would be followed by similar immunities.

The fact that individuals who have once passed through certain infectious diseases, or a mitigated form of them, are afterward not susceptible to the infection of these diseases, may be regarded as a strong evidence of the possibilities of such immunities being obtained by inoculation with the attenuated viruses of infectious diseases. While working in this line Pasteur brought forward the results of his inoculations against hydrophobia. Both his experiments and his results have aroused adverse criticism from those whose ignorance of the subject forbade any fair discussion of his methods or conclusions, as well as by those who presumably were competent to sit in judgment upon him; as a consequence the profession has been slow to accept his conclusions.

It would seem, however, that the report of the English Commission appointed by Parliament to investigate the subject, composed as it was of the best English observers, must at once put at rest all doubts. This report is all the more interesting and valuable because it is the first that has been made by impartial and competent authority upon Pasteur's work. The report of the Commission declares that it is certain that Pasteur has discovered a method of protection against hydrophobia comparable to that given by vaccination against smallpox; and in their opinion it is "difficult to overestimate the importance of the discovery;" and that while not every case which he has treated has escaped, yet a large proportion of cases have been absolutely cured. The report of such a commission will not only give to Pasteur's researches and experiments an authority which they have not before had, but it will also give an impetus to similar investigations in other directions, for a method of inoculation is presented by his experiments by which it may be possible to prevent other diseases in man. The diseases which up to the present time have been proved to be preventable by inoculation are vaccinia, variola, splenic fever, and, if we regard the report of the English Commission as conclusive, hydrophobia. All the explanations that have been given of the immunity afforded by inoculation are unsatisfactory, and at best only conjectural. It seems possible that a person who survives an infectious disease has in his struggle with it acquired the power of resisting such infection by some as yet unknown modification in the chemical constituents of his tissues, and that acquired immunity from inoculation is on the basis of the introduction of an infection in minute quantities until such a chemical change has been reached; but all such explanations are only suggestive. While it has been proved that inoculation is protective in a few diseases, it is reasonable to infer, in those diseases in which one attack is protective against a second, that preventive inoculation is possible, and it opens a wide field for investigation and experimentation.

The causes of abnormal temperature in disease is the third problem to which I invite attention. What is fever, is a question that still remains unanswered, and which is constantly pressing itself upon the clinical observer for solution. Few subjects have been more at the mercy of theorists, or been made more the sport of ingenious minds. In discussing it we are primarily led to a consideration of the animal heat of normal conditions. It is comparatively easy to reach reasonable and, indeed, demonstrable conclusions on the physiology of this subject up to a certain point. Beyond this we are confronted with difficulties which, with our present means, we are unable to solve with any approach to success or satisfaction. In regard to the causation of a certain amount of manifest energy in the form of heat, as exhibited in the body of animals, there appears to be no reasonable objection to the view that conditions which result in the manifestation of such energy outside the body shall exhibit similar calorific effects within the tissues. It is well established that foods exhibit their heat potential in the changes incident to the production of water and carbon dioxide, and these demonstrations of chemical force are true combustions, and yield stored heat just as certainly as when like changes occur apart from the living tissues.

In the light of present physiology it appears almost self-evident that the prominent factor of heat production exists in metabolism, and that metabolic processes consist in the liberation of heat stored in the food introduced into the body. The inadequacy of these changes alone to account for the maintenance of an equable temperature of the body during the extraordinary and varying conditions of man's environment also seems apparent.

Very early in the investigation of this subject one becomes conscious of the imperative necessity for the existence of some regulating mechanism. I must, however, say just here, that I have never been able to convince myself, from analogy or otherwise, of the necessity for a nervous mechanism which shall give rise to heat-production without corresponding chemical changes, either general or local. Such a theory, to my mind, calls for effects without a cause. I cannot, in other words, conceive of any reasonable evidence against the view that physical processes must be governed by the same laws, and be productive of the same results, in every instance and under all conditions.

This brings us squarely to the question, Is the hyperpyrexia of fever an extraordinary manifestation of animal heat, governed and controlled always by the same mechanisms, differing only in degree; or are the conditions other than those of simple pyrexia, requiring special mechanisms for its development? In the study of the literature of this subject we find that increased calorific manifestations, resulting from an exaggerated body-metabolism, was for a long period deemed a reasonable explanation of the temperature of fever. This view was based upon the fact that food and tissues represent a certain and definite potential; that in the metabolic processes this is exhibited as kinetic energy in the form of heat. Later, these changes were found to be under certain nervous control, and special mechanisms were demonstrated as regulating metabolism, without offering any objection to the combustion theory of animal heat and of fever as well. Within a comparatively recent period the theory has been advanced that pyrexia results from a disturbance of the normal equilibrium between the production and the dissipation of heat.

The views advanced by Maclagan and others on this subject are essentially as follows: First, that in the ordinary production of animal heat the influence of the nervous system is neither essential nor exhibited, even though the pyrexia be considerable. Second, that as soon as the disturbance induced by fever occurs, or the normal balance between heat-production and heat-dissipation is reached, nervous mechanisms are called into requisition, and hyperpyrexia results. Third, that the contagium of fever consumes the proteids designed for tissue-repair.

It has been pretty conclusively shown by the experiments of Dr. Wood that an inhibitory control—a check—is in constant supervision over ordinary heat-production, and he has located, with more or less definiteness, a cerebral heat-centre, the normal inhibitory action of which is reflexly withdrawn in fever, and the resulting increased metabolism is exhibited in increased temperature. Dr. Wood has performed many carefully conducted experiments on animals in the settlement of the question, "Does fever consist in an increase of heat-dissipation from the body, or in an increased heat-production?" It is difficult to understand just how the body can continue to dissipate heat for any prolonged period without a corresponding heat-production.

Thus far experimental physiology has proved an efficient help in determining the mechanism of fever; but all attempts to isolate the spirit which primarily actuates these mechanisms have left us groping for an agency which we have thus far found too subtle for recognition.

What causes the peripheral stimulus which Dr. Ordt and others believe is carried to the spinal thermogenetic centres, and there translated into influences which are transmitted to the tissues, to increase or diminish those transformations upon which depend the amount of heat produced? What is this morbific principle which so influences the cerebro-spinal centres of Brodie, Hetzig, Eulenburg, Landois, Wood, and others, as to inhibit their action on the heat-reservoirs of the tissues by increasing chemical metamorphosis? Such questions as these force us back to the original proposition, What is fever? One must plainly see the futility of attempts to answer this question until some more satisfactory definition can be given than that fever is an exhibition of phenomena or symptoms, of which high temperature is the most prominent. Fever is a something which we have not yet grasped, which produces those symptoms or *effects* which we have been accustomed to regard as its *cause*. Beyond this we actually know nothing, except that the result of its presence is manifested largely, at least, through the nervous apparatus; and knowing so little of its nature, its causes must be speculative. What is destined to come out of the work in the direction in which the medical world is now active, remains to be seen.

The establishment of a special nervous control over heat-production will unquestionably remain an important and leading idea in the physiology of pyrexia, at least. The disposition evinced by various observers, to regard the febrile conditions as produced by a specific cause—one entirely distinct and apart from normal phenomena—has not, as yet, modified in any very essential degree the views entertained by clinicians of the earlier part of the present century. Unsatisfactory and incapable as the chemical theory is in accounting for certain temperature-manifestations, it must remain the leading and influencing thought upon this subject until something essentially and radically different from that afforded by the results of present experimenters has been suggested.

We may sum up our knowledge on this subject as follows:

1. Chemical transformations produce definite results, whether occurring within the tissues or outside the body.
2. The body takes cognizance of the potential of food, and during certain changes, which are true combustions, a definite, unalterable value is exhibited as kinetic energy in the form of heat.
3. Muscular action is an insignificant factor in the establishment of animal heat, excepting as it excites metabolic energy.
4. The varying circumstances of man's environment necessitate some heat-regulating mechanism to preserve the conditions of homogenesis.
5. The evidence of the existence of a regulating mechanism, operating independently of chemical change, is insufficient.
6. There appears to be no reason for regarding the increased heat production of fever as requiring mechanisms other than those acting in normal rise in temperature.
7. While anatomical difficulties interfere with the complete isolation of such ganglia, the existence of two cerebral inhibiting heat-mechanisms has been fairly established; as much may be said of like spinal ganglia.
8. The production of heat in fever is in exact consonance with metabolism, and the chemical changes are under the control of the heat-mechanisms through the connection between the nervous and the vascular apparatus.
9. In the present state of our knowledge we can only theorize as to the identity of the material in the circulating media of the body which institutes the primary irritation in febrile conditions. That it is inconstant in composition or nature, there is abundant reason for believing. That it is microbic in every instance, I am unprepared to admit. We certainly must have a clearer idea of what fever is, before we accept or seek to explore the action of poisons or microbes in producing it. We are too prone to seek for the causes of phenomena before we have determined the precise nature of the phenomena themselves. It is evident that the bacterial pathology, which is dominating all the teachings and investigations of the present day, has, as yet, given us no clew to an explanation of the causes and phenomena of fever.

The length of time already occupied in this discussion will compel me to be brief in my consideration of our last problem, viz., *The effects of antipyretics in the treatment of disease.*

During the last decade, since the thermometer has become a part of the physician's *armamentarium*, antipyretics have taken a more prominent place in the treatment of disease than ever before, probably for the reason that by it we are able to more readily and accurately determine their effects upon the body-temperature. If we accept the view that high temperatures cause destructive metamorphosis of tissue—a view which, in some unaccountable way, has gained almost universal acceptance—the importance of reducing high body-temperatures in all diseases cannot be overestimated, and we are justified in resorting to the most powerful antipyretic agents to accomplish it. But there is very little, if any, evidence that a febrile temperature of 106° or 107° F. causes any serious injury to the body—certainly that no such dangerous destructive changes take place in the blood and solid organs as we have been led to suppose from the writings of Continental observers. I can find no clinical or experimental evidence to sustain the popular doctrine of Liebermeister and others, that the grave symptoms in fever—the symptoms that usually render a prognosis unfavorable—are referable to a high temperature-range. In fact, the evidences of the so-called parenchymatous changes, and of the grave febrile symptoms in acute infectious diseases, are as well marked, and as often present, in cases where the temperature-range at no time reaches 103° F. as in those cases which are attended by very high temperature. In a series of cases of typhoid fever of low temperature, often subnormal, which have come under my observation during the past year, in which the ratio of mortality was unusually high, I was surprised at the development of so many of those very grave symptoms which I have been accustomed to regard as due to the effects of high ranges of temperature; from these and similar observations in other acute diseases, I have come to the opinion that there is no necessary relationship between the other febrile symptoms and the temperature-range.

It is evident that we have passed through the period of enthusiasm in the antipyretic treatment of disease, and already prominent workers have come seriously to consider whether the dangers of hyperpyrexia have not been overestimated, and the question is being asked, May not the high temperature in disease, especially in infectious diseases, be a conservative process? From statements already made it is evident that elevation of temperature is far from being all that there is to fever.

A pertinent question for every practitioner of medicine to put to himself is, How much has he accomplished by the use of antipyretics in the arrest and safer conduct of disease, and are there no dangers attending their employment? Whatever answer may be given to these questions, I am convinced that the heroic use of antipyretic measures, which within the past few years has come into such general use—the one idea of the modern therapeutist being to reduce temperature at all hazards—has a side of danger that should not be lost sight of. If the temperature-range in a case of fever or pneumonia is about 105° or 106° F., and can readily be reduced by mild antipyretic measures, the condition of the patient at the same time being made more comfortable by their use, I should most certainly recommend their employment. But when powerful antipyretic measures are required to effect temperature-reduction, and its reduction is only temporary, I question very much their beneficial effects; in fact, I am quite confident that such reductions are obtained only by an expenditure of vital force on the part of the patient which largely diminishes his chances of ultimate recovery, especially if the hyperpyrexia has been long continued, for I have frequently noticed that their daily employment for a prolonged period has been followed by grave nervous phenomena and the evidence of the most extreme cardiac failure, greater than could have been caused by the high temperature alone. I think no one whose experience is at all extensive in the use of antipyretics in the treatment of acute infectious diseases will for a moment claim that they have any power in shortening their duration or greatly modifying their severity. Time will not allow me to enter into a detailed account of the different antipyretics now in use, to compare their relative merits, nor to theorize as to their mode of action. In a general way they may be divided into two classes—the application of cold to the surface, and the internal administration of antipyretic drugs. The mode of action of the two classes is evidently not the same, although they may both effect the reduction of temperature. Whether they act by diminishing heat-production, or by increasing heat-dissipation, is still undetermined; for every day's experience teaches that sometimes when antipyretic drugs act badly or inefficiently, cold applied to the surface, in the form of baths or packs, often accomplishes the desired results in the most satisfactory way, and *vice versa.* It has seemed to me that the beneficial action of antipyrine and antifebrine is not so much due to their power of controlling temperature as to their tranquillizing effects upon the nervous system. Dr. Wood, from his experiments on animals, concludes that antipyrine diminishes heat-production and heat-dissipation, and that its action on the bodily heat is entirely independent of any influence on the circulation—that it probably acts through the nervous system directly upon the chemical movements of the organism.

Clinical experience has taught me that opium is often one of our most efficient and reliable antipyretics. The old custom of administering Dover's powder in small doses at stated intervals, throughout the course of a typhoid fever, undoubtedly had its origin in the power of opium to control temperature by its tranquillizing effects upon the nervous system. As all discussions in this line must at present be theoretical and unsatisfactory, I close the consideration of this problem with the practical question: If temperature-reduction does not shorten the duration, mitigate the severity, or avert serious complication in disease, and if the ratio of mortality is not so diminished as to encourage us that we are making advances by antipyretic measures, on *what basis are we justified in their use?* Evidently, only on the basis that by their use we relieve one of the many phenomena of fever. If this can be accomplished without serious loss of vitality, or at the expense of the reserved force of the patient, we are justified in their use; but do not let us imagine that by reducing temperature we are controlling fever.

In review of the subjects which I have brought to your notice this evening, it is evident that the work of to-day is gradually rescuing medicine from the realm of wilful and unreasonable speculation, and is establishing it on a basis of new facts. Yet I would warn those who are in haste to elevate the experimental above the practical, that the experimental will never alone be able to accomplish the great work that is ever before the practical physician. We cannot safely forsake the rich storehouse of clinical observations that have been gathered by so many master-minds, and withdraw into the recesses of the laboratory; for although in the work of the laboratory we hope to find the solution of many of the problems with which we are now struggling, it must be remembered that the special field of medical investigation is, and ever will be, the study of disease in its activities. Experimental work, even in the study of the causes of disease, must always be one-sided; the whole number of its causes can only be studied and understood at the bedside of the patient. The great treasures of clinical observations must ever be the basis of true medical advancement. It is here that medicine is to find her firm and enduring foundations. Let us then labor without rest, in the laboratory, at the bedside, and in the dead-house, for the solution of the great and vital problems that are before us in every branch of our science, and the full benefit of our labors later generations will come to know and enjoy.

Digitalis in Aortic Disease.—In the Therapeutical Section of the British Medical Association at the Dublin meeting, Dr. Sansom, of London, read a paper upon the treatment of some forms of aortic disease. In cases of aortic disease without cardiac symptoms, it might be laid down as an absolute rule that all agents which tended to increase the force of the ventricular systole are absolutely hurtful. Compensation being already perfect, such agents could only serve to disturb the equilibrium. As regards the very important question of the administration of digitalis in aortic disease, medical opinion and experience had varied much from time to time. The present tendency was rather in favor of its administration, a view supported by Dr. Oliver, of Newcastle-on-Tyne. While carefully guarding himself against an absolute expression of opinion, Dr. Sansom pointed out certain drawbacks to the use of digitalis. These are: 1. It may increase the distress and aggravate the symptoms present. In some of his cases where digitalis had had this effect, he had seen great relief follow the administration of five-minim doses of tincture of aconite and the inhalation of nitrite of amyl. 2. Digitalis sometimes caused sickness. 3. In some cases where much temporary relief was obtained by its administration, sudden death had followed apparently as the result of its use. Yet, in spite of these dangers and drawbacks, he believed that digitalis was sometimes of service in the *early* stage of aortic disease and for a *limited* time. If given in the same manner and for the same length of time as was usual in mitral disease, great evil would result.—*The Practitioner*, November, 1887.

ON THE TECHNIQUE OF THE OPERATIONS FOR THE RELIEF OF INTESTINAL OBSTRUCTION.[1]

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WHETHER a simple enterotomy or the more severe laparotomy should be resorted to, in a case of intestinal obstruction, depends largely upon a correct appreciation of the strength of the patient. It is becoming more and more properly recognized that exhaustion in these and kindred abdominal lesions proceeds with rapidity, and is generally due to septic influences acting under the most favorable conditions. Though a laparotomy be scientifically the correct procedure, yet in many instances its performance does not save, but promptly terminates the life of the patient; while the resort to enterotomy, which is admitted to be a blind opening of a piece of distended intestine, presumably above the site of the obstruction, yields not infrequently a brilliant result. It, however, does not belong to me to discuss this portion of the subject; my assigned duty is to dwell upon, in the short time allotted to me, the various steps of the operative technique.

Let me therefore ask your attention, first, to some points common to both of these operations. Although it is possible that the section of the peritoneum after the division of the abdominal wall may reveal that an adhesive or a suppurative peritonitis is present, and therefore that an infectious condition already exists, yet, as this may not be found, it is imperative, before any operative interference with the abdominal cavity is begun, that the rules of antiseptic surgery should be strictly followed in the preparation of the hands of the surgeon and his assistants, as well as of the instruments, ligatures, sponges, and towels—in short, of everything that may be carried into the wound during the operation. The belly-wall, and particularly that sink-hole, the umbilicus, should be thoroughly cleansed by brushing with soap and hot water, and then washed with either alcohol or a 1 to 20 carbolic, or a 1 to 1,000 sublimate solution. If time will permit, it is advisable to keep one of these fluids in contact with the skin for several hours prior to the operation, under oiled silk, rubber-cloth, or other impermeable tissue. Now as to the anæsthetic—naturally an American surgeon would prefer ether for this purpose. Such, too, is yet my conviction for the ordinary operations in general and abdominal surgery, and such has been, until recently, my custom, even in laparotomy performed for intestinal obstruction, perforation of the intestines, and similar grave conditions. But in the weakened condition of the patient requiring an operation in these circumstances, I have been led, from experience, to choose chloroform for the production of anæsthesia, since with ether I have found the cyanosis and bronchorrhœa alarmingly marked and decidedly depressing. I say all this, knowing two things, one of which is universally conceded, that, as a general thing, chloroform is more dangerous than ether. The second, however, is not so well known. It is, that ether is more unsafe than has been and is now supposed, for, out of 12,000 operations which I have collected from the records of the New York Hospital, there were 6 deaths from this latter anæsthetic. With chloroform administered, largely diluted with air, which is best accomplished with an Esmarch's inhaler, in a recent case of laparotomy for a perforated appendix, the color and respiration of the patient were everything that was to be desired.

Cocaine has been suggested to obviate the risks of both ether and chloroform; but this in a laparotomy, while permitting the painless cutting through the abdominal walls, will not insure the quietude that is necessary in handling, treating, and replacing the intestines. It might, however, be applicable to the slighter operation of enterotomy. Before the anæsthetic is given, to strengthen the patient's heart it is also of service to administer, hypodermatically, $\frac{1}{100}$ to $\frac{1}{80}$ of atropia, and to introduce a large rectal enema of brandy, say from two to four ounces. The patient's bladder should also be emptied, voluntarily, if possible.

Enterotomy.—For the performance of this operation, according to Schede,[1] an incision not exceeding two and one-half inches in length is made in the right iliac region, above and parallel to the outer half of Poupart's ligament. The peritoneum, when cut through, is sutured all around the wound, with a continued catgut suture, to the skin. This shuts off the muscular and cellular planes from subsequent infection, and also affords a broader surface for the prompt adhesion of the loop of intestine, after it has been fastened into this opening. Then the first presenting loop of *distended* intestine is seized, and also sutured, by a continued catgut suture, to the prepared abdominal wound, the needle including only the serous and muscular coats, but not the mucous membrane. A space of intestine about one and one-half inch long, and three-fourths of an inch broad, is thus fixed to the belly-wall. An opening in the bowel sufficient to admit the forefinger is now made, and while the finger is *in situ* two silk sutures, each with its own needle, are passed from the bowel through the adjacent wall of the abdominal wound and tied. This sufficiently secures the patency of the completed artificial anus. Only in exceptional cases is it permitted to delay the opening of the intestine for twenty-four or forty-eight hours, and thus to obtain greater security against leakage into the peritoneal cavity.

A loose protective antiseptic dressing is then applied, and frequently changed, care being taken not to choke up the fecal opening. This operation, originally devised by Nélaton, is based on the anatomical fact that the presenting loop is usually found low enough down the intestinal canal not to interfere with the subsequent nourishment of the patient, and its distended state is a reasonable evidence of its being above the site of the obstruction.

Laparotomy.—The uncertainties which environ a surgeon throughout the whole subject of intestinal obstruction follow him even when he stands, knife in hand, over his anæsthetized patient. Where and how shall he make his incision are questions that must be decided, and considerable argument can be brought to support the various plans of action proposed. Where a decided swelling, as, for instance, a plainly recognized invagination, or a fairly well-marked tumor exists, surgeons are in accord that the incision is to be chosen as nearly over the point to be attacked as may be practicable. But with the nature and situation of the obstruction unknown, a median laparotomy is also conceded to be the most advisable section. But here, however, comes in the points of controversy. Shall it be a moderate incision, as is resorted to in an ordinary ovariotomy, *i.e.*, from two and one-half to five inches long, or shall a heroic section of seven to twelve inches be made?

Let me state the *pros* and *cons*, for they are of real importance. The selection depends, actually, whether the surgeon should resort to one of two methods of discovering the cause of the obstruction. Shall he, by a small incision, just sufficiently large to admit his hand, and yet limited enough to permit the distended intestines being kept within the abdomen by this plugging, or by the aid of his assistants, make his preliminary examination by touch in the regions most likely to be the site of an obstruction, such as, first, the cæcum and adjacent parts, where invaginations, abscesses, bands, and diverticula, are most commonly met with, and then continue his search, by sweeping over the natural openings in the abdominal wall, where perhaps a concealed or partial hernia may be present? Or, failing to find the source of the obstruction, shall he further blindly move his hand about the intestines, hoping to discover a tumor or a stricture, or some satisfactory cause for the occluded intestine? I beg here to say, in a general criticism of these proceedings, that among a mass of intestines the touch is very fallible, and that, from personal experience, the recognition of a distended cæcum, which is a landmark of importance, is extremely difficult even when the obstruction is below this point. For be it remembered that, usually, above the obstruction the fæces are in a liquid condition, more or less mixed with gases, and have no distinctive sensation. I have myself found so little help from such explorations, save concerning herniæ and large tumors, that I cannot advise resort to it, except to the most limited degree. What else can be done with a short incision, even though enlarged beyond the point of admitting the hand? If the assistants seize the edges of the wound and draw them apart and strongly forward, and at the same time the intestines be kept back, the operator may, perhaps, determine two things which may greatly help him. He may, perhaps, fortunately see—and generally in the pelvis—a mass of shrunken intestines, which are also much paler than the overlying or adjacent loops. If he should strike such a bonanza as this, his work is much simplified; he has only to raise up a portion of this collapsed intestine, intrust a loop of it to one of his assistants to hold in an angle of the wound, and then to follow the bowel along until the obstruction is reached; each few inches, as he goes along in this examination, is, after its inspection, tucked under the belly-wall on the opposite side of the wound out of the way. Should he find on coming, say, to the ileocæcal valve, that he is travelling away from the obstruction, he goes back to the loop still held by his assistant, and works his way similarly upward.[1] But suppose he does not have this good fortune of finding the collapsed bowel, for possibly the obstruction may be quite near the cæcum, how may he proceed? The suggestion has been made,[2] and it is a good one, as I can testify, that a moment's inspection of the several loops of intestine that first present themselves to view will show that some of them are much more congested, are much darker, than others are, and it is possible, in many cases, also to see of a certain congested loop that it is of a deeper hue toward one part than it is a few inches farther off. Follow, then, as in the preceding case, toward the more congested portion, and it will often lead to the obstruction. Occasionally, too, when but moderate inflation of the bowels is encountered, it is possible to crowd and hold back the intestines by forcing in large sponges and thus secure a view of the cæcal or sigmoidal regions. It would seem from this, to a tyro, to be an easy task to discover, and perhaps relieve, the cause of an intestinal occlusion. Unhappily, it is only occasionally that the conditions are as simple as these. It is more than likely, in the presence of distended bowels, that, failing any guide, the surgeon may be compelled to venture on the weary way of tracing the small intestine upward and downward its whole length, in the manner just indicated—an attempt which will probably be rendered nugatory by the repeated escape of distended portions of the bowels, or by the slipping of loops from his fingers and their being then confounded with other indistinguishable intestine; or by the losing the landmark loop from between the assistant's fingers, though this may sometimes be better secured by tying a band of iodoform gauze with long ends around it, or by perforating the mesentery at a thin place where vessels are not to be seen the intestine can be similarly loosely tied, and thus the accident be prevented, and the wound rid of crowding fingers. Much time may be spent in this way in keeping in and replacing the bowels, and the treatment of the distended intestines becomes therefore of paramount importance in a laparotomy for obstruction. Two ways of any reliance are given to overcome this hindrance to the rapid completion of the operation.

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[1] Read at the meeting of the State Medical Society at Albany, N.Y., on February 9, 1888, as a part of the discussion on Intestinal Obstruction.

[1] Beiträge zur Chirurgischen Behandlung des Ileus, Arch. f. klin. Chirurg., Bd xxxvi., S. 635.

One may puncture or incise the intestine, and thus let out the gas and fluid fæces, and so permit an easier manipulation and search in the abdominal cavity, and also a readier reposition and retention when the time comes to close the wound. But punctures made in a tense and paralyzed intestine, even with a small needle, frequently leak. Hutchinson, of London, demonstrated this, and I can myself confirm by a personal experience the correctness of the observation. It is better to use, if a collapsed condition of the bowels is determined upon, the safer incision of an inch long in the axis of the bowels, having first drawn out a loop before making the section sufficiently far, to prevent the fluid fæces getting into the peritoneal cavity. This is aided by plugging at the same time the abdominal wound with sponges. Madelung[1] further advises that, after emptying as much as possible the intestines of their contents, the wound should be carefully sewn up with the usual Czerny-Lembert sutures, and returned temporarily to the abdominal cavity, having been first provisionally cut off from the pressure of fresh intestinal contents, and from the possible traction of the surgeon's efforts, by encircling the coil of intestine containing the incision by thread, or by what has in other conditions proved serviceable to me, by strands of iodoform gauze passed through the mesentery and around the bowel above and below the wound. This incision can be afterward used if required to make an artificial anus.

The second way to manage the disadvantages accruing from the greatly distended bowels is not to try to diminish their size, but to remove them bodily from the field of search and operation. This is often done by the surgeon from necessity, but it is wiser to do it from choice. The following has therefore, in a laparotomy, seemed to me the more reasonable procedure to follow: After the often fruitless but proper palpation of the cæcum and the usual hernial openings, and a similar attempt to recognize by sight or touch a collapsed knuckle of intestine, the protruding loops of intestine should be rapidly drawn out of the wound until a large portion of the small intestines are outside the peritoneal cavity. They should be received into a large sponge,[2] or towels wrung out of warm water previously boiled, or a warm solution of salicylic acid—1 to 1,000—and to a special assistant their care should be assigned. It should be his sole business to prevent undue traction upon their mesenteric attachments. This is a point of importance, for I have seen, for want of this precaution, the mesenteric peritoneum badly torn, and veins lying deep in the peritoneal cavity ruptured. From time to time, while thus out of the peritoneal cavity, warm water, plain or medicated, should be poured over the extruded intestines. By this procedure the cavity of the abdomen can be readily inspected and quickly examined with the eye or with the hand. That such thorough examination is required is borne out by the fact that more than one, or even two, causes of obstruction are sometimes met with. I have to report, myself, one fatal case, where only one band was recognized and removed, and the autopsy showed that a second existed.

If nothing is found in the intestines themselves, as they are withdrawn, to account for the obstruction, nor in the region of the abdomen opposite to the side upon which they rested, they can be turned over to the other side of the abdominal wound, and the previously hidden side of the abdomen thus exposed to view for examination. By this means, and this means only, can the large as well as the small intestines be rapidly and thoroughly explored. By this means only, also, can the rarer causes of obstruction be detected, such as cysts of the pancreas, hernia through Treitz's fossa, etc. The necessary corollary to this evisceration is a decidedly ample incision. This should reach upward certainly as far as the umbilicus, and I should say that in many cases it should go an inch or two beyond this point. Kümmel,[1] of Hamburg, advises a heroic incision from the ensiform cartilage to the pubis, and gives seven instances in which he has employed this long division of the abdominal walls, with two successes. He states that in all of his cases the source of the obstruction was found in a few minutes.

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[1] Rand, of Liverpool (British Medical Journal, December 22, 1883), has said that the direction of the root of the mesenteric fold will determine whether one is proceeding toward the stomach or toward the cæcum, but this has proved of no practical value, though anatomically correct.

[2] Greig Smith, in his Abdominal Surgery, p. 376, says it has only failed once in eight cases in which he operated.

[1] Zur Frage der operativen Behandlung der inneren Darmeinklemmungen, Arch. f. klin. Chir., Bd. xxxvi., S. 283.

[2] Dr Hunter, of the New York Woman's Hospital, has utilized the ordinary Henis vegetable-squeezer in expediting the handling of such sponges.

Without proceeding to this extremity, it is undoubtedly true that the sound rule of surgery obtains in the abdominal cavity, as well as elsewhere, viz., that the hand should always be controlled by the eye. Treves, of London, however, has expressed himself decidedly adverse to this method of taking out the intestines, and believes that the procedure previously spoken of, of loop by loop examination, is to be chosen for action in the search for an obstruction. Five years ago I was of the same opinion, but careful observation of such cases of laparotomy for intestinal obstruction, six in number, as have occurred in my own charge, and also of those that have come under my notice in the practice of my colleagues, have forced upon me the conviction that not only is more time consumed by the older plan, but that by the prolonged manipulation of the hand in the abdominal cavity more exhaustion of the patient's force is brought about than by the freer incision and removal of intestines.

Leaving for a few moments the consideration of the treatment of the cause of obstruction, after it has been found, by either of these two plans, I beg to continue the consideration of this subject of the management of the distended intestines. Not only do they, as has already been remarked, interfere with the search for the obstruction, but they are a serious obstacle to the final closure of the wound when this becomes necessary. Anyone who has seen this attempted will realize the fact that the bowels, in the endeavor to replace and keep them in the abdominal cavity, are subjected to no little violence, which is often appreciably demonstrated by the blood that oozes from the minute ruptures of their peritoneal covering. Indeed, during the progress of an operation they seem to be much more distended, and often actually do become so, than they were at its beginning, and the closure of the wound offers the surgeon many times more difficulty than any other portion of the operation. This very difficulty of replacing the intestine has been one of the strong points urged against a large incision. Rehn,[2] of Frankfort, has, however, brought to our notice a procedure which offers help in this direction. He has found that the washing out of the stomach, after Kussmaul's method, diminishes the intestinal contents very materially, and he has resorted to this plan during the process of laparotomy with even better results than when it had been employed prior to the operation. The distended intestines are in this way satisfactorily diminished in size, and can be easily replaced in the abdominal cavity, and readily retained there. Should this expedient—which though tested but a few times yet in each instance has proved to work happily—should this, I say, not act well, the sewing up of the wound is best accomplished according to the method lately set forth by Kümmel, and which has been followed by Czerny and others.

This device is a simple one, and is carried out in the following manner: A properly disinfected and warm wet towel is placed over the whole mass of protruding intestines. It is then tucked in on all sides, as far as possible, through the wound and under the parietal peritoneum. Now, the intestines at the upper end of the wound are pressed inward, and one suture, carried through the skin, muscle, and peritoneum, is passed and secured. A further tucking in and additional pressure upon the intestines is now made. The latter are in this way protected from violence by the towel, and, at the same time, more satisfactorily controlled than by the naked hand or hands of the assistants. After three or four sutures have been applied the included portion of the towel is partially withdrawn from above, and the wound is further closed, and so on until the last suture is placed *in situ*.

It must be here understood that the plan of sewing together, first, the divided peritoneum, and then the skin, muscles, and fascia, as is done in ordinary ovariotomy, cannot be practised in cases where the intestines are much distended. In fact, it is often impossible to bring together at all the cut peritoneal surfaces in a satisfactory manner. This peritoneal gap in the abdominal wall is, however, of no especial moment, for the intestines rest up against it, and shut off in a short time the general peritoneum, as I have demonstrated in two instances; once in the living subject, where my abdominal wound gave way, without permanent detriment, and once at an autopsy.

Let me now recur to the treatment of the causes of obstruction after such have been found. If a band, or a peritoneal adhesion, or an omental cord should be detected, and if it is too large to be easily ruptured with the finger, it is advisable, in order to prevent a recurrence of the obstruction, to tie it with two ligatures and to cut it off close to its origin. Similarly, if there should be an opening in the mesentery, through which a loop of intestine is caught, after the latter has been relieved the opening should be sewn up with catgut or fine silk sutures. Should the knotting or intertwining of the intestines through such an opening in the mesentery be so intricate that it cannot be disentangled, and such things have happened, then the example of Reali[1] may be followed. This surgeon was compelled to cut the intestine in two, which permitted its loosening. He then sewed the divided ends together, and success followed the procedure. It has since been repeated by Kümmel in a similar instance.

If a diverticulum of the intestine adherent at its tip has produced the obstruction, it becomes a question as to its removal, after the intestine has been liberated from its grasp. It is better, I think, to cut it off after ligating it, but leaving enough beyond the ligature to allow its peritoneal coat to be separately sutured with Lembert's sutures over its divided muscular and mucous coats.

Should the obstruction be due to a gall-stone of large size, this—and the same remark applies to intestinal calculi and foreign bodies—can be removed by an incision, to be subsequently closed, or there can be first tried the expedient suggested by Tait,[2] of passing a needle from below through the intestinal wall, and in this manner breaking up the gall-stone, which, as is well known, is quite friable. It may sometimes be pushed along through the ileo-cæcal valve into the large intestines, and there left; or it may be also moved into a sound portion of the bowel and then crushed with well-padded forceps—as had been done in the biliary passages. Again, should an invaginated condition of the bowel be found, its reduction is usually accomplished by slight traction made upon its upper and lower ends. This, however, may not suffice, and Rydygier[3] advises pushing from below and pulling from above, a proceeding which Hutchinson,[4] of London, had substantially practised in 1874. He also aids the reduction by carrying his finger between the invaginating and the invaginated portions of the intestine.

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[1] Centralbl. f. Chirurg., No. 45, 1887.

[2] Ueber die operative Behandlung des Darmverschlusses, Centralbl. f. Chirurg., No. 30, 1887.

[1] Schramm: Die Laparotomie bei innerem Darmverschlusse. Arch. f. klin Chir., Bd. xxx., S. 737.

[2] Lancet, December 10, 1887.

[3] Beilage Centralbl. f. Chirurgie, S. 59, 1887.

[4] Med. Chir. Trans., 1874, p. 31.

Should the reduction of the intussusception be found to be impossible, or should the invaginated tumor be found to be in a state of gangrene, three courses are open to the surgeon. If the mass is not too large, it can be resected and the divided ends of the intestine sewn together, or it can be resected and the divided ends brought out to a convenient point in the wound and there fastened, for the formation of a temporary artificial anus; or if the invaginated intestine is of too great a size to be resected [1]—though over a metre has several times been excised with success and without subsequent impairment of nutrition—the intestine above the invagination can be fastened into the wound and an artificial anus made in it.

Roser,[2] of Marbourg, in order to avoid the tendency which sometimes exists in invagination to recur, proposes, after it has been reduced, to suture the loosened invaginated parts to the belly-wall at two or three points. This has also been applied to volvulus of the intestine.

If the obstruction should be found to be due to a tumor, whether of the large or small intestine, and it is more commonly found in the large intestine, the formation of an artificial anus should be resorted to. In exceptional instances, such as in growths not capable of removal, or in irreducible invaginations, then the expedient suggested by Mynther and Senn,[3] of Milwaukee, of making an opening between the intestine above and below the obstructing portion, can be entertained. The ingenious plates of the latter surgeon, now exhibited, for the rapid accomplishment of this operation of enterostomy, by pressing together large peritoneal surfaces adjacent to the openings in the intestine, seem worthy of trial.

Finally, the making of an artificial anus is also indicated if the occlusion of the bowel should be brought about by the pressure of a neoplasm originating outside of the intestines. It is, however, contraindicated where the obstruction is high up in the small intestine, when the risks of a resection must be taken; also, it cannot be always applied to the fixed portions of the large bowel, and it may be then necessary to do a colotomy after closing the laparotomy-incision.

In all the foregoing instances in which the cause of the obstruction could not be safely removed, it will be noticed that an artificial anus is advised to be made. This is based on sound surgical observation. Not only is it a quicker procedure than a resection, but, in the exhausting conditions such as are now under consideration, it is immeasurably safer. In a series of thirty-five resections of the large intestines which I collected together the mortality of resections, undertaken when symptoms of obstruction demanded laparotomy, amounted to one hundred per cent. Reichel also shows that in the small intestine resections with obstruction gave seventy-five per cent. of mortality, whereas in secondary resections for an artificial anus the mortality is lessened to thirty-seven per cent., which is corroborated by Makins [4] in his report of 15 deaths in 39 resections for artificial anus. The rule for its performance varies but little from that given for an enterotomy except when it is necessary to resect a portion of the intestine. Here the precaution should be taken to bring the part of the intestine well out of the abdominal cavity, and then, having first made a slight cut into the bowel, to allow the free escape of gas and liquid fæces, and thus to diminish the size of the intestine, a ligature of silk or iodoform gauze is secured at each end, just beyond the place where the section of the bowel is to be made, somewhat after the previously described method of Madelung. However, the fingers of an expert assistant will often suffice for this purpose.

The portion of the intestine to be resected is then cut out, together with a small V-shaped piece of the mesentery. After ligating the bleeding points and after sewing together the divided mesentery (the removal of which materially facilitates the subsequent cure of the artificial anus) the open ends of the bowel are either plugged securely with sponges, or, better still, are temporarily but tightly closed with sutures. The constricting bands of iodoform gauze are then removed, and the closed bowel-ends are thoroughly fastened to each other and to the abdominal wound, the peritoneal layer of which is first to be secured to the skin, as is done in Nélaton's enterotomy. If a sufficient relief has been afforded by the outflow of the intestinal contents to warrant the continuation of the closure of the end of the upper bowel for twenty-four hours, this will contribute somewhat to the patient's safety. Hahn has recommended, to preserve the advantages of a clean wound and yet to allow of escape of fæces, that the intestine should be closed tightly around a rubber tube, which is left projecting some distance for this purpose. It is well also to let the ends of the intestine project a little beyond the skin, for sometimes it will be found that by the necessary interference with the mesentery a slight necrosis at the line of the section of the bowel will take place. This was noticed by me in one case where an artificial anus was made after a resection of the large intestine.

If a resection with a reunion of the divided ends of the intestine should be determined upon, the advice of Kraussold,[1] which has been lately revived by Senn,[2] should be kept in mind. These suggest that a portion of omentum, either partially or totally separated, should be wrapped around the line of the intestinal suture. This speedily adheres, and aids in obviating the risk of fecal extravasation from a defective suture. A similar strip of peritoneum can also be obtained from the removed portion of mesentery and used singly or doubled on itself. It is also desirable, when such a resection and reunion of intestine has been practicable, to place the newly united bowel near to the line of the wound just before the latter is closed, and also to carry, according to my judgment, a drainage tube through the wound down to this place. I am not, for want of time, able to give further reference to the methods of applying sutures to the divided intestines in such an operation, and must refer you to other sources for this information.

In all the preceding directions concerning the details of the various operative procedures upon the sources of obstruction, it has been assumed that the surgeon has been able to avoid the entrance of fæces and blood into the abdominal cavity, and that for the final cleansing of this cavity, prior to the closing of the wound, the so-called toilet of the peritoneum may be confined to a simple sponging out of the pelvis and dorsal gutters with soft, warm sponges.

There is, however, a different state of affairs that may be unexpectedly met with. The first incision into the peritoneal cavity may reveal the fact that suppurative peritonitis exists. This cannot always be readily determined beforehand. It is most commonly found associated with perforation of the intestines, either at the appendix vermiformis or elsewhere. Duplay,[3] of Paris, was among the first to call attention to the fact that in such cases the symptoms of obstruction, even to fecal vomiting, were strongly present. In thirteen cases that I have recently gathered together of laparotomy for perforation of the appendix vermiformis, it was found that symptoms of intestinal obstruction existed in six cases, and caused a resort to the operation without the diagnosis of perforation having been previously made. Its insidious progress and defective symptoms often cause delay to a most dangerous point. The recently advised hypodermatic puncture of the abdominal walls in other places than in the right iliac fossa will sometimes give an early clew to the nature of the disorder. Such punctures, made after urination, deep into the pelvis,[1] or from the rectum [2] upward, are most likely to be successful in withdrawing pus, which is formed in perforative peritonitis with great rapidity. Should, therefore, a suppurative peritonitis be recognized on entering the abdominal cavity by a laparotomy, the surgeon should at once make a thorough examination *by sight* of the region of the appendix vermiformis. Failing that, the intestinal tract must be explored as before directed, and the opening, if found, closed by Lembert sutures; or if the perforation is recognized in the appendix, this latter should be tied above the opening and the distal portion cut off. As the stump is too short to secure a proper covering by its own peritoneal coat, it must be either left exposed or covered with the adjacent peritoneum by one or two stitches. In this instance, and in many others where peritonitis exists to a decided extent, the peritoneal cavity must be cleansed in a more thorough manner than by the simple introduction of sponges. It should be washed out several times by large quantities of warm water that has previously been boiled, or, as Mikulicz [3] has advised, after extended experimentation on animals, with a solution of salicylic acid of the strength of 1 to 1,000 of water. This is found to be potent and safe. This observer found that in washing out an abdominal cavity in which infectious peritonitis had been induced by him in animals, first with a six per cent. solution of common salt, then with a salicylic solution, he was enabled to save sixty per cent. of the animals experimented upon. Solutions of carbolic acid and corrosive sublimate, even when largely diluted, are too poisonous to be used in this manner. It is self-evident that in this condition of suppurative peritonitis drainage must be employed, preferably with two tubes, one going to the site of the perforation, possibly through a separate opening in the belly, and the other to the depth of the pelvis, through the median abdominal opening.

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[1] Hahn: Berlin. klin. Wochensch., No. 25, 1887.
[2] Centralbl. f. Chirurg., No. 44, 1883.
[3] Lancet, October 8, 1887.
[4] Med. Chir. Transactions, vol. lxvi.

[1] Sammlung klinischer Vorträge, No. 191, S. 23, 1881.
[2] Experimental Contribution to Intestinal Surgery, Lancet, October 8, 1887.
[3] Archives Générales de Médecine, November, 1876.

The after-treatment of patients that have been operated upon by laparotomy is of considerable importance, and varies remarkably from that which has been used ten years ago. Opium is abstained from as much as possible. Liquids are given not at all, or only in the most sparing manner for the first twenty-four or forty-eight hours. If vomiting occurs, more than should be expected from the anæsthetic, or if the distention is not promptly removed by the action of the bowels, or if symptoms of peritonitis present themselves, you should not hesitate to follow the suggestion of Tait and administer a saline purge. Surgeons have long been acquainted with the fact that, after a herniotomy, for instance, although it was known that the obstruction had been removed, the bowels remained distended from paralysis of the part above the site of the strangulation. This paralytic condition, from over-distention or from deranged innervation, is also one of the objections raised against the performance, in conditions of obstruction, of a resection and reunion of the divided ends of the bowel, even if the strength of the patient admitted this operative procedure. The interesting report of Mr. Malcolm, of London, has within the last few months given us a clear demonstration, not only of the reasons for this purgative treatment, but also of its efficacy, and of its limitations. This is a paper well worthy of perusal to all interested in operations in the abdominal cavity. It is published in *The Lancet* of October 29, 1887.

Lastly, in concluding this imperfect and somewhat diffuse account of the various surgical manœuvres demanded in the treatment of intestinal obstruction, I feel that I am warranted in somewhat departing from the rule that has been laid down for me, of *ne sutor ultra crepidam*, and this I do, from an earnest desire to join with my colleagues in this discussion, in the entreaty that an early surgical interference be resorted to in these very destructive cases, and I also conceive it wise to urge upon the profession, not as some have done, that every case of this description should be from the beginning placed in the hands of the surgeon, for this is not generally practicable, but that from the very inception of such cases the surgeon should be associated with the physician in the care of the patient. This harmony of action and conjoined supervision will, I believe, obviate the delays and clear up the doubts which are now too often solved by time rather than by the knife.

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[1] Medical News, January 28, 1888.

[2] Pepper: Medical News, January 8, 1887. [3] Centralbl. f. Chirurg., 1887.

ACUTE BRIGHT'S DISEASE.[1]

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The literature of Bright's disease is already voluminous: systematic treatises, monographs, records of cases and of pathological examinations, are numerous, and yet our knowledge of the subject is imperfect, confused, and unsatisfactory.

This is due in part to the inherent difficulties of the subject, in part to faulty methods of investigation. The kidneys have been looked at too much by themselves, and too little as if they were only a part of the whole body. If from inflammation, or from other causes, we find the pleural or the peritoneal cavity filled with the blood-serum, we call the fluid serum; but if the same conditions exist in the kidneys, and we find the serum in the urine, we call it albumen. If a patient with scarlatina has an endocarditis, we call it a complicating inflammation; if he has a nephritis, we say that this is due to the elimination of the poison of the disease by the kidneys. And so there has always been the same disposition to think too much of the functions of the kidneys, and too little of their structure. The tendency has been to consider the diseases of the kidneys by themselves, apart from those of the rest of the body, and to accumulate descriptions of kidney lesions without bringing them into an orderly classification.

So descriptions and names have been multiplied, assertions and counter-assertions have increased, and no definite or systematic knowledge of the diseases of the kidneys has resulted.

While this condition of affairs is an embarrassment and a hindrance to the practitioner, it presses with double weight on those who have both to practise medicine and to teach it.

It is now for many years that I have studied patients during life, and kidneys after death; that I have read all the available literature on the subject; that I have written and lectured concerning it; but always with the same feeling of dissatisfaction and want of success.

During the past three years I have made another effort. I have gone over afresh all the clinical and pathological material of previous years, and it is because I feel that, for the first time, I stand on a surer footing than ever before, that I venture to bring to your notice a subject concerning which so much has already been said.

In doing this I confine myself entirely to the subject of acute Bright's disease, leaving aside for the present everything relative to the chronic form.

At the very beginning of an attempt to study the lesions of the kidneys, we are embarrassed by the absence of a general agreement as to what lesions, in any part of the body, are to be considered of an inflammatory nature. The only changes which are universally accepted as inflammatory are those which belong to exudative inflammation.

When in any part of the body there is an accumulation of blood in the vessels, an exudation of blood-plasma, an emigration of white blood-cells, a diapedesis of red blood-cells, everyone calls this an inflammatory process, and the serum, fibrine, and pus are clearly inflammatory products. But even in this best-defined form of inflammation it is not generally understood that the production of serum, fibrine, and pus are compatible with the absence of visible structural changes in the inflamed tissues after death. The presence or absence of such changes depends upon the severity of the inflammation, and the facility with which the inflammatory products can escape from the position in which they first make their appearance.

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[1] Read at the Meeting of the Medical Society of New York, at Albany, February 8, 1888.

When we come to the changes in the cells of the viscera, and to the formation of new connective tissue, there is no longer any agreement. Some ascribe such changes to inflammation, others to degeneration.

But, no matter how we account for these changes, or whether we call them inflammatory or degenerative, we find that they constitute an important feature in the diseases of the viscera.

The changes we find in the cells are: A simple swelling of the cells, a disposition to degeneration and necrosis, and a formation of new cells to take the place of those destroyed. With such changes in the cells is generally associated some degree of exudative inflammation; very often this is but slight, with only the exudation of a little serum; occasionally it is severe, and serum, fibrine, and pus are found as inflammatory products.

Such changes in the viscera may be termed "parenchymatous" or "cellular" inflammation or degeneration.

The formation of new connective tissue in the viscera takes place in their stroma. Here we find diffuse or circumscribed formations of ordinary connective tissue, or of the same tissue with an excess of round cells. This may be called "interstitial" inflammation, or degeneration.

Still further, we may find that, in the viscera, there exist at the same time the evidences of exudative inflammation, a growth of new connective tissue in the stroma, and marked changes in the cells. To designate this process we may employ the term "diffuse" inflammation.

Now, if we turn to the kidneys we find that, like the other viscera, they are composed of blood-vessels, a stroma, and special cells; and that the only peculiar features about them are the arrangement of some of the blood-vessels into the tufts of the Malpighian bodies, and the distribution of the special cells in tubules.

We have a right, then, to expect that the lesions of the kidneys will correspond to those of other parts of the body, but that the structure of the glomeruli and of the tubes may add something to the character of the inflammation.

A careful study after death of the changes in the kidneys, and of the histories of the patients during life, seems to me to show that this is the case, and that all the examples of acute Bright's disease may be conveniently arranged in three classes:

I. An exudative nephritis, characterized by a congestion of the blood-vessels, an exudation of the blood-plasma, an emigration of white blood-cells, a diapedesis of red blood-cells, and certain changes in the glomeruli.

II. A parenchymatous or cellular inflammation or degeneration, characterized by changes in the renal epithelium.

III. A diffuse nephritis, which involves all the tissues of the kidneys, but of which the most important features are the growth of new connective tissue and the permanent character of the lesions.

I. Acute Exudative Nephritis.—This is an acute inflammation of the kidneys, characterized by congestion, an exudation of plasma, an emigration of white blood cells from the vessels; to which may be added swelling or necrosis of the renal epithelium and changes in the glomeruli.

Of such a nephritis we may distinguish four varieties:

(1) A mild form, which gives symptoms during life, but leaves no lesions in the kidneys after death.

(2) A more severe form, in which we find inflammatory products in the kidneys after death.

(3) A form characterized by the excessive production of pus cells.

(4) A form in which the inflammation is prolonged for an unusual length of time, and effects more extensive changes in the structure of the kidneys.

Lesions.—In a nephritis of this type we should expect that the inflammatory products—the serum, white and red blood-cells, and coagulated matter from the blood-plasma—would collect in the Malpighian bodies and tubes, or infiltrate the stroma between the tubes; and that, of the inflammatory products in the tubes and Malpighian bodies, a part would be discharged with the urine and a part found in the kidneys after death. We should also expect that the quantity of inflammatory products should be in proportion to the severity of the inflammation, and that an excessive number of pus-cells would belong to the especially severe forms of the disease. Still further, it is evident that with the milder examples of nephritis, with but little exudation, no inflammatory products might be found in the kidneys after death, all having been discharged with the urine during life.

As a matter of fact, the kidneys do present just such changes. In the mild cases we find no decided lesions in the kidneys after death. In the more severe cases the kidneys are increased in size, their surfaces are smooth. The cortical portion is thick and white, or white mottled with red, or the entire kidney is intensely congested. If the stroma is infiltrated with serum, the kidney is succulent and wet; if the number of pus-cells is very great, there will be little, whitish foci in the kidney.

The evidences of exudation are most marked in the cortical portion of the kidneys. Here we find tubes containing cast-matter or irregular coagulated matter; and very frequently, in most of the cortex tubes there will also be a flattening of the epithelium and a dilatation of the tubes, as if these had been distended by fluid exudation. Less frequently, the epithelium of some of the convoluted tubes is swollen and broken down. If pus-cells are numerous they will be found in the tubes, the stroma, and Malpighian capsules, and the capillary veins will contain white blood-cells. To these ordinary evidences of exudative inflammation are added changes in the glomeruli, which at first sight seem peculiar, but which are really similar to the changes which we find in the arteries and capillaries in many inflamed tissues.

If we look at a normal glomerulus, we see that it is composed of a tuft of capillary vessels enclosed in a capsule. The capsule is lined with a layer of flat cells continuous with the epithelium of the tubes. The capillary vessels have rather thick walls; on their walls are large nuclei, such as are seen in other capillaries, but it is very difficult to demonstrate in them the endothelial cells which are regularly found in blood-vessels. The outer surfaces of the vessels of the tufts are plastered over with large flat cells, which we can see at the margins of the tufts and between all the vessels which make up the tuft.

In acute exudative nephritis we may find within the glomerular capsules, as within the tubes, coagulated matter or white blood-cells. The capsular epithelium is swollen, sometimes to such an extent that the cells are almost cuboidal instead of flat. The most noticeable changes, however, are in the cells which cover the outer surfaces of the blood-vessels of the tufts. These cells are swollen, or they are both swollen and multiplied. In addition there may be changes within these vessels. They may be filled with white blood-cells, or the nuclei in their walls are swollen and surrounded by protoplasm.

As a result of these changes in the glomerular epithelium, we find the tufts swollen and filling, or even distending, the capsules; we can no longer distinguish the different vessels which make up the tufts, as their edges are covered by the swollen cells, and the coils of vessels are all matted together. How much impediment is offered to the passage of the blood through the glomeruli by these changes in them it is not easy to say.

In most cases of exudative nephritis the patients recover, and the glomeruli return to their natural condition; but in the cases which are protracted for months, we find the glomeruli still presenting the same changes which have just been described, or with thickened capsules, or with the tufts in various stages of atrophy and obliteration.

In some examples of exudative nephritis we also find a thickening of the walls of the branches of the renal artery within the kidney. This thickening is due to a swelling of the muscle-cells in the walls of these vessels.

Etiology.—Acute exudative nephritis is frequently a primary disease, either occurring after exposure to cold, or without discoverable cause. It complicates scarlatina, measles, diphtheria, typhoid fever, acute general tuberculosis, pneumonia, acute endocarditis, acute peritonitis, dysentery, erysipelas, diabetes, and many other of the infectious diseases and severe inflammations. It is one of the forms of nephritis which complicate the puerperal condition.

Symptoms.—In the milder cases the only symptoms are the changes in the urine. This is somewhat diminished in quantity, of normal, or high, specific gravity; it contains albumen in moderate quantities, a few casts, sometimes blood.

In the more severe cases, the changes in the urine are more decided. It is diminished in quantity or even suppressed, its specific gravity is normal, or high, or low; the quantity of albumen is very large; the casts are numerous—hyaline, granular, containing white or red blood-cells or epithelium; there are also free white and red blood-cells and epithelial cells from the kidneys and the bladder. As a rule, the quantity of albumen and the number of casts are in proportion to the severity of the nephritis, but this is not always the case. Large quantities of albumen, numerous casts, and many white and red blood-cells may be found in the urine of kidneys which, after death, show no structural changes. While, on the other hand, small quantities of albumen and a few hyaline casts are compatible with a severe nephritis. Still further, the number of casts found in the urine during life is not always in proportion to the number of casts and quantity of coagulated matter found in the corresponding kidneys after death.

In addition to the changes in the quantity and composition of the urine, the patients present constitutional symptoms, which vary in the different cases as to their number and their severity. A febrile movement with more or less prostration, stupor, headache, sleeplessness, restlessness, muscular twitchings and general convulsions, dyspnœa, loss of appetite, nausea and vomiting, a pulse of high tension with exaggerated heart-action, or hypertrophy of the left ventricle, dropsy, and anæmia—these may be called the characteristic symptoms of acute exudative nephritis. Of these symptoms a certain number—the fever, the prostration, the loss of appetite and nausea, the anæmia, the diminution in the quantity of urine—are such as would naturally accompany an acute inflammation of the kidneys, and very often they are the only symptoms which do accompany it.

But with this same kidney lesion a certain number of patients will present, besides the symptoms just mentioned, the additional features of cerebral symptoms, changes in the heart and circulation, and dropsy. We might indeed think that the cerebral symptoms and the dropsy were due to the diminished excretion of urine; but when these conditions occur, as they often do, in patients who are passing large quantities of urine of good specific gravity, and when they are absent, as they often are, in patients who are hardly passing any urine at all, it is evident that these symptoms are not directly due to the nephritis, but constitute a separate, complicating set of symptoms, which may be present or absent in any given case of nephritis.

What the complicating lesion is which produces these symptoms, we do not fully know; but the changes in the action of the heart and the dropsy naturally direct our attention to the arteries and capillaries, with the expectation of finding in them some morbid condition which will hinder the passage of the blood through them. Whether the morbid condition is of an inflammatory nature, or whether it is only a spasmodic contraction, we are as yet ignorant.

The cases of exudative nephritis with an excessive production of pus-cells have a somewhat different clinical history. Such a nephritis occurs both in children and adults; it may be primary, or complicate scarlatina, diphtheria, or measles.

The invasion is sudden, with a high temperature and marked prostration. Restlessness, delirium, headache, and stupor are soon developed and continue throughout the disease. The patients lose flesh and strength and pass into the typhoid state. Dropsy is slight or absent altogether. The urine is not as much diminished in quantity as one would expect, its specific gravity is not changed; albumen, casts, and red and white blood-cells are present in considerable quantities, but not always early in the disease.

It is a very fatal form of nephritis, and yet one easily misunderstood on account of the resemblance of its symptoms to those of an acute meningitis.

As a rule, exudative nephritis is a temporary disease, resulting either in the death of the patient or in recovery, with a return of the kidney to its natural condition. But there are exceptions to this rule.

Either after one or more acute attacks, or after a subacute invasion, the nephritis may take on a chronic form.

The patients then give the same history as that which belongs to a diffuse nephritis. They go on for months and years exhibiting renal symptoms, either continuously or with intermissions.

When they die, it is found that in addition to the ordinary lesions of exudative nephritis there are added a diffuse thickening of the stroma of the cortex, with more or less degeneration of the epithelial cells.

II. PARENCHYMATOUS INFLAMMATION, OR DEGENERATION OF THE KIDNEYS.—I employ this term to designate all the acute morbid processes which seem to belong to the epithelium of the tubes and of the Malpighian capsules, and in which all the evidences of disease are confined entirely to these cells, or are secondary to the changes in them.

Such acute changes are a frequent complication of the infectious disease, of severe inflammations, and of extensive injuries; they are also found after poisoning with phosphorus, arsenic, and mercury.

After death the gross appearance of the kidneys varies with the intensity of the morbid process, and with the presence or absence of secondary changes on the part of the blood-vessels. In the milder cases the kidney is a little swollen, and the cortex is pale; in the severe cases the kidney is much enlarged, and the cortex is either white or congested.

The changes in the cells are: A simple swelling of the cell-body, especially of its network, causing it to look larger and more opaque and to take on irregular shapes; an infiltration of the cell-bodies with granules of fat; a death of the cells, which may take the form of coagulation-necrosis, or of a disintegration and crumbling of the cell-bodies; a desquamation of the dead cells; a formation within the tubes of myeline-globules, apparently derived from the epithelium; and a growth of new cells, to take the place of the desquamated epithelium. All these changes are most marked in the convoluted tubes.

In most examples of parenchymatous nephritis no other changes will be found, although the presence of albumen and casts in the urine indicates an exudation. But in the more severe forms, with rapid death of the epithelium, the process is a more stormy one, and the blood-vessels take an active share in the inflammatory process. We find the veins and glomeruli gorged with blood, and in the tubes cast matter, coagulated matter, and blood-cells.

Symptoms.—The urine is diminished in quantity or even suppressed, according to the severity of the lesion. Its specific gravity is unchanged. In most of the cases little or no albumen and few or no casts are found. In the more intense cases, with the addition of the exudative inflammation, albumen in large quantities, numerous casts, red and white blood-cells, and renal epithelium make their appearance in the urine.

So many of the examples of this nephritis are secondary to other diseases and of mild type that they can hardly be said to have any symptoms of their own. The severer forms are indeed dangerous to life, but dropsy, cerebral symptoms, and disturbances of the circulation are not associated with them.

III. ACUTE DIFFUSE NEPHRITIS.—This is the most serious and important of all the forms of acute nephritis, not only for the reason that it involves so many of the structures of the kidney, but because its lesions are from the first of a permanent character, and because disturbances of the circulation are so frequently associated with it.

It is one of the forms of scarlatinal nephritis, it occurs early and late in the course of diphtheria, it is the most important variety of the nephritis of pregnancy, and it is especially frequent as a primary nephritis, with or without a history of exposure to cold.

The changes in the kidneys are extensive and well marked.

The kidneys are large, at first smooth, later sometimes a little roughened; the cortical portion is thick, white, or mottled with yellow or red, or congested; the pyramids are red.

In these kidneys we find the same lesions as have been described as belonging to exudative nephritis, but with two additional changes—changes which are found in the earliest stages of the inflammation, and which give the characteristic stamp to the lesion. First, a growth of connective tissue in the stroma; second, a growth of the capsule-cells of the Malpighian bodies.

Both these changes do not involve the whole of the kidney, but symmetrical strips or wedges in the cortex which follow the line of the arteries. These wedges are small or large, few or numerous, regular or irregular, in the different kidneys. But in every wedge we find the same general characters—one or more arteries of which the walls are thickened. The Malpighian bodies belonging to this artery show an enormous growth of capsule-cells, with compression of the tufts. Running parallel to these arteries there is a growth of connective-tissue cells and basement substance in the stroma. Between the wedges we find at first only the changes of exudative nephritis, later a diffuse growth of connective tissue.

So, if the patient live long enough, the final result is atrophied kidneys, which a careless examination might confound with the atrophied kidneys of chronic Bright's disease, but yet which really differ from them in their origin and their structure.

Symptoms.—The urine during the acute periods of the nephritis is scanty, colored by blood, of high or low specific gravity. It contains much albumen, numerous casts of all kinds, and blood. Exceptionally the casts are few or absent. Later in the disease, or when it is of a more subacute type, the urine is more abundant, the specific gravity falls, the albumen and the casts continue. In the protracted cases the albumen and casts may for a time diminish, or even disappear.

The patients develop all the symptoms which we are accustomed to associate with Bright's disease—headache, restlessness, neuralgic pains, delirium, stupor, coma, muscular twitchings, and general convulsions; dyspnœa and cough; loss of appetite, nausea, and vomiting; neuro-retinitis; diarrhœa; increased arterial tension, and hypertrophy of the left venticle of the heart; anæmia, loss of flesh and strength; and dropsy, often developed to an extreme degree.

The course of the disease varies with the intensity with which it is developed and the rapidity with which it proceeds.

The invasion may be sudden, the symptoms marked, and the duration of the disease short, with a fatal termination. Or, with the same acute invasion, the disease may be protracted over many months. Or, the invasion may be gradual, the course of the disease subacute, the symptoms not continuous, but with periods of improvement or even apparent recovery, and the duration of the disease protracted for months and years.

The prognosis of this form of nephritis is bad. The lesion is a permanent and a progressive one. It is indeed apparently possible to recover from it, although with damaged kidneys, but this is the exception. The rule is, that sooner or later the disease proves fatal, although it may well happen that periods of improvement give rise to false hopes of recovery.

Treatment.—From what has been said concerning the nature of acute Bright's disease, some general conclusions may be drawn as to its treatment.

In that form of the disease characterized by changes in the cells alone, it does not seem probable that any treatment can be of avail. We are not possessed of any means by which we we can affect acute morbid changes in the epithelium of the kidneys.

In exudative nephritis two separate sets of symptoms present themselves to us for treatment—those due to the nephritis, and those due to the complicating disturbances of the circulation. For the nephritis we naturally employ the same methods of treatment which are appropriate to an acute exudative inflammation in any part of the body; for the disturbances of the circulation we use the means by which we can regulate the action of the heart, and put a stop to contraction of the arteries.

In acute diffuse nephritis the problem of treatment becomes much more complicated. The inflammation of the kidneys may be, at the first, of an acute or of a subacute type; the complicated disturbances of the circulation are developed to a great degree; the long continuance of the disease has its effect on the entire nutrition of the patient; the character of the lesion is such that we hope for the alleviation of symptoms, and the prolongation of life, rather than for the cure of the patient.

Now let me ask you to apply this classification of acute Bright's disease to your own cases.

1. You have seen primary cases which gave well-marked renal symptoms for days or weeks, and then recovered completely, with the exception of a few very severe cases which terminated fatally. These were examples of exudative nephritis.

2. With scarlatina and diphtheria, with pneumonia, with typhoid fever, with many of the infectious diseases and of the acute inflammations you have often found albumen and casts in the urine, but no other symptoms. These were examples of mild exudative or of parenchymatous nephritis.

3. You have seen women, in the latter months of pregnancy, with albumen and casts in the urine, sometimes with dropsy, sometimes with cerebral symptoms. You have found that if the patients survive their immediate danger that most of them have no further kidney trouble, but that a few will, later, give the evidences of a chronic nephritis. This means that these patients have suffered from more or less severe forms of exudative nephritis or from diffuse nephritis.

4. You have seen primary cases which began with headache, nausea, anæmia, dropsy, and albumen and casts in the urine, and which then went on for months or years, sometimes better, sometimes worse, until they died of their disease. These patients had diffuse nephritis.

5. You have seen diphtheria or scarlatina followed for months and years by renal symptoms. This again means a diffuse nephritis.

So, no matter what names are used, I believe that we can group all the cases of acute Bright's disease into three classes:

1. One in which the principal share in the morbid process is taken by the blood-vessels, and in which the

principal evidences of the inflammation are the matters exuded from the blood-vessels.

Such a nephritis varies as to its severity and its fatality, but is regularly only a temporary lesion.

2. One in which the principal share in the morbid process is taken by the renal epithelium, and in which the evidences of inflammation are certain changes in these epithelial cells.

Such a nephritis is regularly secondary to other diseases, and does not give constitutional symptoms.

3. One in which the principal share in the morbid process is taken by the stroma, and in which the evidences of inflammation are permanent connective tissue in the stroma, with, in addition, the lesions of exudative nephritis.

Such a nephritis is regularly a permanent and progressive lesion, and is attended with well-marked constitutional symptoms.

REMARKS ON THE ALBUMINURIA OF PREGNANCY.[1]

By FORDYCE BARKER, M.D., LL.D.,

NEW YORK.

The general pathology of acute Bright's disease has been so ably discussed by previous speakers that it is my purpose to confine my remarks closely to the subject which you assigned to me, and to restrict them to the limit of time which you suggested. What I have to offer will therefore be condensed in the fewest words. If the aphoristic style, which I must adopt, may seem to some presumptuously dogmatic, I hope that it will be excused on the ground that the time and occasion demand that ideas should be expressed in the fewest words.

I prefer to use the term "albuminuria of pregnancy," as defining the topic which I am to discuss, rather than that of acute Bright's disease, for the following reasons:

1. Bright's disease has become so familiar to the public, as one which sooner or later must terminate fatally, that it inevitably depresses a patient, and especially carries terror to the minds of women during gestation, and to their friends. While the disease which we are discussing, if properly treated, results in recovery of a large majority of patients, why, then, should we deprive our patients of the positive benefit of confidence and hope by the use of a term which may be scientifically incorrect, inasmuch as the pathological conditions now accepted as belonging to acute Bright's disease may be, and sometimes are, absent in those cases where albumen is abundant in the urine, and where other general symptoms which, in the aggregate, we call albuminuria, may be found in an alarming degree?

2. I express my conviction, based on my experience and observation, that in nine cases out of ten, in private practice, where albuminuria is found in pregnant and parturient women, the structural lesions of the kidney, which can be properly designated as Bright's disease, did not exist previous to pregnancy; and even in hospital practice, where the organic changes exist in a larger proportion of cases, it is my belief, after a careful review of my experience, that the assertion I have just made is true in seven out of ten patients.

3. I may here express my conviction that the albuminuria of pregnancy and the organic disease which can be properly termed acute Bright's disease in the non-pregnant should be regarded, clinically, etiologically, and sometimes pathologically, as distinct diseases, requiring differing therapeutic treatment, and having essentially a different prognosis. They are allied diseases in the fact that both have many of the most striking phenomena in common, as albumen in the urine, and dangerous neurotic, gastric, and vascular disturbances of a similar character, and both may induce that peculiar form of blood-disease, with all its dangerous consequences, which we call uræmia.

I beg to say, here, that the terms albuminuria, uræmia, and Bright's disease are not synonymous or identical. Either condition may exist alone, but they are often associated, as cause or consequence of one or both of the other conditions. The symptoms of the disease we call albuminuria may exist for some time before albumen can be found in the urine—such as œdema, first in the lower extremities, gradually becoming general and invading the face; puffiness of the eyelids is generally present. The œdema sometimes extends to all the areolar tissues, and even dangerously fills the serous cavities.

Arterial tension, as demonstrated by small, hard, thready pulse, is a symptom of great importance. The patient often has a chlorotic or anæmic appearance; and if nausea, or vomiting, or other gastric disturbances come on in the later months of pregnancy, these symptoms should excite suspicion. The cerebral symptoms are very important, such as headache, dimness of vision, impaired hearing, and an unusual mental dulness, with unusual excitability. A marked decrease in the amount of the renal excretion is a very serious and significant symptom.

There have been various theories as to the causes of albuminuria in pregnancy: First, it may be entirely due to certain modifications of the system, resulting from pregnancy, as changes in the quality of the blood. During the period of gestation the blood becomes superalbuminous, as has been demonstrated by Claude, Bernard, and many others. There is increased demand for albumen for the nutrition of the fœtus. There are changes in the capillaries, which should be reserved for plastic alimentation. The urine of the fœtus normally contains albumen, but does not contain urea. Therefore the maternal albumen, which passes through the fœtus without being employed in its development, returns to the maternal system loaded with waste material. Robin asserts that in pregnant women hæmatosis is incomplete, and thus predisposes to an hydræmic state of the blood and relaxation of the tissues which facilitate the passage of albumen into the urine, which is notably increased by the arterial tension always found in this condition. Thus we often find serous plethora in pregnant women. Formerly I believed more fully than now in the mechanical theory, first suggested, I think, by Dr. Cormac, that in a large proportion of cases of albuminuria in pregnancy, especially in primiparæ, it was a result of venous congestion, caused by the pressure of the gravid uterus on the emulgent veins of the kidney. This may be one of the causes, but it is probably rare, as the pressure is very slowly developed, and the circulation adjusts itself to the changed conditions, as we are constantly seeing clinically.

This mechanical theory may be the explanation of a fact often observed, that in some patients, where repeated examinations have failed to detect albumen in the urine, it has been found abundantly after the process of parturition, especially if convulsions have occurred. The violent muscular contractions seem to have interrupted the venous circulation to such an extent as to produce acute hyperæmia of the kidneys, and afterward the urine is loaded with albumen. But the limit of time assigned to me does not permit of more prolonged discussion of these points, and I will only add that while our knowledge has been greatly advanced by recent investigators, among whom I should particularly mention Mahomed, Bouchard, Capron, Moricke, Gubler, Peter Rosenstern, and many others whose names at the moment do not occur to me, still I think we will all agree that renal pathology, in relation to its associations with pregnancy, is in a transitional state, with bright hopes as to our exact knowledge in the future. I leave all discussion of the pathology and treatment of the most serious of all the explosions which often occur in connection with the albuminuria of pregnancy to the gentleman who is to follow, Professor Charles Jewett.

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[1] Made at the annual meeting of the Medical Society of the State of New York, Wednesday, February 8, 1888.

As every one must see, who examines the programme of this meeting, the great object of our President and his associates has been to make the papers and discussions of practical value. I hope our late President may not feel that I am encroaching on his domain, if I add a few words on the treatment of puerperal albuminuria, expressing the convictions of a long experience in the briefest terms consistent with clearness. I will not detain the Society by a discussion of such treatment as is now accepted by all well informed physicians, but will only refer to those plans of treatment in regard to which there is a difference of opinion among physicians of equal ability and experience.

In the treatment of the albuminuria of pregnancy the most prominent indications are, obviously, to restore the normal condition of the blood, and to prevent the tendency to, or overcome existing, renal congestion. Of course, the means to secure these objects must vary extremely, according to the special conditions of each case. Thus, in one, anæmia, hydræmia, and general feebleness of the vital powers predominate. In another, plethora and abnormal activity of the digestive and assimilative functions; and a strong tendency to renal and cerebral congestion is a prominent characteristic.

The question of diet is one of the most important points. The first class need a nutritious diet, avoiding the danger of overtaxing the kidneys by restricting the amount of nitrogeneous food, and chalybeates may be required. I have often seen great benefit from giving the patients, for weeks before parturition, a teaspoonful of glycerine, 3 parts, and tincture of chloride of iron, 1 part, in a wine-glass of water, after each meal. In a few cases wine, or some other form of alcohol, is often beneficial.

In the other class of cases an exclusive milk-diet, so strongly urged by Tarnier, is, I think, very important. It would be a waste of time for me to discuss details of treatment familiar to all, such as the importance of saline purgatives to secure large serous intestinal discharges. The utility of diuretics in these cases is, I think, very questionable, except the indirect diuretic which results from the cardiac tonics, such as digitalis and the tincture of the chloride of iron.

If the albuminuria is attended with symptoms indicating a threatening of uræmia, or it already exists, then more active treatment is necessary.

Venesection I regard as of the first importance, even if the patient be hydræmic, as it relieves from the effect of serous plethora. The bleeding removes tension from the brain, relieves congestion of the lungs, sets the breathing free, removes pressure from the laboring heart, and eases the congested kidney of the load that embarrasses it.

In medical journals I now and then read the report of a case of albuminuria successfully treated by the use of pilocarpine. When the therapeutic effects of jaborandi or its alkaloid, pilocarpine, were first made known to the profession, it was received with great enthusiasm, as a remedy which would probably prove of great service in the treatment of albuminuria.

In the Transactions of this Society for the year 1879 will be found a paper, which I had the honor to read, on this subject. I will only say that my convictions are still the same as expressed in that paper—that the remedy is in this class of cases unsafe and uncertain, and that we have other resources much more safe and reliable.

The necessity and propriety of inducing premature labor in the albuminuria of pregnancy is one not yet settled. It was first advocated by Braun, of Vienna, some thirty years since. Some years later, Tarnier, of Paris, became the most prominent advocate of this measure, but he has very essentially modified his views in late years. Some ten years ago it was strongly advised by several of our most prominent obstetrical teachers and writers in New York, under conditions which seemed to me quite unjustifiable, and I then published a protest, which some present may have seen.

It was assumed that albumen in the urine, persistent for some time in large proportions, and if attended with extensive serous infiltration of the general areolar tissue, demanded the induction of premature labor to prevent eclampsia. I think the doctrine accepted by the vast majority of the present day is, that albuminuria. even in its greatest development, never justifies this procedure, unless accompanied with unquestioned evidence of perilous uræmia, and other resources for the cure of both the albuminuria and the uræmia have been exhausted.

The theory of this practice is based on the great danger of eclampsia; but this danger is much less than has been assumed, for while about 1 in 25 pregnant women have albuminuria, convulsions occur in only 1 out of 485 or 500 cases. Then it must be remembered that considerably more than half of the cases of convulsions come on during labor, whether spontaneous or induced, and more than one-quarter after parturition. I think the evidence is conclusive that, by appropriate prophylactic treatment, the albuminuria and the uræmia may be almost absolutely averted. It is many years since I have seen a case of eclampsia in a patient who has had this prophylactic treatment. I will take this opportunity to speak of one agent which, I think, may prove of great value in the treatment of the uræmia of pregnancy, but which, so far as I have seen, has never been mentioned in this connection—and that is nitro-glycerine, in doses of from $\frac{1}{100}$ to $\frac{1}{50}$ of a minim, repeated every three or four hours. Its effect is to speedily reduce arterial tension and allay spasm of the cerebral and renal arterioles, and thus indirectly increase the functional activity of the kidney and marvellously quiet the nerve-storm so characteristic in these patients. [Two cases, illustrative of these effects, were then briefly related.]

The existence of amblyopia and amaurosis has been urged by some as a reason for the induction of premature labor.

This reason has been chiefly brought forward by some of our prominent ophthalmologists, and in THE MEDICAL RECORD of January 28, 1887, is a very interesting article on this subject.

This subject has been fully discussed by me, in a work on the puerperal diseases, published in 1874, which, I suppose, it is hardly to be expected that even the most prominent ophthalmologists should be familiar with. I will not detain the Society by again going over this ground. I will conclude with this formula of my view on this point: The premature induction of labor may be justifiable and absolutely a duty, when the symptoms of albuminuria and uræmia have resisted previous medical treatment, and are of so grave and dangerous a character as to threaten the life of mother or child.

SULPHUR IN CHLOROSIS.—Acting on theoretical considerations, Schulz and Strübing have given sulphur in chlorosis. From six cases thus treated they draw the following conclusions: 1. In cases of simple chlorosis in which iron has no effect, the general condition is markedly improved by sulphur. 2. After sulphur has been given for some time, treatment with iron could be started and continued successfully. 3. Sulphur is not well borne in cases of chlorosis complicated with catarrhal, inflammatory conditions of the digestive tract. The following is their formula: ℞. Sulph. depur., 150 grains; sacch. lact., 300 grains. M. Ft. pulv. Half a teaspoonful three times daily.—*Medical Chronicle.*

SULPHO-BENZOATE OF SODA IN THE DRESSING OF WOUNDS.—At a meeting of the Academy of Sciences of Paris, Dr. Heckle read a note on the results obtained by the employment of the sulpho-benzoate of soda in the dressing of wounds. These results have been so satisfactory that the author considers this agent as being far superior to all the antiseptics now in vogue, without having any of the inconveniences inherent to them.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, February 11, 1888.

COMMITMENT OF THE INSANE.

THE successful effort of a sane lady to secure admittance to an asylum for the insane, in this city, through the ordinary method of procedure, has given a renewed interest to the question of the security of the community against improper commitment to asylums under our present laws. The undertaking was undoubtedly a very clever piece of journalistic enterprise, and was very cleverly executed. The result has been, as we anticipated, a crop of measures before the Legislature, to amend the lunacy laws, especially in relation to the procedure of commitment of the insane.

Before discussing the bill now in hand, it may be well to state that the law of commitment of the insane in this State is nearly a transcript of the English law, which has been regarded as a model. It requires that the person shall first be personally examined by two physicians of reputable character, graduates of an incorporated medical college, and who have been at least three years in the actual practice of their profession, such qualifications having been certified to by a judge of a court of record. These physicians fill out blank forms of certificates, stating their reasons for believing the person insane, and before a notary or judge make oath to the correctness of their certificates. These certificates are then presented to a judge of a court of record, who may approve the finding of the physicians, or he may take additional testimony, or he may summon a jury and have a full trial. On the approval of the certificates by the judge the papers are complete, and the person may, within ten days, be confined in an asylum. The procedure is certainly very simple, and proceeds on the principle that the insane are sick people, and require hospital care; that they should be disturbed as little as possible, and that friends are generally very sensitive about giving publicity to the nature of their affections. That the law has worked well in England there is no question, and it has yet to be proved that any harm has befallen an individual during the sixteen years that it has been in operation in this State.

The bill before us, which is now in the committee of the Legislature, proceeds upon an altogether different principle. An insane person is regarded as a criminal, and he is spoken of as the "accused." It provides that a judge of a court of record must issue "a mandate directing the sheriff to summon, within five days, at the county court-house, not less than twenty-four persons qualified to serve as jurors in the courts of records in said county, from whom twelve persons shall be chosen, in manner as petit jurors are chosen for trial of criminal actions, to serve as a jury to try the question of insanity of the accused." The "accused" must have at least five days' notice of the trial, "and such trial shall be conducted, in all respects, as a trial for felony." The "accused" is entitled to be present at the trial, to be defended by counsel, to be accorded reasonable opportunity to prepare for trial, to call witnesses, to challenge jurors, and "to exercise every other right and privilege which is accorded by the constitution and laws of this State to a person indicted for a felony." The trial is to be conducted in behalf of the people, and the district-attorney, or counsel directed by the judge for that purpose, must manage the prosecution. The judge shall also see that the "accused" is provided with good and efficient counsel. If the jury shall find the "accused" to be insane to such degree as to render it unsafe for him to be at large, they shall so specify in their verdict, etc. The remaining provisions of the bill are of similar import.

To one who is familiar with the progress which this State has made, during the century of its existence, in ameliorating the condition of the insane, and in making public provision for their better care and treatment, such a bill as this is a singular anachronism, the more remarkable because it is reported to emanate from a society for the protection of the insane. The old adage, that history repeats itself, is curiously illustrated by the introduction of this bill into the present Legislature. Just one hundred years ago—viz., in 1788—a measure was introduced into the Legislature of this State, the spirit and the essential features of which were the same as this bill. It stands on the statute-book as the first effort in the first Legislature of the State of New York to provide for the insane. It is entitled "An Act for apprehending and punishing disorderly persons," and is an exact transcript from the vagrant laws of England. The following is the original act:

"*Whereas*, There are sometimes persons who, by lunacy or otherwise, are furiously mad, or are so far disordered in their senses that they may be dangerous to be permitted to go abroad; therefore, be it enacted that it shall and may be lawful for any two or more justices of the peace to cause to be apprehended and kept safely locked up in some secure place, and, if such justices shall find it necessary, to be there chained, if the last place of legal settlement be in such city, or in any town within such county."

The law passed by the Legislature of 1788, like the bill before the Legislature, placed the insane in the category of vagrants and criminals, and proceeded against them as persons accused of crime.

It must be presumed that the advocates of this bill are really inspired by humane motives, and believe that they are providing measures by which the sane cannot be committed as insane. But the practical results of such legislation would be that no better safeguards would be provided against the commitment of the sane, while untold hardships would be inflicted upon the insane. It is a matter of history that the verdicts of juries in cases of alleged insanity are reliable only in proportion to the competency of the medical witnesses in each case. Hence the opinions of juries, in themselves, are unimportant, but the competency of medical examiners is all-important. While it is probable that our methods of procedure in commitment might be made more definite and reliable, it is certain that the method proposed in this bill would be a retrograde step of the most serious character.

PYROMANIA.

The extraordinary and unfortunate case of incendiarism in the Hospital for Ruptured and Crippled, in this city, has naturally excited no little interest and comment. For several weeks a series of attempts, one of which was successful, to set fire to the building were made. At last it was discovered that the author of the mischief was a girl of about eleven. She confessed her crime and expressed some sorrow, but was unable to tell why she acted as she had done. According to reports, she was an intelligent and attractive child, and had shown no signs at any time of entertaining malice, or of having criminal propensities. Her mother was reported to be insane.

The case seems to be one of instinctive juvenile mania of Morel. Clinically it belongs to the form of monomanias known as pyromania. This peculiar disorder is known to affect the young more especially, and more often the female than the male sex. It is classified by Emminghaus ("Die psychischen Störungen im Kindesalter") among the anomalies of instinctive feelings. By French writers it would be classed among the monomanias of the degenerate.

Emminghaus states that the fascination for fire, *Sucht nach Feuer*, is peculiar to many children. If of healthy organization, they soon learn its dangers; but if there is defective volitional power, it leads the victims to accidents and even crimes.

Dr. More, in an article upon incendiary monomania, calls attention to the fact that it often occurs among young persons, and cites a case of Henke's: A girl of fourteen, who suffered from nostalgia, twice set fire to the house in which she lived. She said that she was continually possessed with a desire to burn the house, and she had the delusion that a ghost was urging her on to do it.

Livi, cited by Hammond, claims that while incendiarism may be often committed under the influence of delusions, it may also be the result of a morbid instinctive impulse. It is a fact that pyromania is extremely uncommon as an isolated symptom. There are, as a rule, other signs of insanity present.

EXTRA-PERITONEAL INCISIONS IN THE LINEA ALBA FOR PURPOSES OF EXPLORATION.

At the Second Congress of Russian Physicians, Professor Sneguireff, of Moscow, advocated extra-peritoneal incision of the abdominal walls, in various directions, for purposes of examination. Whenever necessary, these incisions were to be supplemented by the performance of ordinary laparotomy.

Not long afterward Bardenheuer, independently, as it would appear, of the Russian surgeon, also described and advocated this method of arriving at an exact diagnosis in otherwise doubtful cases of abdominal disease. According to the recommendations of these surgeons, the incisions should be made laterally in various directions.

In a recent issue of the *Centralblatt für Chirurgie*, Dr. A. v. Gubaroff takes up this subject, but advises the incision to be practised in the median line. The anatomical reasons for this preference he gives as follows: The peritoneum is easily detached at the median line, as well as for a distance of over one inch to either side of it; the elasticity of this membrane is so great that almost the entire abdominal cavity can be explored by palpation in this way. The best results are obtained by employing bimanual palpation, one hand being placed in the incision-wound, and the other in various regions of the abdomen.

The author asserts that by this means the anterior surface of the pancreas, the pylorus, the duodenum, the kidneys and ureters, a large part of the under-surface of the liver, including the gall-bladder, and, in fine, almost every organ contained in the abdominal cavity may be felt. The author agrees with Sneguireff and Bardenheuer in asserting that these incisions and manipulations are quite devoid of danger, and that this method of procedure should constitute the first step of an exploratory laparotomy in the ordinary sense.

It may be well to remember in this connection that Bardenheuer's suggestions have not yet received the sanction of the leading surgeons either in his own country or elsewhere, probably for the excellent reason that the method may not be quite as free from danger as it is claimed, and further, because the average operator of to-day has no hesitation in opening the abdomen for purposes of diagnosis as well as treatment. It seems to us, however, that if extra-peritoneal incision is to be given a trial, the median line is the proper site for its performance.

Death by Electricity.—The full report of the commission appointed to investigate the most humane and practical method of carrying into effect the death-sentence has reached us. It, in a measure, confirms the view expressed by us, that exact experimentation, in order to determine the best practical mode of applying electricity so as to cause death, is wanting. Two experiments are cited, in which dogs were used, and a wire, or iron bit, placed in the mouth for one of the connections. Death was instantaneous, and the action of the heart was at once and permanently stopped. It does not follow from this, or the results of the electrical dog-killing apparatus at Buffalo, that a man, seated in a chair, with a head and foot rest forming the electrodes, would be instantly killed, unless, at least, the head and feet were firmly bound to wet sponges. This seems a somewhat brutal proceeding, and it might seem extremely so with a struggling man or woman. The *Medical Press* says, *à propos* of this subject: "The present condition of electrical science, however, does not inspire confidence. We can put up with an occasional 'wobble' in the electric light, or an occasional delay or error in the despatch of a telegram, but there must be no 'wobbling' when life has to be disposed of."

News of the Week.

An American Physician before a Berlin Society.—Dr. Frank Donaldson, Jr., of Baltimore, recently read a paper, by request, before the Physiological Society of Berlin, "On the Method of Isolating the Mammalian Heart for Experimental Research."

The Virginia State Board of Medical Examiners.—The law regulating by a rigid examination the practice of medicine in Virginia, is said to be in danger of being repealed. According to the *Alexandria Gazette* (January 21st), two bills have been introduced into the Virginia Legislature, one to repeal the law providing the State Board of Medical Examiners, and the other to exempt from passing before this Board graduates of all State medical schools.

We have Itinerant Doctors in this country, but they are, without exception, pestilent quacks. In Roumania, however, doctors are scarce, and an itinerant dispensary has been established, which perambulated through the country last summer and treated nine thousand patients.

Medical Expert Witnesses.—An English judge is said to have laid down from the bench, as recently as the year 1882, the following classification of liars: 1, liars; 2, great liars; 3, scientific witnesses. Apropos of this piece of sagacity, we notice in the *Medical and Surgical Reporter* a reference to a suit for damages on trial in New York. The medical expert for the plaintiff testified that the woman, who had, previous to the accident, been unusually strong and hardy, suffered from concussion of the spine, and that it was only a question of time when she would die of her injuries. The expert for the defence testified that the woman had no disease, that her spine was in its normal condition, and that the only trouble was hysteria. Inasmuch as she fell forward, he held it was impossible for concussion of the spine to occur.—*Medical Age.*

A Spanish Gynecological Congress.—In the month of April next a congress will be held at Madrid under the auspices of the Spanish Gynecological Society. It will comprise three sections—obstetric, gynecological, and one for diseases of children.

A New Anæsthetic: Erythrophlœine.—Dr. Lewin, of Berlin, has examined an arrow-poison called haya, a poison sent to him by Messrs. Christy & Co., and received by them from Africa. The following particulars are gleaned from an article published in the *British and Colonial Druggist.* The poison was found to contain some pieces of sassy-bark, the ordeal poison of the Africans (*Erythrophlœum judiciale*). Dr. Lewin separated an alkaloidal substance, soluble in water, and not reducing Fehling's solution. Having often heard of an arrow-poison which caused insensibility, Dr. Lewin proceeded to ascertain whether the haya-poison could produce anæsthesia of the cornea, and he found that it could, though it was a little longer in developing than from cocaine; it lasted, however, for eight or ten hours, as it gradually faded. The application produced a passing irritation of the conjunctiva. Dr. Lewin suspected that the anæsthetic property came from the *erythrophlœum.* He obtained a two per cent. solution of the hydrochlorate of erythrophlœine, and found that it produced anæsthesia of the cornea, but with considerable irritation. Weaker solutions were non-irritating, but required ten to fifteen minutes for their effect.

The Best Drink is Tea, according to M. Germain Sée. Tea-drinking is increasing in France, the amount consumed having doubled in the last thirty years. Americans are not tea-drinkers, but consume coffee largely. In England the use of tea is being condemned.

A Laryngological Society has been organized in England, and it has already about fifty members, including most of the prominent laryngologists of Great Britain and Ireland.

Abandonment of Homœopathy.—Professor Samuel O. L. Potter, of San Francisco, gives, in *The Lancet,* the following as his reasons for abandoning homœopathy. He says: "I abandoned homœopathy before entering into practice, because my observation of the reception by homœopaths of Dr. C. Wesselhoeft's reproving of carbo-vegetabilis, and Dr. Sherman's work in the "Milwaukee Test" of 1879, proved to me that no crucial drug-experimentation, conducted under scientific safeguards, could meet with any degree of appreciation from the majority of that sect. I was further impressed by finding that ninety-nine out of every hundred so-called homœopathic physicians were in the habit of resorting to regular therapeutics whenever there was any active therapy to be done."

The New York County Medical Society.—In the final report of the County Medical Society's Treasurer, Dr. O. B. Douglas, an interesting table is given, showing that the total receipts of the Society, from the date of its foundation to the year 1879, were $18,838.38. From 1879 to 1886–87, the receipts were $25,517.12. The total membership of the Society is now 974, of whom 605 have paid their dues, and 369 are in arrears.

The Bill for the Improvement of the Condition of the Assistant Surgeons of the Navy has been reported upon favorably by the sub-committee of the Senate Naval Committee, and it is the understanding that it will be so reported to the Senate by the full committee.

A Pension Fund for Nurses and Hospital Officials.—The sum of $100,000 has been subscribed as the beginning of a fund for pensioning nurses and hospital officials in Great Britain. There are, it is said, about twenty-five thousand persons of these classes in that country. The idea of pensioning nurses, etc., is probably a good one. But in this country the pension idea has not a great hold, except so far as soldiers in the late war are concerned. We understand that the feature of the English pension fund is to be, in a measure, that of a mutual provident insurance company. All persons who wish to share the benefits of the fund subscribe a sum of about thirty dollars, and pay certain annual dues. The success of the project is due largely to the energy of Mr. Henry C. Burdett. An association of nurses already exists, so that British nurses seem likely to be well provided for.

Warts Rapidly Disappear under the internal administration of arsenic, according to Dr. B. G. Pullin, in the *Bristol Medico-Chirurgical Review*.

Dr. William E. Vermilye died at Flushing, N. Y., February 2d, aged sixty years. He was a graduate of the University Medical College, and practised for some years in this city.

The Legal Status of Private Hospitals.—A very important decision, if correctly reported, has been recently made by a California court. It is that a private hospital in a populous neighborhood is a nuisance and must be removed.

Marine Hospital Service.—A bill has been introduced into the United States Senate, providing that medical officers of the Marine Hospital Service of the United States shall hereafter be appointed by the President, by and with the advice and consent of the Senate; and no person shall be so appointed until after passing a satisfactory examination in the several branches of medicine, surgery, and hygiene before a board of medical officers of the said service. Said examination shall be conducted according to rules prepared by the Supervising Surgeon-General, and approved by the Secretary of the Treasury and the President.

Hepatic Stimulants.—Dr. George Bird, of London, has recently called attention to the value of calomel, in doses of a tenth of a grain, as a hepatic stimulant, and I have frequently employed it, in the form of the triturates, for the purpose. I believe you obtain from these small doses, given every three or four hours, as good an effect as from a single dose of five or even ten grains, and that without inconvenience to the patient. Podophyllin resin, in doses of a quarter of a grain every four hours, is equally useful.—*Dr. Wm. Murrell.*

Ginger-drinking is said to be greatly on the increase, especially among women. Ginger extracts are used, and the stuff is taken chiefly on account of its alcohol, although some have claimed that ginger itself causes a distinct form of inebriety. The sale of ginger in Maine was at one time so great that it was declared by the courts to be an intoxicant, and placed among the alcoholic drinks prohibited.

National Control of our Maritime Quarantine.—The Committee of the College of Physicians of Philadelphia, appointed to investigate the efficiency of our quarantine arrangements for the exclusion of cholera and other epidemic diseases, reported, some months ago, the very inefficient condition of our maritime quarantine. In a later address the matter is presented at greater length, and the arguments for a national control of quarantine are fully and cogently presented. To secure the passage of a law to this effect the Committee invite the co-operation of the medical profession as a body, and as individuals, to assist in influencing legislation by the following means: "1. The passage of formal resolutions recognizing the necessity of national control of maritime quarantine, and urgently recommending the matter upon the consideration of your representative in Congress. 2. Strenuous efforts to enlist popular sentiment in support of such legislation. 3. The enlistment of the influence of the local medical and public press."

Reports of Societies.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Eighty-second Annual Meeting, held in Albany, February 7, 8, and 9, 1888.

Tuesday, February 7th—First Day—Morning Session.

The Society convened in the court-room in the City Hall, and was called to order at 9.25 o'clock by the President, Dr. Alfred L. Loomis, of New York.

Prayer was offered by Rev. A. V. V. Raymond.

The President delivered his inaugural address, having appointed the following committees:

Committee on Credentials—Dr. James D. Spencer, Dr. O. B. Douglass, Dr. Wm. B. Brown.

Committee on Business—Dr. Frederick A. Castle, New York; Dr. John W. Whitbeck, Rochester; Dr. A. Walter Suiter, Herkimer.

THE PRESIDENT'S INAUGURAL ADDRESS.

The President maintained that each member had a right to present his own views and experience, and to criticise those of others, and even apparently insignificant facts might be worthy of record. But in addition to its scientific work, this Society must attend to the welfare of the profession as a whole, and to that of every member of it. Up to 1880 there was

NO LEGAL PROVISION AGAINST QUACKERY;

but now, by the efforts of the Society, a law had been passed under which the New York County Society had prosecuted eighty-five individuals, and had had sixty-five convicted and punished by fines and imprisonment. The President recommended that other county societies follow this example.

In 1885 the Society had recommended a bill for a

BOARD OF MEDICAL EXAMINERS,

and a bill had been suggested which was a compromise with some who opposed the views of the Society. The President had made particular personal efforts for this bill, and it was almost passed. Now the time is favorable for passing this bill, or some similar measure, and the President recommended further effort in that direction.

Lawyers very often fail to treat

MEDICAL EXPERTS,

giving evidence in trials in a sympathetic spirit, and it would tend to greatly improve the status of medical expert testimony if some arrangement could be made by which the medical experts would have the right to ask questions for themselves. The President recommended that some attempt should be made to alter the law accordingly.

THE TREATMENT OF THE INSANE

is a very important subject, which needs investigation and improvement in this State, especially in regard to the county asylums, and the President recommended that the Society take up the subject.

AN ENLARGEMENT OF THE SOCIETY

had been urged by many, but it was felt by the President that it was not advisable to alter the organization of the Society.

This Society should have some voice in the

REVISION OF THE UNITED STATES PHARMACOPŒIA,

and it would be well to appoint a committee for that object.

After alluding to the prominent members of the Society who had died during the preceding year, he would suggest that the President be empowered to appoint a committee to prepare

OBITUARIES OF DECEASED MEMBERS,

which should be inserted in the "Transactions" of each year.

Dr. William C. Wey, of Elmira, Dr. Willis E. Ford, of Utica, and Dr. Daniel Lewis, of New York, were appointed a committee to consider and report upon the President's inaugural address.

Dr. William C. Wey moved that the by-laws be suspended and all names of candidates for permanent membership be referred to the Committee on Nominations. Seconded and carried. The following were made members by invitation: Dr. William Pepper, of Philadelphia; Dr. Francis Bacon, of New Haven (President Connecticut State Society); Dr. Edward R. Campbell, of Bellows Falls (President Vermont State Society); Dr. John W. Ward, Trenton (President New Jersey State Society); Dr. A. P. Grinnell, Burlington, Vt.; Dr. H. P. Walcott (Massachusetts State Board of Health); D. J. C. Irish, Lowell, Mass. (Delegate Massachusetts State Society); Dr. C. C. Bartholomew and Dr. W. S. Dailey, of Ogdensburg, N. Y.; Dr. Joseph O'Dwyer, New York City; Dr. John H. Jewett, Canandaigua; Dr. Daniel S. Burr, Binghamton; also Dr. J. D. Bryant, Dr. W. M. Polk, Dr. J. H. Girdner, Dr. W. M. Thomson, Dr. C. C. Lee, Dr. W. H. Draper, Dr. L. A. Stimson, Dr. R. F. Weir, Dr. B. F. Curtis, and Dr. F. H. Bosworth, of New York City; Dr. E. F. Brush, of Mount Vernon; and Dr. Roswell Park, of Buffalo.

Dr. William C. Wey, of Elmira, reported for the Committee on By-laws, that the

BY-LAWS OF THE WESTCHESTER COUNTY SOCIETY

had been investigated by them, and found in accordance with the laws of this Society, and that they recommend the admission of that County Society to the State Society. It was moved and carried that the report and recommendation of the Committee be adopted.

The Committee on Legislation reported, by Dr. Laurence Johnson, that the bill for

THE REGISTRATION OF MEDICAL PRACTITIONERS

had become a law, the full text of which is given in the "Transactions" of the Society for 1887. W. A. Purrington, Esq., was employed as counsel for the Society to forward the passage of this bill, and the Committee presented a request for the payment of legal expenses. The report was adopted, and it was voted that the expenses be paid as requested.

The Society was then divided by the President into a Medical and a Surgical Section.

SURGICAL SECTION.

Dr. A. M. Phelps, of New York, President of the Section, in the chair.

The Section was called to order at 10.10 o'clock.

Dr. Henry G. Piffard, of New York, read a paper entitled

NOTE ON THE TREATMENT OF LUPUS.

Years ago the speaker had urged energetic measures for the treatment of lupus—excisions, curetting, and cauterization. But in some cases this is impossible, and milder means must be employed; yet green soap, carbolic acid, bichloride of mercury, and other agents had not been satisfactory. For the last ten months he had employed local applications of

HYDRONAPHTHOL

in a ten per cent. solution in liquid gutta percha, or in a twenty per cent. rubber plaster. He had treated six cases with these means—and one case had not relapsed; the others had relapsed, as they will under any method. The solution was applied daily for a week, when a crust formed. The plaster was applied and allowed to remain on for one week. The applications had to be made three or four times. The pain was slight. Dr. Piffard considered the method of treatment superior to any other for such cases.

Dr. P. A. Morrow read a paper on the

TREATMENT OF LUPUS,

advocating treatment by scarification. Treatment of this disease should be early and energetic, but it must avoid disfigurement (especially in the usual situation of lupus—upon the face), and leave a smooth, superficial, movable, and non-contractile cicatrix. Chemical cauterization causes disfiguring cicatrices. Galvano-cautery, applied by the linear or the punctate method, is better. Curetting is not good, and excision makes a disfiguring scar. The best method of treatment is that by linear scarification, which acts by dividing the small vessels. Pain is generally not great—if it should be, local anæsthesia by freezing or the use of cocaine may be used.

Dr. T. Fox, of New York, said that for extensive patches all methods of treatment which necessitate ulceration must be avoided on account of the disfiguration which followed. For very small nodules fine dental instruments are very good as curettes. For extensive patches he knew of nothing so good as the local application of hydronaphthol in rubber plaster, or, still better, in an ointment with sulpholeate of soda, which does not repel water.

Dr. Piffard could not agree with Dr. Morrow in regard to excision, which he considered the best method for small patches—just as it is for epithelioma. Nor did he like the actual cautery, except to be used after a thorough curetting, and even then the solid pencil of nitrate of silver was as good. Some cases do not respond to any treatment whatever.

Dr. Sherwell, of Kings County, has found pyrogallol an excellent local application.

Dr. Morrow had not tried hydronaphthol, but thought no agent had a selective action upon lupus.

A paper by Dr. O. D. Pomeroy, on

SOME POINTS IN THE DIFFERENTIAL DIAGNOSIS OF DISEASES OF THE EAR BY THE USE OF THE TUNING-FORK,

was read by title.

Dr. Hermann Knapp then read a paper on the

EXTRACTION OF CATARACT WITHOUT IRIDECTOMY,

with a report of one hundred successive cases. The speaker said that the revival of the classical flap-operation for the extraction of cataract would be hopeless without the assistance of cocaine, eserine, and the antiseptic method. These prevented the two great drawbacks of the old method—prolapse of the iris and suppuration, which had destroyed innumerable eyes. The combination of

IRIDECTOMY WITH EXTRACTION OF CATARACT

by Graefe had reduced the loss of eyes by one-half. After describing the method of operation in the new operation, Dr. Knapp stated that in the present series of

ONE HUNDRED SIMPLE EXTRACTIONS

prolapse of the iris had occurred in 11 cases; all, with one exception, regained good sight. Suppuration occurred in one case, the only failure of the series. It was produced by secondary infection in a patient suffering from cystitis and diabetes. The visual results in this series had been good beyond precedent, for ninety-five per cent. of the patients regained good vision (nineteen per cent. had V. = $\frac{20}{20}$); four per cent. moderately good; one operation failed. Dr. Knapp felt sure that the high rate of visual acuteness was largely due to the subsequent discission of the capsule—an operation free from danger, which he performed in the majority of the cases.

Dr. David Webster, of New York, then reported a case of

FATAL MENINGITIS CONSECUTIVE TO OPERATION FOR EXTRACTION OF CATARACT

caused by panophthalmitis. The operation was done with the assistance of cocaine, and without accident. On the second day the patient showed symptoms of dementia, tearing off his dressings. On the fourth day chemosis set in, and on the eighth day panophthalmitis was well marked. There were symptoms of meningitis upon the twelfth day, and the patient died a week later. So far as the reporter knew, this was a unique case.

Dr. D. B. St. John Roosa, of New York, said that no one had done more than the author of the paper on extraction of cataract to advance the technique of that operation. He felt, however, that each case had a particular method suitable to it, and careful selection should be made. Yet the method without iridectomy was his favorite also, and he had himself invented a modification of that operation. He had, however, been content with a vision of V. = $\frac{20}{40}$, and was unwilling to increase the danger of an operation in an attempt to improve on that. Heredity he considered an important factor in the etiology of the disease ; in one family he knew of seven cases, in another of four. As to antisepsis, he considered it unnecessary—only cleanliness.

Dr. Knapp had never known of such a case as the one of meningitis just reported. He thought the method introduced by the last speaker excellent for some cases, but no one method suited all.

Dr. Webster liked the simple extraction for suitable cases, and in a series of 12 cases had had prolapse of the iris in only one—in which he had not employed eserine.

Dr. J. H. Glass, of Utica, had seen panophthalmitis follow in two cases of simple extraction of cataract followed by a secondary iridectomy. He considered antisepsis very essential.

Dr. Fessenden N. Otis, of New York, then gave a demonstration of

NEW URETHRAL AND BLADDER INSTRUMENTS,

including an electric endoscope and an improved aspirator for litholapaxy. He stated that in Bigelow's aspirator the sieve became so clogged with débris and blood as to be useless, as was shown by a photograph taken of one after an operation. He desired to state that he had lately examined two cases, sixteen and thirteen years after he had performed internal urethrotomy, and found not the least relapse.

A paper by Dr. S. Wight, of Brooklyn, on

A CASE OF FORWARD DISLOCATION OF THE ULNA,

was read by title in the absence of the author.

Dr. W. B. De Garmo, of New York, read a paper upon the

RESULTS OF MECHANICAL TREATMENT OF HERNIA,

founded upon the observation of 1,000 cases. Eighteen were irreducible, and yet in 7 of these recovery was obtained. It is true that hernia does not recur as frequently as has been supposed after mechanical treatment, or after operation for radical cure, for the statistics of the latter deal only with unusually severe cases, but the rate of mortality after these operations is still so much higher than that of the operation for strangulation, that it does not seem justifiable. About twenty-five per cent. recovered under mechanical treatment so as to go without a truss, as shown by examination after six months.

Dr. F. H. Potter, of Buffalo, read a paper upon

GALVANO-PUNCTURE FOR ENLARGED TONSILS,

in which a sharp-pointed electrode was plunged into the tonsil twice, at frequent sittings. The method avoided the dangers of hemorrhage, and was not painful.

Dr. Sherwell, of Kings, had never met a case of hemorrhage after tonsillotomy, and thought there was some danger of it after this method of galvano-puncture.

Dr. Lewis S. Pilcher, of Brooklyn, had independently hit upon the same method and had found it very useful, especially in timid patients, the circuit not being closed until the instrument was in the mouth.

Dr. Clarence C. Rice, of New York, had found the method tedious, although useful in some cases in adults. In children hemorrhage is not found after tonsillotomy, and he preferred that operation. For adults he preferred the galvano-caustic snare.

The Section then adjourned.

MEDICAL SECTION.

Dr. Alfred L. Loomis, the President, called the Section to order.

Dr. H. Kretzschmar, of Brooklyn, read a paper upon the

USE OF ALCOHOL IN CERTAIN FORMS OF FEVER.

Alcohol was in certain cases a most important means of preserving life. It did not stand between food and medicine, but combined the properties of both. The amount to be given, and the frequency of administration must be carefully and exactly prescribed. It was the prince of antiseptics, and the best remedy we possess in diphtheria, dissolving the membrane, reducing the temperature, and calming the pulse.

Dr. Frederick A. Castle, of New York, put each dose of the stimulant in a separate small bottle to avoid evaporation.

Dr. J. Leonard Corning, of New York, read a paper on some

NEURO-THERAPEUTIC MEMORANDA,

in which he described a method of applying medicaments directly to the spinal cord, in certain tetanic and painful conditions, by the hypodermic syringe. He had employed strychnine in this way. The speaker also described the benefit he had derived from the prolonged use of faradism in paralysis of the face due to rheumatism.

Dr. Willis E. Ford, of Utica, read a paper on

REFLEX NERVOUS DISTURBANCES,

describing some cases treated both by removal of the exciting peripheral cause, and by constitutional measures. Thus, chorea, epilepsy, and masturbation were found to be caused by diseased ovaries and tubes, phimosis, and urethral caruncle ; and although the removal of the cause failed to cure, the addition of bromides was followed by recovery.

Dr. E. D. Fisher thought in all chronic cases it was necessary to treat the central lesion produced by the long continuance of the irritation, as well as to remove the cause of irritation itself.

Dr. J. L. Corning thought that many ovaries had been removed for so-called reflex irritation, where the trouble was really a central lesion.

Dr. Andrew F. Currier, of New York, read a paper on

THE INFLUENCE OF OBESITY IN YOUNG WOMEN UPON THE MENSTRUAL AND REPRODUCTIVE FUNCTIONS.

He found the law that, when obesity occurred in multipara reproduction ceased, as a mark of the exhausted forces of the system. In unmarried women it marked only a diversion of the vital forces, and was curable. In the latter cases it was accompanied by pain, and constipation was generally present. The causes were hereditary disposition, luxurious habits, over-indulgence in starchy and fatty foods ; and the treatment was addressed to the correction of these.

Dr. Francke H. Bosworth, of New York, read a paper on the

ACTION OF CAUSTIC APPLICATIONS ON THE NASAL MUCOUS MEMBRANE.

Chemical agents did not differ from the actual cautery. He preferred chromic acid, and with this agent pinned the mucous membrane at exactly the desired points.

Dr. Edward F. Brush, of Mt. Vernon, read a paper on

BOVINE TUBERCULOSIS.

He commenced by remarking that after all discussion respecting tubercle, we are confronted with the questions: "Is bacillary tuberculosis conveyed to the human race from animals affected with this disease?" He pointed out that, of all domesticated animals, the bovines were the most subject to tuberculosis; that, indeed, the human and the bovine races were pre-eminently tubercular.

The percentage of cattle infected with tuberculosis in England is placed at five per cent., and increases till, in some of the thorough-bred Jersey herds of the Northern States, Professor R. A. McLean declares that twenty per cent. are so affected.

The reason why more human beings are not infected is, that the normal temperature in the human race is so much lower than in the bovine, that the germ will not grow till the temperature is raised in the former to the degree naturally existing in the latter, namely, 101° to 103° F.

The same rule holds, also, in localized tubercular deposits, where the temperature is raised by reason of injury to a degree permitting the growth of the bacillus. The cultivation of tuberculosis in other animals confirms this view, as the resistance to tuberculosis decreases in proportion as the natural temperature of the animal increases. Thus, in the dog, with the lowest temperature, resistance is good; while in the common fowl, with the highest temperature, resistance is *nil.*

The Section then adjourned.

First Day—Afternoon Session.

The President, Dr. A. L. Loomis, in the Chair.

A COMMITTEE ON NOMINATIONS

was appointed by The President, consisting of Dr. Henry G. Piffard, New York, for the Society; Dr. A. M. Phelps, New York, for the First District; Dr. L. H. Miller, Brewster, Second District; Dr. A. Vanderveer, Albany, Third District; Dr. C. W. Hamlin, Middleville, Fourth District; Dr. George Seymour, Utica, Fifth District; Dr. W. C. Wey, Elmira, Sixth District; Dr. J. L. Heffron, Syracuse, Seventh District; Dr. J. O. Roe, Rochester, Eighth District.

Dr. Clarence C. Rice, of New York, read a paper on the

REMOVAL OF LARYNGEAL GROWTHS

with O'Dwyer's snare, in conjunction with intubation of the larynx, in the case of a child in intense dyspnœa, the intubation having been done first to save its life. The tube was removed and the growths extirpated with the snare—a wire loop with a cutting edge on the interior.

ACUTE BRIGHT'S DISEASE.

Dr. Francis Delafield, of New York, opened the discussion with a paper upon its

PATHOLOGY AND CLINICAL HISTORY (see p. 151).

Dr. A. Jacobi, of New York, followed with a paper upon

ACUTE BRIGHT'S DISEASE IN CHILDREN.

The speaker stated that many cases run an insidious course, the temperature being low, and appearing lower than it is, for the incipient œdema lowers the surface temperature, and even the temperature taken in the axilla by the thermometer is deceptive. Œdema and dyspnœa are the first marked symptoms—œdema of the pericardium, lungs, glottis, and brain. Increase of blood-pressure causes cerebral symptoms and cardiac trouble. Diarrhœa is also found. Sometimes the symptoms appear very suddenly—such as a sudden loss of sight. The urine contains albumen; although this is occasionally absent, and then the urine is scanty, of low specific gravity, containing very little urea. Casts and epithelia are found.

One of the causes of acute nephritis in the adult is wanting in children, for the arteries are not degenerated. The most frequent cause is the poison circulating in the blood in the

ACUTE INFECTIOUS DISEASES,

especially frequent in scarlatina and diphtheria, but very rare in typhoid fever, probably because its course is not so acute and the range of temperature during it being lower. Rheumatism is for the same reason also less frequently a cause, even when endocarditis is present. The speaker had seen it follow purpura, renal hemorrhage being one of the symptoms, and it also complicates croupous pneumonia, and even catarrhal pneumonia and bronchitis. Irritant drugs cause it, and especially chlorate of potash.

EXPOSURE TO COLD

is a very frequent cause, and in these cases suppression of urine is a common symptom, or hæmaturia, or hæmoglobinuria, which may return with every fresh exposure. As to the

PROGNOSIS

in typhoid fever, it is sometimes bad, even fatal, but generally the patient recovers entirely. In scarlatina, chronic nephritis may result, or uræmia may set in early and cause death. In diphtheria, on account of the difference in the poison, the lower range of temperature, and the weak heart, render hæmaturia not so common. In some cases of diphtheria copious albuminuria may even be followed by improvement in the general condition.

Dr. D. B. St. John Roosa read a paper on

THE PATHOLOGICAL CHANGES IN THE EYE IN ACUTE BRIGHT'S DISEASE,

stating that nothing new of importance had been discovered in this branch of the subject, and the ophthalmoscope revealed nothing, the case being very different from the clinically similar sudden loss of vision from poisoning by drugs. Cases of amaurosis from nephritis generally recover. The action of the pupil remains normal in some cases—probably because the nerve-centres are not affected beyond the corpora quadrigemina.

Dr. Richard Van Santvoord, of New York, followed with a paper upon the

CARDIAC CHANGES IN BRIGHT'S DISEASE.

Dr Van Santvoord stated that it had always been recognized that there was a causal connection between the condition of the heart and nephritis. Dilatation of the heart, or hypertrophy accompanied by dilatation, is sometimes caused by scarlatinal nephritis, the changes being made evident by the pulse and the development of a murmur; but autopsy generally shows very little alteration in the tissues.

Dr. Fordyce Barker, of New York, discussed

ACUTE BRIGHT'S DISEASE IN THE PUERPERAL STATE (see page 155).

Dr. William S. Ely, of Rochester, discussed the

TREATMENT OF BRIGHT'S DISEASE,

saying that there is no specific. The kidneys must be given rest, transferring their functions to the bowels and the skin. Every case must be treated according to its individual indications.

Dr. Eugene Beach, of Gloversville, and **Dr. Joseph Peso**, also joined in the discussion.

Dr. Delafield then closed the discussion.

Dr. J. O'Dwyer then exhibited some new instruments and some pathological specimens showing the results of

INTUBATION OF THE LARYNX.

Intubation has been done on adults for erysipelas of the larynx, to aid in the removal of a tracheotomy tube, for syphilis and tuberculosis, for diphtheria, and for stricture. When a tracheal fistula exists, the latter must be sealed, because the secretions dry so readily upon the cannula.

Dr. Hale read a paper on the

RESULTS OF INTUBATION

in a series of several cases, in one of which the removal of the cannula was very difficult.

First Day—Evening Session.

The President, Dr. A. L. Loomis, in the Chair.

Dr. A. Vanderveer, of Albany, read a paper upon the

HISTORY OF ABDOMINAL SURGERY IN ALBANY,

with a summary of seventy five cases of laparotomy performed for a great variety of conditions.

DISCUSSION ON SALPINGITIS.

Dr. William Goodell, of Philadelphia, and **Dr. Paul F. Mundé**, of New York, who were to have taken part in the discussion of the pathology and symptoms, sent word that they would be unable to be present.

Dr. Charles Carroll Lee, of New York, discussed the

ETIOLOGY,

stating that inflammation of the tubes was similar to that of the uterus, for both developed from the same tissues, the ducts of Müller. The etiology was not well understood, because it was impossible to make a diagnosis until very late in the disease, as the early stages were apt to run their course without symptoms. It is generally secondary to endometritis, and of two forms, catarrhal and parenchymatous. Exposure to cold and repressed menstruation were the usual causes in the primary form.

Dr. George Seymour, of Utica, discussed the

PROGNOSIS.

The tendency is toward recovery in the majority of the cases, but the sequelæ are often serious, and sometimes even fatal. Many cases can be cured without operation.

Dr. Frederick A. Castle, of New York, discussed the

MEDICAL TREATMENT.

The speaker said that generally the disease was not recognized until it was beyond the reach of treatment. The gonorrhœal variety was the least amenable to treatment. Absence of sexual excitement, saline purgatives, enemata of hot water, and arterial sedatives were indicated. Massage had been advised, but was dangerous, for pus might be thus carried into the peritoneal cavity.

Dr. William M. Polk, of New York, then discussed the

SURGICAL TREATMENT.

He said that in pyo-, hæmato-, or hydrosalpinx the only treatment was removal, as also in tuberculosis. In parenchymatous salpingitis the walls were so thickened that the tube was practically destroyed, and as we do not know whether this will end in resolution, we must also remove them. When only one tube is diseased we must remove both tubes, unless we can prove that there is no endometritis, otherwise inflammation will be sure to develop there also.

SHOULD THE TUBES BE REMOVED FOR CATARRHAL INFLAMMATION?

The speaker thought not, for absolute recovery is possible. When there are adhesions in these cases which cause symptoms, it will be well to perform laparotomy and break them up—a much safer proceeding than attempting to do so by massage.

Dr. W. Gill Wylie, of New York, discussed

THE RESULTS OF OPERATIVE TREATMENT,

giving some results from his own work, and concluding that operative interference was not very dangerous.

Dr. A. Vanderveer, of Albany, closed the discussion, saying that removal, and removal close to the uterus, was the only method of treatment. Care must be taken not to promise immediate results from operation.

Dr. C. C. Lee, of New York, read a paper on

ALEXANDER'S OPERATION IN COMPLETE PROCIDENTIA OF THE WOMB,

stating that, out of a score of times in which he had performed the operation, he had done it three times for procidentia. Contrary to the belief of many, he had found the operation curative.

Dr. W. Potter, of Buffalo, then read a paper upon the

TREATMENT OF PELVIC INFLAMMATIONS, AND THE MANAGEMENT OF THEIR RESIDUES

by local applications, tampons, and removal of pus.

Dr. William M. Polk, of New York, read a paper on

VAGINAL HYSTERECTOMY,

with a report of eight cases. The mortality of this operation is about twenty-five per cent., and is much better than that if only the cases of the best operators are included. The results as to recurrence are satisfactory and improving. Of the eight cases, two died from the operation, and two had recurrence within a year.

The Society then adjourned.

Wednesday, February 8th—Second Day—Morning Session.

The President, Dr. A. L. Loomis, in the Chair.

The Society was called to order at 9.30 o'clock, when prayer was offered by the **Rev. Walter D. Nicholas**.

The minutes of the preceding meeting were read and accepted.

The following names were added to the list of invited guests: Dr. C. M. Lefler, Gloversville; Drs. W. C. Marselius, S. R. Morrow, F. M. Trego, Robert Babcock, W. G. McDonald, R. D. Craig, Albany; Dr. J. H. Girdner, New York.

The Treasurer, **Dr. Charles H. Porter**, of Albany, then read his report, which was adopted on motion.

Dr. Porter then reported on the Merritt H. Cash Prize Fund.

Dr. William C. Wey, of Elmira, reported on behalf of the Committee on By-Laws, that they advised the adoption of the President's suggestion, not to admit as delegates the representatives of unchartered medical societies. The report was adopted.

Dr. Wey then reported for the Committee on the President's Address, recommending that the bill in regard to a State board of medical examiners be referred to the Committee on Legislation, with instructions to urge its adoption upon the Assembly. The suggestions as to expert testimony to be referred to the same committee, with instructions to report. The questions of the treatment of the insane and national quarantine to be referred to special committees to report at this meeting. That the recommendation not to admit delegates of voluntary unchartered medical societies as members of this Society be approved. That a committee be appointed to consider the revision of the United States Pharmacopœia, and report in 1890. Finally, that a committee be appointed to prepare biographical notices of deceased members for the Transactions.

The report was adopted.

The Secretary, Dr. W. Manlius Smith, read a communication from the Philadelphia Medical Society, concerning national quarantine—already considered; and from the Georgia Medical Society, urging action to secure the removal of customs duties on drugs and surgical instruments. Referred to Committee on Legislation.

Dr. D. B. St. John Roosa moved that the New York Polyclinic and the New York Post-Graduate Medical School be authorized to send one delegate each to this Society, subject to the regulations with regard to delegates from medical colleges. The resolution was adopted.

Letters were then read by Dr. J. W. Whitbeck, of Rochester, for the Business Committee, from the presidents of several State medical societies, regretting their inability to be present.

The President then asked the Society to decide whether it would remain in one body or divide into sections.

Dr. Roosa moved that there should be no division. Carried.

Dr. William H. Thomson, of New York, then read a paper on the distinction between

FUNCTIONAL AND ORGANIC DISEASE OF THE NERVOUS SYSTEM.

The speaker said that probably we shall never find any lesions for true functional disorders, any more than for a fit of anger. These disorders are marked by total intermissions, which are never found in true organic disease, although the latter may have great remissions. Functional diseases are always peripheral, never central, although the centres may be affected secondarily. Before organic changes in the central organs take place, the latter may be rendered unusually unstable. Treatment should accordingly be directed to removing the peripheral irritation.

Dr. D. B. St. John Roosa, of New York, referred to a case of paralysis of the third cranial nerve, which was entirely intermittent for two years, and then became permanent, the cause being supposed to be a tumor pressing on the nerves, first only in congestion, and then by its growth. Was not this an organic disease?

Dr. Thomson replied that in the intermittent stage of the symptoms the tumor was, in fact, only a peripheral irritant, and there was no true organic lesion until the constant pressure produced the permanent changes.

Dr. A. H. Smith, of New York, inquired why ipecac could produce asthma in some persons if that was really a peripheral disease.

Dr. Thomson replied that that was the point he wished to emphasize—that such idiosyncrasies were due to personal peculiarities of the peripheral nerves, and not to the central organs.

Dr. William H. Draper, of New York, read a paper on the

DIETETIC TREATMENT OF THE GOUTY DIATHESIS,

in which he stated that gout was usually considered due to over-indulgence in nitrogenous food and alcohol. But it is found in herbivora also, and later investigations show that for out-of-door muscular exertion the best diet is one composed of carbo-hydrates, while sedentary brain-workers require a nutritious albuminous diet. Gouty persons have an incapacity to digest carbo-hydrates. The treatment suggested was limitation of starch and sugar in the diet, exclusion of wine and beer (if necessary to give alcohol, dilute spirits are to be prescribed), exclusion of fruits, and increase of exercise out of doors.

Dr. Francis Bacon, of New Haven, President of the Connecticut State Society, was introduced.

Dr. E. V. Stoddard, of Rochester, read a report from the Committee on Hygiene, recommending certain alterations in the organization of the local boards of health necessary to increase their efficiency; legislation to prevent the sale of nursing-bottles with long tubes, and of canned vegetables colored with salts of copper. The report was accepted on motion.

Dr. Joseph D. Bryant, of New York, read a paper on the treatment of

PENETRATING GUNSHOT WOUNDS OF THE CRANIUM.

Hemorrhage should be stopped, depressed fragments of bone and all foreign bodies removed, and the wounds thoroughly drained. Statistics show that of sixty-six cases in which the bullet was removed the mortality was forty per cent., while in one hundred and seventy cases it was fifty-seven per cent. Of the recoveries when the bullet was removed the recovery was complete in forty-one per cent., while when the bullet was not removed it was complete in only twenty per cent.

THE BALL SHOULD BE REMOVED

immediately when its situation could be found, but no operation should be made to search for a bullet in an unknown situation. A large, light, rigid probe must be used, and passed without force, best in such a way that the force of gravity will make it enter the bullet-wound. The ball is to be removed by a counter-opening when it lies against the opposite side of the skull, and such an opening will admit of search for and removal of the ball if it has been deflected, and also for

THROUGH DRAINAGE.

Dr. Bryant described an original method for locating the distal end of a probe passed through a bullet-wound, and recommended the telephonic probe very highly. Horsehair drainage is excellent for wounds entirely penetrating the cranium, and sometimes irrigation.

Dr. John H. Girdner, of New York, then gave a demonstration of the

INDUCTION BALANCE AND TELEPHONIC PROBE

—the former for locating a ball without contact with it, the latter for recognizing it when touched.

Dr. A. Ross Mathewson, of Brooklyn, then read a paper on a case of recovery after an

EXTENSIVE COMPOUND FRACTURE OF THE SKULL,

with considerable loss of brain-substance and complicating fungus cerebri. The fracture occurred in a lad whose head was crushed by a horse's hoof stepping upon it. The patient was shown to the Society.

Dr. Henry Flood, of Elmira, read a paper on

DEPRESSED FRACTURES OF THE SKULL,

stating that in many experiments upon the cadaver he had failed in producing a depression of the external table without depression of the internal table.

Dr. Glass, of Utica, related a case in which a ball had been located but not removed, and in which there were no marked symptoms, and asked if an operation was indicated.

Dr. Bryant replied that in such a case the ball should be allowed to remain, unless symptoms or the induction balance gave evidence that the ball had begun to change its position, when it should be removed.

Dr. Charles Stover, of Amsterdam, then read a paper on the interdependence of

LOCAL, STATE, AND NATIONAL HEALTH BOARDS,

with a plea for their unification. Statistics showed that health boards diminished the death-rate; but combined action was absolutely necessary for success.

The President appointed a Committee on the Care of the Insane, consisting of Dr. A. Jacobi, New York; Dr. W. E. Ford, Utica, and Dr. C. R. Agnew, New York. Also a Committee on National Quarantine, of Dr. Daniel Lewis, New York; Dr. Charles Stover, Amsterdam, Dr. E. V. Stoddard, Rochester. Also a Committee on the Revision of the Pharmacopœia, of Dr. F. A. Castle, New York; Dr. Laurence Johnson, New York, and Dr. E. V. Stoddard, Rochester.

Dr. O. J. Welsey, Broome County; Dr. W. B. La Moure, Albany; Dr. L. Balch, Albany; Dr. W. Rider, Rochester; Dr. L. H. Hills, Broome County, and Dr. E. Sill, Jefferson County, were made invited guests.

The session then closed.

Second Day—Afternoon Session.

The President, Dr. A. L. Loomis, in the Chair.

The meeting was called to order at 2.40 o'clock.

Dr. A. S. Hickey, of Auburn, read a paper upon a case of

PERSISTENT VOMITING OF PREGNANCY

with melancholia, successfully treated by continued rectal alimentation.

Dr. R. Jeffery, of Brooklyn, presented a portable storage battery.

Dr. A. Walter Suiter, of Herkimer, read a paper on the

DISPOSAL OF DEAD BODIES,

warning against embalming by an undertaker, which might conceal the evidence of a crime.

Dr. W. Manlius Smith, of Syracuse, moved that the question presented in this paper be referred to the Committee on Legislation. Carried.

Dr. William C. Wey moved that members who had served for two years previous to the passage of the new by-law be eligible to election as permanent members. Adopted.

DISCUSSION ON INTESTINAL OBSTRUCTION.

Dr. Lewis A. Stimson, of New York, read a paper upon the

PATHOLOGY AND SYMPTOMS.

After enumerating the various causes of acute intestinal obstruction, the speaker pointed out the symptoms which accompanied each. In fifty per cent. of the cases of subacute and acute intussusception, a tumor can be felt in the abdomen; the less acute the case, the more difficult the diagnosis. Even in stricture there may be no previous symptoms, as in one case of stricture in the colon, so close that an appleseed was caught and obstructed it, with the result of death in a few hours.

STERCORACEOUS VOMITING

was not always a sign that the matter came from the large intestine, for the contents of the ileum acquire a fæcal odor. All cases may be divided into those in which nothing but operation can give relief, and those in which relief may be spontaneous. Almost the only cases of the latter class are intussusception and stricture of the large intestine, both of which have peculiar symptoms, and are not impossible of diagnosis.

Dr. R. F. Weir, of New York, remarked that surgery could save something over thirty per cent. of these cases. Could any of the physicians give us an idea of how many cases recovered under medical treatment?

Dr. L. A. Stimson moved that the President appoint a committee to collect and investigate as many cases as possible of recovery without operation which were known to members of the Society. The motion was carried.

Dr. William C. Wey, of Elmira, discussed the question,

HOW LONG SHALL THESE CASES BE TREATED MEDICALLY?

Desperate cases do recover, said the speaker, and in confirmation he briefly related two cases in his own practice, with fæcal vomiting and commencing collapse. He would say that if symptoms do not improve very soon, an operation is indicated. In one case in which he had operated he found a band, but gangrene had already occurred and collapse was present, and the case terminated fatally.

Dr. Simmons, of Utica, had seen two desperate cases recover without operation, in one of which preparations had been made to operate.

Dr. Albert Vanderveer, of Albany, discussed the question,

WHEN SHOULD OPERATIVE MEASURES BE RESORTED TO?

The speaker said that he was very anxious to know what to do in such cases as the following: A man, twenty years of age, had an acute attack of colic, supposed to be due to lead, which was not relieved by drugs, and ended in death in seventy-two hours. Early operation was necessary. Only this morning he had operated in a case in which he feared that the operation was too late—a man, thirty-three years of age, last movement of bowels five days ago, vomited green materials two days ago, sudden aggravation of symptoms yesterday; operation, stricture of gut found, probably cancerous, resected. The specimen was shown.

Dr. Arpad Gerster, of New York, remarked that the only way to gain knowledge upon this subject, and to be able to make an early diagnosis, was to carefully observe every case of ordinary colic, even in its early stages. Palpation thus made will often discover a tumor in the abdomen. Tympanites soon develops, and then operation is difficult or impossible. Many cases will always remain obscure.

Dr. R. F. Weir remarked that no time should be lost in endeavoring to ascertain the exact cause of the obstruction, for this

REFINEMENT OF DIAGNOSIS

will generally be impossible. The important point is to determine whether or not obstruction really exists. Among all the cases subjected to operation, the existence of some cause, irremediable in any other way, has been almost invariably discovered; so that every successive operation renders the surgeon less afraid of operating unnecessarily. It is time that some of this confidence should also be imparted to the physician. In regard to spinach-green vomited material, he would say that it is not to be assumed as a proof of the existence of peritonitis—and there was no peritonitis in Dr. Vanderveer's case. As to the

PROPER TIME FOR OPERATION,

he felt, for the present, inclined to say that, if obstinate constipation, pain, and vomiting had existed for forty-eight hours, laparotomy should be performed at once.

Dr. W. Gill Wylie, of New York, had lately seen two cases of perityphlitis with very latent symptoms, and thought that in every abdominal disease it was necessary to operate very early, before symptoms were marked.

Dr. I. N. Goff, of Cazenovia, was anxious to learn some means of making a reliable early diagnosis, for in the country it was no small matter to bring a surgeon a long distance to a case in vain. He had seen a case of recovery from intussusception by sloughing, in an adult.

Dr. William S. Ely, of Rochester, remarked that, according to Dr. Weir's remarks, peritonitis was in every case a surgical, as distinguished from a medical disease.

Dr. Weir replied that such was the fact—traumatic peritonitis being very rare.

Dr. Roswell Park, of Buffalo, then discussed the

CHOICE OF OPERATIONS.

The speaker remarked that the presence of a tumor in the abdomen was said to indicate the necessity for laparotomy; but, in one such case, he had opened the abdomen and found a malignant growth in the pelvis—an artificial anus was made, and gave temporary relief. Authorities differ upon the choice of operations—thus, Treves, Kümmell, Le Dentu, Terrier, and Trélat, favor laparotomy; while Madelung, Schede, Verneuil, Le Fort, and Rochet favor enterostomy. Rydygier holds that obstruction due to the pressure of a tumor, or to partial twisting of the gut, indicates enterostomy, and may be entirely relieved by it. Schede suggests enterostomy to relieve the urgent symptoms, and laparotomy performed soon after, to remove the obstruction, if it persists. In conclusion, the speaker said that

ENTEROSTOMY

was indicated whenever the diagnosis was uncertain, in cases of cancer of the gut, and whenever tympanites was very great; and

LAPAROTOMY

was indicated when the diagnosis of a curable cause was certain, when a small tumor could be felt in the abdomen, when a neoplasm was present which admitted of resection, and when peritonitis was present and required drainage of the peritoneum.

Dr. Robert F. Weir, of New York, discussed the question

HOW SHOULD THE OPERATION BE CONDUCTED?

Dr. B. Farquhar Curtis, of New York, then read a paper on the

RESULTS OBTAINED BY OPERATIVE INTERFERENCE,

which will appear in a future issue.

Dr. Abraham Jacobi, of New York, remarked that the medical profession had the tendency to divide itself into specialties—one body writing prescriptions, another wielding the knife only. He had long been known as an advocate of the right and duty of every medical practitioner to

PERFORM ALL LIFE-SAVING OPERATIONS,

such as tracheotomy and herniotomy, and he would now advocate the performance of laparotomy for acute intestinal obstruction by any practitioner out of reach of a surgeon by specialty. He only advised early operation and antiseptic methods. The diagnosis of

INTUSSUSCEPTION

was not difficult, and operation ought to be possible in the earliest stages. In fecal impaction there was usually a colitis and peritonitis, and some septic absorption, and in these cases the thermometer, *placed in the rectum*, would show a

SLIGHT RISE OF TEMPERATURE,

which was absent in other forms of obstruction during the first three or four days, and he considered this a useful point in diagnosis. He would strongly warn against puncture of the gut for the relief of tympanites, as the openings did not close afterward on account of the paralysis of the gut due to over-distention, and peritonitis would certainly follow.

Dr. Francis Bacon, of New Haven, would also urge the importance of

EARLY OPERATION.

The early operator was the man who would have the best results. He felt constrained to warn those without experience in surgery, and especially abdominal surgery, against rashly undertaking these cases. When watching Mr. Tait perform an oöphorectomy, one is inclined to think abdominal surgery an easy matter, but in these cases the elaborate description just given of the technique of the operation enabled one to form some faint idea of the complexity and

TREMENDOUS DIFFICULTIES

to be encountered in these operations. He favored a very large incision, which adds greatly to the ease of manipulation while not increasing the risk of the operation. But he must emphasize the chances for recovery without operation; he had recently seen three cases of intussusception, two of which were cured by inflation of the bowel.

Dr. J. Pero, of Oswego, related a case of intestinal obstruction.

Dr. R. B. Bontecou, of Troy, showed a patient upon whom he had performed a

SUCCESSFUL LAPAROTOMY FOR OBSTRUCTION,

a man about thirty years of age, who had had the symptoms of obstruction for one week, but was in fair condition when the operation was performed, immediately upon the appearance of fecal vomiting. A band was found near the ileo-cæcal valve, and removed. The incision had healed by first intention, and although it was only about a month since the operation, there appeared to be no weakness of the abdominal wall.

Dr. Topman, of Syracuse, related a case of acute intestinal obstruction, due to a mass of gooseberry seeds, relieved by enemata, in which a cast of the intestine, apparently a false membrane, was passed later.

Dr. Roswell Park then closed the discussion, remarking that he agreed with Dr. Weir in preferring chloroform to ether in these cases, but he found that thorough narcosis produced by morphine before the operation diminished the shock.

INFLATION OF THE BOWEL

in attempts to overcome the obstruction he considered a dangerous procedure, having seen a case so treated in which a perforation of the gut was found at the subsequent laparotomy, and resulting fatally. He had seen

SUFFOCATION BY REGURGITATED MATTER

result in one case in which a band had been successfully removed, when the operator put considerable pressure on the distended gut to reduce it within the abdomen, death taking place in a few minutes.

Dr. Arpad Gerster, of New York, read a paper on the

OPERATIVE TREATMENT OF JOINT-DISEASE.

He stated that every particle of diseased tissue must be removed in tuberculosis of the joints, just as in cancer, but that only the diseased tissues should be removed. Esmarch's bloodless method was of great service in these operations to prevent loss of blood, and systemic infection (by embolism, etc.) by the tuberculous matter. Long-continued after-treatment was necessary, but passive motion was injurious.

The session then closed.

Second Day—Evening Session.

The Society met in the Senate Chamber of the Capitol at 8.15 o'clock, with Dr. William C. Wey, of Elmira in the chair, to hear the annual address of the President, Dr. A. L. Loomis (see p. 141).

Dr. S. B. Ward, of Albany, moved a vote of thanks to the President for his address, which was carried.

The Society then adjourned.

A banquet was served at the Delavan House after the evening session.

THURSDAY, FEBRUARY 9TH—THIRD DAY—MORNING SESSION.

THE PRESIDENT IN THE CHAIR.

The Society was called to order at 11 o'clock, and prayer was offered by REV. JOSEPH LITTELL.

DR. A. WALTER SUITER, of Herkimer, moved, on behalf of the Committee on Business, that Dr. Bell be allowed to enlarge his Merritt H. Cash Prize Essay of last year. Adopted. Also that the papers read by invited guests at this meeting be referred to the Committee on Publication, for publication in the "Transactions."

DR. DANIEL LEWIS, of New York, read a paper on

CHIAN TURPENTINE IN THE TREATMENT OF CANCER.

DR. C. R. AGNEW, of New York, discussed Dr. Roe's paper.

DR. SAMUEL B. WARD moved to raise the salary of the Secretary. The motion was adopted.

OFFICERS ELECT.

DR. JOHN L. HEFFRON, of Syracuse, Secretary of the Committee on Nominations, read the following nominations by the Committee:

For *President:* Dr. Samuel B. Ward, Albany. *Vice-President:* Dr. A. Walter Suiter, Herkimer. *Treasurer:* Dr. Charles H. Porter, Albany. *Secretary:* Dr. W. Manlius Smith, Syracuse. *Censors:* Southern District—Dr. John S. Warren, New York; Dr. Walter B. Chase, Brooklyn; Dr. W. H. Helm, Sing Sing. Eastern District—Dr. Joseph Lewis, Albany; Dr. Thompson Burton, Fultonville; Dr. Leroy McClean, Troy. Middle District—Dr. Henry Flood, Elmira; Dr. Robert Frazier, Camden; Dr. I. N. Goff, Cazenovia. *For Syracuse University:* Dr. I. N. Goff, Cazenovia.

Committee of Arrangements: Dr. F. C. Curtis, Albany; Dr. Edward L. Partridge, New York; Dr. C. L. Merrill, Albany.

Committee on By-laws: Dr. George Seymour, Utica; Dr. F. F. Castle, New York; Dr. W. M. Smith, Syracuse.

Committee on Hygiene: Dr. E. N. Stoddard, Rochester; Dr. E. F. Brush, Westchester; Dr. J. P. Creveling, Auburn; Dr. Alfred C. Moyer, Syracuse; Dr. W. H. Bailey, Albany; Dr. W. C. Bailey, Albion; Dr. A. N. Bell, Brooklyn.

Committee on Legislation: Drs. Alexander Hadden; H. T. Pierce, New York; Dr. F. C. Curtis, Albany.

Committee on Ethics: Dr. A. Jacobi, New York; Dr. Arthur Matthewson, Brooklyn; Dr. H. R. Hopkins, Buffalo.

Committee on Prize Essays: Drs. George F. Shrady; Frank P. Foster, New York; Dr. Eugene Beach, Gloversville.

Committe on Publication: Dr. W. Manlius Smith, Syracuse; Dr. C. H. Porter, Albany; Drs. Daniel Lewis, O. B. Douglas, New York.

Honorary Members: Dr. Duane D. Simmons, Japan; Dr. Francis S. Shepherd, Montreal; Dr. B. F. Bear, Philadelphia; Dr. George E. Fenwick, Montreal; Dr. D. M. Wilcox, Lee, Mass.

Eligible to Honorary Membership: Sir Morell Mackenzie, London, England; Professor William Pepper, Philadelphia, Pa.; Dr. Max Schede, Hamburg; Dr. Reginald Harrison, Liverpool, England; Mr. Howard Marsh, London, England; Dr. Francis Bacon, New Haven, Ct.

Delegates to State and other Societies: Dr. A. Jacobi, New York; Dr. J. O. Roe, Rochester; Dr. B. F. Sherman, to Massachusetts. Dr. D. M. Totman, Syracuse; M. L. Bates, of Columbia; W. O. Moore, to Vermont; A. Jacobi, of New York, to Pennsylvania; Prince A. Morrow, to New Jersey; James McFie and George H. Rider, to Canadian Medical Association; George H. Fox, Clarence C. Rice, A. M. Phelps, of New York, to Ontario Medical Society; Henry G. Piffard, A. M. Phelps, of New York; M. L. Bates, of Columbia, to Connecticut; Frederick R. Sturgis, of New York, to Virginia; John O. Roe, of Rochester, to British Medical Association.

These gentlemen were duly elected.

VOTES OF THANKS.

DR. SAMUEL B. WARD, of Albany, moved a vote of thanks to the railroad companies, which had granted reduced fares. Adopted. Also a vote of thanks to the Mayor for the use of the Court-room of the City Hall for the meetings.

DR. JOHN O. ROE, of Rochester, read a paper on "The Frequent Dependence of Persistent and so-called Congestive Headaches upon Abnormal Conditions of the Nasal Passages."

PAPERS BY TITLE.

DR. A. W. SUITER announced the following papers read by title: "The Frequency of Preventable Blindness as shown in the State Institutions at Batavia," by Dr. W. Rider, of Rochester; "Cardiac Medication," by Dr. E. N. Stoddard, of Rochester; "Biographical Sketch of the Late Dr. Edwin Hutchinson, of Utica," by Dr. Thomas R. Pooley, of New York; "Idiosyncrasy," by Dr. A. R. Hopkins, of Buffalo; "Forward Dislocation of the Ulna," by Dr. J. S. Wight, of Brooklyn; "Biographical Sketch of Dr. W. M. Chamberlain," by Dr. John L. Warren, of New York; "Memoir of Dr. Wesley M. Carpenter, of New York," by Dr. Daniel Lewis, of New York; "Sketch of the Life of Dr. J. R. Boulware, of Albany," by Dr. C. H. Porter; "Treatment of Tubercular Affections of Joints," by Dr. A. M. Phelps, of New York; "Treatment of Tubercular Affections of Joints," by Dr. Virgil P. Gibney, of New York; "Biographical Sketch of Dr. B. A. Mynderz."

The Committee on Quarantine asked for more time, which was granted, with power to communicate with other societies.

DR. C. R. AGNEW, of New York, presented the report of the Committee on the Treatment of the Insane.

Discussed by Drs. Totman, Vanderveer, Blumer, and Brown, and adopted and referred to the Committee on Legislation.

THE PRESIDENT appointed a committee to prepare obituary notices of deceased members.

DR. DANIEL LEWIS moved a vote of thanks to the President for his labors in behalf of the Society. Carried.

The meeting then adjourned.

A NEW METHOD FOR IDENTIFYING BLOOD STAINS.—Dr. Ferry has described a new method for the medico-legal examination of blood stains. If the marks be upon linen, fibres are to be teased out with a needle and placed in a tube containing a one-thousandth solution of chloride of sodium. The fluid will soon become of a reddish-brown color. This liquid, then examined by the spectroscope, will present the characteristic lines of hæmoglobin. For the examination of the blood-globules one or two drops of a saturated solution of chloral are to be added to the fluid, when a rose-colored precipitate will be obtained. A drop of the precipitate is to be exposed on a thin plate over the flame of a spirit-lamp. A clear liquid will be separated, and may be taken up by blotting-paper. The pellicle of coagulum that is left should be colored with fuchsin, then washed with water. A drop of diluted acetic acid will render the preparation transparent, and the globules will become visible in bright red.—*Le Progrès Médical.*

AMPUTATION FOR GANGRENE IN DIABETES.—Professor König holds that in diabetic gangrene where, despite antidiabetic and local antiseptic treatment, the general and local symptoms do not improve, and further waiting involves danger to the patient, we should try to save life by a radical operation, such as an amputation, executed with the most scrupulous attention to antisepsis.—*Centralblatt für Chirurgie.*

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE QUEEN'S JUBILEE HOSPITAL—THE CONTROVERSY ON HOMŒOPATHY—THE DISCUSSION ON COW DISEASE —OBSTRUCTION OF THE BOWELS BY GALL-STONES, AND THE TREATMENT OF SUCH CASES—MR. HUTCHINSON'S HARVEIAN LECTURES ON LUPUS—A NATIONAL PENSION AND SICK FUND FOR NURSES.

London, January 24, 1888.

Law is proverbially uncertain, and both the litigants in the case of Millican vs. The Queen's Jubilee Hospital have found it so to their cost. The judgment obtained by Mr. Millican in his favor has been reversed on appeal, and he will have to pay the costs of the latter, both sides paying their own costs in the original action. Mr. Millican will perhaps emerge from the conflict but little lightened in pocket, as his friends have started a subscription to pay his expenses. The hospital, meanwhile, seems in direful need. From evidence given in another action, just brought against them by their printer, it appears that they have no funds, but are deeply in debt, and that all expenses are being met by the founder, Mr. Benham. This gentleman will probably hesitate ere he aspires to found another hospital. The experiment has in this case proved a costly one, as the institution owes him between two and three thousand pounds. The late Dr. W. Marsden, however, was the founder of two hospitals—the Cancer Hospital and the Royal Free Hospital—which have both survived and flourished.

The controversy on homœopathy aroused by the recent litigation has at last subsided. Nobody, I think, will be much the better for it. The homœopaths, however, are about to reprint the letters which have appeared in the *Times*, with a view of getting some additional publicity for them. Dr. J. C. Bucknill has written to disavow his identity with "J. C. B.," who is therefore now supposed to be Sir J. Crichton Browne, but the latter makes no sign. Dr. Brunton has penned a short letter in which he defends the orthodoxy of his book.

The discussion on cow disease, at the Pathological Society, was resumed on Tuesday last, and ended on the same evening. The conclusion is not satisfying, as nothing certain has been arrived at. Nevertheless, the free discussion of the subject which has taken place cannot but do good. The question of the identity or otherwise of the Hendon cow disease with that of the Wiltshire cows still remains an open one. As to the alleged causation of scarlet fever in man by disease communicated from the cow, no additional evidence in support of Mr. Power's views has been produced. Nor was any unanimity of opinion displayed as to whether the Wiltshire disease was really vaccinia, as Professor Crookshank believed it to be. The latter described at considerable length the minute anatomy and bacteriological features of the disease. Dr. Klein refused to regard Professor Crookshank's conclusions as final. The subject will doubtless be brought forward again at the Society in the near future.

At the last meeting of the Clinical Society a number of brief communications were made to the Society on the subject of obstruction of the bowels by gall-stones and the medical and surgical treatment of such cases. Dr. Maclagan read the notes of two cases which terminated fatally. In one, four stones, averaging an inch in diameter, were passed during life, and a fifth was found in the gall-bladder after death. There was a free opening between the gall-bladder and the duodenum. Mr. Clutton read a case in which he performed laparotomy for obstruction by a gall-stone in a woman aged seventy. The stone was felt in the lower end of the ileum, and was pushed through the ileo-cæcal valve. The patient made a good recovery. The president (Dr. Broadbent) referred to a fatal case of obstruction occurring in a woman ninety years of age. Dr. Ord related three cases. One proved fatal, and it was found, post-mortem, that the stone had ulcerated through the gall-duct. Dr. Gibbons related a case of biliary colic which subsided ten days before death. The latter was sudden, and due to perforation of the bowel by the gall-stone. Mr. Barker exhibited a calculus removed from the ileum after death. It measured four inches in circumference, and had caused complete obstruction. Mr. Heath suggested that systematic manipulation (under anæsthesia) might be valuable in such cases. Mr. Knowsley Thornton spoke with approval of Mr. Lawson Tait's plan of crushing the stone *in situ* with a pair of padded forceps, and thought it not very risky if the stone were first dislodged into a healthy portion of intestine. Mr. Gant narrated a case in which a concretion ulcerated through the vermiform appendix and caused fatal peritonitis. Dr. Glover referred to the value of olive-oil given freely internally. It facilitated the expulsion of the stones.

In his recent Harveian lectures, Mr. Hutchinson expounded his views on lupus at considerable length. The subject is one of those to which he has devoted great attention, and his utterances have therefore been awaited with considerable interest. He regards lupus as the head of a family, and not as a disease by itself. Its rarer forms were described at considerable length, and illustrated by numerous drawings and photographs exhibited. Mr. Hutchinson considers that there are bonds of essential relationship between ordinary lupus and lupus erythematosus, both clinically and pathologically. He thinks it probable that all forms of lupus are in occasional relationship with the tubercular and scrofulous diatheses, and also with cancer; but that, nevertheless, many patients with lupus appear in excellent health. He regards the disease as beginning in an inflammation under the influence of various exciting causes, and as deriving its peculiarities from the part affected.

A national pension and sick fund for nurses has been on the tapis for some time past. It was hoped by many that some portion of the women's jubilee offering to the queen would be devoted to this object. Such has not proved to be the case. Four city gentlemen thereupon came forward and subscribed between them the munificent sum of twenty thousand pounds. The fund, therefore, may claim to have made a good start, though not under royal auspices.

SURE CURES AND SPECIFICS.

To the Editor of The Medical Record.

Sir: Some of the "original" articles in the medical journals, on diphtheria, have an odor of self-praise or free advertising that offends the ethical sense and creates a distrust of their therapeutical value.

The "Memoranda" on the subject published in The Medical Record of the 24th ult., however, possess a seeming detail of circumstance and sincerity of statement that entitle them to respectful consideration.

He who believes he has a "cure" for ninety-seven per cent. or seven per cent. of "severe and unpromising diphtheria" should be both proud and pleased. A specific cure or antidote for the effects of a poison or harmful agent in a "severe" case should, by the ordinary processes of reasoning, be a cure for all other like or similar cases, barring accidents and the rare exceptions to all general rules. This being true, your contributor has furnished the profession what it has so long sought for in vain—a remedy or reasonably sure cure for diphtheria. Is the esteemed author of the "Memoranda" prepared to accept this conclusion? One day there is an equally encouraging account, in some medical journal, of the treatment of diphtheria by whiskey, brandy, or alcohol; the next brings a verified statement, in another publication, of hundreds of cases, "severe" ones, cured, with only three or four exceptions, by chlorinated lime. The advocates of these different, and frequently conflicting, theories of cure appear to believe absolutely in their respective methods, until unhappily their own, or the children of their immediate neighbors, begin to die of the affection with as little apparent effect from the operation of remedies as though there were not a physician in the whole town or city.

As your contributor remarks, "clinical evidence is the touchstone of the value of a remedy"—in a certain sense —and it is natural, though it is by no means true or logical, that a physician should regard a remedy useful in cases that recover under its administration. He admits that he has been misled in this respect in the past, and what guarantee has he that the next epidemic of diphtheria he has to encounter may not destroy his faith in "turpentine?" The history of the disease in this and other countries shows that the best physicians have only indulged in a misplaced confidence in this or that remedy, to have their faith destroyed by their own or the experience of equally intelligent observers. Turpentine may be a good germ-destroyer, but who knows that parasites cause diphtheria? and if they do, has it been proven that turpentine is a better parasiticide than is the blood itself?

The bichloride is recommended because it reduces the temperature. I have lately lost two patients with diphtheria whose temperature was subnormal from the commencement of the attacks. Patches of diphtheritic membrane were often found in the stool of these patients after the third or fourth day, and turpentine may have been indicated. It was given, though in smaller doses than those recommended by Dr. B——. A communication of this sort affords no proper opportunity to discuss the pathology or treatment of this disease. I merely wish to offer a mild protest against the general practice of publishing "cures" for so many of the human ailments, and especially to condemn the too frequent announcements that a remedy for this mortal malady has been found.

Many of the suggestions in the article under consideration, in my opinion, are wise and timely; but when we talk about "curing" so large a percentage of our cases, we are liable to embarrass, if not injure, our professional brethren; and the most ignorant quack, in or out of the profession, steps right forward with a "record" that not only equals but outstrips the statement of the "regular" physician.

Is it necessary, is it good policy even, for the medical profession to talk and write so much about "cures" when there are really so few of them? Does not this "state of things" do much, too much, toward keeping the profession on a level with quackery? It seems to me that nothing can more enhance and fortify the good name and respect which the medical profession should enjoy in the public estimation, than to tell the community the truth and educate the public to accept it as the best thing that can be done for the general welfare.

Respectfully,
S. B. H. Nichols, M.D.

Corning, N. Y., January 9, 1888.

LAWSON TAIT'S METHOD IN PLASTIC OPERATIONS.

To the Editor of The Medical Record.

Sir: I desire to ask for information regarding the peculiar operation for perineorrhaphy suggested by Lawson Tait. I saw it first described in Tait's work upon "Diseases of Women," New York, 1879. Coming from such a distinguished authority, I studied his directions for making the operation very carefully, but failed to comprehend them, until I saw the operation again described and illustrated in the "Transactions of the London Obstetrical Society," 1880, vol. xxi., p. 296. Since that date I have frequently practised it, and usually with success. I never take up a new work upon gynecology without at once looking for some mention of this operation, but with the exception of one English author, Arthur W. Edis, M.D., I have never seen it mentioned. I had some correspondence with Lawson Tait, in 1880, regarding the technique of the operation, and although I have never seen it practised by any other operator but myself, with one exception (Professor R. Ludlam, of Chicago), I have continued to practise it whenever I had an opportunity, until the present time.

The operation is especially adapted to lacerations of the perineum that involve the sphincter, and in cases where the rent in the rectum extends upward over half an inch. In those cases where the rent extends up an inch or more, the stitch of Dr. Emmet is uncertain as to the result, and in these cases the operation of Tait is, as a rule, usually followed by complete union. The principle of Tait's operation is: 1. No tissue is removed. 2. The edges of the rent are *split*, and the flaps are lifted up, and the mucous surfaces of same reverted, or turned back into the rectum, and go to their original position, while the vivified surfaces come together, and are carefully adjusted and co-adapted; and then sutures are introduced of sublimated Chinese silk, passing *between* the *two mucous surfaces* through their whole extent, so that, when tightened, the suture will not be seen or felt. The reverted flaps (mucous surfaces) are turned into the rectum where they belong, and actually form a sort of valve there, completely keeping out the fæces, and assist in the union of the raw surfaces. 3. In case healing and union should fail, the patient will be no worse than before the operation. In one case in the practice of the writer did this operation fail, and a second trial now upon the same patient seems to warrant the belief that a good result will follow.

In the operation I always use Bozeman's sharp pointed curved scissors, running the point of one blade through the skin and mucous membrane to such a depth as will allow me to turn the flap backward from each edge of the rent into the rectum. The vivified surfaces of these flaps must be accurately adapted to each other before the sutures are introduced. The sutures we formerly used were Pearsall's English silk, but now we use Chinese silk, previously kept in sublimate or carbolic acid. After the introduction of these sutures, the perineum may be closed. It would seem that the principle of Lawson Tait for making plastic operations might be formulated in a few words.

He does not, like other operators, commence by denuding the tissues and then removing the same, but he denudes by accurately *splitting* the *edges of any surfaces* where he wishes to join them, and turning what was the internal mucous membrane into the cavity of its viscus, and directly opposed to it will be the vivivied surfaces of the opposite corresponding flap, so that the mucous surfaces will be reverted into the rectum where they belong; or, if it should be a rent in the bladder, the edges, instead of being pared as in the old method, should be first split, and the mucous surfaces of same turned into the bladder where they belong, and the raw surfaces brought together, and stitches are then so introduced as to hold these raw surfaces together; all plastic operations are thus made by carrying out the above simple principles, whereby all tissue is saved.

It will be readily seen that this proceeding is especially adapted to operations for vesico-vaginal fistulæ.

Now, Mr. Editor, will you kindly inform me if this operation of Lawson Tait is approved of or employed by any gynecologist in your classic city? In case of perineal lacerations extending, say, an inch and a half up the rectum, it is my usual custom to unite the rectal rent by Lawson Tait's method, and, at a subsequent operation, close the perineum. The stitch employed by Tait is peculiar, and difficult to describe; it is really a buried stitch, introduced by a curved or straight needle across the rent, passed in the thickness of the septum *between* the *two mucous surfaces*, and when tightened can hardly be seen. Sometimes, for the rectal rent, one stitch only is necessary, but frequently a second may be required.

While recently attending a course of two months at one of the post-graduate medical colleges in your city, I never heard this operation mentioned, nor did I see it performed at the Woman's Hospital.

Any practical gynecologist will agree with me as to the uncertainty of the result in rupture of the perineum, where the rent extends more than half an inch into the rectum. Until I learned Lawson's Tait's method, I found that the operation, as taught by Emmet, sometimes failed.

It seems remarkable that in none of our recent works upon diseases of women notice should be made of the above surgical procedure.

T. Griswold Comstock, A.M., M.D.

507 N. Fourteenth Street, St. Louis, Mo.

HYPERTROPHY OF GLANDULAR TISSUE AT BASE OF TONGUE.

To the Editor of The Medical Record.

Sir: I have just seen in your issue of December 17th the interesting article of Dr. Gleitzmann on "Hypertrophy of the Glandular Tissue at the Base of the Tongue." Although the bibliography at the end of the paper refers to my recently published second edition of "The Throat and its Diseases," and also to my address at the Philadelphia County Medical Society, the author has overlooked my paper at the First International Congress of Laryngology, held at Milan in September, 1880, and published in the *Comptes Rendus* of the Congress.

I venture to ask your insertion of this note, because the doctor has ascribed to much more recent observers the credit of priority of description of the clinical signs and effects of this, until recently, unrecognized condition.

I am, yours faithfully,

Lennox Browne.

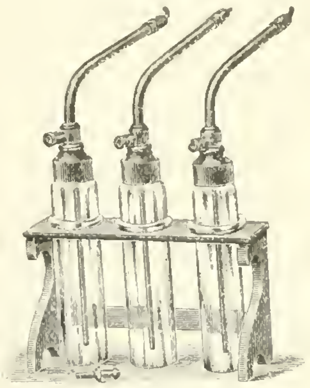
[36 Weymouth Street, Portland Place,
London, W., January 14, 1888.

Severe Blow on the Loin followed by Copious and Long-continued Hæmaturia.—*The Lancet* reports the following case: "A well-grown, muscular laborer was admitted into Middlesex Hospital, December 14, 1886, under the care of Mr. Hulke. He was suffering, at the time of his admission, from concussion of the brain and a scalp-wound, and, in addition to these injuries, he had a bruise on the left loin. He was said to have fallen headlong off a scaffold twenty-eight feet above the ground, and to have struck his left side on a projecting beam. The first urine which he voided contained a very large admixture of blood, and the hæmaturia continued, with slight variations in the quantity of blood, until December 25, 1886, when an evident decrease was first noted, coincidently with the exhibition of acetate of lead in doses of three grains every three hours. Traces of blood did not finally disappear from the urine until January 3, 1887, about which date a small quantity of pus was noticed in it, and a few hyaline casts. With reference to the cause of the hæmaturia, Mr. Hulke remarks that it hardly admits of doubt that the source of the hemorrhage was the kidney, which had sustained some degree of laceration; for the amount of blood was too great to have proceeded from the ureter, and there was not anything to suggest an affection of the bladder. That such lacerations of the kidney are not necessarily fatal without operative intervention is, he believes, abundantly established by experience; and they do not necessarily demand nephrectomy, which should probably be restricted to the severest forms of injury. In this, and in other similar cases, acetate of lead has appeared to him to be decidedly useful."

New Instruments.

AN IMPROVED ATOMIZER.

The accompanying illustration represents an atomizer which has some new features. It is made to be used in connection with the Sass condenser, but may also be worked with the double hand-bulb. When the air is forced into the tube a portion of it passes down into the bottle, presses on the fluid therein, and forces it up to the outlet cap. The larger part, however, passes up the tube to the outlet cap, and there meeting the fluid rising through the inner tube, forces it out in a fine spray. The bottle is of glass, and has a flange upon which it rests in a wooden stand when not in use. The bottle is of a convenient size to be grasped by the hand when an application is made. The tube is of hard rubber, with a platinum tip.



DAVIDSON RUBBER CO.

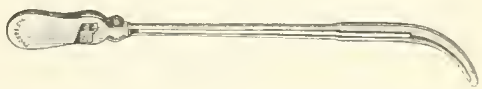
A pressure of only about four pounds is necessary to produce a spray, whereas the forms of apparatus in general use require a pressure of ten pounds or more. The tubes, being of hard rubber, are more durable than those made of glass. The screw-cap is removable, thus allowing of ready cleansing, and the platinum tips are proof against corrosion or softening by any acids that may be used. The caps are screwed on, and cannot by any possibility be blown off, as may sometimes happen when they are merely slipped over the tube. The socket made to receive the tubes can be unscrewed from the bottle whenever it is desired to clean the latter. The atomizer is made by the Davidson Rubber Company, of Boston.

A DILATING URETHRAL SOUND.[1]

By ALEXANDER J. PEET, M.D.,

NEW YORK.

This sound, when closed, is essentially a Weir's sound, twenty-five millimetres in circumference; that is, the upper two-thirds is somewhat smaller than the lower one-third. The instrument, when partially open (as may be seen in the accompanying cut), consists of an ordinary Weir's sound split longitudinally into two halves or arms, which at the extremity of the curved part are united so as to form a joint, the remaining two ends being firmly fixed to the handle of the instrument. A long, narrow bar extends between these two arms, and is connected with them near the curved portion by means of a small set of levers; while the thumb-nut seen in the slot in the handle turns on a screw which forms the upper part



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[1] This is the sound referred to in my article on An Improved Urethrotome in the Medical Journal of May 15, 1886, the description of which has been deferred until the present time.

of this central bar. The instrument is opened and closed by simply turning this thumb-nut to the left or right. On this nut is a French scale extending from twenty-five to forty millimetres, and the thread of the screw is so cut that one complete turn of the nut opens the sound to forty millimetres. I have had a smaller sound constructed upon the same principle, which is ten millimetres in circumference when closed, and twenty-five when open. These two instruments, therefore, accomplish the same amount of work as a set of thirty ordinary sounds.

The great and obvious advantages obtained by the use of this instrument are as follows:

1. It is much more economical to buy one or two of these instruments than it is to buy a set of thirty ordinary sounds.

2. Among physicians who believe that dilatation is the proper method for treating strictures, this instrument is peculiarly advantageous, since after once introducing it the urethra can be dilated as much or as little as is desired without inflicting the injury and pain on the delicate mucous membrane that the repeated introduction of different-sized sounds is so apt to do, even in the hands of the most skilful.

3. This instrument can also be used very advantageously by surgeons who think that all strictures must be divided to effect a cure; for after division it is necessary for several days to introduce large sounds, in order to prevent the stricture from closing during the process of healing, and thus leaving the canal in as contracted a state as before the operation. Particularly is this the case if the stricture is not completely divided. By one introduction of this instrument at any time during the healing process the stricture can be torn open with little or no pain, especially if a few drops of a solution of cocaine are injected prior to the operation.

4. Another great advantage in using this instrument is that any portion of the urethral canal can be dilated without materially affecting the remaining portions.

5. Inasmuch as several articles have appeared of late in our medical journals as to the inadvisability of meatus-cutting, it may not be amiss to say that this instrument will be of especial value to those surgeons who believe that the meatus should be cut but rarely, since the sound, when closed, can be introduced through a meatus of ordinary size, and the canal beyond can then be dilated to forty millimetres, if required, without materially stretching the meatus.

174 West Fifty-eighth Street.

The Cellulo-microbian Warfare.—Throughout our lives there is a constant miniature battle in progress within our bodies, the elements of health waging fierce warfare on the invading microbian elements of disease. When in perfect health, the body-cells are successful in the contest, destroying the injurious microbes as fast as they enter; but let some condition impair the vigor of these cells, our body-guards, or introduce some microbe with which they are unable to cope, and the stream of battle turns about, and disease is rampant. These cells, possessing the power of absorbing and digesting microbes, are called by Metschnikoff "phagocytes," and are not destined for the destruction of microbes alone, but also for the absorption and removal of dead or degenerated tissue. M. Metschnikoff has made researches on transparent animals, such as daphnea, which are often invaded by spores of the yeast family. These spores, after entering the intestine with the food, escape into the cavity of the body of the animal, when a struggle to the death begins between them and the white corpuscles, which, singly or in groups, absorb and destroy the spore, thus saving the life of the daphnea. M. Metschnikoff claims that essentially the same struggle is forever continuing in the body of man, only on a more complicated scale, and divides our standing army of protective cells into "microphagi" and "macrophagi."—*The Weekly Medical Review.*

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 29 to February 4, 1888.

Page, Charles, Lieutenant-Colonel and Surgeon. To be Assistant Surgeon-General, with rank of Colonel. November 17, 1887.

McKee, James C., Major and Surgeon. To be Surgeon, with rank of Lieutenant-Colonel, November 17, 1887.

Girard, Alfred C., Captain and Assistant Surgeon. To be Surgeon, with rank of Major, November 17, 1887.

Raymond, H. I., First Lieutenant and Assistant Surgeon. Ordered to Fort Bidwell, Cal.

Fisher, W. W., First Lieutenant and Assistant Surgeon. Ordered to Presidio of San Francisco, Cal. S. O. 25, A. G. O., January 31, 1888.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 4, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	7	2
Scarlet fever	147	24
Cerebro-spinal meningitis	1	1
Measles	46	8
Diphtheria	166	39
Small-pox	5	0
Yellow fever	0	0
Cholera	0	0

The Term "Malignant."—The resemblance between the innocent tumors and the cancerous may seem to indicate such close relation that they ought to be regarded as of essentially the same nature. But I believe that an unlikeness indicating differences yet more essential may be observed in them, and it is expressed in our calling them severally innocent and malignant growths. Malignant is nearly synonymous with cancerous; and though the name is sometimes treated with disrespect, as being figurative and without scientific meaning, yet, as an expression of certain qualities shown in the method and course of the diseases to which it is applied, it is neither unfit nor, I think, unmeaning. For the qualities which the name "malignant" indicates are far more distinctive, more surely diagnostic, of this group of diseases than are the minute structure and chemical composition of the diseased parts, or even than the method of their growing; and in this is an example of what we must hold in the study of all diseases, for pathology is a part of biology, and not derived chiefly from the study of anatomy and chemistry.—Sir James Paget, in the "Morton Lecture on Cancer."

Glassblowers' Syphilis.—Professor N. De Smet, of Brussels, in commenting upon a case of syphilis occurring in the mouth of a glassblower, referred to several epidemics which have been reported as having occurred among artisans of this description. He said that only two plans for preventing these outbreaks had been devised, viz., giving a separate movable mouth-piece to each man, and instituting frequent, rigorous, and periodical inspection of the persons of the employés. The first plan is always declared by the workmen to be impracticable, from the loss of time which would be occasioned by fitting the different mouth-pieces on the tubes. The second would, of course, be resisted by the men, but he thinks their objections could be overcome by showing them the danger to themselves and their families which arises from the present system.—*The Lancet.*

A Warning for the Overworked.—One of London's most successful physicians, a few months before his death, in conversation with a friend, said: "You see me, at a little over forty years of age, in full practice; my rooms are full, and I am making several thousands per annum, and if I die to-morrow I do not leave as many hundreds to my family. All this I have done by sheer perseverance, unceasing hard work, and no holiday. But I am to-day a wreck. I have fatal disease of the heart, the result of anxiety and hard work. I know I cannot live many months, and my parting advice to you is this: 'Never mind at what loss, take your six weeks' holiday. It may delay your success, but it will insure its development.' Otherwise you will find yourself at my age a prosperous practitioner, but a dying man."

Large Nævus in an Unusual Location.—Dr. A. McShane records the following rare case: "The patient was a young white man, aged twenty, in good physical condition. Five years ago a friend, while looking at his back teeth, observed a large swelling on the right side of the soft palate. In October, 1887, there was a large purplish bulging in that locality, involving the pillars of the fauces and the uvula, which is three-fourths of an inch long, and very thick. Immediately to the right of the uvula is a slightly elongated, blackish mass, projecting downward, which consists of distended veins. All over the surface of the swelling numerous dilated blood-vessels are seen, giving a mottled, purplish aspect to the tumor. The swelling is soft. The patient does not know how long he has had it; he himself first noticed it five years ago, and it was as large then as it is now. The swelling is a large nævus, occurring on the mucous membrane of the soft palate and fauces. It causes no inconvenience in swallowing or speaking, but swells a little when he gets a cold."—*New Orleans Medical and Surgical Journal*, December, 1887.

Better than the Doctor's Advice.—A man met his doctor on the street and complained of rheumatic pains, for which the doctor recommended him to take a pinch of "nitrate of potash" two or three times a day. Shortly afterward he met the doctor again, and in reply to a question regarding his health, remarked, "Oh, I'm getting well, doctor; but 'tain't your medicine. I tried that for some time, till a neighbor told me of something he took for his rheumatism—a very simple remedy. I tried it, and it does me a great deal of good." "What is it?" said the doctor. "Oh, it's simple; I'm afraid you'll laugh at me if I tell you." The doctor promised to control his risibles, and the patient, after much urging, informed him that it was "saltpetre." The doctor's smile was longer than the street.—*Chemist and Druggist.*

The Renal Glomeruli in Disease.—In the various forms of inflammatory and degenerative disease to which the kidney is liable there has been assigned by all the more recent authorities a very considerable share to the Malpighian corpuscles. Since Klebs drew attention to "glomerular nephritis" it is remarkable how the tubular lesions have gradually taken a secondary place. Dr. Hansemann, one of Professor Virchow's assistants, has published an article on the subject, which tends, if anything, to limit the sphere of the changes in the glomerular tufts (*The Lancet*). His pathological study is based on the examination of one hundred and twenty cases of nephritis, arising under very varied conditions. He prefaces his account of the results obtained in these morbid specimens by a statement of the normal histology of the Malpighian body which departs slightly from the usually accepted teachings. Bowman's capsule, which is continuous with the basement membrane of the convoluted tubule, is composed of a single layer of cells, the nuclei of which may or may not be centrally situated. The tubule is not constricted at its termination, but expands rapidly in a funnel-shaped manner; while developmentally the capsule is formed directly from the curvation of a tubule, and in the same way the epithelial layer covering the glomerular loop is formed. The space between the capsular and glomerular epithelium is filled with fluid, which, according to Dr. Hansemann, can be seen in hardened specimens to be traversed by a fine filamentous net-work. He does not agree with Drasch's division of the glomeruli into a larger set placed centrally, and a smaller-sized set placed peripherally, in the kidney. For, although it is evident that these bodies vary much in size, there is no such manifest separation in structure and situation as Drasch implies. The glomerular investing membrane is, according to Hansemann, merely a layer of cells with scanty nuclei, and cannot, as usually stated, be separated into a basement membrane and endothelium. He also declares that connective-tissue elements are very scanty in the glomerular tuft, being mainly limited to the region of the afferent and efferent vessels; while he disputes the statement of Babes that these vessels at their points of entrance and exit are dilated in an ampullary manner, or that such degenerative processes as amyloid and sclerotic changes select these positions for their starting-points. The pathological portion of Dr. Hansemann's essay deals in turn with certain questions respecting the rôle of the Malpighian body in renal disease, and the replies to these questions are based entirely upon his own histological studies. The first is as to whether these structures take part in every affection of the kidney, and if so, are they attacked simultaneously with or before the rest of the organ? He shows that although in many cases of parenchymatous nephritis, as well as of other diseases, the Malpighian corpuscles are involved, yet that cases do occur in which these corpuscles (even in nephritis) may remain unaffected. In a few instances they are so much affected as necessarily to influence the nutrition of the rest of the renal substance; but it is very rare and quite exceptional to find that glomerular lesions are the first to appear. Another point is as to the part played by nuclear proliferation in the glomerular change. This is always more marked in young subjects, in whom the nuclei are normally more abundant. However, there is undoubted evidence of proliferation of epithelia, more especially of that covering the tuft, besides leucocytal infiltration, which is liable to be mistaken for the former. Further, he denies that the pathological changes—*e.g.*, amyloid degeneration—to which the glomerular tufts are liable afford any evidence that their constituent vessels are provided with a special endothelial lining, as Langhans asserts. On the contrary, he finds that the delicate walls of these capillaries are simply composed of epithelium. In disease of the Malpighian bodies, it would seem that very extensive changes in the direction of swelling, proliferation, and shedding of the epithelial lining of the capsule and tuft may take place without any apparent lesion of the vessels. This, of course, does not apply to amyloid change, which commences in the vessels. Lastly, in speaking of the relation of glomerular lesions to those of the rest of the kidney, he distinctly discards the doctrine of a primary glomerular nephritis. He quotes Cohnheim to the effect that it is inconceivable that the several vessels and tubules of the kidney should share equally in the work of secretion, and that inflammation should attack simultaneously all the glomeruli or all the tubules. It accords with experience that nephritis does not involve the whole kidney to an equal extent, or both kidneys in the same degree. And there is sufficient evidence adduced to show that there is no relation between the extent of disease in the glomeruli and that in the rest of the kidney;

although it necessarily follows that where a Malpighian body is so diseased as to be functionally destroyed the tubule in connection with it must be more affected than is the tubule connected with a less damaged glomerulus. In amyloid degeneration there is, besides the malnutrition induced by interference with blood-supply, a probability that the tubule connected with the affected glomerulus atrophies from disuse, being no longer required to fulfil its function. The polyuria of amyloid disease will have, then, to be explained in another way—but Dr. Hansemann does not proffer any such alternative.

UTERINE MYOMA TREATED WITH HYDRASTIS.—Dr. Schmidt, of Prague, has treated with remarkable success a case of long-standing myoma of the uterus, accompanied with copious hemorrhage, by means of tincture of hydrastis canadensis. Twenty-five drops were given four times a day for three or four months. During this period the hemorrhage stopped, the menstrual periods became normal, and the tumor decreased very markedly in size.—*Lancet.*

HAP-HAZARD MEDICATION.—*The Medical Register* inveighs against the too common practice of prescribing in a hap-hazard way. It says: In the medical profession how many are striving to fight disease with weapons of which they are absolutely ignorant, prescribing they know not what, simply because some enterprising manufacturer has told them that his compound is an excellent thing, and has almost miraculous curative powers in this or that disease. That the inducements to this sort of hap-hazard prescribing are exceedingly numerous is patent to everyone who takes the trouble to glance through the advertising pages of many papers and periodicals, or looks over the mail of any physician. They are all filled with advertisements of these wonderful (!) compounds, and the mail is largely made up of circulars and pamphlets descriptive of the powers of these selfsame "life preservative, death preventative" mixtures. While they discourse at great length upon the wonderful curative powers of these remedies, scarce a word is said as to the *composition* of the preparation. Perhaps one or two lines of small-sized type may be devoted to the publication of a so-called "formula," in which anywhere from three to a dozen powerful drugs are enumerated as entering into the composition of these "triumphs of pharmacy." An instance of this occurs in the formula of a very extensively advertised preparation, which informs us that the compound (of course, ending with an *ine*) contains "the essential constituents" of six powerful drugs, but not one expression as to the proportions of these drugs to each other, or to the ounce or pint of the preparation. The physician who uses this is prescribing in the most hap-hazard way. He is little better than an empiric. Ignorant of the quantities of the drugs contained in the preparation, which obliges him to confine himself to the dose prescribed by the manufacturer, he is unable to graduate the dose to the requirements of the case, and if, by chance, his patient recovers, he cannot tell which of the drugs, if any, contributed to that recovery. His knowledge of the treatment of disease is not increased; neither has he gained in experience. Science is not benefited by the use of these compounds. They add nothing to the progress of medicine. On the contrary, they are a hinderance, a positive injury to it, for their use lowers the physician into a quack, and changes the pharmacist into a mere vender of merchandise. The treatment of disease is a difficult matter at best, and needs all the attention we can give to it, instead of shutting off what light we have by the use of preparations of which we know nothing beyond what the manufacturer, anxious to dispose of his wares, chooses to tell us. How may this state of affairs be overcome? There are several ways, but there is only one positive means of eradicating this evil. Let every member of the profession refuse to use, or in any way to give support to any and all preparations of which the manufacturer does not, or will not, furnish complete information regarding the ingredients, their quantities, and mode of preparation. Some of these compounds are, no doubt, excellent preparations and, it may be, improvements upon what we already possess, but they are lost to science because of the secrecy concerning their mode of preparation. Let the manufacturers throw around their products all the protection by furnishing good and reliable preparations. Let them furnish true "working formulæ" of their ingredients, and they will then be a help, instead of a hinderance, to the progress of medical science.

THE DIGESTION AND TEMPERATURE OF THE SNAKE.—Mr. H. M. Phipson, of Bombay, has made some curious observations on the physiology of the Indian rock snake (*Python molurus*). "During the twelve months between May 27, 1886, and May 20, 1887, the snake ate twenty-three rats, three hens, three crows, and one hawk. In the hot months the period of digestion averaged about eight days, whereas in the cold weather it became much slower, in one instance being thirty-eight days. During the cold weather, for a period of one hundred and thirteen days, the snake refused food, and remained in a very sluggish and sleepy condition. During this period of the hibernation the temperature of the reptile fell from 82° normal to 73°, a fall of nine degrees. The snake shed its skin four times in the course of the year; three times in hot weather at an interval of two months, and once after it had recovered from its hibernation."—*Journal of Comparative Pathology.*

JAMBUL IN DIABETES.—Mr. J. Munday, of Poona, writes to the *British Medical Journal:* "After several years' experience in this country with 'eugenia jambolana,' in diabetes, I have found it does not lessen the amount of sugar secreted, but does immensely reduce the quantity of urine, thereby relieving (quite) the irritability of the urethra, and giving the sufferer a complete night's rest. The fruit grows plentifully. The seeds ought to be let dry in an open vessel, the kernels removed, pulverized, and the quantity of one seed taken thrice daily. In forty-eight hours the diminution of urine takes place. Codeia in a pill of half a grain, taken with the above thrice daily, holds the secretion of sugar in check, and with certain restrictions in diet affords the patient apparently permanent relief, and need not interfere with a useful career."

NOTES ON PROGRESS OF ABDOMINAL SURGERY—*Laparatomy for acute suppurative peritonitis.*—The treatment of acute suppurative peritonitis by laparotomy and copious injections into the abdominal cavity was brought under notice at a recent meeting of the Clinical Society by Mr. Barwell, who, in his remarks on a successful case under his own care, claimed for Mr. Hancock the first conception of the idea of opening the abdomen for acute peritonitis. At the same meeting two interesting cases, in which similar treatment had been practised with good results for tubercular peritonitis, were reported by Mr. Knaggs and Dr. Kilner Clarke, of Huddersfield. The discussion on these papers, though maintained with much ability, was confused and unsatisfactory, from the fact that the treatment of two really different affections—one being acute, the other chronic—was made the subject of the same debate.

Splenectomy.—That abdominal section is now performed under much improved conditions may be shown by the latest results of splenectomy. Dr. Leonard, of Philadelphia, has recently reported a case of successful removal of an hypertrophied spleen, and has asserted that, in twelve of seventeen cases that have been recorded since the year 1881, this operation had good results. Other successful cases have during the year been published by Dr. Myers, of the United States, and by Dr. Severeanu, of Bucharest; and in the last number of the *Journal* mention was made of a still more recent instance, in which an enlarged spleen had been successfully removed by Sir Spencer Wells. Two cases of successful treatment of cystic growths of the pancreas by abdominal section, incision, and drainage have been put on record by Dr. Bull, of New York, and by Professor Küster. In concluding this review of the latest contributions to peritoneal surgery, reference may be made to Mr. Meredith's case of a large omental lipoma, weighing over fifteen pounds, successfully removed by abdominal section, and to an instance of a very much larger fatty growth similarly treated, but with a fatal result, by M. Terrillon, of Paris.

Renal surgery.—In renal surgery much has been done toward establishing the indications of the operative procedures that have been so often practised during late years. The lumbar and extra-peritoneal operation is still preferred in most quarters to abdominal section. In London special attention seems to have been paid during the year to the treatment of calculous disease of the kidney. It has been shown by Mr. Godlee that sympathy may exist between the two kidneys in case of disease originating in one organ, and that suppuration around a damaged kidney may cause albuminuria and an abundant production of casts in the secretion of the opposite and healthy organ. Israel, of Berlin, has lately put on record a case of cancer of the kidney in a young subject, in which case the diagnosis was established and nephrectomy performed while the disease was in a very early stage, and the diseased organ of normal size.—*British Medical Journal.*

Remarkable Hereditary Longevity.—Dr. A. Huntington of this city writes: "It may be of interest to see how strongly longevity in families is marked in some instances, and in some portions of the world perhaps more strongly than in others. As an illustration of this I give you the exact copy of a most remarkable family record which came recently under my notice as medical director of one of the large life insurance companies of our country. The individual to whom this wonderful record attaches is a native of Bulgaria, and is now upward of sixty years of age. The truthfulness of the record is vouched for. The father died at the age of eighty-nine, the mother at the age of eighty-three; the father's father and the father's mother reached the ages of one hundred and five and one hundred and twenty respectively; the mother's father and the mother's mother reached the ages of one hundred and sixteen and ninety-five respectively; there are five brothers and four sisters, comprising, with the individual himself, the entire family, and these are all living and in excellent health, ranging from thirty-five to fifty-eight years in age. One of the sisters is reported as having borne fourteen children, and another sister eleven children, *all* of whom are living, and several have children of their own. Another sister, still, has borne eight children, all living; but the fourth sister, although married, has remained barren. This is one of the most remarkable family records it has ever been my lot to see; but I am informed that such records are not altogether infrequent in the rural towns of Bulgaria, and that some portions of Turkey also furnish equally remarkable family records. I suppose the reasons are to be mainly found in the combination of the climate and habits of the people, which latter are very different from the rushing, nervous restlessness of our own American people."

New Surgical Operations.—Dr. J. A. Moore writes from Reichenberg, Bohemia (Austria), to the *Albany Medical Annals*: "I have seen some few operations here that I never saw or heard of at home, nor in any of the books. One by Pawlik, for incontinence of urine in women, consists in removing a triangular strip the whole length of the urethra, and quite deep, on one or both sides. We have a case under treatment here now; have done the operation on one side, and shall do it on the other in a few days. The doctor here had never seen it. Another is by Gertie, the first assistant to Professor Albert, for amputation at knee-joint. In this operation the patella is brought to the under surface of the femur, making a round-end stump, with all scar behind. Another for stricture of rectum, by opening into descending colon in front (left side) and dilating through. Another for stricture of œsophagus, performed by doing the ordinary gastrotomy, and dilating by passing sounds through. Another, and a beauty, is for bunions, done by cutting between the great and second toes (under surface) and removing the second metatarsal bone, sometimes two, then strapping the toe straight. The result is grand." Dr. Moore evidently sees so much which is new that he does not have time to cultivate his literary style.

Comparative Statistics of the Treatment of Diphtheria.—Dr. Lunin, of St. Petersburg, made comparative trial of various remedies in the treatment of diphtheria in the Oldenburg Hospital, with the following result: Cases, 296; percentage of deaths, 55.

Fibrinous form.		Septic phlegmonous form.		General result.
Per cent. of Deaths:		Per cent. of Deaths:		Per cent.
By turpentine	8.30	By turpentine	81.00	43.4
By resorcine	20.00	By resorcine	89.50	65 0
By sublimate	30.20	By sublimate	92.50	45.0
By chinoline	31.60	By chinoline	100.00	53.0
By ferri perchlor	32.60	By ferri perchlor	76.50	56.0
By bromine	46.70	By bromine	88.90	69.7

—*Journ. Am. Med. Association.*

Infant Morphiomaniacs.—Children born of morphia-eating mothers are practically, says Erlenmeyer, morphia-eaters, and during the first days of their life, unless morphia is given them, are very apt to suffer collapse. This condition may end in death, and seems to be parallel to the sudden giving out of the system which sometimes follows the sudden withdrawal of the alkaloid in adults.

Lobar Arrangement of Phthisical Lesions.—An examination of the literature of pulmonary phthisis will show how little attention has been paid by most writers to the question of the exact distribution of the lesions in the lungs and their relation to the chest-wall. Dr. Kingston Fowler has gathered together some facts of importance, and in *The Practitioner* gives us the outcome of his own experience. He believes that there is a definite mode of extension of the lesions of phthisis through the lungs, and has found great assistance in the diagnosis and valuable aid in the prognosis from a recognition of this fact. We agree with Dr. Fowler in thinking that there probably is in most cases of phthisis a distinct "line of march." The extreme apex of the lung is not often the site of the primary lesion; it is situated from an inch to an inch and a half below the top, and rather nearer to the posterior and external borders. Lesions in this region tend to spread in the first instance backward, possibly from inhalation of the virus while the patient is lying down. This accounts for the fact that an examination of the supra-spinous fossa will often give certain evidence of the presence of disease when the physical signs in front of the chest have left some doubt. From this primary focus, which in front corresponds either to the supra-clavicular fossa or to a spot immediately below the centre of the clavicle, the lesions often first spread downward along the anterior aspect of the upper lobe, about three-fourths of an inch within its margin, frequently occurring in scattered nodules, separated by an inch or more of healthy tissue. The second and less usual site of the primary affection of the apex corresponds on the chest-wall with the first and second interspaces below the outer third of the clavicle. The lines of extension are usually downward and backward. The lower lobe of the lung primarily diseased is usually affected at a very early period. The site of the primary infiltration of the lower lobe is generally situated about an inch below the upper and posterior extremity of the apex of the lower lobe, and this situation corresponds on the chest-wall to a spot opposite the fifth dorsal spine midway between the border of the scapula and the spinous processes.—*The Lancet.*

Hydatids in Bone.—An instance of this rare affection was observed by Dr. Leacock, who reports it to the *Australasian Medical Gazette.* A man, aged forty, was troubled with his left knee ever since his twelfth year, when he received a blow. About twenty years ago he was kicked by a horse on the same knee. Some thirteen years later symptoms of pain and swelling came on after walking. They were so severe as to necessitate medical treatment, which was continued for six months, the patient being more or less confined to bed during that time. Since then—that is, for the last seven years—there has been inability to completely straighten the limb, frequent pain, and permanent though slight enlargement of the joint. The patient came under Dr. Leacock's care about four months ago, through having struck the knee violently against a post. He saw him a couple of hours after the accident, when he was suffering very acute pain in the joint. For a fortnight he kept his bed, with all the usual local symptoms of acute synovitis, but little or no constitutional disturbance or rise of temperature. At the end of that time, the pain having greatly subsided, he left his bed on crutches, but could not put his foot to the ground, and, the pain gradually returning, after two or three weeks he was compelled to take to bed again. All the usual means for obtaining absolute rest to the joint were adopted. Extension, which usually gives relief in acute joint disease, in this case seemed only to increase the pain. There were no symptoms, either local or general, of suppuration. There was only a slight increase of swelling about the knee; very little effusion in the joint, the permanent seat of pain being referred more particularly to a spot on the inner condyle of the femur. In addition, there were the usual electric-shock pains and startings, aggravated at night. Finding, after about a month's treatment, that absolutely no improvement took place, that the patient's health was beginning to break down from constant pain, and that he himself was anxious for relief at any risk, the author suggested resection, or amputation, if found necessary. On opening the joint, he found a small amount of flocculent lymph, slight erosion of the articular cartilages, and on digital examination a perforation admitting the tip of the finger, between the condyles of the femur, apparently communicating with a cavity in the end of that bone. There was chronic thickening of the ligaments and fibrous tissue of the joint, but no pus; nor did he see any hydatid cysts in the joint, and he was certainly not expecting them. On applying the saw to the condyles of the femur, the instrument did not meet with the usual resistance; the bone, in fact, was a mere shell, in some parts scarcely thicker than paper. Such being the state of affairs, amputation was the only resource. On examining the removed limb, the lower end of the femur was found hollowed out into one large cavity, stuffed full of hydatid cysts, from the size of a small pea to nearly an inch in diameter. The cancellous structure in the head of the tibia was undergoing fatty degeneration, and in the popliteal space was an ounce or more of broken-down soft tissue, evidently a commencing abscess, though not yet converted into pus.

Cholera and Milk.—An instructive example of the facility with which milk may become the medium for the propagation of a zymotic disease is afforded by a limited epidemic of cholera which occurred on board a sailing ship, the Ardenclutha, lying in the port of Calcutta. Dr. W. J. Simpson, the health-officer of Calcutta, investigated the outbreak with great care, and offers strong evidence that the outbreak was not to be traced to any peculiar climatic condition, to the state of the ship, to the water, or to any circumstances connected with the visits of the men on shore. Pursuing the inquiry, it was ascertained that ten of the men had used milk supplied by a native who visited the ship daily; of these ten men, nine were affected; four died of cholera, and five had severe diarrhœa. With regard to one other man, who was the last to suffer from cholera, it was doubtful whether he drank any of this milk or not; as he sickened after the others he may have contracted the disease from an earlier case. Only one man who drank the milk escaped, and he only took a very small quantity. The native who supplied the milk kept one cow, which was in good health, but he frankly admitted that the milk he supplied to the sailors contained about twenty-five per cent. of added water; and it also came out that several of his neighbors had suffered from cholera. A case had been imported on March 2d; the dejecta from this patient drained into the tank on which the milkman's house stood. The first case among the milkman's neighbors occurred on March 7th; the first case of diarrhœa among the crew of the Ardenclutha on the same day, and the first case recognized as cholera two days later. This, taken along with the admission that water was added to the milk, and that, with one exception, the remainder of the crew, fourteen in number, who had not drunk the milk, did not suffer from cholera or diarrhœa, leaves very little doubt as to the origin of the epidemic. The milk was clearly the connecting link between the epidemic in the hamlet and on board the ship, and it was without much doubt rendered infective by the addition of the tank-water fouled by the dejecta of the imported case. The investigation also shows that cholera, while prevailing in a distant locality, may be established simultaneously at two widely different places, and yet be due to a common cause which is preventable.—*British Medical Journal.*

Sterility in the Male.—Dr. Kehrer, of Heidelberg, has recently published some researches on this obscure subject in a work entitled "Beiträge zur Klinischen und Experimentellen Geburtskunde und Gynäkologie." To forty already reported cases of sterile marriages where he had examined the semen, he has added fifty-six more. In 3.12 per cent. complete impotence was certain; in 30.21 per cent. the semen did not contain spermatozoa (*Azoöspermia*); in 11.45 per cent. these organisms were deficient in quantity (*Oligozoöspermia*); and in 55.20 per cent. they were present in abundance (*Polyzoöspermia*). Among the cases of azoöspermia, in many instances no cause for the anomaly could be traced; in a fifth, masturbation had avowedly been practised; in more than two-thirds, the subjects had suffered from gonorrhœa, but disease of one or both testicles could not be detected in many of these patients, so that Dr. Kehrer suspects other complications besides disease of the epididymis, such as obstruction of the ejaculatory duct through prostatitis, or fatty degeneration of the tubuli seminiferi. The proportion of subjects where there had been gonorrhœa was the same in the cases of oligozoöspermia, where yet a chance of fruitful coitus remained, while among the sterile men where polyzoöspermia was discovered, only half as many had been subject to gonorrhœa. Dr. Kehrer believes, judging from his researches, that in at least a third of the cases of sterile marriages the husband was the party at fault, and gonorrhœa was the primary cause of the barrenness. Here it must be remembered that, unfortunately, that disease is extremely common among young unmarried men, and in making researches in long series of fertile marriages, a large proportion of the husbands would probably be found to have suffered from gonorrhœa. Noegerrath fell into a doubtful line of argument somewhat like that of Dr. Kehrer, and Bumstead, among others, exposed the fallacy. Dr. Kehrer believes that other sources of sterility will yet be discovered, such as influences directly prejudicial to the germ-cell or sperm-cell.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 7. New York, February 18, 1888 Whole No. 902

Original Articles.

THE NERVOUS SYMPTOMS, LOCAL AND REFLEX, ARISING FROM THE DISPLACEMENTS AND INFLAMMATIONS OF THE UTERUS AND ITS APPENDAGES.[1]

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NEW YORK.

In the scant literature which has been written upon the nervous affections dependent upon abnormal conditions of the uterus and its appendages, there has been presented, for the most part, an array of unusual and startling cases, until the profession, and the public, too, as for that matter, have come to feel that a woman's organs of generation are seldom in a state of perfect health ; rather more, that they are centres from which emanate the most terrible and awful nervous explosions. This is, indeed, sometimes true, but not nearly as often as one is led to suppose from the articles which from time to time come from the pens of our most eminent gynecologists, illustrated with cases numbering from two or three to a dozen or more, setting forth weird reflex neuroses starting from the genital tract.

For the last four years, in taking the histories of my gynecological cases, I have had in view the finding out of how extensively and in what directions the nervous system was implicated in diseases of the uterus and its appendages. This paper, therefore, has not for its object the presentation of unusual and bizarre cases. Out of over two thousand cases, I have selected for analysis about five hundred. I have set aside any in regard to which there might arise some question as to the diagnosis, either of the disease of the uterus and its appendages or the dependence of the disturbances in other parts of the body upon pelvic trouble. I cannot, as it is, claim absolute accuracy for the table which I have prepared, but I have endeavored to make it as nearly so as possible. It can be easily understood that it is difficult to gather together cases which are typical and uncomplicated with other troubles. To simplify my already too complex subject as much as possible, I have excluded from consideration all the nervous disturbances of menstruation and the menopause, and those arising from neoplasms. The symptoms classify themselves naturally into four distinct groups: 1. Those of the pelvis. 2. Those of the alimentary canal. 3. Those of the head. 4. General nervousness, including hysteria.

Besides these, there remain a few peculiar symptoms which do not readily fall into this classification, but should be noted.

This may not be the most scientific way of regarding the symptoms, but for purposes of study and contrast it has seemed the most practical.

In complete prolapsus we find that out of 37 cases 25 suffered no pain, nor experienced any nervous disturbance. The trouble was entirely that of a mechanical inconvenience. Two had no pain, but great dyspepsia, which possibly might not be attributable to the nervous disturbance ; 5 had pain only in the hypogastrium ; in 1 the pain was referable to the whole pelvic region, 1 to the right side, and 1 to the left side ; 2 had lumbar and sacral pains ; 1 suffered from general nervousness.

In prolapsus of the second degree, 15 had pain referable to the whole pelvis, in 3 of which the pain was of a bearing-down nature ; in 2 it was sticking in character ; 1 complained of pain in the hypogastrium alone ; 5 had pain in the back, and 4 in the left side ; 2 had flatulence, and 2 felt as if something were moving in the abdomen, a sensation which gives rise to the notion that pregnancy may exist ; 2 had general headache ; 1 had headache referable to the vertex ; 1 had dizziness.

In prolapsus of the first degree, of the 20 cases 8 had pain referable to the whole pelvic region, 4 to the left side, 4 to the lower lumbar and sacral regions ; 1 had flatulence, 2 had dyspepsia, 1 had disturbance of the general nervous system.

Considering, also, in this connection, anteflexion with prolapsus, there are 6 cases, and no nervous disturbance outside of the pelvis, the pain occurring in the whole pelvis and on either or both sides. In retroflexion with prolapsus (9 cases), 4 were troubled with headache.

In 97 cases of prolapsus, 37 were of complete prolapsus, 20 were of the first degree, 25 were of the second degree, 6 were of anteflexion with prolapsus, and 9 were of retroflexion with prolapsus.

In the analysis of these cases it is shown that in only 16 have the symptoms extended beyond the pelvis ; that they are mainly referable to the whole pelvis or to the left side ; that the cases of the first and second degree give rise to pain, owing to the dragging and pulling away of the organ from its attachments, but when this is accomplished and complete procidentia has become a fact, pain is no longer a prominent symptom.

The cases in which anteversion occurs, uncomplicated with inflammation or other troubles, and of sufficient degree to be considered pathological, are not very numerous. There were 8 such to be found : One had no pain, except menstrual ; 4 had pain in the whole pelvis, 1 complaining of it especially in walking, another saying that it reached to the shoulders ; 2 had pain in the right side ; 1, in both sides. Of these, 2 complained of headache, and 1 of dizziness.

Retroversions are more numerous. Of the 34, 6 had no pain (came for dysmenorrhœa) ; 16 had pain in the whole pelvis ; 4, in the left side ; 1, in the hypogastrium ; 2, in the back ; 1 had headache, and no other disturbance ; 4 had general headache ; 2 complained of dizziness ; 2, of creeping sensations in the back and cold perspiration.

Of 32 cases of anteflexion, 17 complained of pain in the whole pelvis ; 2, of each side ; 1, of both sides ; 1, of hypogastrium ; 5, of the back alone or of the back and sides together ; 1, of flatulence ; 1, of dyspepsia ; and 4, of general headache. Two had general nervousness ; 1 was subject to fainting attacks ; 2 were hysterical.

In retroflexion, of the 39 cases 5 complained of no pelvic pain ; 20 had pain referable to the whole pelvis ; 2, pain in the right side ; 4, in the left side ; 1, in both sides and back ; 1, in the hypogastrium ; 6, in sacral and lumbar region. The intestinal disturbances were peculiar ; 2 felt the flutterings as if pregnant ; 1 felt as if "the wind worked up to her head ;" 4 had dyspepsia ; 3, vomiting ; 11, general headache ; 1, frontal headache ; 3 had dizziness ; 3 had hysteria ; 3, general nervousness ; 1, cold perspiration.

In the 42 cases of versions 19 had nervous disturbances extending beyond the pelvis ; and in the 71 cases of ante- and retroflexions, 20. The flexions act more seriously on the general nervous system than any of the other purely mechanical displacements. The circulation of the uterus in flexions is so impaired that they cannot exist long without giving rise to inflammatory conditions which bring with them pelvic pains. Shortly the circle of disturbance spreads to the periphery; the digestive functions become disturbed and neuralgias are invoked.

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[1] Read before the Section on Neurology of the New York Academy of Medicine, January 13, 1888.

Passing on to the inflammatory conditions, we will first consider endometritis. I have excluded from this list a large number of cases in which the only symptoms were those of menstrual derangement, either dysmenorrhœa or menorrhagia due to fungoid growths. Of the 45 cases 27 had pains referable to the whole pelvis; 3 had pains running down the thighs; 1 had pain in the right side, and 9 had pain on the left; 8 had pain in the sacral and lumbar regions, and 2 in the hypogastrium; 2 had dyspepsia; 3, nausea; 8 had general headache; 1, frontal headache; 3 complained of dizziness; 3 had general nervousness; 3 had hysteria; 1 had paræsthesia; 1, general neuralgia; and 1 complained of trouble with the eyes.

In 29 cases of endometritis with anteflexion, 19 had pelvic pain; 3 had pain in the right side; 1 in hypogastrium, and 5 in sacral and lumbar regions; 6 had flatulence; 2, dyspepsia; 8, general headache; 1, dizziness; 3 were hysterical.

In the 37 cases of retroflexion with endometritis, 21 had pelvic pain; 2 had pain extending down the legs; 2 had pain in the right side; 4 had pain in the left side; 2 had pain in the hypogastrium; 3 had pain in the lower lumbar and sacral regions; 8 were dyspeptic; 5 had nausea; 6 had general headache; 1, headache at the vertex; 1, occipital headache; 1 was dizzy; 1 complained of the eyes; 1 had melancholia; another had chilly sensations.

In the 111 cases, 45 were of endometritis; 29 were of endometritis and anteflexion; 37 were of endometritis and retroflexion. Of these, 44 had symptoms extending beyond the pelvis.

Of 26 cases of contractions and chronic inflammations of the broad ligaments, in 1 case both ligaments were tender and contracted, but the pain was referred to the left side. In 1 (left side) there was no pain. In 2, where the trouble was on the left side, the pain was located upon the right; and, *vice versa*, in the cases where trouble was in the right broad ligament, the pain was on the left. In 13 cases both the trouble and the pain were on the left side, and in 2 others the left side and back were seats of pain. Two with trouble in the right side had pain in the back, and 4 with trouble in the left side had also pain in the back. Three had flatulence; 2, dyspepsia; 1, nausea; 3, general headache; 1, frontal headache; 3, dizziness; 1 had hysteria; 1, paræsthesia; 1, trouble with eyes; and 1, hiccough.

Of 6 cases of anteflexion, complicated with trouble in the broad ligaments, 2 had pain in the right side; the remaining 4 had sharp, burning, cutting pain in the left side; 1 only suffered from dizziness.

There were 16 cases of retroflexion associated with disease of the broad ligaments; 6 had pain referable to the whole pelvis; 6 had pain in the left side; 1 had pain in the hypogastrium; 3 had pain in the lumbar and sacral region; 7 had headaches.

In 26 cases of trouble with broad ligaments, in 1 pain was referred to both sides; 20, in left side; 5, right side; broad ligaments and anteflexion, 6 cases; broad ligaments and retroflexion, 16—total, 48. Among these are included those masses of inflammation in which are bound up the ovaries and the tubes in such a manner that it is difficult to differentiate them one from the other. It is interesting to note that in 12 cases out of the 26 of trouble in the broad ligaments that the disturbance extends beyond the pelvis, while in the complications with anteflexion and retroflexion, 24 in number, 8 only had trouble, and all of those referable to the head.

In considering the 16 cases of ovaritis, I am unable to make an exact statement with reference to prolapsus of the ovaries associated with ovaritis, but my impression is that the cases of prolapsus without ovaritis which come to the physician for aid are very few in number, and also that the cases of ovaritis without prolapsus are equally few. In 8 cases the pain was general, except in 1 instance, when in the left side; in 2 cases, in which both ovaries were prolapsed, both sides were affected; in the other cases, 3 of each, the pain was referred to the corresponding side; 2 had headaches, 1 of whom felt as if her head were on fire; 2 were dizzy, 2 had hysteria, 1 had attacks of fainting, 1 felt cold as ice on the left side.

In 4 cases of anteflexion with ovaritis 2 had general pain in pelvis; 1, pain in the left side; 1 had pain in the back, 1 had dyspepsia, 1, nausea—all four suffered from headaches; 2 had pain in the heart and 2 had general nervousness.

In 4 cases of retroflexion associated with ovaritis, 2 had general pelvic pain, 2 had pain in left side (corresponding to ovary) and the back. All were generally nervous, and had headaches. Summary: Ovaritis, 16 cases; ovaritis and retroflexion, 4 cases; ovaritis and anteflexion, 4 cases—total, 24 cases.

The reason I present so few cases of ovaritis complicated with displacements is not because they are lacking, but because they are more often complicated with other inflammatory conditions of the pelvis, such as cervicitis, endometritis, and parametritis. I think, however, that these cases are typical, and show that anteflexion, associated with ovarian disease, gives rise to a more general nervous disturbance than almost any other complication.

There are 26 cases of metritis, in which are included subinvolution and the more chronic hyperplastic conditions. Sixteen had general pelvic pain; in 1 the pain extended down the leg; in 2 the pain was in the right side, and in 2 in the left; 1, in the hypogastrium; 4, in the back. I find no disturbances of the alimentary canal recorded. Five had general headaches; 1 had frontal headache; 1, of the vertex; 3 had cold and chilly feelings. In 4 cases of anteflexion associated with metritis, the pain was located in the pelvis—1 in both sides and back, 1 in hypogastrium, and 2 in the back. Cases of metritis with retroflexion, without other complications, are not numerous on the list. Two cases, with decided pain in the back and general nervousness, are all that I can bring forward just now. It is true, I think, that a metritis uncomplicated with flexions gives rise to little disturbance or discomfort outside of the pelvis itself.

In 26 cases of subacute and chronic parametritis, 16 complained of pain in the whole pelvic region; 1, the pain extended down the leg; 3, it was on both sides; 1, in the left side; 5, in the back; 4 had dyspepsia; 1, nausea; 8, general headaches; 1, frontal headache; one felt prickling like needles, another was sleepless.

It must be remembered, with reference to these cases as well as the others, that I only bring out the distinctly local and reflex nervous symptoms.

I have endeavored, in considering the cases of the cervix, to eliminate all other pathological conditions. So much has been written about the reflex influence of cicatricial tissue remaining in cervical angles, that the matter has assumed surgical importance. The 14 cases of fissured cervix which I present were without inflammatory trouble, but the cases of cervicitis and endocervicitis were, many of them, complicated with lacerations. Of the fissured cervices, 5 had pain in the whole pelvis; 1, on the right side; 2, on both sides; 1, on the left; 2, in the hypogastrium; 4, in the back; 2 complain of flatulence; 1, of general headache; 1, of frontal headache; 1, of curious sensations about the umbilicus. Of the 47 cases of endocervicitis, 36 had general pelvic pain; 2 had pain in the right side, 1 in both sides, 1 in the left side, 2 in the hypogastrium, and 5 in the back; 5 complain of flatulence, 1 of nausea, 13 of general headache, 2 of headache of the vertex, 3 of dizziness; 1 was hysterical; 2 were sleepless; and 1 was drowsy.

Of the 61 cases of pathological conditions of the cervix, 22 had disturbances outside of the pelvis. The presence of headache was noticeable.

Of the 517 cases, 170, or about thirty-two per cent., have nervous troubles extending beyond the pelvic region. It is interesting to note that, in about half of the cases (226), the pain and discomfort were referable to the whole pelvis, and that pain in the left side is twice as frequent as in the right.

Second.—It has been shown that mere mechanical displacements give rise to almost no disturbance in complete prolapsus. In the other degrees of prolapsus the pain comes from the pulling and stretching of the tissues. Retroflexion occasions the most nervous disturbance outside of the pelvis.

Third.—It can be seen that the amount of disturbance is in every way proportioned to the amount of uterine tissue involved, and the length of time the disease has continued.

Fourth.—It is plainly shown that the reflex nervous symptoms are no more severe nor extensive that arise from displacements and inflammatory conditions of the uterus and its appendages than would be produced by pathological conditions of the same extent and the same chronic character in other parts of the body. When these are present a previous neuropathic tendency, either acquired or inherited, probably has existed, and the uterine trouble is generally extensive and of an aggravated nature, which, acting on the central nervous system, produces a display of disturbed innervation at the periphery or of disturbed cerebration, which results in neuralgias or hysterias.

Fifth.—In these studies the effects of uterine trouble upon the eyes have been carefully considered. Three cases, 2 of endometritis and 1 of inflammation of the broad ligaments, are found. I have met others, but in

TABLE OF 517 CASES SHOWING THE NERVOUS SYMPTOMS, LOCAL AND REFLEX, ARISING FROM DISPLACEMENTS AND INFLAMMATIONS OF THE UTERUS AND ITS APPENDAGES.

	Total number of cases.	No pain present.	PELVIC SYMPTOMS.							ALIMENTARY CANAL.				HEAD.					GENERAL NERVOUSNESS, ETC.		Other symptoms.	Total number having symptoms extending beyond pelvis.
			Entire pelvic region.	Extending down leg.	Both sides.	Right side.	Left side.	Hypogastrium.	Sacral and lumbar.	Flatulence.	Dyspepsia.	Nausea.	Vomiting.	General headache.	Frontal headache.	Vertex.	Occipital.	Dizziness.	General nervousness.	Hysteria.		
Complete prolapsus	37	25	1	..	..	1	1	5	2	..	2	..	..	..	..	..	..	..	1	..	....	3
Prolapsus, second degree	25	..	..	..	..	..	4	1	5	4	..	..	..	2	..	1	.	1	..	..	... ...	5
Prolapsus, first degree	20	.	8	..	..	..	4	..	4	1	2	..	..	..	..	..	..	..	1	..	... .	4
Anteflexion and prolapsus	6	..	2	..	1	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	....	0
Retroflexion and prolapsus	9	..	..	..		..	7	.	2	..	..	..	..	2	2	..	..	..	..	.	....	4
Total	97																					
Anteversion	8	1	4	..	1	2	..	..	..	.	..	..	..	2	..	..	..	1	..	..	....	3
Retroversion	34	6	16	..	..	..	4	1	2	..	..	..	..	4	..	..	..	2	..	..	Creeping sensati ns; cold perspiration.	6
Anteflexion	32	..	17	..	1	2	2	..	5	1	1	..	..	4	..	..	..	..	2	2	....	8
Retroflexion	39	5	20	..	1	2	4	1	7	3	4	3	..	11	1	..	..	3	..	3	1 Cold perspiration.	20
Total	113																					
Endometritis	45	..	27	3	..	1	9	2	8	..	2	3	..	8	1	..	..	3	3	3	1 General neuralgia; 1 eyes,and 1 paræsthesia.	15
Endometritis and anteflexion.	29	..	19	..	..	3	..	1	5	6	2	..	..	8	..	..	..	1	..	3	....	16
Endometritis and retroflexion.	37	..	21	2	..	2	4	2	3	..	8	5	..	6	..	1	1	1	..	..	1 Eyes; 1 melancholia; 1 chilly sensations.	13
Total	111																					
Broad ligaments	1	..	..	..	..	..	1	..	..													
Broad ligaments, left side	20	1	..	..	..	2	13	..	4	3	2	1	..	3	1	..	..	3	1	..	1 Eyes; 1 paræsthesia; 1 faint; 1 hiccough.	12
Broad ligaments, right side	5	..	..	..	..	1	2	..	2													
Broad ligaments and anteflexion	6	..	..	..	..	2	4	..	..	..	..	..	..	..	..	..	..	1	..	..	... .	1
Broad ligaments and retroflexion	16	..	6	..	..	..	6	1	3	..	..	..	..	7	..	..	..	..	..	..	....	7
Total	53																					
Ovaritis	16	..		..	2	3	3	..	..	..	..	..	..	2	..	..	..	2	..	2	1 Cold as ice on left side; 1 faints.	5
Ovaritis and anteflexion	4	..	2	..	..	..	1	..	1	..	1	1	..	4	..	..	..	..	.	2	2 Pain in heart.	4
Ovaritis and retroflexion	4	..	2	..	..	..	2	..	..	..	..	..	..	4	..	..	..	..	..	4	....	4
Total	24																					
Metritis	26	..	16	1	..	2	2	1	4	..	..	..	..	5	1	1	..	..	..	..	3 Cold and chilly sensations.	7
Metritis and anteflexion	4	..	..	..	1	..	..	1	3	..	..	..	..	..	..	..	..	..	..	..	....	0
Metritis and retroflexion	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2	..	....	2
Total	32																					
Parametritis	26	..	16	1	3	..	1	..	5	..	4	1	..	8	1	..	..	..	..	..	1 Prickling sensation like needles.	9
Total	26																					
Lacerated cervix	14	..	5	..	2	1	1	2	4	..	2	..	..	1	1	..	..	..	..	..	1 Curious sensation about umbilicus.	2
Cervicitis and endocervicitis	47	..	36	..	1	2	1	2	5	..	5	..	1	13	..	2	..	..	..	1	2 Sleepless and 1 drowsy.	20
Total	61																					
Grand total	517		226																			170

From an inspection of these cases, as well as looking through the very many others which were not sufficiently typical to come under classification, the following deductions have been made:

First.—Nervous disturbance outside of the pelvis is not nearly as frequent in disease of the uterus and its appendages as is generally believed. The impression that one severe case makes, effaces that of dozens of simpler ones. Moreover, gynecologists who are men are apt to meet only the severer cases, since women suffer long and in silence before undertaking a treatment which does such violence to their natural modesty. The eminent specialists who have done most of the writing on this subject encounter the most severe and difficult cases, and their object, often, in writing, is to present peculiar and extraordinary cases.

these, and looking over the literature, I have reached the conclusion that the eye-trouble is generally due to anæmia and general asthenia, and it is doubtful if it can be proven that such troubles with the eyes occur more often in uterine diseases than in others which would produce a similar state of anæmia and depression of the general bodily strength.

Sixth.—Many nervous symptoms are not present *because* of uterine disease, but are due to the constipation and anæmia with which it is so often accompanied.

Seventh.—Nervous disturbances outside of the pelvis are much more prevalent among the more highly organized women of the higher classes than among those of the lower, who have less time to think of themselves, and much less vivid imaginations.

Eighth.—The attention should be called to the fact that sacral neuralgia often simulates uterine disease; the pain is very like that described in many of the inflammatory conditions with displacement, and even with ovarian trouble. It is often associated with pain extending down the leg, and pain referred to the sides and the back, and it is also accompanied with general nervousness. I recall, now, three cases of sacral neuralgia in which the nerves were tender at their exit on the right side, and the great pain complained of was on the left side.

The minute anatomy of the nerves of the pelvis, and its relations with the so-called sympathetic, is far from precise, and we must turn, as has been done in the absorbing questions of brain-localization, to clinical data to substantiate hypothesis and theory. I am inclined to think that most of the reflex troubles leave the pelvis through the nerves connecting with the spinal cord, and are thence reflected to the brain, and from the brain to the periphery.

It is not my purpose to discuss at length the treatment, which might properly come within the limits of this paper, but only to speak of the remedies which, in these cases, have best served their end. If extensive relaxation of vaginal walls and uterine ligaments existed, astringents were used, of which iodine and tannin have proved the most successful. In using tampons for support, great care was taken to make them of such a size that they would support without distending the parts. In non-inflammatory conditions a well-adjusted pessary was the great desideratum. In a case of retroflexion associated with metritis, complete relief from the most distressing dyspeptic symptoms occurred in a few hours after the uterus was replaced and held in position by a pessary. In inflammatory conditions, belladonna, combined with iodine and glycerine, has proven the most useful in relieving pain and taking away the extreme sensitiveness. In the majority of cases the copious injections of hot water have been beneficial. I do not, however, believe in the present wholesale employment of this remedy. I have tried similar cases side by side, one using four quarts of hot water night and morning, and the other not. The curative results were obtained in about the same length of time. In cases of perimetric inflammations, acute and chronic, the hot injections are, indeed, beneficial in the vast majority of instances. In a few cases, for some unknown reason, they have been illy borne, and, instead of allaying the pain, they have increased it.

In all the long list of remedies addressed to the nervous system, there is none that can compare with the bromide of potassium. Five years ago I began to use it, having witnessed its almost marvellous effects in several cases in which I had tried it. Since then I have seen several articles in which it has been extolled. I always combine it with a bitter tonic. It certainly has a direct effect upon pelvic inflammation, aside from the soothing effect upon the nervous system. Where there is general nervousness, with a tendency to hysteria, a mixture composed of equal parts of valerian, aromatic spirits of ammonia, and compound spirits of lavender has been satisfactory. The ammonia renders the valerian less disagreeable. Next in the list stands a combination of hyoscyamus and camphor. The pill-form of these drugs commends itself, since it is more agreeable to the patient, but I have seldom been able to obtain anything like the results with pills. They probably do not dissolve. Galvanism has been very successful in allaying the pelvic and general pains.

"THE MADISON," 25 MADISON AVENUE.

ECCHONDROSES OF THE SEPTUM NARIUM AND THEIR REMOVAL.[1]

BY CARL SEILER, M.D.,
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I FEEL a great hesitancy in bringing before you a paper on the subject of ecchondroses of the septum of the nose, because, after having read the admirable—one might almost call it classic—paper on deformities of the septum which was read before the Academy by my esteemed friend, Dr. Frank H. Bosworth, not much more than a year ago, little remains to be said that he has not pointed out. Yet, like him, I have been struck with the great importance of these excrescences of the septum in the production of the various, and often remote, symptoms which we notice in cases of chronic nasal catarrh; and for this reason I hope you will pardon me if I give you my personal experience and the result of my own observations, which extend over a period of several years. I will confine my remarks, however, to those excrescences which are found on the surface of the cartilaginous plate of the septum, and leave out of consideration those exostoses and deformities which are found on the vomer, or those which are in connection with deviation from the normal position of the septum. Long before I realized that these protuberances on the surface of the cartilaginous septum played an important rôle in the production of the symptoms of chronic nasal catarrh, I was aware of their presence, and devised a little instrument which would assist in the differential diagnosis between them and deviation of the septum, a description of which was published in the second edition of my Handbook. Since then I have more and more come to the conclusion that it is necessary in many cases to restore the normal smooth surface of the septum in order to cure the chronic nasal catarrh.

The origin and growth of these cartilaginous excrescences which are seen in a great many of the cases, some of which have come under my observation, puzzled me greatly—the more so as I cannot accept the theory expressed by many, and also by Dr. Bosworth, that they are of traumatic origin; and it was not until I had occasion to watch their formation in several instances that my opinion as to their origin was formed. And, therefore, I think that a short history of one or two instances will be of interest.

Mrs. T——, wife of a physician, consulted me at the request of her husband, three years ago, on account of a chronic nasal catarrh. An examination of the nasal cavities showed a perfectly formed normal septum, but a turgescence of the turbinated tissue over the anterior portion of the lower turbinated bone, which on the right side was in contact with the mucous membrane of the septum. As she declined positively any surgical interference or cauterization of the superabundant tissue, I gave her an alkaline spray to use at home, and did not see her again until a year later. She then told me that she was better, but that the obstruction in the right nostril had been permanent, the nasal cavity opening up only occasionally, and then allowing the passage of air but for a few moments. For some time she had noticed that her nose, which had formerly been straight, had a tendency to bend over to the left side. There was no history of any blow or fall on the nose. An examination gave an entirely different picture from that seen at the first examination, inasmuch as the cartilaginous septum was seen to bulge into the left nasal chamber, while on the right side there was a depression corresponding in size and position to the projection of tissue from the lower turbinated bone. This depression was bordered in front by a decided ridge, which ran obliquely upward. She again refused to be operated on, and I did not see her until a short time ago. An examination revealed the following condition: The tip of the nose was considerably deflected from the median line toward the left side; the left nasal chamber was partially obstructed by a decided bulging of the cartilaginous septum, on the surface of which a tit-like projection came in contact with the turbinated tissue of the lower turbinated bone. On the right side, the turgescence of the turbinated tissue was still present, but the depression which had existed at the former examination had disappeared, and in its place was seen a shelf-like projection from the surface of the cartilaginous plate of the septum running back to a considerable distance. The upper surface of this shelf was gently sloped downward, while the lower surface was slightly concave, and separated from the floor of the nasal chamber by a space of about one-eighth of an inch, so that a probe could easily be passed between it and the floor of the nose. The most prominent symptoms were fits of violent sneezing with every sudden change of surface temperature, such as getting out of bed, going out of a warm room into a cold one, or into the open air, and so forth; severe neuralgic headaches over the right temple, obstruction to nasal respiration, chronic laryngeal inflammation, and accumulation of thick viscid mucus in the naso-pharyngeal cavity, which had to be removed by hawking.

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[1] Read before the Laryngological Section of the New York Academy of Medicine.

Another case in which I observed the development and growth of an ecchondrosis on the surface of the septum was that of a boy, about fourteen years of age, who was afflicted with a large papillomatous growth in the larynx, and whose nose I examined only incidentally. His nasal chambers were perfectly normal as far as the anatomical relation of the parts was concerned, but there was a somewhat deficient watery secretion, and a tendency toward the formation of scabs of dried mucus which adhered to the surface of the septum, particularly on the left side, and which he was in the habit of removing with his finger-nail. I cautioned him against this habit, which, as I explained to his parents, was likely to lead to a perforation of the septum. The papillomatous growth was successfully removed, and I did not see the patient again until about eighteen months later, when he returned with a chronic laryngitis which his parents thought was a return of the tumor, as it was accompanied by cough and hoarseness. He also complained of occlusion of the left nostril, which prevented free inspiration; but there was no obstacle to the outflow of the air, and his mother told me that he breathed heavily at night, and slept with his mouth open, expectorating in the morning large scabs of dried mucus. On inquiry, I found that he had persisted in picking off scabs with his finger, and that there were frequent slight nasal hemorrhages. I fully expected to find my prediction verified, viz., that he had scratched through the cartilaginous septum, thus producing a perforation. But such was not the case, for, instead of a perforation, I found on examination a conical projection from the surface of the septum on the left side, which was in contact with the atrophic turbinated tissue of the lower turbinated bone. Its apex was covered with dried mucus, and, on removal of which, presented a bleeding surface denuded of mucous membrane. The right side showed nothing abnormal except that the mucous membrane was dry, and the turbinated tissue slightly atrophied. The most minute interrogation of the patient and his parents failed to elicit an account of any injury to the nose by a blow or fall during the interval between the two examinations, and for a long period before I saw the boy.

In a number of other cases have I had the opportunity to observe a similar process of development of these ecchondroses of the cartilaginous septum, without the presence of a decided deviation existing previously, so that I have come to the conclusion that these simple cartilaginous excrescences are due, not to external traumatism, but to internal local irritation of the mucous membrane of the cartilaginous septum primarily, and of the perichondrium secondarily. If we consider that a turgescent or hypertrophied portion of the turbinated tissue, which for a considerable length of time is in contact with the mucous membrane of the septum, must necessarily exert a certain amount of pressure upon that mucous membrane and upon the perichondrium underlying it, and that even a very slight pressure, when it is kept up for a considerable period of time, will produce local congestion of the part pressed upon, be it on the outer integument of the body or the mucous membrane, it seems plausible to assume that this local congestion gives rise to changes of nutrition of the part sustaining the pressure. Taking into consideration the peculiar histological structure of cartilage, and particularly of hyaline cartilage, in which the blood is supplied by loops of vessels dipping into the substance of the cartilage from the perichondrium, and the nutrition of the cells is carried on by osmosis from one to the other without the intervention of a capillary net-work of blood-vessels, we can readily see that a localized increase of blood-supply to these loops must necessarily give rise to a *more* rapid cell-division and proliferation of the intervening cartilage-cells than is demanded to supply the waste by cell-death, and localized increase of cartilage-tissue must result therefrom.

In the majority of cases the cartilaginous projections from the surface of the septum corresponded in position and size to the line of pressure by turbinated tissue, and in those cases of atrophic rhinitis in which they are found, careful examination of the patient will elicit the fact that at some former period a hypertrophic rhinitis has existed, which has given rise to the ecchondroses in the manner described. It is, of course, impossible to state what length of time is required for their formation, and how long the pressure must exert its influence before any elevation on the surface of the septum becomes apparent. And, further, it is impossible to give any reason why, in some instances, no apparent redundancy of tissue results from long-continued pressure by the turgescent turbinated tissue. Individual peculiarities in this case, as in many other pathological formations in the body, must account for the differences noted in different cases.

In a short paper on this subject read before the German Medical Society of Philadelphia, last spring, I mentioned some instances in which an excessive growth of ecchondroses had caused a union between them and that portion of the turbinated bone lying opposite to them, so as to form a bridge across the floor of the nose, and explained this union by the fact that both the top of the ecchondrosis and that portion of the turbinated tissue which pressed against it had become denuded of mucous membrane, and an exostosis from the turbinated bone had projected to unite with the ecchondrosis on the septum. Since then I have had the opportunity to watch a case in which this condition existed, but union had not as yet taken place. In order to satisfy myself as to the result, I refrained from operating, and found that in the course of three months a firm union between the two had taken place, and the bridge was covered with mucous membrane, intact as far as I could determine, thus proving in this instance my surmise, as to the origin of these bridges, to be correct.

I will not tire you with an enumeration of the many and varied symptoms to which these obstructions to nasal respiration give rise, particularly as they have been so well described by Ingalls, Jarvis, Bosworth, Allen, John Mackenzie, Hinkel, and others, and will only mention one peculiarity, which I do not recollect to have seen a description of in any of the writings on this subject, viz., the valve-like action of the alæ of the nose when ecchondrosis on the septum exists low down. It will be noticed that in these cases inspiration alone is obstructed, because the pressure of the air upon the external surface of the ala of the nose, due to the suction, causes it to move slightly inward, and the lower portion of the turbinated tissue coming in contact with the ecchondrosis, more closely obstructs the lower orifice of the nasal chamber, like a valve which, as in the tube of an air-pump, permits the exit of the air, but prevents the influx through the same channel. By inserting a nasal speculum or dilator into the nostril this valve-action can be prevented, and the patient can breathe in and out with equal facility. A like result is obtained, if there is no other obstruction farther back in the nasal chamber, by removing a sufficient amount of the cartilaginous mass to prevent contact with the turbinated tissue during respiration.

I will also refrain from describing in detail the various shapes and positions of these cartilaginous excrescences, as this point has also been fully discussed by the above-mentioned writers, and will only add that my own experience has taught me that, if they have existed for some time, they are apt to become ossified or calcified in the centre. This ossification makes their removal much more difficult than it would otherwise be, and necessitates the employment of instruments which are capable of penetrating through this hard centre, so as to restore the normal flat surface of the septum.

Various writers have suggested and used a large variety of different instruments for these operations, such as the saw and knife, the plough, the gouge, the snare, the rotating-knife or burr in the surgical engine, and so forth; but a careful consideration of the requirements of individual cases will at once show that none of these instruments can be successfully used in all cases to the exclusion of the others, and the armamentarium of the operator should include them all.

But we must take into consideration that most operators have a particular fondness for this or that instrument, and prefer to operate with it rather than use any other, if this is possible; probably because they have acquired especial dexterity in its manipulation. It is, therefore, natural that they should praise their pet tool, and obtain results with it which others, with less dexterity in its use, can never hope to arrive at.

The object is to remove the redundancy of tissue as thoroughly and quickly as practicable, leaving a plain surface without ragged edges, and to perform the operation with as little pain and inconvenience to the patient as possible. And this can only be done by adapting the instruments to the requirements of the case.

Before I proceed with the operation, however, in a given case, I treat the nasal mucous membrane with a view to reduce the existing hyperæmia, for it is my experience that, if any surgical interference is undertaken at once, the shock following the operation is much more severe, and the wound does not heal as kindly nor as rapidly as when all acute or subacute inflammation has first been removed. For this purpose I use a spray of an alkaline solution, and make lócal applications with glycerole of iodine by means of a cotton carrier. Formerly I used the ordinary Dobell's solution for the spray, and also as a wash to be sniffed up the nose by the patient, morning and night, but within the last two years I employ instead a solution composed of the following ingredients:

Sodii bicarb	ʒ viij.
Sodii bibor	ʒ viij.
Sodii benzoate,	
Sodii salicylate ....āā	gr. xx.
Eucalyptol,	
Thymol.........................āā	gr. x.
Menthol........................	gr. v.
Ol. gaultheria.................	gtt. vj.
Glycerine	℥ viiiss.
Alcoholis......................	℥ ij.
Aquæ ....q. s.	16 pints.

This formula gives a solution which is sufficiently alkaline to dissolve the thickened secretion adhering to the nasal mucous membrane, and as it is of the proper density, it is bland and unirritating, leaving a pleasant feeling in the nose. At the same time it is antiseptic and acts as a deodorizer, being in this respect far superior to Dobell's solution or any other non-irritating deodorizer and antiseptic. As it is, however, inconvenient for many patients to have so large a quantity of solution on hand, one of our Philadelphia druggists made the solid ingredients into a compressed tablet, so that one, when dissolved in two ounces of water, will make a solution identical in its effects with the solution made after the above formula, and my patients prefer the tablets to the solution.

As soon as the inflammation has subsided sufficiently, I introduce a pledget of cotton, saturated with a four per cent. solution of cocaine, into the nasal cavity so as to cover the ecchondrosis completely, and leave it there for about ten minutes, when it is removed, and a fine cambric needle inserted for the purpose of ascertaining whether all sensibility has been destroyed, and also to determine whether any ossification has taken place in the substance of the excrescence.

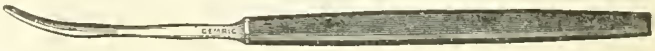

FIG. 1.

If the ecchondrosis is in the shape of a conical projection or of a ridge running from below upward, and if no ossification has taken place, I prefer a small, double-edged knife, slightly curved on the flat (Fig. 1), with which I make an incision, first from below upward to about the middle of the excrescence, and then cut from above downward until the two cuts meet, and the cartilaginous projection is ablated. If there exists a hard centre which cannot be cut through with the knife, I carry the two cuts from below and above to this centre, and then use a flat chisel (Fig. 2) to cut through the bony portion, which is easily effected by tapping the handle slightly with a leaden mallet (Fig. 3).

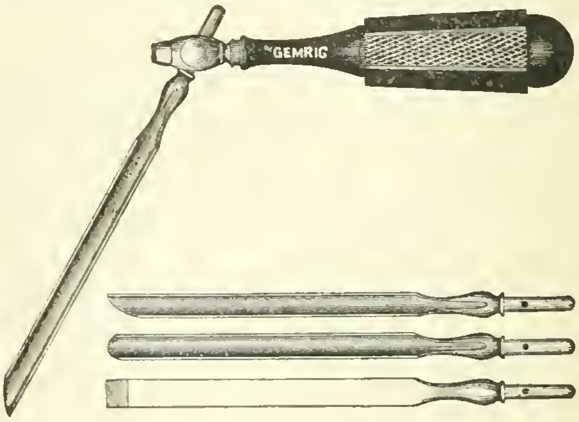

FIG. 2.

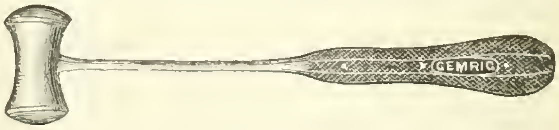

FIG. 3.

The two cuts are necessary because the knife, after having passed through the cartilaginous tissue, finds not sufficient resistance in the mucous membrane if the operation is made with one sweep of the knife from above downward, and the ablated piece falls over into the mass of coagulated blood, being still attached to the surface of the septum at its lower edge by the mucous membrane. It is then difficult to grasp with the forceps, and much time is lost in finally severing the mucous membrane.

If, on the other hand, the shape of the ecchondrosis is shelf-like, with a downward-sloping upper surface, and a concave under surface separated from the floor of the nose by a narrow space, and running backward for some distance, I know beforehand that I have to deal with an ossified excrescence, and proceed as follows: After having thoroughly anæsthetized the parts with cocaine solution, I introduce a grooved director, slightly bent at an angle, into the space between the floor of the nose and the under surface of the shelf-like projection, with the groove upward. I then dilate the nostril to its full extent with Bosworth's (Fig. 4) or Jarvis' self-retaining nasal dilator, and insert the dull point of a plough-shaped knife (Fig. 5) into the groove of the director, pushing it backward so as to cut through the base of the projection; very much in the same way as a wood-carver uses a similar tool. As soon as I find that the bony centre presents an obstacle to the further progress of the knife, I remove the latter and insert a gouge—the cutting edge of which is slanting—with its point into the groove of the director, and with a few blows from the mallet upon the end of the gouge, I cut through the ossified portion. In order that the view of the nasal cavity be not obstructed by the handle of the instrument and the hand holding it, I find it advantageous to insert the tool into the handle at an angle of about sixty degrees fastening its stem by a set-screw, and allowing the former to project slightly so as to receive the blows from the mallet in a direct line with the direction of the cut to be made. The hand holding the cutting instrument should be steadied against the chin of the patient, so as to prevent injury to the parts beyond the projection, which might easily result from the cutting edge or point of the instrument getting out of line and going beyond the posterior end of the projection, into the vault of the pharynx. A little practice soon enables the operator to feel when the gouge has cut through the hard tissue. The tool is then removed, and, keeping the grooved director in position, a pair of scissors bent at an angle is passed along its groove, so as to sever any portion of the mucous membrane at the upper surface of the shelf which may not have been cut by the plough or gouge. A straight chisel is not as advantageous as the gouge, because it cannot be so easily kept in the line in which the cut should be made; and, although the cut surface is slightly concave, I have in no case observed any retardation in the healing of the wound from this cause. In the case of a union between the turbinated exostosis and the ecchondrosis of the septum, I have found it best to divide the exostosis first, with a saw, close to the turbinated bone, and then to ablate the ecchondrosis with the knife and chisel, or gouge.

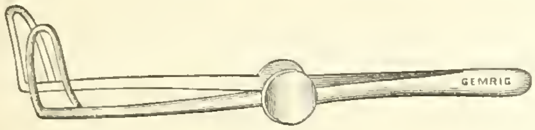

FIG. 4.

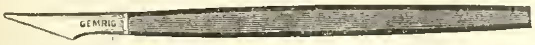

FIG. 5.

These operations are absolutely painless if the cocaine has fully anæsthetized the parts, and the only objection made by the patients is the jarring produced by the blows of the mallet upon the end of the gouge or chisel. The hemorrhage resulting from these cutting operations, as a rule, is comparatively slight, and can always be controlled by placing a pledget of borated cotton against the wound for a few hours. As soon as all oozing has stopped, this should be removed and the nasal cavity should be washed out twice daily with the antiseptic solution, so as to prevent any sepsis. The healing process is usually complete in about ten days, but may, in some cases, be prolonged for a few days more. There is no soreness of the nose, and no great amount of inflammation of the surrounding mucous membrane following the operation, and the patient is able to attend to his duties at once. I do not, however, wish to be understood that other methods of operation are not as successful, and that the saw or revolving-knife should not be used in cases of ecchondrosis of the septum. I only wished to give my personal experience, which, probably owing to want of dexterity with these instruments, has taught me that I obtain better results, and more easily, with the knife and gouge, than with the revolving-knife or saw.

1346 SPRUCE STREET.

A METHOD OF PROPHYLAXIS IN DIPHTHERIA.[1]

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EVERY experienced practitioner has probably observed that in certain families one or more of the members regularly take sick with diphtheria in the spring or fall of the year.

This is particularly true in the case of children, and, according to my personal experience, the months of October, November, March, and April are those in which such patients are prone to contract the disease.

It occurred to me that persons thus frequently afflicted might harbor the diphtheritic poison, or the microbes essential to its formation and septic power, in their nasal and oral cavities most of the time, without damage to the organism; but as soon as active hyperæmia of a neighboring mucous membrane took place from any cause whatsoever, the germs of diphtheria would readily find foothold in this damaged mucous lining, and manifest their presence in the various ways and forms familiar to us.

In a spirit of investigation, and with the object of testing to a certain extent the correctness or fallacy of this view of auto-infection—which, by the way, may be held by other observers, and which is certainly not incompatible with our present knowledge of the disease under consideration—I selected eight patients of various ages, all of whom had suffered from true diphtheria, to my knowledge, twice or more prior to October 1, 1885.

Case.	Name.	Age. Years.	
1.	S. K.	14	Members of one family who have had diphtheria once or twice each year from 1882 to 1885.
2.	E. K.	16	
3.	L. K.	26	
4.	G. S.	3	Two attacks of diphtheria prior to October 1, 1885.
5.	E. B.	5	Three attacks of diphtheria prior to October 1, 1885.
6.	K. I.	12	More than three attacks prior to October 1, 1885.
7.	M. S.	3	Children belonging to one family; both have had diphtheria several times.
8.	G. S.	6	

The families represented in the above table by one or more members have been known to me for a long time, they live in different parts of the Tenth and Seventeenth Wards of this city, and each respective family has occupied the same house or apartments, and lived in the same surroundings, for a number of years. The adults enumerated above, and the parents of the children mentioned in my list, were intelligent enough to appreciate the importance of carrying out the following suggestions, viz.:

I. All carious teeth to be filled or extracted, and the teeth to be examined by a dentist from time to time.

II. The mouth to be thoroughly rinsed three times a day, after each meal, with one of the following solutions:

(*a*) Three per cent. solution of potassium chlorate in water; or (*b*) liquor sodæ chlorinat. in water, 1 to 20; (*c*) a saturated solution of boric acid in water (four per cent.); the liquids to be alternately used and changed every four weeks. They were to be used as a gargle, as a mouth wash, and dropped into the nostrils by means of a medicine dropper three times a day.

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[1] Read before the New York Academy of Medicine, January 19, 1888.

III. In the case of the children not able to gargle, the liquid was to be dropped into each nostril from a pipette (medicine dropper), three times daily.

IV. These precautionary measures to be strictly carried out from October 1, 1885, for one year, or eventually two years, except during the hot months, in which diphtheria had never been observed in these families, and when most of the parties under observation were out of town.

In addition to these eight cases, two infants, each about one year of age, who had never been sick with diphtheria, were treated during the time stated above in the following manner: Ten to fifteen drops of the boric-acid solution was dropped by means of a medicine dropper into each nostril twice a day, immediately on awaking and before sleeping, with the understanding that the boric acid solution was to be used in this way every three hours, if at any time symptoms of nasal catarrh should be noticed.

Results.—From October 1, 1885, to December 1, 1887, not one of the persons experimented upon suffered from diphtheria.

Patients Nos. 1, 3, 4, 6, and 8, had several attacks of acute pharyngitis and amygdalitis during the time of experimentation, characterized by a dusky redness of the throat with moderate swelling of the tonsils, and a moderate rise of temperature.

An adult member of the family at the head of the list (but not under observation) suffered from diphtheria in February, 1887. Patients 1, 2, and 3, members of the same family, were exposed to infection, but did not contract the disease.

The mother of one of the infants took sick with diphtheria in March, 1887; also the servant in the family. The infant was isolated from the sick ones, but not removed from the house, and did not take sick.

Remarks.—This brief but accurate report of the above facts does not embody the absolute proof of prophylactic cause and effect, but it certainly goes far to establish the belief that, if the nasal and oral cavities are kept tolerably clean by means of harmless, non-irritating liquids known to possess antiseptic (disinfectant) properties, the frequency of diphtheritic infection is markedly reduced.

The treatment of diphtheria is a perennial subject for discussion all over the civilized world; at the same time, rational and thorough prophylaxis has not received the attention from practitioners in medicine which it merits.

If we scrutinize the vast amount of information which has accumulated concerning the manifestations of what is known to us under the name of diphtheria—information which has been furnished by careful and competent observers, and by some of the most acute minds of the present century, in the domain of practical and experimental medicine—we must candidly admit that we are not in possession of positive knowledge as to the nature of the diphtheritic virus, its mode of propagation, and its predilection for certain individuals, notwithstanding the most painstaking research of Loeffler, Emmerich, Wood, Formad, and others.

If we admit our ignorance of the true nature and significance of so-called diphtheria, we must also admit that we cannot with certainty differentiate clinically between contagious and non-contagious acute inflammatory changes of the mucous membrane of the naso-pharynx and buccal cavity; and we are thus compelled to look with suspicion upon all such changes, and apply our prophylactic and therapeutic measures in accordance with this view, which was first publicly proclaimed by A. Jacobi twenty-eight years ago, in a paper (published in the New York *Medical Times*) on diphtheria and diphtheritic affections, and publicly upheld in his controversy with B. Fraenkel, of Berlin (*vide Berliner Klin. Wochenschrift*, Nos. 17 and 18, 1886), in an article entitled "Follicular Amygdalitis," published in The Medical Record, November 27, 1886.

Furthermore, we may safely commit ourselves to state that, although the line of treatment which we pursue in diphtheria is not without its influence in checking the progress of the disease and in stimulating the system until the disease shall have exhausted its virulent properties, we have no means of absolute control at our command, or, in other words, no specific treatment for diphtheria.

And, finally, as a logical sequence of such reasoning from facts, we certainly do not assert too much if we declare that, in the present state of our knowledge, practical methods of prophylaxis in diphtheria will be of more value to the community than the most approved method of treatment, whatever that may be.

And now, a few words about prophylactic measures. We have, in the first place, general preventive measures, such as hygienic legislation, enforcement of sanitary rules regarding dwellings, ventilation, food, occupation, erection of isolation hospitals, general disinfection, etc.; and, in the second place, methods of prophylaxis within the family and directed to or against the person or individual.

Without intending to underrate the importance of general sanitary enactments, I would suggest that in a large city only a limited number of inhabitants can live in salubrious surroundings, and that the majority of the people in large cities are not, and never will be, able to live in first-class healthy abodes; the more so as we are still in the dark as to the actual source of danger from infectious diseases, which makes it all the more difficult to escape from their embrace.

I am of opinion, therefore, that while the dictates of sanitary science should be carried out strenuously, the utmost importance should be attached to personal and individual preventive measures.

Now let us take up for one moment the subject of individual prophylaxis, and abstract from the vast literature of diphtheria such prophylactic suggestions as appear simple and practical. It has been a surprise to me to find the subject barely mentioned in the majority of our text-books and works of reference.

In the latest edition of Ziemssen, in Oertel's article on diphtheria, no mention is made of prophylaxis, and we look in vain for information on the subject in such text-books as Eustace Smith, "Diseases in Children," 1884; West, "Diseases of Infancy and Childhood," 1874; Day, "Diseases of Children," 1881; Meigs and Pepper; Rilliet and Barthez, "Maladies des Enfants," Paris, 1887; or the latest edition of Vogel's "Children's Diseases," who simply mentions isolation and fumigation of infected localities. Preventive methods are not mentioned in Buck's "Reference Handbook of the Medical Sciences," New York, 1886; and the author of the article on diphtheria, in the latest edition of "Eulenburg's Cyclopædia," disposes of the subject in ten lines, stating that he has seen no advantage from prophylactic gargles, and is of opinion that strong solutions do harm by causing hyperæmia, which is undoubtedly true. He mentions potassium permanganate, vinegar, alcohol, lime-water, carbolic acid water one-half per cent., and chlorate of potassium solutions as liable to do harm.

Austin Flint, in his "Principles and Practice of Medicine," speaks only of isolation of patients, and thorough disinfection of dejections and all articles which have been in contact with patients.

E. Schottin, "Die Diphtheritische Allgemein Erkrankung," Dresden, 1885, says, page 83: "I have known all attempts to prevent the spread of diphtheria by prophylactic measures to fail."

Semple, in a monograph on diphtheria, 1879, and E. S. Gaillard, "Diphtheria," a prize essay (Richmond, 1867), do not mention preventive measures; and G. F. Wachsmuth, "Die Diphtheritis Heilmethode," Berlin, 1886, simply says that a sponge-bath with friction is good preventive treatment for children.

In some other publications I have found the subject at least under brief consideration.

Max Gaube ("Entstechung der menschlichen Rachendiphtherie," Leipzig, 1884), says: "A healthy mucous membrane of the pharynx and nose is an impediment to diphtheritic invasion."

Rigauer ("Die Diphtherie u. das kalte Nasenbad," Leipzig): "The abundant mucus in the naso-pharyngeal catarrh of children is excellent material for the growth and development of diphtheritic virus, which gets into the system through some epithelial lesion."

F. Stecher, a practitioner in Munich, has written an excellent monograph ("Zum Schutz wider die Diphtherie," Berlin, 1884), in which he says: "A healthy condition of the throat has the same importance in relation to diphtheria as a healthy stomach in times of cholera." He advises isolation, disinfection, and the wearing of a mask filled with salicylated cotton. Dust and smoke are to be avoided, carpets are condemned, children's necks should be washed daily with cold water, and they should gargle as soon as the throat is unusually red.

C. Gerhard ("Verhandlungen des 2. Congresses für innere Medizin") says: "I feel convinced that prophylaxis in the household, and frequent cleansing of the nose and throat for the purpose of keeping them in a healthy condition, will do more good than the most approved methods of treatment."

In our own country, J. L. Smith ("Diseases of Children") has a short chapter on preventive measures in diphtheria. He advises isolation, disinfection of apartments, linen, spittoons. When diphtheria is prevalent children's fauces should be frequently and carefully inspected, and if they seem too red they should be sprayed with proper remedies.

H. Francotte ("La Diphthérie," page 398, Paris, 1885) says: "At the present time there is no efficacious prophylactic treatment for diphtheria. Children should be accustomed to changes of temperature by cold frictions of the whole body, frequent gargling with cold water, and an abundance of fresh air; and he suggests that gargles with antiseptic liquids may do some good by carrying away putrescible matter from the oral cavity. He also reports that Marotti, of Venice (*Gazz. Med. di Venezia*, October, 1884), has made twenty preventive inoculations for diphtheria in 1864.

Vincenzo Cozzolino ("Tratato della Difteria," Naples, 1887) reports, on page 309, that: "Norberto Perotti (*Archivia di Pathologia Infantile*, March, 1885) recommends the black sulphide of mercury mixed with equal parts of gum arabic, to be insufflated. He claims that persons treated in this manner escaped contagion during an epidemic of diphtheria in Albano Leziale, a town in which he practised, except two children in his own family. Cozzolino believes that it may be possible in the future to prevent diphtheria by inoculating the attenuated virus.

I do not know how I could aid the cause of preventive measures in diphtheria more than by quoting the language of a physician who has studied this disease the greater part of his life.

Abraham Jacobi, in his treatise on diphtheria (the last edition of which appeared in 1880), says, on page 32: "As there are individuals, so there are families which have a predisposition to disease, and there are others in whom, notwithstanding ample exposure, infection does not easily take place."

"That the contagiousness of diphtheria should still be doubted is hardly possible, and still the public act as if it did not exist. It is certainly transmitted by spoons, glasses, handkerchiefs, and towels. Oertel has seen diphtheria of the pharynx which was communicated by the act of kissing, and developed in two days."—Pages 57, 58. "One important axiom must be borne in mind, namely, that prevention is more easy than cure, and there are certain prophylactic measures which will prove valuable in the hands of every good physician. It is necessary, under all circumstances, that the mouth and pharynx of every child be constantly kept in a healthy condition."—Page 158.

Cases of pharyngitis and amygdalitis, no matter whether influenced by an epidemic or not, furnish an indication for the prophylactic use of potassium chloride.

On page 172 of the same work we read: "Unnecessary petting of the patient on the part of the well ought to be avoided—kissing forbidden. The well, or apparently well, children of a family that have diphtheria at home must not go to school or to church. Teachers ought to be taught to examine throats, and directed to examine every child's throat in the morning, and return home every one barely suspicious."

Finally, I would refer to Dr. A. Jacobi's article on "Diphtheria Spread by Adults" (New York *Medical Journal*, September 24, 1884), and quote from his article on "Follicular Amygdalitis" (THE MEDICAL RECORD, November 27, 1886) as follows: "I claim that the name of follicular or lacunar amygdalitis is but a subterfuge for the lack of a correct or complete diagnosis," and "whether membrane or point, the contagiousness of the disease is the very same." With punctate diphtheria "the adult is in the street, in business, in the school-room, in the railroad car, in the kitchen and nursery. With this variety parents, while complaining of slight throat trouble, which is not heeded, kiss their children."

Can it be difficult to understand, in the light of such evidence, that the physician, if he be true to his calling, must strive henceforth to cultivate and carry out practical methods of prophylaxis in contagious disease? I think not.

Permit me to close this paper with a brief *résumé* of some of the points which appear to me worthy of attention.

In a city with densely populated districts, such as the Tenth, Eleventh, Fourteenth, and Seventeenth Wards of New York, the reconstruction of plumbing arrangements and erection of air-shafts in tenement-houses, are useful measures of sanitary reform if supplemented by universal attention to the details of individual disease prophylaxis, and it is the noble privilege of each member of our profession to aid our local health authorities by instructing the people in such matters as often as opportunity presents.

The overheating of school-rooms and living-apartments should be most emphatically denounced as dangerous.

Isolation of the sick should be explained and insisted upon, and the management of isolation hospitals for the poor should be such as to rapidly gain their confidence.

Enlarged tonsils should be reduced by the knife, or, better still, by means of the galvano-cautery. Carious temporary teeth of children should be removed promptly, and to the poor should be given the opportunity to have carious teeth filled with amalgam or cement for a nominal small fee or free of charge.

Parents should inspect their children's mouths and throats each day before sending them to school. Children readily learn to use their own fingers as tongue depressors, and it is important that they learn to gargle at an early age.

Children suffering from simple sore throat (apparently) should not attend school until they are quite well; and in follicular amygdalitis and other forms of acute sore throat, preventive measures should be strictly carried out.

Adults with sore throats should not mingle with children.

The kissing of children upon the lips should be forbidden, and parents themselves should set an example in this direction.

Children old enough to gargle and rinse their mouths should be taught to do so after each meal, a weak solution of one of the harmless antiseptic chemicals to be used; and in the case of young children such solutions should be dropped into the nostrils regularly twice a day, or oftener if symptoms of nasal catarrh supervene. The outfit necessary for carrying out such proper measures consists of one ounce of the antiseptic chemical, dissolved in a wine-bottle of water, and a medicine-dropper.

Recognizing that it is impossible to lay bare and control all sources of diphtheritic infection, it will be more practical to teach the individual to protect himself and his surroundings by striving to keep in a healthy condition those parts which are found by experience to be generally affected.

Necessity being the mother ot invention, let us hope and believe that in the near future we may have at our command simple methods of prophylaxis which may be safely placed in the hands of all rich or poor who are willing and intelligent enough to appreciate the benefit to be derived from their employment.

ON SOME POINTS IN THE MANAGEMENT OF THE EUSTACHIAN TUBE IN CERTAIN EAR AFFECTIONS.[1]

By OREN D. POMEROY, M.D.,

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In the following observations no effort has been made to present the literature of this subject, but to present the writer's views and personal experience thereon.

Whatever may be faulty in these, it is hoped that the ensuing discussion may, as far as possible, correct. Many considerations must, from the nature of things, be presented from theoretical points of view, as actual demonstrations are often impossible.

In acute purulent inflammation of the tympanum it may not be proper to inflate while the inflammation is at its height, for fear of adding to the already augmented intratympanal pressure, and thereby increasing the pain. On the other hand, there may be great and instantaneous relief to pain by inflation ; besides this, inflammatory products are often removed per Eustachian tube, if not too tenacious in consistency. It is safe enough to at least gently try inflation and watch the effect. Politzer's plan is probably better in this connection than other methods.

In acute catarrh of the tympanum the obstruction of the Eustachian tube often is a factor in the production of pain in this wise : There is a tendency to vacuum in the tympanum, which adds to the pressure exerted by the drum-membrane and ossicula upon the supersensitive tympanum in a state of inflammation. This, I think, accounts for a certain relief to pain which often occurs during an attack of otitis in consequence of air passing into the tympanum, and which is accompanied by a prolonged crackling, snapping, or hissing sound, noticed by the patient. This in itself may cause an exquisite lancinating pain, but is quite momentary, and is often followed by the most grateful relief. It does not, however, follow that an aching ear should always be inflated, for in the earlier stages of the trouble, when the parts are tense with overfilled blood-vessels, this plan of treatment would be quite contra-indicated, as still further adding to the existing intratympanal pressure.

In certain cases where the hearing is considerably improved by inflation, but after deglutition immediately returns to its former state, it would seem that the tube itself was not altogether at fault, or perhaps not at fault at all. This point was discussed in my article on "Multiple Paracentesis of the Drum-membrane," published in the New York *Medical Journal*, in February, 1887, in which the ground was taken that the fault was not to any considerable degree due to the condition of the Eustachian tube, but to the drum-membrane. The latter was declared to be so stretched by the prolonged condition of collapse, as to have its superficial area considerably increased, rendering the condition of collapse one of preference, and that a restoration to a normal position was only accomplished by excessive intratympanal air-pressure, resulting from inflation. Naturally, the act of deglutition, opening the tube, would allow this excess of air to escape, and the return of the membrane to its former position would be a necessary consequence. The paracentesis, it may perhaps be remembered, was done with a view to diminish this redundancy of drum-membrane, so that a less sunken condition would inevitably result. A few of my paracentesis cases certainly favored this mode of explaining the phenomenon and the procedure seems a justifiable one. The different modes of rarefying the air in the meatus, used by many surgeons, point to the fulfilling of a similar indication.

I have noticed, as also have other aural surgeons, that, on inflating the tympanum, the hearing at first would reach a maximum point, then, on still further inflating, the hearing would become lowered, and, on causing the patient to swallow, the tympanum would not empty itself of the excess of air, even when the nostrils were compressed (which produces a partial vacuum in the upper pharyngeal space, thus aiding in the evacuation of the tympanum), and that no effect on the hearing was thus produced. I have ascribed this to the faulty action of the tubal muscles. This is more often seen in acute cases of catarrhal obstruction, and in these cases may be due more to the excessive swelling of the tube, which would render even a normal exhibition of muscular action inoperative in regulating its calibre, rather than faulty muscular action alone. This experiment may be a good one to test the power of the muscles of the tube.

There is still another fact regarding the muscularity of the tubes which is interesting, to wit : In a given case of one sound ear, with its fellow affected with a chronic aural catarrh, with its tube easily "forced" by Valsalva's inflation, that, on swallowing, the catarrhal ear shows interchange of air between the throat and tympanum, while there may be none of this in the perfect ear. Confining the nostrils during this experiment may simply exaggerate the phenomenon. It is a curious fact that in a normal ear the act of deglutition may sometimes empty the tympanum, and again act as an inflator. This array of facts readily suggests the possible value of frequent acts of deglutition as a means of gymnastics to the muscles of the Eustachian tubes.

In one case of mild acute catarrh of the Eustachian tube, of a few days' duration, it was noticed that air passed much too readily into the middle ear, occasioning a very disagreeable crackling, which was very frequent and annoying. There was a great amount of thin mucous secretion from the upper pharynx, and the region of the Eustachian tube was pale and seemed much relaxed.

A twenty-grain spray of nitrate of silver against the orifice of the tube relieved this symptom in fifteen minutes.

This symptom has been a difficult one to explain, but the result of treatment in this instance seems to indicate that there was lack of coaptation of the somewhat valvular-shaped faucial orifice of the tube, due to relaxation of the tissue, which was corrected by the nitrate of silver. One or two applications subsequently relieved the symptom completely, though I admit that, in cases of long duration, relief so prompt is not to be expected.

Another class of cases gives us a great deal of trouble.

Some time since I was asked by a practitioner about one of his ear patients ; it was a case of chronic aural catarrh, in which excellent hearing resulted after inflation, but after a few days the improvement failed to continue. I found he had duly treated the catarrhal condition and used the means ordinarily depended upon to relieve, and I was compelled to tell him that I could not offer any help. Unfortunately this is a condition seen in a considerable number of cases of chronic aural catarrh. Occasionally electricity seems to do good in this, possibly atonic, condition of the tubes.

The following case will illustrate the conduct of the Eustachian tube in recovery from acute purulent inflammation of the middle ear. The patient made a good recovery from the middle-ear trouble, with almost perfect voice, hearing, and about 12″ for the watch. He noticed that the Eustachian tube was easily "forced," that is, whenever he sneezed, blew his nose, swallowed, etc., that the air passed into the ear. At this time the hearing was slightly augmented by inflation. Treatment of the faucial extremity of the tube was continued for a few weeks with no striking result. Two months subsequently the watch-hearing had arisen to 16″, and on inflation it was 24″. He still had symptoms of the tube being easily forced, as before. I continued applications to the Eustachian tube, by means of my hard-rubber spray instrument, of carbolic acid, nitrate of silver, etc., with directions for the patient to practise swallowing many times a day, with the hope that the muscularity of the tube, by this species of gymnastics, would be improved. Subsequently the patient's hearing became nearly normal. This idea may have been suggested from Professor von Tröltsch's practice of using gargles with a similar end in view.

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[1] Read before the Ophthalmic and Aural Section of the New York Academy of Medicine, December 19, 1887.

In this case there was very little pharyngeal trouble, and the conclusion was that the severe tympanal inflammation had more to do with disturbing the functions of the Eustachian tube than the pharyngeal trouble.

It has long been a prevailing opinion among the profession that the deafness, or the increased hardness of hearing, noticed in damp or stormy weather, was due in some way to the moisture in the atmosphere, or possibly to the augmented catarrhal irritation incident to inclement weather. The true explanation of this phenomenon, or a part of it at least, seems to be the diminished barometric pressure, which permits the tissues of the body generally to swell. This condition, applied to the walls of the Eustachian tubes, naturally would result in swelling, diminished calibre, and insufficient tympanal ventilation. It cannot be denied, however, that a catarrh often behaves worse in inclement weather.

In obstruction of the nostrils from polypi, adenoid growths, hypertrophic swellings of the turbinated bones, deviation of the septum, or the "stuffing" of the nostrils from an acute rhinitis or hay fever, the Eustachian tubes must suffer. Constant, or very frequent, interchange of air between the pharynx and tympanum, especially if accomplished with some violence, is fraught with great evil to the organ of hearing. The most violent otitis media may be caused by the rapid breathing of pneumonia, especially if the nostrils are, as is often the case, obstructed. In the latter condition, on the inspiratory effort, the air is more or less rarefied in the upper pharynx, and the tympanum is partially emptied of its air to equalize the air-pressure, while in expiration the opposite condition obtains, and air is forced into the tympanum, as the narrowed nostrils fail to carry off the great volume of air rushing from the lungs; the consequence will then be a to-and-fro movement of the air from tympanum to pharynx. Besides the inflammatory trouble excited by this manœuvre, we have the flapping, to-and-fro movement of the drum-membrane, which puts it on the stretch, and may ultimately spoil its elasticity. The foot-plate of the stirrup also must move in its oval window, somewhat like the piston of a pump, with considerable violence, and inflict not a little traumatism to these parts. Whether a moderate swelling of the mucous membrane covering the turbinated bones acts with special prejudice on the hearing, beyond the catarrhal aggravation it may engender, and associated with perfectly free nostrils, I am unable to say. I remember a patient with chronic aural catarrh who came under my care. His hearing was considerably lowered, but on inflation came up to nearly normal. He left my care without undergoing treatment, and was treated by an aural surgeon of recognized ability, who at once removed pieces of swollen mucous membrane from the turbinated bones, although the nostrils were as free as nostrils in general. I did not quite see the indication for doing this. but perhaps the doctor was right and I wrong. It may be needless to remark, in this connection, that we are at present passing through a somewhat violent period of heroic surgical interference with the nasal passages, and it is to be hoped that such interfering hands will learn to be more kindly disposed toward the upper air-passages in future. Another important indication for instituting a free passage through the nostrils is to prevent mouth-breathing. I will not here enter into the numerous indications for avoiding the latter, but simply content myself in remarking that in pure mouth-breathing the upper pharynx is no longer emptied of its secretion, and this retention aggravates catarrhal conditions of the Eustachian tubes. Besides this, it would seem that to produce the frequent necessary interchanges of air between the throat and tympanum, a column of air needs to be passing to and fro across the orifice of the Eustachian tube; that is, whenever the tubes open, air moving across its orifice is more likely to enter the tympanum than where the air is stagnant or not in motion.

Adenoid growths in the vault of the pharynx often disturb the functions of the Eustachian tube. The average American aural surgeon may be inclined to think comparatively light of these growths as obstructers of the Eustachian tubes and sources of irritation to a post-naso-pharyngeal catarrh. All are agreed, however, that when the growths obstruct nasal respiration they should be removed. In this country I believe that these cases are much less serious than in Europe. Within a few days, a former pupil of mine, just returned from London, describes cases of adenoid growths seen there, and which are frequent, where nasal respiration is almost, or quite, impeded, where the upper pharynx is filled with a soft mass resembling angle-worms to the sense of touch, bleed easily, completely obstruct the Eustachian tubes, and which may often be removed by scraping with the finger-nail. Great and permanent improvement to the hearing generally resulted from their removal. Little chance of return seemed to be the doctor's experience.

In enlarged tonsils there does not seem to be any direct mechanical obstruction of the Eustachian tubes; for, however great the increase in size may be, it is not in the direction to encroach upon the tubes. In enlarged tonsils there is great increase in secretion, the throat is cleaned oftener than would otherwise be necessary, and the general catarrhal condition of the pharynx is thereby much aggravated. This, of course, would act unfavorably upon the calibre of the Eustachian tube.

Perhaps a more important condition, however, incident to the enlarged tonsils, is the obstruction to both mouth and nose breathing. In any considerable enlargement of the tonsils it is manifest that mouth-breathing is interfered with.

It is also often true that nasal respiration will be rendered more difficult, as the tonsils, by their extension backward, will diminish the depth of the pharynx, through which nasal respiration must proceed, and result in interference. The influence of impeded nasal respiration on the Eustachian tubes has already been considered.

In tinnitus aurium we have, perhaps, one of the most urgent indications for treating the Eustachian tube that exists. Whatever the multiform causations of tinnitus may be, there is, certainly, one which often enough can be demonstrated to be the actual cause: namely, pressure on labyrinth waters from sunken drum-membrane, the consequence of defective ventilation of the ear-cavity. The demonstration, of course, consists in relief to tinnitus following the inflation.

If the neurologists oftener made an observation as to the previous nature of the Eustachian tubes, it is possible that less stress would be placed on certain symptoms pointing to brain diseases, such as vertigo, nausea, tinnitus aurium, incapacity to mental exertion, etc., which may, each or all, be only indications of pressure on the acusticus, due to obstructed Eustachian tube and sunken drum-membrane.

In otitis from acquired syphilis there is obstruction of the Eustachian tube quite frequently, in my experience. In many cases of specific otitis there seems to be present all the characteristics of ordinary otitis, with a strong tendency toward tissue-proliferation, especially about the foot-plate of the stapes, resulting often in enfeebled bone-conduction. I believe that I treat the Eustachian tube in these cases with almost as great frequency as in ordinary otitis. The hearing is very frequently improved by inflation in these cases, and I infer that I am right in treating the Eustachian tubes. Observe the frequency with which the syphilographer gives local treatment to specific sore throat.

My impression is that in otitis from hereditary syphilis the Eustachian tube is not often in a condition to require treatment, although the reverse of this sometimes obtains. It is manifest that when a syphilitic subject has a corroding ulcer near the Eustachian tube that appropriate constitutional as well as local treatment must be instituted to diminish the size of the cicatrix, which might close the orifice of the tube, from which recovery would be doubtful.

I always have had a strong prejudice against injecting fluids far up into the Eustachian tube, and especially into the tympanic cavity, in chronic aural catarrh. It has been done in this country, and especially by Professor Jones, of Chicago. It is again being done on the Continent, on the other side. Lately, Dr. Hepburn, of the Manhattan Eye and Ear Hospital, has done it, with the result of making the tube more pervious, but he at the same time punctures the membrane, so as to allow the fluid to escape through the perforation. This appears to the writer to be a rational procedure.

In deafness dependent on the administration of quinine there is naturally hyperæmia of the whole organ of hearing, more or less; but I have frequently noticed, especially where the quinine influence was not profound, that obstruction of the Eustachian tube from hyperæmic swelling of its walls seemed to be the principal lesion. The evidence of this appeared from the fact that inflation sufficed to relieve most if not all the symptoms, such as deafness, tinnitus, and unnatural voice-resonance. In obstructions of this kind it would be a very agreeable practice to spray a little two per cent. solution of cocaine upon the orifices of the Eustachian tubes, the effect on the hyperæmic swelling of the parts being almost instantaneous, and the patient is likely to experience the most delightful relief, though it may be somewhat temporary. Where the orifices of the tubes are pale, somewhat œdematous, and possibly relaxed, the cocaine seems to work well. I do not, however, believe that cocaine has so far proved to be more than a temporary means of relief. In one case, of an elderly lady about sixty-five years of age, I noticed a sound, also audible to the patient, much like the peeping of a chicken, which could be easily heard eight inches from the ear. It was rhythmical and constant; it had continued without intermission for several months, and I did not hear of its cessation previous to the patient's death, which occurred two years after this observation. I inferred that there was spasmodic contraction of the tubal muscles, causing the walls of the tube to flap against each other. I also infer that a senile tubal catarrh acted as an exciting cause, and that possibly electricity would have benefited the patient. I could not, however, treat her, as she lived remotely from town. Cases somewhat resembling this have been reported by others, and a similar explanation has been given.

As to the best mode of inflating the tympanum. On the whole, I believe Politzer's to be the most satisfactory; it is not attended by violence, the tube is not "forced," the faucial orifice is not molested by appliances for inflating, and there is less danger of inflating too frequently than by other methods (as it cannot be done without trouble). The modifications of Politzer's method I use frequently, as it takes less time, but I believe they are not quite equal to the genuine Politzer. Some have argued that in catheterization the beak of the catheter, coming in contact with the mouth of the tube, provokes a degree of irritation to the part, which acts curatively upon the catarrh. It is certain that the increased flow of mucus consequent on the application of the catheter to the mouth of the tube does temporarily relieve the turgid lining membrane and increases the calibre of the tube. In a general way I have always avoided traumatism in the treatment of catarrhal tubes as much as possible. The modern treatment of catarrh of the tear-duct is a good illustration of this principle—too frequent probing is avoided, and the probe is not left in as long as formerly; means taken to reduce the catarrhal irritation of the parts, etc., are employed.

In this connection it may be proper to allude to the practice of using bougies in the Eustachian tube, which has latterly been somewhat revived, especially on the European continent. If I could find a reasonable degree of evidence that the practice of using bougies aided in opening a tube which was insufficiently pervious, and at the same time did no harm by the traumatism thus inflicted, I might become a convert to its use. It seems to me impossible, from what experience I have had, that a bougie can be passed into the Eustachian tube, however gentle the manipulation, without inflicting an amount of violence exceeding, in the harm done, any possible good to be obtained by its introduction.

The frequency of the inflations is a very important matter. I do not often give my patients a Politzer bag for self-inflation, neither do I encourage the practice of holding the nose and pressing the air into the middle ear. I believe that an inflation should not be repeated until the augmented hearing consequent on the first inflation has become lowered. Too frequent inflation stretches the membrane, congests the tympanum, and may inflict dangerous traumatism to the middle-ear mechanism, such as stretching, or even rupturing, the ossicular ligaments, dragging the stirrup from its window, compressing the labyrinth water through pressure on the round window, etc.

So sensitive are some patients with catarrh of the Eustachian tubes that any considerable fatigue is likely to aggravate the catarrhal condition. Following this state of lowered vital energy, it, in the same connection, is often observed that such patients are much worse where the supply of nourishing food is diminished or a period of faulty digestion and assimilation supervenes. The depressing influences of cold, with insufficient clothing, acts in a similar manner, whether an active catarrhal aggravation results or not.

The influence of climate on the Eustachian tube is perhaps, in some instances, more potent than any medical or surgical treatment whatever. I am convinced by some observations that many cases of tubal catarrh, which underwent such repeated relapses as to occasion a gradual but sure progress toward profound deafness, have been completely arrested by removal to a more congenial climate. More than this, after a few years the hearing has been actually improved in some instances.

In conclusion, it may be proper to observe that the outlook in treating affections of the Eustachian tube in the somewhat unfavorable climate of this country is not as cheering as could be desired. It only remains for us to make the best of the situation, and where much cannot be accomplished be contented with less. In a general way, I have the impression that over-treatment is rather the rule, and that the opposite condition is the exception in our practice.

MEDICINE A MEAN TRADE.—The practice of medicine must be very disappointing to those who follow it chiefly for the acquisition of wealth. Whoever practises it in a commercial spirit debases the calling and degrades himself. As a French writer has truly said: "Medicine is the noblest of professions, but the meanest of trades."—*Dr. Cotting.*

MENTAL RESPONSIBILITY IN INEBRIETY.

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THE following case outlines some facts I wish to make prominent:

John Smith, a neurotic, with an insane and hysteric ancestry, became an inebriate from hardship and exposure in the army. He drank periodically, and while drinking was either stupid and dull or very irritable and quarrelsome.

Usually he kept at work most of the time as a carriage-maker, and acted sanely on all matters pertaining to his business. The afternoons and evenings were spent in bar-rooms, drinking and talking politics. This drink period lasted from four to ten days, ending with melancholy and great prostration, from which he gradually recovered. Then a free interval of five or six months elapsed, during which he would sign the pledge, live temperately, and act in the most exemplary manner. He was in this interval a kind-hearted, generous man, rarely angry, but forgiving, and of good judgment.

When the drink paroxysm came on he was irritable and sullen. In one of these drink paroxysms he quarrelled, and threatened to kill a farmer, a near neighbor. When sober he seemed to have forgotten this anger, and was cordial and friendly to the farmer.

A year after this first altercation, while in a drink paroxysm, he borrowed a gun and shot this farmer without a word, returning the gun to the owner, and seemingly not intoxicated. He then went to an hotel and remained drinking as usual until arrested. He acknowledged the crime, saying he had "fixed him," meaning, killed the farmer, and during the ten days following in jail was stupid, indifferent, and finally very nervous. He seemed to have realized his crime at this time, and suffered from great exhaustion and insomnia. Two months later he seemed to have passed into an apathetic state, was indifferent and silent, and talked but little of himself and the crime. The quarrel with the farmer was on politics, and attracted no attention. The threats of violence seemed only the ravings of a drunken man.

On the trial, several medical men testified that the prisoner was fully sane at that time, and also at the time of the murder. That he seemed conscious of his acts and talked rationally; also, that the history of drinking did not point to insanity, or indicate that he was unconscious of the crime.

The medical men for the defence affirmed that the man was of unsound mind, that this was sustained by the facts of heredity; his drink paroxysm, the crime, its motiveless character; his changed and insane conduct during this period. They also swore that the present appearance of sanity was no reliable evidence of his consciousness or knowledge of the crime at the time, and that he was insane when the crime was committed, and without knowledge or control of his acts.

The judge charged: "That inebriety was voluntary, and always entered upon with more or less consciousness of the danger and possibility of doing wrong, hence could not be used as an excuse.

"That unless the evidence of insanity was beyond question the jury should not consider it. The fact of drinking, and the commission of crime at this period, should be regarded rather as an aggravation than as an excuse; hence, the responsibility of the prisoner would be increased if the facts alleged were true."

On this the prisoner was found guilty and hanged.

The question to us, as scientific men, is not whether this conclusion was correct legally, or in accord with the highest teachings of human justice, but was this verdict of sanity and full consciousness of his acts and their consequences true? Was this conclusion sustained by all the facts of the prisoner's life and the history of the crime?

This case is not unusual, nor different, except in minor particulars, from many others which occur in every section of the country. Persons who are not criminals in any way, but are inebriates, under the influence of or while drinking spirits, commit crime against both person and property, without malice, motive, or premeditation, and the question before the courts is, Was the man of sound mind and responsible?

Both experts and non-experts attempt to answer this inquiry by comparing the history of the prisoner and crime with that of the most pronounced types of insanity. The absence of prominent delusions, hallucinations, and deliriums, or marked mental feebleness, are regarded as evidence of soundness and responsibility. Here the physician often allows himself to be influenced by the legal rulings and definitions of insanity, inebriety, and responsibility, and unconsciously studies the facts of the history with the view of making them correspond with such rulings.

Insanity and mental disease which are without the prominent symptoms laid down in text-books are not recognized. Concealed, incipient, partial, or complex brain-diseases are regarded as not affecting responsibility for acts or conduct unless they are manifested by some well-known symptoms.

The physician has rarely an opportunity to study the case thoroughly; a few interviews in the jail gives very uncertain evidence of the mental condition of the prisoner at the time the crime was committed. The study of the previous history of the prisoner, and of his condition of life and living, requires time, and patient gathering and sifting of facts. This is absolutely essential to understand how far the brain was capable of realizing or controlling its acts.

On the witness-stand the expert is called to give definitions and lay down lines of health and disease, which unconsciously destroy the value of both his conclusions and the scientific facts of the case. As a result, these obscure border-land cases of inebriate criminals are unknown and misjudged.

Both experts and non-experts divide in their opinions of the mental soundness of these cases; the facts are not all studied; the mediæval theories of vice and wilful wickedness continue prominent, and the victims are punished by death and imprisonment. Thus, the object of the law is defeated, and the cause of justice becomes grave injustice. It is apparent that the same great wrongs are inflicted on the inebriate that marked the treatment of insanity two centuries ago.

My object is to point out some of the general principles and landmarks which should guide the physician in his study of these cases. I repeat that the teachings of the law and public theories concerning these cases are not to be considered.

The object of the physician's inquiry is to determine the mental health of the prisoner at the time the crime was committed, and to ascertain whether he could realize the nature and consequences of his acts, and had the power of self-control.

Beginning with the fact that the prisoner was an inebriate, and that the crime was committed while he was using spirits, the first study should be into the form of inebriety from which the prisoner suffered.

If a *periodical inebriate*, the character of the drink paroxysm and its duration, and the free interval, should be studied, to show how far the brain was dominated by morbid impulses.

If the drink craze was sudden, impetuous, and overwhelming, at its onset, associated with delirium and often delusions, it is called dipsomania, a distinct form of insanity and irresponsibility. The victim is controlled by a maniacal impulse, and is without clear conception or control of his acts. He has a form of epilepsy and circular insanity that cannot be mistaken.

If the periodicity is not marked by pronounced mania, its exact return at certain stated intervals is evidence of neurosis and central nerve-disease, which grows with each repetition, destroying consciousness and power of control at the time. Crime, or any act committed during those periodical attacks, cannot be the result of conscious reasoning or realization of the character or results of the act.

If the act was done in the paroxysmal stage of periodical inebriety or dipsomania, there is strong probability of insanity and irresponsibility.

The second inquiry should be of the crime, and the circumstances associated with it.

If the evidence shows that the prisoner was using spirits at or before the time the crime was committed, and also indicates no motive or reason for the act, which may be committed in a strange, unusual way, or in an exact, methodical manner, this sustains the probability of mental unsoundness. The favoring or retarding influences of the surroundings, and circumstances of the act; the reason and non-reason apparent during the commission, after or before the act, all throw light on the state of the mind at the time.

Under this head will come the complex influences of occupation, nutrition, mental and physical exhaustion, associated with the use of spirits or dependent on it.

The third general study should be of the origin of inebriety.

Here physical injuries, such as blows on the head, sunstrokes, or profound exhaustive diseases; or physical injuries which came from brain-injury, nerve shock or strain, and like causes, should be studied; also nutrient, muscular, sexual, and emotional disorders, from which inebriety is often originated or largely intensified. Where many of these causes are more or less distinct, the brain-failure and impairment can be readily traced.

Not infrequently in these cases the inebriety is merely a symptom of the brain-degeneration; the brain integrity and capacity to reason and act normally are permanently broken up. Sane conduct and thoughts in such persons are always automatic and along lines of accustomed thought and act. When they go beyond this, mental aberration and defects are apparent. Such persons have little or no control over their acts or reason, unless under the most favorable circumstances and conditions. Along this line the insanity of the prisoner can often be conclusively demonstrated.

The fourth line of study should consider the influences of heredity.

A drinking and insane ancestry points to a direct entailment of mental degeneration and feebleness, and always a more or less unstable organism, unable to bear the strains and drains of life. A consumptive, epileptic, hysteric, or odd, peculiar parentage is always followed by defective children. Inebriety and many complex neuroses date back to this cause. Defects of reason and control are transmitted as positively as external forms and peculiarities.

Where the parental degeneration dates further back, it may be less prominent, but it is always a factor. An heredity associated with inebriety from neurotic ancestors gives strong indications of insanity and irresponsibility.

If the facts in evidence on these four points of inquiry sustain one another, the conclusion of insanity is inevitable.

If the inebriety was periodical, or had the form of dipsomania; if the crime was unusual in circumstances, surroundings, and without apparent motive; if there was a history of traumatism or exhausting disease of severe injury; and if to this was added an heredity direct or indirect, the chain of evidence pointing to insanity and irresponsibility is more or less complete; if the evidence on any one or more of these points is wanting, as, for instance, on heredity or traumatism, the irresponsibility of the victim may still be found. These are only outlines of the ranges of facts which must be ascertained in the question of responsibility.

Exhaustive studies of these cases will often indicate the changed character, habits, temper, emotions, and reason that have been noticed by only intimate friends, not only when the subject was under the influence of spirits, but when free from them. These are some of the factors from which to determine the mental capacity of the prisoner.

The medical examiner should always remember that the use of alcohol, continuously or at intervals, produces changes of brain-circulation, vaso-motor paralysis, congestion of the brain-centres, disturbances of nutrition, and many other changes. Also, that the use of alcohol in moderation or excess impairs both brain and nerve function, and imperils the integrity and capacity of the brain.

The use of spirits is often a symptom of brain-disease, as well as an exciting cause, and the character of injury produced from the use of alcohol in any way cannot be clearly determined.

From this basis of facts the following general conclusions may be stated:

1. The knowledge of right and wrong is no evidence of the mental health of the prisoner; his ability or inability to control or restrain himself are the real tests of responsibility. In determining this, the question of morbid impulses, of the craving for spirits, and of the control or domination of the passions over the reason must be studied.

2. The toxic use of alcohol brings on a degree of brain-paralysis, with delusions and hallucinations, all of which may be concealed, except from a careful study.

3. The absence of all prominent symptoms of insanity in an inebriate is no proof that he is sane; the appearance of sanity and of the power of control of his acts is often only the twilight of a mental condition that is gone.

4. The fact of using spirits persistently, and to excess, so prominent in all these cases, indicates a form of mania; also, loss of self-control, and incapacity to realize the nature and character of his acts.

5. In all these cases there is a physical element, in which local paralysis, or perversions of brain-centres, may exist. Trance and hypnotic states, the direct or indirect result of alcoholic ethers, may make the victim fully unconscious and irresponsible.

6. Nothing but an exhaustive study of all the facts in the history of these cases will reveal the actual condition and measure of responsibility. Anything less than this will fail, and result in great wrong and injustice.

The charge of Judge Edmonds, cited by Dr. Mann,[1] gives a correct view of the general principles which apply in these cases.

"To be a criminal, a man must have memory and intelligence to know that the act he is about to commit is wrong, and that he will be subject to punishment, also reason and will to enable him to compare and choose between the right and the wrong.

"If he has not intelligence and capacity to have a criminal intent and purpose; if his moral and intellectual powers are so deficient that he has not will, conscience, or controlling power; or if from violence of mental disease his intellectual power is for a time obliterated, he should not be held as responsible or punished for his acts."

I conclude this outline-study with a general summary, which may be said to represent the latest facts and conclusions on this point.

1. In all cases of inebriate criminals there is mental defect, and incapacity either to reason sanely or to control their acts. An inebriate who does criminal acts cannot be of sound mind. A criminal who is an inebriate is not sane. No inebriate is fully sane, and no criminal can be of sound mind long.

2. The question for the medical witness is, How far

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[1] See Journal of Inebriety, July, 1884.

was the prisoner conscious of the nature of his acts? and How far did he have control over his acts in a certain crime?

3. John Smith has committed a crime while under the influence of alcohol, and the law inquires into his mental condition at the time of the crime. His impaired mental health and responsibility is beyond doubt.

Is it possible from a study of the facts in the history of the prisoner to determine the ranges of responsibility and accountability? Can we go into this penumbra region of sanity and insanity, and follow vice up to the dead lines of disease, and show where human justice should punish, and where it should forgive, as irresponsible?

4. The medical man approaches this problem from the scientific side, seeking the facts beyond all moral or legal theories of brain-action. There should be no hesitation in stating what appears to be the truth, no matter how far it is beyond the popular intelligence of the present.

5. If the facts in the history of the prisoner point to a degree of unconsciousness of the nature and character of his acts, and the inability to control such acts, the insanity of the prisoner should be assumed as a fact far more likely to be true than the opposite. The limits of scientific study will not sustain any efforts to draw boundary lines where health and disease join.

6. When the fact of the inebriety of the prisoner is established, his sanity in a given case must be proven and sustained beyond all question or possible doubt. All the circumstances and conditions of the crime and life of the prisoner must bring evidence to prove this fact.

The general fact of inebriety reverses the natural order; his insanity must be assumed, and his sanity proven.

7. Finally, in all these cases, the medical witness is called to determine the physiological, pathological, and psychological facts and their meaning. The applications of these facts are for the law, court, and jury.

The medical expert of to-day must go beyond the theories of yesterday, or the facts on which yesterday's views were based. A newer, larger field opens up to-day, and the facts are more numerous, and indicate a clearer, wider view to-morrow.

Death from Fright.—Instances in which persons have been known to die as a result of some fright are not very uncommon, but in most cases it is really heart disease to which the death is rightly attributable, the fright acting merely as an exciting cause by throwing a little extra burden upon this already overtaxed organ. A few cases of death from pure fright have, indeed, been reported by Manson, Cazenave, and others, but well-authenticated instances of the occurrence are rare enough to possess considerable interest. The following case is reported by Dr. Annibale Montalti, in *Lo Sperimentale*, No. 10, 1887: A lady accompanied her husband one day to their estate in the country, and was present when he got into an altercation with one of his tenants. The dispute ran high, and the men were just on the point of coming to blows, when the lady exclaimed, "I am dying," and fainted. She was carried to a bed, and soon died, in despite of the efforts of a physician, who had been summoned. The only lesion found at the autopsy was a very slight aortic insufficiency, a few drops filtering through when the aorta was filled with water. There were also slight atheromatous changes in the aorta and on the aortic valves, but none of the lesions was of sufficient importance to have weakened the heart to any appreciable extent. This case may, therefore, be added to the few already reported of death occasioned by pure fright without any other sufficient cause being discoverable.

Progress of Medical Science.

Rupture of the Rectum from a Fall.—The following case is reported by Mr. Thompson, of the Manchester Royal Infirmary (*The Lancet*, December 3, 1887): C——, aged eighteen, was admitted on May 20, 1887. He stated that he had fallen about four feet, in a sitting posture, on to the end of the upright shaft of a smith's hammer, which he described as having entered his seat for a considerable but unknown distance, and requiring some amount of force in its removal, which was accomplished by a fellow-workman. He had very little pain at the time of the accident, and walked about a mile to the infirmary without much trouble. On examination only some slight bruising was found around the anus, with a little blood-stained mucus. Per rectum nothing was detected. The abdominal walls were quite flaccid. Examination caused no pain. He complained, however, of a slight, continuous, aching pain just above the pubes Soon after admission he passed both urine and fæces, the former normal, the latter soft and streaked with blood. Some hours later he passed another motion, with a considerable quantity of clotted blood; the suprapubic pain also became more intense, but the abdominal walls still remained flaccid. The face was very pale, the pulse rather weak, and the extremities cold; but the patient appeared to be in good spirits, answered questions readily, and did not feel unwell. He remained in this condition until midnight, when the abdominal pain became more severe. Symptoms of collapse gradually came on, and he died at 8 A.M. At the necropsy, on the same morning, the peritoneum was everywhere found intensely injected, and in parts presented a thin layer of lymph. There was a marked laceration in the recto-vesical pouch, a little to the right of the middle line, which led into a triangular opening in the wall of the rectum, about three inches from the anus; this aperture was triangular, its base measuring one inch and a half, its sides an inch each. At the brim of the pelvis, on the right side, was a laceration of the peritoneum covering the psoas, with bruising of the subjacent muscle. The mesenteric glands were enlarged and inflamed. The abdominal cavity contained a small quantity of hard fæces; there was also found a piece of cloth corduroy, two inches long and one inch and a half in breadth, corresponding in texture to the patient's trousers and to an aperture in their seat.

The Salicyl Compounds in Rheumatism.—In a paper on the treatment of acute rheumatism by salicylic acid and allied drugs, Dr. Alfred H. Carter, of Birmingham, discusses, among other points, the circumstances under which these remedies are alleged to fail. Probably the most common source of failure consists in a faulty mode of administration. Either the drug is not given in sufficiently large doses or not at sufficiently short intervals. For a young adult, in a case of average severity, the doses should not be less than twenty grains, nor should the intervals between them exceed three hours. In cases of unusual severity the dose should be repeated every two hours. Of course it is not necessary to maintain this high dosage. As soon as the symptoms begin to yield, the quantity should be gradually diminished. Failure in other cases may be explained by the fact that inflammatory changes have been set up in the joint, which are too severe and deep-seated to subside immediately on the removal of the primary irritation. The salicylates remove the latter, but have no direct influence over the inflammatory changes in the joint. The salicyl compounds always answer best in the early stages of the disease, before the joint mischief has had time to make any headway. Again, if the drug be suspended during the early days of the fever, relapse is practically certain; later on, relapse is less likely to occur, until at last, when the metabolic disorder which constitutes the essence of the rheumatic process has naturally subsided, relapses do not occur at all. It is necessary to continue the use of the drug, in reduced doses, for at least three weeks from the date of onset; and even then, on the slightest return of symptoms, to recommence its administration and to continue it at least for another week or ten days. In this light, so far from the occurrence of relapses depreciating the practical value of the drug, they show up the specificity and certainty of its operation, within its own limits of activity, in a most striking manner. With reference to heart-complications, Dr. Carter believes that they occupy exactly the same secondary relation to the chemical changes in the blood as does the joint-affection. Consequently, in the same manner as the joint-inflammation can be prevented by early and vigorous salicyl treatment, cardiac inflammation may be prevented. He has never seen cardiac complications occur after the first twenty-four hours of salicyl treatment in a case which was known to be uncomplicated at the outset, and in which it was clear, from the rapid diminution of the joint-pains and fever, that the patient was properly under the influence of the drug. When such complications occur during the first days of treatment, it is probable that the inflammation had already begun when the patient first came under observation; and, as with the joint-inflammation, the salicylates have no direct influence of any kind on the inflammatory mischief *per se*.—*The Practitioner*.

Medical Missionaries.—In very many of the missions for the spread of evangelical Christianity among heathen nations the physician is regarded as almost as essential as the clergyman, and it is through the good results of the former's ministrations that the latter is enabled to gain a hearing. This is an eminently practical way of reaching the heathen, and to it is doubtless due the greater part of whatever success these missions have had. There ought to be little difficulty in securing medical missionaries enough to supply the demand. There is little attraction, for a young graduate without means or unusual abilities, in the prospect of a long struggle after a practice sufficient to support him in even comparative comfort in civilized countries. But the thought of a journey to distant lands, plenty of congenial work to do, and a support from the start, is pleasing to many even who may be but little influenced by the religious aspect of their calling. And when to this is added the powerful attraction of religious work to a truly pious mind, the impulse to offer one's self for the mission is wellnigh irresistible. But it is well to look at the dark side of such a life before entering upon it, for after the work is once begun it cannot be laid down lightly and without good cause. A medical missionary should, above all, be a thoroughly educated physician, not merely a graduate who has passed a creditable examination and has attended a few clinics. He should be one who has studied disease practically as a hospital interne, and who is competent to treat any affection of any organ—the eye, the throat, and the ear, as well as the heart, the lungs, or the stomach. He should, of course, be thoroughly in sympathy with the religious work of the mission, for he is to be a missionary as well as a physician; indeed, the primary reason of his going is to pave the way for the conversion of the people among whom he is to live. Finally, he should be not only healthy, but of robust physique and iron constitution. He is going to a new climate, and one that is often most trying, if not deadly, to people from temperate regions, and he will be, by reason of his work, more exposed than any others of his companions to the dangers of this climate. Then, again, the medical missionary is sometimes exposed to considerable personal danger at the hands of ungrateful patients, or of the ungrateful friends of patients. The heathen are no better than other people. When a case goes wrong they abuse the physician just as roundly as good Christians do, and their abuse is apt to be even more active and to express itself by the attempt to inflict bodily injury rather than damage to reputation and good name. Medical missionaries in China and elsewhere have been forced to flee for their lives to escape the fury of an angry mob of the friends of some patient who had unfortunately died after an operation. We have no desire to discourage young men or women from embracing the calling of a medical missionary, but it is better to put the facts plainly before them while they are still here, than it is for them to learn them after they have journeyed thousands of miles and have found themselves in a position from which they cannot honorably retire. The medical missionary societies do all they can to put the matter in a proper light before their candidates, but it is hard to restrain enthusiasts, who believe that they have a vocation, from embracing it, in despite of any and all obstacles which may be thrown in their way.

An Unreliable Sign of Death.—Among the signs of death which have usually been considered the most certain is that of the explosive air-bleb. If the flame of a candle be brought close to the finger of a dead person the skin will be observed to become dry, and air will collect beneath it, raising it up in a blister, which will finally break with a slight noise. In a living person, under the same irritation, there will usually be formed a bleb containing serum. This has been supposed to indicate certainly that the person was dead, but a case reported by Dr. Martel, in the *Revue Internationale des Sciences Médicales*, No. 9, 1887, goes to show that the sign is not an infallible one. A woman attempted suicide by inhaling charcoal fumes, but was discovered before life was extinct. In the efforts at resuscitation cupping was employed, and the skin was accidentally burned. It was noticed that the blister resulting contained air instead of serum, and on approaching the flame of the candle to the finger an air-bleb was formed and broke with a slight explosion. The woman, though insensible, was breathing regularly, and the heart was acting well. The signs of death resemble those of pregnancy in their uncertainty, and in doubtful cases of either condition no single symptom can safely be relied upon, but a conclusion must be reached by a careful weighing of all the indications present.

Recurrent Attacks of Scarlet Fever.—Authentic cases are on record in which scarlet fever has attacked the same person twice or even three times. Yet such recurrences are rare; and Dr. Willan, quoted by Aitken, asserts that among two thousand cases of scarlet fever he had never seen a second attack. On the other hand, the sore throat which so often accompanies a scarlet fever epidemic seems often to attack even those who have had the disease. Some physicians, like the late Dr. George B. Wood, can never attend scarlet fever patients without suffering from a slight angina. It has been thought that perhaps the scarlatinous virus may appear in a modified form many times, and Dr. Frank, a German physician of many years' experience, suggests (*Allgemeine Med. Central-Zeitung*, 1887, No. 100) that mild forms of diphtheria are illustrations of this idea. He has been impressed with the belief, also, that an attack of scarlet fever gives a certain degree of immunity against diphtheria, this latter disease appearing in a milder form in those who have suffered from the exanthematous fever. In illustration of the view that the virus of scarlet fever may attack a person a number of times, he cites the case of a boy of thirteen who, between the years 1880 and 1887, had four different attacks of typical scarlet fever, the later attacks being, on the whole, milder than the first. It has been claimed for some infectious diseases that persons who do not secure immunity by one attack never secure it, and are liable to the disease an almost indefinite number of times. The subject of recurrence of scarlet fever is an important one, and doubtless our readers can contribute to it from their experience.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, February 18, 1888.

THE NERVOUS ORIGIN OF RHEUMATOID ARTHRITIS.

PROBABLY the bulk of the profession has accepted the opinion of Charcot regarding the nervous origin of those arthropathies which are now commonly included under the designation of "Charcot's disease." But concerning the etiology of rheumatoid arthritis, or, as many prefer to call it, arthritis deformans, there is a much wider divergence of professional opinion. The subject was recently brought before the Royal Medical and Chirurgical Society, by Dr. A. E. Garrod. This gentleman based his views on the study of five hundred cases of arthritis deformans. Arguments were put forward by Garrod in support of the following propositions (*The British Medical Journal*):

1. The causes of rheumatoid arthritis were such as might be expected to act upon the central nervous system. 2. The distribution of the lesions was such as would be likely to result from nervous lesions. 3. The distribution of the lesions was similar to that of certain arthropathies of spinal origin.

The influence of heredity was then discussed. In 216 cases out of 500 there was a family history of joint-disease, sometimes of more than one variety. There was a history of gout in 86, of probable gout in 10, of rheumatism in 64, and other conditions, which might be classed together as probably rheumatoid arthritis, in 84. These figures could only approximate to accuracy, as they were based upon information given by the patients.

The influence of uterine causes was then taken up, and it was shown that when the female cases were arranged according to the age of the patients when the disease commenced, there was a steady increase in numbers up to the period of the menopause, and a steady decrease after that period. Of the 500 patients 411 were women, and only 89 men. The influence of anxiety and care, mental shock, injuries, damp, cold, and previous rheumatic attacks was discussed, and each of these was shown to have a share in the causation of the disease. Stress was laid upon the extreme symmetry of the joint-lesions in rheumatoid arthritis. There was a tendency for the joint-lesions to advance up the limbs from the periphery toward the trunk. This order of invasion was by no means constant, but in particular instances it was well marked. In the localized form of the disease it was of course absent. The knees ranked only second to the hands in liability to rheumatoid arthritis. Garrod also pointed out that there was a close resemblance between the distribution of the joint-lesions in rheumatoid arthritis and in the recorded cases of arthritis following spinal concussion, whereas in more local spinal injuries one or more large joints were usually affected, as in tabes dorsalis. The associated nervous phenomena, such as muscular wasting, increase of tendon-reflexes, etc., were regarded as secondary to the joint-lesions, and as therefore lending no efficient support to the theory of the nervous origin of rheumatoid arthritis.

In the discussion which followed the reading of this interesting communication, Sir Dyce Duckworth agreed with Garrod in believing that rheumatoid arthritis was of nervous origin. He added, which is no doubt quite true, that the minute anatomy of the nerves about the joints was still very imperfectly known in this disease. Trophic changes might easily occur, however, without palpable nerve-lesions.

Dr. Buzzard, on the other hand, found some difficulty in convincing himself of the nervous origin of rheumatoid arthritis. He had said eight years ago that probably there was some part of the medulla presiding over the nutrition of the skeleton. And some acute medullary affection he still considered the cause explaining the acute sweating of rheumatism, its hyperpyrexia, and cardiac disease. The evidence of nervous origin of rheumatoid arthritis was, at any rate, very much less decisive than in Charcot's joint-disease. Its symmetry made it probable, but there was not the concomitant trophic disturbance of a nerve-disease.

From all of this we may conclude that, while the mode of origin of rheumatoid arthritis is still rather obscure, the time is past when it can be ascribed to that convenient *fons et origo mali*, "a cold." Doubtless dampness, cold, and similar influences are not wholly without their effect. But there are other factors, more directly acting upon the nerve-centres, that we cannot afford to overlook.

CARCINOMA AND SYPHILIS.

IN a communication in *The Lancet*, on the subject of the contagiousness of cancer, noticed recently in these columns, Mr. Clement Lucas referred to syphilis as being often contributory to an outbreak of carcinoma. Others have expressed the same opinion as to the existence of a causal relation between the two affections, but have not brought forward any very satisfactory evidence in support of their views.

In a paper read before the Texas Medical Association, in 1884, Dr. Edmund Goldmann, now of San José, Cal., took the opposite ground, that there exists an antagonism between syphilis and carcinoma, so that the former disease, instead of predisposing to cancer, is rather preservative against its ravages. The writer stated that Dr. Scheuthauer, formerly Rokitansky's assistant in Vienna, had told him that in several thousand autopsies which he had made personally, he had never seen the lesions of carcinoma and syphilis in the same body. This statement had made a strong impression on him, and during a professional life of five years in Mexico, where he had had an opportunity to study a large number of cases of syphilis, he had been on the lookout to discover an instance of the coexistence of these two affections, but had yet to see it.

The following are Dr. Goldmann's conclusions in the paper above mentioned: "I may condense the result of my experience in stating that I have never met the two affections in the same person, and, according to my view, the one excludes the other. While carcinoma holds for a long time the position of a parasite or a foreign body growing within the human body, syphilis is, from its beginning, an infection, like that of glanders, with which it was confounded by the physicians during the siege of Naples. The two diseases, therefore, have nothing in common with each other." Syphilis, he adds, is extremely common among the men in Mexico, while cancer is rare.

ŒDEMA OF THE NEW-BORN.

In a communication presented to the Academy of Medicine of Paris, on November 8th, Dr. L. Dumas called attention to the striking analogy between œdema neonatorum and phlegmasia alba dolens. These two affections resemble each other, he said, not only in their symptoms, but also in their etiology and pathological anatomy. But it had not hitherto been shown, though suspected by some writers, that there is a thrombosis existing as the cause of the œdema in the new-born. The writer had, however, found thrombosis of both femoral veins in a case of this affection recently examined post-mortem by him.

Although not presuming to assert dogmatically, after a single examination, that this is the sole lesion of the affection, the author offers the following theory of the nature of the disease: The œdema, which has been shown by Parrot to be entirely distinct from sclerema, with which it was formerly confounded, affects chiefly weak and sickly infants, the type of which is the prematurely born, which may be compared to cachectic organisms, in whom, as is well known, there is a predisposition to spontaneous thrombosis. The incomplete respiration, a consequence of the general weakness, induces a retardation of the venous circulation, which favors a coagulation of the blood, especially in the incompletely emptied umbilical vein. Phlebitis of the umbilical vein may also be a direct cause of thrombosis.

The two practical conclusions which the author draws from his study of this affection are the following:

1. The treatment of œdema neonatorum should be the same as that of phlegmasia alba dolens. Especial care should be taken to provide a sufficient amount of heat, for which purpose Tarnier's *couveuse* is especially useful. Every means should be used, also, to increase the functional activity of the lungs.

2. It is necessary to abstain absolutely from the practice of massage, which is recommended by many authorities, since it exposes to the danger of breaking up the thrombus and thus giving rise to embolism. Possibly the pulmonary troubles so often met with in this disease may be excited, in some cases at least, by fragments detached from the thrombus and lodging as emboli in some portion of the lungs.

Whether the author is right in his assumption, that œdema of the newly born is essentially the same disease as milk-leg in the parturient woman, can only be determined from the results of numerous autopsies of infants dying with this affection. Thrombosis certainly offers a reasonable explanation of cases of localized œdema, but it would hardly appear to account satisfactorily for those cases in which the œdema is very extensive, involving the upper extremities, trunk, and at times even the face. Nevertheless, the conclusions of Dr. Dumas regarding the treatment are sound, and may safely be followed, whether his views as to the pathology of the disease are accepted or not.

THE CURE OF DEAF-MUTISM.

Whatever may be the disadvantages and dangers of specialism in medicine, no one can dispute that the general sum of knowledge has been vastly increased by the labors of special workers in different departments Many affections, the nature of which was unknown or misunderstood, have been set forth in their true light, and, being better understood, have come to be more rationally and successfully treated. Deaf-mutism, for example, was formerly regarded as a congenital affliction, and one for which there was no remedy. The labors of otologists have shown, however, that it is frequently due to loss of hearing—the result of ear disease in infancy—and that the deafness so caused is often amenable to cure, or at least improvement, by proper treatment.

In the *Revista de Ciencias Médicas* for December 10, 1887, Dr. D. P. Verdós reports two cases which well illustrate this point. The first case was that of a boy, five years of age, who was a mute. The parents noticed that the child did not begin to talk at the usual age, and after waiting a while in the hope that he might commence to lisp a few words, they consulted their physician. The only explanation that he could offer was, that there was probably some trouble with the hearing, which might eventually disappear. After waiting a few years more, and hearing no articulate sound from the boy's lips, they took him to Dr. Verdós' clinic. Examination at this time showed an apparently total loss of hearing. The only hope lay in the fact that the child gave evidence of a slight perception of the sound of the tuning-fork applied to the walls of the cranium. Further examination showed that the loss of hearing was due to a catarrh of the Eustachian tube, occurring in infancy, which had caused a closure of its lumen, the rarefaction of the air in the tympanum being evidenced by the enormous retraction of the drum-membrane. Treatment was now commenced by catheterization of the Eustachian tube and forcible inflation by air douches, assisted by rarefaction of the air in the external auditory canal. By these measures the drum-membrane was restored to its normal position, and within the space of two months the boy was able to hear sounds of all kinds, including the ticking of a watch held at some distance from the ear. He soon began to utter a few monosyllables, and rapidly learned to talk with as much ease as any child of his age.

The history of the second case, that of a child four years of age, was similar to the first, though his acquisition of speech was not as rapid nor as perfect, owing, evidently, to mental defect.

These cases are instructive, showing, as they do, that deaf-mutism is not always an irremediable condition, but that, in certain cases at least, proper treatment will save the child from this affliction. They prove, also, that it is not too late to make the attempt to restore the hearing, even after the lapse of several years; and if a child five years old can be saved from this fate, it is not too much to hope that one even older might acquire hearing and speech as a result of intelligent and persistent treatment.

VIRCHOW ON CANCER.

In the current issue of *Virchow's Archives* is a long article, by Professor Virchow, on the pathology and diagnosis of cancer. The article is largely historical, and gives a review of the facts regarding the pathology of cancer now generally accepted. As is well known, Virchow was the first to place the pathological anatomy of cancerous growths upon a sound basis. His share, as he justly claims, in this work consisted in demonstrating the alveolar type as common to all carcinomas, and not merely to the simple and gelatinous forms (which latter had alone been termed "alveolar" by Otto); and then to prove that the cancer-cells were of the type of epithelial or epidermal cells, especially those of so-called transitional epithelium. He adds that Alibert is incorrect in saying in his recent work that Johannes Müller was the first to discover the epithelial character of cells in a case of cancer of the cheek. Müller's statement is: "I once saw epithelioid, flat, squamous-looking cells, with nuclei forming a thick layer on the surface of a cancer of the cheek—obviously an epidermal layer."

There is, then, a twofold test of carcinoma, the closed alveoli and the epithelioid cells they contain. It is plain that this structure can only be found in the depth of the tissues, and not on the surface, although in its growth it may come to project beyond the surface. The diagnosis therefore turns upon the point whether the growth is actually seated below the surface; whether it is, in fact, heterologous in the sense in which Virchow uses that term. Cancer begins with the development of epithelium in abnormal situations, and the proof of such abnormality (heterotopia) is the first step in diagnosis; but it does not end there, for other tumors—as pearl tumors and dermoids—produce heterologous epidermal structures, and are certainly not cancers. The growth must have the appearance of a gland, but with closed outlet.

With regard to the bacillus, Virchow says: "It is possible such may exist; indeed, such a discovery would constitute an important advance . . . which might explain much that is still obscure as to the metastatic processes which occur in cancer." But gland-cells have been shown to produce various tissue-products, and cancer-cells alone amply suffice to explain the constitutional effects of cancer. That cancer is always primarily local in character, and that its dyscrasia was always secondary, was contended for in the "Handbook of Special Pathology" as early as 1854, a time when the "cancerous constitution" was still firmly believed in.

On the question of the cure of cancer it says: "Dittrich showed that cases of supposed retrogression of cancer of the liver were really due to gummata; but Virchow has observed a cicatricial process in hepatic cancer caused by fatty metamorphosis of the cells in the centre of the tumor. 'The formation of accessory foci is what forms the obstacle to a real healing. Cancer itself is no permanent tumor.' Indeed, its cells have a very restricted vitality. Regarding medicines, Clay's treatment with Chian turpentine is mentioned, and the author is of opinion that though as yet no satisfactory proofs of cure are afforded, the profession is generally too sceptical on this subject. Von Nussbaum attempts to set up fatty degeneration in a tumor by thrusting the thermo-cautery in different directions beneath it, and thus depriving the periphery of its vascular supply. All such attempts are commended. 'If cancer is at first, and often for very long, a local disease, it must be possible at this stage to cure it locally.'"

News of the Week.

Care of the New York Insane.—A strong effort is being made by the State Charities Aid Association to secure a law providing that the insane in all the sixty counties of this State, except New York, Kings, and Munroe, shall be taken care of in State institutions. There are now, exclusive of the three counties mentioned, about two thousand insane in county institutions, scattered in the various poor-houses and almshouses of the State. To erect the buildings required for their accommodation on State asylum grounds, an appropriation of about $500,000 would be necessary. The State has already appropriated over $6,000,000 for the better care of its pauper insane. The prominent features of the law are the following: 1. The districting of the State into as many asylum districts as there are State hospitals or asylums for the insane. 2. The reception by the State hospitals of all the pauper insane, both acute and chronic cases, from all the poor-houses and almshouses of the district to which the State hospital belongs, at a uniform weekly rate per capita, charged to the counties for each pauper insane person so received, whether an acute or chronic case, of $1.50. This payment is to include clothing and travelling expenses. An attendant trained in the State hospital for the purpose shall be sent for and will accompany the insane person to the State hospital. 3. The erection on the grounds of the existing State hospitals of a number of inexpensive detached buildings sufficient to provide suitable accommodations for the chronic pauper insane now in the poor-houses and almshouses of the State at a cost not to exceed $250 per capita. These buildings to be erected, if possible, within one year after the appropriation is made.

The Committee of the Medical Society of the State of New York, to whom was committed that portion of the President's opening address relating to the treatment of the insane, would respectfully report:

1. That until comparatively recent times the insane were considered and treated as criminals and confined in dungeons or prisons.

2. Their subsequent retention in poor-houses was but a remnant and mitigation of the old system.

3. The treatment of the insane has improved with the progress of civilization.

4. Therefore special hospitals were supplied for them, and their welfare was intrusted to scientific and humane experts.

5. To return to anything like the old system of treating the insane in poor-houses or relegating them to the custody of county officials would be a grave mistake.

As early as 1855, at a meeting of the county superintendents of the poor, held at Utica, the following, among other resolutions, was passed:

"*Resolved*, That no insane person should be treated or in any way taken care of in any county poor- or almshouse or other receptacle provided for, and in which paupers are maintained and supported."—"Fifty-fifth Annual Report, State Asylum at Utica."

6. For the proper classification and treatment of the insane more means are required than for the patients of general or even other special hospitals. Institutions for the insane therefore demand medical experts as superintendents, nurses trained in the general care of the sick and then in the special care of the insane, schools for the physical and intellectual training of the insane, for the practice of out-door and in-door industries, and many other appliances.

7. The Medical Society of the State of New York expresses therefore its objections to any plan or law which in any way looks to the return of the insane to the county poor-houses as being unscientific and inhumane, and expresses its conviction that those institutions, like the State Asylum, which have Boards of Managers accountable to the State government and also to the public, are best adapted for the care of the insane poor of the State.

All of which is respectfully submitted.

A. JACOBI,
C. R. AGNEW.

Adopted, February 9, 1888.

Resolved, That the above report on the treatment of the insane be sent to the Committee on Legislation of the Medical Society of the State of New York, with instructions to use it in its discretion in the Legislature and elsewhere to further the objects in view.

In the discussion which followed the following was read as illustrating the progress which is being made in the scientific nursing of the insane, a kind of progress not likely to reach the insane if shut up in poor-houses:

"Extract from letter of Dr. Joseph M. Cleveland, Medical Superintendent, Hudson River State Hospital, Poughkeepsie, N. Y., to Amasa J. Parker, Jr., President of the Board of Managers of said hospital.

"Dated February 5, 1888.

"Next month (March) we graduate four young women from our Nurses' Training School. All four before coming here had graduated from a General Hospital Training School. They will have been with us one year in March. They have been very thoroughly instructed in mental nursing by lectures, class instructions, quizzes, and clinical teaching. They are bright, intelligent, and full of ambition to become thoroughly equipped in all that pertains to a high order of nursing."

LONG ISLAND COLLEGE HOSPITAL.—The commencement exercises of this institution will be held at the Academy of Music on Friday, March 9, 1888, at 8 P.M. Rev. T. DeWitt Talmage, D.D., will deliver the address to the graduates, and the valedictory will be given by George W. White. Professor A. Jacobi will address the Association of the Alumni of this College on Monday, February 27, 1888, at 8 P.M., at the College building. The subject of his paper will be "The Heart and Blood-vessels of the Young." The Annual Dinner of the Association will occur on Thursday, March 8th, at 7 P.M., at Remsen Hall.

OFFICERS-ELECT OF THE NEW YORK COUNTY MEDICAL ASSOCIATION.—At the last meeting of this Association, held January 16th, the following were elected: *President*, J. R. Macgregor; *Vice-President*, C. S. Wood; *Recording Secretary*, Frank Grauer; *Corresponding and Statistical Secretary*, J. W. Small; *Treasurer*, C. Ellery Denison; *Member of Executive Committee*, Charles A. Leale.

THE ANNUAL DINNER OF THE ALUMNI ASSOCIATION OF BELLEVUE HOSPITAL MEDICAL COLLEGE was held at the Hotel Buckingham on Tuesday evening last, and was in every respect the most successful gathering which this organization has yet held. Among the guests were Commissioners Porter and Brennan, Rev. Dr. Armitage, Rev. Dr. Lloyd, Dr. C. R. Agnew, Dr. F. P. Foster, Dr. C. L. Dana, and Mr. William A. Purrington. The President, Dr. Webster, was in the chair, and numerous toasts were responded to by the guests. The Association has reason to congratulate itself upon its rapid growth and prosperity.

PROFESSOR W. T. COUNCILMAN, Associate in Pathology in the Johns Hopkins University, has been elected to the Chair of Anatomy in that institution. Professor Councilman is a native of Maryland, and a graduate in medicine of the University of Maryland, of the class of 1877.

THE TRUE FIELD FOR TEMPERANCE WORK is among physicians. Such is the view taken by "an excellent but mistaken clergyman," who sends a paper setting it forth to the *Journal of Inebriety*. This view he believes to be true "from the fact that a large number of physicians were intoxicated at the banquet at the International Medical Congress at Washington." The editor of the *Journal* says, however, that only one man was visibly intoxicated out of three thousand. "A half a dozen or more were exhilarated, and showed the transient excitement of wine. A dozen or more had marks of being inebriates, but seemed to be abstaining at that time. It was clearly evident that the American physician, as seen at this place, was far more temperate, as a class, than the average man in other callings of life."

THE WILLIAM F. JENKS MEMORIAL PRIZE.—The First Triennial Prize, of Two Hundred and Fifty Dollars, under the Deed of Trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on "The Diagnosis and Treatment of Extra-uterine Pregnancy." The prize is open for competition to the whole world, but the essay must be the production of a single person. The essay, which must be written in the English language, or if in foreign language, accompanied by an English translation, should be sent to the College of Physicians of Philadelphia, Pennsylvania, U. S. A., addressed to Ellwood Wilson, M.D., Chairman of the William F. Jenks Prize Committee, before January 1, 1889. Each essay must be distinguished by a motto and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer.

Clinical Department.

A NEW MYDRIATIC AND NARCOTIC—ASTRAGALUS MOLLERSIMUS—THE "LOCO" PLANT.

By ISAAC OTT, M.D.,

EASTON, PA.

In a series of experiments published in the journal *New Remedies*, August, 1882, I found that astragalus mollersimus decreases the irritability of the motor nerve, and affects the sensory ganglia of the central nervous system, preventing them from receiving impressions. It also has a spinal tetanic action, killing mainly by arrest of the heart. It reduces the cardiac force and frequency, temporarily increasing arterial tension, but finally decreasing it. It has a stupefying action on the brain, increases the salivary secretion, and greatly dilates the pupil. The diminution of sensibility by this drug and its slowing action on the heart show that it would be an important medicinal agent. In my previous observations no experiments were made as to the local effect of the astragalus upon the pupil. Recently, on account of the great rage for mydriatics, I have tried it upon the eye of the rabbit. The alcoholic solution of the drug, about two fluid drachms, was allowed to evaporate in the air, and the residue was rubbed up with a drachm and dropped into the eye. In about fifteen minutes the pupil of the rabbit's eye was seen to be considerably larger, and remained so for some time. In my own eye a few drops of the above watery solution also caused dilatation of the pupil. The admixture of the vegetable tissues with the active principle of the drug prevents any extended experiments upon the pupil. It is to be hoped a chemical extraction of the active principle will soon be made. The dilatation of the pupil and the narcotic action of the drug explain the disposition of animals who have been "locoed" to mistake a rut for a larger opening in the ground, and make a great leap to avoid it.

PENETRATING WOUND OF NECK, INVOLVING THE COMMON CAROTID ARTERY AND INTERNAL JUGULAR VEIN—LIGATION—HEMIPLEGIA—RECOVERY.

By E. P. SWASEY, M.D.,

NEW BRITAIN, CONN.

Shortly after 2 P.M. of June 2, 1887, I received a telephonic summons to come to East Berlin, a small manufacturing village five miles distant, the person at the telephone stating that a man had been wounded in the neck and was bleeding badly. My reply was to apply pressure directly to the wound, and maintain it until my arrival.

Ordering a conveyance, getting necessary instruments, and calling Dr. H. C. Deane, my next-door neighbor, occupied but a few moments, and thirty-five minutes after I had received the message we had driven six miles (having gone a mile out of the way), over hilly roads, heavy from recent rains, and were at the side of the patient, whom we found lying on a bench in the corner of a lathe-room, his clothing covered with blood, in front, to his feet, the master-mechanic of the shop, a large, powerful man, calmly standing by his side, pinching the edges of the wound together, and effectually checking the flow of blood. The pulse was strong and slow. It was evident from the situation of the wound and the amount of blood already lost that we had a serious wound to deal with.

The man, aged forty, had been employed in holding what is termed a set-hammer, at a place some three hundred feet distant from the lathe-room. This set-hammer, the face of which was very ragged, and held with the outstretched hand on a level with his neck, was being struck from above by another hammer, when a chip from the face of the former was broken off and struck the patient in the neck. Grasping his neck and jumping from the flat-car on which he had been standing, he hastened toward the shop, the master-mechanic meeting him on the way and assisting him to the place where we found him. The scale of iron, which was afterward found in the wound, was about half an inch square, very thin, and with exceedingly keen edges, and must have been projected with great force.

The patient was now brought around to a good light on the table prepared for him, and we found, on examination, a transverse wound, cleanly incised, three-fourths of an inch in length, an inch and a half to the left of the median line, and nearly opposite the cricoid cartilage. This side of the neck presented a large tumor, due to escaped blood beneath. No bleeding followed the removal of the pressure, the clot being forced into and separating the edges of the wound. It was quite evident that one of the large vessels had been injured. It was not deemed expedient to give an anæsthetic, as there were no hands to spare for that. An incision was promptly carried through the skin, beginning an inch and a half above the wound, intersecting its outer end, and downward toward the sternum. The deeper tissues being divided, the clot was forced out, and a terrible hemorrhage ensued, which was checked for the time by hastily crowding sponges into the incision. It was noticed that both arterial and venous blood gushed from the wound. Maintaining the pressure on the sponges, I directed Dr. Deane to carry the incision completely down to the sternum. It was then found that the sterno-mastoid had been divided by the chip of steel through nearly three-fourths of its substance, which fact facilitated the search. Pushing the muscle back, we discovered that the internal jugular had been completely severed. We had found the proximal end, and it was immediately ligated. Removing the sponges *en masse*, and guided by my fingers, I hastily applied through the current of blood four artery clamps, and upon the application of the fourth saw the bleeding suddenly cease, whether from death or the seizure of the artery I could not at first say, for I had noticed a deathly pallor spread over the countenance. Just then, however, the man opened his eyes, and a gush of venous blood from above indicated that there was still life. Pressure being applied above, over the jugular, I cleansed the wound, and found on the common carotid, between the third and fourth pairs of forceps, at a point just below the cricoid cartilage, an opening in the artery involving fully one-half its calibre. So admirably had the forceps been applied that no readjustment was necessary. The sheath was dissected from the vessel with a bent director, and braided silk ligatures were applied by means of a curved fenestrated probe. Our attention was next directed to the distal end of the jugular vein, which we reached by splitting up the sterno-mastoid muscle, and then ligated. The missile had penetrated to the transverse processes of the cervical vertebræ, its course evidently having been arrested by the same. The hemorrhage was checked, but our patient's condition was not a flattering one, for he was pulseless at the wrists, and the surface was covered with a cold perspiration. He was conscious, however, and told me that he had not lost consciousness throughout the operation, though I thought at one time he was in a fatal syncope. Whiskey and milk were now freely administered, the wound was thoroughly cleansed with a 1 to 2,000 sublimate solution, freely powdered with iodoform, and the edges were brought together with silk sutures, except in the middle, where the ligatures, four in number, were brought out. Iodoform gauze, borated cotton, paraffine paper, and a bandage completed the dressing. An hour later he was taken on a stretcher, the head depressed, to a house near by and placed in bed, the foot of which was raised. Bottles of hot water were placed about, and blankets over him, whiskey and milk were given as often as he would swallow, one-fourth grain of morphine was administered hypodermatically, and the patient was strictly enjoined not to attempt to stir, speak, or have anyone but the attendant in the room. There was then some slight indication of radial pulse.

At midnight the pulse was 92, and the patient was quiet; another one-fourth grain of morphine was administered as before. He had taken the whiskey and milk well. Dr. Deane remained through the night, and was obliged to repeat the morphine once.

For the next two days the temperature ranged from 100° to 102°, and the pulse from 84 to 100. At the end of this time the patient began to complain of inability to move the right arm and leg, and I now found complete paralysis of motion, and also of loss sensation, on the right side. No paralysis of the tongue or facial muscles. This paralysis probably took place at the time of the ligation, but was not earlier observed, as I had so strictly insisted on perfect quiet. His voice was also husky, and he could not speak above a whisper. This he noticed immediately after the receipt of the injury, and it suggested some lesion of the recurrent laryngeal nerve. Dr. Deane suggested acute cerebral anæmia as the cause of the hemiplegia, and the subsequent history of the case proved this to be the most probable cause.

On the fifth day the patient had a rise of temperature and became delirious. A small pocket of pus which was found in the upper angle of the wound was emptied and washed out, and the fever and delirium soon disappeared. The ligatures of the carotid artery came away on the 16th and 18th of June, and those of the jugular vein on the 21st and 22d. From this time the improvement continued, and the patient resumed work on October 10th, and has worked steadily since that time, though his voice is still husky and he is not as strong as he was before the accident.

INTUBATION OF THE LARYNX—ASPHYXIA FROM OBSTRUCTED TUBE.

By W. C. DEMING, M.D.,

ASSISTANT PHYSICIAN, STATE EMIGRANT HOSPITAL, WARD'S ISLAND.

Antonina Dorsa, aged two, born in Italy, was treated for pneumonia in the New York State Emigrant Hospital, last February and March, and recovered. She remained here till the latter part of April, regaining strength slowly, when she was taken sick again with symptoms of pneumonia and also increasing laryngeal obstruction. This became so marked about the second day that, on consultation with Dr. Marple, the acting physician-in-chief, it was thought best to intubate. Accordingly, this was done by Dr. Marple, with immediate and marked relief to the patient. The smallest tube was used. No false membrane could be seen.

Two days later, the tube having been worn continuously in the meantime, while the patient's chest was being examined she coughed, gagged, vomited a little coagulated milk, and suddenly ceased to breathe. The larynx was absolutely occluded, although the child made, for it, heroic efforts of inspiration. After a few seconds she was inverted and slapped on the back, and the chest was compressed in the hope of dislodging the tube. This did not succeed, but the nurse having meanwhile brought the extractor, which was at the other end of the ward, it was introduced and the tube was immediately withdrawn. The child was now unconscious, fearfully cyanosed, and had ceased to make any efforts to breathe, but after a few minutes of artificial respiration, we had the pleasure of seeing a return of consciousness, and breathing again beginning. The laryngeal obstruction was still so marked, however, that, after about fifteen minutes, the tube was replaced, with the same relief resulting as at the first introduction.

On examining the tube a small amount of soft, white matter, probably coagulated milk, was found in it, but not apparently occluding it. A small piece of what might have been false membrane was found somewhere about the instrument, but not in the tube.

The child died in a day or two, with extension of the pneumonia, the tube being left in till death. On autopsy, by Dr. Thacher, there was found pneumonia in both lungs, and "deep ulcers in both tonsils, ulcer on epiglottis [perhaps traumatic], inflammation of larynx and trachea with exudation, apparently fibrinous, and some loss of epithelium." The exudation was, however, very thin.

Was the occlusion caused by the milk, by the small membrane-like particle, which might have been detached from the upper opening of the tube by the extractor, or by membrane from below, which did not come away with the tube?

Probably the tube was not coughed out because the stoppage took place at a moment of extreme expiration following the vomiting.

FATAL OBSTRUCTION OF THE BOWELS WITH PECULIAR FEATURES.

By R. R. LAWRENCE, M.D.,

HARTFORD, MICH.

On Sunday, November 6, 1887, I was called to visit Mrs. A——, widow, sixty-one years of age, a well-preserved lady of full habit, and with a history of good health quite remarkable for one of her age, preceding the commencement of the present trouble. The pulse was from 102 to 108; temperature normal. Subjective symptoms were negative, save an increased tendency to constipation dating back about eighteen months, during which time, at frequent intervals, she would take a cathartic followed by temporary relief. It was sometimes necessary to repeat the cathartic before an evacuation of the bowels could be obtained. Objective symptoms were negative, except the acceleration of pulse. I was called in consequence of the usual remedies having failed, and ordered laxatives, with no result. Cathartics supposed to be more thorough were then tried, but in vain; finally the drastics, viz., elaterium, oleum, tiglium, etc., favored by enemas, with disappointment in every instance. By this time there was great distention of abdomen occasioned by flatus, with very loud borborygmi, which could be distinctly heard in a room quite distant from the one occupied by the patient. Diagnosis: Intra-intestinal tumor, of the nature of which I had no idea. Its location was also uncertain, but, as a copious enema could not be given, I inferred it was low down. Paroxysms of pain, produced by flatulence, were frequent and excruciating in character, requiring morphia hypodermatically, as the stomach was irritable. Nourishment was taken very sparingly, and consisted wholly of liquids. Case progressed without any notable change until December 25th, when there was stercoraceous vomiting lasting several hours, after which the patient could be persuaded to partake of but little food. During her entire illness there was *no evacuation of the bowels*, the enemas being merely tinged with the secretions of the rectum. The thermometer never registered any elevation of temperature, and after the first three weeks the pulse did not deviate from 120 per minute.

Death occurred at 2.20 A.M., January 10, 1888—sixty-five days after the patient had taken to the bed. Autopsy twelve hours after death: Rigor mortis absent; slight emaciation. Intestines greatly distended, especially the colon, the muscular coating of the latter being thickened and imparting a leathery sensation to the touch, the whole tract containing a yellowish-colored fluid, resembling in consistence and appearance *egg nog*. Abdominal organs normal. Tumor located in the sigmoid flexure of the colon, cystic in nature, containing the same characteristic fluid, interspersed with a gelatinous substance. The sigmoid flexure was distended to its utmost capacity; in fact, the tumor filled the entire space. At the junction of the colon and rectum the tube was attenuated to a mere cord, and surrounding that part which should have been the opening was a calcareous deposit of the hardness of bone, resembling it in many respects, and, the most startling of all, *a tuft of hair* (perhaps a nucleus), some of which was three or four inches in length, of a yellowish-white color, the whole forming a mass which, if globular in form, would have been about the size of an average English walnut. This case possessed many peculiar features, as rapid pulse without febrile movement or nervous symptoms; the absence of all inflammatory action; length of time bowels remained in a quiescent state; the mode of death, being evidently gradual failure of the heart's action. Will some one of the many readers of The Medical Record inform me how hair became a part of the contents of the cyst, and whether its formation preceded the calcareous degeneration, or *vice versa?*

ANTIFEBRIN AS A HYPNOTIC.

By J. B. KELL,

DELPHOS, O.

In the issue of The Record of December 17th, I notice an article by Dr. G. Dalton Hay upon the use of antifebrin and antipyrin as hypnotics. While never having had experience with the remedies in any case without a certain degree of pyrexia being present, yet so marked was the effect in the reduction of temperature, delirium, and relief from an insomnia almost absolute, that I wish to record the action of antifebrin in the treatment of a disease in which delirium of a violent form and insomnia are, as a rule, almost constantly present. I refer to acute alcoholism. The case was one in which a man, aged twenty-seven, had indulged in a protracted spree. He was of a neurotic temperament, and inclined to a condition, upon retiring for the night, which he termed "unstrung." After the fourth day had been spent in a constant round of dissipation, he was taken to his home by friends and put in bed. As evening came on his delirium assumed a violent form, manifesting itself in his attempts to strangle his attendants, who were required to hold him in his bed. When called, I found him with all the marked symptoms of a well-defined case of acute alcoholism. The increase of temperature was slight (101.5°); pulse, 85; skin, of a cold, clammy "touch." He was given potassii bromidum and chloral hydrate, grs. xv., every four hours, for the purpose of inducing sleep. He also received quinia sulph., grs. xx., for reduction of temperature, which was almost immediate, but without cessation of delirium or relief of insomnia. The next morning I was informed that his night had been one of constant wakefulness and movement. I now put him on opii pul., grs. iij., every two hours, but effect was negative.

Toward the evening of his second day in bed his condition became alarming; his pulse was now 140, and dicrotism marked; temperature, 103°; low muttering delirium and subsultus tendinum. I now suspended the use of all other remedies, and administered antifebrin in doses of ten grains. After the second dose had been given the patient passed into a sleep, at first interrupted by involuntary muscular contractures. These, however, soon passed away, and under the influence of a third dose the sleep became profound. The temperature was now reduced to 99.5°, while the circulation had become much stronger (112), with an absence of the dicrotic character. After a period of five hours' rest he awoke, but almost immediately was given a fourth dose, of grs. viij., which prolonged the rest four hours. In conjunction with supporting measures the use of antifebrin was continued to convalescence, which was prompt and satisfactory.

Applying ourselves to the case under consideration, it appears that antifebrin is directly an antipyretic and a hypnotic, and not, as one would suppose, directly an antipyretic and indirectly a hypnotic; or, in other words, the latter therapeutic effect depending upon the former, for the reason that, in this case, prior to the use of antifebrin, quinia was given in antipyretic doses, with a consequent reduction of heat but no cessation of delirium or insomnia; in fact, I may add, they appeared to be aggravated. While under the influence of antifebrin, not only was an absolute reduction of heat accomplished but its effect as a cerebral sedative and hypnotic was well marked. It is true that the absence of delirium and production of sleep, under the use of the alkaloid, may be due to the accompanying reduction of temperature; but, if this be true, why not secure the same effect from antipyretic doses of quinia and the cold bath, both of which failed utterly in this case?

I have noticed in several of my journals articles upon the use of this remedy for the relief of that functional disease, insomnia, but as yet I have not seen it recommended in the treatment of acute alcoholism. It is well recognized that in the grave forms of delirium tremens, associated with or without surgical injury, the more common soporifics and hypnotics will fail to produce the desired effect, and if we can secure a remedy which meets the indications so successfully as antifebrin seems to have done in this case, this one value in itself will amply repay all time spent in its investigation. Of course, *one* case is, in one sense, unimportant; what is needed is a *collection of cases*, from which deductions can be drawn, thus reducing its study to a working level.

A CASE OF CHRONIC MEMBRANOUS ENTERITIS, WITH PERIODICAL EXACERBATIONS.

By H. S. KILBOURNE, M.D.,

ASSISTANT SURGEON, UNITED STATES ARMY, PORTLAND, ORE.

I. X——, aged fifty, married, tall, spare, of nervous temperament, came under observation in October, 1886, with the following history: The patient had been in active service, during the war, in North Carolina and other malarious districts, where he had contracted intermittent fever, from which he suffered severely at intervals for years.

In 1882–83, while serving on the plains, he had recurring attacks of "colic," which were attributed to occasional indiscretions in diet. In 1883 he first observed that some of the discharges from the bowels contained patches and shreds, having a membraniferous appearance. These were more abundant after the attacks of "colic." From 1883 until the present time he has had numerous exacerbations of his malady, and during this time he has never, excepting for short intervals, been altogether free from the characteristic discharges. In May, 1886, when I first saw him, he was under the care of an associate, and recovering from an illness of several weeks' duration, which was characterized by great debility and prostration. When I took charge of the case, in October, 1886, he was in bed, suffering from pains of moderate intensity, radiating from the umbilical to the right iliac and hypochondriac regions, with slight tympanites. The pulse was 100; temperature, 99°; and there was a degree of mental and nervous irritation amounting to hypochondria.

The pain was mitigated by hot fomentations and anodynes, and was followed on the second day by a copious discharge of mucous casts from the bowels, after which there was relief of the symptoms.

On examination of the casts they were found to consist of ribbons, patches, and shreds of white pseudomembrane, having a resemblance to the patches detached from the fauces in cases of diphtheria. They were grayish white, smooth, varying in thickness from that of tissue-paper to blotting-paper. There were ribbons from one-half to one inch wide to two feet in length, some being rolled up like cocoons, others coiled up in masses which readily unfolded when floated in water. Other specimens were shreds and patches of varying sizes and forms. Examined by the microscope, no traces of organization were found. When tested with reagents they did not give the reactions of albumen or fibrin, but seemed to be mucous in character.

The quantity discharged varies from a mere trace to an ounce or more, with each discharge, and since my observation began there have been but few discharges that have been free from mucous. Occasionally, after a paroxysm, in addition to the casts, there will be found mingled with them masses of a gelatinous, amber-colored exudate, in quantity amounting to one or two fluid ounces. The present condition of the patient appears to be that of profound anæmia. The skin has an icteroid hue, the patient is emaciated—especially in the lower extremities—the tongue is pale, large, and constantly coated with white fur, which occasionally has a tinge of yellow in the median line. There is at times slight œdema of the lower extremities, and of the eyelids and face. The bowels are habitually constipated, but are easily moved with two or three grains of calomel, or by enemas of warm water. The appetite is variable, with anorexia during the exacerbations. The mind is clear, but easily disturbed. The patient is constantly disturbed by a hæmic murmur in the cervical blood-vessels. The pulse-rate, during the exacerbations, which continue from two to ten days, rises to about 100, and gradually returns to an average of about 80. Palpitation and cardiac intermissions occur frequently. Valvular disease, with a compensatory hypertrophy, has been suspected, but not accurately determined. The border of the liver does not appear below the ribs. The spleen is not perceptibly enlarged. The urine is clear, abundant, and free from albumen and glucose. The patient sleeps fairly well, and without the assistance of anodynes, excepting at the culmination of his attack. The fæces, when brought away by a laxative or enema, are frequently composed of hardened masses of the size of marbles—not unlike the droppings of sheep—in which case the color is darker than usual. The distinctive feature in the complexus of symptoms present in this case appears to be the condition of the intestines, which, however, has not within my observation presented the evidences of an acute inflammatory process. During the height of the exacerbations, there is but very slight tenderness on pressure about the abdomen.

The disease is non-febrile; the temperature is more frequently sub-normal than otherwise. The hydremia appears to be the result of failure of the powers of assimilation.

During the past summer the patient improved markedly in his general health; his flesh and strength returned, and no paroxysms have occurred. Nevertheless, occasional casts have been discharged, showing that the disorder, though latent, still exists.

ANTIPYRIN IN ACUTE AND PAINFUL EYE AFFECTIONS.

Dr. B. J. Wetherby, Arlington, Kan., reports the following case: "Mrs. O——, aged about forty, married, came to me, January 1, 1888, for treatment for what she termed 'a sore eye.' On examination I found intense conjunctivitis of the right eye, with considerable trachoma. There was intense photophobia and lachrymation; and the patient stated that every day, at irregular hours, pain would begin in the eye and extend from there to the head and neck, gradually becoming so intense that she was obliged to go to bed. The pain always became greater toward evening, and was so severe as to prevent her sleeping until near morning. The patient assured me that this state of things had persisted for over a month, and that she had not had a continuous night's sleep in that time. I immediately began the usual treatment, with the result of precipitating the attack of headache as well as of prolonging it, and this same unhappy result was produced three times. At this time I noticed Professor Ryerson's article in The Medical Record on the use of 'Antipyrin in Acute and Painful Affections of the Eye,' and resolved to try this remedy. Accordingly I gave my patient six powders, of fifteen grains each, instructing her to take one on going home and immediately to lie down—the powder to be repeated in two hours if necessary. She did as directed, and found no need to use a second powder. The effect was 'almost magical,' and at eight o'clock the patient went to sleep and slept soundly till the next morning, when she awoke feeling better, as she expressed it, than she had for weeks. She took one powder after each of the two following applications, with the same happy result; and since then she says she has been entirely free from pain, except a transient smarting following each application to the lids. I think the antipyrin had a controlling action on the inflammation, since the eye has improved more rapidly than any other eye I ever treated which was similarly affected."

A CASE OF TYPHOID FEVER WITH SOME PECULIAR FEATURES.

Dr. L. B. Dawley, of Binghamton, N. Y., writes: "The following case presents some unusual features which, I think, render it of sufficient interest to justify this report. The patient was a lad, seven years of age, in whom all the prodromal symptoms of typhoid fever were developed in the usual way. The temperature rose rapidly, and attained a height of 108° F., at which point it remained for two weeks, with at no time a reduction of to exceed one degree. At the end of the second week pneumonia developed, and subcrepitant râles were heard over both lungs. At the beginning of the third week complete aphonia took place, and he was unable to articulate a single word. During the remaining time of the fever, which lasted twenty-one days in all, and for three weeks of convalescence, he did not speak a word. After the application of electricity and under the stimulus of constant encouragement he spoke the word 'ma.' He learned to speak as the child does, only it came to him more rapidly. It seemed difficult for him to get the sound of the vowels. Another feature of the case, and it may seem incredible, was the large amount of nourishment taken. From the development of the fever milk and beef-tea were given, and in the second week he had raw eggs in his milk. He had one and one-half pound of the round of the beef made into tea in the most approved way. This amount of beef-tea and two quarts of milk were taken by him each twenty-four hours, and in the second week, in connection with the above, he took a fresh egg beaten in a glass of milk four times a day. Never for one moment did the stomach go back on this regimen.

"I never saw a more severe case that recovered. The two characteristic features of the case were the complete loss of voice and the large amount of nourishment taken. The patient never lost his reason or his hearing. When asked a question, to be answered by yes or no, he would raise his hand or not, as requested.

"I do not think that typhoid fever is of as frequent occurrence in children under eight years of age as it is in adults. I am fully convinced in my own mind that the disease is not contagious, but that it comes from decaying matter, either animal or vegetable. The house in which this patient lived had previously been occupied by people who evidently did not believe that 'cleanliness is next to godliness.' The present incumbents have had the premises thoroughly renovated, and I think the disease can be attributed to the filth. After an experience of nine years I have come to the conclusion that it is almost impossible to abort the disease, at least as late as the beginning of the second week, whatever plan of treatment may be adopted."

THE TREATMENT OF DIPHTHERIA.

Dr. F. J. T. Fisher, of Elmhurst, Ill., writes: "I have read with much pleasure Dr. Baruch's 'Therapeutic Memoranda on Diphtheria,' in your issue of December 24, 1887. I have now, for several years, pursued substantially the same treatment. I add, however, a little chlorate of potash to the tincture of iron solution, and I dissolve the corrosive sublimate in a little muriatic acid, and add this directly to the above, making only one solution instead of two; and then I order a teaspoonful of this solution to be taken every half-hour, instead of every hour, as Dr. Baruch directs. In the twenty-four hours my patients get about the same quantity that Dr. Baruch prescribes—my solution being only half as strong as his.

"To adults, however, I have, in severe cases, given in the twenty-four hours as much as one and one-fourth grain of the corrosive sublimate, instead of three-fourths of a grain, the quantity apparently not exceeded by Dr. Baruch. Of the turpentine I give about the same quantity, but instead of one I give it in three doses. When the turpentine is given the other medicine is for two hours discontinued.

"It is very rarely the case that I have to stop either the corrosive sublimate or the turpentine. I have treated between forty and sixty cases in this way, with comparatively few deaths, and these few may in great part be fairly attributed to their not receiving treatment soon enough. The diphtheritic membrane is by these means usually dissolved in from four to seven days.

"If Dr. Baruch's article had been written ten years ago, it would have saved me a great deal of worry and anxiety."

PROTECTING THE PERINEUM.

Dr. W. V. M. Taylor, of M'Keesport, Pa., sends the following communication: "I find, in looking over the literature of the past few years, much written on the subject of operation for lacerated perineum, but very little concerning the prevention of this accident. Up to within the past few years I believed that rupture of the perineum was of almost necessary occurrence in primiparæ, and no methods of supporting the perineum seemed to be of any use in preventing the accident. I do not support the perineum, in the sense of making forcible pressure against it and the advancing head, but I endeavor to prevent laceration by placing the thumb and forefinger, and, in some cases, the points of all the fingers behind the anus, at or near the tip of the coccyx, and pressing against the brow of the child, pushing it toward the pubes. The other hand supports the head in order to prevent its too rapid descent. The advantages of this method are: 1. The accoucheur has complete control of the labor, and there is no possibility of injury to the mother or child. 2. By maintaining the perineum on a gentle continuous tension, dilatation is much more easily effected than when there is an alternation of extreme tension and complete relaxation. 3. This is the only direct way of helping the uterus, 'pushing around a corner,' as Dr. Landis expresses it. 4. By being doubled upon itself from behind forward the perineum is rendered more elastic. 5. This is a very great assistance in forceps-operations. The head is steadied with the forceps held in the left hand, and, when the perineum is well on the stretch, the brow is to be caught with the fingers of the other hand in the manner described, and the head is then pushed out with as much safety to the integrity of the perineum as in an ordinary labor. These are great advantages over the method with the finger in the rectum. I would earnestly ask the profession to give this method a fair trial, feeling that the results obtained will be most gratifying."

A CASE OF SUPERFECUNDATION.

Dr. R. T. Edwards, of Vicksburg, Miss., writes: "In your issue of January 7th, there is a report from the *Medical and Surgical Reporter* of 'Twins; one Black, and one White,' by Dr. Newton Hill, of Pickensville, Ala. A similar case occurred in this State that was explained by the mother to an inquiring physician. She had been separated for a month or more from her husband, a black man. While she was engaged in picking cotton one day, a young white man approached her in the cotton-field, and she yielded to his requests and they held sexual congress. That night her husband returned, a reconciliation followed, and she submitted to *his* rights as husband. Nine months afterward she was delivered of twins, one black and one white."

TWO CASES OF FOREIGN BODIES.

Dr. E. J. Jones, of Oak Hill, O., reports the following cases: "Mr. J——, being fond of shooting squirrels, one day made several dozen rifle-balls and placed them in a small box where he usually kept them. After eating his dinner, he was preparing to go to look for squirrels, but the rifle-balls could not be found in the box. After searching in vain for the balls he abandoned his purpose. The following day his three-year-old boy passed, with the fecal evacuations, forty-two rifle-balls. The child had shown no signs of sickness.

"The following case also occurred in the same neighborhood. A two-year-old girl had been noticed picking at the nose (which was slightly swollen) for several days. One day she forcibly sneezed, ejecting from the nostril a large white bean, which had growing from it a young sprout about half an inch long. The bean had undoubtedly sprouted in the nostril, as there were no sprouted beans about the house."

Pure Terebene in the Treatment of the Advanced Stage of Uterine Cancer.—Attention has been called to the value of pure terebene in the treatment of advanced cases of cancer of the uterus. The vagina is first injected with a small quantity of a strong disinfecting solution (permanganate of potash or chlorine water), and washed out with a copious supply of tepid water. Then plugs of cotton-wool, saturated with a mixture of equal parts of terebene and olive or almond oil, are placed in contact with the ulcerated surfaces, and maintained in apposition with a large plug of wool. This dressing only needs to be removed every second or third day. If care be taken not to make the plugs too voluminous, no inconvenience will be felt from their pressure.—*The Medical Press*, December 7, 1887.

Œdema of the New-born and Phlegmasia Alba Dolens.—At a recent meeting of the Academy of Medicine of Paris, Dr. Dumas spoke upon the probable identity of œdema of the new-born and phlegmasia alba dolens. He thought the former should not be confounded with sclerema, for it is characterized by the infiltration of serum into the subcutaneous cellular tissue and into all the cellular interstices of the affected parts. On the contrary, this œdema should be regarded as a symptom of phlegmasia. Treatment should consist in the employment of heat in the form of the *couveuse* of Tarnier. He warns against manipulation of the affected parts, still recommended by many, as it tends to the formation of emboli.—*Le Progrès Médical.*

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from February 5 to February 11, 1888.

JANEWAY, JOHN H., Major and Surgeon. Detailed as member of the Army Retiring Board in San Francisco, Cal., convened by S. O. 168, A. G. O., July 22, 1886. S. O. 28, A. G. O., February 4, 1888.

HOPKINS, WILLIAM E., Captain and Assistant Surgeon. Detailed as member of the Army Retiring Board in San Francisco, Cal., convened by S. O. 168, A. G. O., July 22, 1886. S. O. 28, A. G. O., February 4, 1888.

JARVIS, NATHAN S., First Lieutenant and Assistant Surgeon. Ordered from Fort Lewis, Col., to Fort Leavenworth, Kan. S. O. 30, A. G. O., February 7, 1888.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 11, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	9	1
Scarlet fever	161	24
Cerebro-spinal meningitis	1	1
Measles	47	5
Diphtheria	183	55
Small-pox	7	1
Yellow fever	0	0
Cholera	0	0

PHTHISIS CAUSED BY A HYPODERMIC NEEDLE.—Erlenmeyer, in his work on the opium habit, records a case in which fatal tubercular poisoning was believed to have been produced by the hypodermic needle. A physician, aged thirty-eight, who had been accustomed to use the same needle for himself and a tuberculous patient, died suddenly, and at the autopsy a tuberculosis, strictly localized to the peritoneum, was found.

THE RELATION OF CONVULSIONS TO ARTERIAL TENSION.—In his Croonian Lectures Dr. Broadbent observed that convulsions were sometimes associated with increased arterial tension, and suggested that uræmic convulsions were largely due to the high tension. In support of this he adduced the fact that blood-letting has often a remarkable effect in cutting such convulsions short. Dr. Ringer has propounded a theory of at least equal plausibility to account for this effect of blood-letting, namely, that by suddenly reducing the bulk of fluid in the vascular system, it leads to a rapid flow of watery fluid from the tissues to restore the balance, and that the beneficial effect is due to this dilution of the poisonous matter in the blood. However this may be, we ought not to lose sight of Dr. Broadbent's other observation, that ordinary epilepsy is usually associated with low arterial tension.—*British Medical Journal.*

THERAPEUTICS OF CHRONIC ARTICULAR RHEUMATISM.—At the Sixtieth Congress of German Naturalists and Physicians, at Wiesbaden, Ziemssen read a paper on this subject, in which he made the following points: 1. Chronic articular rheumatism is a general disease; though at times it may be quite localized, yet there exists no surety that the disease may not again become general. 2. Therefore treatment must at the outset be general. 3. The disease is often so inveterate at special points that a combined local and general treatment is necessary. 4. In the affected joints are almost always found separate spots with a distinct border, which can be accurately marked out by touch and by the sensation of pain on the part of the patient. 5. The pain is often complicated in such a way that either the diagnosis is doubtful, as in arthritis, syphilis, gonorrhœa, and after injury; or that the pains belong to another kind of rheumatism, for example, muscular rheumatism, rheumatic neuralgia, sciatica, and heart-disease. 6. Such complications are to be dealt with at the same time with the general disease. 7. Treatment is not to cease before complete cure is obtained, otherwise a relapse would not be surprising. The rheumatic diathesis itself is the uncured disease. Treatment is general and local. General treatment consists in the regulation of nutrition, in an out-door life, in promoting increased activity of the skin, in the use of warm and hot baths, in wearing woollen clothing, and a regulation of the whole style of living; and finally, in large doses of salicylate of soda. This remedy is, when rightly used, very well borne, has no contraindications, and acts so specifically that when failure results from its use an error in diagnosis is to be inferred. The local treatment, which is to be employed simultaneously with the general treatment, consists in the use of massage, combined with warm douches while the patient is in a warm bath. By means of tubing and a bellows, a stream of water, under a pressure of three to seven atmospheres, is projected against the affected part, which at the same time is manipulated by a skilled attendant. This treatment excels all other local measures. In other rheumatic affections, such as muscular rheumatism and sciatica, this method of treatment by douche is very efficient.—*Medical and Surgical Reporter*, December 3, 1887.

THE FREQUENCY OF STERILITY IN THE MALE.—According to Kehrer, the cause of childlessness in many marriages is to be sought much oftener on the side of the man than has heretofore been the custom. This statement is based upon an investigation of the semen. Kehrer has, up to the present time, instituted this investigation in ninety-six cases. In 3.12 per cent. there existed inability to copulate; in such cases there had always been preceding masturbation. The men suffered from frequent pollutions, or the ejaculations were premature, so that the penis was not inserted into the vagina. In these cases impregnation may result, if before the attempt at coitus a speculum be introduced into the vagina. In several cases conception was obtained by this manœuvre. In 31.21 per cent. azoöspermia existed. In most of these cases gonorrhœa, with unilateral or bilateral orchitis, had preceded. The author lays particular stress upon occlusion of the ejaculatory duct through gonorrhœal prostatitis. But azoöspermia was also found where no disease of the sexual organs had occurred, and where nothing abnormal in the genital organs could be demonstrated. Oligospermia was demonstrated in 11.45 per cent. Several times masturbation was confessed, or else gonorrhœa with orchitis, or syphilis, had preceded. But, in addition, the author thinks that the diseases of the female sexual apparatus which may condition sterility are considered too numerous. Principally, catarrhs under certain circumstances lead to sterility, and Kehrer also thinks that bacteria may exert a destructive influence upon the ovules. It is a question whether these bacteria produce inflammation of the mucous membrane, or only find in the latter suitable conditions for further development.—*The Medical and Surgical Reporter*, December 10, 1887.

STRYCHNIA AS A HEART STIMULANT.—In "St. Bartholomew's Hospital Reports," Dr. Habershon writes on the use of strychnia by hypodermic injections in cases of heart failure. In this paper Dr. Habershon discusses the *modus operandi* and effects of various heart tonics, such as digitalis, alcohol, ether, and ammonia, and concludes that none of them are so useful as strychnia in cases in which not only the heart-muscle, but also the nerves which promote and control its activity are exhausted. The order of excellence seems to be digitalis for a prolonged effect ; and ammonia, or ether and alcohol, for a more rapid but less lasting one. It is somewhat surprising to find the statement that Dr. Habershon has never found ammonia "to act where brandy and ether have not succeeded." This sentence is not easy to analyze, but we incline to the opinion that if ammonia be used by intravenous injection, it will be found capable of arousing the vaso motor and respiratory centres to a temporary activity when nothing else will. The principal value of Dr. Habershon's paper is in calling attention to the influence on the heart by hypodermic injections of from $\frac{1}{60}$ to $\frac{1}{30}$ of a grain of strychnia. He cites cases of disease of the mitral and aortic valve, and of pneumonia which had advanced to a state of cyanosis, with weak and rapid pulse, and hurried or Cheyne-Stokes respiration, in which the use of strychnia seemed to cause the tide of life to turn back, and recovery ultimately took place. These cases may be regarded as establishing the opinion which he has formed of the great benefit to be derived from the hypodermic use of this drug in conditions of exhausted heart-muscle, accompanied by exhaustion of the nerves which supply the heart. Dr. Habershon suggests that the most convenient solution of strychnia for hypodermic use consists of one grain in fifty minims of water. We would suggest that it would probably be easier to regulate the dose if the solution were only about half as strong as this, consisting of one grain of strychnia to one hundred and twenty minims (two fluid drachms) of water. Two minims of such a solution would contain $\frac{1}{60}$ of a grain of strychnia, and four minims $\frac{1}{30}$ of a grain.—*The Medical and Surgical Reporter*, December 10, 1887.

Penetrating Wounds of the Gravid Uterus.—At the Société de Chirurgie M. Schwartz read a paper on penetrating wound of the gravid uterus. A young woman, aged twenty-two, *enceinte* six months, received a stab of a knife in the abdomen. The intestines protruded through the wound as well as the two feet of the fœtus, and a quantity of blood was lost. However, as the condition of the patient was pretty fair, M. Schwartz decided on interfering. The wound in the uterus was enlarged and a dead fœtus was removed. The incision was sutured and antiseptic dressing applied. On the third day peritonitis set in, and death took place a few hours subsequently. The author asked his colleagues what other line of conduct should he have followed? M. Berger replied that there were several kinds of uterine wounds. He cited one case in which the patient made a good recovery. M. Guéniot was of opinion that the operation should be made as quickly as possible in such cases. Transverse wounds unite much more quickly than longitudinal. In the Cæsarean section the incision is generally, if not always, longitudinal, but it would be much preferable to make it transverse. M. Marchaud thought that Porro's operation was the best.—*The Medical Press.*

Non union of Bone during Pregnancy.—M. Padieu, of Amiens, describes the case of a woman who fractured the tibia and fibula of one leg on January 4, 1886. The fracture was put up in a many-tailed bandage. At the end of a month it was found that there was still movement between the fragments, and a fortnight later there was no further progress. At the end of three months and a half, M. Padieu put the patient on crutches in order to hasten consolidation. Union was still delayed ; then he began to suspect pregnancy. The patient admitted that her period had not recurred since December 26th, nine days before the accident. The abdomen and pelvis were examined, and M. Padieu's suspicions were confirmed. Delivery occurred on September 28th, and a well-nourished live child was born. Ten days after delivery the patient noticed that her leg felt much stronger than it had ever been since the accident. At the end of a month union was perfect. The *Archives de Tocologie* observes that this case was remarkably clear and authentic. The physiologist and obstetrician may advantageously consider the facts of the case. The delay in ossification of the callus must surely be due to some cause more subtle than mere debility. Indeed, the amount of debility involved in an average pregnancy is often very trifling. Severe abdominal operations, even double ovariotomy, have been tolerated with impunity during gestation, the wounds healing and delivery occurring at term. The theory that lime-salts are used up during pregnancy for the benefit of the fœtus, and to the prejudice of the callus, will hardly bear strict examination, or at least it demands strong proof that local nutrition in the parent is palpably affected.—*Maryland Medical Journal.*

The Etiology of Typhoid Fever.—Dr. Quine's views on typhoid fever are summarized by the *Philadelphia Medical Times* as follows : 1. The exciting cause is a specific, poisonous, microscopical germ ; and under no circumstances can typhoid fever originate from the influence of filth alone, unless that filth contains the specific germ. 2. The germ is practically immortal. Typhoid dejecta may be imprisoned in an old cesspool or unused sewer-pipe for half a century, and then, after a lapse of this period, when this cesspool or unused sewer-pipe is opened, the typhoid germ literally springs into existence with frightful malignancy, and a few whiffs from the accumulations in the cesspool will be sufficient to cause it. The germ does not die spontaneously ; it can be killed. 3. The germ multiplies in the human body, and an inconceivably minute quantity of this germ introduced into the human system makes the individual susceptible to the disease. An individual having a dozen movements of the bowels a day, each dejection contains germs enough to impart it to a hundred or thousand individuals ; so there is clear proof that the germ multiplies in the human body. 4. The specific germ of typhoid fever is eliminated by the bowels. A person may inhale the breath of a typhoid patient without danger of contracting the malady. He may lie on the same bed throughout the entire course of the disease without danger to himself, unless in some way the intestinal dejections or emanations have found their way into his own circulation. The poison is not contained in the urine, nor in the emanations from the surface of the body, but simply in the fæcal discharges. 5. The fresh germ itself is innocuous—non-poisonous. Some investigators in Germany have engaged in the unpleasantry of drinking down fresh typhoid discharges, and have demonstrated with absolute certainty that these fresh discharges are innocuous. 6. In order for the discharges to acquire activity or virulency, they must be exposed to atmospheric air ; hence old typhoid putrid discharges undergo partial decomposition. 7. The poison of typhoid fever is almost invariably swallowed in drinking from impregnated water-supplies. It is sometimes swallowed in the food. In rare, exceptional cases, typhoid germs may be diffused through the atmosphere, and find their way into the human body through the lungs. 8. A patient may have the disease two or three times ; one attack does not protect him from subsequent attacks.

Simplified Antisepsis in Obstetrics.—Dr. W. Bolselmann, of Berlin, has formulated the following propositions for the guidance of obstetricians. It will be observed that his chief aim is to do away with the unnecessarily cumbersome antiseptic apparatus of some authors and to substitute therefor simple and yet efficient measures for the prevention of infection. It is to be remembered, in the first place, that the healthy puerpera is aseptic. The danger of infection comes to her from without.

There being no infectious material in her genital tract, the latter requires no disinfection ; for there can be no disinfection in the absence of infectious material. The hands and instruments of the accoucheur are probable sources of infection. These must, therefore, be thoroughly disinfected before coming in contact with the woman's genital tract. In order to avoid introducing infectious material which may adhere to the body of the patient, the external organs must be thoroughly cleansed with soap and water, and then washed with an antiseptic solution. The vaginal canal should also be washed out once with an antiseptic solution before an examination is made. The most practical disinfectants are, solution of mercuric bichloride, 1–5,000, for the hands of the accoucheur and the genitals of the patient ; and a three per cent. solution of carbolic acid for instruments. No unnecessary examinations of the patient's genital tract should be made. After the cleansing and antiseptic vaginal douche above mentioned, vaginal and uterine injections are needless, and often harmful, and should not be used unless there is evidence of septic infection, as manifested by fever or offensive discharge. Intra-uterine douches should not be practised unless there is evidence of the presence of infective material within the uterine cavity.—*Berliner Klinische Wochenschrift.*

THE QUESTION OF OPERATIVE INTERFERENCE IN HYDATID TUMORS.—A discussion on this subject was had at the last meeting of the London Clinical Society. *The Medical Press*, December 14, 1887, summarizes the outcome of the debate as follows: The general opinion was evidently in favor of withdrawing a portion of the contents by aspiration as a tentative measure, but experience varied greatly as to the result which might be hoped for from this procedure, in so far as a cure of the disease was concerned. Should the cyst refill, the best course is evidently to cut down upon it, and, by stitching or otherwise fixing it to the edges of the abdominal wound, secure adhesion and thus obviate the danger of any of the fluid escaping into the abdominal cavity. Within a few hours, or at most within a few days, the cyst can be opened and the cyst wall removed with comparative safety. Should an abscess have formed, some surgeons are of the opinion that it is preferable to empty it at once. Hydatid cysts are by no means rare, but few surgeons obtain a sufficient number of cases requiring operation to enable them to form a reliable opinion as to the relative merits of the several procedures. Dr. Broadbent alluded to a point of some practical importance, viz., that where the fluid was clear and not filled with daughter-cysts, recurrence was rare after simple aspiration, and *vice versa.*

THE TREATMENT OF INTESTINAL PERFORATION PRODUCED BY EXTERNAL INJURY.—At a recent meeting of the Société de Chirurgie, a long debate ensued on the treatment of perforation of the intestines produced by external wounds. Two opinions had their partisans. One was that when the penetration was fully diagnosed the abdomen should be opened, the intestine sought for, and the wound closed to prevent fæcal matter from escaping into the peritoneum ; while the other was in favor of systematic abstention. M. Reclus said he would be inclined to the latter, or conservative, treatment, although he would not deny that sometimes the most heroic method may be called for. The diagnosis of traumatic perforation is very difficult. The tissues of the abdominal wall divided by the instrument close up again, and it is impossible, or nearly so, to say what damage has been done to the internal viscera. Sometimes it has been observed that the knife, or ball, just struck between the folds and thus left the intestines untouched. Such cases have been observed in the proportion of four per cent. As to the immediate signs of perforation, they were obscure and often wanting, and generally it is only when peritonitis supervenes that the fact is discovered. In penetrating wounds of the stomach hæmatemesis may be observed, whereas hemorrhage from the intestines through the rectum is not often witnessed *au début.* In any case, penetration is not necessarily fatal when treated without operation. Statistics have shown that although great damage may be done the patient recovers, and the reason may be found in the fact that stercoral matter is not always present in the intestine, as frequently the person has not eaten for several hours. In conclusion, M. Reclus indicated the line of treatment he would follow in penetrating wounds of the intestine. The patient is placed in a position of absolute repose, the external wound washed by an antiseptic solution and hermetically sealed by iodoformized collodion ; the abdomen is covered with a good layer of cotton and firmly bandaged with a flannel roller, as after ovariotomy. Subcutaneous injections of a third of a grain of morphia are given, and feed the patient on exceedingly small quantities of milk, beef-tea, or wine ; thirst will be combated by ice in the mouth. If, in spite of all, peritonitis is observed, laparotomy remains the only resource.—*The Provincial Medical Journal*, January 2, 1888.

THE TREATMENT OF HEADACHES BY NITRO-GLYCERINE.—Dr. Trusevich has published a series of observations on the effect of nitro-glycerine on headaches. He adopts in the main the classification of headaches made by Dr. Day. The preparation generally used was the one per cent. alcoholic solution, though in a very obstinate case the ten per cent. solution was used, two drops being first given, and after an interval of two minutes three more (*The Lancet*). The result of this heroic medication was that the patient, a girl of fifteen, became pallid, and her pulse very weak ; however, a little water and some smelling-salts quickly revived her, and she was none the worse. The nitro-glycerine had no effect on the headache, which was of a persistent character, and was probably due to some organic lesion, perhaps an affection of the cranial bones. As a rule, two or three one-drop or two-drop doses of the one per cent. solution, placed on the tongue at intervals of a very few minutes, sufficed to arrest the headache. The conclusion arrived at was that all cases which depend entirely, or almost entirely, on a vaso-constrictor neurosis are immediately curable by nitro-glycerine. In cases where the cerebral anæmia is partly due to deficiency or poorness of blood, milk, iron, arsenic, quinine, and other tonic remedies are, of course, required in addition to the nitro-glycerine. The chief indications for the successful treatment of migraine by nitro-glycerine are pallor of the face and a paroxysmal character of the pains, also their augmentation on pressure of the carotids, and their diminution when the head is lowered. In "nervo-hyperæmic headaches" nitro-glycerine is useful, but it only acts indirectly by dilating the vessels in other parts of the system, and thus relieving the congestion in the cerebral vessels. It is positively injurious in headaches depending on passive hyperæmia. As a rule, he thinks that if nitro-glycerine fails to relieve, the prognosis is probably bad, as the pain is generally due to some organic lesion, such as thickening of the fibrous coverings following chronic alcoholism or syphilis, or to some osteophyte caused by periostitis, or, lastly, to morbid changes in the cranial bones. In some headaches of rheumatic origin nitro-glycerine appears to have some effect, but Dr. Trusevich thinks that in others massage would probably be more beneficial. Where headaches are due to heart, lung, or to hepatic disease, which causes passive congestion in the cerebral vessels, nitro-glycerine cannot be expected to do much good.

CORRECTION.—HYDRONAPHTHOL IN THE TREATMENT OF LUPUS.—Dr. Henry G. Piffard writes: "In report of my 'Note on the Treatment of Lupus,' your correspondent makes me say that of six cases treated, *all relapsed but one.* It should read *only one* relapsed."

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 8. NEW YORK, FEBRUARY 25, 1888 **Whole No. 903**

Original Articles.

REPORT OF CASES OF INTESTINAL OBSTRUCTION TREATED BY LAPAROTOMY.[1]

By WILLIAM T. BULL, M.D.,

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It will be generally acknowledged that the treatment of intestinal obstruction is at present a very puzzling problem. Rarely do cases that present grave symptoms recover with purely medical treatment, and when they do, there is often much doubt as to the correctness of the diagnosis. When surgical treatment is adopted, the majority die. Schramm's collection of one hundred and ninety cases,[2] published in 1883, showed a mortality of 64.2 per cent. And time, which has perfected details in the operative technique and recorded an improved rate of success for laparotomy in other conditions, has not shown any bettering of the statistics of this operation for obstruction. Dr. B. Farquhar Curtis, who has just completed a collection of three hundred and fifty cases, tells me that the rate of mortality is sixty-eight per cent. This increasing rate of mortality would make it appear at first sight as if surgery were not likely to attain great success in this field. And yet I am convinced, to the contrary, that the operative treatment has not yet had the trial which it deserves, and, furthermore, that the doctrine long ago laid down by surgical writers, of early operative interference, has not yet been followed in practice by the profession at large. One has but to note the records of cases appearing frequently in the journals in order to be convinced of this. And it is interesting to note that, in recent discussions of this subject before the surgical societies of Berlin and Paris, much thought has been given to the proper procedure in cases where the cause of the obstruction is obscured by tympanitic distention of the bowels, a condition that develops gradually, and becomes of such extent as to be baffling to the surgeon only in the later stages of the disease. It may be safely averred that much of the perplexity which besets the operator in cases of late operation. much of the danger attending the patient, and a great deal of the doubt as to the proper procedure, and uncertainty as to the result, would be swept away if we would adopt the plan of early operative interference.

But it is not my purpose to discuss this point, on which I am sure most of you would agree with me, but rather to illustrate the method of operative treatment by narrating those cases which have fallen under my own observation. Of five cases three have been of an acute character. The first one, but for the distance from town, would have doubtless been operated on earlier. It is as follows:

CASE I. *Intestinal obstruction by a peritoneal band; peritonitis; laparotomy on the eleventh day; death.*—Miss F——, aged thirty, who had been previously in good health, living on a farm near Summit, N. J., and doing some household work, was seized with colicky pains in the epigastrium, July 17, 1886. After a loose passage the pain lessened. Next day it recurred, and vomiting began, which became fecal in character after a few hours, and continued. Twice or three times in each twenty-four hours one or two pints of yellow, fluid fæces were ejected. Pain was controlled by small doses of morphine. It was not severe. No cathartics were given, and no nourishment except what the stomach would hold. On the fourth day enemata of water were administered, and one or two given daily, not exceeding a quart in quantity. Twice small fecal masses were passed, but no gas. The urine was normal in quantity and appearance. The temperature had not been over 100° F.; the pulse, 100 to 120, not strong; the patient growing weaker every day. The abdomen had not been distended.

This history, unavoidably scanty in details on account of the distance of the patient from her physicians, I obtained from one of them, Dr. W. H. Lawrence, of Summit, who had urged an operation long before the friends would consent. I found the patient, on July 28th, weak from want of nourishment and much dejected; pulse, 120; temperature, 100°; respiration, 30. The abdomen was flaccid, resonant, tender only in the ileo-cæcal region; no tumor was to be felt, and rectal examination was negative. I saw the matter vomited last, and it was undoubtedly liquid fæces—at least a quart in quantity. Laparotomy was performed at once, with the assistance of Dr. B. Farquhar Curtis and Drs. Martin and Lawrence. An incision five inches long, through thin abdominal walls, disclosed the omentum spread out over and concealing the intestines, to which it was lightly adherent and attached to the parietes of the pelvis by several thin bands of recent adhesion. After ligating these the omentum and small intestine presenting, which were highly congested and slightly distended, were pushed upward with sponges so as to expose the cæcum and sigmoid flexure. Neither of these was distended. The finger, passed among the coils of small intestine toward the cæcum, detected a band passing from the right hypochondrium downward into the mass of coiled intestine. This band was drawn into the wound, and, from exploration with the finger, it seemed to be attached above to the parietal peritoneum or to the colon, where it was one inch wide and one-fourth of an inch in thickness. Its length was four inches, and it passed over and compressed one segment of small intestine, to become attached to and encircle another part of the gut about eight inches distant. This loop of eight inches of the gut was deeply congested, empty, and shrivelled; that on the other side of the band moderately distended. Near the intestine the band was the size of a lead-pencil. The accompanying cut (Fig. 1), from Poulet and Bousquet, ("Path. Externe," iii., Fig. 44) is an accurate representation of the condition. On lifting the band, the air rushed in and filled up the loop within it. The band was cut between two ligatures; the parietal, or upper end, dropped, and the intestinal end gently separated from the gut which it encircled. The circumference of the gut before this separation was about that of the index-finger, but its walls appeared healthy. On lifting up the disengaged loop, however, a few drops of fecal matter escaped through a small softened or gangrenous spot one-eighth of an inch in diameter. This was cut out, making a wound an inch long, and parallel to long axis of the gut, which was closed with twelve Lembert sutures. The cavity was carefully washed out with 1 to 10,000 bichloride solution. The operation lasted one hour and forty minutes, and the patient was profoundly depressed by it. The pulse increased to 140 after the cavity was opened, and never diminished in frequency. There was no more vomiting, and no pain. Consciousness was regained in about two hours, and maintained till half an hour before death. The temperature was 97¾° for several hours after operation. Later it rose to 105°, and fell a little. Death occurred about twenty hours after the operation.

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[1] A paper read at the meeting of the Practitioners' Society, New York, February 3, 1888.

[2] Archiv für klin. Chirurgie, xxx., s. 685.

Here was a mechanical condition easily discoverable, and remediable by a short operation, allowed to remain undisturbed for eleven days, while the patient was suffering from inanition and the intestine was being slowly strangled by a band. There was no obscurity of diagnosis; but help came too late. Peritonitis was beginning, as shown by the adhesion of the omentum to intestines and parietes. The manœuvre of wedging back with several sponges the gut presenting in the median line is worthy of note, as it allows the inspection of both sigmoid and cæcal regions, unless the tympanites be very great. The easy detection of a band by the finger among the coils of gut is also of interest. The gentlest manipulation of this band and the intestine it embraced did not prevent a softened spot from giving way and allowing the escape of fæces—an event which would not have happened had the operation been possible three or four days earlier.

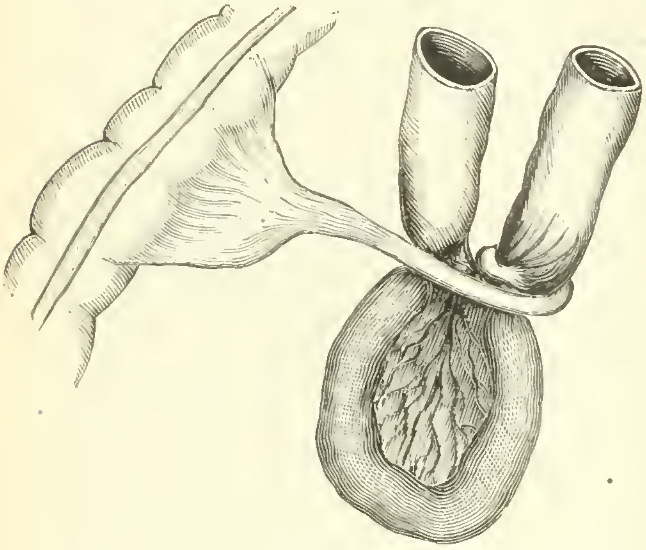

Fig. 1.

Case II. *Acute intestinal obstruction caused by peritoneal band; laparotomy on the sixth day; recovery.*—Mrs. V——, aged twenty-six, married, but without children, had suffered from perimetritis, or some pelvic inflammation, two years before present illness. On November 5, 1887, after a hearty lunch, she was seized with severe cramps in the abdomen, and vomited the contents of the stomach shortly afterward. The pain and vomiting continued, without fever, and a pulse of 100, and on the third day the abdomen was slightly swollen. Pain was referred to the lower part. Enemata were given every day for five days, twice, copious in quantity (two quarts), and in the knee elbow position, but only small particles of fæces and no gas were evacuated. Treatment was morphine, liquid diet, and rectal enemata. On November 10th, the fifth day of the attack, I saw the patient, with Dr. George T. Harrison. The pulse was 100; temperature, 99°. Tongue was moist, slightly furred. She complained of great thirst and general abdominal pain, and vomited a brownish mucus. Urination was normal. The abdomen was slightly swollen, nowhere tender, and presented no tumor. Nothing in rectum. Treatment continued, with the addition of irrigation of the stomach. Twenty-four hours later, November 11th, the sixth day of the attack, the condition was unchanged, and laparotomy was performed, with the assistance of Dr. Harrison, Dr. G. B. Phelps, Jr., and Dr. Claiborne. On opening the abdomen by an incision four inches long, a small quantity of odorless, bloody serum escaped, and moderately distended coils of small intestine presented themselves, deeply congested, but free from exudation. The finger, passed into the cæcal and sigmoid-flexure region, discovered no band, tumor, or stricture, but a loop of empty gut was felt and brought to the surface after enlarging the wound to a length of six inches and pushing the distended intestine aside with sponges. The empty gut was the cæcum and about two inches of the ileum. By gentle traction I followed this empty gut into the depth of the cavity, where, to the finger, it seemed to pass behind the mesentery or under a false ligament.

It was impossible to see this point, but in manipulating the sponges and retractors, in order to bring it nearer, there came into view the appendix, with a slender band of tissue stretching from its extremity to a loop of small intestine. This band was of the size of a knitting-needle, an inch in length, and was red and raw, as if torn from a large mass. It was cut between two catgut ligatures. The intestine exposed to view was then drawn out farther, till three inches of cæcum and ascending colon, and about four inches of ileum could be seen. At a point four inches from the ileo cæcal valve there was a circular groove about its circumference, where the peritoneum had lost its glistening character and was opaque. This was about one-sixteenth of an inch wide. Above it the gut was deeply congested and distended, half as large as the wrist; below it the gut was of the size of the thumb and not congested, but along its mesenteric border were one or two places which appeared to have been the seat of ruptured adhesions. There was no thickening of the coats of the intestine, and during the investigation the empty part became a little congested and the contents passed freely by the circular mark described and into the cæcum. Dr. Harrison and I concluded that this band encountered at first had constricted the small intestine at the situation of the circular marking, and that the manipulation of the gut had ruptured some adhesions and released the gut *before* the band was divided. We did not think it prudent to remove the distended intestine from the abdomen, nor to open it, and, after washing out the cavity with warm 1 to 10,000 bichloride solution, closed the wound.

After operation patient vomited but once. The pulse was never above 90 or 100. The temperature was 99° or 100° at night for the first forty-eight hours. Liquid nourishment was retained, and a copious fecal evacuation occurred after a bottle of citrate of magnesia and an oxgall enema on the morning of the third day after operation. The general condition rapidly improved, but complete recovery was delayed by an abscess in the abdominal wall. While recovery ensued without an untoward symptom in this case, the patient would have had better chances from an earlier operation, and the symptoms were certainly sufficiently pronounced to warrant it. The chief reason for delay was that the mother of the patient, her only living parent, was at a distance from the city. She was telegraphed for, but, when no improvement was noted in the first twenty-four hours that I observed her, the operation was done without waiting for her arrival. The band in this case was evidently soft and easily torn, and, had not the grooving of the intestine been seen, the success of the operation would have been unexplained. The easy recognition of the empty intestine suggests a search for such a condition as an important step in the technique.

Case III. *Acute obstruction in cancer of the sigmoid flexure; laparotomy and artificial anus on the seventh day; recovery.*—Mrs. S——, aged fifty, was visited, with Dr. F. M. Townsend, March 11, 1886. She had had no serious illness except a series of attacks of intestinal obstruction during the three years previous to the present one. The first was in March, 1884; in 1885 there were two, and one in January of this year. These were characterized by violent colicky pains, with constipation and moderate vomiting, without swelling of the abdomen. The symptoms yielded after the administration of cathartics—the pulv. jalap co. having been given several times by Dr. Townsend in doses of forty grains. The duration of the attacks varied from four to ten days. In the intervals she was well, and relied on the regular use of Hunyadi Janos water to secure daily movements. The passages were never misshapen, nor did they contain blood or mucus. A fibroid tumor of the uterus had existed for two years, and was large enough to nearly fill the pelvis, but occasioned no symptoms. March 5, 1886, the present attack began, like the others, with pain, nausea, and constipation. On the second day there was vomiting, which continued. Calomel, pulv. jalap co., and ol. tiglii, and several copious injections of water were of no avail. On the sixth day, when I saw her, the vomited matters were fecal in odor, and the abdomen was moderately distended. The pulse was rapid; the temperature 100°. The features were slightly pinched, the surface warm, the tongue dry. The abdomen was not tender; no tumor could be felt. Urine normal, but small in quantity. Rectal examination by sound and by finger was negative, except that the presence of the fibroid tumor was made out. An operation was advised, but twenty-four hours elapsed before consent was given. March 12th, the abdomen was opened in the median line by an incision four inches downward from the navel. I exposed the surface of the uterine tumor by pushing back the moderately distended small intestine with sponges. It occupied the greater part of the pelvis, but there was no intestine compressed by it. Cæcum felt natural, but between the centre of the sigmoid flexure and the beginning of the rectum there was a hard annular stricture, half an inch in width, which made a deep circular furrow in the gut. No mesenteric glands could be felt, but the mesentery was fully an inch thick from fatty deposit. The gut above the stricture was but slightly dilated and congested. Although the stricture was undoubtedly cancerous, I could not reasonably entertain the idea of resection. The situation was too low down for suitable manipulation, and the patient too weak for a prolonged operation. A portion of gut, distant only an inch from the stricture, reached to the centre of the incision without tension. It was accordingly fixed in the middle third of the median incision by suturing it with catgut to the peritoneum, after that membrane had been sutured to the skin. The gut was not opened. The general condition of the patient was not desperate; some gas had passed through the stricture during the manipulations, and I thought it wise to allow some hours for adhesions to form. The duration of the operation was one hour, and the general condition was not notably affected by it. Morphine was continued, with nutrient enemata, and a cold-water coil applied. Vomiting occurred only once, the temperature was not over 101°, and the pulse rapidly improved. Ten hours after the operation I punctured the gut and allowed more gas to escape, and twelve hours later several pints of fluid and pasty fæces escaped through the puncture. Following this, food by stomach was given, and recovery was rapid. The wound above and below the artificial anus united primarily; the edges of the anus retracted so as to leave an opening the size of the index-finger, into which the mucous membrane projected. After the patient got out of bed, she ate liberally and took exercise; the movements took place regularly every morning. She gained flesh, and three months after operation was in every way better than for two years past, although she complained much of the annoyance of the artificial opening. A small quantity of fæces passed the stricture, and required an enema every ten days or two weeks for its dislodgement. Six months after operation I saw her again, and found the anus narrowed by a hard tumor of the size of a walnut, which occupied the lower half of its circumference, and projected above the level of the skin and was ulcerating on its surface. The orifice of the anus admitted the tip of the little finger with difficulty, and a second rounded, hard mass could be felt just within its upper edge. The passages were sometimes of the size of a lead-pencil, though the anus had been dilated daily with urethral bougies for several weeks by Dr. Townsend, and cathartics were necessary almost daily in order to get a movement without great efforts. But the general health was excellent. Excision of the growth was recommended, but not consented to till four months later, in January, 1886, ten months from the first operation. In the interval, notwithstanding the increasing difficulty of defecation, owing to the growth of the tumor into the lumen of the anus, its cauterization by arsenic paste, the constant discharge of mucus, and several hemorrhages, the general health and strength was apparently unimpaired. The excision of about four inches of intestine, including the artificial anus and the cancerous stricture, was done twelve months ago, and she has been ever since in better condition than before. There is no sign of recurrence at the present moment, and the patient is eager to have the new artificial anus closed by operation, which I propose to undertake within a month or two, if her good condition continues.

The timely interference in this case rescued the patient from a dangerous situation, and placed her in the best condition for subsequent operation for the removal of the neoplasm. Although that secondary operation was so long deferred, the result seems likely to be satisfactory. Up to the present time nearly two years have been added to her life, and her existence, despite the unnatural anus, has been a contented one. In all cases of malignant stricture requiring operation for obstruction, I believe it preferable to pursue the plan which I adopted in this and the following case, of relieving the obstruction first, by the formation of an artificial anus, and leaving to a later operation the removal of the neoplasm by resection.

CASE IV. *Chronic intestinal obstruction from cancer of sigmoid flexure; laparotomy and artificial anus; recovery.*—August 14, 1886: Mrs. J——, aged sixty, has had no severe illness, and childbirths have been natural. She is well preserved, and of hearty appearance. She has always been of constipated habit, and for several years past has taken laxatives to bring about movements, but has never had any attack of acute obstruction.

Six weeks ago, when constipated, was seized with severe pains in abdomen, with nausea but no vomiting, and since that time had had no movement from the bowels. After copious injections, a few teaspoonfuls of well-formed fecal matter have been passed, but nothing more. Purgatives have caused vomiting. Wind has passed freely. There have been frequent paroxysms of pain, unless suppositories of morphia (gr. j.) and belladonna (gr. ss.) were employed. Two days ago, under ether, an O'Beirne's tube was introduced thirteen inches, and two quarts of water introduced through it. This was followed by a trifling amount of fæces. Her diet has been of fluid character, and rectal injections have been freely used. Her general strength has kept up well; much of the time she has been out of bed, and she has withstood a journey from Asbury Park to-day without marked fatigue.

Pulse, 96; respiration, 18; temperature, 98½.° Tongue clear and moist. The abdomen is slightly distended, but flaccid, and nowhere tender. In the lower iliac and lower lumbar region an indistinct mass of the size of a banana is felt. It is not fixed to the wall of abdomen or pelvis, and percussion over it is normal. After palpation of the abdomen for several minutes, by Dr. A. B. Ball and myself, the peristaltic movement of the intestine could be detected in the umbilical region and on the right side, and the mass felt on the left side changed its shape—and even at one time disappeared. Liver, spleen, and heart normal. Rectal examination negative. Urine is said to be normal in quantity.

Two days later Mrs. J—— was visited by Dr. Janeway, who passed the rectal tube again for me. Three pints of warm water were injected, held a few minutes, and then passed, with the addition of a tablespoonful of flaky fecal matter. It was thought by both Dr. Janeway and Dr. Ball, as well as myself, that the most probable diagnosis was cancerous stricture of the sigmoid flexure, though the possibility of impaction of fæces was admitted, as well as constriction ot the gut from some other cause, such as adhesions and bands. Explorative laparotomy was recommended. Dr. Didama, of Syracuse, had previously expressed a similar opinion. At the urgent request of the family, attempts to effect a movement by injections were continued.

August 23d.—The general condition is about the same. No fever; pulse ranges from 80 to 100. There has been more pain in last two or three days, requiring three or four suppositories per day to overcome it. The diet has been fluid in character, with two or three enemata of "liquid peptonoids" daily. Vomiting only once. Wind has been passed freely, but no sort of injection has produced a movement. A long tube has been twice passed, and two pints of warm water injected; a shorter flexible tube (eight inches) has been introduced every day. Olive-oil, glycerine and water, and soap-suds have been injected in various quantities and held for some hours, but in vain. The greatest amount of fecal matter has been passed in the intervals of the enemata—voluntarily, or after the peptonoids had been introduced. This has never been more in quantity than half a tablespoonful. It seems evident that the fluids pass through the seat of obstruction, and that small amounts of fæces get through at intervals and accumulate in the rectum. Urine is acid, contains no albumen; specific gravity equals 1.014.

August 24th.—Laparotomy was performed, with the advice and assistance of Dr. Douglas Morton, of Louisville, Ky., Dr. B. Farquhar Curtis, and Dr. H. C. Coe. After opening the abdominal cavity by a median incision four inches in length, the hand encountered at once the distended sigmoid flexure, which reached well over to the median line and was as large as one's wrist. Its walls were more rigid and more parchment-like than normal, its serous coat congested, and it was partly concealed by coils of small intestine of normal appearance. On tracing the flexure toward the pelvic cavity a narrow annular constriction was met with close to the beginning of the rectum. The diameter of the gut here was not greater than one inch, the width of the ring of constriction being about one-fourth of an inch. In the mesocolon adjoining was an area of infiltration, one-half by three inches. This could not be seen, although the stricture was brought into view by wedging the small intestine out of the way with sponges. There was a small quantity of clear serum in the pelvic cavity. Twenty minutes were spent in getting this information, from the time the administration of ether was begun.

It was not possible to resect the strictured part of the gut with its mesocolon, for it could not be brought up to the level of the abdominal wound. I should not, however, have ventured on so hazardous and unpromising an operation in so old a subject. The choice of procedures lay between an artificial anus in the median line, and a left lumbar colotomy. The former seemed to me the wiser, as it offered a relief to the obstruction at once, without complicating or prolonging the operation materially. The lower three-fourths of the incision were closed by silk sutures (through all the layers). In its upper fourth the peritoneum was sewed to the skin with a continuous catgut suture, and the wall of the distended gut, at a point about four inches above the stricture, sewed to the peritoneum in the same way. The gut was not opened. The duration of the operation was forty-five minutes, and the patient was placed in bed in good general condition. At the end of twenty-four hours the temperature was 100°; pulse, 120; and there were pain and vomiting. These symptoms ceased after incision of the wall of the colon, thirty hours after operation. A copious evacuation of soft fæces occurred, nourishment was retained, and recovery was rapid. At the end of four weeks Mrs. J—— travelled to Louisville, without discomfort. She is reported to me as being in pretty good health, able to make a journey to Florida, though there are signs of the growth in the vicinity of the artificial anus. She and her family have been opposed to a secondary operation.

The experience of these two last cases has demonstrated to me that the location of the artificial anus in the median line is more convenient for the patient than in either lumbar or inguinal region. And it has the further advantage of being a simpler procedure, and one requiring less time and involving less hemorrhage than the making of an opening in the other localities.

CASE V. *Obstruction from cancer of rectum; laparotomy; death.*—Mr. L——, a lawyer, aged thirty-seven, was first seen by Dr. C. H. Knight in the latter part of November, 1887. He had for several years had occasional attacks of diarrhœa, with pain, and in the last year there has often been severe pain at stool. The passages have been always loose, without blood or mucus, and in the past six months he has lost much flesh. The examination of the abdomen and rectum was negative. Two weeks before I saw him he had severe abdominal pain, with vomiting, tympanites, and sharp peristalsis. Enemata brought away a small amount of fecal matter during the first three or four days, the vomiting ceased, the pain moderated. Pulse was 100; temperature, 100°; and there was no abdominal tenderness. But the distention increased, no flatus was passed, and enemata failed to produce any fæces. A small rubber bougie would pass only five inches into the rectum, and it was observed that the quantity of water which the patient could retain rarely exceeded six or eight ounces. Urination normal, but quantity diminished.

December 24, 1887, in consultation with Dr. G. L. Peabody and Dr. Knight, laparotomy was advised, and the operation performed immediately with their help and that of Dr. G. B. Phelps. The tympanitic distention of the abdomen was extreme, but in other respects the condition was good. On pushing the finger vigorously into the rectum its tip seemed to encounter a hard mass, but the sensation was very indefinite. Still, we felt sure that the exploration would discover a stricture of the sigmoid flexure or rectum from the history of the case. At 10 P.M., after opening the abdomen under ether, it was with much difficulty that the swollen small intestine could be displaced sufficiently to permit digital exploration of the pelvis. Seeing was impossible. But in the upper part of the rectum a hard, flattened mass was detected, which could be caught between one finger inside and another pushed far up the rectum. The sigmoid flexure would not reach to the median line, and consequently it was affixed to the abdominal wall (peritoneum to peritoneum), on the left side of the rectus muscle, by an incision parallel to Poupart's ligament and two inches above it. The bowel was not opened, but the wall had been torn at one point by the teeth of a forceps, which permitted the escape of some gas. More escaped during the night, but there was no visible lessening of the distention. Fæces were passed freely during the day of December 25th, but the pulse became very rapid, the surface cool, the temperature did not rise, and death followed eighteen hours after the operation.

At the autopsy Dr. Peabody found evidences of commencing peritonitis, but no fecal matter in the cavity, though the gut was not closely adherent to the parietal peritoneum. The omentum was turned up on the stomach, and contained carcinomatous nodules, and the mesenteric glands were likewise affected. Six and a half inches from the anus there was a cancerous deposit in the wall of the rectum, causing it to adhere to the posterior surface of the bladder. This was annular in form, one inch long, three quarters of an inch thick, and the lumen of the bowel was diminished to the size of a lead pencil.

In this instance, examination with the finger in the rectum gave vague indications of the presence of a stricture. The introduction of the whole hand would have made the situation clear, and inguinal or lumbar colotomy would have been the proper procedure. I omitted this examination, because there was not present anyone with a hand the dimensions of which would have made the exploration safe. With the fingers extended and folded together, a safe hand should not exceed eight inches in circumference. The evidence furnished by exploration with a bougie and by the quantity of water retained is justly regarded in general as fallacious; but in this case it was undoubtedly correct.

It will be seen, from the histories of these cases, that I have operated as early as consent could be gained, and with a good measure of success. But in all of them still earlier interference would have been better surgery and more advantageous to the patient. It is difficult to adhere to a rule that an operation should be done at a given time from the onset of an attack. Either the danger is not appreciated by the physician in attendance, or the friends object, or some variation in the symptoms leads to the hope that medical measures may suffice. Much valuable time is lost in efforts at refinement in diagnosis, such as the location of the seat of obstruction and the determination of its nature. I do not mean to speak lightly of the information we possess, which will sometimes enable us to arrive at valuable conclusions in these respects, but I think the deciding of the main question, Does intestinal obstruction exist? is more important. This conclusion once reached, medical measures may be resorted to. If they fail to relieve at the end of from twenty-four to forty-eight hours, the operation should be performed. In this I refer, as a matter of course, to acute obstructions. In chronic cases, like the last two narrated, it is proper to delay longer. The persistence of pain which requires morphine for its relief, the continuance of vomiting, the failure to provoke a movement by several rectal enemata, aided by mild aperients, these symptoms, with or without commencing tympanites and without fever, should invite the attention of the surgeon, and demand operative interference unless promptly relieved. The operation decided upon, an incision large enough to admit the hand should be made, and the presenting intestine pushed away to permit inspection of the rectum, cæcum, and sigmoid flexure. Then bands may be felt for, or empty loops of intestine, and this failing to discover the lesion, the gut may be searched, while still inside the belly, for congested or distended portions. This can be done rapidly, if the edges of the abdominal wound be strongly retracted. Removal of the small intestine from the cavity, or "eventration," which has been advocated by Kümmell, seems to me a very serious step. In has, in the instances where I have done it for gunshot wound, invariably produced great shock. It might seem proper if the intestine were *not* heavy from congestion and enlarged by distention; but when such a condition exists, I think enterotomy would be preferable to "eventration," or to the emptying of the gut by incision, as proposed by Greig Smith.

I would like to add to these cases notes of five others which I have seen with Dr. F. P. Kinnicutt, Dr. J. B. Hunter, Dr. J. D. Anway, Dr. W. H. Farrington, and Dr. G. T. Harrison, but it is impossible, since I saw the patients but once. But in all of them the symptoms, pronounced at the outset, disappeared within seventy-two hours under medical treatment. In all, then, I have met with ten cases of intestinal obstruction, five of which have recovered within three days. The other five have been operated on, with two deaths.

Epitaph on the Grave of a Dentist:

"View this gravestone with all gravity,
I . . . is filling his last cavity."

REPORT OF A CASE OF TUBAL PREGNANCY ADVANCING TO FULL TERM WITHOUT RUPTURE.

By CHARLES E. TAFT, M.D.,

LATE HOUSE SURGEON TO THE WOMAN'S HOSPITAL IN THE STATE OF NEW YORK.

The patient, aged thirty four, was admitted to the Woman's Hospital in the State of New York, into the service of Dr. T. Gaillard Thomas, January 17, 1888. Her health had always been excellent, and she had passed through two perfectly normal pregnancies, the last having occurred ten years previous to her present trouble.

About a year and a half ago she began to notice again the usual signs of pregnancy, having amenorrhœa lasting seven or eight months, with gradual enlargement of the abdomen, swelling of the breasts, and for a period of two or three weeks well-marked morning sickness. Between three and four months after she became pregnant she commenced to "feel life," and this she noticed from time to time for five or six months. Nine months after she first missed her menstruation, milk appeared in her breasts, and then she was very firmly convinced that she was enceinte.

In February she had a profuse flowing lasting one week, and during this time large clotted masses came away. For quite a while after, this was supposed to have been a miscarriage. Since that time, at intervals of a few weeks, but irregularly, she has had moderate flowing, passing also a few clots. Previous to this pregnancy her menstruation was always normal and regular.

From February, 1887, to the following July, her abdomen gradually diminished in size, and since has varied but little. Although she had lost some flesh, as was her custom during a pregnancy, she was still in fair health and but little emaciated up to three months ago. She then commenced to run down, losing flesh and strength, and soon became unable to do her housework. At intervals since, she has had slight fever toward night, with occasional night-sweats, and several times in the past two months has had chills.

During the past year she has consulted physicians frequently, and five weeks ago she was examined under chloroform by several doctors in Jersey City. The treatment adopted was palliative or tonic, and the real state of affairs does not seem to have been surmised.

At the time of admission she complained of anorexia, weakness, and more or less sharp pain in the side and lower abdomen, aggravated by walking or any exertion. The evening temperature averaged 99° to 100° F.

Palpation of the abdomen revealed in the median line an evenly rounded, rather tense, elastic, and freely movable tumor, extending upward as far as the umbilicus, and about the size of a pregnant uterus at six months. To the left and in front, just behind the pubes, and apparently attached to the mass, was a hard body which was evidently the slightly enlarged uterus. Vaginal examination confirmed what external palpation seemed to indicate. On bimanual palpation the uterus seemed to move with the tumor, although it was very difficult to determine this point, and indistinct fluctuation was thought to be present. Ballottement was negative.

Laparotomy was very strongly advised by Dr. Thomas, and was consented to by the patient.

After the usual preparatory treatment customary at this hospital, which consists of moderate catharsis for several days, warm baths and tonics, followed by an enema of soap suds, the patient was anæsthetized at 3 P.M., January 21st.

The operation was performed by Dr. Thomas, Drs. Chambers, Nicoll, Taft, Aspell, and Baldwin assisting. An incision about four inches long. afterward lengthened to six, was made in the median line, between the umbilicus and pubes. But little bleeding ensued. On snipping the peritoneum, a tumor with very vascular coats and of a light purple color presented. A sound swept over its surface revealed no adhesions. The tumor seemed to contain fluid. The patient was then turned on her right side, and a small trocar and cannula inserted into the sac, when, on removing the trocar, a thick, purulent-looking fluid escaped. The operator then incised the tumor, seized the edges of the sac with cyst-forceps and large hooks, and, enlarging the opening, introduced his hand and extracted a full-grown child, somewhat macerated. The lower surface of the sac was quite adherent, and it was not thought advisable to attempt its removal, and, on account of the danger from hemorrhage, it was determined to leave the placenta *in situ*.

Further examination of the sac showed it to be covered everywhere with peritoneum, its wall to be $\frac{1}{4}$ to $\frac{1}{2}$ inch thick, to contain muscular coatings, and to be intimately connected with the right horn of the uterus. The sac, in other words, seemed to be unquestionably an enormously distended Fallopian tube. The body of the uterus was apparently perfectly developed, there being no evidence of any bifurcation. The patient was so very weak that Dr. Thomas determined to sew the edges of the sac into the abdominal wall, and allow the placenta to slough away, instead of removing the sac. On trimming off the edges of the sac there was considerable hemorrhage from the very vascular walls, but this was readily checked by a continuous catgut suture uniting them to the peritoneum and abdominal walls. A few interrupted sutures of silk were afterward added to strengthen the line of union. The sac was next thoroughly washed out with a solution of corrosive sublimate, 1 to 5,000, and strong carbolic acid applied to the edges of the wound. A dressing of iodoform gauze was packed into the sac about the placenta, and covered with a thick layer of absorbent cotton and bandage.

On coming out of ether the patient's pulse became quite weak, and her breathing very shallow, but by vigorous stimulation and elevation of the extremities, after a period of two or three hours she rallied. Very little nausea followed the operation. On examining the wound at this time for hemorrhage, it was noticed and remarked by all that the sac had contracted more than one-half. For the first twenty-four hours continuous antiseptic irrigation of the sac was kept up, and after this, until the removal of the placenta on the ninth day, washing out of the sac was performed every two hours. Until the eighth day the temperature did not rise much above 100° F., and the pulse averaged 80 to 100 per minute. By this time considerable sloughing was going on in the sac, and Dr. Thomas removed, with the placental forceps, the greater portion of the after-birth, which was quite friable. No hemorrhage took place. Since then the patient has done uninterruptedly well, and has now entirely recovered.

Examination of the fœtus showed it to be a male child, about seventeen inches long. It undoubtedly had been macerating in the purulent contents of the sac for some time.

During the operation the patient, on two occasions, became so much exhausted that a fatal issue seemed imminent. Dr. Thomas has since declared his conviction that, had he removed the sac, the patient would surely have died.

Cases of tubal gestation advancing to nearly, or quite, full term are very rare. Several cases are historical, and are quoted in most of the recent works on obstetrics. In rather a hasty research in the limited time at my disposal, I have been able to find eleven cases that have reached eight months without rupture of the tube.

In this search I have been very much assisted by Dr. R. P. Harris, of Philadelphia, who kindly furnished me with references to several cases.

Spiegelberg[1] reports a case of his own, and also one by Saxterp, and another by Fabbri, all going to full term. Hofmeier[2] reports a fourth case. Simpson[3] and Tinker had one each at full term. Dillingworth had a case reaching eight months. Orten,[1] of Broome County, N. Y., reports a case in which the fœtus advanced to full term, and remained *in situ* fourteen years, and where his diagnosis was confirmed by a post-mortem held by himself and Dr. C. P. Tucker, of New York. In the discussion which followed the reading of the paper describing this case, before the New York State Medical Association, Dr. I. E. Taylor, of New York County, referred to a case which occurred in Bellevue Hospital, the patient being eight and a quarter months pregnant, and dying of a hemorrhage following rupture of the Fallopian tube, in which the fœtus was contained. He stated that the specimen was placed in Wood's Museum.

Zitzman[2] and Brendel[3] each report a case where they removed by gastrotomy a dead fœtus, at nearly full term, from a sac which was probably the greatly distended Fallopian tube.

The convalescence of the case which I report was remarkable in several respects. The patient certainly looked and felt as well as any woman following the first week of a normal labor. Indeed, I may say that she has done better in every way than any case of ovariotomy which I have yet seen, where the sac was adherent and stitched into the abdominal wound. Her appetite has been excellent. There has been an entire absence of odor, and this, in the presence of a sloughing placenta, I attribute to the large, free opening in the sac, permitting thorough and frequent irrigation, with early removal of the sloughing fragments.

While I was able to find quite a large number of cases in which the fœtus reached a development of four months before rupture of the tube, I could find but very few, indeed, where the death of the fœtus and rupture of the sac took place between four and eight months; and from the rarity of the latter cases, it seems not improbable that, having passed four or five months, there is a more than even chance of the pregnancy reaching the period of viability before rupture of the tube or death of the fœtus occurred.

This is the fifth case of extra-uterine pregnancy advanced beyond full term which has been treated by laparotomy by Dr. Thomas. Four of these occurred in this hospital. All five cases recovered; a remarkable record, when the extreme rarity and gravity of such cases are considered.

MAURICEAU ON MULTIPLE BIRTHS.—Francis Mauriceau, in his treatise on "The Diseases of Women with Child," Paris, 1668 (*Medical Classics*), discourses as follows regarding multiple births: "There are daily women brought to bed of two children at once, sometimes of three, and very rarely four. Yet I knew one Mr. Herbert, converer of the king's buildings, who was so good a coverer that his wife, about seventeen years since, brought forth four living children at a birth; which the Duke of Orleans, deceased, coming to hear of, to whom (because of his jovial humor) he was very welcome; the Duke asked him (in the presence of divers persons of quality) whether it were true that he was so good a fellow as to get his wife with child of those four at one bout? He answered very coldly, Yes, and that he had certainly begat at the same time half a dozen, if his foot had not slipt; which made them all laugh very heartily. But I esteem it either a miracle or a fable, what is related in the history of the Lady Margaret, Countess of Holland, who, in the year 1313, was brought to bed of three hundred and sixty-five children at one and the same time; which happened to her (as they say) by a poor woman's imprecation, who, asking an alms, related to her the great misery she was in by reason of those children she had with her; to which the lady answered, She might be content with the inconvenience, since she had the pleasure of getting them."

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[1] Lehrbuch der Geburtshülfe, p. 312.
[2] Zeitschr. f. Geburtsh. und Gynaek, Bd. v., p. 115.
[3] Fränkel: Archiv für Gynaek., Bd. xiv., p. 205.

[1] Tr. N. V. Med. Ass'n., 1884. N. Y., 1885, i., 250–253.
[2] Archiv für Gynaek., xviii., 1881, pp. 1–13.
[3] Centralbl. für Gynaek., 1883, pp. 649–655.

NOTES OF TWO CASES OF REFLEX PARALYSIS OF ACCOMMODATION OF THE EYE, WITH MYDRIASIS, DUE TO DENTAL IRRITATION; WITH OBSERVATIONS UPON THEIR SUPPOSED BEARING ON THE QUESTION OF THE PATHOGENESIS OF SYMPATHETIC OPHTHALMITIS.[1]

By SAMUEL THEOBALD, M.D.,

ONE OF THE SURGEONS TO THE BALTIMORE EYE, EAR, AND THROAT CHARITY HOSPITAL.

Case I.—Mr. J——, a merchant, aged twenty-six, who had never had syphilis, and who had had no previous trouble with his sight, consulted me on July 1, 1873, on account of a disturbance in the vision of his left eye, of twenty-four hours' duration. The pupil of the affected eye was found to be dilated, and upon testing his near vision, almost complete paralysis of the accommodation of this eye was discovered. Its distant vision was $\frac{20}{xxx}$, but its near vision so poor that J. No. 10 could be read with difficulty at 12″. In searching for a cause for this sudden impairment of vision, I learned that for some time he had been annoyed by the existence of a suppurative inflammation about the root of the left, upper, lateral incisor tooth, the nerve of which had been previously destroyed by a dentist. The tooth was decayed, but was not painful, although there was a constant discharge of pus from its socket. However, for several days before the appearance of the eye trouble, and after exposure to wet and cold, pain of an unusual character to the patient, who was not subject to neuralgia or rheumatism, was felt in the face and head.

It seemed to me highly probable that the tooth was the cause of the ocular paralysis, and I therefore advised that it should be extracted, which was done three days subsequently, on July 4th. I also prescribed ten grains of iodide of potassium, to be taken three times a day, and a blister to be applied to the forehead. No change for the better had taken place when the patient was next seen (July 8th). I then directed an ointment, containing equal parts of extract of calabar-bean and lard, to be rubbed upon the forehead and brow at night; and on the 13th ordered, in addition to the iodide, $\frac{1}{24}$ grain of sulphate of strychnine, to be taken three times a day. On the 18th I began the daily application of the faradic current. The use of the calabar-bean produced temporary contraction of the pupil and increase in the accommodative power, but no appreciable improvement had manifested itself up to the 29th, at which date I decreased the dose of iodide of potassium to five grains, and gave in addition $\frac{1}{48}$ grain of biniodide of mercury. Within a few days after this the condition of the eye began to improve, and by August 4th he was able to read with it J. No. 6, and the size of the pupil had lessened very perceptibly.

As I left home for several weeks on the following day, I did not see the patient again until the end of the month (August 31st), when I met him upon the street. The left pupil was then of the same size as the other, and he reported that the sight was again all right, and that it had been so for about ten days. He had continued to take the remedies for a while after his last visit to me, but soon stopped all treatment, as his eye gave him no further annoyance. In response to a note of inquiry, he writes me (January 14, 1888) that the eye has never given him any further trouble, and that the sight is "perfectly good."

Case II.—Mr. M——, thirty-five years of age, a man of independent means and without occupation, was first seen by me on October 19, 1885. He stated that he had been conscious of something being wrong with his right eye for about two weeks. There had been no decided pain in it, but it felt uncomfortable and as though it were swollen. He denied ever having had syphilis, and stated that he had not suffered with rheumatism. He was, however, of a decidedly nervous temperament. Upon testing the vision of the affected eye, the pupil of which was only slightly enlarged, complete paralysis of accommodation was discovered; the lids were also perceptibly retracted, so that the palpebral aperture appeared larger than that of the other eye—the effect being just such as we are now familiar with from the instillation of cocaine. Upon testing the responsiveness of the pupils, to my surprise, I found that they were *both* absolutely motionless—neither in response to varying degrees of light, nor during changes in accommodative tension, did either undergo any perceptible alteration in size. The patient also mentioned that he had noticed that his taste, especially for sweet things, was impaired. The distant vision of each eye was nearly normal, $\frac{20}{xx}$ (?), and with the left eye he could read J. No. 1. With the right, however, he could with difficulty make out J. No. 11, and could do this only by holding the page off to about 18″. The ophthalmoscope showed the fundus of each eye to be healthy and the media clear. Upon further investigation I discovered that the crown of his right, upper, lateral incisor tooth had been broken off, and that about the root, which remained, and which was probably dead, there was considerable inflammation, the alveolar process over it being swollen and sensitive to pressure. The appearance of the gum suggested the existence of a fistulous opening from the alveolus, although he was not aware that there had been any discharge from the tooth.

He was advised to have the offending tooth, or at least what was left of it, extracted without delay. This he did at once, and on the following day there was not only a diminution in the swelling and tenderness of the gum, but a perceptible improvement in the accommodation of the eye, J. No. 9 being read tolerably well, and even some words of J. No. 8. This change, it will be observed, took place before any treatment, except the removal of the tooth, had been employed. At his second visit (October 20th) I prescribed for him biniodide of mercury (gr. $\frac{1}{32}$) and iodide of potassium (gr. j.), three times a day. Subsequently the dose of biniodide was increased to gr. $\frac{1}{24}$ and then to gr. $\frac{1}{16}$, and that of the iodide of potassium to gr. v. Strychnia was also given in doses of gr. $\frac{1}{24}$, three times a day, and an ointment of mercury and extract of opium was ordered to be applied to the forehead and temples at night. A few applications of eserine were also made to the eye, and their immediate effect upon the pupil and the accommodation was very decided, but they were soon discontinued, as they evidently had no curative action. On the 27th he reported an improvement in his taste (especially for sugar), but as yet there was no appreciable change in the pupil or further improvement in the sight. On November 23d the mercury was discontinued, as his bowels were disturbed by it, and the iodide of potassium given by itself; a blister was also applied to the right temple. On the 25th the right pupil, for the first time, responded perceptibly to light, but not until December 1st did the accommodation begin to show decided improvement. In the meantime the strychnia, which he had been taking for several weeks, had been discontinued, and syrup of phosphate of iron, quinine, and strychnia substituted. On December 12th the iodide of potassium was omitted. On December 30th the right eye was able to make out some words of J. No. 1. On January 5, 1886, I observed that the right pupil was smaller and rather more responsive to light than the left, and upon testing the far and near point of each eye with a $+\frac{1}{10}$s. lens, I found that there was but little difference between the two eyes, and that the range of accommodation in each was below what it should be. The result obtained was: L. E., $\frac{1}{A}=\frac{1}{8.1}$; R. E., $\frac{1}{A}=\frac{1}{9.1}$. All treatment was now discontinued. A week later the right eye could read J. No. 1 with ease at 9″, and this was also the near point for the left, and the pupils were of the same size and equally responsive to light. Some time before this the retraction of the lids of the right eye and the impairment of taste, to which reference has been made, had disappeared. On February 2d I tested the eyes for astigmatism, finding in each Ah. $\frac{1}{36}$, for which I prescribed plano-cylinders. At this visit the left pupil was observed to be larger and less reponsive to light than the right. On February 5th this difference in the size of the pupils was more decidedly marked, and the left one showed no perceptible response to light. The range of accommodation of each eye was again tested, and now the right eye was found to have the advantage, the result being: L. E., $\frac{1}{A} = \frac{1}{9 \cdot 1}$; R. E., $\frac{1}{A} = \frac{1}{6 \cdot 7}$. He was now complaining of tenderness and discomfort about the left, lower, anterior bicuspid tooth, the nerve of which had been destroyed, and which his dentist had recently filled, after treating an abscess at its root; and as the mydriasis and failure of accommodation in the left eye were becoming more and more pronounced, he was advised to have this tooth removed. This he consented to do, and on February 11th it was drawn. The accommodative power of the left eye, however, continued to decline, and by March 1st he could with difficulty read J. No. 3 with this eye, even with the aid of his astigmatic glass ($+\frac{1}{36}$ c., ax. 80°). With the originally affected eye, the right, he could read J. No. 1 with ease.

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[1] A paper read before the Clinical Society of Maryland, January 20, 1888.

There were still several other teeth in his mouth the nerves of which had been destroyed, and which were giving him considerable discomfort. One of these was a right upper molar, which had been filled in three places, and one of the fangs of which was exposed, at the side of the alveolar process, nearly to its extremity; and another was the left lower canine, which contained one filling, and was sensitive to pressure over its root. In addition to the disturbance in his vision, he had a great deal of headache, and pain at times in the facial branches of the fifth nerve. On March 1st these two teeth were removed by my advice, and this was followed by the immediate disappearance of the headache. Two weeks later the left pupil had regained its normal size, and responded fairly well to light, but with this eye he could, as yet, hardly read J. No. 4. However, a steady improvement now set in, and by April 5th the left eye could read J. No. 9, but only when it was held at about 16″ from the face. On May 1st it could read it at 7″, almost as close as the other eye, and the left pupil was now rather smaller than the right. On June 8th he reported that since his visit to me, six days before, the dentist had been treating another dead tooth (a left lower incisor), and had found it necessary to remove the filling from it, and that in consequence severe inflammation had ensued, accompanied by swelling of the face and a considerable amount of fever. Coincident with this attack, he observed that the right pupil became enlarged, and that his near vision grew less distinct. The dilatation of the right pupil was still quite marked when I saw him, but he was able to read J. No. 1 with each eye. I advised him to get rid of this tooth also, which he did; and a week later, when he paid me his last visit, the pupil was considerably smaller and the accommodation restored to its previous condition. It will be observed that after the discontinuance of the constitutional treatment, on January 5th, it was not again resumed, and that the recovery of the second eye took place without resort to any remedial measures, except the removal of the dead teeth.

At my request the patient was kind enough to call upon me (January 18, 1888), so that I might learn the present condition of his eyes. I found that he was still wearing, in near vision, the $+\frac{1}{36}$ c. glasses, which I had prescribed for him, and that with these he could read J. No. 1 with ease, with each eye, the near point for the left eye being 8″, for the right 7″, and the binocular near point being also 7″. The pupils were of equal size, and rather larger, when examined with the light from the window falling upon them, than is usually the case with normal eyes. They contracted and dilated in the usual manner with changes in convergence and accommodative tension, but to light stimulation neither would respond in the slightest degree.

About six months after his last visit to me (December, 1886), and coincident with the occurrence of irritation and tenderness about another of his dead teeth, the sight of his left eye, he told me, had again become affected, and the pupil enlarged. At this time he was induced to seek the advice of a specialist of great popular repute, who, according to the patient's account, made light of the dental-irritation theory to which I had attached so much importance, assured him that the degree of astigmatism (Ah. $\frac{1}{36}$) which he had was of no account, and advised him that he required no treatment except the selection of proper glasses. Thereupon he proceeded to determine what these were, and as a result of his tests, he prescribed for near vision: for the right eye, $+\frac{1}{48}$ s.; for the left eye, $+\frac{1}{15}$ s. Presumably, these glasses were intended to equalize the vision of the two eyes, the accommodation of the left being defective. However, as the difference between the accommodative power of the eyes did not long remain as it was when the glasses were prescribed, they, of course, soon became useless and were thrown aside, the cylinders being resumed, to be worn, as I have stated, up to the present time.

The two cases which I have related have interested me especially because, in some measure at least, they seem to me to afford evidence in favor of the older, and now generally discredited, view of the pathogenesis of sympathetic ophthalmitis, which, not long since, I had the temerity to attempt to defend.[1] Whatever may be said as to the conclusiveness of the evidence in Case I., that the ocular paralysis was really due to dental irritation, there is, certainly, in Case II. no room for doubt upon this point. We have, then, at least, one striking example of reflex ocular disease due to persistent irritation of a branch of the fifth nerve. That the direct cause of the ocular paralysis was not situated in the affected eye itself, but in some ganglionic centre back of it, there is, I think, little room for doubt; and such doubt as might exist upon this point seems to me to be dispelled by the decided effect upon the pupil and the ciliary muscle which was produced by the instillation of eserine. It is, perhaps, scarcely possible to locate with certainty this centre, but, at any rate, it does not seem *necessary* to go further back than the ophthalmic and Gasserian ganglia, in order to explain all the observed phenomena, including the impairment of the sense of taste; for in the former we have a connecting link between the fifth nerve and the third, and with those branches of the latter, especially, which supply the iris and ciliary muscle, and in the latter the gustatory nerve is, of course, in relation with the other sensory branches of the fifth. As to what was the exact nature of the changes which occurred in the centres involved, in consequence of the persistent irritation of the dental nerves, we are also not in a position to speak with certainty; but we are, I think, warranted in assuming, at least, that they were structural in character, rather than simply vaso-motor, from the slowness with which the ocular paralysis disappeared after the removal of the original source of irritation.

That there is a very close parallelism between the sequence of events which must have taken place in this case and that which occurs, according to those who believe that the disease is a reflex neurosis, in sympathetic ophthalmitis will, I think, scarcely be denied. In the one case we have, as a result of persistent irritation at the peripheral extremity of branches of the dental nerves, structural changes in ganglionic centres having connections with the fifth and third nerves, of such a character as to produce paralysis of certain of the ocular muscles, usually, it would seem, upon the side corresponding with the location of the diseased tooth. In the other we have, in the same way, in consequence of persistent irritation of the ciliary nerves (in the primarily affected eye), structural changes brought about in ganglia connected with the fifth nerve, some of which, at least, are central, and these, in turn, probably through the medium of vaso-motor or "trophic" nerves, leading to the development in the opposite eye of the condition which we call inflammation. The disciples of Cohnheim tell us that this is impossible; that their experiments prove that inflammation cannot be produced in this way. But are they justified in believing that they have reproduced, experimentally, essentially the same conditions that exist in sympathetic ophthalmitis? For one, I am not disposed to admit it.

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[1] Some Recent Theories regarding the Pathogeny of Sympathetic Ophthalmia viewed from a Macroscopic Stand-point, Archives of Ophthalmology, vol. xiii., No. 1, p. 62.

FRACTURES THROUGH THE HEAD OF THE RADIUS.[1]

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SIR ASTLEY COOPER[2] says, of fracture of the upper extremity of the radius: "I have heard it mentioned as of frequent occurrence, but there must be some mistake in the statement, for it is an accident which I have never seen, and if instances do present themselves (which I do not mean to deny) they must be very rare."

Hamilton,[3] speaking of fractures in this location, says: "While, therefore, the presence of what appears to be the rational diagnostic signs has compelled me to record one case as an uncomplicated fracture of the neck of the radius, and two others as fractures at this point, accompanied either by a fracture of the humerus or a dislocation of the ulna, I am prepared to admit that some doubt remains in my own mind as to whether in either case the fact was clearly ascertained. Nor do I think, speaking only of the simple fracture, that it will ever be safe to declare positively that we have before us this accident, lest, as has happened many times before, in the final appeal to that court whose judgment waits till after death, our decision should be reversed."

Stimson[4] says: "Our knowledge of this variety of fracture is drawn from about a dozen specimens, and two or three doubtful cases."

In view of the foregoing expressions of these well-known authorities, the following case seems worthy of record and study. Of one thousand and twelve cases of simple fracture of the radius treated at the Chambers Street Hospital during the past seven and a half years, it is the only one in which the head of the bone is noted as the seat of lesion.

H. S——, aged twenty-six, a native of Germany, a stout, muscular porter, fell about ten feet at five o'clock in the afternoon of March 24, 1887. Immediately thereafter he sought treatment at the Chambers Street Hospital, and upon examination the followingcondition was noted: Inspection of the injured elbow revealed only moderate swelling on its outer aspect, this due to the contusion. The patient could completely flex and extend the forearm, but said that this occasioned much pain. The forearm was pronated, and he was unable to supinate it. Fracture of the humerus or ulna was excluded by the usual process of examination, as was also fracture of the radius below its neck. On placing the thumb of the left hand on the head of the radius and rotating its shaft with the right hand, the head was felt to roll beneath the thumb, but a diffuse bony crepitus was both felt and heard. This manipulation occasioned very severe pain; pressure over the head of the radius also detected a deeply seated point of local tenderness. The inner half of the head could be fixed beneath the left thumb; then, on grasping the outer half of the head between the thumb and forefinger of the right hand and "rocking" the parts, the outer half was distinctly felt to move on the inner.

Diagnosis was made of fracture through the head of the radius, approximately from the middle of its cup-shaped articular surface downward and inward to the upper part of the neck.

The elbow was placed at a right angle, the forearm in a position midway between pronation and supination, and a plaster-of-Paris splint applied from the wrist to the upper third of the humerus.

This dressing gave rise to no disturbance, and was left in place for twenty-seven days, at the expiration of which time it was removed and the following condition noted: There was considerable thickening all about the outer aspect of the elbow, this obscuring accurate examination of the bony parts. The circumference of the arm at its middle was two inches smaller, of the elbow one inch larger, and of the forearm three-fourths of an inch smaller on the affected side than at the same points about its fellow. The patient could flex the forearm to eighty degrees, and could extend it to one hundred and twenty. Pronation and supination were almost *nil*. Movements at the joint occasioned no pain. He was directed to apply a flaxseed poultice nightly, to soak the joint in hot water morning and night, and to rub it thoroughly with neat's-foot oil after each hot bath. Flexion and extension quickly improved, and on May 17th, twenty-six days after the removal of the splint, the patient could almost completely flex the forearm, and could extend it to one hundred and sixty degrees. Pronation and supination, however, did not improve. He returned to his work as a porter, at which he has since been engaged.

His present condition, six and a half months after the injury, is as follows: The circumference at the middle of the arm on the affected side (the left) is one inch less than on the opposite; measurements about the flexed elbows show no difference, while at the middle of the forearm the affected side is half an inch smaller than its fellow. Flexion at the elbow is ten degrees short of normal; extension can be made to one hundred and sixty-five degrees.

The forearm is in a position midway between pronation and supination, and the radius at the wrist describes but one fifth of its normal arc about the ulna.

The external condyle of the humerus is slightly thickened and rounded. The head of the radius can be plainly grasped antero-posteriorly, and is fully half an inch broader than its fellow. On rotating the shaft the head is plainly felt to move, and postero-externally a prominent ridge of bone may be distinguished.

All movements at the elbow-joint elicit a diffuse, soft crepitus, which is present in a less degree on the opposite side.

The patient works daily at lifting heavy parcels, and says that he experiences no discomfort whatever, except that due to the limitation in range of pronation and supination, and this is comparatively trivial.

The recorded cases of this lesion are few in number and scanty in detail; in fact, they seem to have been presented only as surgical curiosities.

Stimson has collated eleven cases, and to these I have been able to add three, including my own, making fourteen in all. For purposes of comparison, I append a brief synopsis of each:

CASE I. (Malgaigne).[1]—Case observed by A. Berard in 1834, in which post-mortem examination revealed a fracture of the coronoid process of the ulna, together with an oblique fracture downward and forward through the head of the radius, severing about one third of its articular surface.

CASE II. (also cited by Malgaigne, seen by Velpeau in 1840).—A man, aged forty-five, sustained a dislocation of the forearm, which was at first mistaken for a contusion. At the end of six weeks, failing to regain the use of the joint, he consulted M. Velpeau, who recognized the condition, but tried in vain to reduce the luxation. The patient succumbed to an erysipelas, and the autopsy revealed the presence of a fracture through the coronoid process of the ulna, as well as a fracture through the anterior half of the head of the radius.

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[1] Read before the Section on Surgery, Academy of Medicine. October 10, 1887.

[2] On Dislocations and Fractures, American edition, p. 412. Philadelphia, 1844.

[3] Fractures and Dislocations, sixth edition, p. 299.

[4] Treatise on Fractures, p. 431.

[1] Traité des Fractures et des Luxations, vol. ii., p. 636.

CASE III.—Mr. Sampson Gamgee[1] relates a case in which a man, aged twenty-six, sustained a backward dislocation of the ulna, together with a fracture through the head of the radius. He does not state the direction of the fracture, or treatment adopted, but says that the case made a rapid and complete recovery.

CASE IV. (cited by Mr. Pick).[2]—A man fell from a scaffold, and died from fracture of the base of the skull. After death, a vertical antero-posterior fissure was found running through the centre of the head of the radius, separating one-half of the cup-shaped cavity and a small portion of the shaft from the rest of the bone. There was no other lesion, and the orbicular ligament was intact.

CASES V. AND VI. (specimens).—Seen by Hamilton in Dr. Mütter's cabinet. In one a small fragment from the outer part of the head of the radius was slightly displaced downward in the direction of the axis of the bone; in the other the fragment was thrown outward, or to the radial side. Both were firmly fixed in their new position.

CASE VII. (specimen).—Bryant[3] instances a case occurring in a woman, aged seventy, who fell on the elbow, breaking off the coronoid process and the anterior third of the head of the radius. The specimen is in the museum of Guy's Hospital.

CASES VIII. AND IX.—Holmes[4] mentions a case in which both forearms were dislocated backward, both coronoid processes broken, and the head of each radius split longitudinally.

CASE X.—Hodges[5] presented to the Boston Society for Medical Improvement a specimen showing a clear and regular split through the head of the radius involving very nearly one-half, and clearing outward so as to extend no farther than the neck of the bone. It was associated with an oblique fracture of the shaft of the ulna, commencing above at the constriction between coronoid and olecranon, and extending three and one-fourth inches downward, detaching from the shaft that portion of bone to which the olecranon was attached.

CASES XI., XII., AND XIII.—Stimson[6] instances three cases observed by himself. Case XI.: A boy, aged thirteen, admitted to the Presbyterian Hospital, March, 1877, with suppurative arthritis of the right elbow, following a blow received two months before. Dr. Stimson excised the elbow, and in the course of the operation found the outer half of the head of the radius separated from the rest and from the shaft, with an irregular surface of fracture and preservation of the articular cartilages. Case XII.: Man, aged twenty-seven, admitted to the Presbyterian Hospital in April, 1882, with backward dislocation of right elbow. Dr. Stimson reduced the dislocation under ether, and then felt a movable piece of bone on the outer side between the olecranon and the head of the radius; he removed it under antiseptic precautions. It was a part of the head of the radius, presumably from the upper and inner aspect, about one-third. Of this case Dr. Stimson[7] says: "I met this man, May 24, 1883, at which time flexion and extension were almost complete, but rotation was entirely lost. The forearm was in a position midway between pronation and supination, and the patient said that it was strong and serviceable." Case XIII.: A case seen by Drs. McBurney and Yale in Bellevue Hospital in 1881. The patient was a muscular man, thirty-nine years of age, who fell from a ladder, striking on the outer side of the left arm, which was held close to the body. After the swelling had subsided, a movable piece of bone could be felt at the side of the head of the radius; crepitus could be felt when the wrist was rotated. Dr. Stimson saw the patient in 1882, at which time flexion of the elbow was complete, extension amounting to one hundred and forty degrees, and pronation and supination limited to ninety degrees.

The head of the radius was irregular, its diameter greater than usual, and the distance from its upper edge to the top of the olecranon nearly an inch greater than on the right side. The arm was useful and strong, and the patient on duty in the Fire Department.

The fourteenth case forms the subject of this paper. Of these fourteen cases, eight were complicated either by a fracture through some portion of the ulna or by a dislocation of the forearm; three are pathological specimens without history, and one was discovered during an operation for suppurative arthritis of the elbow. There were but four cases in which a diagnosis was made, and treatment adopted, and of these four only two were uncomplicated.

Assuming, then, that fracture through the head of the radius, though a very rare lesion, is yet of undoubted occurrence, what are the evidences on which a diagnosis may be based?

I feel that there is but one, namely, a movable fragment of bone. Joint-crepitus about the elbow is particularly deceptive, and we know how frequent are those cases which present the harsh, grating sound characteristic of fracture, but in which most thorough examination under an anæsthetic fails to assert the undoubted presence of a bony lesion. If one assuredly obtains a false point of motion between the fragments of the head of the radius, there must be a solution of continuity in the bone itself; failing of this, he cannot feel assured that there is a fracture, for minor evidences, as local tenderness, disability, pain, swelling, and ecchymosis accompany most cases of severe contusion. Hutchinson[1] thinks that the click, characteristic of the partial downward dislocation of the radius (by elongation), is often mistaken for evidences of fracture.

Hodges[2] says that fracture through the head is more common than is thought, but, from the non-displacement of the fragments and the difficulty of diagnosis, fails of recognition.

As to prognosis, Gamgee states that his patient made a rapid and complete recovery, and by this we assume that all of the functions resumed their normal condition; but in the other three cases—McBurney's, Stimson's, and my own—the functional results are almost precisely similar; namely, good flexion and extension, but very limited rotation.

The smaller fragment can be nourished only by absorption and by the spread into it of granulations from the layer, yet those of us who have had the fortune to deal with compound fractures of the head know how very vascular it is, and we may be assured that if the fragments are apposed and kept at rest, there is but little danger of non-union.

In my own case, I think the limitation of rotation of the head in the lesser sigmoid cavity due to the presence of a considerable callus, both anteriorly and posteriorly, which acts as a mechanical impediment, and I should think that in all cases (except, possibly, those in which a small fragment is chipped off the outer aspect) the callus would restrict rotation in this way. In this event the range of motion should improve with time.

There is but little to be said regarding treatment: The best possible apposition of the fragments, the forearm at ninety degrees, midway between pronation and supina-

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[1] Treatment of Fractures of the Limbs, p. 146. London, 1871.
[2] Fractures and Dislocations, p. 200.
[3] Surgery, third American edition, p. 837.
[4] System of Surgery, American edition, vol. i., p. 859.
[5] Boston Medical and Surgical Journal, vol. lxxv., p. 333.
[6] Treatise on Fractures, p. 433.
[7] Annals of Anat., p. 210, June, 1883.

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[1] Annals of Surgery, vol. ii., p. 95.
[2] Boston Medical and Surgical Journal, vol. xcvi., p. 65.

tion, and fixation in this position by some such apparatus as the plaster-of-Paris splint. At the expiration of four weeks union will very probably obtain, and the splint may be discontinued and the joint subjected to the usual course of hot baths, massage, and action.

Clinical Department.

A CASE OF DEATH BY SUFFOCATION IN PHLEGMONOUS TONSILLITIS.

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While most, if not all, writers on the subject of tonsillitis admit the possibility of the occurrence of sudden death from rupture of the tonsil and escape of pus into the larynx, the accident is one of such extreme rarity that the possibility of its occurrence is often forgotten. So far as I have been able to ascertain from the limited medical literature at hand, I find recorded only two cases where death has resulted from this accident, occurring during sleep, and one in which it took place while the patient was awake and in the act of speaking. To these three cases I desire to add a fourth, which has recently occurred under my own observation.

On November 7th I was consulted by G. H. M——, a merchant, aged twenty-four, of stout, plethoric build and of scrofulous diathesis, who has been an occasional patient of mine for the past two years, during which time he has had several attacks of bilateral phlegmonous tonsillitis. On two occasions the swelling was so great that I deemed it advisable to incise freely each tonsil and permit the pus to escape. At other times the treatment consisted, in the main, of the internal exhibition of guaiacum, aconite, and quinia, with the local application of iodo-tannin, and frequent gargling with hot water. Mercurials were usually administered early in the attack. The attacks usually subsided in from five to eight days, during most of which time the patient was attending to the duties of his store. At the time of my examination, on November 7th, I diagnosed phlegmonous tonsillitis, and adopted the plan of treatment indicated above, which I had found efficacious in previous attacks. After this, though feeling quite unwell, he remained in his store until the afternoon of November 10th, when he consulted me again, complaining of a throbbing, pulsating sensation in the region of the tonsils, and also of pain in the ear. Examining his throat, I found each tonsil very much inflamed, and swollen so as to touch at one point in the mesial line. I thrust a small bistoury boldly into each tonsil, and from the left fully three drachms of pus exuded, with the result of greatly reducing the swelling on that side. From the right tonsil only a small amount of blood came, and no pus. These incisions seemed to afford much relief. My patient complaining of being unable to procure sleep by the aid of the hypnotics that I had prescribed for him, I visited him about 9 P.M. and administered a hypodermatic of morph. sulph. (gr. $\frac{1}{8}$) and atrop. sulph. (gr. $\frac{1}{120}$).

On the following morning I visited him, and found the tonsils swollen about as badly as on the previous afternoon, prior to my incising them. He reported himself as having been able to sleep some during the night, though not so well as he should have liked. His temperature was 102.6° F.; pulse, 96; and general condition as good as usual in similar attacks. I applied iodo-tannin to the inflamed glands, and also an emollient poultice to the neck over the situation of the tonsils. The quinia and gargles were also continued, and the patient was advised to remain in bed. At 10.30 P.M. I visited him again, and found him in about the same condition as in the morning. His pulse was 94; temperature, 102°; he had been able to take some fluid nourishment during the day, and said he believed he would be able to get out on the morrow, if he could only get some sleep.

His throat presented much the same appearance as in the morning. I again administered the hypodermatic of morphia (gr. $\frac{1}{8}$) and atropia ($\frac{1}{120}$), as on the previous evening, and a few minutes later retired to a room on the same floor of the building, two doors removed from the patient. An hour and a quarter later I was hastily summoned to attend my patient by a gentleman who was occupying the same apartment with him. His tone betokened alarm, and without dressing, or waiting to question him, I hurriedly repaired to his room. My patient was dead! Intravenous and intracardiac injections of ammonia, with artificial respiration practised more than half an hour, failed to elicit at any time the slightest evidences of vitality. Examination of the body of the deceased revealed the fact that the upper pharyngeal region and the larynx, especially the latter, contained a large quantity of pus and broken-down tonsillar tissue, derived from the rupture of the right tonsil. There were no evidences of cardiac or renal disease; *per contra*, the deceased had always, saving the frequent attacks of tonsillitis, enjoyed excellent health.

From his companion I learned that within fifteen or twenty minutes subsequent to my departure he had sunk into a peaceful slumber, breathing quietly and without any difficulty for almost an hour. He then seemed to stop breathing for a moment, but soon made one or two ineffectual gasps for breath, which so alarmed his companion that he rushed out of the room and down the hall to my room. In not more than one minute from the first respiratory difficulty I was at the bedside, but the life-principle was then entirely extinct.

GALL-STONES OR SOAP?

Dr. A. Noel Smith, of Dover, N. H., writes: "I noted an article in The Medical Record of January 14th, taken from the *Lancet*, in which Dr. Just Tonatu, of New Orleans, advocates olive-oil in large doses for cure of hepatic colic. A bit of my own experience was at once called to mind, and I could not help thinking that Dr. T—— might have been mistaken in some of his conclusions. As I understand it, there has existed for some time a popular idea, more or less diffused, that very full doses of sweet-oil would relieve in cases of gall-stones, for they have 'seen the stones.' And so they have; some things having the *appearance* of gall-stones, but which, if examined critically and carefully, would be found not to be such.

"A case to the point: I was invited by a good lady to step into her house one morning to see a display of gall-stones which she had succeeded in bringing away from her husband by the use of olive-oil. She had carefully washed the discharges, and separated these greenish oval bodies, and had them all spread out upon the floor, to the number of fifty or sixty, varying in size from a pea to a nutmeg. I carried some of the best specimens to my office, and, together with two other physicians, looked them over. They were of a soapy feel, readily crushed under the finger, and of similar consistence throughout. We could find no semblance of a stone in any of them, and came to the conclusion that they were only saponaceous masses, formed from the presence of excess of oil, and I so informed the family. We were confirmed in the above opinion by the following statement, which may be found on page 1076 of the 'National Dispensatory' by Stillé and Maisch, and bearing directly upon the subject in hand:

"'A notion has been entertained that large doses of olive-oil were capable of causing the discharge of gall-stones, and in proof of the statement a great number of bodies resembling these concretions has been found in the stools. On examination, however, they were found to consist of the partially saponified oil.'"

Progress of Medical Science.

RESECTION OF LEFT LOBE OF LIVER.—Dr. Langenbuch (*Berl. Klin. Woch.*, 1888, No. 3) records a case in which he successfully resected the greater part of its left lobe, which had been extensively deformed by tight lacing, and had caused great inconvenience and trouble to the patient. The woman, about thirty years of age, was, in November, 1886, under treatment for erysipelas at the Lazarus Hospital, and when about to be discharged convalescent, she begged that she might be relieved of a painful abdominal tumor that rendered life unbearable, and caused pain both on standing and on lying down. On examination a tumor of the size of the fist was detected in the epigastrium—dense, elastic, not fluctuating, moving with respiration, and its dulness continuous with that of the liver. The diagnosis lay between hydatid tumor and deformity from tight-lacing (*Schnür-leber*), although the latter condition usually involves the right lobe. An exploratory incision proved that the case was of this kind, but involving the left lobe, and probably for that reason producing the painful symptoms. Dr. Langenbuch decided that it would be advisable to remove the source of so much distress, especially as the portion of the lobe forming the tumor was practically cut off from the rest of the organ by a broad but ligamentous pedicle, and therefore it was functionally of no service. Accordingly, the pedicle was transfixed by ligatures, and the lobe excised. The same evening symptoms of severe internal hemorrhage appeared, and, on reopening the wound, the abdominal cavity was found to be filled with blood; this was sponged out, the bleeding vessels secured, and no further trouble arose from that source. The wound healed, but recovery was somewhat retarded by the development of ascites, which necessitated tapping on two occasions. It could not be determined how far the ascites was due to the cardiac debility and hydræmia resulting from the previous prolonged attack of erysipelas and the profuse hemorrhage, or how far it might have depended on the diminution of the hepatic circuit. There was œdema elsewhere, so the former hypothesis had some support. At any rate it was not permanent, and the patient left in February quite well. The portion of liver removed weighed three hundred and seventy grammes (about twelve ounces), and Dr. Langenbuch says that the case shows the feasibility of removing the lobe of a tight-laced liver when this gives rise to serious discomfort.—*Lancet.*

PARALYSIS OF THE ABDOMINAL MUSCLES.—At a meeting of the Paris Société de Chirurgie, Dr. Deprès exhibited a photograph of a woman whom two medical attendants had believed to be subject to ovarian disease. The abdomen was extremely pendulous, and measured forty-eight inches round the umbilical level (*The British Medical Journal*). On careful examination, Dr. Deprès found that the abdominal muscles were entirely paralyzed. The patient could not rise from her bed without supporting the abdomen with her hands. No contraction of the muscles occurred during movement or coughing, nor under any form of electrical stimulation. Frequent pregnancies often cause distention, thinning, and consequent weakening of the abdominal muscles, but never paralysis. His patient had been only twice pregnant, and the labors were normal. Lannelongue stated that he had seen paralysis of the abdominal muscles in anterior poliomyelitis, but without the symptoms noted in Deprès' case. Marc Sée believed that pendulous abdomen was certainly most frequent among multiparæ, but had been observed in women who had only borne one child. Dr. Deprès replied that he had seen numerous cases of pendulous abdomen which simulated ovarian disease, but never, before this example, any instance of paralysis of the abdominal muscles which had caused symptoms mistaken for those observed in cystic tumors of the ovary. Pendulous abdomen is a well-known affection. Landau has recently written an able treatise on its nature and treatment, and its due recognition is of importance to physicians and surgeons, as well as to obstetricians. A cursory glance or sweep of the hand over a pendulous abdomen may give rise to a serious error of diagnosis. Ascites, pregnancy, ovarian or uterine tumor, may be suspected, especially when the walls are very thick, so as to interfere with resonance on percussion. In cold weather, or when the hand of the observer feels chilly, contractions of the recti are set up, and may give the erroneous impression that some solid growth is present. The support of a belt gives comfort, and to a certain extent cures the affection. Mr. Treves has recently declared that the belt is not advisable after ovariotomy and allied operations, as it interferes with the natural process of recovery which the muscles, weakened by long distention, would undergo if left to support themselves. However, many experienced authorities would dread the abolition of the abdominal belt after abdominal section, for hernia of the cicatrix is not rare. Indeed, Dr. Homans, of Boston, discovered that it ultimately developed in ten per cent. of his patients, and those who are as careful about after-histories as Dr. Homans would possibly find their proportion just as high. Thus the question of the means of making the abdominal walls as strong as possible after an operation becomes very important, and the relative merits of Mr. Treves' principles and the usual practice deserve consideration. The case of true paralysis of the abdominal muscles described by Deprès must not be overlooked, since it is a condition which we may safely say has been frequently confounded with a simple pendulous condition of the abdominal walls.

STIMULANTS TO BE AVOIDED IN THE TREATMENT OF SKIN DISEASES.—In an article on diet in cutaneous affections, by Dr. G. H. Fox, the following suggestions occur: One very important point to be considered in preparing a diet list for patients with skin disease is the effect of alcohol, tea, coffee, and tobacco in retarding tissue-metamorphosis. To improve the nutrition of the skin, it is desirable that the processes of waste and repair be carried on without cessation. When alcohol or other stimulants are consumed to any extent, this desirable change or reconstruction of tissue is arrested, and the various organs of the body are impaired in the performance of their functions. The effect of beer upon an eczema is as marked as it is upon a gonorrhœa. Dr. Fox has sometimes thought it better for a patient to drink a whole bottle of whiskey than a single glass of malt liquor. In cases of pruritus, in private practice, the author has fallen into the habit of forbidding all stimulants, on the ground that they do no good and may do harm. In charity practice it has often struck him as the height of folly to prescribe medicine for patients who are living largely on tea and beer, and whose symptoms would speedily disappear under a judicious regulation of diet. Indeed, it is difficult to appreciate what dietetics will do in the treatment of cutaneous and other diseases unless we move, for the time being, a suspension of the Pharmacopœia.—*The Dietetic Gazette*, January, 1888.

POISONING BY HYOSCYAMIN.—Dr. Johnson, of Toronto, recently met with a case in which one-twelfth of a grain of hyoscyamin produced most alarming symptoms. Having investigated the subject, he has reached the following conclusions: 1. Poisoning by hyoscyamin resembles, and may be easily mistaken for, poisoning by atropine. 2. Hyoscyamin is identical with "light atropine," "light daturine," and "duboisine." 3. There are various preparations known as "hyoscyamin." 4. These preparations differ exceedingly in their strength. 5. There is a pure alkaloid hyoscyamin which should not be given, at first, in more than $\frac{1}{100}$ of a grain doses; and 6. There is a resinoid hyoscyamin, commonly dispensed as "hyoscyamin," which may be given in doses of $\frac{1}{4}$ to one grain.

7. It is advisable for the safety of our patients, when prescribing hyoscyamin, to name the manufacturer whose drug we wish used.—*The Canadian Practitioner*, January, 1888.

THE ADDITION OF AN ACID TO CORROSIVE SUBLIMATE SOLUTIONS TO INCREASE THEIR ANTISEPTIC POWER.—Dr. E. Laplace has made a series of experiments in order to determine whether sublimate dressings, such as gauze, cotton, rollers, etc., were really aseptic (*i.e.*, free from microbes) and antiseptic (*i.e.*, germicidal).

He found that while most of the dressings were aseptic, none of them exerted positive antiseptic powers. It has been proven by numerous investigations that when the sublimate solution is brought in contact with albuminous fluids, an insoluble albuminate of mercury results, which is entirely devoid of antiseptic properties. This takes place when sublimate dressings are applied to the body, and explains the poor results obtained from their use in some cases. Laplace found that the addition of an acid to the sublimate will prevent this coagulation. He especially recommends tartaric acid.

The following are his conclusions:

1. Acid solutions of corrosive sublimate exert the full effects of the drug even in albuminous fluids.
2. The combination of an acid with the sublimate increases its antiseptic powers, so that weaker solutions are required.
3. The acid sublimate dressing does not interfere with the employment of other measures—caustics, iodoform, etc.
4. The acid sublimate solution and gauze gives more satisfactory results in the laboratory and in practice than other disinfectants.
5. The wounds are not irritated.

The solution employed by Laplace is the following:

Sublimate	1.0
Acid. tartaric	5.0
Aq. destil	1,000.0

Gauze, cotton, etc., are soaked for two hours in a solution of:

Sublimate	5.0
Acid. tartaric	20.0
Aq. destil	1,000.0

The author obtained very satisfactory results with this dressing in the treatment of suppurating wounds. The fetor rapidly disappeared, granulation was established, and the dressings remained sterile, in one case for six days.—*Deutsche Med. Wochenschrift.*

THE RESULTS OF OPERATIVE INTERFERENCE IN ACUTE INTESTINAL OBSTRUCTION.—B. Farquhar Curtis, M.D., of New York, in a paper read before the Medical Society of the State of New York, presented an exhaustive *resumé* of the results of operative interference in acute intestinal obstruction. Statistics founded upon 339 cases of *true* laparotomy for *acute* obstruction gave a gross mortality of 68.4 per cent.; intussusception, seventy-six per cent.; volvulus, eighty-two per cent.; adhesions, sixty-six per cent.; bands, fifty-nine per cent.; internal incarceration, sixty-one per cent.; stricture, forty per cent.; tumors of the gut, seventy-four per cent.; foreign bodies, sixty-seven per cent.; miscellaneous, ninety-one per cent.; undetermined, sixty per cent. The mortality for operations performed in the first twenty-four hours after onset of the symptoms is sixty-two per cent.; in the second, seventy per cent.; in the third, seventy-three per cent.; but after that there is no regular variation in the percentage, because the operation was delayed in every case until the patient was reduced to about the same state of exhaustion. The most frequent cause of death was the bad condition of the patient, owing to the delay usually allowed in these cases. Out of the 232 fatal cases, in 103 the condition of the patient is described as bad, while the complicating peritonitis and gangrene of the gut found on operation in 28 others showed that the operation was delayed too long. In 20 cases the cause of obstruction was not found, and in 10 it was irremediable. Of deaths directly traceable to the operation there are only 45, 17 due to sepsis, 13 to shock, and in the rest death was probably due to shock and exhaustion. A very important factor in the mortality is the duration of the operation. When the obstruction could be removed without wounding the gut the mortality was only fifty-six per cent.; when it was necessary to establish an artificial anus (the obstruction being removed) it was seventy-three per cent., and when the gut was sutured, whether in its entire circumference or not, the mortality rose to eighty-three per cent. Although enterotomy (including colotomy) was for so long a time considered superior to laparotomy in the treatment of intestinal obstruction, it is better suited for, and more often resorted to in, the more chronic forms. Of late there has been a revival of interest in the operation, owing to the bad results of laparotomy; but in spite of this fact the published observations are not yet numerous enough to allow of very satisfactory statistical study, and for the present we must be content with the figures given by Treves—61 cases with a mortality of sixty-seven per cent. As enterotomy only relieves the symptoms and does not remove their cause, the mortality must be much reduced in the future before it can be placed upon a par with laparotomy as a method of treatment for acute intestinal obstruction.

STONE IN THE STOMACH.—Concretions, or stones, are not often found in the human stomach, though the bezoar of the abomasum and intestines of ruminants is well known, and in olden days was very highly esteemed as a remedy against poisons and infectious diseases, being even worn as a charm. Human intestinal agglomerates are occasionally found in oatmeal-eating districts, and have sometimes been dignified by the name of "avenoliths." An enterolith was found by Laugier in a human subject, the nucleus of which was formed by a piece of liquorice root. True gasteroliths are, however, occasionally found in human stomachs; thus Schönborn was able to collect seven such cases, all of which appeared to have formed round a nucleus of hair; one of these weighed two kilogrammes. Quite recently a Dutch physician, Dr. H. A. Kooyker, has described a case of true gastric concretion weighing 885 grammes, in which there was no nucleus at all. The patient was a middle-aged man, who was so averse to examination and manipulation of all kinds that it was very difficult to form a diagnosis of his disease. He occasionally vomited blood, and gradually became more and more emaciated. A tumor was felt in the epigastrium, but its nature was not made out until the post-mortem examination revealed a stone measuring eighteen by eight centimetres, nearly filling the cavity of the stomach. There was also a smaller stone, situated at the pyloric extremity. These stones were of a brownish color, and the large one contained several cavities. It had an offensive smell like that of fæces. A number of vegetable cells were found in it, but it was devoid of concentric or other structure. It does not seem to have been fully analyzed.—*The Lancet.*

OLIVE-OIL IN BILIARY COLIC.—Dr. Herman Ostrander, of Lansing, Mich., reports the following case of self-cure of biliary colic which was related to him by a young architect of that city. The gentleman's mother, who was a great sufferer from gall-stones, took, during one of her attacks, half a tumblerful of olive-oil, and repeated the dose in twenty-four hours. The result was the painless passage of more than forty calculi. On the occurrence of another attack, about a week later, she repeated the treatment and passed more than sixty calculi. Since that time she has been entirely free from these attacks, although several years have since elapsed.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY
WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, February 25, 1888.

THE ACIDITY OF THE GASTRIC JUICE, AND THE DIAGNOSTIC VALUE OF ITS VARIATIONS.

THE numerous observations which have been made, almost exclusively by German physicians, on the acidity of the gastric juice, and, in particular, the percentage of free hydrochloric acid in it, have produced important physiological and clinical results. Our readers will be interested, therefore, in a review of some of the more recent work in this line, work which deserves to be undertaken in this country to a greater extent than has yet been done.

The general facts claimed, with regard to the variations in the acidity of the gastric juice, are that in gastric cancer free HCl is absent; in other chronic gastric disorders it is diminished, increased, or unchanged, according to the nature of the trouble.

While Riegel, Kahler (*Prag. Med. Woch.*, Nos. 32 and 33), and others have examined a large series of cases of gastric cancer, and found no free HCl, even in early stages of the disease, Petersen (*Verhandl. des XVI. Congr. des Deutsch. Chur.*, 1887), and Cahn (*Verhandl. des VI. Congr. für inn. Med.*, Wiesbaden, 1887), have reported a few cases in which this acid was present in this disease. Dr. F. Spaeth also reports cases illustrating both its presence and absence. The last-named physician has devised a very simple apparatus for testing the presence or absence of HCl. He takes a small bullet, calibre No. 6, and wraps about it a silk thread, No. 1, which has been previously soaked in a 0.015 per cent. watery solution of Congo red. To this is fastened also a small piece of elder pith which has been soaked in blue litmus paper. The whole is attached to a long silk thread. The bullet and pith ball are swallowed and allowed to remain in the stomach for a minute, then drawn up. Any acid present turns the litmus pith to red, while if free HCl is present it turns the Congo-red thread blue. The other ordinary color-tests for HCl are methyl violet, which is turned blue with feeble solutions, green with stronger solutions, of the acid; thin solutions of red fuchsin are turned yellow; solutions of tropæolin are turned from red to brown. A strong solutions of lactic acid may effect the same change in the above agents. Uffelmann gives the test with a chloride of iron and carbolic acid mixture: ℞. Sol. acid. carbol., ten per cent., ʒ ijss.; aquæ destillat., ʒ v.; neutral liquor ferri chlorid., ♏j. This solution, Congo red, is decolorized by free HCl, made yellow by lactic acid, gray by fatty acids, is turned blue by free HCl, but not by organic acids. Only, accordingly to Wurster (*Centralbl. f. Phys.*, 1887, I., No. 11), there must be no free ammonia or ammoniacal salts present.

Several observers have of late contributed the results of their observations upon the acidity of the gastric juice.

Dr. A. Kirstein, assistant at Professor Rossbach's clinic at Jena, reports (*Thüringer Korrespondenzblätter*, No. 8, 1887) the case of a man who appeared to be suffering from gastric cancer. The contents of the stomach were examined repeatedly, on different days and at different hours, and the methyl-violet reaction to HCl was plainly obtained; yet after death the autopsy showed the presence of a gelatinous carcinoma of the mucous membrane, with metastatic nodules in the perito neum.

Cahn and v. Mering found that in close titarmetric examinations of the stomach acids in pyloric cancer, that the presence of HCl was the rule, its absence the exception. They also denied the usefulness of the methyl-violet reaction test, and of that of Congo red, 39 = 47, 49 — 52.

C. Honigmann and C. v. Noorden (*Zeitschr. f. klin. Med.*, Bd. xii., H. 1) confirm the accuracy of Cahn and v. Mering's titrate method, but deny that the acid found was free HCl, since it possessed no peptic strength. The acid reaction was due to acid compounds, and they claimed that the small amount of HCl secreted in gastric cancer united with albumen compounds and was absorbed. They assert, as against Cahn and Mering, that the absence of the color reaction in gastric cancer was due to absence of free HCl. In fine, they uphold the value of the color-reaction test and of its significance in the diagnosis of cancer.

Dr. J. Grundzach examined the stomach contents in several hundred patients, and in five cases detected a constant absence of hydrochloric acid. Even in the course of digestion the stomach never contained HCl, and it reacted either neutral or feebly acid. In one case this acidity was due to lactic acid. There was a great deal of mucus secreted; the morbid condition was apparently that of catarrh. The muscular power and movements of the stomach seemed to be unimpaired.

In the same journal with Grundzach's paper (*Berlin. klin. Wochenschr.*, No. 30, 1887), Dr. L. Wolff and Professor Ewald report eight cases of entire absence of free HCl from the gastric juice, partly in healthy persons, partly in persons with some slight stomach disturbance. They found also that after these persons were given ʒ ss. of dilute muriatic acid the tests for the acid in the gastric juice still showed its absence. They conclude that HCl may be absent in tests from the stomach in perfectly healthy persons; that this acid may be absent in diseases which are not of a carcinomatous nature. Ewald seems to regard the absence of free HCl as an important clinical fact in gastric cancer, but not as an essential diagnostic sign.

Dr. von Sohlern, of Kissingen (*Berlin. klin. Wochenschr.*, 1887, p. 947), made a long series of experiments in order to determine the normal percentage of HCl in the stomach. This has been done before, but the subject was gone over with especial care. The persons examined were fed with the same amount and kind of food, the stomach contents were examined three hours, and in some cases five hours, after the meal. The results gave an average of 0.22 to 0.28 per cent. of pure hydrochloric acid in the gastric juice of healthy persons, after meals. These figures are lower than those of Ewald and Szabo, but higher than those of Riegel. The latter experimenter, however, made his examinations five hours after ingestion of food, which will explain the discrepancy. They are a little higher than the average usually given, viz., 0.2 per cent.

The method employed by Sohlern was the ordinary one of titration. He thinks that we may look upon this percentage, 0.22 to 0.28, as the normal average, subject to some physiological variations, like the specific gravity of the urine, but not departed from markedly or continuously except from disease.

Dr. Sohlern having determined the normal average, proceeded to make further investigations in cases, first, of chronic gastric catarrh. Each patient was given the same "test meal" of soup, beefsteak, and rice, three hours after which the stomach contents were examined. In twenty-one cases the per cent. of hydrochloric acid was below the normal, ranging from 0.12 to 0.19. In one case only was there excessive acidity. The clinical fact is established, therefore, according to Dr. Sohlern, that in gastric catarrh there is a diminished secretion of free hydrochloric acid. With improvement the gastric symptoms cause increase in the percentage of acid.

In almost all cases there was some lactic acid present.

In fifteen cases of gastric ulcer, twelve of whom had given a history of hemorrhage, there was an increase in the percentage of hydrochloric acid except in one instance. This patient had been greatly reduced by frequent copious hemorrhages. The increase in percentage was from 0.29 to 0.41, it being on an average about double the normal amount. These observations are in harmony with the observations of Riegel, and are certainly of great importance.

The patients examined were persons whose age ranged between twenty and thirty-two years; eight were women, seven were men.

In six cases of gastric dilatation there was a diminution of the per cent. of acid, ranging from 0.08 to 0.17. Naturally some of these cases were complicated with catarrh, and the same condition as regards the acid secretions would be expected.

Twenty-five cases of nervous dyspepsia were examined. They were cases in which there was a general neurasthenic state, with evident irritability and hyperæsthesia of the gastric apparatus. In all instances the percentage of HCl was found to be normal. Sohlern's observations confirm, therefore, the opinion of Leube, that in nervous dyspepsia all the phenomena depend upon disturbance of the nervous mechanism, and its abnormal excitability.

No opportunities were had of investigating the condition of the stomach in gastric cancer.

A NEW TREATMENT FOR BOILS AND CARBUNCLES.

THE ordinary methods of treating boils and carbuncles by a "free, bold incision" often leads to good results, but the anticipation of this cutting is always such a terror to patients that surgeons would most gladly use a milder treatment, if certain that cure would follow. M. Verneuil, with an experience of half a century, has noticed with interest the different phases through which the treatment of these painful maladies has passed. Following in the footsteps of his teachers, he freely used the knife, to give it up only when the thermo cautery came into use. Cauterization, with subsequent application of carbolated dressings, gave him such good results that his rule was to use the knife only exceptionally, in the gravest cases, and then to use it unsparingly. In 1883 he observed a case which made him reflect and change his mode of treatment. Since that time he has confined his treatment absolutely to the application of carbolated powders, and these for all kinds of boils and carbuncles, large, small, diabetic, painful or indolent, closed or open, and covered with gangrene. For the small and medium-sized carbuncles, this method of treatment has been very successful, without pain or extension of the inflammation.

In a communication to the French Academy of Medicine, at a recent meeting, he says: "This mode of treatment, so simple, has shown itself superior to all others in causing the sufferings, supportable but none the less disagreeable, to cease quickly, and in promptly limiting the trouble—a thing which cannot always be guaranteed in advance." After citing a number of facts to prove this statement, he concludes as follows:

"1. The furuncle and carbuncle are only degrees of the same infectious disease, and should have the same therapeutic treatment.

"2. This consists of surgical interference and topical applications. The former often seems indispensable, or at least only suitable for the majority of cases; the latter particularly efficacious in mild cases, but only playing a subordinate part in the treatment.

"3 The opposite should be accepted to-day. Cutting should become less and less necessary, and should be reserved for the exceptional cases. On the contrary, topical applications (prominent among which stand the carbolated and borated solutions) employed in a certain way, and particularly in the form of powder used repeatedly and for a long time, are of remarkable efficacy, and at the same time are absolutely harmless and easy of application.

"4. These applications of powder quickly abort, with very few exceptions, boils and carbuncles. They arrest the progress of the disease in the gravest cases, ordinarily cause the pains to quickly cease, reduce the fever, disinfect the purulent and gangrenous centres, hasten resolution, and promote the formation of healthy granulations.

"5. This treatment is suitable for all regions, and for all forms and periods of the disease; it is never harmful, and leads to a cure in a large number of cases. It assists surgical interference when that is necessary.

"6. Finally, it tends to prevent auto-inoculation and general infection."

In this report it is seen that the Frenchman is nothing if not enthusiastic. This treatment, however, is exceedingly simple, and bearing as it does the endorsement of such a man as M. Verneuil, should be carefully tried, even by the most incredulous.

STOMACH-WASHING IN CHILDREN.

To wash out the stomachs of adults has, for a number of years, been practised extensively, since Kussmaul first proposed it for the treatment of various gastric disturbances. In spite of the decided value of this mechanical treatment of the stomach, apparently but few practitioners have given it a fair trial. The reason for this may be looked for in the fact that it is a procedure requiring more energy on the part of the patient than skill of the doctor, the swallowing of the tube, in the first attempts, being usually attended by wrenching and even vomiting, besides taking up considerable time.

The unpopularity of this therapeutic measure for adults, among practitioners, also explains why its application in the treatment of children is almost unknown, though Professor Epstein, of Prague, as early as 1880, had fully demonstrated its applicability and usefulness (*Prag. Med. Wochensch.*, 1880, No. 45). In spite of repeated publications and reports on this subject, however, the great majority of physicians having charge of children's wards in hospitals and of clinics have either entirely overlooked them, or at once made up their minds that the infantile stomach-tube was the toy of a specialist desirous of the inventor's fame, and even considered its application a rather dangerous measure. All of these authorities, however, never tried this method themselves on children. Not until lately did this question loom up again in the pediatrical literature of Germany, when a few adherents of stomach-washing published extensive reports (Epstein: "Jahrb. f. Kinderk.," Bd. 27, 1888; Lorey: *Ibidem*, Bd. 26; Ehring: *Ibidem*, Bd.27; and Demme: "Jennersches Kinderhospitalbericht," 18, p. 89, Bern).

The method is the following: All clothing pressing upon thorax and abdomen of the baby are removed, the child is placed on the mother's lap in a half-reclining posture, and the head held forward. While gently pressing down the tongue with two fingers of the left hand, the operator slowly introduces a soft catheter (No. 8 to 10 of Jaques' patent, according to age). Irrigation is then proceeded with in the usual manner, always using *small* quantities of warm water, or boric solution (1 to 100) at first. The procedure is repeated until the water returns perfectly clear.

The indications are said to be: 1. Mild forms of dyspepsia in very young children (two to six weeks old), retarding their growth and laying foundations for future serious troubles. In these cases a single irrigation is said to cure the trouble. 2. In acute gastro-intestinal catarrh of summer, and in the most violent forms of cholera infantum, this remedial procedure is stated to have saved many lives, particularly when applied *early*, stopping the most obstinate vomiting immediately, and cleaning the stomach so as to take away all remnant of decomposed food lodged between the folds of the mucous membrane, and any organic or chemical poison which may have been the cause of the attack from the outset. 3. In cases of obstinate intestinal catarrh and enteritis, the mechanical cleansing of the stomach (together, here, with enemata) will act like the washing out of an abscess, as the contents of this organ, especially in such cases, are often of fetid and decomposed character, remaining in there for days and infecting all food put into the stomach, and sending to the intestines colonies of infectious material, keeping up the disease of the bowels. One or two washings often cure the case.

In Epstein's clinic, five thousand children were treated by this method with unusually good results. As the rationality of this therapeutic measure is apparent, and as the only objection is the aversion of the children, and no accidents ever happened to any of the children operated upon, we think it advisable to give it a fair trial.

STRICTURE OF THE ŒSOPHAGUS.

EVER since the malady of the German Crown Prince has been announced, medical writers in all parts of the civilized world, but particularly in Germany, have vied with each other in describing diseases of the upper air-passages and that region. This may have been what suggested to Dr. Renvers to review the treatment of strictures of the œsophagus by means of permanent tubes (*Arch. f. kl. Med*, 1888, xiii., H. 6). The most usual forms of stricture are hysterical or spasmodic, fibrous, and cancerous. It is with especial reference to the latter form that the treatment has been used. In view of the fact that attempts made heretofore in this direction have met with little success, and about ninety-five per cent. of such cases were incurable, it seems very discouraging to attempt any assistance. The methods usually employed have been (*a*) repeated introduction of a sound, (*b*) operative procedure from the mouth or stomach, or (*c*) nourishing by the rectum. The objections to such procedures are that a daily introduction of a sound would hasten the growth of the cancer or break through the degenerated œsophageal wall; the other methods are in many cases fatal, and, if successful, prolong the life for a very short time.

The cases reported by Symonds, Mackenzie, and others do not show the good results of this treatment. Renvers' experience is confined to five cases of stricture from carcinoma, of which the last three had been previously treated by sounds; and, in addition, they suffered from severe complications of the organs of respiration, while the first two show a more favorable history. He first used a funnel-shaped soft-rubber tube, but found that the stricture and the muscular compression exercised during swallowing narrowed the lumen, and the body-temperature soon made the rubber soft and tender. He then used hard-rubber tubes with one side smoothed, to facilitate passing it by the projecting cricoid cartilage in old subjects. When the stricture was entirely confined to the upper part of the œsophagus, near the cricoid cartilage, the soft-rubber tubes were admissible. The introduction of the tube is often very difficult. It is kept in place by silk threads tied around the ear or around a tooth. At first the difficulty of swallowing is great, and at times morphia must be given to quiet the patient after the introduction of the tube. Soft or liquid food is alone to be used, and due care must be taken in its selection. The two successful cases of Dr. Renvers were living up to the last report, and were in health, having gained in weight.

Considering the fact that such cases are generally doomed in a short time, whether operated on or not, the introduction and use of permanent œsophageal tubes opens a way for great relief in this malady. Such cases should be kept carefully under observation, and a judicious selection of tubes as to size, position, composition, should be made, in order to give this mode of treatment its best results. These experiments of Renvers seem to be simply a continuation of the work begun by Symonds (*British Medical Journal*, April 23, 1887) and others, and is a valuable addition in confirmation of what many have considered a doubtful experiment.

THE CANCER-BACILLUS, AND THE SARCOMA-BACILLUS.

Dr. Carl Francke, assistant to Professor Von Ziemssen at the Clinical Institute, at Munich, reports to the Munich Society of Morphology and Physiology that he has confirmed the discovery of Scheuerlen regarding the bacillus of cancer. He has also discovered, himself, a bacillus of sarcoma (*Münch. Med. Wochenschr.*).

Dr. Francke's experiments began last November, and he had already seen and demonstrated the bacillus of sarcoma when Scheuerlen's discovery was announced. Francke has examined nine cancers since then, and in all has observed the carcinoma-bacillus and its spores essentially as described by Scheuerlen.

His observations on the sarcoma-bacillus were based on the examination of three cases. In each instance he found a bacillus which resembled the cancer-bacillus very closely, only it was thinner and longer. The cancer-bacilli are, on the average, 2 micro-millimetres long, and 0.4 micro-millimetre broad, while the sarcoma-bacillus measures 3 to 4 by 0.4 micro-millimetres. The sarcoma spores also resemble those of carcinoma, except that they are a little larger and have a sharply contoured pole. The two organisms develop alike in culture-media, producing a reddish-brown pigment. Inoculations of the pure cultures of the sarcoma-bacillus have produced no result as yet, but Francke thinks that four weeks is too short a time for sarcoma to develop, and he will make another report later.

THE OVERWORKED BOY PIANIST.

The fact that Josef Hofmann retires from the concert stage on account of physical disability ascribed to overstrain, enhances the interest of the medical profession in the marvel. It appears that in the early part of February his work was curtailed as the result of a medical examination, and now there is a prospect of its being discontinued altogether, at least for a time.

The amount of work performed by the boy pianist since May 17th last, has been prodigious. During that period, with the exception of one month's rest, he has daily, and sometimes also nightly, performed upon the stage before large audiences, amid great excitement and corresponding nerve-strain. Playing the most difficult compositions of the great masters, improvising, and leading large orchestras, there is developed in him, as the result of this increased mental activity and emotional exaltation, a condition of nervous prostration which may in the end blight promises of a wonderful genius. The physical examination of the little musician shows that no organic disease is present, but the symptoms presented are of sufficient importance to warrant the anxious conferences of Dr. Simon Baruch, the medical attendant, with the medical gentlemen who, on behalf of the manager, have been appointed a board of examiners. It appears from these examinations that Josef is a sturdy little fellow of pronounced neurotic type. As is usual with such prodigies, he at first enjoyed the triumphs of his performances; but lately some pronounced neurotic symptoms have been noticed. Recently, his parents observed urine stains on his under-clothing and pantaloons, and the boy finally acknowledged, with much bashful reserve, that he suffered from incontinence of urine during or immediately after the performances. This aroused the usual suspicions of the lay mind, of kidney disease. Chemical and microscopical examinations of the urine developed nothing abnormal. The temperature, however, has been above the health standard, $99\frac{4}{5}$° to 100° F. in the mouth, while the pulse has ranged from 96° to 100°, and has been constantly irregular in rate, rhythm, and tension. Taking these circumstances into consideration, together with the fact that the first medical examination demonstrated the necessity for reduction in his work, it would seem that the advice of the gentleman having charge of the case—to give the little hard-worked boy complete—rest is eminently sound. With ordinary boys of his age who are overtasked at school, there would be no question as to the policy to be pursued, but with the boy pianist, whose performances are worth so much money, it appears to be an altogether different matter.

THE CAUSE OF THE COLOR OF THE SO-CALLED CALOMEL STOOLS.

It is a curious fact that, notwithstanding the frequent use that has been, and still is, made of mercurous chloride, we really know, even yet, but little positively concerning its mode of action upon the liver and the secretion of bile. The drug has generally been supposed to increase the secretion of bile, but recent experiments would seem to prove that, instead of being an hepatic stimulant, it is really a sedative, diminishing rather than increasing the secretion of bile. The peculiar color of the stools, after a dose of calomel has been taken, has been urged, as a proof of the stimulating action of the drug on the liver, as this color was assumed to be due to the presence of an excessive amount of bile in the intestinal discharges. But this explanation has also been called in question, many asserting that the color is simply an indication of an incipient ileo-colitis excited by the irritant action of the mercurial on the intestines.

The latest explanation of the color of calomel stools is given by Dr. Józef Zawadzki, of Warsaw, in a recent number of the *Pamietnik Lekarski*. As a result of a number of experiments, conducted by him in the pharmacological laboratory of Professor Tumas, the author presents the following conclusions:

1. The action of calomel is to prevent decomposition of the bile and other contents of the intestines.

2. This action does not depend upon the presence of calomel as calomel, but upon that of gray oxide of mercury, formed from mercurous chloride in the presence of an alkali.

3. The color of the stools is due to the presence of biliverdin, which passes unchanged owing to the restraining influence of the gray oxide, and which is also

formed from the bilirubin, and perhaps from the hydrobilirubin as well, through oxidation by the mercurous oxide, according to the following formula: $C_{16}H_{18}N_2O_3$ (bilirubin) + $2Hg_2O = C_{16}H_{18}N_2O_4$ (biliverdin) + $HgO + 3Hg$.

4. In those cases in which the characteristic color of the stools is not present, the cause is to be referred to a failure of this oxidation of the coloring matter of the bile through some morbid action within the intestinal canal.

Obstruction to the passage of bile, if complete, should also prevent the formation of the "calomel stools," if this explanation of the action of the mercurial be the correct one.

News of the Week.

THE NEW YORK CANCER HOSPITAL.—Since the opening of this hospital, fifty-seven patients have been admitted for treatment, and thirty-seven operations have been performed. The warming and ventilation of the building is all that could be wished. There were at one time seven cases of advanced epithelioma of the cervix in one of the circular wards, and not the slightest unpleasant odor was perceptible on entering the room. No cases, however hopeless, or however destitute of means, have been refused admission.

DR. JAMES CRAIG.—The death is announced of Dr. James Craig, of Jersey City, in the fiftieth year of his age. Dr. Craig was born in Scotland; he graduated in medicine from the New York University in 1861, and had been actively engaged in practice ever since. He was attending physician to St. Francis' Hospital.

ACUTE INFECTIOUS PHLEGMON OF THE PHARYNX is the title given by Professor Senator to a disease which he regards as a new one. That is to say, though observed by others, its clinical distinctions and pathology have not been made out. It seems, however, from the description, that the "new disease" is only another name for what has been termed erysipelas of the pharynx.

WHAT THE Germans would call a jubilee was celebrated on December 21st, by James L. Cabell, M.D., LL.D., Professor of Physiology and Surgery, in the University of Virginia. It was the anniversary of the fiftieth year of Dr. Cabell's connection with the college.

THE PATIENT WITH A CEREBRAL TUMOR, which was removed by Dr. Weir, at the New York Hospital, recovered sufficiently to go to his home in Bridgeport, Conn. We learn that he is now dead.

THE CROWN PRINCE AND ENGLISH PHYSICIANS.—One of the morning papers goes to the expense of telegraphing from London an extraordinary story, to the effect that the introduction of an English doctor into the Crown Prince's case was done in order to prevent an early operation for cancer, thereby prolonging the Crown Prince's life for a time, but making ultimate recovery impossible. Meanwhile, the Kaiser was expected to die, thus making the Crown Prince emperor and leaving his widow (an Englishwoman) a millionnaire dowager Empress, instead of a mere Princess! It is added: "Of course the implication in all this is that the English deliberately plotted the sacrifice of whatever chance of ultimate recovery the Prince had to the prospect of his becoming Emperor just long enough to leave their Princess in the possession of imperial revenues and estates and a Crown rank." We give the above as an illustration of the fantastic stories which London correspondents, who have to cable two columns of something for Sunday morning papers, can devise.

VIRCHOW'S REPORT ON THE CROWN PRINCE'S DISEASE.—The *Klinische Wochenschrift*, in an article on the condition of the Crown Prince, approves the report made by Professor Virchow, in which he says the particle coughed up by the Prince was a dead, decayed portion of the larynx which had become detached from the surface, leaving a cavity of a depth in some places of four millimetres. He found nothing to indicate a process involving gangrene. He did not see either pus-corpuscles or suppurating cells. In most places he found nothing pointing to the presence of any foreign substance. Rather a large portion of the particle coughed up was detached from an almost indurated spot, and had the form and appearance of a flat wart, in which, when cut open, a solid, whitish kernel, with a darkish, rather thick envelope was discernible to the naked eye. Within this kernel the microscope revealed clusters of epidermoidal cells, many of which had become quite homogeneous. The report draws no conclusions as to the nature of the disease.

THE FRENCH CONGRESS OF SURGERY holds its third annual session in Paris, on March 12th to 17th. The subjects to be discussed are the radical cure of hernia, the treatment of empyema, the cause of relapses after removal of tumors.

THE Fifth International Veterinary Congress will be held in Paris in September, 1889. Professor Chauveau is President of the Committee.

THE STATE HEALTH BOARD'S REPORT.—The annual report of the State Board of Health gives the total number of deaths throughout the State for 1887 as 96,453. Of this number, 35,114 deaths were of persons under five years of age. Consumption caused 11,609 deaths; diseases of the nervous system, 9,957; small-pox, 175, and typhoid fever, 1,327. The Board's report adds confirmation to the possibility of milk becoming the carrier of fever-germs, and recommends systematic supervision of sources of milk-supplies. Recommendations are made as follows: That power be given to the Superintendent of Public Instruction to enforce through Trustees the sanitary improvement of schools; that the Supreme Court, as well as county judges, be empowered to approve regulations of the Board as to the sources of water-supply for cities; more thorough organization of local health boards; relative to the quarantine station; that the health officer of the port of New York, with the State Engineer, be directed to prepare plans for such remodelling of the station as is necessary, and that these plans be submitted to the Board for approval.

LONDON MEDICAL RECORD.—The proprietorship of this journal has been changed, and it is to be continued, with its name changed to the *London Medical Recorder*.

A New Medical School has been organized at Rome, Italy, in connection with a newly founded institute, the Policlinico Umberto I. The arrangements in the new building for clinical and scientific work are on the most ample scale. The work is under the direction of Professor Bacelli.

The Laicization of the Paris Hospitals will shortly be complete. The religious staff at the Charité was dismissed a short time ago. The laicization of the Hôtel Dieu and the Hôpital St. Louis will follow in the course of the year. The laicization of the hospitals was begun in 1878, with the Hôpital Laënnec. Since that time the Administration of the Assistance Publique has organized a training-school for nurses at the Hôpital de la Pitié. The nurses are taken from there to replace the religious nurses, whenever a fresh hospital is laicized.

German Medical Congress at Wiesbaden.—The seventh annual Medical Congress will take place at Wiesbaden from April 9th to 12th, Professor Leube, of Würzburg, being the president.

Statistics of American Laparotomies.—The *Pittsburg Medical Review* gives, in tabulated form, the statistics of 422 laparotomies performed by American surgeons in the past two years. The general classification and results were: Laparotomies for removal of ovarian and parovarian tumors, 207; mortality, 13 per cent. Laparotomies for removal of ovaries not the seat of tumor, 115; mortality, 8.7 per cent. Laparotomies for other purposes than the removal of ovaries, 100; mortality, 31 per cent.

Christmas Gifts to the Crown Prince's Physicians.—It is reported that Sir Morell Mackenzie has received as a present a valuable case of instruments; Herr Krause, a diamond pin; Herr Schroeter, two superb Japanese vases; Herr Bergmann, twenty-four silver table-ornaments; and Herr Schmidt, a gold inkstand.

Doctors and Infectious Diseases.—The daily papers of the past week record this interesting item: "Dr. Edward Russell, of Brooklyn, who was arrested for concealing a case of small-pox, was fined $50 by Justice Walsh. Dr. Russell is determined to appeal the case."

The Discoverer of Chloroform.—The Chicago Medical Society, at its regular annual meeting, concurred in the unanimous report of its special committee awarding the credit of priority of discovery of chloroform to Dr. Samuel Guthrie, of America, giving references to authorities on which its conclusion is based. The report was ordered published.

Expiring Poison.—M. Brown-Sequard and Dr. Arsonval, and, independently, M. R. Wurtz, have discovered a volatile poisonous alkaloid in the expired air. This is found by Wurtz to be identical with an alkaloid circulating in the blood, and it is suggested that some of the phenomena of phthisis are due to imperfect excretion of this poison.

Chronic Nephritis with Large White Kidney may be due to an auto-toxic condition, according to M. Gaucher. The liver does not act sufficiently, and incompletely oxidized nitrogeneous products, such as leucin, tyronin, creatin, xanthin, etc., circulate in the blood and irritate the kidney. He has produced the large white kidney experimentally, by injecting these substances into animals.

California State Medical Society.—The annual meeting of the Medical Society of the State of California will be held in San Francisco, commencing April 18th.

Why Didactic Lectures?—The editor of *Gaillard's Medical Journal* refers to the letter upon the subject of didactic lectures recently published in the columns of The Medical Record, and says that, "Though the writer has carried the strain to too high a point, he has undoubtedly struck on the key-note of an error that exists to a detrimental extent in some of our diploma-giving medical colleges." He adds: "We regard the note-book as the curse of the medical student, and as the enemy of consecutive thought and memory. Instead of allowing his mind to follow the thread of the discourse, the student attempts to trace it on paper with his pencil. Let note-books be proscribed, and the medical student will take renewed interest in his didactic teacher, and find pleasure where he expects ennui." This is carrying the matter to quite as great an extreme. The note-book may be very helpful, and even indispensable, if properly used. The art of using it should be taught.

The Danger of too many Consultants.—Sir James Paget, in a lecture on "Dissection Poisons," said: "Sir William Lawrence used to say that he had not known anyone to recover on whose case more than seven had been consulted. Our art has improved. I had the happiness of being attended by ten—Sir Thomas Watson, Sir George Burrows, Sir William Jenner, Sir W. Gull, Dr. Andrew, Dr. Gee, Mr. Cæsar Hawkins, Mr. Savory, Mr. Thomas Smith, and Mr. Karkeel. In this multitude of counsellors was safety."

Hydra-naphthol and Beta-naphthol are said to be identical compounds.

Prevalence of Syphilis.—The percentage of syphilis in 620 patients, at the Berlin Poliklinik, was 11.12 per cent. In Bernhardt's clinic, at Vienna, and among private patients, 150 in all, six per cent. had syphilis. Neumann, in the Moabite Hospital, at Berlin, found among 861 male patients that 22.4 per cent. had had syphilis. Of these, 11.8 per cent. had tabes dorsalis; of the non-infected, 0.9 per cent. had tabes.

Promoting the Cause of Higher Medical Education.—An important resolution was adopted by the California Board of Medical Examiners, at its meeting on January 4, 1888. It was as follows:

"*Resolved*, That on and after April 1, 1891, the Board of Examiners of the Medical Society of the State of California will not grant certificates to practise medicine on diplomas issued after that date, by colleges which do not require that all candidates for graduation shall have studied medicine not less than three full years, and shall have attended not less than three full regular courses of lectures, delivered during three separate years."

Medical graduates will have to bear in mind the fact that they must have taken "three full regular courses of lectures" in order to be able to practise medicine in California.

Dr. Alexander W. McCoy has been elected Professor of Diseases of the Throat and Nose in the Philadelphia Polyclinic and College for Graduates in Medicine.

Pathology of Myxœdema.—Dr. Ord has contributed $500 toward the expenses of investigating the pathology of myxœdema.

The Kansas State Medical Society will hold its next annual meeting in Representative Hall, Topeka, May 1, 2, and 3, 1888.

The Illinois State Medical Society will hold its next annual meeting in Rock Island, commencing at 10 a.m., May 15, 1888.

Successful Removal of a Spinal Tumor.—A patient of Dr. Gowers was recently shown, at the London Medical and Chirurgical Society, from whom a spinal tumor had been successfully removed by a surgical operation. He had spent about three years in severe pain, which was most intense just below and inside the angle of the left scapula, and was accompanied by absolute loss of motion and sensation of the body and limbs below that level. The upper border of the anæsthesia was distinctly in the region of the fifth intercostal nerve on the left side; on the right it was less accurately defined, but did not extend higher. All the symptoms agreed with those of tumors of the spinal cord, and the intense pain afforded ample justification for making an attempt to excise the tumor. Mr. Victor Horsley accordingly removed the spines and parts of the laminæ of the fifth and fourth dorsal vertebræ; but not until the third vertebra had been similarly treated did the tumor come into sight. It was a small oval myxoma, compressing and making a deep impression on the left side of the spinal cord below the third vertebra. It was easily shelled out, and under careful antiseptic treatment the temperature did not rise more than 1° F. The wound healed rapidly, except at the uppermost point, where a drain had been left in by which a little cerebrospinal fluid flowed away very slowly. For three or four weeks the former acute pain did not lessen, and even at times seemed more agonizing; but after that it gradually and intermittently decreased, and now, after seven months, is entirely gone; the sensation and motion of the body and legs are almost completely restored. This is the first time that such an operation has been attempted.

Cheap Medical Practice in Paris.—A federation of clubs and similar societies in Paris has been formed, under the title of the "Union Médicale des Sociétés de Secours Mutuels du Département de la Seine," with the object of cheapening medical attendance. A large number of practitioners have received a circular inviting them to become members of the medical staff of the Union Médicale. Some extracts from the rules of this body are enclosed, from which it appears that the annual remuneration is fixed at 2 francs per head in the case of adults, and 1 franc, only, for children under sixteen years of age. The amount is to be paid quarterly. Medical officers must visit members as soon as possible after being sent for; they must examine candidates for admission. They must, in case of sickness or absence, find a substitute, and three months' notice must be given of retirement.

Carcinoma of the Larynx in Different Countries.—M. Mollière, of Lyons, thinks that carcinoma of the larynx must be much more common in Germany and Italy than in France and England, for while he himself, though he sees annually some seven thousand surgical patients, has never had a case suitable for extirpation of the larynx, and this operation is known to be a very uncommon one in France and in England, no less than seventy-six cases were mentioned at the Dresden Congress, and one hundred and one operations are referred to in the Italian *Archives of Laryngology*.—*Lancet.*

Reviews and Notices.

Atlas of Venereal and Skin Diseases. Edited by Prince A. Morrow, A.M., M D., Clinical Professor of Venereal Diseases, Medical Department University of New York, etc. New York: William Wood & Co. 1888.

One-eighth of the diseases afflicting man is said to be caused by venereal affections and their sequelæ, while the very large number and variety of skin diseases is well known to every practitioner of medicine. Considering, therefore, the extent and scope of the field properly embraced in the title of this work, its accomplished editor and his enterprising publishers have set for themselves no light task.

The practical demonstration of the varying characters of disease by faithful illustrative plates is a feature in scientific publications which cannot be too highly appreciated by the student and practitioner. In no departments of medicine are accurate illustrations of lesions more necessary or desirable than in those of skin and venereal diseases. No text-description, however carefully made, can equal a fine colored illustration of a chancre, a chancroid, or a mucous patch. To present these and kindred lesions in fine and realistic chromo-lithographs is high art. Each illustration carries with it a benefit which the practical man, especially the one denied of clinical opportunities, cannot too highly value.

Judging from the three numbers of this "Atlas of Venereal and Skin Diseases" which are before us, it promises to fulfil its mission as a valuable practical guide to the busy practitioner and careful student as none other has yet done.

The Atlas is issued in monthly parts, each containing five imperial-folio chromo-lithographic plates, with from fifteen to twenty pages of descriptive text of similar size. The editor, Dr. Prince A. Morrow, has succeeded in this latter in presenting in an admirable manner an intelligent epitome of the subjects of skin and venereal diseases, and of matching them with beautiful and striking flesh-tinted and life-sized illustrations of typical lesions. Associated with him in this work are Professors Kaposi and Neumann, of Vienna; Drs. Hutchinson, of London; Fournier, Hardy, Ricord, Cullerier, Besnier, and Vidal, of Paris; E. L. Keyes, F. N. Otis, and H. G. Piffard, of New York; and J. Nevins Hyde, of Chicago.

A marked feature of the publication of this Atlas is the fact that all the contributors here named, and especially Professors Kaposi and Neumann, of Vienna, are in this relation to the Atlas by their own consent, and not, as so frequently happens to foreign authors, whether they will or not. We are informed by the publishers that they have purchased from both Drs. Kaposi and Neumann the sole right to reproduce in America such of their elegant plates of skin and venereal diseases as may be desirable for Morrow's Atlas.

The three first fasciculi have been published, and are models of typographical art, while the chromo-lithographic illustrations are equal in excellence to beautifully finished water-colored drawings.

Reports of Societies.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, February 3, 1888.

George F. Shrady, M.D., President, in the Chair.

Dr. Samuel Sexton referred to several cases of

FACIAL PARALYSIS

which he had seen in which the symptoms simulated disease of the ear. There was severe pain, not at the point of exit of the nerve, but at the back of the head and side of the neck. There was no tenderness along the course of the nerve. In one case, in which there was pain in the mastoid and periauricular regions, there was absolute and immediate deafness. There was no hyperakusis. In this case there was also marked hyperæsthesia of the skin.

Dr. C. L. Dana said that it was certainly very rare to encounter pain when there was affection of the facial nerve alone. He thought it not improbable that there might have been compression, from some cause, of the trifacial nerve, to which the pain could be attributed.

Dr. Beverley Robinson reported a case of

DIPHTHERIA

with the following history: Flora M——, four years of age, had been a patient in the orthopædic service in St Luke's Hospital. On November 21st the patient was noticed to have a slight cough of a croupy character. The temperature at midnight was 100° F. The following morning the fauces were seen to be markedly reddened, and several small patches were observed on the left tonsil. The case was seen by Drs. Davis and Robinson, who believed it to be one of follicular tonsillitis with, possibly, some false membrane in the larynx. On November 23d there was marked dyspnœa, with some cyanosis of the lips.

INTUBATION OF THE LARYNX

was performed by the house physician, Dr. Traub, and a marked improvement in the dyspnœa and general symptoms followed. Examination of the urine at this time showed a specific gravity of 1.024; no albumen. On the following day signs of a general bronchitis were noted, but there was no dyspnœa, and the child seemed to be very comfortable. On the next day the dyspnœa returned, and the tube was removed and found to be clogged with tenacious mucus. The temperature at this time was 104.2°. Two days later the tube was again inserted, on account of a return of the dyspnœa, and gave relief as before. The patient now became very restless, and died suddenly on the morning of November 28th, apparently from cardiac thrombosis.

At the autopsy the mucous membrane of the bronchial tubes was seen to be congested and covered by a false membrane, nearly a line in thickness in the larger tubes and apparently blocking up completely the smaller tubes. The mucous membrane of the larynx and trachea was covered by a false membrane nearly a line in thickness. The tube was still *in situ*, and where it was in contact with the tracheal and laryngeal walls the false membrane was less abundant.

Dr. Robinson called attention, especially, to the difficulty of diagnosis in the beginning and to the absence of albumen. He believed that Dr. Ball had also seen the child and had concurred in the diagnosis of follicular tonsillitis.

Dr. A. Brayton Ball said that he had seen the case, but had believed it to be diphtheria. He had now under treatment a gentleman, forty-five years of age, suffering from one of the most severe attacks of diphtheria he had ever seen.

THE UVULA WAS ENORMOUSLY SWOLLEN AND COVERED WITH MEMBRANE,

and there were also two large patches on the pharynx, but there had been none on either tonsil. The membrane was just now beginning to disappear. During the entire course of the disease there had been no fever at all. In his experience, the more the tonsils were covered the higher usually was the fever, but he was getting to doubt more and more his ability to distinguish with any degree of certainty between diphtheritic and follicular tonsillitis.

The brother of the gentleman whose case he had just related was subject to attacks of what was called follicular tonsillitis, suffering from them every winter. He had an attack this year which differed from those preceding only in the great amount of prostration accompanying it. There was high fever, but the urine was free from albumen. This patient's physician diagnosed the affection as one of follicular tonsillitis. Ten days later, however, the brother, Dr. Ball's patient, came down with the unmistakable attack of diphtheria from which he is recovering, and ten days after this his sister was attacked with what had the appearance of follicular tonsillitis. In her case, however, as in that of the first one of the family attacked, the prostration was most marked. In none of the three cases was there any albuminuria.

Dr. Ball was satisfied in his own mind that all three of these cases were true diphtheria, although two of them presented the appearances rather of follicular tonsillitis. He believed that the second brother caught the disease from the first, and the sister, probably, from him.

Dr. Robinson said that, in this country, physicians recognized usually only diphtheria and follicular tonsillitis, though Da Costa has described a form of "membranous sore throat" differing from either. Rilliet and Barthez, however, speak of a distinct affection of a benign character which they call

HERPETIC SORE THROAT,

or membranous angina. He would ask Dr. Ball if he had ever seen any cases of this nature.

Dr. Ball replied that he had never recognized such an affection. He was certain, however, that the case related by him was not of this nature, but was one of genuine diphtheria.

Dr. William T. Bull then read a paper (see p. 205) entitled

REPORT OF CASES OF INTESTINAL OBSTRUCTION TREATED BY LAPAROTOMY.

Dr. G. L. Peabody agreed with the author of the paper that operation should be resorted to after medical treatment has proved ineffectual, but he thought the limit of twenty-four, or even of forty-eight, hours was too narrow. He had now a patient who was convalescent, who had been without a passage from the bowels for ten days and was supposed to be suffering from strangulation. The obstruction had, however, yielded to medical treatment. It was impossible to lay down any definite period for waiting before a resort to surgical measures, but certainly the latter should not be undertaken until after persistent efforts to relieve the obstruction had been made and failed.

Dr. Polk thought the general condition of the patient should be relied upon to determine the proper time for operating. When symptoms of distress supervene and it becomes evident that the patient's vitality is being reduced, then delay is no longer admissible. He reported two cases in which he had operated. The first patient was a woman, fifty-five years of age, who had had some symptoms of obstruction for about three months. It was thought that the obstruction was in the sigmoid flexure. A small tumor, about the size of a hickory-nut, could be felt to the left of the uterus, resembling a cystic ovary except that it was too movable. An incision was made in the median line, and the point of constriction was picked up and drawn out within two minutes. The intestine was greatly distended and the mesorectum was found to be in a cancerous condition, so resection was not performed, but the intestine was stitched to the abdominal wall and, as the patient lived in the country and could not be seen again, it was opened at once. The patient has made a good recovery. The speaker was struck with the advantage of making the

OPENING IN THE MEDIAN LINE.

The second case was that of a young woman who had presented symptoms of intestinal obstruction, which it was thought could be overcome by means of cathartics, but the attempt to do so failed. After incision it was found that rupture of the intestine had occurred. The patient died two weeks later. She gave a history of old pelvic inflammation.

Dr. Weir agreed with Dr. Bull that these operations were often made too late. He would not go so far as to say that every case of intestinal obstruction was a surgical one, but he thought that a surgeon and physician should watch the case together from the commencement. A great deal of time was often lost in getting the surgeon thoroughly acquainted with the case, when he was not called in until the last moment. He had had seven cases, three of lumbar colotomy and four of laparotomy. In three of the laparotomy cases the obstruction was caused by bands. In one case there were two constricting bands, the second of which was discovered only at the autopsy.

He thought the length of time consumed in laparotomy was a very important consideration. The reader of the paper had spoken of the great amount of shock following eventration, but he had seen considerable shock caused by the introduction of the hand into the abdominal cavity and the search for the point of obstruction, even when the intestines were not taken outside. He did not believe in the heroic incision, along the entire length of the abdomen, which had been proposed by one operator, but he thought that a tolerably long incision was best, especially when the intestine was greatly distended, in order to facilitate the search for the obstruction and shorten the operation. It was not always feasible to make an artificial anus in the median line, especially when the obstruction was found in the ascending or descending colon. As a substitute for the artificial anus, with its discomforts, Dr. Senn had proposed establishing what he called an

INTESTINAL ANASTOMOSIS,

by making a communication between the portions of bowel above and below the seat of obstruction. He used two plates of decalcified bone, which were inserted into the lumen of the two portions of intestine and united by sutures, thus bringing two broad surfaces of peritoneum in apposition and securing firm union.

Dr. Robinson was in favor of exhausting medical means, as long as the patient's condition seemed to warrant it, before resorting to operation. He thought that better effects were often to be obtained from frequent doses of laxatives than from powerful purgatives. It was not always an easy matter to decide whether fecal matter had passed the point of obstruction or whether what appeared in response to enemata was simply part of the accumulation in the portion of bowel below the seat of obstruction. In order to decide this point, a dose of calomel might be of the greatest service by reason of the color which it imparted to the stools.

Dr. Harrison had found calomel very useful in one case. If it was once established with certainty that total obstruction existed, he thought further delay was useless.

Dr. J. B. Hunter thought that by far the most difficult point to decide was when, and when not, to interfere. He recalled one case in which the hour for operation had been determined upon and everything was in readiness, but the obstruction yielded, the temperature went down, and the patient recovered without operation. In a certain number of cases the operation fails to give relief even when the stricture is found, as when extensive adhesions are present. He did not regard it as always a safe thing to give calomel when obstruction existed, for he had seen a case of extreme salivation from five grains of this drug.

Dr. B. F. Curtis had been surprised to find, in looking over the literature of the subject, how often surgeons had operated upon patients in a state of extreme collapse. The worse the condition of the patient the longer should be the abdominal incision, for in such cases saving of time in operating was of extreme importance.

Dr. Draper recalled a case, which had also been seen by Dr. Weir, occurring some years ago, in which the knowledge now possessed of intestinal obstruction would doubtless have been of great assistance. The patient had pain, nausea, and vomiting, but for a week there was no distention of the bowels nor any symptom of peritonitis. The patient died on the eighth or ninth day of his sickness, and at the autopsy a large gall-stone was found which had ulcerated from the common duct into the duodenum and had then passed down nearly to the cæcum. The case would have been a very favorable one for laparotomy. When the obstruction exists in the small intestine, he would advise early operative interference, but when it is in the large intestine, and there is much tympanites, he would delay operation. Many of the latter cases would be found to yield to the opium-treatment.

Dr. Weir remarked that this case showed well the advances which surgery had made. It might not have been necessary to open the intestine, even had laparotomy been performed, for the stone might possibly have been crushed with padded forceps, broken up with a needle, or pushed along into the large bowel.

Dr. Loring recalled a case which he had seen a number of years ago, in which no passage from the bowels took place for five days, and there was great doubt whether obstruction existed or not. The symptoms finally subsided, and the patient recovered. Opium had been used freely in this case, and he would like to ask Dr. Bull whether at the present time, in view of a possible operation, he would give the drug so liberally.

Dr. Bull replied that he would give opium in sufficient quantity to quiet the pain, if possible, but not so as to narcotize the patient. He was learning to avoid the use of morphine, as far as was compatible with the comfort of the patient, in abdominal complaints. He did not insist upon a limit of twenty-four or forty-eight hours as an inflexible rule in every case, but wished that statement to be taken in a very general sense. Persistence of the pain and vomiting and failure to obtain a movement of the bowels were the indications for operation. It might possibly happen that a case now and then would have recovered without surgical interference, but he believed that such a plan would be for the best interests of the greatest number of patients. What was now needed was a greater refinement in diagnosis. The main point of the existence of obstruction seemed to him to be comparatively easy to determine, but the question of the locality or of the nature of the obstruction was one that was often very difficult to decide.

The Society then adjourned.

Professional Devotion.—Dr. Eustace, of Alresford, England, is to be congratulated upon the successful result of a heroic operation. A short time since this gentleman was summoned at night to the bedside of a patient who was sinking from the effects of previous uterine hemorrhage. After an unsuccessful attempt at direct transfusion from his own arm, he drew off six ounces into a basin and injected it with a syringe, with the result that the patient ultimately recovered.—*Med. Press.*

MEDICO-CHIRURGICAL SOCIETY OF GERMAN PHYSICIANS OF NEW YORK.

Stated Meeting, February 6, 1888.

L. Weber, M.D., President, in the Chair.

Dr. M. Einhorn gave a

PRACTICAL DEMONSTRATION OF THE MOST RECENT TESTS FOR HYDROCHLORIC ACID IN THE CONTENTS OF THE STOMACH.

He said that the importance, especially in chronic diseases of the stomach, of ascertaining the chemical function of the affected organ, must be evident to all. As was well known, the chemical function of the stomach consisted in that it responded to stimulation (which was physiologically produced by the ingestion of food) by the secretion of a fluid, the principal ingredients of which were hydróchloric acid and pepsin. By means of these the gastric juice was enabled to digest albumen.

But while pepsin exerted its action though present in very small quantities (according to Petit one part of pepsin dissolves in seven hours five hundred thousand times its weight of fibrin), and was harmless even when present in larger amounts, the same could not be said of hydrochloric acid. Thus, in the proportion of 1 pro mille, hydrochloric acid interfered with digestion, and in quantities of 3 pro mille and over it became positively injurious to the stomach-walls.

Therefore it was always important in gastric derangements to discover whether hydrochloric acid was present at all, and if so, whether normally, less than normally, or excessively present.

For the examination of hydrochloric acid we proceeded as follows:

The stomach contents, obtained in the usual way by means of a tube, were filtered. The reaction of the fluid was then determined by means of litmus-paper. If acid, the question arose whether this reaction was due to acid salts or to free acids. For the determination of this point a few drops of the fluid to be examined were poured into a test-tube containing a small quantity (1 to 2 c.c., *i.e.*, fifteen to thirty grains) of a saturated alcoholic tropæcolin solution. Free acids produced a deep, dark, brown-red color, the presence of acid salts a yellowish tint.

To decide whether the obtained acid was of an organic or inorganic nature (*i.e.*, hydrochloric acid), the following reactions had been, until lately, generally in use:

Weak alcoholic solutions of about 0.2 per cent. methylviolet, Congo red, fuchsin.

The changes arising from these anilin-colors with hydrochloric acid were:

1. Methylviolet + HCl = blue.
2. Congo red + HCl = dark blue.
3. Fuchsin + HCl = yellowish, colorless.

Besides these, there were two other well-known reactions. One was Uffelmann's test, an alcoholic extract of bilberries giving, with hydrochloric acid, a red color. The second was Rheoch's test. The reagent fluid consisted of:

Sol. kal. rhodan. (ten per cent.)	2.0
Liq. ferri acet. neutr	0.5
Aq. dest	q. s. ad 10.0

A few drops of this mixture are poured upon a white plate, and one to two drops of the fluid to be examined are brought in contact with them. The presence of hydrochloric acid changes, after a few seconds, the yellowish color of the mixture into a dark-red one.

Of these various tests the reactions produced by methylviolet and Congo red were the most reliable.

Nevertheless, all the above-mentioned tests, including that of Uffelmann and Rheoch, possessed the disadvantage of giving the same reaction with concentrated organic acids. Moreover, the delicacy of these tests was lessened by the presence of peptones. For these reasons, in order to obtain a positive knowledge of the presence of hydrochloric acid by those tests, it was necessary to determine the degree of acidity of the fluid to be examined, and also to be sure that no organic acid, of similar concentration, could have produced the color-changes mentioned.

Therefore the finding of a reaction for hydrochloric acid which was not also produced by the most concentrated organic acids, and the delicacy of which was not lessened by the presence of peptones, must be regarded as a decided step in advance. The phloroglucin-vanillin test answered to those requirements. It had been used in chemistry by Singer and Etti, and during the last year it had been introduced into medicine by Guenzburg.[1] This test is performed as follows: A few drops of the following solution—two parts phloroglucin, one part vanillin, and thirty parts alcohol—instantly produce, with concentrated hydrochloric [2] acid, an intensely red color. In the presence of dilute hydrochloric acid a red color arises after warming slightly a few drops (two or three) of the fluid to be tested with about the same quantity of the reagent. A small white porcelain plate and an alcohol lamp are used for this purpose. During the evaporation of the fluid, cherry-red crystals are formed. Even $\frac{1}{20}$ pro mille of hydrochloric acid will produce a red zone at the edge of the fluid, when employing this test.

Lately the speaker had been using Guenzburg's test exclusively, because of its accuracy and extreme delicacy.

The speaker here demonstrated successfully the above hydrochloric acid tests, as well as the phloroglucin-vanillin test, employing a fluid which he had obtained that morning from the stomach of a patient suffering from gastric hypersecretion. He also showed that a twenty per cent. solution of lactic acid—*i.e.*, the acid which occurs in the stomach oftener than any other organic acid—does not give the slightest reaction with Guenzburg's test.

The phloroglucin-vanillin test was very easily performed, and was, in addition, the surest and most sensitive. Consequently it should be preferred to all other tests, and could be recommended without any further consideration.

As regards the quantitative determination of the acidity of the stomach contents, this was of great value for determining the choice of therapeutic measures to be instituted. During the past few months von Sohlern [3] had showed that in most stomach diseases, with too much or too little hydrochloric acid, the normal proportion became re-established after a course of treatment lasting from three to six weeks.

According to von Sohlern the normal quantity of hydrochloric acid occurring three hours after a meal consisting of one plate of bouillon, rice, and beefsteak, equalled 0.22 to 0.28 per cent.

Clinically it was sufficient to determine the degree of acidity in the stomach contents, and to reckon this as hydrochloric acid, provided, of course, that the presence of this acid had been qualitatively proven.

The speaker then continued: "The degree of acidity is determined in the following way: 5 c.c. (about seventy minims) of the filtered stomach contents are poured into a small glass; then a few drops (one to three) of litmus tincture or of a one per cent. alcoholic solution of phenolphthalein are added; next we add of one-tenth normal sodium hydrate solution as much as is sufficient to make the fluid slightly blue when litmus, or red when phenolphthalein, has been taken as indicator. The quantity of the sodium hydrate solution used affords us the means of finding the degree of acidity (1 c.c. normal sodium hydrate solution = 0.036 grm. HCl). To compute the degree of acidity in decimals, multiply the number of the c.c. (one-tenth sodium hydrate solution) used by 100 × 0.00365, *i.e.* by 0.365; then divide by the number of c.c. taken from the fluid to be examined.

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[1] Centralblatt f. klin. Med., 1887, No. 40.

[2] The same is the case with other inorganic acids, but as we know that in the stomach only one inorganic acid is formed (namely, the hydrochloric), we speak only of this.

[3] Berlin. klin. Wochenschr., 1887, No. 50.

"In connection with this demonstration I take the liberty of exhibiting to you two patients with a diametrically opposed condition of the stomach in reference to hydrochloric acid. One of these patients suffers from hypersecretion associated with hyperacidity of the gastric juice, the other shows a complete absence of hydrochloric acid in his gastric juice.

"I must ask your indulgence for a clinical history of these two cases until the next meeting; but to-night let me show you the condition of the hydrochloric acid in these two patients. I have made the following experiment: At 7.30 o'clock this evening I have emptied and washed the stomachs of both patients, and at 7.45 each of them ate the whites of two eggs and drank 100 c.c. of water. It is now 8.45 o'clock, and I shall take a specimen of fluid from their stomachs by Ewald's method, in order to demonstrate to you the marked difference."

The speaker demonstrated this on his patients, the stomach contents of both still showing small particles of the white of egg. One specimen gave all the hydrochloric acid reactions; the other was weakly acid from the presence of acid salts, but did not show the slightest reaction for free acids.

Dr. F. Kammerer then gave a demonstration of

GIRDNER'S TELEPHONIC APPARATUS FOR THE LOCATION OF BULLETS.

A paper was read by Dr. E. Fridenberg on the

SURGICAL OPENING OF THE MASTOID PROCESS,

in which early surgical interference was strongly advocated, provided always that an accurate diagnosis had been made.

The President related a case of bilateral mastoid disease, in which speedy recovery had followed opening and drainage of the mastoid cells. He also emphasized the importance of chiselling in as flat a way as possible, *i.e.*, never lifting the instrument perpendicularly. He said further that due care should be had not to make the preliminary incision too small. The bone-drill he discarded altogether as unscientific and dangerous.

Dr. B. Scharlau then made some remarks on

THE UTILITY OF THE LATERAL DECUBITUS IN OBSTETRICS.

He said that, so far as he was aware, the principles on which the employment of the lateral decubitus for the correction of certain fœtal malpositions were based had been first clearly enunciated by Dr. Martin, of Berlin, the father of the well-known gynecologist of that city. For the past twenty-four years he had practised, and had induced others to practise, in accordance with these principles. It was a matter of surprise to him that the current text-books of obstetrics had little or nothing to say on this subject. The leading idea was to utilize the force of gravity. The woman was to be placed on her side, so as to permit the weight of the fundus uteri to incline the upper portion of the uterus in one direction, while the lower end would thus be moved in the opposite direction.

In practice it was found that the fœtus most frequently lay in the first position, *i.e.*, the left occipito-anterior one. Now, if labor was retarded owing to failure of the head to properly engage, the woman should be placed on her left side. It would then be found that the maternal decubitus would favorably influence the position of the child in utero. The head would engage, and delivery was often speedily accomplished without instrumental aid.

Again, if the fœtal head manifested a tendency to slip away toward the right side, above the brim of the pelvis, the parous woman should be placed in the right lateral decubitus, and the weight of the fundus would divert the head in the opposite direction.

In face presentations the same plan of treatment was to be followed, only here the position of the woman was to be the opposite of that mentioned as applicable to vertex presentations.

For transverse presentations no aid could be had from changing the decubitus of the mother. In applying the forceps the lateral decubitus was likewise of no use. The operation of turning could often be greatly facilitated, however, by placing the woman on her side.

Dr. Kucher said that labor was frequently delayed in transverse presentations in consequence of the accoucheur introducing his hand on the wrong side of the infant. He was not only ready to admit the advantage to be derived from a proper decubitus of the mother, but had himself often employed this means of hastening tedious labors.

Dr. Krug stated that the principles laid down by Dr. Scharlau had no novelty for him. At the lying-in institute of the University of Freiburg he had become thoroughly familiar with their application, and he believed they were well known and appreciated in Germany.

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

"CONTAGIOUSNESS OF MURDER"—THE PERIODICITY OF SPECIAL CRIMES—THE INFLUENCES OF HEREDITY AND EXAMPLE.

Paris, February 3, 1888.

The astonishing facility with which crimes are being committed in this country, the almost absolute similitude in the means of their execution, the apparent periodical return of certain forms of murder, induced Dr. Aubry to make researches as to the cause, and what the mysterious link was that connected these different states. The author consigned the results to his thesis for the doctorate, the title of which is, "Contagiousness of Murder." The term contagiousness would in this case appear to be a misnomer, as it would convey the idea of the transmissibility of a morbid psychological condition occurring after the manner of corporeal affections, which are known to be infectious or contagious; but as there is no other term in English or French, or perhaps in any other language by which the proper idea may be expressed, we must only accept the term as it is at present employed in medical literature. The morbid psychological phenomenon in question is, according to the author, not the result of a simple imitation, as one would be led to believe, but it consists of a combination of four very distinct conditions, viz.: suggestion, imitation, heredity, and contagiousness, which, together, constitute the principal elements of an epidemic. In other words, no person can undergo the influence of the contagion of a crime unless he possesses a morbid receptivity—that is to say, a soil previously prepared for the germination of the seed. It is thus that, in a room of hysterics or epileptics, an isolated attack is soon followed by other attacks among those present. In general massacres, the sight of blood excites the furor of the populace, who then blindly commit the greatest crimes. It is equally after this manner that may be explained the epidemics of St. Vitus' dance, of tarantism, and other convulsions; the strangest accounts of which have been transmitted in history. The epidemics of murder have been clearly demonstrated in history, but it is only within the last few years that the veritably pathological nature of these epidemics has been understood. Encouraged by the example of his masters, Dr. Aubry has treated the question with the authority of the experience he had acquired in the special asylums of Paris. His work is divided into three parts. In the first he studied the contagiousness of murder in its general forms, he examined what were the great factors, and in this connection passed in review the family, the prison, the spectacle of executions, and the reading of works which excite a morbid propensity. In the second part the author treats of the contagiousness of crime in its special forms: vitriol, revolver, poisoning, incineration, and the criminal cutting up into pieces of bodies. In the third part, epidemics and endemics are considered. The idea of murder, continues the author, is essentially contagious. For it to manifest itself two factors are necessary: 1, Heredity or its degeneration; 2, education, and under this head Dr. Aubry comprehends the action of example. The relation of a crime, reproduced with minute details by the public press, leads almost always to a series of crimes, the means of the execution of which are, so to say, copied on the same "crime-type." Acts of cruelty which are witnessed during great political and social commotions are known to be the result of the great masses being drawn into them by a few excited individuals. There is, in fact, in this case, a veritable imitative contagion. Heredity, the implacable laws of which appear to influence every living being, plays an immense rôle in criminality. It exists in beings morally degraded, as it exists in those who are physically degenerated. There are families of murderers, as there exist families of musicians. The author, however, does not wish it to be understood that he would deny the influence of a sound education to remedy or prevent this hereditary propensity to crime. It may, however, be remarked that while criminality has diminished in this country, insanity, in its various forms, has quadruply increased during the last half century. The *crimes célèbres*, as well as striking events, are capable of dangerously deranging the brains of those who are already predisposed to such influences, whereas the same events would have no effect on a sound mind. Science is daily discovering new forms and unexpected causes of insanity. Very recently Dr. Charpentier, of the Bicétre Asylum, attributed an attack of mania to the existence of hæmorrhoids; Dr. Lannois had met with cases of insanity caused by affections of the ear. Dr. Bataille wrote a very remarkable thesis, in which he endeavored to demonstrate the part played by traumatism as an exciting cause of neuroses. But heredity seems always to be the primordial condition, "the cause of causes of insanity," as expressed by Moreau de Tours. Without the degeneration induced by morbid heredity, the other causes of insanity are, so to say, powerless. In seeking for heredity in criminals, and in thus calculating the possible relation between crime and neurosis Lombroso, and other authors have arrived at the conclusion that crime is often a malady. The limit, however, between crime and insanity are frequently very ill defined. Take, for instance, the three delinquents that created so much sensation lately in Paris: A man who murdered his wife and two children; Aubertin, who attempted the life of M. Jules Ferry; and the third, who murdered another man through jealousy, all three are still under observation. The first is an "alcoholic," the second is a general paralytic, and the third is affected with the "delirium of persecution." But the insanity of criminals is not always so well marked as in the three preceding cases. Whatever may be the cause, there is no doubt that, notwithstanding the assertion of Dr. Aubry to the contrary, crime, and particularly murder, is more rife now than it has ever been in this country; for scarcely a day passes without one hearing of a murder being committed in Paris. For this state of things Dr. Moreau de Tours proposes the following preventive measures: 1, A healthy, moral, individual hygiene; 2, the moralization of habits; 3, a restriction on the press for the publication of crimes; 4, a more logical severity in the judgment of tribunals.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE STRUGGLE AT THE COLLEGE OF SURGEONS—NOTES AT THE SOCIETIES—TUBERCULAR DISEASE OF THE TESTIS—SHALL WE INJECT A RUPTURED BLADDER AFTER SUTURING THE RENT?—IDIOPATHIC DILATATION OF THE COLON—GANGRENE FROM EMBOLISM IN HEART DISEASE—HEART DISEASE FOR HALF A CENTURY—THE PROGNOSIS OF NEURO-RETINITIS IN BRIGHT'S DISEASE—THE TEACHING UNIVERSITY FOR LONDON—THE COMITIA AT THE COLLEGE OF PHYSICIANS.

LONDON, February 4, 1888.

THE struggle at the College of Surgeons still continues. It has now entered upon another phase, the Council having, for the first time in the controversy, condescended to defend their position by argument. This is, at any rate, what they attempt to do in the statement they have just forwarded to the Lord President of the Privy Council. They still persist in the fallacy—repeatedly exposed—of assuming that they have eighteen thousand members. This is no doubt done with a view to minimize the importance of the petition to the Privy Council, signed by nearly five thousand members. The Association of Members held their annual meeting a few days since, followed by the first annual dinner. The Association is pledged to continued action on behalf of the members. Some extraordinary instances of the tactics of the Council in the past were narrated at the dinner by one of the speakers, who, although a Fellow, is evidently in full sympathy with the cause of the Members.

At the last meeting of the Medical and Chirurgical Society, Mr. W. H. Bennett, of St. George's Hospital, read a paper on tubercular disease of the testis. Five cases were described which had been specially selected because they all had an absolutely perfect family history, and also all but one (who had had syphilis twenty-three years previously) could show a perfectly clean bill of health up to the time of onset of the disease. In every one the disease was traceable to direct local irritation—traumatic in four, gonorrhœal in one. In each case the spinal column showed evidence of disease before the opposite testis became involved. In none of the cases did the affection manifest itself in other parts until after the original disease had broken down. He concluded that the rational treatment of such cases is castration upon the appearance of symptoms of disintegration about the original disease. Mr. Howard Marsh disagreed with Mr. Bennett as to the tendency of local tubercular disease to become generalized, which he thought rare. Mr. Clutton observed that in hospital out-patient practice, patients usually had both testes involved before we saw them. Mr. Bruce Clark remarked that it was easy to understand how tubercular disease of the testis spread so much more readily than that of a joint, for a colored material, such as Berlin blue, if injected into the testis, spread upward easily into the thoracic duct.

Mr. Walsham then read a case of intraperitoneal rupture of the bladder for which abdominal section was performed, and the bladder successfully sutured. The paper was followed by a short discussion, turning mainly on the desirability, or otherwise, of injecting the bladder after putting in the sutures. Mr. Holmes thought there was a danger of tearing out the sutures, but most of the speakers thought it a good plan to prove the bladder to be water-tight.

At the Clinical Society a paper (of which Dr. Money and Mr. Stephen Paget were joint authors) was read on idiopathic dilatation of the colon. The patient was an habitual drunkard, aged fifty-five, who suffered from dyspnœa and bronchitis. The colon was enormously distended. The girth of the patient was over five feet, and the measure from the ensiform cartilage to the pubes twenty-six inches. Repeated punctures gave much relief—so much so that he discontinued treatment and returned to his drunken habits. A week later he was admitted into University College Hospital, under Dr. Money. He was suffering from dyspnœa, lividity, and the same distention was present. The long rectal tube was used, and gave great relief, but he died in a week. At the necropsy all the signs of habitual drunkenness were found, including typical hobnail liver. There was enormous distention of the colon, principally of the sigmoid flexure, which formed two huge sacs, extending across the abdominal cavity. There was no organic stricture, but Dr. Money thought that the sigmoid flexure might have been twisted, or that spasmodic stricture might have been present. The bowel was hypertrophied as well as dilated. Dr. Hadden narrated two cases of sigmoid distention, and Sir Dyce Duckworth mentioned a case of enormous dilatation of the cæcum. Dr. Broadbent referred to congenital elongation of the sigmoid flexure as a cause of hypertrophy and dilatation of the colon, and mentioned a case of enormous dilatation of the colon, with chronic constipation, which was successfully treated by the administration of enemata to the patient—the latter resting on his elbows and knees.

Dr. Burney Yeo related a case in which embolism of the right axillary artery occurred in a patient suffering from mitral stenosis. Gangrene of the forearm ensued, and amputation through the middle of the arm was performed by Sir Joseph Lister. Embolic pleuro-pneumonia, however, occurred, and the patient died. Dr. Broadbent observed that it was, in his experience, rare for emboli to cause gangrene of a limb in cases of heart disease. Mr. Bowlby mentioned two cases of gangrene following embolism from heart disease in patients advanced in life. Dr. Drewitt mentioned a case of embolism of the common iliac artery, occurring in a girl, aged thirteen, during typhoid fever. Gangrene of the left leg followed, for which amputation was successfully performed.

The most interesting paper of the evening was one read by Dr. Kingston Fowler, which described the case of a patient who had suffered from heart disease for fifty-four years. In 1834 the patient, then a boy, aged thirteen, was admitted into Middlesex Hospital under the late Sir Thomas Watson (then Dr. Thomas Watson), for acute rheumatism, for which he was under treatment for nine months. There was no written record of the early history, but there was good circumstantial evidence that the cardiac lesions now present occurred during the attack of acute rheumatism in 1834. The patient remembered leeches and blisters having been applied to his chest repeatedly; also that gentlemen who had auscultated him had spoken of blowing and whistling sounds. Dr. Watson had told the patient's mother that he was never to leave home without telling her where he was going, and he had, consequently, for three years always carried with him a card with his name and address upon it. No return of the rheumatic affection had ever occurred, and the patient had scarcely been absent from work for a single day during the last fifty-four years. He was a remarkable example of a stationary lesion of rheumatic origin, in which compensation had occurred and remained perfect. The signs now present were: Systolic recession of the epigastrium; apex-beat forcible, and felt in fifth space in nipple-line; at apex, first sound accompanied by a systolic murmur; at base, in the aortic area, a short systolic bruit and a rough diastolic murmur replacing the second sound. Pulse small and collapsing. Urine free from albumen.

At the Ophthalmological Society, on January 26th, among the papers read was one by Dr. Miles Miley on the prognosis of neuro-retinitis in Bright's disease. The paper was mainly statistical, and was based upon the examination of the records of three hundred and seventy-five cases in the "London Hospital Medical Register." From his inquiries the author concluded that the retinal changes occur late in renal disease; that their presence renders the prognosis much worse, the mortality among the affected cases being doubled; that the prognosis was so bad that not one had lived eighteen months after the changes had been noted; and that the ophthalmoscope, therefore, afforded a most valuable index as to the course any given case of Bright's disease was taking, except, perhaps, in pregnancy cases. Mr. Simeon Snell read a paper on the same subject, in which he also referred to the better prognosis of retinitis associated with pregnancy. Mr. McHardy mentioned the case of a hospital patient who had lived two years after the discovery of retinitis. Dr. Van Milligen referred to a case in which the patient (still living) had had retinitis of one eye for eight years.

The proposed Teaching University for London does not make much headway. The chief work done as yet by its promoters has apparently been to evoke the opposition of all other bodies. It is unfortunate that the two medical colleges cannot see their way to act in harmony with the promoters of the Teaching University. Both would thereby benefit. As it is, it is extremely doubtful whether the Government will confer the right to grant degrees in medicine and surgery on two exclusively professional corporations, one of which is at open war with its own Fellows and Members.

No decision was arrived at at the Comitia of the College of Physicians, held last week, to consider the question of Fellows and Members of the College contributing articles to, or allowing themselves to be advertised in, journals professing to supply medical knowledge to the public. The Senior Censor moved a resolution declaring it undesirable. It is an open secret that the two journals aimed at are *The Hospital* and *Baby*. One of the Fellows wished to render the resolution still more stringent. Great difference of opinion prevailed, and, as might have been anticipated, the discussion was adjourned.

DILATATION OF THE STOMACH.

To the Editor of The Medical Record.

Sir: *A propos* to the valuable paper of Dr. Smith[1] on dilatation of the stomach, I desire in this note to direct attention to certain measures for the relief of those cases which the author has omitted to mention, or has, in my opinion, passed over too lightly.

a. It will be conceded that nutrition and the alleviation of hunger are two of the most prominent indications in the management of any severe case, and that the stomach cannot be relied upon in attaining these ends. The only other available avenue for the introduction of nutriment into the system is the rectum, and my experience in a considerable number of cases has convinced me that recourse may be had to nourishing rectal injections with a great deal of confidence. The particular injection which I recommend has for its basis a half-pint of milk and the yolks of two eggs. To this may be added pancreatine or other digestive, brandy or other alcoholic stimulant, and any medicinal agents which are indicated.[2] By exercising great care in the technique of the operation, and temporarily suspending them upon the approach of rectal intolerance, such enemata may be given six or eight times in the twenty-four hours, and continued for months.

In the vast majority of instances of pronounced and persistent gastroectasis the condition is due to incurable causes, and in these relief only can be afforded, and this is done more fully by these injections than by any other method. Now and then, however, cases present themselves which do not belong to this list, and that are susceptible not simply of amelioration but of a cure, and in these we have in rectal injections the only rational treatment, in that the stomach obtains rest, during which its muscular walls are regaining lost tone and resiliency.

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[1] See The Medical Record, p. 120, current volume.

[2] The addition of coffee, as by boiling a tablespoonful of the ground and roasted bean with the milk for half an hour, is useful in counteracting the mental depression attending many of these cases.

β. The diet should be liquid, non-coagulable, and as sparing as possible.[1] Hunger and thirst, in some cases not fully satisfied by the enemata, is in some instances so imperative that it must be satisfied, and the indications are to use only such food as causes the minimum of discomfort.

γ. For some time after food is taken into the stomach the patient should assume the recumbent position upon the right side, and with the pelvis and lower portion of the abdomen elevated, in order to favor the exit of the gastric contents through the pylorus.

δ. In the way of medicine I have seen positive and direct benefit derived only from the administration of small doses of saline laxatives.

Edward F. Wells, M.D.

Chicago, Ill.

CONCERNING SPECIFICS IN DIPHTHERIA.

To the Editor of The Medical Record.

Sir: Under the caption of "Sure Cures and Specifics," one of your correspondents writes, in your issue of February 11th, a criticism of my "Therapeutic Memoranda on Diphtheria," to which I desire to reply.

The Record is fortunate in being the organ by which the noble indignation of so sensitive a nature seeks expression.

Your correspondent's superfine ethical sense is offended by "the general practice of publishing" cures "for so many human ailments;" but the "frequent announcement that a remedy for this mortal malady (diphtheria) has been found" arouses his holy horror.

It does not seem to occur to your correspondent that he plays sad havoc with the Queen's English when he hurls his anathemas indiscriminately against "remedies, cures, and specifics," nor does the idea seem to occur to him that other physicians may not (as he does) regard diphtheria as a "mortal malady" to the extent that they must not, on pain of being classed with "ignorant quacks, in or out of the profession," dare to suggest a "remedy."

In this sordid age it is refreshing to meet so lofty an exemplar of professional morals, and it would perhaps be "good policy" to allow his homily to pass unchallenged. But, since he has taken my essay as a text, I desire to call the attention of your readers to the *fact*, that in my "Memoranda" there is not one word said of "sure cures or specifics." On the contrary, my statements are made as cautiously as a subject of empirical knowledge admits.

I said: "If there be any therapeutic method, any combination of remedies by which its duration can be shortened or its type modified, we are obligated to adopt it."

Again: "By a process of selection I have reached a mode of treatment which I desire to submit to your consideration, because it has enabled me to cope successfully with many desperate cases."

Turpentine, so far from being lauded as a "sure cure or specific," is referred to in the following terms: "In oil of turpentine we have a more recent remedy, which during the brief time of its clinical history has been so thoroughly tested in private as well as hospital practice, that I must urge upon you its claim as a valuable agent in modifying and shortening the disease."

"It is needless to say, however, that I shall continue to strive for improvement," etc.

It must, indeed, be a singular mental organization which would distort these cautious statements into a belief in a "specific cure or antidote," or in a "reasonably *sure* cure for diphtheria" even. Your correspondent says that in his two fatal cases, in which he "found patches of diphtheritic membrane in (that novel location) the stools, turpentine was given, though in smaller doses than those recommended by Dr. B." I distinctly emphasized the importance of administering large doses of turpentine, and entered into even tedious detail to show that, while small doses of turpentine are useless and may damage the kidneys, large doses afford immunity from this danger. If this critic would permit his fine ethical sense to remain somewhat in abeyance, and afford the empirical sense to come to the front, he may yet learn from more careful reading and adoption of therapeutical measures, recommended and fortified by hospital statistics, something useful to those of his patients who are stricken by *mortal maladies*.

But he would have "the medical profession tell the community the truth" about diphtheria, which would be, according to his view, that it is a *mortal malady*. As he "condemns the too frequent announcement that a *remedy* for this mortal malady has been found," the logical deduction would be that in these cases (diphtheria) he would simply make the diagnosis and abandon the patient to his fate.

As "the medical profession" continues "to write and talk so much about cures," our critic trembles for "the good name and respect which it should enjoy in the public estimation." Is it surprising that the mind which classifies remedies, cures, and specifics together, fails to discern the difference between "the statements of the regular physician" and the "record of the most ignorant quack," and lacks the penetration to distinguish between publications made in the medical press and those in the secular journals? Respectfully,

Simon Baruch, M.D.

47 East Sixtieth Street, February 15, 1888.

THE OPERATION FOR LACERATED PERINEUM.

To the Editor of The Medical Record.

Sir: Your correspondent from St. Louis, in a recent issue of The Medical Record, asks you to inform him whether Lawson Tait's operation for lacerated perineum "is approved of or employed by any gynecologist in your (our) classic city." I can answer his question by saying that I have performed it three times during this past winter, twice with the most gratifying success.

I saw Tait do the operation in his usual rapid style in 1886, and described it in my report of my European trip. (See "A Glimpse of Laparotomy in Europe," *American Journal of Obstetrics*, September, 1886, p. 926.) But I did not perform it, being fairly well pleased with my results with the time-honored Emmet's and Simon's operations. Not until I read Sänger's enthusiastic description and recommendation of Tait's method before the Association of German Physicians, at Wiesbaden, last September, did I decide to employ it on the first favorable case, which soon presented itself in a private patient with a very deep complete laceration. I found no difficulty whatever in splitting the recto-vaginal septum, or introducing the sutures, of which I used five, silver wire, and the Peaslee needle being employed. The bands were moved on the sixth day, the sutures removed on the fourteenth day, and perfect union, with complete retention, found to have been secured. Time of operation was twenty minutes; but I could, with a little haste, have done it in fifteen. The skin was adapted by catgut sutures.

The second case was a hospital patient, with incomplete laceration. Here, also, wire was used, and a complete success achieved. The thickness and strength of the perineum in both cases by far exceeded that of the other methods. The ease, rapidity, and success of the method enchanted not only me, but my assistants and spectators, and I briefly reported my results at a recent meeting of the New York Obstetrical Society. (See *American Journal of Obstetrics*, January, 1888, p. 74.) But there was another and less pleasing side of the question. The splitting of the recto-vaginal septum and of the labia forms a deep, broad wound, from which septic infection might take place. Last December a patient presented herself at my office with a large complete laceration of the perineum. I admitted her into Mount Sinai Hospital, and on December 28th did Tait's operation, under the most careful antiseptic precautions, irrigating the wound frequently with a 1 to 10,000 sublimate solution. Deep silkworm gut and superficial catgut sutures were used. The patient had a slight temperature, and complained of much pain on the next day, but as there were no local evidences of inflammation I attributed the symptoms to nervousness (she was very hysterical) and reaction from the operation. I was then suddenly taken ill and confined to the house for three days. A messenger sent to the hospital brought me the news that the patient had a slight temperature, but did not seem very ill. But as soon as I saw her, when able to go out, on the fifth day after the operation, I recognized septic infection, and at once removed the stitches. A large yawning, sloughing cavity presented itself, which was diligently and frequently irrigated, and the patient stimulated by all possible means; but she died of a low form of septic poisoning on the tenth day after the operation. Out of several hundred perineorrhaphies performed after the old method no such accident, indeed no febrile reaction had occurred to me. I do not see how I could have operated more aseptically; it is true, the stitches should have been removed sooner, and would have been had I been able to see the patient. But sepric infection ought not to have occurred at all. I have heard of its taking place in the practice of other operators, but I had so far escaped, and I did not wish to destroy the success of the operation when septic infection was yet doubtful. Still, the fact remains that so deep a wound into so highly absorbent tissues may be more liable to septic influences than the more superficial wound of the old operations.

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[1] As to food—I have been so often informed by intelligent and observant patients that oatmeal gruel, rather salty, taken often and in small quantities, has afforded them more relief and less discomfort than any other article, that I cannot resist their evidence as to its value as an article of diet in these cases.

My confidence in Tait's method is, however, so strong that I propose to perform the operation next week; but I shall most carefully watch for a rise of temperature, and rather remove the sutures early than risk the life of my patient from septicæmia. I would add one caution, and that is, not to divide the recto-vaginal septum to a greater depth than half an inch, which gives a large enough surface for union. PAUL F. MUNDÉ, M.D.

30 WEST FORTY-FIFTH STREET, February 13, 1888.

INSUFFICIENCIES OF THE OCULAR MUSCLES.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your issue of February 4th appeared a letter of Dr. George T. Stevens, in which occurs the following sentence: "Will Dr. Loring point us to a single instance reported by von Graefe, or any of those whom he has named, including himself, in which tenotomy of either the superior or inferior rectus was done in a case of non-strabismic insufficiency?" The writer further says: "Quite a number of well-informed oculists would be glad to see that report." For the gratification of Dr. Stevens and quite a number of "well-informed oculists" I take the liberty of sending you the notes of the following case: Marie Zalenska, of Warsaw, came to von Graefe's clinique May 15, 1870. Patient had of the right eye, myopia $\frac{1}{36}$, $V = \frac{12}{xxx}$; of left eye, myopia $\frac{1}{5}$, $V = \frac{12}{xx}$. Insufficiency of the interni in 8″ of more than 18°; in 10′ of 9°. Insufficiency of the right superior rectus of 4°. On May 18th a tenotomy of the left external rectus was made, with a conjunctival suture, to diminish the operative effect. On May 20th there was in the position of election dynamical (lateral) equilibrium. On June 2d there was in the middle line dynamical equilibrium. The insufficiency of the superior rectus was revealed only when the light was held on the side of the operated muscle. On June 9th the insufficiency of the superior rectus (patient wearing glasses correcting the myopia) was between 5° and 7°. On June 15th patient wore before the left eye $-\frac{1}{6}$; prism of 20° base upward before the right eye. With these glasses patient had for all distances binocular vision. On June 18th a partial tenotomy of the left superior rectus, leaving a portion one millimetre wide of the innermost muscular fibres, was made. On June 20th the insufficiency of the superior rectus was corrected.

These notes of this case I made at the time, as was my duty as assistant of Professor von Graefe. Von Graefe was not a man to publish individual cases. He made wise generalizations from his vast experience. The operative treatment of dynamical strabismus of the lateral as well as vertical working muscles has been the common property of all competent ophthalmic surgeons for, at least, twenty years. If von Graefe failed to report such a case as this, it was because the case itself was one of not infrequent occurrence. Should the recital of such cases interest the readers of THE MEDICAL RECORD, I will very gladly transcribe others from my record-book of von Graefe's clinique, and might add to them others which have occurred in my own practice.

RICHARD H. DERBY, M.D.

9 WEST THIRTY-FIFTH STREET.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from February 12 *to February* 18, 1888.

ARTHUR, WILLIAM H., Captain and Assistant Surgeon. Leave of absence extended two months. S. O. 35, A. G. O., February 13, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 18, 1888.

OLCOTT, F. W., Assistant Surgeon. Detached from the Minnesota, and ordered to the Atlanta.

HEYL, T. C., Surgeon. Ordered to the receiving ship St. Louis.

MARTIN, H. M., Surgeon. Detached from the St. Louis, and ordered to the Swatara.

WEBSTER, CHARLES F., Assistant Surgeon. Ordered to the receiving ship Vermont.

FIELD, JAMES G., Assistant Surgeon. Detached from the Vermont, and ordered to the Swatara.

WHITING, ROBERT, Passed Assistant Surgeon. Detached from the Iroquois, and ordered to the Coast Survey.

TRACY, ELONER C., Assistant Surgeon. Resigned, to take effect immediately.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 18, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	13	4
Scarlet fever	162	32
Cerebro-spinal meningitis	6	5
Measles	65	6
Diphtheria	161	40
Small-pox	7	0
Yellow fever	0	0
Cholera	0	0

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 9 New York, March 3, 1888 Whole No. 904

Original Articles.

LAPAROTOMY OR ENTEROSTOMY?[1]

By ROSWELL PARK, M.D.,

BUFFALO, N. Y.

Almost without exception every writer who has discussed this question has emphasized the fact that as between the operations of laparotomy and enterostomy in obscure cases of acute intestinal obstruction the surgeon is called upon to decide a matter of the greatest perplexity and most serious importance. On the one hand, the abdominal section offers about the only prospect of overcoming the obstruction, while, on the other hand, it is certainly a terribly grave ordeal to which a patient in this condition must be submitted. Enterostomy is a less immediately dangerous procedure, and is, furthermore, an operation of expediency rather than of absolute cure.

Granting, then, as I am sure all will, the paramount importance of the question as between the two, and the impossibility of giving a perfectly satisfactory quick reply, let us see to what extent it may be definitely answered. Such weighty considerations as may assist in a decision are not to be hastily reviewed. It by no means falls to the lot of any one man to enjoy such a sufficient experience in this matter that he can consistently lay down succinct rules for others to follow. It seems to me that this problem can best be solved by a consideration of the opinion of the wisest and most experienced men of our day, and that this course will guide as safely as a study of numerical statistics which lack entirely a personal element. So without wishing in any respect to belittle the study of percentages and of mortality-rates, whose value I fully appreciate, I have preferred to lay before you a summary of the opinion of some of the most noted living surgeons, thinking in this way best to further the object of this notable discussion.

First of all, it is generally accepted that when a tumor is distinctly felt there is no surgical relief save by abdominal section, which should accordingly be made unless the patient's general condition absolutely contra-indicates it. Still, blind observance of this rule will surely bring disappointment, and even a liberal interpretation of it is not always a happy one. Thus in one case I was called to a case of acute obstruction simply for the purpose of operating for its relief. With grave doubt as to its surgical propriety I yet opened the abdomen and found malignant trouble in the pelvis. I made an artificial anus low down in the linea alba, but with only very temporary relief. In another instance I was summoned a hundred miles to afford surgical relief. It was evident the patient was suffering from a malignant ovarian tumor. Yet she was suffering terribly, and absolutely insisted upon operation at all hazards. Her apparent body-strength was a source of serious error, since I mistook her resolution and courageous or desperate persistence for vital power; she died before the operation was completed. But my experience has been unusually unfortunate, and one may be excused perhaps for being overpersuaded by the dying appeals of victims undergoing this torture.

Schramm[1] takes the ground that when the indications are not clearly for enterostomy and against laparotomy, the latter should be selected. He comes to this conclusion partly as the result of his own observations, partly from a careful study of recorded results. Still he does not deny the ease and readiness with which enterostomy is done, and contents himself with a reminder that more than once the gut has been opened *below* the obstruction. He claims, also, that Nélaton's operation is now perfected, while in the technique of laparotomy much improvement may yet be made.

Rydygier[2] quotes Czerny's[3] dictum that one should only perform laparotomy in cases where the vital powers are still capable of withstanding shock in severe form; where the abdomen is still soft and not too distended; and where, upon diligent examination, after the anæsthetic has been given, still no exact notion can be gained as to the locality and nature of the obstruction. He thinks that if this be closely adhered to we shall very seldom be found opening the abdomen. Still, while not disputing its wisdom in general, he expresses a hope—in which we may all join—that these cases shall, as time goes by, either be more accurately recognized in their incipiency or be turned over to the surgeon while there is still a fair chance for the benefits to be gained by a thorough operation.

In his estimation the only cases suitable for enterostomy are: 1. Those where the gut is firmly pressed upon by tumors, and where an artificial anus may relieve the most urgent symptoms, and prepare the patient for a more radical measure later. 2. Those where the intestine has undergone such a partial twist that its nourishment is endangered, and where, it may be hoped, that after evacuation of its contents it may untwist itself.

Madelung[4] prefers enterostomy for the majority of cases of ileus calling for operation, at least until better means of diagnosis are afforded, and bases his preference on the better results he has obtained by it.

He alludes to the difficulty of locating the obstruction, even after laparotomy, and says that in those cases where he has failed to find it he has asked the pathologists who have made the sections to repeat the same manœuvre, and has seen them fail after twenty minutes' search with the hand introduced through the wound. He is, furthermore, opposed to any handling of the intestines, being convinced that the danger of septic peritonitis is thereby enhanced.

Madelung's own plan of operation is to begin with a small incision in the abdominal wall. Through this he makes such investigation as is possible with reference to the immediately adjacent intestine. He then pulls out a loop of distended gut, so that it doubles on itself. This is held out of the wound by two strong silk threads passed under the loop and through its mesentery. The patient is then turned on his side, the knuckle of intestine and the wound protected by iodoform gauze, and the gut deliberately incised so that all its contents can escape, their flow being encouraged by insertion of a soft catheter. He then waits for fifteen minutes or so, during which time the anæsthetic is, perhaps, intermitted. When nothing more escapes, the wound in the intestine is carefully closed with fine suture. Now, after carefully cleansing the parts and throwing away the gauze packing, the original abdominal opening is enlarged. If an obstruction is discovered, it is treated as may seem best; if nothing can be discovered, the intestinal loop first utilized is found again by means of the silk threads which have not yet been removed; this is then sewn into the abdominal wound, and reopened where first incised. Thus the artificial anus is produced.

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[1] Read at the meeting of the Medical Society of the State of New York, February, 1888.

[1] Archiv f. klin. Chir., xxx., 685. This article contains a very valuable bibliography, to which the interested reader should certainly refer.

[2] Archiv f. klin. Chir., xxxvi., 194.

[3] Virchow's Archiv, ci., 524.

[4] Archiv f. klin. Chir., xxxvi., 283.

This method of Madelung's certainly has much to commend it, and deserves to find ready acceptance.

Schede's [1] recent paper is almost entirely devoted to the surgical treatment of ileus. He commences it with the most undeniable statement that the fate of those suffering from ileus depends entirely on an early diagnosis. He also lays stress on this most practical point that there is, perhaps, no other acute disease in which the patient's ability for resisting shock so rapidly vanishes. But a short time suffices to so weaken him that even the mildest form of surgical relief cannot be borne. He also insists that the hours spent in experimenting with drugs, with enemata, and with washing out the stomach are not only too often wasted, but leave the case entirely beyond surgical help. To be sure, once in a great while we see such a case recover without operation, but it is a most rare event, for which one cannot afford to wait; most of these cases consist, in fact, of volvulus of the sigmoid flexure and intestinal obstruction in small degree. The more sudden and complete the occlusion the greater the constriction, and the more probable that it is absolute. In such instances every effort to palliate or to temporize is to the greater jeopardy of the patient. It is in these most severe cases that, in his belief, the prognosis after laparotomy is the best. The condition of collapse is rather one of shock, and not an undermining of vital power, consequently is not beyond possibility of reaction. But even the laparotomy which he would favor is to be done only when the location of the obstruction is pretty clearly made out, or when the general indication is that it can be quickly overcome.

Schede, while not absolutely opposed to such extremely radical measures as Kümmell favors, yet prefers a small incision. He, too, reiterates the statement that the question as between laparotomy and enterostomy is one of the most urgent, yet difficult, ever presented to the surgeon. In many cases, nevertheless, he thinks there can be but little room for doubt, and that the formation of an artificial anus offers the only hope. For this purpose he utilizes, if possible, the cæcum. In many cases of ileus it is above the seat of obstruction, while it is best adapted for artificial feeding. It also enables one to meet the indication of opening the intestine as low down as possible. If the cæcum is found empty, then the most accessible loop of distended small intestine can be grasped.

He prefers an incision two inches above, and parallel to, the right Poupart's ligament, and he carefully unites the parietal peritoneum with the skin before attaching the gut, a technical point of great value. Having had a most unpleasant experience in postponing opening of the gut itself he advises to do it immediately. He particularly emphasizes that it seems to him a little-known and scarcely appreciated fact that enterostomy always has not only an immediately palliative effect, but it often exercises an absolutely curative influence upon the obstruction, be this what it may, so that later a normal, permeable condition of the bowels is brought about. Soon a small quantity of fæces escapes by the natural channel again, and later this amount increases, till the artificial anus may even close spontaneously.

A beautiful illustration of this I have seen in the practice of my colleague, Professor Mann, of Buffalo. He was called out of town to operate for obstruction of the bowels of severe but uncertain nature. He made an exploratory laparotomy, but was totally unable to discover any internal condition which could account for it. He accordingly made an artificial anus. The symptoms of strangulation at once subsided. Later she came to our hospital for closure of the fæcal fistula, where I saw the case with him. Partly as the result of a plastic operation, and partly spontaneously the opening was closed; but it was made quite apparent before its closure that the bowel below was cleared of obstruction.

It has happened once to me also to open the abdomen for intense symptoms of strangulation and to discover nothing. I very much regret, now, that I did not make an enterostomy before closing the abdominal wound.

But the German surgeons are not all so much in favor of enterostomy. Kümmell, like Heald and Heiberg before him, has advised making a large opening when doing laparotomy. This, of course, facilitates exploration but complicates in some degree the case. Kümmell [1] claims that perityphlitis is perhaps the only absolute contra-indication of laparotomy. Peritonitis is usually a sign of septic trouble or of perforation, and is consequently secondary. He compares laparotomy for ileus to suprapubic lithotomy, which permits such inspection as is without it impossible. It permits, further, closure of a perforation if one exist, and as much disinfection of the abdominal cavity as circumstances may justify. Enterostomy alone permits none of these measures, and is not always successful; it further usually necessitates a later operation, which is not free from danger.

To be sure, in doing laparotomy, one must contend with the length of the operation, the uncertainty of even finding the cause of the trouble, and the difficulty in returning the intestines to place. Kümmell is extremely radical in his section method, since he would make the incision at once extend from sternum to pubis, and claims that the discovery of the lesion is thereby greatly facilitated, and the duration of the operation actually shortened. Indeed it is doubtful if surgeons will at once accept his operative method as in the end the safest; perhaps not generally until his results can be compared with those of others.

No one in Great Britain speaks on this subject with greater authority than Mr. Treeves.[2] He advises against primary enterostomy, which, *he* says, is at best a palliative measure, not founded on sound surgical principles, carried out independently of diagnosis, done in the dark, and leaving the cause of the disorder untouched. He calls attention also to the fact that the opening *may* be made so high up as to lead to subsequent emaciation and death from starvation. The accumulated material between the new opening and the rectum may be the cause of great distress, or the obstructed or twisted loop may go on to subsequent gangrene. While there is no denying the force of these statements the improbability of the frequent occurrence of any of these untoward events must not be forgotten.

The Société de Chirurgie de Paris during the past year held a long and lively debate [3] concerning the merits of the great question before us—a debate which put its individual members on record without shedding any particular light on the subject. Verneuil took the ground that when one *can* distinguish with any accuracy the nature of the obstruction, he should make the operation as radical as possible. This being impossible, the surgeon is compelled to address himself solely to meeting the immediate indication, and must, therefore, open the intestine at the most practical point. Le Dentu would, as far as he could, limit enterostomy to those cases where the obstruction pertains to the intestine itself. Le Fort and Richelot were heartily against laparotomy in all uncertain cases, while Terrier and Trélat were its advocates, particularly since the one did not prevent the other if found advisable.

Within the past few months Rochet [4] has written at length on these subjects. He alludes to the recent experiences of French surgeons, to the uncertainty of diagnosis, and to the bad results of secondary enterostomy. He believes that when neoplasms and impaction can be excluded the obstruction must be considered to be caused by volvulus, invagination, or adhesions; these indications being reasonably clear, he considers laparotomy to be required.

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[1] Archiv f. klin. Chir., xxxvi., 635.

[1] Centrlblt. f. Chir., 1887, No. 45.

[2] Intestinal Obstruction, p. 468.

[3] Bull. et Mém. de la Soc. de Chir., 1887, xiii., 294, 301.

[4] La Province médicale, 1887, Nos. 30, 31.

But when one is absolutely in the dark, Rochet would have him at once proceed to enterostomy. When a diagnosis of tumor or stricture can be made, then an enterostomy or a colostomy are positively indicated.

That the road to success in these cases is bestrewn with stumbling-blocks may be made still clearer by two or three illustrative cases. In Rydygier's fourth case[1] he made a laparotomy and found a loop of ileum bound fast in the pelvis to the results of a perforating ulcer of the rectum. He made an artificial anus, but regretted that he had not contented himself with an enterostomy in the first place.

Waldenström[2] had the case of a child, aged twenty months, that presented at the anus a tumor easily recognizable as an invaginated colon. All efforts at reposition failing, the colon was opened in the loin. Even then reduction was not possible. After death it was found that a second ileo-colic invagination existed.

Brown[3] has reported the case of a boy, aged fourteen, in which the diagnosis of intussusception was made. A tumor was felt to one side, and an incision was made directly over it. The lesion was easily found, but reduction was impossible. A colotomy was then made, but the small intestine was found to have so far filled the colon that nothing was gained. Death ensued in six hours. While Brown regretted that he had not opened the abdomen in the middle line, it seems to me, rather, that his regret should have been that a laparotomy was made instead of an enterostomy.

These, as well as numerous others of equal interest, may be found at considerable length in Braun's most valuable article,[4] to which those interested are referred.

To be sure, Bulteau's statistics[5] of twenty-one cases of acute invagination treated by laparotomy, with eight recoveries (= 38 per cent.), are encouraging; but the division of our subject precludes my consideration of this view of it, and I must leave that to abler hands.

So far, then, as a careful study of the recent literature of the subject would permit conclusions to be drawn, they are:

When a case of acute obstruction is seen *very* early an exploratory laparotomy may be justified.

When a case is seen very late, enterostomy is probably the only justifiable operation.

Laparotomy is especially indicated when the nature of the obstruction is recognized or made reasonably evident; when a small tumor indicating intussusception is made out; when the obstruction is caused by neoplasms which can be removed; when the condition of the peritoneal cavity demands washing out or drainage.

Enterostomy is especially indicated when no idea can be formed of the nature of the obstruction; when the malignant element precludes hope of permanent benefit; when the abdomen is particularly tympanitic; when the patient's power of endurance has been undermined by the severity of the disease.

To put this somewhat differently, laparotomy is the more radical and surgical measure, but somewhat the more dangerous. Enterostomy is the safer and quicker, causing little or no shock, but entailing certain very disagreeable sequelæ, suitable for all desperate and some more favorable cases. Abdominal section should never be done *in extremis;* enterostomy may be. Since many cases are only seen by the surgeon in this terrible condition, the lesser operation will still find a wide applicability. It is accompanied by scarcely any danger of peritonitis, and may even be done under cocaine, so that the shock of an anæsthetic may be avoided. Cases die after laparotomy as the result not merely of the disease; an enterostomy, on the contrary, complicates the case, if at all, in extremely small degree.

These conclusions, it appears to me, have a value that no criticism can diminish. But beyond these one is confronted by the complexity of the circumstances attending individual cases, which only the attending surgeon can estimate, and therefore to presume to go further is to take the ground that rules must rise superior to circumstances, a position quite untenable among those whose experience or ability qualify them for this kind of abdominal surgery.

THE "ORAL WHIFF."

By WILLIAM S. CHEESMAN, M.D.,

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The article entitled "An Undescribed Arterial Murmur" in The Medical Record of November 5, 1887, reminded me forcibly of another murmur synchronous with the pulse of which there is no satisfactory description in the literature accessible to me, and with which none of the well-known diagnosticians whom I have addressed on the subject are familiar. Perhaps it can be best portrayed by an account of several illustrative cases.

Case I.—A gentleman, aged thirty-three. Had always enjoyed excellent health, and was quite athletic during early manhood, but inherited a neurotic temperament. Had smoked considerably, and been much harassed by business during the season of 1886. Went shooting early in September, and in pursuing a grouse through heavy underbrush, became considerably blown. Sitting upon a fallen tree to recover wind, he observed that the sound of his breathing, particularly in expiration, was intermittent, giving a puff at each beat of the heart. The expired air, instead of leaving the mouth in an even, prolonged current, came in a series of whiffs which may be represented quite accurately by the sounds *huh, huh, huh, huh.* These were loudest at the commencement of expiration, and became fainter toward its close. Inspiration was similarly broken, but the interruptions were less marked. As the heart's action quieted down, this pulsation of the breath became less and less noticeable, till it finally ceased. A second run, however, reproduced it exactly as before. At no time was the subject conscious of any pain, or shortness or difficulty of breathing. As he had never observed the phenomenon before, even during the exertions of his old athletic work, he sought medical advice.

Examination of the heart discovered no abnormality whatever. Its sounds were clear; no murmur could be found over any part of the chest. The action was, however, rapid, and complete abandonment of tobacco and coffee was advised. The respiratory sounds were also even and regular. I could not detect the puff which was described, but as the patient said that exertion would bring it back, I asked him to run up and down stairs several times. The sound was then plainly heard by the ear held about a foot distant from the patient's open mouth. I listened with the stethoscope over the chest, but could not distinguish it there at all. When the instrument was applied along the trachea, however, it came out loudly, and had the characters already described. Drummond's "oral whiff" as a sign of thoracic aneurism came to my mind, and therefore, though there were neither symptoms nor physical signs of this disease, I re-examined for it carefully and repeatedly, but with an entirely negative result.

This subject now enjoys excellent health, but exertion always reproduces the puff in his breathing. When carefully listened for, it can also be heard even when he is at rest. He has often heard it faintly *when lying in bed at night.*

Case II.—A young man, aged twenty-four. Gave a history of neurasthenic symptoms. Had been aware of the respiratory puff ever since boyhood. In character it corresponded perfectly with that described in Case I. The subject had no sense of shortness of breath, and heart and lungs were sound.

Case III.—Very nervous lady, aged thirty-three. Puff well marked; heart-sounds normal. Had never observed the breath-pulse herself.

Case IV.—Gentleman, aged forty-five. Heart and pulse normal. Had neurasthenia ten years ago, and at the time of examination was excited over a political contest. Had never observed the sound, though it was plainly audible.

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[1] Archiv f. klin. Chir., xxxvi., 194.
[2] Upsala läkereförenings förhandl. xiv., 501.
[3] London Lancet, 1882, ii., 1036.
[4] Archiv f. klin. Chir., xxxiii., 255.
[5] Bulteau: De l'Occlusion intestinale, Thèse de Paris, 1878, No. 427

CASE V.—Workingman, healthy in all respects. Whiff well marked, but never detected by himself.

I have often examined patients for this peculiar pulsatile breath, but have found it only in the cases narrated. Those having larger clinical opportunities might, doubtless, meet it frequently if they sought for it. But it was never alluded to by any expert under whose tuition I have been, nor have I since found any physician who knew aught about it, nor any work on physical diagnosis which mentioned it. The Index Catalogue of the U. S. A. Library contains no reference to it. The only account which I can find is in descriptions of Drummond's "oral whiff," where it seems to be looked upon as a familiar fact. But, considering the sort of men who have professed to me their ignorance, it certainly cannot be an every-day matter. To them, as well as to myself, it was a puzzle—which is my reason for describing it here.

Why it occurs in so few subjects and not in others I cannot explain. In my small experience it has usually been associated with a distinctly neurotic constitution. Nor is the mechanism of its production clear. Two explanations have occurred to me. When one listens to the sound along the trachea, it seems as if it must certainly be due to interruptions of the column of in-going and out-going air by the intermitting pressure of some part of the circulatory apparatus; the entering current being simply retarded at each systole, the emerging current being alternately obstructed, and then liberated under accumulated pressure. This is the explanation sometimes given of the "whiff" in cases of thoracic aneurism. No such compression of the air-passages could take place, however, without dyspnœa. Both in health and in aneurismal disease it seems more likely that the sign described is due to the fact that each rise of intra-thoracic pressure attending the aortic expansion so increases the expulsive force of expiration that the sound of the air rushing through the narrow *rima glottidis* is momentarily intensified into a puff.

The conditions may be roughly imitated as follows. Over one extremity of a glass tube tie a piece of sheet rubber, having a slit cut in it from side to side of the tube. This represents the vocal cords. To the other extremity attach the double atomizer bulbs. After distending the reservoir bulb, allow the air to escape slowly through the artificial *rima*. In so doing it will make a blowing sound. While it is passing, compress the reservoir intermittently. At each added *vis à tergo* the sound will rise to a distinct puff, which, allowing for necessary faults in the instrument, and for the absence of resonating chambers like the pharyngeal vault and the nasal corridors, bears a close resemblance and analogy to the "oral whiff."

The value of this whiff as a sign of intra-thoracic aneurism must depend on its association with other physical signs of that disease. It would certainly seem that any physician accepting the usual statement that the "oral whiff" occurring during physical and mental quietude is of itself evidence of aneurism (see Pepper's System of Medicine, vol. iii., p. 811) would inflict needless alarm upon his patient.

A PHYSICIAN PROSECUTED FOR ASSAULTING A BABY.—A physician in Berlin was requested to prescribe for a boy, four years of age, for some slight ailment, but the child screamed so that it was impossible to examine him. After trying for a long time to quiet him, the physician lost his patience, and gave the boy two or three slaps with his hand on the nates. The mother was very angry and took the child away at once, and in a few days brought suit against the medical man for assault upon her boy. It was shown that no injury had been inflicted upon the child, and the physician was acquitted, the court holding that he had acted for the good of the patient, and that the punishment was inflicted with the best intentions.

DUPUYTREN'S FINGER CONTRACTION.[1]

FURTHER REMARKS ON THE THEORY OF ITS NERVOUS ORIGIN.

By ROBERT ABBE, M.D.,

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THE infrequency which Dupuytren's contraction of the palmar fascia is met with by most practitioners, and the scant literature of this interesting subject, together with its uncertain or unsettled etiology, lead me to offer some observations based on my personal experience with it.

No one who has ever operated upon one of these contracted palms, traversed by dense bands of glistening fibrous tissue, questions the locality of the contracting tissues. It is essentially a hyperplasia of the palmar aponeurosis fibres, with involvement of the areolar connective tissue of the palm, often taking in the skin also. But what cause can be assigned for its commencement is yet a moot point. It comes with mysterious quietness, and never is spontaneously arrested. Must we conceal our ignorance of its cause behind the word idiopathic hyperplasia, or can we definitely ascribe another? Gout has been commonly received as the most probable factor, but with this I have never been satisfied, for reasons I will soon give. During the past seven years I have observed not less than forty patients with this malady, of which I have private notes of at least twenty-five, and upon the study of these I venture to offer some points which seem to me of importance.

In 1884 I read a paper on this subject before this Academy of Medicine (*New York Medical Journal*, April 19 and 26, 1884), in which, after reviewing it, and reporting ten cases I had been studying, I advanced a theory of its causation, which to me was more satisfactory than the vague assumption of gout which Mr. Adams, of London, and some others think can be assigned to most every case, and which, for want of a better, has been accepted by authors generally.

My conclusions resulted in the following working hypothesis to explain the disease.

First.—A slight traumatism of the palm, often entirely forgotten.

Second.—A spinal impression produced by this peripheral irritation.

Third.—A reflex influence to the part originally hurt, producing insensible hyperæmia, nutritive-tissue disturbances, and new-growth, shown in the contracting bands of fascia and occasional joint-lesions resembling subacute rheumatism.

Fourth.—Through the tense contractions a second series of reflex symptoms, neuralgias, general systemic disturbances, and a reflection of the trouble to the corresponding part of the opposite hand.

Since the publication of that theory I have often been asked if subsequent cases have confirmed it.

I may now say—decidedly—yes! for the following reasons:

First.—Very few cases of Dupuytren's contraction have specially strong hereditary or personal predisposition to gout, and many have no taint whatever of either rheumatism or gout.

Second.—No case I have yet seen has had both hands affected simultaneously. An interval of from a few months to several years occurs between them.

Third.—The neuroses of scar tissue in various parts of the body are universally recognized by surgeons and specialists, and are analogous to those accompanying Dupuytren's contraction.

Fourth.—The neuroses of which I shall speak are secondary to the development of the palmar bands, and can be started up oftentimes by hurting these.

Fifth.—The neuralgias and neuroses are usually relieved by operation, oftentimes as if by magic.

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[1] Read before the Surgical Section of the Academy of Medicine, February 13, 1888.

On these five points I will now narrate my experience.

First, as regards hereditary taint and a personal predisposition to gout, that are assigned as coincidences in the great majority of cases of this affection by two of the many observers. In my earlier cases I found no corroboration of this theory, and in my last twelve there is a striking absence of taint, except as follows.

In one patient of these twelve, the man's father had been troubled with rheumatism "all the time," and there was a family tendency that way, though his mother had not suffered from it.

In another case, a German laborer, there was no inheritance; but the patient himself had had a short two-weeks' attack in one arm and leg some years before I saw him.

In a third case, a lawyer, who had never had rheumatism himself, had one brother who had been subject to it, but he was the only one out of a family of ten children.

In the other nine cases (they were all males), there was no hereditary or personal taint. Some were thoroughly conversant with their family history, and spoke most emphatically in the negative.

I have been endeavoring to reconcile my observations with those of Adams and Keen, who think it due to gout. The clue to their suspicions of this taint I find in a sentence of Dr. Keen's, which reads: "The large majority of all the cases I have seen had enlarged and tender finger-joints, the seats of more than suspicious pains." Now it is eminently true that, coincident with the palmar irritation, there is often a train of symptoms of nervous origin frequently simulating rheumatism, *and not only absent before the palmar disease came*, but disappearing, as I shall show later, when the disease is cured.

It would be difficult to review a dozen cases of any other disease in which there was less ancestral or personal history of the commonplace rheumatism, or what is rarer in this country, but of which the English and French writers speak so often, namely, gout. Therefore I feel we must look for other origin than this, and would repeat that, more than ever, I believe sincerely rheumatism has little or nothing to do with its causation.

It would be reasonable to expect that, if it depended on such a constitutional cause, it would appear more or less simultaneously in both hands, or that the feet would also suffer; while if it originated from injury sustained by one palm, and appeared long after in the other, often with coincident neuralgias following the upward course of the nerves from the first well-established trouble, and which were repeated in a similar form in the opposite hand, we would find some corroboration of the theory I have advanced.

As a matter of fact, we do find that the contraction in one hand always precedes that in the other by from a few months to many years. In one case, the right existed twenty years, the left eight. In another, the right, twelve; the left, seven. And so they usually are found, with several years between.

In one old gentleman's case, one hand had been in trouble twenty years before it affected the other. Thus a chronic nerve irritation in one scar is—more or less—slowly reflected to the opposite side.

As regards the third point, scar-tissue in any part of the body may give rise to neuralgia in distant places. There are few physicians who have not seen painful sensations, radiating to a distance from a cicatrix, entirely relieved by excision of the scar. I have seen a number of such instances.

I recall one, several years ago, in a very intelligent old gentleman, brought to me by Dr. A. A. Smith, for intractable neuralgia of the entire arm and shoulder, the sole cause of which was a small, hard, linear scar of the palmar side of the last joint of his middle finger, cut by a falling window sash. I excised the scar, and the neuralgia entirely disappeared.

Some years ago I assisted Dr. Weir in removing the depressed cicatrix of an old bullet-wound of the thigh in a gentleman, the victim of a vicious neuralgia of the foot and limb. He was completely cured by the operation. Twice I have relieved neuralgia of the leg by cutting contracted fascia beneath the toes.

These are well-recognized surgical incidents, and strikingly analogous to the pains of many cases of Dupuytren's contraction.

Fourth.—There are associated with Dupuytren's contraction, in more than half the cases, a various list of neuroses, which constitute an unwritten chapter in the disease. To one who sees a case but seldom, many of these would not for one moment be considered as related to the palm trouble, at least in the sense of sequel. In some patients there is apparently no pain or sensation associated with it. In my experience, however, this is not usual, and the victim suffers from what he supposes to be another disease, which, however, is intimately related to the hand.

In my former paper I related one of the most striking cases that has come under my observation. It was of a man suffering for years from persistent and severe rhachialgia of the lower dorsal vertebræ, for which he had been blistered, cauterized, ice-packed, and dosed with drugs by distinguished medical men. The backache was instantly relieved by operation on the contracted fingers, and never returned.

In the case of a cloth-cutter, with both hands affected, who had given up work on account of the unbearable pain of the palm, especially the right, which was second to be affected, and which he could scarcely lift to his head or touch in the palm without suffering, I operated first on the left only—it being the tighter—and at once *the pain left the opposite hand entirely*, so that he could swing it above his head, brush his hair, lie upon it at night, and do many things that formerly caused great suffering. He remained cured.

A third case, already reported, with pronounced Dupuytren for nine years, had had, several times during each year of this period, attacks of painful subacute swelling of the fingers and joints of the affected hands, which kept him awake nights, and caused increasing depression of spirits. He had abandoned business in consequence. Since operating on his hand four and a half years have elapsed, during which he has never had return of the pain. He is now in perfect health and spirits.

A fourth case—a physician with numbness and tingling in the palm when the contracting band was in its infancy—had, after the band grew, a neuralgic pain, darting occasionally from the palm up the forearm. This subsided six months later, when the opposite hand began to contract, and then the pain stayed altogether in that one.

Fifth case, also reported: Double Dupuytren's contraction. Has a burning sensation in the palm. No neuralgia.

Sixth case, also reported: A butcher had tingling sensation, persisting for two years, in the adjacent sides of the ring and little fingers, but no neuralgia. During the four years of his Dupuytren, however, he had had a writer's-cramp of the thumb, little, and ring fingers of the affected side, so that after writing a few moments cramps would seize them, they would stiffen up, and he would have to drop his pen and pull them straight.

I will make one more extract from my published cases of an interesting form of neuralgia associated with this contraction, which existed seven years in one, and four years in the other palm. For three years the patient had had numerous attacks of cervico-brachial neuralgia, lasting ten days. Each paroxysm of pain during this time was relieved by folding his arms, and tightly squeezing them together. During the same period he had, every few weeks, attacks of sudden neuralgia of the right palm, repeated at a few minutes' interval for several hours, and eased only by pressing the opposite thumb into the affected palm. He also had occasional neuralgia of the right leg and thigh, and hyperæsthesia of the back, painful to the touch of a towel. I regret that at the time he could not leave his business to be operated on, and has since passed from my sight. But I have no doubt the neuralgias and hyperæsthesia, one and all, would have been relieved by proper division of the contracted palmar bands.

Of my later cases, now published for the first time, I will narrate such as bear on this most interesting feature of the matter, omitting details irrelevant to this point.

Hugh McG——, aged sixty-two, truck driver. Dupuytren's contraction twenty years in the right, and eight years in the left palm. Six months before being seen began to have severe pain in the radial side and back of the left wrist. It was a burning pain, as of a coal burning deep inside the wrist. The latter became quite weak, so that he could not do a day's work during the four months prior to operation. The pain was worse at night, coming on when quiet in bed, and giving a sense of burning that caused him to keep it exposed on top of the bedclothes. He could not lie on his left side at all, without, as he expressed it, " squealing with pain." Sometimes this would dart up the arm to the shoulders, neck, and side of the occiput, so that he could hardly turn his head to that side for the pain in the neck. This paroxysm would usually last several hours.

He had most typical disease in each palm. In 1884 he came under the care of Dr. W. T. Bull, who kindly invited me to operate on one hand by Adams' method of subcutaneous division, while he operated on the other by open section of the bands, to compare the relative merits of the two methods. I chose the left, because it was the older trouble and the seat of all the pain. I made twelve subcutaneous cuts on three cords, and released the fingers thoroughly.

From the moment of operation he had not a particle of pain in the wrist or arm, and never afterward lost a moment's sleep from the hand. He soon resumed work, and I saw him, long afterward, perfectly well and without recurrence. He remarked that " no one ever had such wonderful relief."

In March, 1885, Dr. M. C——, aged forty-seven, appealed to me to relieve him of Dupuytren's contraction of twelve years in the left, and four years in the right hand. It resulted from a tight ring, which had to be cut off the left hand twelve years before, and which was at once followed by the commencing trouble.

His case exhibited the following striking neuroses: On two occasions during the past four years he has had an attack, lasting several days, of " battery-shock " sensation in the left ulnar nerve. When I saw him he had been having, for eight days, constant and severe neuralgia of the left ulnar nerve, worse sometimes in the forearm, sometimes in the arm toward the shoulder, and again in the pectoral region, like an angina pectoris. Part of the time it was a dull aching pain, and at others an acute neuralgia, for which he had had to resort to considerable quantities of morphine for relief. I operated under cocaine anæsthesia. He was completely relieved at once, and remains so at the present time.

The next case displaying a neurosis was in an old gentleman of seventy-two, with classic cords in both palms. For ten years it had existed in the right hand, and somewhat less in the left. He had occasional pains about the left shoulder, but that was nothing to him comparable to a notable sensation present most of the time in the right arm. From the shoulder down to the fingers there seems to be, to his sense, a great increase in size, as if it were distended to twice its natural bulk, giving a strange, unnatural feeling.

I excised, under cocaine, the entire well-marked and long band in the right palm. The delusive sense of increased size slowly left the arm. That was two years and a quarter since. I saw the patient a few days ago, and he remains free from pain or sensations. The cicatrix is without the slightest sign of return of trouble, and the play of the fingers perfect. By coincidence he volunteered the statement, which is of interest in this connection, that the knotted cord of the left little finger (never operated on), which had been rapidly getting worse during the year prior to my operation on the opposite hand, was now getting softer. Comparing it with drawings made at the time I could corroborate his statement.

Now as the trouble in this hand was a sequel to the other, is it not possible that curing the right might cause some retrograde action to go on in the left, if, as we see, there is unquestionably sympathy between the two?

In the case of Dr. S——, of this city, seen by me last year, there was occasional pain only in the band itself in one palm.

In the case of O. W——, aged sixty, the left middle finger drawn down, with increasing weakness and pain in the forearm. Operated on by excision of the band. Pain relieved.

In the case of Dr. W——, of Virginia, whom I recently operated on, we have most interesting illustrations of the relation between the contracted palm and the distant pains. This gentleman, in middle life, without trace of rheumatism or gout, inherited or acquired, began to have Dupuytren's contraction three years since. He attributed it to carrying a whip, with heavy loaded handle, pressing his right palm, while in constant hard riding the left hand held the reins tightly. The left first showed trouble, neuralgia being an early accompaniment. The suffering was in the arm, shoulder, and side of the neck. Three months later the right took on the same pain. Both have been growing worse during the last six months, so that he has been broken down in his work. Occasionally, when riding, the neuralgia will attack his shoulder with a sensation as if he were being " clawed." Again, he is often seized with an intense pain at some distant point, as in one thigh or a spot on the arm. The neuralgia is now continuous. Two weeks ago he came to my office suffering as usual from pain, specially in the deltoid and brachial region—both sides. I at once operated, under cocaine, on the worst hand. Before I could get the dressing on the part he assured me the pain had entirely gone from that arm and shoulder. Five days ago, pain having continued unabated on the opposite side, I performed the same operation, namely, the open transverse incision of all the bands in the palm. The relief to the shoulder was complete and instantaneous, as it had been on the opposite. He has since remained absolutely free from neuralgia, and feels like another man.

There are some cases of well-marked bands that have no accompanying pains or reflex sensations, ao far ss we can see. I suspect that the pain depends on the involvement of sensory nerve-filaments by the cicatrix, and that those cases have not entrapped the sensitive nerves at a disadvantage. They are not an argument against the influence of a cicatrix on distant parts, as an insensible play of nervous force can go on without subjective pain, as in sympathetic ophthalmia.

In the only case I have seen where there was a strong family tendency to rheumatism, and where the patient himself had it before the Dupuytren's contraction, I made a clean dissection of the fibrous band, and for ten days everything went well, until a stiffening and subacute rheumatism of the joints of the hand set in, which left a stiffness that has only moderately gone away at the end of a year and a half. The hands were left unstretched after the operation, and the trouble seemed to depend entirely on the patient's constitution. Adams and Keen speak of this incident occurring occasionally. In this patient's hand it was noted that whenever a piece of ice or cold object touched the band in his palm, it sent a severe pain up the ulnar nerve—a further proof, if that were needed, of the intimate relation of the two.

From this recital of painful neuroses associated with, and a sequel to, the onset of many cases of contraction of the palmar fascia, we find new strengthening of the argument for its nervous origin, especially considering the magical relief of pain by cutting the bands, the relief not infrequently extending to the opposite side of the body. In operating I have tried every method. I prefer excision of the band if it is well defined; or if not, and if the skin is much involved and the band matted to the tendon-sheaths, then numerous transverse open sections. These small gaping wounds fill quickly with granulations, or else close by primary union, with a little wedge-shaped clot. The soft scar does not contract, and the wounds are entirely healed in from ten to fifteen days.

I operate preferably with cocaine anæsthesia and Esmarch's bandage. The only dressing on the palm after the operation, and before the Esmarch bandage is removed, should be thick, well-adjusted compresses of damp gauze, fresh from sublimate solution (1-1,000). No iodoform is needed. No stretching of the parts should be allowed for ten days, and then it is rarely needed. Splints may usually be discarded from the treatment as doing more harm than good.

IS IT EVER JUSTIFIABLE TO PROVOKE PREMATURE LABOR FOR THE RESTORATION OF SIGHT IN ALBUMINURIC RETINITIS?

By J. L. THOMPSON, M.D.,

INDIANAPOLIS, IND.

This question is asked by Dr. Thomas R. Pooley, in The Medical Record of January 28, 1888. It was also put by Dr. E. G. Loring, in a paper published in the "Transactions of the American Ophthalmological Society" in 1883, and to the latter Dr. Pooley gives the credit of having first induced premature labor for threatened permanent blindness.

This same question confronted me six years prior to the publication of Dr. Loring's able paper, but my reason for not then reporting it was that I supposed the practice had been more frequent than it now seems to have been, and that it had been written upon, but had escaped me. On October 11, 1877, I was called twenty-five miles distant to see Mrs. J. D——, aged thirty-nine, married several years, pregnant nearly eight months with her first child. Her sight had been failing for nine days, but total blindness did not set in until the day of my visit. The ophthalmoscope revealed a well-marked retinitis albuminurica, with the characteristic exudations in and around the macula lutea and blood-extravasations from the retinal veins. She was a very intellectual woman, short in stature, stout, of apparently plethoric habit, and, with the exception of this trouble, seemingly in good health. Her loss of sight was so complete that she could not discern even the brightest light thrown upon the eyes from the mirror of the ophthalmoscope. The urine contained much albumen. On consultation with her physicians, then present, Drs. Payne and Webb, of Franklin, Ind., I advised the immediate induction of premature labor for the preservation of both eyesight and life. This was promptly done, and in two days the child was delivered, but died thirty-six hours afterward. In a few days the patient could distinguish between light and darkness, then could discern large objects, and in a few weeks sight was fully restored.

She called upon me on December 6, 1877, when I made the following additional record on my books: "The exudative patches have given place to five little white spots in the right and two in the left eye. V. equals $\frac{20}{50}$ right and $\frac{20}{30}$ left eye; can read the finest print at the usual reading distance. Dr. Payne writes that the urine shows but the slightest trace of albumen." The vision has since become quite normal. The woman is now in good health, but has not conceived since her former terrible experience. This patient was very anxious to go to full term, as she and her husband greatly desired children (they having been married so long); and had it not been that total blindness was threatened, no other cause could have induced her to make the sacrifice which she did. My reasons for this step will appear after a brief report of some other cases, as follows:

Soon after my location in this city, seventeen years ago, I was called by a physician to examine the eyes of one of his patients, far advanced in pregnancy, whose sight was failing rapidly. I could not then leave my office, so put it off until after my regular office-hours; but an urgent call for him to the bedside again in the evening caused us to hasten to the house, when we found her in a uræmic convulsion, from which she died in a few minutes.

I saw another similar case on October 6, 1877, with Dr. F. S. Newcomer, of this city. Mrs. M——, aged twenty-seven, became suddenly blind. Dr. Newcomer saw her for the first time before breakfast on the 6th, when she complained of a violent pain in the head; labor came on almost immediately afterward, and she was delivered in less than two hours. I saw her a little past noon, and found, as in my first case, well-marked retinitis albuminurica. She was treated with salines and other remedies, but died in convulsions on the following day.

On July 27, 1885, Mrs. H. C——, aged thirty-five, was brought to my office by her physician, six weeks after her confinement, with the following history: "Had convulsions ten days before parturition, and became totally blind." My record reads: "V. equals O. both eyes; pupils widely dilated; characteristic exudation all around each macula lutea and optic disc; many partially absorbed blood-extravasations in each fundus." The patient called again, January 20, 1886, when nothing was to be seen but a cicatrized patch in left macula lutea and atrophy of the optic papillæ; no nutrient vessels were to be seen in either optic disc. V. equals O. right, and simple perception of light left; pupils still dilated. I have heard that sight has not improved in this case since that date.

Do not the above cases furnish a sufficient answer to the question? Acute albuminuria, from whatever cause, is an exceedingly fatal affection when it has so impressed the system as to become manifest in and upon the retina. Of the truth of this I have had abundant evidence, as it has been my fortune to meet with at least thirty cases of retinitis albuminurica, a very large majority of them being in men between twenty-four and forty-eight years of age. Most of them have consulted me for dimness of vision, which they supposed could be remedied by glasses, never suspecting that any disease existed.

P. N. D——, aged twenty-nine, a mechanical draughtsman, called upon me, October 26, 1877, on account of dimness of vision, for which he desired me to examine him for glasses. His V. equaled $\frac{20}{200}$ right and $\frac{15}{200}$ left eye. Negative and positive glasses were placed alternately before each eye, but did not improve his sight in the least. The ophthalmoscope quickly pointed to the deposits and extravasations of blood in the fundus of each eye. "Have you had any trouble with your kidneys?" was asked of him. "No, I never had better health in my life, and I weigh twenty pounds more than I ever did," was his reply. His urine was found to be heavily laden with albumen, nearly all of it becoming coagulated under the application of heat and nitric acid. I advised him to consult one of our best physicians, but he seemed to think that I was unduly alarmed about his case. He subsequently called Dr. F. S. Newcomer, but soon had convulsions and died on November 25th, just one month after he called on me.

And so I could go on, repeating cases similar to this one. But two weeks ago a physician, for whom I had prescribed sphero-cylindrical lenses eighteen months before, called upon me for a change of glasses, as his served him no longer—could not see to read with them; but on looking into his eyes there sat the dread monster, as boldly prominent by the aid of the ophthalmoscope as Gibraltar's Rock to one in the Straits of the Mediterranean. I advised him not to change his glasses, but he persisted in having me order them; but in four days I received a despatch from his city, countermanding the order, and informing me of his death.

Some of my patients have improved temporarily under a milk diet and medicines; some have been benefited by going to mineral springs. One very fine-looking young man became disheartened at his increasing blindness and shot himself. But, so far as heard from, all but two have died inside of two years. Remember that I do not consider simple cases of albuminuria necessarily fatal; on the contrary, numbers recover and live for many years, but it is my experience that when it has so affected a patient as to become manifest in the retina but about one in ten live over two years; most of those which I have seen died inside of six months.

If, then, this disease is so frequently fatal to life, are we not justified in certain cases in recommending the induction of premature labor?

ON THE APPLICATION OF ALEXANDER'S OPERATION TO PROCIDENTIA UTERI; WITH REPORT OF TWO CASES.[1]

By ELIZABETH STOW BROWN, M.D.,

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THE position of the uterus in the pelvis depends on the state of the cellular connections; the inclination of its axis upon the condition of its ligaments; its dimensions upon the functional state. Of the cellular connections, the most important is the subperitoneal pelvic connective tissue (containing elastic and smooth muscular fibres), particularly where it surrounds and accompanies the uterine blood-vessels. The latter portion is strengthened by additional trabecular filaments (Savage).

The utero-sacral ligaments are regarded by Aran as the only true ligaments of the uterus, their function being to hold the cervix to the posterior and upper part of the pelvis. Their relaxation and elongation cause the cervix to slip forward and downward. The round ligaments, passing backward through the inguinal canal, crossing in front of the spermatic artery, and going between the layers of the broad ligament to the anterior and superior part of the uterus, consist of fibro-cellular substance, muscular fibres, vessels, nerves, and absorbents. In the test of the strength of the round ligaments by Drs. Polk and Wright (THE MEDICAL RECORD, July 3, 1886), one broke at five pounds, having stretched to twice its length; the other was broken at four and three-fourths pounds. This was a strain far exceeding that demanded functionally of the ligaments. In the human subject the function of the round ligaments is generally agreed to be to prevent the fundus from being pressed too much backward; to aid in preventing the entire body from being prolapsed and resting with undue weight upon the rectum; and to facilitate the process of parturition by fixing and maintaining the uterus in due relation to the pelvis during the pains of labor.

Uterine prolapse is admitted to be the joint result of rupture of perineal structure, elongation of internal ligamentous supports, and stretching or forcible separation of the subperitoneal pelvic connective tissue. Of these deviations from the normal, the lengthening of the utero-sacral ligaments and the yielding of the connective tissue are the most essential.

The state of complete prolapse, as we see it, shows loss of perineum generally (but not invariably); prolapse of vaginal walls or inverted vagina; displacement downward and forward of the cervix from elongation of the utero-sacral ligaments; displacement backward and downward of the fundus. Dissection will show the blood-vessels leading to and from the uterus lengthened, straightened, and taking a new course; the ligaments, including the round, increased in length; the alar mesentery lengthened in its base line but otherwise in normal position.

What is the object in procidentia uteri in shortening the round ligaments, drawing the fundus up to the pubes, and placing the uterus in anteversion?

First: By maintaining the uterus in an elevated position in the pelvis, it is hoped to secure the retraction and consolidation of that subperitoneal pelvic connective tissue on which the position of the uterus so largely depends. That the maintenance of an elevated position in the pelvis by means of the round ligaments is not, however, the main or immediate expectation, will be shown later. Savage teaches us that if the connective tissue which has yielded to such an enormous extent, is relieved for a sufficient length of time from the weight of the prolapse, it will securely contract and consolidate.

Second: By putting the uterus in anteversion the current of the forces which gravitate toward the pelvis will converge behind the organ, instead of impinging upon its surface on top or in front. This does away with the pressure into retroversion, the first step in descent (Grailey Hewett).

Alexander never claimed that the round ligaments would hold up a prolapsed uterus when all its supports were gone, or so lax as to be practically useless. He but suggested that putting the uterus into forced anteversion takes away its wedge-like action; and, that when cervical supports are gone, we counterbalance the slipping forward of the cervix by bringing the fundus forward, maintaining the uterus at right angles to the vagina.

As preliminary operations, if the indications are present, a trachelorraphy, a colporrhaphy, or a perineorrhaphy may be done. Alexander has laid no stress on the latter operations taking precedence of the shortening of the round ligaments, though Doléris has done so. The advantages of their precedence, however, are obvious. Doléris, noting the behavior of the bladder where both ligaments are shortened, urges the drawing out of one ligament only. He says: "If there is cystocele, the shortening of the round ligaments, far from lessening it, actually increases it at first. Since the bladder cannot rise when distended, but must extend laterally, or downward as a subpubic pouch, it is impossible that this lateral distention of the bladder should not finish by exercising a traction upon the neck of the uterine body, with which this organ is so intimately connected. This traction eventually causes the uterus to redescend and reproduce the prolapse sooner or later." Though, of course, unless the round ligaments stretch, the uterus even then could not become procident. Doléris, having in mind this mechanism of the distention of the bladder, is convinced that it is better to shorten one ligament than both. He believes that the search for the second ligament has often helped to cause suppuration in the first wound. The other ligament can be shortened later, if one is found insufficient. Doléris also affirms that one ligament sufficiently sustains the uterus while it is deviated to one side of the bladder.

The after-treatment is not the least important part of Alexander's operation. It depends upon two limits of time. The first is the time required to unite the ligaments to the pillars of the ring, to the wound, and to the canal. This, according to Alexander, is about three weeks, and determines the period of decubitus. The second limit of time is that required for the secure contraction and consolidation of the connective tissue. Now, since the longer the uterus has been prolapsed, the longer it will take for the cellular tissue to return to its normal state, this period will be in direct proportion to the duration of that previous condition. It has been suggested, and with unquestionable propriety, that this return of the connective tissue to its normal state is practically a species of involution, and is the result of the alterations produced in the circulatory conditions consequent upon the new position of the uterus. In old cases of prolapse these changes will probably not take place in less than a year, if so soon. The length of this period of time should determine how long the patient should wear a pessary. The additional relief to the connective tissue afforded by the pessary is certainly desirable. The drawing of the fundus up to the pubes does not constitute the desired result; but that result is rather the return to the normal of the connective tissue surroundings. Hence we ought not to speak of the results in Alexander's operation in less than one year.

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[1] Read before the Alumnæ Association of the Woman's Medical College of the New York Infirmary, October 17, 1887.

Patients must always be warned about constipation and straining efforts at stool, and against attempting to lift heavy weights; while especial caution must also be insisted upon in regard to conjugal relations, which should not be resumed under two months after the operation.

In comparison to the whole number of recorded cases, Alexander's operation has been done for procidentia but few times. There are on record several hundred cases, of which only about forty-six are for this condition. Recorded failures for procidentia are but three: one of Alexander's cases, where the ligaments stretched; one of Gardner's cases, where, he admits, the ligaments were not drawn out enough; and one of Campbell's, where the operation was imperfect from a previous peritonitis.

The two following cases may be added to those already on record.

Case I.—Mrs. S——, thirty-five years of age, married eight years, American. Has had four children. The second child was premature. The uterus first became prolapsed after this confinement, four years ago. During the last two pregnancies prolapse persisted in the latter months. The patient first came requesting immediate operation, as she feared pregnancy, having had menstruation delayed two weeks, and dreaded very much suffering as in previous gestations. She could not wear a pessary, principally because of the ruptured perineum. The operation was performed February 7, 1887. Both ligaments were found varicose. The right was small and weak, and as it was drawn out, about three inches, stretched perceptibly. The left ligament was large and strong, and was drawn out about four inches. It was then passed through the superficial fascia to the opposite side and tied in a knot with its fellow. Primary union occurred on the right side, but union by granulation on the left side. An inflated rubber ring was introduced into the vagina immediately after the operation. During the two weeks following, the patient at times complained of "dragging pains" in the wounds, but of nothing else. On the eleventh day the patient began to menstruate, anticipating her period by one week. She had considerable pain (which was not her habit), described as "cramps." After three days the flow became profuse, and was checked by ergot. On the fourteenth day the perineum was repaired and the patient spent two weeks more in bed. On getting up at the end of the four weeks, the pessary being still in place, the uterus was well held up to the pubes, and the cystocele, which before operation was very marked, was scarcely apparent. From this time up to about four months after the operation, however, the cystocele increased, and then receded until the present time, when it is very slight. Now, nine months after the operation, the uterus is quite firm in its position, the fundus well up to the pubes, the cervix back in the hollow of the sacrum. The patient feels very comfortable, and is in better health than for many years before. She still wears the pessary.

Case II.—Mrs. E——, forty-five years of age; married twenty-five years; German; has had five children. The procidentia has existed about twenty years. Passed the menopause about three years ago. The patient has been accustomed for years to return the uterus to position several times a day. I was called to her house to relieve her of a condition which was practically a strangulation of the uterus outside the vulva (suggested as possible by Grailey Hewett). After an unusual strain the uterus came down, but could not be returned as before. Soon acute pain set in. The patient was unable to sit, stand, or walk. Defecation and urination became extremely difficult and painful. The extruded organ swelled and became very sensitive. This state had continued for a week, the patient being obliged to remain in bed, before I saw her. Examination showed the perineum ruptured, the cervix outside the vulva, the vagina inverted, and the vulvar orifice tightly grasping the uterine body. The bilaterally fissured cervix was enormously œdematous and purple. Large true ulcerations existed on the segments of the cervix. The vagina was also purple and œdematous. The patient was placed in the genu-pectoral position, and by squeezing the lips of the cervix together while exerting considerable pressure in the axis of the pelvis, the uterus slipped up. Before operation, the ulcerations on the cervix had healed under treatment, and the uterus had been supported for four weeks by pads of cotton. The patient was unable to retain a pessary. On May 30, 1887, the operation was performed. The ligament was readily drawn out on the right side, but in this inguinal canal was found a loop of Fallopian tube. Following this down, the finger readily felt the ovary of that side. The tube was returned to the abdominal cavity with proper antisepsis. The canal of Nuck was very redundant on both sides, and the peritoneum was opened in both canals. The ligaments were both drawn out about four inches, brought through the superficial fascia to the median line, where they were sutured into an incision just above the pubes. An inflated rubber pessary was inserted before the patient left the table. Decubitus was maintained three weeks. There was no elevation of temperature at any time. Both wounds healed by primary union, and the patient never at any time complained of pain. The perineum was not restored. Now, five months after the operation, the condition of the case is not so satisfactory as that of Case I. I consider this as largely due to the omission to restore the perineum. The cystocele is quite marked, and the cervix is on the floor of the vagina; but the fundus is held closely up to the pubes. A large air-pessary is used, but on account of the loss of perineum is not well sustained. However, the patient expresses herself as exceedingly comfortable, and perfectly satisfied with the results of the operation.

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A CASE OF INTESTINAL OBSTRUCTION CAUSED BY A DIVERTICULUM.

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Harry S——, aged two years. The patient had been a healthy child, with the exception of an illness toward the end of his first year. I am informed that at this time the symptoms were those of some abdominal disease, relief following a discharge of pus from the rectum, after which convalescence was prompt. The diagnosis of the attending physician was pelvic abscess rupturing into the intestine. The child enjoyed a year of health. On August 6, 1884, I was called to see him, and found him suffering from colicky pains, without abdominal tenderness and with moderate distention. He had vomited a banana, which he had eaten about two hours before the attack of colic. He received tr. opii camph. (a moderate dose sufficing to quiet pain) and a dose of castor-oil. Only a slight evacuation of the bowels followed the cathartic, and subsequent attempts to secure this result with rhubarb and magnesia, castor-oil and repeated enemata, failed. The child, however, did not appear very ill; he played with his toys, took a sufficient quantity of liquid nourishment, and required only moderate doses of bromide of sodium to allay restlessness at night. Pulse and temperature did not indicate any serious condition. There was no vomiting after the first day of his illness, and little abdominal distention. Gas was voided both by the mouth and per anum, and was noticed to have in both cases a very offensive and stercoraceous odor. He remained in this condition until 1 A.M. of August 9th, when I found him in collapse, with a cold, clammy sweat, and almost imperceptible and very rapid pulse, and very great distention of abdomen. After administering sherry wine and spts. ammon. aro., to which he responded, a final attempt was made to secure an evacuation of the bowels with an enema, castor-oil being used on the abdomen by inunction. The enema was voided without fecal matter, and the patient died at 6 A.M., five hours after the first appearance of collapse, and, I may say, of urgent symptoms.

Autopsy, made nine hours after death. Rigor mortis well marked, body well nourished. On opening abdomen, stomach and small intestines protruded, and were found enormously distended with gas. The large intestine was empty and collapsed. Beginning at the pylorus, the small intestine was examined and found in normal condition until a point about fourteen inches from the ileo-cæcal valve was reached. Here there was found a diverticulum springing from the ileum, about one inch in length and directed backward, which was by its extremity firmly attached to the posterior wall of the pelvis. A constricting band was thus formed, and beneath it were crowded about twelve inches of small intestine, and in so firm a manner that escape of the constricted intestine or passage of its contents was impossible. The gut at this point was of a dark-red color, slightly softened, and would soon have become gangrenous.

A POSSIBLE CARRIER OF INFECTION.

By D. LICHTY, M.D.,

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I have been reading the discussions on scarlet fever in the medical journals, and the series of letters in *Science*, and in support of the theory *de nihilo nihil fit*, I will offer a factor I have never seen alluded to in the literature on this subject.

In an active and extended experience of twelve years in country practice, where much of the produce that is consumed in cities originates, I have observed that it is the custom among the farmers, especially the younger families or beginners, to make butter in the house, in larger or smaller quantities; and in winter-time, to prevent the milk from freezing, it is usually kept in the kitchen, which is also the living-room, and often the only place in the house where a constant fire is kept. In this room the convalescents stay, and to it are often carried the sick, whatever may be the nature of their illness, whether diphtheria, scarlet fever, or what not, because it is probably the only room where an attempt at equable temperature would be successful. Here the milk from which butter is made is kept in large, shallow pans, sometimes on open, temporary shelving, but more frequently in "safes"—a light wood cupboard with wire gauze or perforated tin panels at the ends, and folding-doors of the same material. Now there is nothing in this to prevent the exhalations, desquamations, or disease-germs from being absorbed—and nothing possesses absorbent properties more than fresh milk—or impinging on the surface of the milk from which it, with the cream, is carefully skimmed until sufficient is gathered for churning, when it is made into butter, packed and carried to its home market, from thence to anywhere and everywhere, without ever having been subjected to any influences, either thermal or chemical, to destroy or impair organic life.

I have also seen the mother, who was the housekeeper and only nurse, leave a large wooden bowl full of butter, in which her hands and arms had been immersed nearly to the elbows, and follow me through two adjoining rooms, in which her children were sick with scarlet fever, give me the history of their illness the night previous, receive directions and instructions, and return to her butter-packing without stopping to wash her hands. And this butter was sought by local dealers, shipped to city markets, where well-watched and carefully isolated innocents developed those mysterious *de novo* cases of scarlet fever.

A CHEAP AND EFFECTIVE TEREBINTHINE BATH.

By HOWARD PINKNEY, M.D.,

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The following is a simple device for making a very agreeable and effective terebinthine bath. This method of preparing a turpentine bath is probably well known to, and been used by many others, the process being so simple I presume they have not thought necessary to publish it. If it has been so published, I have not seen or heard of it. It only occurred to me during a recent and painful illness, and is as follows: I was being treated by my friend Professor J. R. Leaming; one portion of his treatment, upon which he particularly insisted, was that certain portions of my body (back and chest particularly) should be rubbed twice daily with a mixture of oil of turpentine and vaselin. These applications gave me great relief, nevertheless I cannot say I looked forward with pleasure to them, as almost every movement was painful. At this time the idea of replacing the rubbings by a turpentine bath occurred to me. But how to make the bath so that the oil should not float on the water, but be thoroughly and evenly mixed with it, was the question. I thought of the different methods that I had used turpentine in my practice. The mode of using it with soap, for rectal injections, seemed practicable for bath use. Thereupon I had my nurse make, in a large bottle, a saturated (six ounce) solution of "old yellow soap." When prepared, three or four ounces of oil of turpentine was added, and the contents well shaken. This formed a very nice, creamy-looking emulsion. I had my bath-tub filled with hot water, and half the emulsion added. I was then placed in the bath, which exhaled a very pleasant and distinctive pine odor. (The unpleasant and pungent vapors from the turpentine seem to be changed by emulsifying.) After remaining in the bath about five minutes, I experienced a decided feeling of relief from pain, and a genial glow over all the immersed portions of my body. After remaining fifteen minutes I was put in bed, when I soon felt a decided (not unpleasant) tingling or pricking sensation of my skin. In a short time I fell asleep, and when I awakened I was much freer from pain than at any time during my sickness. The baths were continued as occasion required, until my convalescence. Judging from the effects on my own person, I believe that they will prove especially useful in the following diseases, viz., rheumatism, gout, insomnia, laryngitis, bronchitis, and in the early stages of eruptive fevers. There is only one precaution that I know necessary to be taken in using turpentine locally, *i.e.*, to protect all, especially sensitive and denuded, parts by the application of some salve, as cocoa-butter, simple ointment, etc. These home-made terebinthine baths have the following to recommend them, viz.: They are equal, if not superior, to any of the pine extracts used for baths; they are much cheaper, costing only a few cents; they are cleanly, having an excess of soap; every physician will find at or near the house of his patient the materials for making, viz., water, soap, and turpentine.

A PECULIAR CASE.

By F. W. EDWARDS, M.D.,

WILMOT FLAT, N. H.

David M. C——, aged seventy-six, had been an invalid for at least eighteen months, and many physicians had treated him during that time. He presented a sallow and emaciated frame, the whites of the eyes were yellow, and the tongue was almost raw, and fissured deeply in every direction. He could make but little water at a time, but was forced to do so often; was constipated, and each movement consisted of a few balls of fæces, which came with the injection he was obliged to use; hands and feet always cold; abdominal organs sound, except stomach, which gives him much trouble. When a child of about twelve he injured himself in the region of the stomach, and vomited a quantity of blood, and he did not recover completely for some years. Now the stomach is intolerant to everything, except a mouthful or two of baked mashed potato, and all medication must, of necessity, be per rectum. Mind bright and cheerful, except when he has what his wife calls a "spell." At about four o'clock each afternoon he becomes cold all over, has a fluttering in the pit of his stomach, and then there is a feeling as though a veil was being drawn over his head, when he becomes stupid, and nearly or entirely loses consciousness. Invariably he would think it to be the day following, and when he desired to micturate or expectorate he would as soon use the corner of the sheet as the vessel or cuspidor. His eyesight was perfect, so far as recognizing friends was concerned, but otherwise he would see double, upside down, and, at times, a number of the same object, close together, looking, as he expressed it, like a file of soldiers. These spells would last from four to six hours, and during this time he had the appearance of an epileptic, but when they had passed off he was just as bright and cheerful as before. His feet, legs, arms, and hands would become very stiff and blue when the attacks began, and continue throughout. The physicians all treated him for "liver disease," but they all said they did not know what caused "the spells," and that he could not possibly live. I had three or four doctors in consultation, and some called it hystero-epilepsy, while others attributed the cause to the injury of years before, with possible perforation, etc. I was not satisfied with such diagnoses, and after treatment for two weeks or so the patient placed himself in my hands unreservedly. After a blunder or so I put him under treatment for malarial disorder, and after using four or five suppositories, containing iron and quinine (the latter in ten-grain doses), I was not very much surprised to see all bad feelings and spells disappear, and then, by the use of cod-liver emulsion, and maltine with pepsin and pancreatin, I soon had him on his feet and as well as he will ever be.

THE TREATMENT OF MEMBRANOUS CROUP WITH BICARBONATE OF SODA.

By CHARLES L. HOGEBOOM, M.D.,

JAMAICA, L. I.

A brief statement of the success which I have had in the treatment of membranous croup, or, as Dr. Flint preferred to call it, laryngitis with exudation, may perhaps be thought worthy of consideration. The idea occurred to me that we needed a therapeutical agent to act more promptly on the blood and on the assimilative action in the system, or at least the tissues in the region of the exudation. The viscous plasticity of the blood requires to be changed very soon in acute cases to avoid dangerous laryngeal obstruction, and it struck me that nothing is so well calculated to effect this as the introduction into the system of a sufficient quantity of the natural alkali of the body, soda, in the form of the bicarbonate. In the next case of membranous croup which I was called to attend, and which occurred some time in the year 1880 in the Eastern District of Brooklyn, the patient being a child aged about three years, I commenced with an eighty-grain dose of bicarbonate of soda dissolved in half a teacupful of water, to which a tablespoonful of milk was added to somewhat disguise the taste and insure deglutition. This was followed with a thirty-grain dose every hour until the laryngeal symptoms abated. Weak milk and water was also given at intervals, and warm fomentations applied to the throat. I used no other medicine in the treatment of that case, nor in a considerable number of other cases of simple membranous croup which occurred afterward.

I had always been in the habit of using bicarbonate of soda freely in various diseases, particularly in typhoid fever and in scarlatina, in connection with the usual tonics and other remedies, but had never before conceived the idea of employing it as a weapon to rival in power calomel and tartar emetic. To become convinced that it is more efficient in many forms of disease, I believe it is only necessary to use it in sufficient quantities. I will not occupy further space by going into any detail of the cases, merely remarking that I sometimes gave even larger doses, according to the age of the patient, than those above noted.

A CASE OF BELLADONNA-POISONING.

Dr. E. A. Chapman, of Belleville, N. J., writes: "On the morning of January 19th a message came to me from Miss S——, aged forty-two, saying that she was not sick but wanted me to call and see her. The call not being pressing, I did not reach her until I had visited several other patients, about 2 P.M. I found her very talkative, and somewhat delirious; pulse, 96; pupils large; unable to walk or stand long, and complaining of dryness of the throat, heaviness of the arms, and that she could not see well. In answering questions she would begin properly, but soon wander. I asked her what she had for dinner. She replied, 'Nothing but what was good, potatoes, beef, and *pins.*' On inquiry, I learned that the evening before she had removed from her chest all that remained of an old belladonna plaster, and applied a new one, and that the skin was abraded in places. There could be no doubt as to the diagnosis, so I caused the plaster to be removed and the part thoroughly washed. I gave her repeated doses of sulphate of morphine and bromide of potassium. The next day she was better, and soon entirely recovered."

UNUSUAL EFFECTS FROM SALOL.

Dr. Charles A. Church, of Bloomingdale, N. Y., writes: "I had occasion some weeks since to administer the new drug salol for its antiseptic properties in a case of typhoid fever. The patient was a young man, twenty-eight years of age, of fine physique, who previously to this attack of fever had always enjoyed excellent health.

"I prescribed five-grain doses every four hours, with good results, it lowering his temperature and relieving the tympanites, until the third day, when the nurse told me that the patient's body was broken out with a rash, which made him very restless. On examination I found an eruption, resembling that of herpes, covering the upper part of the trunk and extending as low as the tenth rib. The treatment consisted of a removal of the cause, and a local application of five grains of carbolic acid to an ounce of cosmaline. This application allayed the itching and caused the rash to entirely disappear in three or four days. I attributed the cause to an idiosyncrasy on the part of the patient against the salicylic acid contained in the salol. I would like to inquire if any other physician has had a similar experience."

Cholecystotomy.—At a recent meeting of the Medical Society of London (*The Lancet*) Mr. J. Knowsley Thornton read notes of two cases of cholecystotomy. The first, a female of forty-five, was placed under his care by Dr. George Johnson, and was operated upon when deeply jaundiced, and in very broken health from the pain of constant attacks of gall-stone colic. A single stone was found impacted in the common duct; the bladder and its duct being much contracted, rendered the operation very difficult, and it was found impossible to follow the usual practice, and suture the edge of the wound in the gall-bladder into the parietal incision. It was therefore carefully closed by four silk sutures and dropped into the peritoneum, glass drainage-tubes being placed in the peritoneum just below the liver and in the pouch of Douglas, through a counter-opening above the pubes. The patient made a good recovery, and remains well. The second case was that of a female, aged fifty-six. The operation was similar, one large stone being impacted in the cystic duct, which was contracted in front of it; and two other large stones were found impacted in the common duct. This patient also made a good recovery. The difference between such operations and those in which the gall-bladder is distended behind a stone impacted in the cystic duct were pointed out, and the precautions to be observed in each operation were discussed. The entire removal of the gall-bladder, and the possibility of forcing the stones through by manipulation without surgery, were mentioned, and some curious cases which had come under the author's notice were briefly referred to. Dr. George Johnson pointed out that in many cases of jaundice the history of a sudden onset with pain could not be relied on. He quoted a case in which a diagnosis of gall-stone having been made chiefly for this reason, operation revealed a scirrhus tumor at the end of the duct. A second case with similar history proved to be one of hepatic hydatid, in which secondary cysts were periodically passed by the gall-duct.

Progress of Medical Science.

Thallin in Gonorrhœa.—Dr. Goll, of Zurich, regards the salts of thallin, and especially the sulphate of thallin, as an effectual and but slightly irritating antidote to the gonococcus virus. He has also employed the tartrate of thallin in one and two per cent. solution in recent cases of gonorrhœa without waiting for the inflammatory stage to pass entirely. It appeared to act well, first changing the purulent secretion into one of a milky or slimy nature, which in turn disappeared. Still more active and beneficial was a two and two and a half per cent. solution, although in some cases this caused some inflammatory symptoms. In the chronic stage he employs a solution of from one to one and a half per cent. as an irrigation, with favorable results. Dr. Kreis, also of Zurich, was led by the observations of Schulz and Pisenti relating to the antiseptic nature of thallin to try its effects upon gonococcus cultures: (1) By bringing a solution of thallin into contact with flat cultures, and (2) by inoculating media containing thallin with gonorrhœal pus. In the first, two series of experiments were made, one with an acid and the other with a neutral solution. In all the trials no gonococci developed. In the second experiment the medium prepared with thallin solutions (neutral and acid) were inoculated with cultures of gonococci and placed in the hot-air chamber; the result was that no gonococci developed, while a control experiment at the same time carried out in a medium free from thallin showed, after twenty-four hours, commencing development of typical gonococci. The strength of the thallin solutions used was from one-half to four per cent.—*Journal of Cutaneous and Genito-Urinary Diseases*, February, 1888.

Puerperal Relaxation of the Pelvic Ligaments.—Dr. Driver, of Cambridge, Mass., concludes, from his observation of three hundred cases of parturtition, that: (1) The presence of relaxation depends very much upon the strength of the bony and ligamentous structures of the skeleton—that is, it is more apt to occur in the woman of poor physique. (2) That age does not determine its presence, at least the degree of it. The age of observed cases ranges from fifteen to forty-four. (3) It is not constant, but a degree of it is natural at time of labor, and may exist during pregnancy, and even in the early months. (4) There may be great motion and no lameness or impairment of walking power. (5) There may be a general degree of motion and great lameness. (6) Lameness depends upon pathological conditions of the junctions, pubic and sacro-iliac. (7) Pain at the sacro-iliac junction of one side proves that on that side is the pivotal motion of the ilium on the sacrum. It may occur in non-puerperal females, in sterile, and virgins. (8) Patients may recover from a most serious condition of lameness without treatment. (9) The most careful treatment, with all the aids that wealth can bring, may not restore firmness to the pelvis. (10) Many a case of lingering disability after confinement may have been due to this cause, and it is well, when you cannot find out "what is the matter," to test the condition of the pelvic ligaments. (11) A small degree of relaxation on separation may facilitate delivery, and may be a factor that saves the use of forceps. The treatment most successful was an abdominal bandage of twilled cotton, five inches wide, with padded perineal bands one inch wide. In some cases cold bathing and massage were added.—*Boston Medical and Surgical Journal.*

Myositis Syphilitica.—At a recent meeting of the Society of Physicians of Vienna, Professor Neumann read a paper on myositis syphilitica. He first mentioned the investigations of others on syphilitic myositis, such as those of E. Wagner, Rokitansky, Virchow, Ziegler, Tschainsky, Spina, etc., and then described his own clinical experience of syphilitic disease of the extensor carpi radialis, the extensor digitorum communis, the temporalis muscle, the trapezius, and especially the sphincter ani externus. When all trace of syphilitic disease of the mucous membrane of the rectum had disappeared, severe pain was often complained of in the region of the anus. It consisted in powerful contractions of the sphincter ani externus (tenesmus), which were the result of a syphilitic inflammation of the muscle. In syphilitic myositis, the blood-vessels of the perimysium which covered the fibres of the muscles were chiefly the point of departure of the infiltration. In the perimysium itself, as well as in the spaces between the fibres of the muscles, many serpentine blood-vessels were to be found, which were filled with blood to a high degree, and surrounded by granulation cells. The connective tissue was proliferated abundantly. The nuclei of the muscle fibres of the inner surface of the sarcolemma also proliferated, and could be distinctly recognized, owing to their arrangement like a string of pearls of from five to twelve nuclei lying close to each other. In slight inflammations of the muscles, this increase of the muscular nuclei could persist, according to the opinion of Recklinghausen. In a later stage of the disease the granulation cells increased in the interstitial connective tissue, whereas the muscular substance disappeared more and more, and finally, when the process was completed, were replaced by fresh connective tissue. Such proliferation had also been observed by Erb, Hay, Heidelberg, and Kraske in rabbits and guinea-pigs, in muscles which had become paralyzed as a consequence of neurotomy. In three cases in which Professor Neumann had sphincterotomy performed by his assistant, Dr. Ehrmann, for the relief of permanent and severe pains, the above-mentioned conditions were also found to be present. According to the experience of Professor Neumann, the sphincter ani externus was the muscle which became in most cases affected with syphilitic myositis. In the course of six years, acute syphilitic myositis of the other muscles had been observed, at the clinic of Professor Neumann, on three patients, whereas in the spincter ani externus it had been seen five times in two years. This did not include cases of gummatous degeneration of the anus. It was also remarkable that the disease in question chiefly affected women, which might be explained by the frequent occurrence in them of papulæ and rhagades about the anus; this was also partly due to the fact that syphilis in women was attended by discharge from the vaginal mucous membrane, which trickled to the anus and irritated the parts, giving rise to an inflammatory process.

MÉNIÈRE'S DISEASE.—Dr. Gellé, from recent researches on Ménière's disease, has arrived at the following conclusions: Typical vertigo, characterized by serious attacks, may exist for years without the presence of any lesion in the auditory nerve. Vertigo is observed in various lesions of the middle ear. These tympanic lesions all tend to close up the labyrinth by one of the following processes: the stapes becomes attached to, or permanently fixed in, the fenestra ovalis; or the fenestra rotunda is obliterated. Every movement communicated to the labyrinth produces an injurious shock owing to the absence of any safety-valve. The mobility of a portion of the wall of the labyrinth is necessary to produce abnormal irritation in the auditory nerves. The state of hyperæsthesia and reflex hyperexcitability of the auditory nerve, resulting from repeated local irritation and functional excitation (deglutition, spasm of accommodation), is a most important element in the causation of auditory vertigo. The lesions and the pathogenesis of Ménière's disease are identical whether it be accompanied by tabes or not. The sense of hearing is preserved to a certain degree. This fact would justify the conclusion arrived at by Marie and Walton, in their investigations on vertigo in tabes, namely, that the auditory nerve remains intact in this affection.—*The British Medical Journal*, December 24, 1887.

CAUSES OF HYPERTROPHY OF THE SKULL IN RICKETS, MOLLITIES OSSIUM, OSTEITIS DEFORMANS, AND CONGENITAL SYPHILIS.—At a recent meeting of the Royal Medical and Chirurgical Society (*The Lancet*, December 17, 1887), Mr. W. Arbuthnot Lane read a paper on the "Factors that determine the Hypertrophy of the Skull in Mollities Ossium, Osteitis Deformans, Rickets, and Hereditary Syphilis." The author called attention to the desirability of separating the direct from the indirect effects of morbid conditions or diseases, especially in the case of those above enumerated. He referred to papers in the *Journal of Anatomy and Physiology* and in the "Guy's Hospital Reports," for 1887, in which he had explained the mechanical factors that determine the character of the deformities of the bones of the lower extremities in mollities ossium, rickets, and osteitis deformans. He had shown that these deformities are preceded and produced by a yielding of the sacrum in such a way that the lumbo-sacral articulation is displaced forward and downward from its normal relationship to the iliac bones and hip-joints. This alteration in the position of a joint through which the whole superjacent weight of the head, trunk, and upper extremities is transmitted from that normally occupied by it, necessitates, when the erect posture is assumed, that the hip- and knee-joints be flexed, and a consequent tendency for the long bones of the leg to yield in a vertical antero-posterior plane. He had also demonstrated the factors that determine the yielding of these long bones in a vertical transverse plane. He obtained his first clue to the conclusions at which he had arrived from a study of the changes that the skeleton undergoes in old age, and of the laws governing them. He attempted to prove that the factors that determine the thickening of the skull in mollities ossium, congenital syphilis, rickets, and osteitis deformans are purely mechanical, and that the hypertrophy is not the direct product of the morbid condition or disease, but a vigorous attempt, and sometimes the only attempt, on the part of the organism to retain its most important organ as free from the direct result of the disease as possible. He referred to a paper in the Transactions of the Pathological Society, 1884, in which he had disputed Rindfleisch's theory of the processes which ensue in the skull in mollities ossium, and detailed the arguments by which he arrived at his conclusions—namely, that in mollities ossium the thickening of the skull is dependent upon an endosteal, and later upon a periosteal, deposit of decalcified lamellæ of fibrous tissue, this being not a direct product of the condition, but an effort on the part of the organism to oppose and limit the baneful influence of the process of decalcification in so far as it affects the cranial vault. He applied the same arguments to the analogous condition of the skull present in osteitis deformans, rickets, and congenital syphilis, with the object of showing that in them also the thickening of the skull was (in a similar manner) a process of repair and not a direct result of the disease.

PERSONAL NOMENCLATURE.—In a letter on this subject to the Buffalo *Medical and Surgical Journal*, Dr. J. F. Baldwin gives the following interesting facts: "In the article on 'Nomenclature, Personal,' in 'Wood's Reference Handbook of the Medical Sciences,' occur definitions of these several operations. As the writer of that article, I may say that these definitions cost me more correspondence than all the other five hundred put together. The definitions of Battey's and Tait's operations are quoted verbatim from letters received from each operator. *Battey's operation*—'The complete extirpation of both ovaries, while yet in a state of functional activity, for the effectual remedy of cases of disease otherwise incurable.' *Hegar's operation*—The same as Battey's operation. *Hegar-Tait operation*—A misnomer of Tait's operation. *Tait's operation*—'Removal of the uterine appendages for physical disease other than cystoma: As the removal of the ovaries and tubes for uterine myoma; the removal of a tube for pyosalpinx, or other disease; or the removal of both ovaries and tubes for chronic inflammatory disease and adhesions.'"

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos 56 and 58 Lafayette Place

New York, March 3, 1888.

THE CLASSIFICATION AND TREATMENT OF THE INFANTILE DIARRHŒAS.

Too much attention has perhaps been paid to the question of the general treatment of diarrhœa of young children, and not enough to the differentiation of the various types. The forms of diarrhœa given by Henoch are cholera infantum, catarrhal diarrhœa, and dysentery. Other writers describe simple, bilious, choleraic, inflammatory, lienteric, and dysteric forms. Thus fine classifications either are not made, or great stress is not laid upon them practically. It is, at any rate, a frequent habit to prescribe about the same class of remedies for diarrhœas of nearly all forms, aside, of course, from dysentery. Dr. A. Lesage, in a series of articles upon "Dyspepsia and the Green Diarrhœa of Infants," in the *Revue de Médecine*, December, 1887, and January, 1888, calls attention to the importance of making sharper distinctions in the treatment of infantile diarrhœas. He makes the following classification: 1. Acute diarrhœa, alimentary or infectious. Of this form there are two types: (*a*) one in which the stools are yellow, small in amount, and containing much undigested food. Here a purgative is always indicated. (*b*) Acute infectious diarrhœa. Here the stools are numerous, yellow in color, neutral or acid in reaction, often fetid, and containing large numbers of microbes, which play an important part in the pathogeny of the trouble. Such diarrhœas often occur at the time of weaning, and in infants who are using the nursing-bottle. The methods of treating this form are two: First, to employ at once intestinal antiseptics, or, second, to give first a purgative, and then follow it with antiseptics, if needed. The best antiseptic in these cases, according to Lesage, is lactic acid, which should be given every quarter or half hour, or every hour, according to the frequency of the stools. It should be repeated for a day after the diarrhœa has stopped.

If purgatives are given, the choice should lie between castor-oil; calcined magnesia, gr. xv. to xlv.; or calomel, gr. iij. to gr. iv., for a child of two years, daily. After the purgation, if the diarrhœa has not stopped, astringents, opiates, or antiseptics may be given. Paregoric is thought to be the best form of opiate, while among astringents rhatany is given in the first place (gr. x. to gr. xv. every two hours). Weiss recommends the use of raw meat or powdered meat.

Discussing the subject of antiseptics again, our author says that we can lay aside resorcine, thymol, benzoate of soda, iodoform, and salicylate of bismuth, as having been proved inefficacious in his own and others' hands. The antiseptics which do give some results are naphthaline, used for infantile diarrhœas by Baginsky, Comby, Crämer, Winslow, Holt, and others. This drug is sometimes impure. The daily dose is from gr. vij. to gr. xv. Creosote, in daily doses of gtt. iv., has been recommended by Henoch. Beta-naphthol, so highly indorsed by Bouchard, has not yet been put to practical trial. Lactic acid is preferable to all the foregoing antiseptics, says our author.

The second form of diarrhœa is the *lienteric.* In this the stools are white at first, and of some consistence. Later they become liquid, but are still white, though occasionally and temporarily green with bile. In this form astringents, opiates, and alkalies do no good. The trouble lies in an alteration of the secretion of the pancreas, and perhaps of the liver. The milk, coagulated in the stomach, is not transformed into peptones by the pancreatic juice. The indication is to give pancreatine or trypsin, and this, says Lesage, is the only remedy that does any good, except, perhaps, a purgative, which may be given for the purpose of clearing out the fermenting undigested milk. At the beginning this alone may be sufficient; later, it is liable to fail.

The third form is the *reflex diarrhœa, à frigore* or from dentition. In these cases the stools are serous, yellow, and do not contain particles of the food. Opiates, rhatany, and lactic acid are the best drugs. If there is fever, aconite or antipyrin may be given.

The fourth form is the *green* or *bilious diarrhœa.* The stools are green and very acid. Bile is present in abundance, and the diarrhœa may be termed "polycholic." This type often occurs in the first month; it is apyretic and not accompanied, usually, with dyspepsia. It sometimes runs a short course, but not always, and it should always be treated. Purgatives do no good. Alkalies should be administered in doses of gr. xv. of bicarbonate of soda per kilogramme of infant. But the dose should not exceed ʒ j. gr. xv. This treatment is not always successful, however, and sometimes opiates and astringents must be added. If there is dyspepsia or fever, lactic acid or calomel should be given.

The *fifth form* is a comparatively new one. It is called by Lesage the *green bacillary diarrhœa.* The stools, though green, are not made so by bile, but by the action of a specific bacillus. They are but slightly acid, and give no biliary reaction. Fever is often present. Bacillary diarrhœa is rare before the first month, and it often occurs in epidemics. Lactic acid is an antiseptic for this, as it is for the infectious diarrhœa.

M. Lesage's lactic-acid medication has been favorably reported upon by MM. Hagan and Sevestre. The dosage is ʒ j. of a two per cent. solution, fifteen to twenty times daily.

STROPHANTHUS.

THE position of strophanthus as a therapeutic agent is still somewhat unsettled. It continues to be used, and favorable results are heard from it; but it has certainly not superseded digitalis, and has not gained a reputation equal to that of its older rival.

In a discussion on the subject of the action of strophanthus at the Berlin Society of Internal Medicine, January 9th and 16th, some interesting facts were brought out. Dr. A. Fränkel reviewed the history of the drug, describing the results obtained by Langgaard, Pins, Zerner and Loew, Hochhaus, and others.

It appears that the views of Fraser as to the physiological action of strophanthus have not been entirely confirmed. Some experimenters have found that its action on the heart as a stimulant was slight and tardy, and they have claimed that it was a heart-tonic indirectly only, through its power of relaxing the blood-vessels. Boyd and Langgaard (*Therapeut. Monats.*, August, 1887) found that in large doses it had a sedative action on the brain and spinal cord.

Dr. Hermann Haas, of Prague, made some interesting physiological observations (*Intern. klin. Rundschau*, No. 44, 1887) regarding the effects of strophanthus. He gave it to twenty young patients, and noted its effect on the heart-beat, blood-pressure, etc. He found that in afebrile patients thirty drops produced an impression in five hours; in febrile cases fifty drops were necessary. The results were a slowing of the pulse and loss of the visible cardiac impulse, which became diffused. The heart-action seemed quieter, and this effect lasted for four to five days. Haas thinks that strophanthus quiets the heart-muscle, and that its apparent tonic effect is due to the relaxation of the arterial walls and lessening of obstruction to the flow of blood.

Dr. Langgaard states that there are eighteen kinds of strophanthus on the market, from various parts of Eastern and Western Africa, and that these differ in appearance and medicinal character.

Among clinical observers of the effects of strophanthus, Pins seems to be most enthusiastic (*Therapeut. Monats.*, June and July, 1887). He finds it superior to digitalis as a heart-tonic, a reliever of dyspnœa, and a diuretic.

Fränkel himself is not so confident. He used strophanthus in twenty-two cases of cardiac disease. He found it most efficient in so-called functional disturbances of the heart, from excessive use of alcohol, tobacco, etc. It acted well sometimes in dropsical conditions; but it was never found to relieve dyspnœa, except indirectly, by relieving dropsy.

Dr. Paul Guttman reported the results of his experience in about forty cases. He was especially impressed with the diuretic effect of the drug, though it was not uniform in its action in this respect. It acted as a heart-tonic in some cases, but was not so trustworthy as digitalis.

Dr. Langgaard reiterated his views, in the discussion, viz., that strophanthus was not a direct heart-tonic, but rather a vaso-motor depressor.

Dr. Fürbringer had treated one hundred and twenty cases with strophanthus. Of these there were only thirty who had responded well to it, and of whom it could be said that the drug's action was permanently beneficial. He found, as had Dujardin-Beaumetz, that it was of no value in purely renal dropsy, and that in Bright's disease the drug is really not indicated at all. The indications for the drug were very difficult to determine. Several times Dr. Fürbringer had thought he could lay them down, but had been disappointed. The earlier the cases the better the action, as is the case with the other heart-tonics. Dr. Fürbringer believed that the chief action of the drug was on the heart, and that its dilating effect on the vessels was secondary.

It is apparent, from the contradictory reports so far furnished, that it will be necessary to get the active principle of the drug, and carefully test this before certainty can be reached regarding it.

THE TOBACCO HABIT.

"In every land and in every clime where the use of tobacco prevails it causes degeneration, degradation, debasement—physical, mental, and moral—disease, and death, or individual and national decadence."

Such is the statement of Dr. George J. Ziegler in an article on "The Tobacco Poison" in the *Sanitarian*.

"I do not believe there is any more harm in smoking a cigar or pipe, after eating, than there is in drinking tea and coffee. Any luxury carried to excess carries with it a penalty. For my own part, I consider that smoking acts as a sedative and equalizer of the temper, assists digestion, and is a medium of sociability among men which should not be discarded."

So says Dr. A. E. Adams, of Danbury, Conn., in an article entitled "Is Smoking Injurious?"

The doctors disagree, but there can be no doubt as to whose view is nearer the truth. The broad statement of Dr. Ziegler is contradicted not only by general experience, but by the undoubted fact that such countries as Germany and the United States, two nations which are certainly not suffering from decadence, consume three or four times more tobacco per capita than do the Spaniards or Italians, nations of by no means so vigorous a vitality.

The real facts as to the influence of tobacco on the health are fairly well established, and the occasional outburst of anti-tobacco fanaticism does not affect received medical opinion. Tobacco is pernicious to growing children. Used in moderation, the majority of healthy adults can smoke it without harm. It does not in these shorten life or produce degenerative changes. Nearly one-half of Professor Humphrey's collection of centenarians were tobacco-users. It is particularly harmless to those who live out-doors and engage in physical work. It is particularly apt to injure those who live in-doors. The worst feature about its use is the difficulty some persons have in smoking in moderation. This is especially true of brain-workers, and it is for this reason that physicians never advise the acquirement of the tobacco habit. But among the great mass of working-people the use of tobacco is apparently a harmless one.

A NEW NATIONAL BUREAU.

The agricultural element of this country has long striven for cabinet representation. It has been thus far compelled to content itself with a commissionership. Even that has not been granted to an interest of very great importance, namely, that of securing foods free from all adulteration. Recent revelations concerning this latter grievance seem to demand some attention from the general government. It is really a serious question as to whether the time has not come for Congress to take some definite stand upon the matter. In a word, the production of food-stuffs and their various preparations should be under national supervision.

It would be the height of folly to bring such a project under the supervision of a cabinet officer. That would mean politics, and we are cursed with too much of that already. A proper expert should be in absolute control, as in the case of the food-fish interest. We already have tea-inspectors under the direction of the Treasury Department, but their work is not done in a satisfactory manner. Witness the large amount of the article condemned by local health boards after it has been officially pronounced good. Plainly, the present methods of food examination are not what they should be.

We do not desire to be alarmists, but food-adulteration has been carried to such proportions that the scriptural suggestion of asking for bread and receiving a stone has become almost literally true. One of the recent numbers of the *Westminster Review* contains the following satire from the pen of a German: "There were four flies, and, as it happened, they were hungry one fine morning. The first settled upon a sausage of singularly appetizing appearance and made a hearty meal, but he speedily died of intestinal inflammation, for the sausage was adulterated with aniline. The second fly breakfasted upon flour, and forthwith succumbed to contraction of the stomach, owing to the inordinate quantity of alum with which the flour had been adulterated. The third fly was slaking his thirst with the contents of the milk-jug, when violent cramps suddenly convulsed his frame, and he soon gave up the ghost, a victim to chalk-adulteration. Seeing this, the fourth fly, muttering to himself, 'The sooner it's over, the sooner to sleep,' alighted upon a moistened sheet of paper exhibiting the counterfeit presentment of a death's-head and the inscription, 'Fly-poison,' and fearlessly applying the tip of his proboscis to this device, the fourth fly drank to his heart's content, growing more vigorous and cheerful at every mouthful, although expectant of his end. But he did *not* die. On the contrary, he throve and waxed fat. You see, even the fly-poison was adulterated."

The first question to be decided is, Have we the means in our present governmental system to carry out the end, or do we need new agencies? We have already alluded to the unsatisfactory work of the tea-inspectors. The plan has been suggested of placing the present internal-revenue inspectors in charge, in case the present Congress shall free them from their present duties by taking the tax off whiskey and tobacco. This is mentioned only to be condemned. In the first place, it is extremely unlikely that such a measure as the latter will be enacted in the immediate future. Secondly, the men now in office would have no technical knowledge of their new duties; and lastly, the service would still be, as it is now, under the control of the politicians.

While various State regulations are now in force, their power for good is almost nullified on account of the lack of such or similar regulations in adjoining States. Our vast internal commerce necessitates making this question a national one. A Bureau of Adulterations has been suggested by some, and fifty thousand dollars named as the amount to be expended the first year for its maintenance. The establishment of such a bureau will meet with resistance, perhaps, from dishonest manufacturers and tradesmen. An unorganized mutual-aid idea will show itself among them, as it has done with the milkmen, where, as as has been said, "one holds the can while the other pumps." But we believe that most of the retail dealers are honest, and are imposed upon by the manufacturers. Hence, any measure will be unavailing which does not go back to the fountain-head.

HOSPITAL PHYSICIANS AND GOVERNING BOARDS.

A CASE occurred in London recently in which the legal relation of the visiting physician, or surgeon, to the hospital management was brought up—and settled. A member of the surgical staff of the Queen's Jubilee Hospital was dismissed by the Governing Board, on the ground that he had accepted a similar position in another hospital where homœopathic treatment was allowed.

The dismissed surgeon, Mr. Millican, brought action in order to have himself reinstated. The Court ruled, however, that the Board had the right of dismissal. The visiting surgeon receives an honorary appointment, which is not in the nature of a contract. The relation is a "personal one." He had a license to use, but not an interest in, the property. He could, therefore, be discharged.

Put in plain language, it means that the visiting physician, or surgeon, is really an employé of the hospital officials.

PROHIBITING THE SALE OF SECRET MEDICINES.

A BILL which practically prohibits the sale of secret medicines has been introduced into the Assembly of the State of New York by Mr. J. W. Smith. It provides that no person or firm shall sell any medicinal preparation without first filing the formula of the preparation with the State Board of Health and receiving a license or certificate from that body.

It further provides that no so-called secret or proprietary medicine shall be sold, unless there is a printed formula showing the nature of the compound on the bottle, and also the words, "Sale authorized by New York State Board of Health."

It seems a very simple and manifest proposition that the public should be protected against the enormous swindling of the patent-medicine trade. And such a bill as the above would certainly promote the public good. But we fear that vested interests will prove too strong for it. The propriety of a printed indorsement by the State Board of Health might be questioned, in any event.

GOOD SOMETIMES COMES OUT OF LIQUOR.— A bequest has been made by a wealthy English brewer of $1,000,000 for the advancement of economic and sanitary science.

A DONDERS MEMORIAL FUND.—A joint committee has been organized by the London Ophthalmological and Physiological Societies, with the view of co-operating with the committee formed in the Netherlands to celebrate the seventieth birthday of the eminent professor of Utrecht, on May 27th next. On that date the law requires Dr. Donders' resignation as Professor at the University and Director of the Physiological Laboratory. It is proposed to raise a Donders Memorial Fund, to be devoted to some scientific purpose.

News of the Week.

The Ohio State Sanitary Association held its annual session at Toledo, February 9 and 10, 1888, Professor E. T. Nelson, Ph.D., President, R. Harvey Reed, M.D., Secretary. The first paper read was one by Mr. D. L. Stine, of Toledo, on "Sanitation in Architecture." The chief thing considered in this paper was the disposal of the soil and wastes of the home without offence to the occupants or their neighbors. "Cremation as a Sanitary and Economic Measure" was the next paper, by Dr. Lew Susser, of Canton, O. He thought complete combustion and consequent annihilation the only method by which the micro-organisms can be destroyed. Persons who have died from small-pox have lain in the ground for thirty years, and then, when the bodies were disturbed, they became the means of producing a local epidemic. The only objections to cremation are sentimental, but we certainly should not prefer corruption and putrefaction in the place of purification by cremation. "Ashes to ashes" is the appropriate finale of humanity. Most of the friends of incineration belong to the medical profession. The movement has been indorsed as a sanitary necessity by the American Public Health Association, the American Medical Association, and the Society of Medical Jurisprudence and State Medicine of New York. A number of gentlemen took part in the discussion, all favoring cremation. "The Effects of the Present System of Educational Methods on the Health of Women" was the subject of a paper by Dr. C. A. L. Reed, of Cincinnati. He drew a pen picture of the course of the young girl through school and the ruin of her health. He estimated that more than two thousand five hundred school-children in Ohio die annually of causes emanating from the school-room. He dwelt on school hygiene, particularly that with reference to female pupils and teachers. He recommended, as a remedy for the terrible destruction of health, that the custom of Germany be imitated, and facilities for physical culture be established at each school-house. Dr. A. Hult, of Waverly, read a paper on "Village Boards of Health." He urged their necessity, and recommended such changes in the law as would give to each incorporate village a health organization. Dr. George A. Collamore, of Toledo, read a paper on the "Duty of the Public to Sanitary Science." Dr. Wm. Owens, of Cincinnati, then presented a communication on "House Drainage and Sewer Connections." He thought no house having average sewer connections could be completely protected against sewer-gas. He proposed to correct this by establishing a ventilator between the sewer and traps on the soil-pipes, thus allowing the gas to escape into the open air. Dr. John McCurdy, of Youngstown, read a paper on the "Ventilation of Sewers." Dr. Victor C. Vaughn, of Ann Arbor, discussed the question of "Foods and Food Adulteration," in which he treated of the preparation of the various kinds of foods and the adulteration of the same. Dr. E. T. Nelson, of Delaware, made the presidential address, in which he reviewed the progress of sanitary science, and compared the present with the past condition of Toledo as an example. He described Hygeia, the city of health, the city of the millennium. Dr. R. Harvey Reed, Secretary of the Association, read a paper on "Passenger Coaches, How they should be Heated and Ventilated." He considered the prime factors to be efficiency, safety, simplicity, durability, and economy. He recommended pipes to carry heat about the sides of the car, also pipes to supply fresh air, and others to remove the cold foul air from the bottom of the car, and thus dispense with ventilators at the top and the opening of windows. Professor Search, of the Sidney public schools, read a paper on "Pure Air within Doors, and How to Obtain it." He thought there was certainly no reason why we should not have pure air. It is abundant, inexpensive, and easily attained; there is no excuse whatever for the lamentable ignorance which deprives us of that great necessity of life. Dr. Isaac D. Smead, of Toledo, discussed the question of "How far the Science of Ventilation has Advanced," and seemed satisfied that it was taking its share in the progress of the nineteenth century. "Cholera, its Prevention and Limitation," by Dr. D. H. Beckwith, of Cleveland, was the next subject on the programme. He discussed the problem of quarantine, and traced the spread of several epidemics throughout this country. He considered dread to be a potent factor in the dissemination of the terrible disease. Dr. Daniel Segur, of Toledo, made a report on Toledo's water-supply. Dr. J. A. Chesney, of Bucyrus, read a paper on "Meat-poisoning." The subject of trichinæ spiralis received merited attention, and several cases of the disease were cited. "The Duty of the Public to Sanitary Science" was the subject selected by Professor John Simpson, Ph.D., of Mansfield, O. The following officers were elected: President, Dr. G. C. Ashmun, of Cleveland; Vice-Presidents, Dr. John McCurdy, of Youngstown; Professor Ortau, of Columbus; Dr. S. S. Thorne, of Toledo; Secretary, Dr. R. Harvey Reed, of Mansfield; Treasurer, Dr. D. H. Beckwith, of Cleveland. Canton was chosen as the place for the next meeting, which will be held on the third Thursday in November.

The Proposed Asylum for Narcotic Habitués.—In our issue of December 31st last, editorial reference was made to a suggested asylum for the treatment of those addicted to the use of opium, chloral, and cocaine. We are pleased to note that a movement for opening such an institution in Brooklyn is now under way, and that a number of well-known gentlemen—whose names are elsewhere given—have expressed their approval of the work and their willingness to act as directors. There is no institution of this kind in the world, and it is quite fitting that in America, where, it is safe to say, narcotic habitués outnumber those of any other nation, there should be a remedial retreat for release from the enslaving power of these drugs. We cordially commend this project to the profession and the public, and bespeak for it a large measure of sympathy and financial support. A permanent fund of $200,000 is desired; the income from which, and from paying patients, will, it is thought, insure a financial success. Subscriptions, conditional on securing the entire endowment, are solicited, and may be sent to General C. T. Christensen, care of Drexel, Morgan & Co., New York.

The New Bacteriological Institute of Pasteur will be remarkable in many ways. It is to be of great extent, occupying over ten thousand square yards. Two principal pavilions will contain the laboratories, the amphitheatres, and consulting rooms. There will be no hospital, for, we are told, the institute "is not a *maison de santé*, but a school." On each side, uniting the pavilions, will be stables, fowl-houses, kennels, and rabbit-hutches for all the animals required for the various researches, which will not be confined to rabies, but will embrace all contagious diseases. Only one department will be devoted to rabies, at the head of which will be M. Grancher, who is styled "Apostle of the Religion of which M. Pasteur is the Prophet." The second department will be devoted to *inoculations charbonneuses*, swine measles, and calf-vaccination, the director being M. Chamberland. The third will be entirely private, devoted to researches in bacteriology, under M. Dudaux; and the fourth to medical bacteriology, under M. Roux. The building is calculated to cost two hundred thousand dollars, and the remainder of the funds subscribed will endow the institute, when opened next June, with about six thousand dollars a year. Yet it is denied that inoculations for rabies or charbon are of any value! The denials, fortunately for the institute, come chiefly from Germany.

A New Form of Infectious Pneumonia.—At the recent Medical Congress in Italy Professor Cantani presented a communication on a new form of infectious pneumonia which had been observed by him. The clinical history showed bronche-pneumonia, which had been preceded by a diffuse bronchitis, with remittent and very pronounced fever, considerable emaciation, and great enlargement of the spleen. The disease was contagious, and was a primary affection of the bronchi, which extended downward through the lung, and sometimes over the pleura and upward along the trachea, and even to the larynx and pharynx. Bacteriological examination revealed the presence of numerous diplococci, and especially streptococci, similar to those found in erysipelas. The pure cultures did not, however, produce erysipelas when injected subcutaneously. When they were injected under the skin of a rabbit's ear, only swelling and reddening at the site of puncture were produced. All the cases ran a favorable course.—*British Medical Journal.*

The Annual Death-rate in England, in 1887, was 18.8 per 1,000, being the lowest rate as yet recorded.

The Patient from Whom a Cerebral Tumor was Removed by Dr. Weir is not dead, as reported. We are glad to state that he is in good general health, able to go about freely, and is, as regards cerebral symptoms, better than he was before the operation, which was done more than three months ago.

Dr. Sharlau desires us to say that he advocates lateral decubitus in certain cases of transverse presentation and not the contrary, as reported in our recent issue.

A Nut for Inebriate Specialists to Crack.—Dr. C. Roberts, writing in the *British Medical Journal* on alcoholism, says: "Indeed, I think it is a great error to speak of the various conditions of the digestive and nervous systems resulting from the excessive or injudicious use of alcohol as a specific disease, as they are similar to those which result from the excessive use of other foods, nervous excitement, and mental and physical excesses of all kinds. The setting apart of the treatment of these diseases as a specialty is one of the greatest evils of the prevailing evil of specialisms, as is obvious by the nonsense which is talked by such specialists as to the hereditary character of the disease, and the incurability of some cases. At present we have no evidence that acquired habits are transmissible from parent to child, and, moreover, there are no definite and uniform lesions resulting from the use of alcohol to be transmitted, if such transmission were possible. That the child of a drunken mother should have feeble health is likely enough, as its nutrition has been interfered with; and that the children of intemperate parents should acquire their habits from imitation and the facilities for falling into them is likely enough also. But this is not heredity, even in the very loosest way in which the word is used by medical men."

Hospital Sunday Collection.—The total amount obtained this year by the Hospital Saturday and Sunday collection was $50,408.10. Deducting expenses, the net amount is $43,500 left for distribution, which is $6,500 more than was obtained last year.

The Crown Prince.—Sir Morell Mackenzie reports formally, under date of February 12th, his opinion on the condition of the Crown Prince. He summarizes his views as follows: "In my opinion, the clinical symptoms have always been entirely compatible with non-malignant disease, and the microscopical signs have been in harmony with this view. I need only add that, although in nearly every case of laryngeal disease it is possible at the first inspection to form an accurate opinion as to the nature of the disease presenting itself, yet in a few rare instances the progress of the complaint alone permits its character to be determined. Unfortunately, the case of His Imperial Highness is among the latter number, and at this moment medical science does not permit me to affirm that any other disease is present than chronic interstitial inflammation of the larynx combined with perichondritis." In his report on the examination of the slough which came from the larynx, Professor Virchow says: "I could not determine what kind of morbid process had caused the gangrene, nor what kind of process had produced the demarcation and exfoliation of the substance. Neither pus-corpuscles nor granulation-cells could be distinguished, and, in fact, in most places there was nothing of a heterogeneous nature to be discovered. Only in the larger of the two smaller pieces, which had been cut off the main mass by Dr. Krause from a somewhat hard spot, and which had the form of a flat wart on section, with the naked eye a central whiter and an external and opaque, rather thick covering could be distinguished. In every microscopic section so-called nests (*Zwiebeln*) of epidermoidal cells, for the most part of a homogeneous character, were seen. As a rule, these nest-cells were in the most external layer or in that lying immediately beneath it. The external layer had also most likely consisted of an epidermoidal formation, though these cells could only be here and there partially distinguished. I could not find epidermoidal cells in the deep parts, and distinctly isolated alveoli were nowhere to be discovered, in spite of assiduous researches."

A Book-agent with the Small-pox.—Dr. Porter sends the following item to the *Journal of the American Medical Association:* A case just brought to light illustrates in a striking manner the way in which people in a large city may be exposed to the danger of contagious diseases without any suspicion on their part or of those liable to communicate the infection. A book-agent applied at the dispensary of the New York Polyclinic for treatment for what he supposed was some ordinary form of skin disease, but which was found on examination to be small-pox. After being removed to the Reception Hospital the man stated that he had been sick ten days, and that during the whole of that time he had been canvassing for subscriptions to a book; visiting mainly banks, insurance companies, and other business offices in the lower part of the city.

The Opening of the Loomis Laboratory.—The Medical Department of the University of the City of New York is to be congratulated upon the completion of the Loomis Laboratory. The new structure, adjoining the other buildings of the medical department to the east and communicating with them, has been erected at a cost of over one hundred thousand dollars, and is the gift of a friend of the University, whose modesty equals, if it does not exceed his generosity. It is constructed according to the most approved methods, has an air of solidity, and is admirably adapted to the uses for which it is intended. The floors throughout are water-proof, the wood-work of cherry in natural finish, and the walls finished in soapstone, of a tint most pleasing to the eye. The building is 35 feet by 90, and five floors in height. The first floor is devoted to the laboratories of materia medica and of physics. The physical laboratory communicates with the lower lecture-room of the main college-building, and affords exceptional facilities for the illustration of the lectures in physics and chemistry. The physical cabinet is well supplied with apparatus. The second floor is devoted to the chemical and toxicological laboratories, divided into a large general laboratory, with desks fitted with gas, water, and ventilating outlets, capable of accommodating sixty students, a balance-room for weighing, a laboratory for the investigation of cases of poisoning, and a laboratory of research, fitted with modern chemical apparatus. The third floor is divided into a large physiological laboratory in the front, which communicates with the amphitheatre of the main college building, for convenience of illustration of the lectures on physiology. This laboratory is well arranged for original investigations, although we failed to find in it the modern apparatus without which physiological investigation is difficult. We trust that the loss of the complete outfit in this department, formerly possessed by the college, will soon be repaired. The laboratory of histology occupies the south half of the third floor, and is furnished for the commodious accommodation of thirty students, each of whom is supplied with a microscope and all other requisite apparatus, and is abundantly supplied with well-selected histological material. The fourth floor is devoted to pathology, the south half being arranged for undergraduate teaching, and the north half fitted with all requisite apparatus and fittings for advanced work and original investigation. The fifth floor is subdivided into a laboratory of bacteriology, a pathological museum, and rooms for photo-micrography, and for such special investigations as may be found to require separate rooms. We understand that the donor purposes to complete his gift by endowing the laboratory with a sum sufficient to meet all running expenses. Not only is the University interested in this laboratory, but also the profession in general and the public at large, as it is the intent of the donor, in which he is seconded by those having the laboratory in charge, that facilities shall be here furnished for those desiring to engage in original investigations, and we trust in time to welcome the appearance of the results of such labors.

The People's Medical Service Society, of New York, has been incorporated by Munsell H. Peet, Louis E. Hilborn, Eva Walton, George W. Hopkins, and D. Edgar Anthony. The capital stock is $12,000. It proposes to furnish medical aid to laborers and people of moderate means. The institution is believed to have purely business objects.

Society Reports.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 27, 1888.

Laurence Johnson, M.D., President, in the Chair.

THE PAUPER INSANE.

Dr. Samuel Sexton explained the nature of a bill presented to the State Legislature by the State Charities Aid Association, providing for the care of the pauper insane in State institutions, and offered resolutions approving of the bill. The resolutions were adopted.

Dr. Charles W. Allen read a paper on

LEPROSY IN THE UNITED STATES, AND ITS RELATION TO THE STATE.

In replying to the question, Why should we stop to discuss a disease which appears of so little practical importance to us, the author reviewed the history of the disease in the United States, and considered whether the facts justified us in regarding it as a source of danger of national importance. The earliest cases of leprosy in this country appeared in Louisiana and South Carolina. Later it had appeared in the Northwest, where it was brought from Norway, and also in California and the West, being brought there by the Chinese. It has also occurred among natives who have visited foreign lands where the disease is prevalent, and a few sporadic cases have appeared among our own people without known origin. At least five sporadic cases, occurring in the United States, were on record. Dr. Allen thought it was not an overestimate to say that there are in this country to-day at least one hundred and fifty cases.

He regarded this as one of the most favorable countries in which to study leprosy. In addition to the review of cases already reported, the histories of two unrecorded cases were given, and one of the patients presented. The other patient had come under the care of Dr. Wiener, but was then in Paris. The further histories of some cases reported by Dr. H. G. Piffard in 1883 were also given. The patient presented had certain disfigurements of the face, especially over the eyes, due to the progress of the disease, which had led Dr. Allen to institute surgical interference for cosmetic effect. The improvement in looks had been considerable. He did not believe the progress of the disease would be any more rapid on account of such surgical interference. The results of treatment in a number of cases reported in this country had been markedly beneficial, especially that from chaulmugra oil, and led to the belief that these cases are less hopeless than they have hitherto been regarded.

The author then took up the subject of the contagious and hereditary character of the disease. While the majority of physicians, especially those residing in leprous countries, disbelieved in the contagious character of the affection. most of them did believe it to be hereditary. But Dr. Allen cited well-authenticated instances in which the children of an affected parent, continuing to reside with their parents, contracted the disease, while those of the same family who were taken from their parents while yet young remained well. This went to show that in some instances, at least, the cases supposed to be of hereditary origin were in reality of infectious origin, the infection taking place in the intimacy of family life. Similar clinical evidence of the infectious nature of the disease was given.

The proof of infection by experiments had not been satisfactory. The author thought there was pretty positive evidence to show that leprosy had been spread, in a few instances, by careless vaccination against small-pox, the vaccine virus having been taken from those affected with leprosy. The mistake had often been made of looking for the evidence of the contagious nature of the disease too early.

Believing, as Dr. Allen did, in the infectious nature of leprosy, the question arose as to the advisability of segregation of the lepers in the United States. The right of the individual to personal liberty is one most zealously guarded in this country, and should not be taken away without good cause.

If it is right to segregate lepers because leprosy is an infectious disease, why is it not also right to segregate those who have syphilis and tuberculosis, which diseases are likewise infectious? The author replied to this question by saying that, if it were possible to eradicate syphilis and tuberculosis from our country by segregating those affected with these diseases, he would approve of its being done. But this might be impossible of these two diseases, which have so strong a hold on our population, while it would be quite possible regarding leprosy, of which there are but few cases yet in this country. It was just to sacrifice the interests of the individual when the good of the whole people demanded it.

Dr. George H. Fox had seen a number of lepers in this country, and many more in leprous communities or hospitals in Norway and other countries, yet he was unable to speak positively of the hereditary, contagious, climatic, or hygienic nature of the disease. The majority of physicians were opposed to the view that it is contagious; individually, he was of the impression that leprosy is both congious and hereditary; but it is only very mildly contagious, and for that reason he did not think we were justified in this country in depriving the leper of his liberty and association with other people. There was no occasion, he thought, for fearing a spread of leprosy throughout this country. Dr. Fox did not believe that leprosy is incurable. The benefits of chaulmugra oil in his hands had been marked. He cited one case in which it had resulted in cure. But if the patients were imprisoned with those suffering like themselves, deprived of all hope in this life, neither chaulmugra oil nor any other measure would be likely to prove of any benefit.

Dr. P. A. Morrow said his own impression was that leprosy is contagious, and is also transmissible by inheritance. Yet we know very little about how the germs conveying the disease gain access to the system; whether they come from direct contact with the abraded surface of the diseased, through the air, water, or contaminated articles. There had not been a single case in which the disease had been acquired among the patients of Charity Hospital who had associated with the lepers in that institution. In 1867 the opinion was formulated by the Royal College of Physicians, in England, that leprosy is non-contagious. The majority of physicians who have seen most of leprosy believe it to be non-contagious. While these facts did not prove to Dr. Morrow that leprosy is non-contagious, they did prove that it must be only mildly so, and he thought we might eliminate it as a possible cause of spread of the disease; and he did not think the State was justified in this country in segregating these patients. We should not take leprosy as it exists in the Sandwich Islands as a basis of comparison with the probable course of the disease in this country. The surroundings and the manner of living are entirely different. Leprosy in Norway is dying out, yet the patients there are not strictly segregated; even after their admission to an institution they are still at liberty to go out and associate among their friends.

Dr. D. B. Delavan thought the question should be studied from three different stand-points: First, is leprosy contagious or communicable. Second, is it communicable at all times in equal degree. Third, what has been the result of segregation?

While the disease may not have been shown to be very contagious, yet its history in Europe during the middle ages formed a most instructive chapter. Its ravages then were most terrific, and extended to all parts of Europe. Have we proof that a similar epidemic may not some time develop in this country? History went to show that wherever the disease has prevailed, segregation has been found desirable. Dr. Delavan expressed faith in treatment, especially by chaulmugra oil.

Dr. Henry Koplik had seen only a few cases of leprosy, but he questioned whether surgical interference, as practised in Dr. Allen's case, might not hasten the progress of the disease, as it was believed to do by some in the case of tuberculosis, which he regarded as an allied affection.

The author closed the discussion, after which the Secretary presented a communication from the Georgia Medical Society, together with the following resolutions, which, on motion, were adopted:

Whereas, The feeling of humanity suggests that all medical and surgical supplies, instruments, and appliances, including those used in diagnosis as well as in the treatment of disease, should be furnished to those needing them at the lowest possible price;

Resolved, That the Medical Society of the County of New York would urge upon Congress that, in the cause of humanity, the import duty should be removed from all medicines, medical and surgical appliances, and from everything used in the treatment and diagnosis of disease.

Adjourned.

The Pneumatic Cabinet *vs.* the Gasometer.—Dr. S. Solis-Cohen, writing in the *Journal of the American Medical Association*, states that the objects accomplished by the pneumatic cabinet may be accomplished also by other means, such as the Waldenburg apparatus, the gasometer apparatus, etc. He adds that: "In view of the recorded history of pneumatic treatment, and of the facts that the pneumatic cabinet is a 'patented remedy;' that it has no advantages, physically or clinically, over other apparatus; that it offers less mechanical facilities for variations of method; that the patient is shut away from examination and control during treatment or from prompt assistance in case of accident; that the cost of the cabinet is out of all proportion to the cost of other instruments, thus tending to prevent rather than promote the extension to all needing it of the benefits of this plan of treatment, we respectfully submit that, while those who prefer the cabinet upon commercial, æsthetic, or mechanical grounds are entitled to use and express that preference, they are not justified, either by recorded facts or physical principles, in claiming novelty or superiority for the instrument, its therapeutic methods, or its clinical results; or in representing as the beginning and the end of the science of pneumo-therapy an instrument which is simply a comparatively unimportant incident in its development."

The Indiana Medical Journal tells of an American in Paris who was about to die. He ordered the following despatch sent by cable as soon as the last breath left his body: "Am dead. Corpse will follow by next steamer."

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 8, 1888.

W. P. Northrup, M.D., President, in the Chair.

The President presented, on behalf of a candidate, specimens removed from the body of a child that had died of *tubercular meningitis with general tuberculosis.*

Dr. G. R. Lockwood presented, on behalf of a candidate, a specimen of *hour-glass uterus.*

Dr. F. S. Sellew presented the history of a case of

CHRONIC BRIGHT'S DISEASE WITHOUT ALBUMINURIA.

The patient was a woman, aged sixty-two, unmarried, temperate; had been failing in health for five or six years, "but no doctor was able to tell her what was the matter." Two years ago she came under observation. At this time she was in fair flesh, very anæmic. No stomach symptoms, no headache. She complained of nothing except weakness in the knees. She could not walk as far as formerly, and yet went about out of doors. She said that her urine had been examined by six doctors, and that no one had found anything wrong with it. Repeated examinations made by Dr. Sellew gave the following results: Amount passed in the twenty-four hours, twenty-four ounces; specific gravity, 1.015, acid, pale, or amber-colored; no albumin, no sediment; no casts were ever found. During the last week of life a trace of albumin appeared.

There were no symptoms up to within three weeks prior to her death, save a gradually increasing feeling of weariness and exhaustion, together with increasing pallor. The pulse was regular and of normal tension until the last three weeks of her life, when there were occasional attacks of palpitation.

At this time there was diarrhœa, which alternated with œdema of the feet and ankles, but there was no ascites. There was occasional vomiting and moderate headache, but the principal symptoms of which the patient complained were excessive weakness and weariness. The pallor gradually increased and became waxy in nature.

The diagnosis of chronic Bright's disease was made at the outset, on the characteristic waxy pallor and the low specific gravity of the urine, and was later confirmed by the occurrence of vomiting and the œdema of feet and ankles, alternating with diarrhœa.

The autopsy, made twelve hours after death, by Dr. W. P. Northrup, showed the following: The heart was pale and flabby, and contained decolorized clots; the muscle substance was so softened that the finger with moderate pressure could be easily thrust through both walls of the cavities together. The liver was slightly diminished in size, the surface of a chocolate color, finely nodulated and firm. The kidneys were small, the surfaces lobulated and finely granular, the capsules bringing away bits of tissue when stripped off; the cortex was of normal thickness, pale and firm.

The microscopical examination showed the heart muscle to be the seat of advanced fatty degeneration.

In the kidneys there was diffuse interstitial thickening with atrophy of the tufts, contraction of some of the tubules, and dilatation of others.

The epithelium was broken down and had disappeared in some of the tubules, and there were hyaline casts in many. These might have appeared in the urine from time to time, and easily have escaped discovery.

The anatomical diagnosis was made of: 1, Chronic diffuse nephritis; 2, advanced fatty degeneration of the heart; 3, cirrhosis of liver.

The points of special interest in the case were thought to reside in: 1, The absence of anything abnormal in the urine upon repeated examination of several doctors; 2, the characteristic waxy pallor, and, 3, the well-marked lesions shown by the autopsy.

Dr. Sellew also presented specimens, removed from the body of a child who had died from

PLEURO-PNEUMONIA, COMPLICATED WITH PLEURISY WITH EFFUSION OF THE OPPOSITE SIDE.

Fidelis M——, aged nine months, was brought to the out-door department of the New York Foundling Asylum on January 30, 1888, suffering from diarrhœa and vomiting, and with inflammation of both tonsils.

The child was wet-nursed and was fairly well nourished. On February 1st, the diarrhœa and vomiting were relieved, but the tonsils were still greatly swollen, though there was no membrane. On February 3d the tonsillitis had begun to subside, but there was a short cough, with labored respiration, and on the right side dulness and bronchial breathing were present. The dulness was not marked, nor did it extend over a large area of lung. On the left side there were a few coarse mucous râles.

On February 8th the child was returned to the Asylum in collapse, and died soon after.

At the autopsy it was found that the left lung was compressed by pleuritic effusion, there being three ounces of turbid serum in the pleural cavity. Upon the surface of the compressed portion of the lung there was a thick exudate of pus and fibrin. The only aërated portion of the lung was the anterior half. The right lung was the seat of an extensive and severe pleuro-pneumonia, the entire lung being in a condition of red hepatization, without any aërated portions. The other organs, even the heart, were normal.

The interesting features of the case were the two associated conditions found in the two lungs. In one there was pleurisy, with effusion of serum and fibrin, with compression of the lung, but no pneumonia. In the other side was an extensive pleuro-pneumonia, the only aërated portion of the lungs being the anterior half of the left or compressed lung. It was thought that the disease commenced on the right side, and was complicated later on by the pleurisy with effusion.

It was also interesting to note the absence of pericarditis. It is very common in autopsies at the New York Foundling Asylum, in extensive inflammation of both lungs or in extensive pleural fibrinous exudates, to find associated pericarditis with excess of fibrin.

The President remarked upon the two especially interesting points in connection with this case. The first was the extremely severe nature of the lesions. The pleurisy with effusion compressing the lung on the left side, and the pneumonia with pleurisy on the right side, rendered both lungs almost useless, and for the last few days of life the breathing space was limited to a small portion of the right lung. The second point of interest was that the pericardium was entirely free from disease, although the pleural surfaces on either side of it were inflamed.

Dr. J. Lewis Smith said that it was not uncommon to find the pericardium involved under these circumstances, yet such was not the invariable rule. He thought it would have been interesting to study the physical signs present in this case. He also inquired whether there were any tubercles present.

The President said that unfortunately there was no clinical history of the case. He did not know which side was first affected, but for the few days immediately preceding death there would probably have been little in the way of physical signs except dulness on both sides. No evidences of tuberculosis had been found at the autopsy.

Dr. Mary A. Dixon Jones presented the

TUBES AND OVARIES

removed by operation from a woman, twenty years of age, married three years, no children. She suffered not only at the menstrual period, but in the intervals as well, with distress and pain in the pelvis. Laparotomy was performed, and the tubes and ovaries were found bound down by adhesions. The tubes were enlarged, closed at each end, and apparently filled with pus.

Dr. Jones also presented another specimen, removed from a woman thirty-eight years of age, the mother of four children, the oldest ten, the youngest five years of age. The patient suffered much pain, and was not able to attend to her ordinary household duties. The cervix was found, on examination, to be deeply lacerated and widely gaping, as if the uterus were pulled in some unusual position. Apparently all around the cervix was a solid mass, having a radius of three and a half to four inches, and extending down on either side to the anal region, and upward as high as the top of the pubic bone. In some portions this tumor was so solid that it suggested a fibroid, but other portions were soft and even fluctuating.

THE UTERUS WAS PULLED OVER TO THE RIGHT,

and firmly fixed, seeming to be closely adherent to the mass about it. The sound could be passed up a distance of four inches.

When the abdominal cavity was opened the uterus was found fixed and deflected toward the right, the right appendages being below it and deeply embedded in adhesions. To the left of the uterus there was a solid mass occupying the whole left of the pelvis, and closely fixed and bound down by adhesions. That portion of the appendages originally anterior was turned over and adherent to the back of the pelvis, and was covered by the remains of strong and well-organized adhesions, which had to be separated with the greatest care on account of some being adherent to the rectum. The greatly enlarged tube, which occupied the lower part of the mass, after going a straight course of three inches, bent upon itself at a right angle and extended upward for another three inches, measuring altogether five and a half to six and a half inches in length. The lumen of the fimbriated extremity measured an inch and a half in diameter, being large enough for the entrance of the index-finger. By this turning over the posterior portion of the appendages had become the anterior, and, being closely united to the anterior wall of the pelvis, had thus formed a cavity, and it was here that the sense of fluctuation had been obtained. There were several other large cysts similarly formed by inflammatory adhesions. The whole of the mass was removed and the abdominal cavity was washed out, but the pedicle was so large and so fibrous that even after tying it still bled, so it was fixed in the abdominal wound by Koeberle's clamp.

The organs had not yet been examined microscopically, but the nature of the changes present might be inferred from those found in a case having similar general features upon which Dr. Jones had operated. The patient was twenty-one years of age, married, and had two children. She menstruated first at the age of eleven years, and then, and ever since, had had severe pain, showing that she had begun her menstrual life with diseased ovaries. Since the birth of her last child the menstrual pain had increased in severity. The cervix and perineum were both deeply lacerated, and on account of the youth of the patient it was determined to repair these structures first, in the hope that the condition of the woman might be thereby so far improved as to render her life endurable without taking from her the possibility of future child-bearing. The operation was, however, not successful in producing this result, so the removal of the ovaries was decided upon. The appendages, which were buried in the midst of adhesions and extensively diseased, were also removed. The tube was enormously enlarged, especially at the fimbriated extremity, and completely closed. There were extensive adhesions back of the tube, and between it and the ovary, and numerous cysts had been formed in this new inflammatory tissue. The ovaries were small and buried in adhesions. Microscopical examination showed degeneration of the ovary from chronic ovaritis, the entire structure being changed except a small portion at the periphery. The tube was diseased in all of its structures—mucosa, connective tissue, muscular tissue, and peritoneal investment.

In many places the perimysium was almost wholly destroyed, and the smooth muscle-fibres of the tubes were entirely disintegrated by the inflammatory exudate. In many places the leucocytes were so crowded together as to form true abscesses, no vestige of muscular tissue being left. In other places, under the microscope, the muscle fibres presented the appearance of a few broken fragments floating in a sea of inflammation corpuscles.

Dr. Jones objected to the term

INTERSTITIAL SALPINGITIS,

usually applied to this condition, as it was not the interstitial connective tissue that was affected, but the muscle itself. She thought the term "corporal salpingitis" would be more appropriate.

Salpingitis usually begins in the mucous lining of the tube and travels outward, but in this case the periphery was most affected, evidently by continuity from the peritoneal inflammation, while the mucosa was least involved.

It was perhaps of interest to add that the patient had at times suffered from great mental depression, and had often threatened self-destruction, but since the operation these symptoms had disappeared, and she had gained steadily in health and strength. Dr. Jones believed that in very many cases similar to this, of supposed uterine disease, the most serious trouble was really with the ovaries or tubes.

Dr. J. Lewis Smith presented a specimen of

UMBILICAL PHLEGMON,

removed from a child who had died in the New York Infant Asylum. Diphtheria had appeared in this institution in August last, since which time there had been in the neighborhood of thirty cases of the disease, and among them were four in the new-born. During the same period there had been six cases of umbilical phlegmon, a most unusual number for that institution.

The patient, Violet M——, was born on January 5th. There was nothing unusual about the labor, and the mother has done well—indeed in all these cases of umbilical phlegmon the mothers had done well. The navel was dressed with borated cotton, according to the routine habit in the Asylum. On January 11th the baby was noticed to have a slight discharge from the umbilicus. Its temperature at this time was 100°. The following day there was some redness immediately about the umbilicus, and this extended gradually until, on the day succeeding, it covered an area with a radius of an inch and a half around the navel. On January 14th examination of the fauces revealed the presence of

DIPHTHERIA.

The temperature ranged from 98.3° to 101.2°, the pulse was weak and varied between 120 and 146. The throat was sprayed with a mixture of sodium benzoate and sodium bicarbonate, of each ʒ ij.; Listerine, ℥ j.; glycerine, ℥ ij.; and lime-water, ℥ viij. The exudate did not disappear under this treatment, however, and on the following day—when the patient died—it had extended to the nostrils.

Post-mortem examination.—The diphtheritic exudate was found covering the epiglottis, especially its under surface, and extending into the larynx down to a point just below the vocal cords. The lungs were mottled with hemorrhagic points. The umbilicus had been sent to Dr. Prudden for examination.

Dr. Smith regarded the occurrence of such an unusual number of cases of umbilical phlegmon during the local epidemic of diphtheria as a point of considerable interest, and he thought it would be of great value to determine whether there were any causal relation between the two.

As a matter of prophylactic interest, he said, it was worthy of mention that there had been no more cases of diphtheria since use had been made of turpentine steam in the institution. A mixture was prepared of oil of eucalyptus ʒ ij. to iv.; turpentine, ℥ viij.; and water, Oij. This was kept in a constant state of ebullition night and day. If this were done everywhere he believed that there would be no danger of the physician carrying away the infection in his clothes.

Dr. Prudden reported as follows upon the specimen: A section through the abdominal wall parallel with the abdominal vein showed that the interstices of the abdominal parietes about the vein were densely infiltrated with serum, fibrin, and pus, and that a small red clot was firmly lodged in the outermost portion of the vein.

SECTIONS STAINED FOR BACTERIA

showed large collections of micrococci at one side of the clot in the vein, with a necrosis of the inner layers of the vein near the bacteria.

Furthermore, the exudation mass in the tissues outside of the vein, particularly along the adventitia, was intermingled with large numbers of micrococci, either scattered singly or lying in clusters or in larger and shorter chains.

Cultures made from the clot and from the exudation showed that two species of micrococci were present, which were readily identified as the *streptococcus pyogenes* and the *staphylococcus pyogenes aureus*.

As to the relationship between these bacteria and the diphtheritic process which developed later in the throat, Dr. Prudden could only say that, as we do not yet know what bacteria cause diphtheria, a definite opinion must be held in abeyance.

Dr. J. S. Thacher presented a specimen of

LARGE TUBERCULAR MASSES IN THE PERITONEAL CAVITY,

which had been sent to him by Dr. Montague L. Boyd, of Savannah, Ga., with the following history:

The patient was a negro girl, five years of age. The mother stated that the child had complained of pain in the abdomen two years ago, and that she had noticed a lump there which was tender on pressure. The case had been under observation for six months. The abdomen had been very much enlarged, the rest of the body being extremely emaciated. The bowels were regular, and the appetite fair. The temperature was almost constantly elevated, ranging from 101° to 103°. There was no œdema of the face or limbs, and no cough at any time. The abdomen became more and more enlarged, while the rest of the body gradually wasted away, the strength failed by degrees, and the child died without any other symptoms.

Dr. Boyd's diagnosis of the case was sarcoma, while other physicians who had seen the child suggested malarial enlargement of the spleen and ovarian tumor.

The autopsy was made under adverse circumstances, and only the abdomen was opened. The peritoneal cavity contained about two gallons of a thin milky fluid. The tumor, with intestines, stomach, and spleen, was removed. The tumor was seen, on inspection, to be composed of a number of rounded nodules, some fused together and some separate from the rest. The tumor measured about $5 \times 3\frac{1}{2} \times 3$ inches, the largest distinct mass being about $4 \times 2\frac{1}{2} \times 2$ inches, and the others of all sizes less than this. They lay behind the peritoneum, in the mesentery, and in the omentum, and gave the impression of being enlarged lymphatic glands. On section they were found to be of a firm, cheesy consistence, and of a pale yellow color.

Under the microscope they were seen to be made up, for the most part, of a structureless granular mass, but at the circumference of inflamed connective tissue, having the features of tubercular inflammation fairly well marked. A very few tubercle bacilli were also found in the sections.

The Society then went into executive session.

Metrorrhagia following a Dose of Quinine.—Dr. A. C. Follett, of Huron, Dak., reports that one of his patients took, upon her own prescription, ten grains of quinine to cut short a commencing cold. In about half an hour she began to suffer from nausea, vomited freely, and was soon greatly prostrated. About an hour later a profuse metrorrhagia set in, and continued for three or four hours.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

A MEDICAL SPORTSMAN—DISPUTES ABOUT POST-MORTEMS—INTESTINAL SURGERY—THE DIAGNOSIS AND TREATMENT OF RUPTURED INTESTINE WITHOUT EXTERNAL WOUND—RUPTURE OF COLON OUTSIDE PERITONEUM—NÉLATON'S OPERATION FOR INTESTINAL OBSTRUCTION—RELAPSING TYPHLITIS AND ITS TREATMENT—THE BRITISH NURSES' ASSOCIATION.

London, February 18, 1888.

A year or two ago an article appeared in one of the magazines with the title "Doctors out of Practice." More medicos are out of practice—*i.e.*, either retired or engaged in other avocations—than would be credited. There is, in fact, scarcely any calling in which medical men have not engaged. Among other pursuits sport has drawn no inconsiderable contingent from our profession, including at least one doctor who devoted himself to it so exclusively as to make it his real profession. I refer to Mr. Walsh, the well-known editor of *The Field*, who died recently. Born in 1810, he studied at Guy's, and became first a Member, subsequently a Fellow, of the College of Surgeons of England. After nearly twenty years of country practice, he spent some time in travel, and finally settled down in London. He became connected with the sporting journal *Bell's Life*, and afterward became editor of *The Field*, a post which he held for thirty years. Besides his editorial work he found time to pen several treatises on sport, writing under the pseudonym of "Stonehenge"—a name recognized as an authority on all matters pertaining to sport by sporting men far and wide.

The performance of a post-mortem examination in a private house is not, at the best of times, a very pleasant process. It is often far from easy to gain the consent of relatives to such a procedure, and even when their compliance has been obtained it is no easy task to make a complete autopsy without leaving unpleasant traces of what has been done. It is very regrettable where the interests of science have induced a medical man to make such an examination without the consent of, or sometimes in defiance of, the relatives or friends. Such incidents are happily of infrequent occurrence. One such has, however, recently occurred at the West End of London. The medical man in attendance did not himself make an autopsy, but sent another doctor to do it. The latter made the examination, and took away with him some of the organs. He left behind him, however, his post-mortem case, which the enraged relatives took possession of, and refused to deliver up. The owner applied to the police-court of the district. The magistrate advised the surrender of the case, which was accordingly returned to its owner. It transpired that the medical man in attendance had been appointed one of the executors by the deceased, and the magistrate remarked that one executor had as much authority over the body as another. Further light was thrown on the matter subsequently by a letter from a son-in-law of the deceased which appeared in *The Times*. In this it was stated that the medical man who ordered the post-mortem examination was, it was true, an executor, but that he could not have been aware of this fact at the date of the autopsy; that the doctor who made the examination gained access to the body by a pretext, and that he left the house with an untruth upon his lips, viz., that he had not done anything to the body.

Intestinal surgery occupied the attention of the members of the Clinical Society at their last meeting. Mr. Mayo Robson read a paper on the diagnosis and treatment of ruptured intestine, in cases where there was no external wound. He described six cases, and observed that in some the symptoms were so distinct as to be almost pathognomonic. The combination of symptoms to be most relied on were shock closely following upon an accident, abdominal pain, moderately quick and soft pulse, vomiting of contents of stomach followed by bilious vomiting, anxious countenance, and diminished or *absent* liver dulness. No reliance could be placed on expectant treatment, and Mr. Robson remarked that the only hope of success lay in early operation. He had himself adopted the rule that where there was a reasonable belief that the intestine was wounded, a small median incision should be made. If there were any rupture of the bowel, flatus, or serum tinged with blood or fæces, would escape through the small peritoneal opening, which could then be enlarged if necessary. If, on the other hand, no such escape took place and the peritoneum proved to be healthy, the small wound could be closed and no harm would have been done.

Mr. Golding Bird remarked on the diagnostic value of radiating pain as insisted on by Mr. Poland. He thought that in such cases the liquid and solid food given to the patient should be of the smallest possible quantity. Much liquid might result from the melting of ice sucked by the patient, and he had known the peritoneum to contain much blood-stained ice-water. Mr. Bryant spoke of the value of treating as serious all cases of abdominal injury. Sir William MacCormac thought the dictum right, "when in doubt, operate." Mr. Bennett thought a week not too long to watch cases of suspected rupture, and related the case of a boy aged fifteen, who was struck in the loin by a cricket-ball, and had no symptom except slight tenderness there. He was kept in bed for a week on spare diet. He then seemed well and was allowed to get up. Faintness came on soon and he died. The necropsy showed that the duodenum had been torn across, but the tear had not implicated the peritoneum till the fatal issue. Mr. Bennett narrated a case of intestinal obstruction in which the colon gave way outside the peritoneum. An operation was performed to relieve the extreme distention, but fatal collapse ensued. Mr. Walsham then read a case of intestinal obstruction treated by Nélaton's operation.

Intestinal surgery also occupied the attention of the Medical and Chirurgical Society at its last meeting, the subject under discussion being relapsing typhlitis and its operative treatment. A paper by Mr. Treves was read, in which the opinion was expressed that relapsing typhlitis was due, in most cases, to some appendicular trouble, and that it might therefore be relieved by operation during the period of quiescence following an attack. A case thus successfully dealt with was narrated. Mr. Holmes mentioned a case in which he had operated. Mr. Howard Marsh thought it a valuable suggestion that a number of affections in this region having various names were due to the state of the appendix. Mr. Walsham said he had been for some time coming to the conclusion at which Mr. Treves had arrived. Mr. Hulke referred to a valuable paper by Dr. Sands, of New York, in which prompt and early interference was advised in cases diagnosed as disease of the vermiform appendix. Dr. Douglas Powell observed that typhlitis and perityphlitis were as distinct as pneumonia and pleurisy. Dr. Dickinson thought that perityphlitis was due chiefly to diseases of the appendix.

A numerously attended and influential meeting in support of the recently formed British Nurses' Association was held a few days since. Mr. Savory, F.R.S., President of the Royal College of Surgeons, occupied the chair. He said it would be the object of the association to obtain a charter. By legal registration it would guarantee the efficiency of nurses; by deliberation and discussion it would advance the great work of women; by the judicious distribution of distinctions, it would bring to the front those worthy of such a position; and it would provide for its own members in old age and sickness.

INSUFFICIENCIES OF THE OCULAR MUSCLES.

To the Editor of The Medical Record.

Sir: In examination of the conditions of the ocular muscles in some thousands of cases I have found that one in which there exists insufficiency of the interni "of more than 18°" associated with manifest insufficiency of the superior rectus from 5° to 7°, is presumably one of strabismus. We know that von Graafe operated on the superior rectus, "in the interest of binocular vision," as he doubtless did in the case reported by Dr. Derby in your last issue.

In regard to the assertion that relief to non-strabismic insufficiencies of the superior or inferior rectus "has been the common property of all competent ophthalmic surgeons for at least twenty years," it is sufficient to say that operative measures of this character, which are the "common property" of a considerable number of competent persons, are liable to find their way into the literature of the subject to which they are naturally related in considerably less than twenty years; and there is little occasion to prove the title to such common property by a search after what a recent writer, referring to these conditions, characterizes as "unpublished exploits."

Ordinarily it is a very difficult matter to prove a negative. In respect to the claim of Dr. Derby that such operative measures have been the "common property of all competent ophthalmic surgeons for at least twenty years," it would be quite easy to show that the statement is incorrect.

George T. Stevens.

33 West Thirty-third Street.

THE RESULTS OF JURY TRIALS IN LUNACY IN THE STATE OF COLORADO.

To the Editor of The Medical Record.

Sir: In your editorial of January 21st, you make use of the following language, when speaking of a proposed law to have jury trials in all cases of insanity before commitment: "Such a process would be clumsy, expensive, and dangerous, and is quite uncalled for." That is *ex-cathedra*, sure enough. In Colorado we have just such a law, and we do not have the scandals that you have in New York State about sane persons being confined as insane.

Here the medical man goes before a jury and gives his testimony in the presence of the person. A guardian *ad litem* is appointed, the person supposed to be insane is allowed to ask questions, and they often do so, and if insane usually give themselves away.

The jury weighs the testimony, and a verdict is rendered; the physician goes home without fear of a coming prosecution, the patient goes away far more quietly than when spirited away by a secret star-chamber proceeding, even though ever so justly conducted. But few patients are so insane as to not know when they have had a fair trial, in which relatives and meddlers have not had it all their own way. Hence they acquiesce in the results, though often denying the correctness of the trial.

Now, as to the "clumsiness" of such a proceeding, it is quite expeditious, occupying but a few hours, and nine out of ten patients accept service, thereby waiving the legal ten days' delay if service is denied. As to expense, when the parties are unable the county pays all expense, which in this State of excessive court fees averages fifty dollars.

The workings of this law have thus far protected the rights of both patient and community. I have resided here for the past sixteen years and never heard of any ill-workings of this law; and what is better, never been sued or known of any other practitioner being sued by a patient or a friend. The jury trial protects the physician, and when the patient recovers there is no ill-will toward the doctor. I have never known any injury being done to the patient or his mental condition by a public trial;

but few attend such trials, and the patient is not unduly excited, at least not any more than his real interests justify.

In conclusion I ask, In these days of two-term medical students being turned loose upon an unsuspecting community, would you, Mr. Editor, be willing to have the average medical man examine you as to sanity and have the power to consign you to an asylum?

Where the vicious "insanity-certificate" method originated they have a much stricter examination, as well as method of education, before they give their medical men such dangerous power. When we stop trying to regulate medical practice, and seriously regulate some of our so-called medical colleges, it will be time enough to give our physicians the dangerous power your New York State laws give them. Until then the jury trial, in insanity cases, of Colorado is the best, that is, if we judge by its results.
CHARLES AMBROOK, M.D.

BOULDER, COL.

WINTER ITCH.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your editorial of January 14th mention is made of winter itch. Perhaps my personal experience with that agreeable companion may be of interest.

During the winter of 1879–80 my horse slipped his halter and took French leave. After a hard run of half a mile the animal was caught. As I stepped into the cutter the horse became frightened and attempted to run away. I was perspiring very freely, the day was bitter cold, and the horse requiring all my attention, I could not properly wrap myself in the robes. Thus I travelled for about half an hour, facing a piercing northwest wind, and alighted from the sleigh thoroughly chilled.

No inconvenience was experienced for a day or two, after which those portions of the limbs which were most exposed commenced to itch. Soon the pruritus located itself permanently in the extensors of the thighs. No inconvenience was experienced during the day, but at night—especially after standing near a glowing coal stove—saints deliver us! there are no words in written language that would describe the pruritus.

Each winter, after severe exposure, the itch has returned and continued until spring. The skin is perfectly healthy; no lesion whatever is visible. My health is perfect, and has been all the time. Treatment has had no effect. The greatest relief has been obtained from wearing very heavy flannel underclothing. That is all I have tried for the past few winters, being fully resigned to fate, resolved to scratch it out.
⁂

FRANKLINVILLE, N. Y., January 21, 1888.

SOME EXPERIENCES WITH WINTER ITCH.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: *A propos* of an article in THE MEDICAL RECORD, January 14, 1888, on "Epidemic Winter Itch," I will state that within the past five years in this city I have seen as high as forty or fifty cases of Winter Itch. Over in Illinois they call it "Missouri Mange," and in Missouri it has been christened "Illinois Mange." It seems to be an eczema, followed with intense itching after retiring and getting warm in bed, and often begins before retiring when the patient becomes warm from any cause. I have found it to be mostly confined to the extensor muscles of the thighs and forearms, frequently covering the abdomen and around the scrotum, sometimes the back. I have never seen it on the face, feet, or hands. It usually selects those surfaces covered by the clothing.

I believe it is contagious, from the fact that I have known a whole family to be affected by it, or one person sleeping with another to impart it to his bed-fellow. In some cases I have seen it assume the pustular form on the forearms and wrists, and I believe it is transmitted from different parts of the body by inoculation with the finger-nails.

The etiology of the disease I am unable to account for, but I believe it comes largely from the want of baths, cleanliness, etc. I have pursued a course in the treatment that has proved *universally* successful. I prescribe as a local application (and always precede it with a warm scrub bath) chrysophanic acid ʒ iss. to the ounce of vaseline, this to be well chafed in at bedtime, wearing a suit of underwear that the stain will not affect. This is to be put on for three nights in succession, then take a good warm sponge-bath. In a few days the skin will peel off and the parts or surface will become quite tender, but that disappears in a few days. In the meantime I order ten drops of Donovan's solution three times a day. Within ten or fourteen days the most inveterate case will yield. After one week, if not cured, repeat the same procedure. I am safe in asserting that any one following this course will be relieved. There is no necessity of dieting or restricting patient in any way.
J. W. FOSTER, M.D.

KANSAS CITY, MO., January 16, 1888.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 25, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	9	4
Scarlet fever	156	19
Cerebro-spinal meningitis	5	3
Measles	57	3
Diphtheria	98	38
Small-pox	3	1
Yellow fever	0	0
Cholera	0	0

COCAINE IN REMOVING A SCALP TUMOR.—Dr. B. Bowman, of Chambersburg, Pa., writes: "Some time ago, having occasion to remove an encysted scalp tumor where the usual anæsthetics were contraindicated, I injected along the line of incision, just under the skin, every three-fourths of an inch, about twelve drops of a ten per cent. solution of cocaine muriate. After waiting fifteen minutes, I found that making the incision, which was two and one-half inches long, removing the tumor, and putting in the stitches were entirely painless. It was situated on the left frontal eminence."

THE MEDICAL LANGUAGE OF MEXICO.—A writer in *La Emulacion*, a journal published in Guadalupe, Mexico, protests against the numerous barbarisms current in the writings and lectures of medical teachers in that country. Most of the ungrammatical expressions are, he says, Gallicisms, and he attributes them to the fact that the greater number of text-books in use there are written in the French language. In this country the tendency is rather to the adoption of Germanicisms.

LAICIZATION OF THE HOSPITALS IN PARIS.—The work of expelling the Sisters from the hospitals in Paris goes steadily on, despite the protests of the physicians and surgeons attached to the various institutions, who are naturally more concerned to have good nurses in care of the sick under their charge than are the politicians. The latest hospital to suffer in this way is the Charité. In the meanwhile the Prefect of the Rhone has awarded to Sister Chaumard, the Directress of the Maternity Hospital of Lyons, the honor of Officer of the Academy, on account of her unremitting labors, following the initiative of the physicians, in establishing a system of antiseptic midwifery in that institution.

TREATMENT OF CILIARY BLEPHARITIS.—Dr. W. Roeder observes that obstruction of the nasal duct and blennorrhœa of the lachrymal sac, as well as conjunctival inflammation, may occasion disease of the roots of the cilia, for the pus-cells combine with the stagnant tears and form an emulsion which easily overcomes the resistance of the fat of the sebaceous follicles and penetrates into the hair-follicles. The cilia then swell, and the inner hair-sac becomes infiltrated with pus-cells. The pus-cells are at first retained by the swollen hair, but ultimately burst through and form crusts between the cilia. If the process be allowed to continue, a contraction of a cicatricial character occurs in the outer root-sheath, so that the new hair can no longer push its way forward, but grows backward, thus assuming a hook-like form. Recovery from the blepharitis occurs only after all diseased hairs are extracted. In addition, however, it is imperative that the disease of the lachrymal passages should be completely cured.—*Klinische Monatsblatter*, No. 7, 1887.

OBSERVATIONS ON SOME VASO-CONSTRICTORS.—M. Trovati has made a series of experiments with the object of ascertaining the relative power of ergotine, hydrastin, and hamamelis as vaso-constrictors. When the blood contained 1–1,000 of ergotine the flow ceased in an hour. It diminished by a third in ten minutes, and by one-half in the same space of time, when it contained 2½ and 5 parts per 1,000, respectively. The extract of hydrastis reduced it by two-thirds at 2½ volumes per 1,000. The extract of hamamelis, in the proportion of 1–1,000, reduced the flow to one-half in ten minutes, and by two-thirds in the proportion of 2½ per 1,000. This test affords a good idea of the relative value of these drugs in the treatment of hemorrhage.—*Medical Press.*

A NEW SYMPTOM OF AORTIC ANEURISM.—Dalhee reports two cases of aneurism of the aorta in which an alleged new sign of the disease was observed. In one instance the disease was in the thoracic aorta, in which the ssame change, in the curve of the femoral pulse were observed as were described by Baltus in aneurism of the abdominal aorta. The peculiarity of the curve consisted in its low amplitude, and especially in a sharp hooklet resembling that met with in aortic insufficiency. This form of the curve is peculiar to the femoral artery. The symptom may prove of use in doubtful cases.—*Journal des Sciences Médicales de Lille.*

A SHOTGUN PRESCRIPTION.—Captain C. N. B. Macauley, Medical Corps, U.S.A., of Fort Gibson, Ind. Ter., writes: "A few days ago a civilian came to me for treatment for secondary syphilis. He had been under treatment by a physician in a large Michigan town. The following prescription, which I take the liberty of sending you, is copied, *verbatim et literatim*, from the original. The names marked * were hard to make out, but two of us decided that what is here written is correct:

℞. Iod. potassa	℥ ss.
Hydr. iod. rub	grs. x.
Aquæ pura	℥ viij.
* Fl. ext. poke root	℥ j.
" " stillingia	℥ j.
" " burdock	℥ iss.
" " gold seal	ʒ ij.
* " " podophylli pellets	ʒ j.
Spts	℥ iij.

Syrupi to fill one pint. M.
S. One teaspoonful three times daily.
(Signed) Dr. ——.

From the results of 'takin' more'n a pint of it,' as the patient said, I do not think Dr. —— was a very good shot, even with his medical shotgun. This is one of several specimens I have seen of curious prescriptions. The others were written or dictated by some self-styled 'local practitioners' down here in the Cherokee Nation. The physician who wrote the above prescription is practising in the Michigan town referred to."

ANTIPYRIN IN MEASLES.—Dr. F. W. Edwards, of Wilmot Flat, N. H., writes: "I have used antipyrin in a number of cases of measles where high fever, headache, and almost intolerable burning skin and thirst were the worst symptoms, and it has acted in every case like a charm, shortening the disease and stopping the intense soreness of the throat."

MEDICO-LEGAL ASPECT OF PREGNANCY ANTERIOR TO MARRIAGE.—Professor Brourdel says that Dr. Bonne was called one day to attend a woman who complained to her husband of spasms of pain in the region of the liver. The doctor noticing that the "spasms" resembled labor pains, asked and received permission to question the patient by herself. She confessed the truth to him. She had been pregnant for eight months, and married only six weeks. The doctor, rejoining the husband, told him the situation of things and urged him not to make a scene. The latter proved accommodating, and not only did not upbraid his wife, but condoned her acts in the presence of her family. Thinking the matter over, however, later, he wished a divorce, but was refused by the court on the ground that he had not made complaint instanter on discovering the facts set forth.—*St. Louis Medical and Surgical Journal.*

IT WAS AN OBSERVANT HOMŒOPATH, with a truly megalous head, who remarked: "Some trained nurses are trained nuisances." One sometimes feels that this training of nurses, like Dean Swift's beefsteak, is a little overdone.

AN ENGLISH TRIBUTE TO AMERICAN MEDICINE.—The American physicians are far ahead of us in this matter, especially in the field of gynecology. Where we have one gynecologist making a good income there are fifty in the States making pots of money. But the Englishwoman has not been educated to recognize her needs in this regard as her American sister has been.—*Hospital Gazette.*

"HÆC OLIM MEMINISSE JUVABIT."—A famous practitioner of many years' experience writes to the *Boston Medical and Surgical Journal* a story of one of his early experiences. It is a story that does credit to the doctors. He says: "In the early days of anæsthesia, I had quite a reputation as a giver of ether and chloroform. One day a distinguished surgical friend asked me to give the anæsthetic for him to a great and rich general, whom he had promised to castrate for malignant disease of the testis. I kept my appointment, and found the instruments arranged in order, the operating table, and the warrior eager to have the ill-behaved gland removed. Out of courtesy, I was asked 'to look at it.' I happened to know the clinical history of the patient, and soon satisfied myself that syphilis had claimed him for her own in a constitutional manner, and that trenchant steel was not what he most needed. I so told my brother doctor, who, being a noble, conscientious man, made an excuse to defer the ablation, put the son of Mars upon the appropriate treatment, and completely cured him. In the course of time, my 'gentle reminder' found its way to the hero's hand. Looking at it for some minutes, he said: 'What a —— outrage! That man just came to give me ether. It was found best by my surgeon to put off the operation, and Dr. M. didn't even give me the anæsthetic. He simply wasn't wanted, and went home. He must think I'm made of money, d—— him!'"

THE TIME IT TAKES TO THINK.—Men in all ages have been familiar with the fact that thought is habitually more active and more speedy in the case of some persons than of others. Whether in the exercise of the imaginative or the reasoning faculty, or in the action of that guiding purpose of life which we call the will, the general truth of this observation has been always evident. As we come to a higher stage of human development, with its corresponding increase of intelligence, it is not remarkable that the mind should seek to subject itself to a closer scrutiny, and to catalogue more exactly the results of its introspection. This has happened with regard to the question before us. In particular has the period which intervenes between the impact of impressions from without and the visible response of the will in muscular action or other mode of expression become of late years a subject of careful investigation. Since the first quarter of the present century, when the comparative speed of visual observation was chronicled in the case of the astronomers Bessel and Struve, the varying rate at which the mind responds to the numerous impulses which reach it from the outer world has been measured with some exactitude. Most of our readers are familiar with the term "reaction" period. They will recognize it as expressive of the whole interval between the action of a stimulus, of whatever kind, and the visible response of the individual affected by it. They will also perceive in the period of "reduced reaction" that interval shortened by the space of time allotted by experimental precision to the transit of purely sensory and motor impulses—the period, namely, which changes the one into the other, and represents in the mind the average time required to think and to will. Discoveries not now very recent have taught us that the ordinary duration of this period is, in the case of simple impressions, about one-tenth of a second, and that where the impression is rendered complex by affording the mind a choice of sources to which it may be referred, the time required is increased by about another tenth of a second. An equally interesting side of the subject, however, is that which exhibits the force of impressions as modifying the rapidity with which they are accepted, and, in familiar phrase, digested by the mental centres before they are visibly transformed into action. The rapidly energizing power of sudden fear, joy, hope, and desire is thus explained. So likewise the contrary effect of some of these emotions may be explained as being due to a stunning effect produced by the causes which give rise to them upon the mental centres. It is also manifest that the energy of the mental reaction must largely depend upon the reserve of force in those centres at the time of activity. They must not be overtaxed by prior stimulation and excessive use; if their response is to be a vigorous one, they must be well nourished and have seasonable rest. There is, therefore, even in these psychological minutiæ, a moral for the times—namely, that if we would preserve our mental efficiency amid the changing pressure of circumstances, we must by occasional recreation withdraw the mind from too continuous application.—*The Lancet.*

The Organization of a Firm of Patent-Medicine Manufacturers.—Professor Chandler says: "These firms of manufacturers of proprietary medicines, nine out of ten, live solely by the newspapers, and sometimes are admirably managed. I know some establishments in which there is a regular staff employed; I know something about them, because they try to bribe me to certify to the value of their concoctions. As I say, there is a regular staff. There is the literary man, who writes the letters, giving marvellous accounts of marvellous cures; there is the artist, who shows the patient before and after taking twenty-two bottles of the medicine; there is the poet, who composes poems upon the subject; there is the liar, who swears to what he knows isn't true, and the forger, who produces testimonials from his own imagination. Without exaggeration, I should say that nine out of ten of these proprietary medicines are frauds, pure and simple; the real business is advertising for dupes. The medical part of it is but a side-issue. I am pretty sure, if I were to pound up brick-bats, and spend $100,000 in offering it at a dollar an ounce, as a sure cure for some disease which cannot be cured, I should get back at least $110,000, thus giving me $10,000 for my trouble. Nine-tenths of the medicines sent out in this fashion have no more curative properties that brick-bat dust."

Temperature Sense.—Dr. Goldschneider has published the results of his experiments on the perception of temperature. It has been known for a long time that cold is more quickly perceived than heat. As a starting-point, he had first undertaken some direct measurements. He sought out portions of the surface of the body which were equally sensitive to heat and cold. These parts were then stimulated, as far as possible, with equal intensity, and the results were as follows, taken as a mean of about two thousand separate measurements: The reaction-time for cold as a stimulus is for the face, 13.5; for the arm, 18; for the abdomen, 22; and for the knee, 25 hundredths of a second. When an equally strong heat stimulus was applied, the numbers obtained were 19, 27, 62, and 79 hundredths of a second. The ratio of the reaction-times was found to be about the same when the stimuli were applied to such a nerve as the trigeminal, which goes straight to the brain and to a spinal nerve. The experiments on thermal stimulation were made by bringing a metallic button in contact with the skin and recording electrically the moment of contact; the resulting sensation was indicated by a Beiss key. The degree of heat and cold employed as a stimulus was selected so as to differ by equal amounts from the temperaure of the skin.—*The Dublin Journal of Medical Science*, December, 1887.

Calomel and Inunctions of Mercury in Syphilis.—At a recent meeting of the Imperial Royal Society of Physicians of Vienna, Professor Neumann discussed the value of the calomel treatment in syphilis. This method had been recommended in 1864 by Scarenzio, who stated that calomel was to be preferred in the treatment of syphilis before any other preparation, owing to the fact that it was first converted into sublimate and slowly absorbed, and that toxic symptoms were thus avoided. In modern times calomel had repeatedly been tried in Germany and Austria, and several observers, among whom might be named Professer Neisser, professed to have obtained admirable results with it. They said that a few injections were often sufficient to make the secondary symptoms of syphilis disappear. Professor Neumann had for some time past experimented with calomel, using a solution prepared according to the following formula: ℞. Calomelanos, sodii chloratis, āā 5.0 (five grammes); aq. destill., 50.0. M.—Sig. For injections. A Pravaz-syringeful, containing 0.10 (ten centigrammes) of calomel, to be injected at once. With this solution he had treated thirty-six patients suffering from macular, papular, pustular, and tubercular syphilides. The injections were made in the region of the buttocks, and not, as was formerly the case, into the affected parts, the "materia peccans," according to the expression of Lewin. The results which Professor Neumann had obtained were not, however, so favorable as those claimed by other authors. According to his observations more injections were required in order to produce the effect, and in one case he had even to make eighteen injections. To appreciate the value of an anti-syphilitic method of treatment, its action as a preventive had to be taken into account. Latterly the experiments which had already been recommended by Hutchinson, namely, to delay the outbreak of the syphilis, in spite of the presence of the primary affection, by means of inunction, had been taken up by several authors, and Professor Neumann, who had also tried this plan, found the appearance of the eruption could indeed be thus delayed, in one case even for one hundred and sixty days, but that no advantage was obtained by it; the course of the disease only became irregular, and, moreover, a greater number of inunctions were required than in other cases in order to cure the disease. As to injections of calomel, he observed that their effect was in this respect still less intense; and according to his own experience the calomel treatment was indeed a new, and in some cases valuable, method, but in general its effect was inferior to that of inunction.

"About the Size of a ——."—An English physician writes to the *Philadelphia Medical Times* a protest against the loose way in which physicians on both sides of the water describe the size of pathological objects: "Such time-honored comparisons as a 'fœtal head.' (I thought they varied a great deal) or 'a millet-seed' (I never saw a millet-seed, but I believe it to be about as big as a miliary tubercle), we cannot hope to get rid of before the millennium. But when it is a mere matter of length and breadth, could we not state the fact in inches or millimetres? I am moved to write to you by having been just now brought up by the statement that something or other was 'about the size of a dollar.' I was interested in this case up to that point, but I got lost then; the only dollar I ever saw was a tiny gold coin, 'about the size of a threepenny bit; I beg pardon, about fifteen millimetres in diameter. From the context, I think that the article mentioned must have been bigger than that, but I am not sure, and the statement bewilders me and destroys my interest in the case. Another time, I came across the statement that a tumor was 'about the size of a dough-nut.' Now as to a dough-nut my mind is blank; is it a nut that grows on a tree —a cocoa-nut, or a walnut, or a hazel-nut? or is it the other half?—'dough' suggests it is a kind of cake—a 'bath-bun,' or a 'tea-cake,' or, perchance, a cake 'about the size of a piece of chalk?' as the witness said in the famous trial. It is bad enough, Sirs, to have to learn two or three languages in order to keep ahead of the progress of medical science. Why should we, who speak the same language, throw these entirely unnecessary obstacles in each other's way? I hope you will lend your powerful influence to induce our American cousins to give their measurements in terms of some scale which can be mutually understood." The writer adds in a postscript: "P.S.—Since writing the above, a lady has told me that a 'dough-nut' is a kind of bun about the size of an orange, brown outside, jam inside, very good to eat, and 'they cost three halfpence.' Upon this I wish to ask: 1. Tangerine or Seville orange? 2. Is she right? 3. Granting 1 and 2, is this a satisfactory way of arriving at a pathological fact?"

THE NEW YORK PHYSICIANS' MUTUAL AID ASSOCIATION.—From the Nineteenth Annual Report of the New York Physicians' Mutual Aid Association we learn that the sum of $4,043 was paid to the heirs of deceased members, while the total of premiums paid by the insured was but $1,430 during the year ending November 1, 1887. The increase in the permanent fund during the year was $1,020.74, and in membership eighteen, thirty new members having been admitted, and twelve having died or been dropped for non-payment of dues.

CUBEB IN LARYNGEAL DIPHTHERIA.—Dr. Fedeli reports (*Revista de Ciencias Médicas de Barcelona*) a case of diphtheria with laryngeal complications, in a child, twelve years of age, which yielded readily to cubeb in four-grain doses hourly, after various other methods of treatment had been tried without effect.

THE NUMBER OF PHYSICIANS IN ITALY, according to official statistics published in 1887, was 17,586, not including the army and navy surgeons, whose number was upward of 1,000. There were also 11,873 apothecaries.

THE LONDON TRUSS SOCIETY recently held its eightieth annual meeting. This Society was founded in 1807, its object being, as its name implies, to supply the poor with trusses gratis. At the present time it gives away nearly 10,000 instruments yearly, and since its establishment it has provided over 430,000 sufferers from hernia with the necessary apparatus.

THE NEW YORK SKIN AND CANCER HOSPITAL.—According to the Fifth Annual Report of this institution, the number of cases of skin disease treated in the hospital during the year ending October 1, 1887, was 1,401, and of the various forms of cancer, 244. Of the latter, 112 were operated upon, and 96 were reported cured.

HYPNOTIC ANÆSTHESIA.—Dr. Pio Masetti performed an amputation of the cervix uteri, in the San Giacomo Hospital, of Rome, upon a patient in a hypnotic condition. The woman gave no evidence of suffering any pain, and lay perfectly still during the operation.

RESECTION OF TUBERCULOUS JOINTS AND GENERAL TUBERCULOSIS.—Dr. T. Wartmann has collected from various sources the statistics of 837 cases of resection for tubercular joint disease. Of this number, 225 ended fatally. Among these deaths were 26 from acute miliary tuberculosis, the outbreak of which the author was inclined to refer to the operation as its exciting cause.

OXYPROPRYLENDIISOAMYLAMINE.—This is a new alkaloid prepared by synthesis. In moderate doses it is said to be a heart tonic, and doubtless the rapid repetition of the word itself would be found a very useful gymnastic exercise in cases of stuttering.

BUFFALO-POX.—In India the experiment has been made of cultivating bovine virus through young buffaloes, and is said to have been very satisfactory.

A BACTERIOLOGICAL INSTITUTE IN BARCELONA.—A rich merchant of Barcelona, Don Pablo Despau by name, recently gave a large sum to establish an institution for the treatment of rabies after Pasteur's method. The city authorities added to this another large amount on the condition that provision be made for histological and bacteriological research. Dr. Ferrán, of cholera-inoculation fame, was appointed director of the new institute.

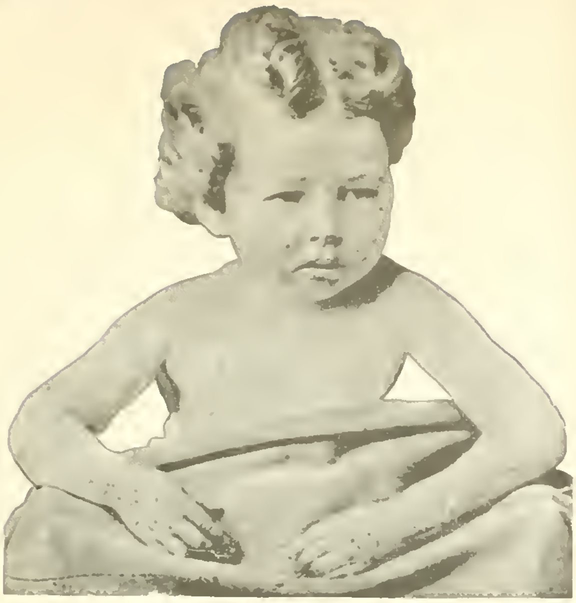
THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE will hold its congress for the year 1889 in the city of Paris.

ABORTIVE TREATMENT OF FURUNCLES.—Dr. Jorissenne treats commencing furuncles by an ointment composed of 1 part of red oxide of mercury to 100 parts of lanoline, and claims that suppuration is prevented when the application is made early. The same treatment is of service, he says, in acne.

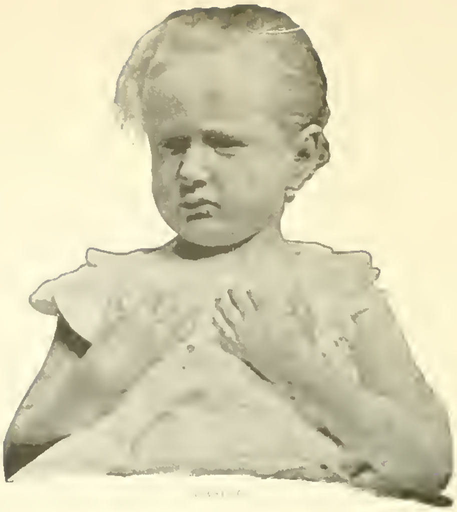
YELLOW-FEVER INOCULATIONS.—The claims made by the followers of Freire that yellow-fever inoculations afford an absolute protection against the disease, have, it is said, been abandoned. It is now held that they merely render a subsequent attack of the disease milder than it would have been without previous inoculation. Among inoculated persons the mortality has been reduced to one in a thousand.

THE HYPNOTIC ACTION OF ANTIPYRIN.—Dr. J. Blake White, of this city, writes: "In THE MEDICAL RECORD for February 4th my attention was arrested by a short paragraph in which Dr. Stubbert, of Bloomfield, N. J., claims to be the first to have called attention to the hypnotic effects of antipyrin. The doctor presumably overlooked my article on 'Antipyrin as an Analgesic' in THE MEDICAL RECORD, September 11, 1886, in which its benefit in neuralgic affections about the head and face was pointed out, and a portion which relates to its hypnotic effects, permit me to quote: 'The grateful relief from headache usually ensues within half an hour after the drug is taken. A sense of *drowsiness* ordinarily supervenes, followed by a brief but sufficient slumber, and the patient awakens quite relieved,' etc. Before my article was written I recognized the hypnotic effects of antipyrin, and had prescribed it in cases of insomnia with good effect. While writing on the subject, permit me to add my testimony to its value as an analgesic and therapeutic measure in acute rheumatism, either by the stomach or administered hypodermically as advised by Professor Sée."

LONGEVITY IN JAPAN.—According to the census of January 1, 1887, the population of Japan numbers 38,507,177. There are 1,086,001 between seventy and eighty years of age; 247,055 between eighty and ninety; 12,220 between ninety and one hundred, and 97 over one hundred years of age. There are two women one hundred and nine years of age, and one who has attained the venerable age of one hundred and eleven. Of those over one hundred years of age, 73 are women, and but 24 men.



CASE 5.—WHEN THREE YEARS OLD.



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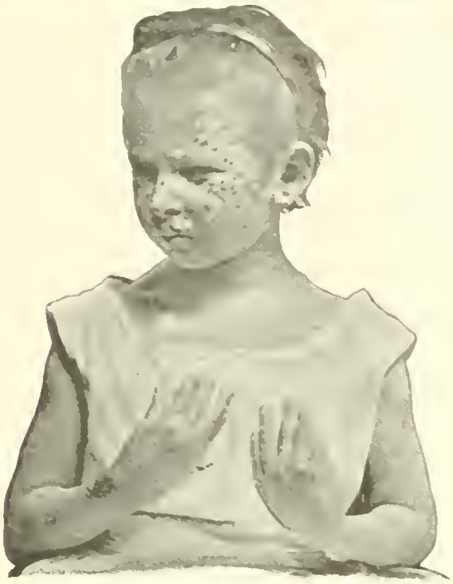

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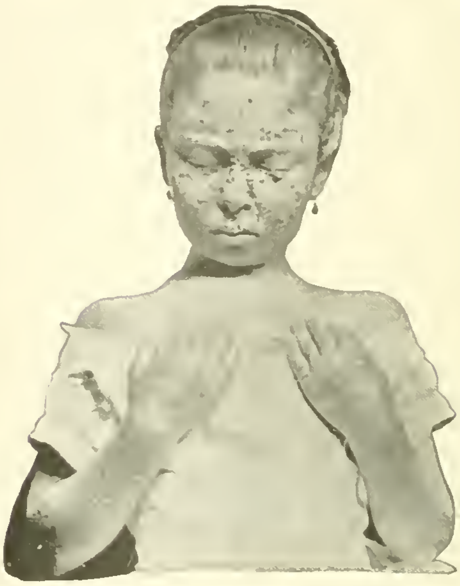

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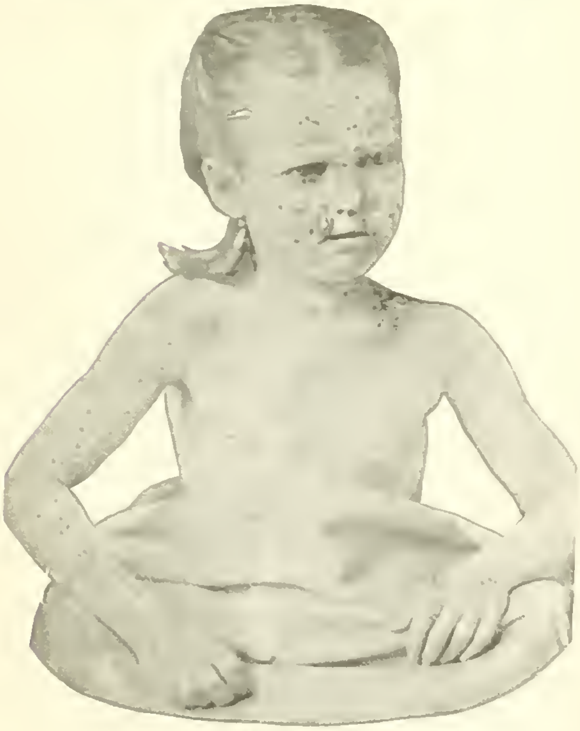
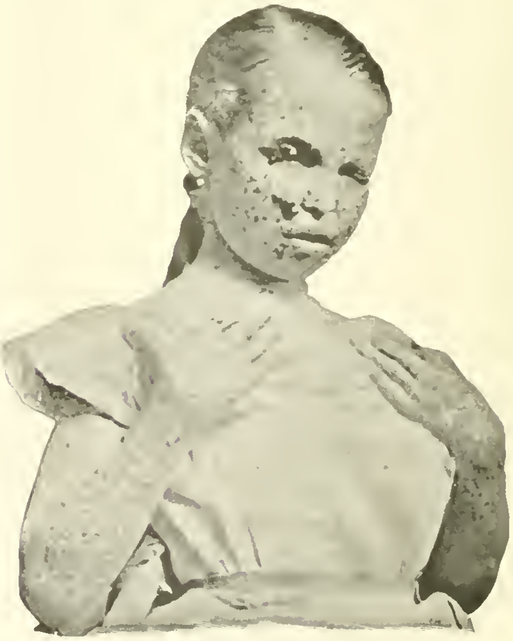


CASE 2.—WHEN EIGHT YEARS OLD.



CASE 2.—WHEN THIRTEEN YEARS OLD.

DR. TAYLOR'S CASES OF XERODERMA PIGMENTOSUM.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 10 New York, March 10, 1888 Whole No. 905

Original Articles.

XERODERMA PIGMENTOSUM AND ITS RELATION TO MALIGNANT NEW-GROWTHS OF THE SKIN.[1]

By R. W. TAYLOR, M.D.,

SURGEON TO CHARITY HOSPITAL, NEW YORK.

In the year 1870 Hebra and Kaposi[2] published in their text-book a description of a disease of the skin peculiar to early life, presenting polymorphous lesions and a complexity of symptoms, chronic and unending in its course, indelible in its disfigurements, prone even from its benign lesions to impair or destroy vision, to more or less disfigure and destroy the ears, nose, and mouth, and by its malignant new-growths to lead to death. This truly wonderful but terrible disease Hebra and Kaposi called xeroderma. Their description was based on four cases, two of which Geber,[3] in 1874, published in greater detail under the title, "A Rare Form of Nævus," using the latter term as applied by some authors to any congenital or very early disfigurement of the skin. In 1877 I read before the American Dermatological Association a paper containing the histories of seven cases of this disease, which had been under my continuous observation for a number of years. At this meeting Dr. Heitzmann related a case.

In 1878 I read a second paper, including the observations made since the former paper was read, and for the reason that, although my paper was complete as regards the clinical history of the mild lesions, I preferred, before publishing, to watch the cases over a long period of years in order to study both their tendency to malignant new-growths and the course of the benign growths. This paper, therefore, is based on seven cases observed during a period of fourteen years. In 1878 Dr. Duhring[4] also reported a case.

In the year 1882 Kaposi[5] published a paper on this subject, in which he called the disease xeroderma pigmentosum, not thinking that the provisional name given to the disease by myself, *angioma pigmentosum et atrophicum*, correct, but taking the adjective pigmentosum as a suffix to xeroderma.

In 1883 Neisser[6] published a paper based on two personal cases, and seven by Rüder, one of which should be dropped, in which he called it *liodermia essentialis cum melanosi et telangiectasia.* Later in 1883 Vidal's[7] paper appeared, in which he called the disease *la dermatose de Kaposi;* such was his enthusiasm for his Teutonic colleague. In the year 1884 Pick[8] published a noteworthy paper on this subject, in which it is evident that he has a clear and accurate knowledge of the disease, which he calls *melanosis lenticularis progressiva.* In the same year Radcliffe Crocker[9] published a paper containing the histories of three cases, the only ones seen in England, in which he proposed the name *atropho-derma pigmentosum.* In 1885 Kaposi[1] published the recent details of his ninth case, including those of Hebra and Geber. In the same year Dr. J. C. White[2] published the histories of two cases observed in Boston, and Dubois-Havenith[3] the history of one case. This constitutes the literature of the subject from ten observers, including forty-one cases, one of which is so imperfect that it must be rejected, leaving forty cases as the basis from which to draw our knowledge of this singular disease. Though the term "xeroderma pigmentosum" is far from perfect, it has the advantage over others of brevity, and will probably come to be accepted generally.

The histories of my cases are as follows:

Case I.—D. M——, born in Columbus, Ga., came under my observation, April, 1874, when three and a half years of age. Her parents and family relations, who were Hebrews, were free from all diseases, particularly affections of the skin. The father and mother were both of dark complexion. D——, a brunette also, was an only child, well nourished and in all respects healthy until she was seven months old, when her mother noticed two bright-red spots, one under each eye, which she thought were the result of sunburn from the carelessness of the nurse. Although numerous remedies were applied, the spots increased rapidly, and within six months the whole face was invaded. The general appearance was then described as a pinkish redness of the skin, with numerous small brown spots. Within the next two years the affection still increased at the periphery of the patch, until, when seen by me, in its third year, the whole face and part of the neck were involved. The following conditions were then noted: The face presented a mottled appearance, the general tint or background was of a pinkish color, the skin having a glazed, stretched look. Here and there, particularly under the eyes and about the nose, were in all about one dozen whitish, pearly-looking, distinctly atrophied patches, on a few of which were numerous small brown spots; in short, freckles. Besides these, scattered irregularly over these atrophied spots, but being rather more abundant near and between the white spots, were a considerable number of minute, slightly elevated and scaling specks of a bright-red color and irregular in shape, which, when examined with a powerful glass, were seen to be composed of groups of minute blood-vessels. In rather greater numbers than these red spots, and more extensively, but more irregularly, distributed over the whole face were spots varying in color from the light brown of ordinary freckles to a blackish brown. They were neither elevated nor depressed, of various shapes, all, however, irregular—some linear, others oval, others, again, angular. Their surfaces were, as a rule, smooth; on some, very minute, dirty scales were seen, while in the centre of a few an enlarged follicular opening was present. These openings of both perspiratory and sebaceous glands were much enlarged, and the usual minute lines of motion of the skin were much deeper, and could be seen to divide up the whole surface into little irregular patches. The minute hairs of the face were still present. The want of elasticity of the skin was well shown at the eyes, over the nose and at the mouth, and its general condition may be said to have resembled that following an extensive, but quite superficial, burn, or the reparative stage of eczema, when the scales and crusts have fallen off and we still have slight hyperæmia. To the touch the sensation was somewhat similar to that felt when passing the fingers over parchment or integument glazed with a coating of flexible collodion. There was no infiltration proper, but rather a condensation of the skin, or a fusion of it with the uppermost layers of the connective tissue. It could be picked up in most places, but the whitish spots were firm, and seemed rather more bound down than the rest. These spots require especial description. They were of various shapes and sizes, from a diameter of one quarter to that of one inch, having no perceptible margin, but merging imperceptibly into the surrounding pinkish integument. They presented a more glazed appearance and corresponding feel than did the other parts, were not scaly, and upon their surfaces no follicular openings were to be seen. When pinched, always with difficulty, between the fingers, it became evident that they were composed of very much atrophied skin, which was firmly connected with the softer tissues underneath. Over some of these patches were a few of the red spots mentioned before, and a few of the black or brown ones.

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[1] Read at a Stated Meeting of the New York Academy of Medicine, February 2, 1888.

[2] Lehrbuch der Hautkrankheiten, 1870, pp. 511, 515.

[3] Ueber eine seltene Form von Nævus der Autoren, Vierteljahresschrift für Dermatologie und Syphilis, 1874, p. 2.

[4] A Case of so-called Xeroderma of Hebra, American Journal of Medical Sciences, October, 1878.

[5] Wiener Med. Jahrbücher, October, 1882.

[6] Ueber das Xeroderma Pigmentosum, etc., Vierteljahresschrift für Dermatologie und Syphilis, 1883, p. 47.

[7] Annales de Dermatologie et de Syphilographie, 1883, p. 621.

[8] Vierteljahresschrift für Dermatologie und Syphilis, 1884, p. 3.

[9] Three Cases of Xeroderma Pigmentosum, etc., Medico-Chirurgical Transactions of London, 1884, vol. lxvii.

[1] Wiener Medizinische Wochenschrift, October, 1885.

[2] Journal of Cutaneous and Venereal Diseases, December, 1885.

[3] Un cas de Xeroderma Pigmentosum, Journal de Médecine de Bruxelles, October, 1885, p. 545.

It remains to mention the condition of the skin under the jaw and upon the neck. Here the affection was of most recent development, and it ended by an abrupt semilunar margin. The appearance was that of a very superficial hyperæmia, without, however, the usual sensation of heat, the color being of a pinkish-red glazed tint, a little deeper than that of the face. There were here and there the red specks, but no atrophic patches, and very few light-brown pigmentations. There was little or no scaling, and as the finger-tip passed from the morbid to the healthy parts no marginal ridge was felt, and the sensation conveyed was that of a dry, smooth surface to that of the normal softness of the skin. The glazed, dry sensation was explained by the almost total absence of the normal secretions. The region in which the sebaceous glands were most numerous was the one most radically involved in atrophy. The integument of the back of the neck, from the hairy margin to that at which the clothing ends, was similarly affected to the face, presenting a small number of red spots and pigmentations, and much cicatrization in small patches. There were irregular-shaped scars with branching processes, others depressed and having the appearance as if punched out. These resulted from abscesses, beginning in the sebaceous follicles, which had occurred from time to time during the past year. Similar lesions had developed about the face, and had caused minute, speck-like scars. The affection stopped abruptly at the frontal and occipital hairy margins.

The hands also showed marked abnormalities. The general appearance was that of a rather less supple skin, with myriads of pigment-spots. There was, moreover, more of the normal feeling in these parts, very little atrophy, particularly over a few of the heads of the metacarpal bones. The parts involved were the backs and borders of the fingers and hands, as far as the wrists. There was less redness apparent, less general change in the structure of the skin. In fact, the only way in which I can describe its structure on the hands is by saying that it was perhaps rather more condensed than normal. By far the greater portion was covered with small, lentil-sized, irregular-shaped spots, varying in color from a light brown to a blackish brown, having, however, a sharply defined border. Between these, and, of course, occupying a relatively much smaller extent of surface, was the light-pinkish background of the integument. In short, the hands, to casual observation, looked as if nearly covered with lentigines or freckles. At the wrist there was no defined margin of the abnormal condition, but rather an imperceptible merging of normal with abnormal integument. Ending in a like manner at the sides of the fingers and hands, the affection wholly spared the palms and matrix and bed of the nails. Heat, burning, and itching were absent. There was, of course, a feeling of stiffness about the eyes, face, and mouth especially, but it caused no complaint.

As to the conjunctivæ, little need be said, except that they were slightly hyperæmic.

The parents of the three following children who are afflicted with this disease are of the Hebrew race, and had never suffered from any sickness or skin disease. Their complexion is dark and their hair black. The husband is fifty years of age and the mother forty-four. They have been married twenty-four years and have ten living children. They are first cousins, their mothers being sisters. Of these ten children, three have this skin affection, namely, the second, the sixth, and the seventh, all of them girls. The sister of the mother of these children was married to a maternal second cousin, and they, too, are the healthy parents of five children, two of whom, namely, the second and fifth, were afflicted in the same manner as their cousins. The second child was a boy, the fifth a girl. Both of these children were, like their parents, of dark complexion.

CASE II. (in 1877).—A. B——, aged thirteen, brunette, was rather sickly in early infancy. She was the second child and of frail build, but free from all skin affections until fourteen months old, when her mother observed little red stains under the eyes. These soon became a continuous patch, and in six months the whole face was invaded. At first the affection consisted in a pinkish redness of the skin, upon which little spots of deeper red appeared quite thickly all over the face, and were called by a physician measles. Gradually these red spots became of a light, then of a dark, brown. These spots of a yellowish and of a blackish brown were very copious upon the face and neck, and they appeared on the cheek following the prodromal hyperæmia. In all of these parts they increased in number. During the second year atrophy began on the forehead and face, leaving patches of thin, pinkish skin, upon which the pigmentations were very few. While this process was taking place many of the dark spots elsewhere underwent absorption (Fig. 1). While the face was thus profoundly and extensively affected by atrophy, the skin of the extremities and neck was only disorganized in small spots and in less degree. The pigmented spots varied in size from a pin-head to a pea, being larger on the face than on the hands.

When first seen by me, in 1874, the girl was ten years of age, of fine health, and of bright intellect. The integument of the forehead was so thin that the vessels were readily seen, and that of the nose in a similar condition, and bound down to the cartilage. A similar state existed on the cheeks and lips, which were much deformed and everted. Over the right eye, involving almost the whole ciliary legion, is an ulcer, situated nearly in the axis of the brow, which extends almost to the bone and has destroyed almost all of the brow (Fig. 2). It has thick, raw, granulated edges, and a raw, red base. At the outer margin of the lower lid is a fungus-like tubercle. Under the lid there was much cicatricial tissue, and, as a result, ectropion. In fact, this eye is, under all circumstances, nearly unprotected. The lids of the left eye were also cicatricial, and their conjunctiva and that of the eye was intensely hyperæmic, that of the lids having a raw appearance. Ectropion existed on this side also. The right cornea is opaque in nearly its whole extent, and to it, from the inner side, large, straight vessels converge, the same feature being seen on the left side. There are two very vascular tubercular elevations on the right cheek, near the ala nasi, separated by a raw fissure. The larger one is of the size of a nutmeg, the smaller of that of a pea. Under the lower lip, near the right angle, are two similar smaller tubercles. The ears are stiff and hard, owing to the atrophic contraction. In the spots where earrings have passed, the lobule is shrivelled and ulcerated. The deep vessels can be seen through the atrophied skin, running over the upper part of the ears. The affection seemed to spare the deep part of these organs, since hearing was perfect. There have been quite well-marked changes in the structure of the scalp. In places it is distinctly atrophied, and everywhere the hairs are thin and dry. There were many small follicular abscesses, and from the whole surface there is much scaling, with here and there plates of sebaceous matter. Scattered sparsely over the whole scalp were small pigmented spots of light brown. There were many of these scattered over the face; being less abundant in the most atrophied places, on some wholly absent, so that this child presented less of them on the face than any of the others. These same spots extended to the level of the third rib, and were extremely copious over the backs of the hands, fingers, arms, and forearms, to the shoulder, being much more abundant on the extensor than on the flexor surfaces. On the legs, mostly on the extensor aspects, also on the flexor, spots of a lighter color—indeed, I may call them freckles—have lately appeared; some have been observed on the upper parts of the feet. There were seen, but in much less profusion than the brown ones, small red, vascular spots of varying shapes, irregular, some linear, generally very small indeed. These are most numerous on the face and neck, less so on the other affected parts. The submaxillary and cervical ganglia were much enlarged, but are not painful. The sensation felt by passing the finger over the face is that of abnormal smoothness, similar to that imparted by parchment, and a feeling of preternatural heat. The follicular openings were nearly all destroyed on the face. Small hairs were seen sparsely scattered over this whole region, while the eyebrows and eyelashes were nearly all destroyed. The normal surface markings were much enlarged. A peculiar immobility of expression was present.

The atrophic process began in the second year of the disease. From that time until now, the thirteenth year of the affection, it has continued, involving various parts at short or long intervals, running an uncertain course, sometimes active, at others passive, exacerbations and remissions alternating. Thus it is that in some cases the atrophy is greater than in others. It was an essentially erratic process, not extending peripherally, but, I may say, at hap-hazard, now here, now there, never being of acute course. In addition to this atrophy there are evidences of further and severe changes, particularly at the junction of the skin with the mucous membranes and upon the ears and nose. Superficially elevated tumors at the angles of the eyes and mouth developed when the child was six or seven years of age. Upon the atrophied patches near mucous tissues small elevations of epidermal structure, and much pigmented, could be seen. They resemble at first keratosis senilis. Some of these attained but a slight elevation, and then underwent spontaneous involution. Others grew in height and breadth. The large tubercles of the cheek appeared within three or four years, having their origin in the same dark spots. The course of the swellings of the lobules has been toward loss of tissue, with marked deformity. Then, again, it has been noted by the parents that the brown spots were not always permanent, though, as a rule, there were many, having become almost black, underwent involution. On the atrophic patches the red spots appeared, formed dark ones, which remained for a time and then disappeared. During this process the atrophic changes were slowly going on. On the hands the atrophy was greatest over bony prominences. Intelligent medication, extending over many years, was ineffective. The mucous membranes of her lips were the seat of the brown and red spots. The nails were unaffected. During hot and cold weather this patient suffered much from congestion of the affected part. This patient was more severely afflicted than any of the others.

During the following six years the most notable feature of the case was the increase in the atrophic changes and the greater development of the supraorbital tumor, which extended to the temple. The new-growth had a fungating surface, not very vascular, with everted edges, and consisted of segments. It was removed by Drs. Gruening and Gerster, who saw the case in consultation. The new-growth extended to the bone, and was thoroughly scraped out. The eyeball was removed several months later. In 1886 ectropion of left upper eyelid necessitated blepharoplasty, which was performed by Dr. Gerster with a successful result. Microscopic examination showed epithelioma, whereas tumors removed in 1877 were myxo-angiomatous in nature.

CASE III.—T. B.——, the fifth child, and the third and last one thus affected, was, in 1876, seven years old, healthy, well nourished, intelligent, and of dark complexion. The affection began under the eyes, as red spots, when the child was less than a year old, and has persisted ever since. She is of somewhat lighter appearance than her sister S——, and presents only pigmentation, with small atrophic patches (Fig. 3). It is only necessary to briefly state her present appearance. There are over the whole face many dark spots, some of large size; among these are a corresponding number of vascular points. The neck, hands, and forearms are also very dark, but in all parts the tint is slightly lighter than in the sister whose history precedes this. There are several atrophic patches about the nose and cheeks, but none on the lids. A well-marked hyperæmia of the conjunctiva produced a moderate photophobia. The ears are stiff and pigmented, but not ulcerated. There is an absence in this case of all epithelial hypertrophy; indeed, the affection may be summed up as diffuse pigmentation, with a small amount of atrophy of the skin. There is the same amount of seborrhœa in the scalp—the hairs of which are dark—and the face has the same apparent elevation of temperature as felt in the other cases. The general features of the pigmented spots, and of the skin thus freckled, are the same as in the preceding case. The submaxillary and cervical ganglia were perceptibly enlarged. There were a few pigmented spots on the lips. Though there are atrophic patches on the face, they are of slight extent, and do not produce much deformity.

During the following six years the cornea became covered with pannous growths, which were removed by Drs. Gruening and Gerster in 1883. The girl also suffered from inveterate pharyngo-nasal catarrh, with chronic otitis and considerable impairment of hearing.

CASE IV.—S. B——, the sixth child, and the second one affected, was, in 1876, eight years of age, and, like her sister, enjoyed good health. She is rather stouter than her sister A——, and has always been well until within six months, when she suffered from rheumatism, which has left no perceptible lesion. Viewed at a short distance in a subdued light she might be taken for a colored child, so profusely and deeply pigmented is she. When born, this child was of very dark complexion, and from this circumstance the parents feared that she would be affected like her elder sister. These fears were realized, since the red spots appeared under the eyes before she was a year old. They soon formed a large patch, and in less than a year the whole face was invaded. When two years old this whole region was covered with the pigmented spots or freckles, in no way differing from those of her sister and of the other cases. From that time until now, being a period of seven years, the morbid process has gone on in the same manner, but with less intensity in certain respects than in her sister. The pigmentation has been at times, as it is now, very deep, and again it would become lighter. The mother observed that these spots came out in crops, which were not always developed as rapidly as in others. In hot weather they became darker, and appeared more quickly than in cold. The present condition of this child is briefly as follows: The principal change observable on the face is the dark, copious pigmentation of nearly the whole surface. The trouble stops quite abruptly at the margin of the scalp, upon which are only a few spots and slight seborrhœa. The absence of large patches of atrophy is noticeable in this case, and the only places where it appears in small, irregularly shaped patches, and without sharp margins, are at the eyes, nose, and mouth. In fact, the process has not been so severe as in the other cases. There is slight ectropion, owing to the condition of the lids. On the right eye, springing from the inner side and overlapping the corner to the extent of half a line, is a little, rather square-shaped, pinkish elevation, to which a number of large, straight vessels run directly from the inner canthus, and over its surface some minute capillaries ramify. This structure, seemingly of epidermal formation, has a diameter of about one-twelfth of an inch and an elevation of one-third of a line. Both surfaces of the conjunctiva are markedly hyperæmic. Beginning at each inner canthus, at the root of the nose, is, on each side, a line of tubercles, which, diverging with the expanding alæ nasi, form a **V**-shape figure with the apex upward. These tubercles, in all about sixteen in number, varied in size from small points to the size of half a pea (Fig. 4). They were of a dirty black color, some covered with a crust, upon the removal of which a raw, bleeding, and slightly fungous surface was seen, others being a little scaly. Besides these there are irregularly placed over the whole face numerous small similar tumors. In the early stage of these lesions they were simply pigmented and scaly spots like keratosis senilis; later they reached a diameter of nearly half an inch, having a slightly adherent crust. The largest tubercle on the face is under the left eye, occupying the greater portion of the lower lid. Similar pigmentation to that of the other cases was present upon the neck, very much worse, however, on the back of it, reaching as far down as the third rib. Intermingled among them were many vascular spots slightly raised, sometimes scaly. Such spots were seen also on the extensor surfaces of the hands, forearms, and ears. A few of them were present on the exposed surfaces of the lips. She suffered from photophobia in a mild degree. There was slight immobility of expression of the features. The cervical and submaxillary ganglia were distinctly felt. The pigmentation in this case had varied in intensity at different times, and had also appeared in crops. This child had suffered from measles, with no perceptible influence upon the chronic skin affection. In this case these dermal changes had lasted seven years. Within a year of its development the whole face was invaded, and some part of the upper extremities; after that it ran an uncertain course, and was complicated at its third or fourth year with the formation of the epithelial tumors. The feel of the skin is rather rougher than normal, yet its suppleness is not much impaired.

Most of the tumors on the face withered and fell off, and some were removed by scraping. Toward 1882 a tumor formed on the left temporal region, which, in 1883, had attained the size of a hazel-nut. It was removed by scraping by Dr. Gerster, without much bleeding. The wound healed rapidly. The structure of the tumor was friable, and it was found to be a granuloma.

The children whose histories follow were cousins of the three foregoing cases. The first, a boy, E——, was the second child, his elder brother having been healthy. Following him in order of birth were three children, two girls and a boy, who were always perfectly healthy, while the sixth, a girl, was affected similarly to her brother and her cousins.

Case V.—E. W—— was, in 1876, the only male subject who had then been known to suffer with this skin affection. He was, as an infant, healthy, and of average strong build and dark complexion. He was affected with the same form of red spots under the eyes as have been described. They appeared when the child was about a year old and ran a precisely similar course to that observed in the other cases. In a year the whole face from the hairy margin was greatly pigmented, also the neck as far as the third rib. The hands, including fingers, the arms, and the forearms were the seat of dark, copious pigmentation. There was much atrophy about the face, particularly about the nose, eyes, and cheek. Ectropion and its resulting photophobia were very severe. There were also pigmented epithelial tubercles about the nose. No change in the general health of the boy was induced (Fig. 5). When he was seven years of age he was attacked with mumps, which ran a severe course and were followed by an abscess. This was opened, and, though properly treated, the wound never healed. The edges became thickened and fungoid, the general appearance being that of an epitheliomatous tumor. From the integument the deeper parts became infiltrated, even to the deep arteries. Ulceration occurred in the morbid tissue to such an extent that an artery was eroded, and in spite of careful treatment the hemorrhage became uncontrollable and death ensued.

Case VI.—H. W——, the sister of this boy, and the sixth child, the only one of the five afflicted cousins who has light hair, was, in 1877, nearly four years of age. She enjoyed good health. She became affected with the typical red spots under the eyes before she was six months old. The parents took this child immediately to the Hot Springs of Arkansas, where she received baths and internal medication. The effect was discouraging, since the erythema was more rapid in its course and the appearance of the pigmentations more prompt and upon a greater area than in the brother's case (Fig. 6). The appearances were like those of the other children. The face of the child was very dark, nearly covered with the blackish-brown spots, and among them a less number of smaller red ones. The neck also was pigmented. The extensor surfaces of the hands and forearms also presented a piebald appearance. About the nose and cheeks there are several atrophic patches, thin and not much spotted. They had a parchment-like feel. The conjunctivæ were very hyperæmic, and upon the sclerotic were numerous large, straight vessels. The ears were stiff and pigmented. Several minute brown spots were seen on the lips. The scalp was nearly normal. The heat of skin already spoken of and a slight roughness of the integument of the arms were felt. The ganglia were swollen. In all minor features this case resembled the others. The child died by drowning when eight years of age.

Case VII.—L. S——, a brunette, the eldest child among six, of healthy Hebrew parents, was well nourished and well until she was six months old, when her mother noticed two large red spots under the eyes, which she thought were caused by exposure to the sun. From this time until seen by me, in 1876, when she was twelve years of age, the affection had continued. The girl was well built, of normal stature, and good health. The parts affected were the face, neck, and upper and lower extremities. The face was, as a whole, of a shining, whitish tint, with here and there sparsely scattered red and dark brown spots. The whole surface of the forehead, extending into the scalp, was composed of tightly drawn, much thinned, whitened skin, which was with difficulty pinched up into folds, and so closely drawn to the bones that all of the raisings, depressions, and sutures could be noted. In the scalp there were many pea-sized, pigmented spots of dark-brown color, with numerous small follicular abscesses, besides which there were small whitish cicatrices, the results of previous lesions. There were a number of irregularly shaped, dark brown spots, in all perhaps two dozen, scattered over the atrophied pigmented skin of the forehead. There were but few eyebrows, and the upper eyelids were atrophied, shrivelled, and drawn up. The general condition of the skin of the nose and face was that of atrophy. The lower lids were similarly shrunken and drawn down, leaving the eyes uncovered, the corneæ opaque. The nasal apertures were much smaller than normal, wholly immobile, and the margins of the alæ nasi were markedly thinned. The tightening about the mouth was such that the aperture was simply a straight slit. The mucous membrane of the lips was much discolored. The same atrophied state existed on both ears; but on the left one, springing from the outer and inferior surface of the lobule, was a distinctly pedunculated tumor of the size of a nutmeg, having a fungoid surface. There was a similar but rather more angular and larger tumor on the right cheek, stretching from near the ala nasi to the angle of the mouth, being less prominent, flatter, and rather more sessile. At its inferior border were three similar smaller tumors. These new-growths began when the child was five years of age. The lobule of the right ear was very much shrunken. Scattered over the backs of each hand were irregularly outlined, atrophic, whitish patches, a few of which extended to the dorsum of the fingers. Upon the atrophied surface of the face were scattered, in all, about three dozen light, to a very dark brown, pin-head to pea-sized spots, not raised or depressed, without any lustre, and contrasting very strongly with the shining white background. These spots were less copious on the cheeks, and more so at the periphery of the face. Besides these were a rather less number of bright red-spots, of about one-half to one line in diameter, very little raised, and composed of dilated capillary vessels. On the neck the skin was more easily pinched up, but much more profusely mottled with brown spots on the arms as far as the shoulders and forearms. In these places the skin was rather dry, and slightly scaly and moderately atrophic. On the skin of the face the natural furrows were very distinct. Upon the nose and cheeks the follicles had been destroyed.

During the year 1878 the tumors at the angle of the mouth and nose became much enlarged and ulcerated. The girl died of marasmus in the month of January of the following year. The nature of the growth I found to be epitheliomatous.

In these seven cases all of the clinical features of the disease are clearly portrayed. The various lesions presented admit of sharp division for descriptive purposes. The disease—xeroderma pigmentosum—itself consists in the telangiectases, the pigmentations, and the atrophic changes, all of which have the most intimate pathological relations. Superadded to these polymorphous lesions there are sequelæ, or new-growths, which are at first of a benign nature, and may thus remain, or they may degenerate into malignant growths. We shall first study the course of the disease itself, and then consider its resulting new-growths.

Of my seven cases the disease began, according to reliable testimony, in six at about the sixth or seventh month, and in one case at the fourteenth month. It is much to be regretted that several observers have failed to learn or to state the date of invasion. In twenty-six of the recorded cases, including my own, given in brief in the table which I present, it is stated that it began in between the third month and the end of the first year in ten cases. and between the first and second year in fourteen cases. There is inherent evidence in several other cases of very early evolution. In marked contrast to these twenty-three cases are those cases reported by Kaposi, Heitzmann, and Vidal, in which the date of the appearance of the disease is respectively stated at sixteen and nine and more years. Dates of evolution are not given by Kaposi in one case; Rüder, quoted by Neisser, in six; and Vidal in three cases. While I am not in a position to deny that these cases of late evolution are those of xeroderma pigmentosum proper, I must say that I am very sceptical about them, seeing that they are so exceptional in their course. It should be distinctly borne in mind that the coincidence of epitheliomatous and other malignant growths upon the faces of persons, the subjects of deep or light pigmentation, does not of necessity constitute xeroderma pigmentosum. The weight of evidence, therefore, places this disease as one of very early childhood.

The invasion of the disease is very constant, beginning about the face or under the eyes as a well-marked, smooth, superficial erythema, which is often regarded by the parents as the result of sunburn. With the exception of this blemish, there is no impairment of health; indeed, the fact of the good health of most of the children is well attested. The erythematous patches extend, coalesce, and gradually creep over the face and neck, usually stopping at about the third rib by an abrupt margin. This condition of the face, neck, and trunk is of variable duration—from one to several months—during which the erythema may become less red. As this prodromal hyperæmia disappears, pigmented spots and red ones, or telangiectases, make their appearance, scattered irregularly over the affected regions. The pigmentations are at first of a light-brown, and may become of a blackish-brown, and even black color. They vary in size from a pin's head to a lentil, and usually are not much, if at all, elevated, and of very irregular shapes. Scattered among them with great irregularity, but less numerous, are the red or telangiectasic spots, which are smaller, rather more salient, and of irregular outline. By a strong glass a congeries of capillaries can be made out. In most cases thorough pigmentation of the face and neck takes place in about six months. Upon the hands there is not such a marked prodromal erythema as upon the face, and in some cases there was no evidence of its presence. With the evolution of these lesions there are no marked local subjective symptoms. If a case is carefully studied, and frequently observed in its early years, it will be very often plain to the eye that the pigmented spots follow exactly upon the site of a pre-existing red spot, and the conclusion will be obvious that the red lesion was the forerunner, and that its pigmented fellow was the sequela. This I have seen to take place time and again. Very often pigmented spots appeared where the red one was only visible by means of a glass. The pathological relationship, therefore, between the red and the pigmented spots is, to my mind, very clear. My friends Dr. Duhring and Dr. J. C. White deny this relationship, but I think that, had their observations been made upon very young children in whom the disease was active, and not on older ones, and had they extended over longer periods of time, they would be of my belief. Later on I will show that the microscope demonstrates the intimate relationship claimed. The further course of these two orders of lesions is well shown in the histories of the cases. They are erratic, they come and they go; they have periods of exacerbation and of remission, but their hold is never lost. If one disappears it is soon replaced by another, or by several. Thus, as the child grows older, its disfigurement becomes more or less rapidly worse, the disease relentlessly persisting. There is no record of a case in which anything like amelioration in its course was observed. A very few children escape with the disfiguring pigmentations, and perhaps slight atrophy; but even these are either attacked later on by severer lesions, or the milder ones remain indelible for life. The period of activity of the pigmented spots and telangiectases is greatest in the very early years and during childhood. After the fifteenth or sixteenth year they may appear and disappear, but rarely in such profusion as in the early years.

These two orders of lesions—the telangiectases and pigmentations—are peculiar to what we may call the stage of hypertrophy of xeroderma pigmentosum. Disfiguring as they are, we find that in every case—in some in a mild and in others in a severe form—atrophic changes are soon superadded. In the majority of cases atrophy begins about the end of the first year of the existence of the morbid changes, but it may occur at any subsequent period. Its course is subject to marked exacerbations and remissions, and though it occurs on both sides of the body it is not usually symmetrical. In some cases it progresses and produces hideous deformities by reason of the size and situation of the patches; in others, again, it is limited in extent and not strikingly observable. Upon the face this form of atrophy reduces the skin to the thinness of parchment, and destroys nearly all of the follicles. Such atrophic patches are usually traversed by minute lines, and frequently so transparent are they that the vessels can be seen beneath. Upon the hands and arms, and feet and legs, atrophy is not usually as well marked as upon the face, and it occurs mostly on parts subjected to tension, such as over the knuckles. If an atrophic patch of the skin of the face is attentively watched for a long period, it will be seen that there is a constant evolution and involution of the telangiectasic spots, which are here sometimes followed by pigmentations. The atrophy of the skin takes place in proportion to the growth and atrophy of these minute vessels. and always where the atrophy of the skin is active close observation will show this rapid development of the red spots. This process seems to go on until all of the vessels of the part have undergone increase and decay; in fact, until no more are left, or until the skin is reduced to such a dense fibrous condition that they can luxuriate in it no longer. Due undoubtedly to the excessive vascularity and exposed position of the parts, atrophic changes are prone to occur upon the forehead, also on the scalp, about the eyes, nose, mouth, and ears. As a result, besides the disfigurement, ectropion occurs, with its train of bad symptoms. and incomplete stenosis of the nasal and oral apertures and deformities of the ears are produced. It is an interesting fact that when the atrophic process is at an end, no further pigmentation takes place, and a smooth, white, mother-of-pearl surface is left.

In almost all cases, particularly in those in which the pigmentations are deep and extensive, hypertrophic changes take place, very often coincidently with the atrophic processes. We find in the course of xeroderma pigmentosum epithelial new-growths. In their simplest and most rudimentary form these consist of plaques or spots, or thickened pigmented epidermal cells, resembling keratosis senilis. This may be the full development of the hyperplastic process in a given case, or it may be the starting-point of larger growths. While the atrophic process is to be dreaded for its terrible disfigurements, these at first seemingly simple and harmless growths are often more terrible in their effects, since their development produces the leaven upon which malignancy may later on be ingrafted. These are border-line lesions between benign and malignant new-formations. These keratosic patches may long remain as such, or they may be cast off and re-formed, and they may disappear. But about the face, particularly at the junctions of the skin with the mucous membranes on the cheeks, chin, and ears, their tendency is to become larger. They soon form sessile or pedunculated, more or less elevated tumors, whose surface after the shedding of their pigmented epidermal covering may in general be termed fungating. At first they are of a deep-red, or purple-blue color, soft and compressible, and remind one of erectile tumors. They frequently become pale, less vascular, and so brittle and friable that they fall off, leaving sometimes a surface which heals spontaneously, or an ulcer which may be very intractable, which may extend in depth and breadth, and frequently are surrounded by thickened and everted edges, which may become the seat of malignant degeneration.

Thus far in the hyperplastic processes of xeroderma pigmentosum we have found two principal forms of new-growth: First, the keratosic plaque or tumor; second, the large, and at first vascular, tumor. While the tendency to malignancy is often found in the first, it is very constant in the second form; yet, on the other hand, the latter tumors frequently wither and fall. A study of the 40 reported cases of this disease shows that malignant new-growths were present in 17, and non-malignant growths (at the time of report) in 6 cases. Further, that in 9 cases in which no new-growths were noted, in 5 the children were respectively two and a half, three and a half, five and a half, six, and twelve years, ages far too young to warrant the prognosis of the future exemption from new-growths. Of the remaining 4 cases, 2 were seventeen, 1 eighteen, and 1 twenty-two years of age. Their chances of immunity were better, yet the ugly fact obtrudes itself that in one case new-growths, which underwent malignant degeneration, appeared at about the thirty-fifth year. This, however, was in the rather exceptional case of Heitzmann.

Of the 17 cases in which malignant new-growths appeared, epithelioma was noted fourteen times, melano-sarcoma once, sarco-carcinoma once, and cancer in one case. Out of my own 7 cases, epithelioma occurred in 3 children.

The 6 instances of benign new-growths are as follows: Papillary warts, 2 cases; papilloma, 2 cases; granuloma and pannus, of each 1 case. This foots up new-growths of both kinds in 23 out of 40 cases, and experience shows that in any of the 6 cases of benign new-growth malignancy may occur. The dates, as far as can be ascertained, at which the malignant new-growths began are as follows:

From four to ten years	8 cases.
" ten to twenty years	7 "
" twenty to thirty-five years	2 "
Total	17 cases.

These statistics would seem to indicate that the period of greatest malignancy is under ten years, nearly as great until twenty years, and not great beyond the twentieth year.

Of the 40 cases of xeroderma pigmentosum 21 were males and 19 were females. Several members of a family were usually attacked, in some cases males alone, in others the females, and in still others both males and females.

The occurrence of malignant growths, particularly epithelioma, in such young subjects is remarkable and exceptional, and is to be explained on pathological grounds to be considered shortly. What has struck me as being equally singular is that there is no evidence, either during life or after death, in any case, of metastasis. This seems to be another peculiarity of this wonderful disease. It is impossible to give an exact description of all of these tumors. In general they are red or purple, sessile or pedunculated, fungating or raw; smooth, sometimes incrusted, again oozing, and often the seat of hemorrhage.

The pathology of this disease has been well studied by Kaposi, Geber, Neisser, and Pick, and it is to their writings that I am indebted for the facts I present.

Neisser gives the histological appearances of the skin of xeroderma pigmentosum as follows: The pigment is distributed in isolated spots, similar to melanotic tumors, and is seated in the deep layers of the epidermis, and rarely in the corium. The pigment is precisely similar to that of melanotic new-growths, and differs from that of ecchymosis. In spots where there is an accumulation of pigment, the interpapillary prolongations of the rete Malpighii are more abundant and compressed than in the normal state. This augmentation in number and size of these prolongations seems to be the first stage of the ulterior epithelioma. It was from this fact that Kaposi was able to predict the development of epithelioma in one of his cases.

The little dirty-yellow, warty elevations undergo corneous transformation, and there is in them a rapid increase of the papillary vessels. The atrophic condition is similar to that of senile atrophy of the skin, and involves the connective tissue of the papillæ and upper portion of the derma. The subcutaneous tissues are usually not altered, at least not until late. It thus happens that the morbid skin usually freely glides over it.

In the white spots there is an entire absence of pigment, and the line of demarcation between the thinned epidermal and capillary layers is perfectly regular. With atrophy of the epidermis there is absence of pigment, while in spots where it is thickened the pigmentation is great. The production of the pigment seems to depend on the alteration in the vessels.

Leloir's results are similar to the foregoing. He found in the atrophic spots very few vessels, and an absence of the papillary loops of capillaries. In the superficial layers of the derma embryonic cells were abundant, and also there was a large quantity of elastic fibres in the deep layers of the papillæ, which seemed to have replaced the atrophied connective tissue. This condition probably gives rise to the hide-bound tension observed in some cases.

Pick says that at first the epidermis is entirely unchanged, but thickened, and from it conical processes pass into the rate, which reduce and thin it. In the corium there is an abundance of vessels, the endothelium of the same and of the capillaries is swollen and folded, so that it obstructs the lumen. Around the adventitia of the vessels are masses of small-cell infiltration, particularly in those of the papillæ. Pigment-deposit keeps pace with the invasion of the vessels and with the small-cell infiltration of the corium. The cell-infiltration is undoubtedly the carrier of the pigment. From this it would seem that in the majority of the pigmentations the cell-increase is not great, but beginning with the keratosic patches it becomes more and more abundant. In the fawn-colored pigmentations, in which it almost conclusively appears that the rete is the seat of pigment, the vessels are dilated and distended with blood, and it is evident that they have their origin in the red spots. While the keratosic or warty patches are also related to the pigmentations, there is found much variation in the amount of cell-infiltration and vascular change. This fact explains why some tumors are very vascular and others firm and dry.

With these facts before us, Kaposi's explanation of the occurrence of epithelioma at such early ages as being due to the rapid changes going on in the epithelial layer in the production and rapid disappearance of new papillæ and epithelium, and of the pigment-carrying elements, is very satisfactory.

The occurrence of melanotic sarcoma and of carcinoma in these growths demands more extended study in the future.

Funk[1] thinks that the disease is caused by a micro-organism which he says that he found in the sero-purulent fluid from the conjunctiva, and in a red nodule from the right eyelid of the case seen by him. Funk's case[1] is reported so briefly that it is of no use for statistical purposes. It was the case of a boy who was attacked at the end of the first year after birth. A sister had died as a result of xeroderma pigmentosum at the age of seven.

Treatment.—Though every suitable external remedy has been tried, no case of xeroderma has ever been cured. Our measures, then, should be directed toward placing the skin at rest, and removing any possible source of irritation to the morbid parts. Especial care should be taken of the eyes, nose, mouth, and ears, since in these situations the disease expends its activity and malignancy. Details of this preventive treatment will suggest themselves as the cases present. Knowing, so well as we do, that these pigmented warts carry in their train such terrible consequences, they should be removed as soon as possible with the sharp spoon. In fact, all small and large tumors should be removed as soon as possible. There need be no fear of excessive hemorrhage, and if taken early one is warranted in expecting prompt cicatrization. Especially should this procedure be followed in small and commencing lesions about the eyes, nose, mouth, and ears. The sooner they are destroyed, the greater is the immunity of the patient to further growth, and, perhaps, malignant degeneration. All large tumors should be removed, and the subjacent tissues scraped thoroughly, if necessary, to the periosteum and bone.

In the following table the essential facts of all the recorded cases are given :

No.	Age.	Sex.	Age at onset.	Age when tumors appeared.	Nature of tumors.	Observer.	Remarks.
1	3½ years.	Female	7 months	None		R. W. Taylor	In this case there were telangiectases, pigmentations, and atrophy, but no new-growths.
2	13 years.	Female: second child, and the first one afflicted. Sister to Cases 3 and 4.	14 months	3 or 4 years	Angio-myxoma; later, epithelioma.	R. W. Taylor	The disease in this child was more severe than in her sisters. The warty tumors, in 1876, were angio myxoma; from that time on, until 1883, they grew and developed into true epithelioma.
3	7 years.	Female; fifth child, and third and last afflicted.	Less than a year.	About 14 years.	Extensive pannus-growths of the cornea and opacity.	R. W. Taylor	Telangiectases, pigmentations, atrophy, and tumors like keratosis senilis in well-marked form until fourteen years of age, when the eye was attacked. Inveterate pharyngo-nasal catarrh and chronic otitis media began about the same time.
4	8 years.	Female: sixth child, and second attacked. Seven other children healthy.	Less than a year.	3 or 4 years.	Granuloma	R. W. Taylor	Telangiectases and pigmentations very marked; atrophy slight. Appearance of keratosic tumors at fourth year. Remained indolent several years. From 1878 to 1883 one near the temple developed into a granuloma of the size of a hazel-nut.
5	7½ years.	Male: second child. Cousin to Cases 2, 3, and 4.	1 year	7 years	Epithelioma	R. W. Taylor	Telangiectases, pigmentations, and keratosic tumors of face. Abscess of the parotid, from mumps, was followed by epitheliomatous infiltration of the parts, erosion of the deep arteries, and death.
6	12 years.	Female: sixth child—first, third, fourth, and fifth healthy. Sister to Case 5.	6 months	None		R. W. Taylor	Telangiectases, pigmentations, and slight atrophy about face. Very mild course of disease; no new-growths. Death by drowning.
7	12 years.	Female. Eldest of six children.	0 months	5 years	Epithelioma	R. W. Taylor	All of the lesions very severe. Tumors about the nose and eyes became of large size and epitheliomatous. Death from marasmus at thirteen years; became malignant at twelve years.
8	18 years.	Female	Early childhood.		No history of tumors.	Hebra and Kaposi.	Case showed telangiectases, pigmentations, and much atrophy. Ulceration of cornea; ectropion severe. Nose and ears disfigured by contraction from atrophy. Death, when twenty-five years of age, from cancer of peritoneum.
9	10 years.	Female	Early childhood.	11 years	Epithelioma	Hebra and Kaposi.	Telangiectases and pigmentations; much atrophy and deformity of the face. A large, pear-shaped tumor developed on the side of the nose. Died of cancerous cachexia when thirteen years old.
10	8 years.	Female	Nearly 2 years.	4 years	Sarco-carcinoma.	Geber and Kaposi.	Telangiectases, pigmentations, atrophy, catarrhal ophthalmia, and photophobia. Malignant tumors removed from the region of the nose when seven years old; wound healed by granulation; return of new-growths.
11	6 years.	Female. Sister to Case 10, who was next oldest child; two younger ones were spared.	1 year	None		Geber and Kaposi.	The lesions in this case were telangiectases, pigmentations, and atrophy. Further history not given. Kaposi regarded the onset in this case as precocious.
12	5½ years.	Female; first child	In the second year.			Kaposi	A deaf mute. Meningitis when six months old. Telangiectases, pigmentations, and contraction of nasal and oral orifices from atrophy.
13	2½ years.	Male. Brother to Case 12. Parents young and healthy.	In the second year.			Kaposi	Not seen by Kaposi, who says that the parents' description convinced him that the affection was xeroderma pigmentosum.
14	17 years.	Male	There is no evidence whatever of the early or late development of the affection in this case.	12 years	Epithelioma	Kaposi	The history of this case is very unsatisfactory. At seventeen years of age there were pigmentations and ulcerations on the face, said to have existed five years, at first regarded as cancerous by Kaposi, then as syphilitic, and cured by appropriate treatment. In a year and a half numerous cancerous nodules on the face, eyelids, cheeks, nose, and chin appeared, together with pigmentations and telangiectases. If this *is* a case of xeroderma pigmentosum, it is one of late and obscure evolution. The relation of the syphilitic diathesis is not dwelt upon. No history of disease on the arms, legs, or other parts usually involved.

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[1] Bakteryjew Xeroderma Pigmentosum.

[1] Przypadek xerodermatis pigmentosi, Gazeta Lekarska, 44 and 52, Warsaw, 1885. Quoted in Virchow and Hirsch's Jahresbericht, Band 2, 1886, p. 497.

No.	Age.	Sex.	Age at onset.	Age when tumors appeared.	Nature of tumors.	Observer.	Remarks.
15	22 years..	Male..........	16 years.....	20 years........	Epithelioma	Kaposi..........	First lesion appeared upon cheeks and nose. When seen by Kaposi there were ephelides, cicatricial spots, and telangiectases. Anterior to the right ear, under the left eye, on the nose, face, and lower lip were epitheliomatous nodules. Disease limited to the face and neck. This would seem to be a case in which the evolution of the disease began at the sixteenth year. It is to be regretted that the early symptoms and course are not given. There is an absence in the history of the classical evolution of the disease, of telangiectases, pigmentations, atrophy, keratosic tumors, and, later, malignant degenerations. These two cases of Kaposi, of very late onset, with the exception of those of Vidal and Heitzmann, at nine years, are the only recorded instances in which the disease did not begin in early infancy.
16	9 years..	Female...............	2 years.. ...	4 years.........	Warts and epithelioma.	Kaposi..........	History very fragmentary, and wanting in many respects. Affection limited to the face. Patient the eldest of nine children, seven girls and two boys.
17	40 years.	Male.................	9 years......	Uncertain; probably over 35 years.	Epithelioma	Heitzmann	Freckle-like patches on the face and hands. One lesion resembled rodent ulcer. New nodules appeared every six months.
18	17 years..	Female. Three brothers and one sister living. Four sisters died of infantile complaints.	6 months	None....	....	Duhring..........	Pigmentations the predominating lesions; telangiectases not numerous nor well defined; atrophic spots sparse and small. A good example of mild form of the disease in the stage of quiescence. Head, neck, arms, hands, legs, and feet involved. Mother died of cancer of uterus.
19	24 years..	Male.................	3 months	22 years	Epithelioma ...	Neisser	Mother had had syphilis; father died of obstruction of œsophagus. Patient an imbecile; pigmentations, telangiectases, atrophy, and nodules of face.
20	22 years..	Male. A brother and sister of father of Cases 19 and 20 were idiots.	3 months	None.	. ...	Neisser...	Not seen by Neisser. Mother said he was exactly like his brother.
21	18 months.	Male; strong and well nourished.	Not stated ...	None..........	....	Rüder; quoted by Neisser.	Pigmentations, telangiectases, and pin head-sized warts. Child too young to judge of course of disease.
22	4 years...	Male; strong and large.	Not stated...	None.........	....	Rüder; quoted by Neisser.	On the face, back of hands, and forearms were telangiectases, pigmentations, and atrophy. Swelling of the conjunctivæ; conjunctivitis; great sensibility to light.
23	5 years...	Male; strong and chubby.	Not stated ...	None......	....	Rüder; quoted by Neisser.	The usual red and black lesions and atrophy upon the face and forearms; yellowish-gray wart on the ear, and small ones on the forearms. Conjunctivitis; marked photophobia. Scar on the lip, from which a warty growth fell spontaneously.
24	9 years ..	Male; healthy and strongly built. Two intermediate girls.	Not stated ..	....	Probably epithelioma.	Rüder; quoted by Neisser.	Red and black spots and atrophy; numerous warts over the face; conjunctivitis. A tumor the size of a hazel-nut was removed from the under lip; recurrence in eight months.
25	11 years..	Male; strong and well nourished.	Not stated....		....	Rüder; quoted by Neisser.	Red and black spots and atrophy; ectropion and conjunctivitis. A pea-size ulcerating wart on the right cheek: numerous radiating scars on same.
26	10 years..	Male. Three healthy girls and a boy were born between Cases 25 and 26.	Not stated....	....	Not known.	Rüder; quoted by Neisser.	A hearsay case. Parents said child died, when ten years of age, of a cancerous swelling of the temporal region. Cases 21 to 26 were brothers.
27	11 years..	Female; healthy. Two healthy brothers.	Toward the age of 3 years.	9 years........	Epithelioma; fungoid.	Vidal............	Pigmentations, telangiectases, atrophy, conjunctivitis, and slight ectropion. Vegetating tumors and ulcers of the face near the nose, ears, and on the chin. Removal of large tumor, and no tendency to recur.
28	11 years..	Female; healthy.	18 months	4½ years... .	Epithelioma; fungoid.	Vidal.	Not seen by Vidal. Parents' description convinced him of the nature of the case. Tumors, probably epitheliomatous, on the face. Death from exhaustion at the age of eleven.
29	12 years..	Male; healthy. Of a family of four boys and one girl.	Toward the age of 2 years.	6 years........	Epithelioma; fungoid.	Vidal............	Telangiectases, pigmentations, atrophy, fungus of cornea, and ectropion; numerous tumors of the face and neck. A tumor existed on the right wrist, which fell off; keratosic tumors of the hands.
30	10 years..	Male; healthy. Paternal uncle died of cancer of the stomach.	2 years	At 5 years, keratosic; at 7 years, fungous tumors.	Epithelioma; fungoid.	Vidal............	An unusually severe case. Usual dermal lesions. Numerous and extensive tumors of the face; some fell off. Ulceration involved several parts of the face and destroyed the nasal bones and portions of the superior maxillaries. Death from exhaustion. No evidence of metastasis.
31	5 years...	Male. Eldest brother and sister healthy.	2½ years.....	Keratosic tumors appeared at 4 years.	(?)	Vidal............	Owing to the youth of this child the disease had not progressed to malignancy. There is evidence of keratosic tumors on the nose, cheek, and upper lip. The history of the case to date does not warrant a diagnosis of epithelioma, which very probably might develop later on, as it did in his brothers, Cases 29 and 30.
32	19 years..	Female; oldest child..	....	... .	Melanotic tumors; sarcoma fuso-cellulare melanoticum (Chiari).	F. J. Pick	Case remarkable for the extensive distribution of pigmentations on the face, neck, chest, arms, forearms, hands (dorsum); legs and feet thickly covered. Tumors on the lower right eyelid and legs.
33	17 years..	Female; second child..	....	. . ..	Papillary warts..	F. J. Pick	Large pigmentations (black, brown, and red) over the face, neck, shoulders, arms, hands, legs, and feet, sparing the palms and soles, and lighter pigmentations around the navel, genitals, and anus. Keratosic tumors on the face and body; small ones on the extremities. Walnut-sized tumor of the gum of lower jaw; removal.
34	2¾ years.	Male; twelfth child...	....	.. ..	Papillary warts..	F. J. Pick	Pigmentations on the face and hands. As in all young subjects, telangiectases very numerous, and large atrophic patches. Pick's cases are particularly satisfactory in many respects, since they were under observation three years. The majority of the reported cases were observed during periods entirely too short.
35	12 years..	Female.	Between 12 and 18 mos. No history of prodromal erythema.	11 years........	Papilloma; fungoid.	H. R. Crocker....	Pigmentations, telangiectases (not numerous); atrophic spots on the face, head, neck, chest, and extremities. Large tumors on the right side of the face, ears, cheek, nose, and chin. Ulcers from breaking down of tumors. In a foot-note Crocker states that his view, that the tumors were papillomatous, and not epitheliomatous, was confirmed by Marcus Beck.
36	10 years..	Female. Sister of Case 37.	Between 12 and 18 mos.	Ulcers at about 4 years.	None...........	H. R. Crocker....	Pigmentations numerous; vascular and atrophic spots less numerous. About six ulcers on the face; no tumors. Some ectropion, conjunctivitis, and photophobia.
37	9 years...	Male; healthy. Brother of the two sisters, Cases 35 and 36.	Between 12 and 18 mos.	Ulcers at 3 years.	Papilloma; verrucoid.	H. R. Crocker....	Pigmentations of the face, neck, arms, and forearms; much atrophy of the face; very few telangiectases; no keratosic tumors. Large tumor of the left cheek removed by the boy's mother. Pterygium of both eyes.

No.	Age.	Sex.	Age at onset.	Age when tumors appeared.	Nature of tumors.	Observer.	Remarks.
38	17 years	Male; second child. First child died at twelve years; skin unaffected.	2 years	None		J. C. White	An excellent illustration of the pigmented and mild form of the disease. Pigmentations, dark and numerous, over the face, neck, forearms, and backs of the hands; much atrophy; numerous telangiectases. No tendency to malignant new-growths. Dr. White believes that there is no pathological relationship between the telangiectases and the pigmentations, but that the latter may be the initial lesions.
39	3 years	Male; well grown; sixth child. Brother of Case 38. Third, fourth, fifth, and seventh children healthy.	18 months	None		J. C. White	Also an excellent illustration of the mild pigmented form of the disease. The immunity of this young child and of his brother, aged seventeen, from malignant growths furnishes no guarantee for the future.
40	42 years	Male	In the second year.	Probably within 10 years.	Epithelioma	Dubois-Havenith.	First symptoms were said to be "sunburn" on the face, hands, and forearms, followed by diffuse red spots, which became brown. On the face and arms raspberry-sized tumors appeared. Cauterization and ablation of these were followed by their return in most instances. Pigmentations became dark in summer and pale in winter. Occasional pruritus accompanied by desquamation. Patient was the father of four children, three of whom were healthy, and one died of marasmus; none showed signs of xeroderma pigmentosum. When first seen by Havenith, patient had ulceration of the ear-lobe of ten years' standing, and there was evidence of destruction of the tissues of the ears and nose. A cancerous tumor of the lower lip appeared, was cut out, and returned. Like all cases seen about and after puberty, this one lacks much of its early history.

THE MICRO-ORGANISMS OF MALARIA.[1]

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NEW YORK.

The attempts to discover the cause of malarial disease are of considerable historical interest. From earliest times the existence of a contagium vivum has been generally assumed, by reason of the peculiar clinical features of the disease itself. Up to 1879 most of the hypotheses that were offered assumed that some one of the fresh-water algæ was the exciting cause. These observations were never confirmed, and obtained but little belief.

In 1879, Klebs and Tommasi-Crudeli isolated from the soil of the Roman Campagna a bacillus which they believed to be the cause of the malarial diseases existing in that neighborhood. They obtained pure cultures of the organism, and stated that injection of these cultures into rabbits was followed by typical intermittent fever, with organic lesions similar to those found in persons dying of malarial disease. They gave to the organism the name bacillus malariæ. Their results were not confirmed by subsequent observers. It is now generally believed that the so-called bacillus malariæ has no connection with the disease. Yet, until Laveran published his paper on the so-called plasmodium malariæ, the work of Klebs and Tommasi-Crudeli was the most important attempt that had been made to discover and define the cause of intermittent fever.

The first work on the plasmodium malariæ was published in 1881 by Laveran, a French army-surgeon in Algiers. He discovered and described, in the blood of his cases, certain appearances that had never previously been noted. He offered a new interpretation of other phenomena that had long been recognized in malarial blood, but not before explained. To account for all the phenomena observed, he assumed the presence in the blood of a parasite, a polymorphic organism belonging to the animal kingdom.

Since Laveran's paper, much work has been done on this subject, though not a great deal has been accomplished beyond a confirmation of statements. In Italy, Marchiafava and Celli have devoted much time to the study of this question. In this country, Councilman and Osler have studied it most. At present, our knowledge of the organism may be briefly summed up as follows: In the blood of persons suffering from malarial disease there is a series of phenomena not yet found under any other conditions. These phenomena point to the presence of an animal parasite. The appearances that we get are one or more of the following:

First.—Colorless protoplasmic bodies inside the red blood-corpuscles. They vary in size from one-fifth to almost the whole diameter of the corpuscle. They exhibit active amœboid movements. Some contain scattered granules of brownish-black pigment; others are unpigmented. The red corpuscle which contains the amœboid body is commonly larger, flatter, and paler than normal.

Second.—We find disk-shaped bodies of colorless protoplasm. They are somewhat larger than a red blood-corpuscle. They show no amœboid movements. They contain scattered pigment-granules. They are apparently a later stage of the form first mentioned, which has come to occupy the entire corpuscle, and has then entered upon a cyst stage.

Third.—We find forms similar to the cysts, but in which the pigment-granules have become massed at the centre, while the protoplasm is undergoing segmentation. Then there are found various stages in the transition from the encysted to the segmentary form.

Fourth.—We have the small masses of protoplasm that have resulted from the segmentation of the cyst form. They are commonly somewhat oval in shape. In fresh blood it is difficult or impossible to distinguish them from blood-plaques. In dried blood they show a tolerably characteristic bipolar staining with aniline dyes.

Fifth.—We have hyaline bodies of crescentic shape, in length rather more than the diameter of a red blood-cell. They have, in every case, a collection of pigment-granules in their centre. These are the so-called "crescentic bodies."

In some cases there are found bodies resembling the crescents closely in character, but elliptical or round. The crescents may have a delicate curved outline opposite the concavity or convexity, or both, but this outline never reaches quite to the tips of the crescent.

Lastly, there are the various motile bodies. These are: First, flagellated bodies. A round or pear-shaped body, about one-half the diameter of a red blood-cell. It contains pigment-granules, and is provided with from one to four flagella, which show an active lashing motion, and by means of which the organism moves about in the blood-plasma. The flagella are several times as long as the diameter of a red cell. Their motion is active enough to set up well-marked movements on the part of the neighboring blood-corpuscles.

Secondly, free flagella have been described. They seem to have become detached from their bodies, and to be capable of leading an independent existence. They exhibit active movements.

Thirdly, some observers have described hyaline pigmented bodies with an actively moving, undulating periphery.

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[1] Read at a meeting of the New York Pathological Society, held January 25, 1888.

Pigmented white blood-corpuscles have been described. I have not seen them; nor have I in my cases met with free flagella or the bodies with undulating periphery. All of the other forms I have had frequent opportunity to study.

Next, as regards the interpretation of the appearances described in the blood: It is believed that the unpigmented amœboid body makes its way into a red blood-corpuscle, and lives and increases in size at the expense of the latter. It becomes pigmented, the pigment-granules being changed to hæmoglobin. It has been demonstrated that the granules contain iron.

Having come to occupy the entire, or almost the entire, corpuscle, it enters upon a cyst stage, during which the pigment-granules make their way to the centre, and segmentation of the periphery takes place, thus forming spores, which are subsequently set free. Each spore then begins again the same life-circle.

The biological relation of the crescentic and flagellated forms to the others has not been made out. But there are, among the lower animal organisms, many polymorphic varieties, which at different periods of development exist as spores, amœboid bodies, cysts, and flagellated organisms. Among the protozoa, some forms (sporozoa, Leuckart) develop falciform spores which in appearance resemble the crescents.

As regards the relation of the various forms of the organism to the types and periods of the disease: The description that I have given applies to tertian intermittent. With quartan I have had no experience; but Golgi states that in this form, which is the prevailing type in Pavia during the autumn months, the organism exhibits certain peculiarities. In general, the various forms are more clearly marked off from one another. The segmentation forms are especially clear. He also states that in every case the complete development of the organism corresponds to the interval between two paroxysms of the disease.

The paroxysm seems to be the period at which the segmentation and setting free of spores takes place. This is now tolerably definitely settled. The discovery in the blood of the segmenting bodies justifies the positive prediction that the patient will have a chill at some time within two hours. According to Golgi, immediately after the paroxysm one finds free spores and unpigmented amœboid bodies. During the day of intermission the pigmented amœboid forms gradually increase in size till six or eight hours before the chill, when the cyst stage is met with. Immediately before and during the chill one finds the segmenting forms.

In my own cases I have found the segmenting forms always just before and during the paroxysm, and at no other time. I have, however, found the pigmented amœboid bodies at all times, and most numerous during the paroxysm.

It is said that in some epidemics the organisms remain unpigmented throughout the disease.

The crescents and the bodies allied to them occur in chronic cases, usually in those associated with malarial cachexia. This point is one upon which all observers agree.

In two of my cases there were at the same time crescents and amœboid forms. Both of these forms commonly occur in greater number in severe than in light cases, though to this there seem to be exceptions. The various flagellated forms may occur in any case; but in only a small number of cases in blood from the finger. I found them in only three of my cases.

During the past autumn I had an opportunity to study the blood of thirty-five cases which were undoubtedly malarial disease. In thirty-four of the cases I found the hæmatozoon. In one case the examination was negative, but here I was able to examine the blood only on one occasion. Often, when the number of the organisms in the blood is small, one may look through several slides before finding them.

In my cases, as in those published by others, the amœboid forms, pigmented and unpigmented, occurred in the acute stages of the disease; the crescentic forms, in the chronic stages. In no case have I failed to find the organism, where the patient presented a clear clinical picture of malarial disease, and where I was able to make a number of examinations of the blood.

The examination for the organism has considerable diagnostic value. In several cases I have been able to diagnose or to exclude malarial disease by examining the blood, where the symptoms alone were not characteristic enough to make a positive conclusion possible, and where the subsequent history has borne out the results of the microscopic examination.

The microscopic technique is simple. The blood is best examined fresh, spread out in the thinnest possible layer—the rouleaux of corpuscles broken up. High-power objectives are necessary. A $\frac{1}{12}$-inch oil immersion answers well.

Stained specimens are best prepared by drying the blood in a very thin layer on a cover-glass, which is then passed through a flame, as in examining for bacteria. It may be stained in a watery solution of an aniline dye, washed out in water, or partly decolorized in alcohol, and mounted, as usual, in balsam. Fuchsin and methylene blue give the best results. I find methylene blue most satisfactory, the red corpuscles staining light green, and the hæmatozoa blue.

Unpigmented amœboid bodies are best studied in stained specimens. The pigmented amœboid bodies, which are those most commonly met with, are best seen in fresh blood. The crescents also show most satisfactorily unstained. The segmenting bodies and free spores are best studied after drying and staining.

The apparent effect of medication on the organism is important.

A few large doses of quinine are almost invariably followed by a disappearance from the blood of the various amœboid forms. The crescentic bodies remain unchanged after quinine, but commonly show a diminution in number as the health improves under the treatment proper for chronic paludism.

These apparent results of treatment followed in my cases as in those of most other observers. The organism has not yet been discovered except in human blood and organs. It has never been isolated. It has never been cultivated outside the body.

Inoculative experiments on human beings are almost uniformly successful. Intravenous injection of malarial blood into a healthy individual is followed by typical intermittent fever, with the appearance in the blood of the second person of the various forms of the organism described. These experiments have been made by Gerhardt, in Germany, and by Marchiafava and Celli and other Italians.

Subcutaneous injections have been unsuccessful.

The few inoculative experiments that have been made upon monkeys have been unsuccessful.

As regards the name of the organism: The term plasmodium has been improperly used in this connection. This name has long been applied to a segregation stage of some of the mycetozoa, and so means, not a particular organism, but a stage of development common to many different organisms. Moreover, so far as we know, the malarial germ has no plasmodium stage.

It is much better, then, in designating the malarial organism, to use the term hæmatozoon of malaria, as suggested by Laveran, which commits us to no definite classification.

Morro injected into the peritoneal cavity of pigeons and chickens blood taken from the carotid of a dog. After two or three days he killed the former, and found in their abdominal cavities a fluid, the remains of the injected blood. This contained some red blood-corpuscles of the bird and some of those injected from the dog. The latter, he claims, showed appearances identical with those described as the hæmatozoon of malaria. Morro argues from this that the so-called hæmatozoon is not an independent organism, but merely a metamorphosis of the protoplasm of red blood-cells. Marchiafava and Celli have repeated Morro's experiments with negative results. Maraghano studied the behavior of healthy human red blood-cells when subjected to various influences. He kept for some time slides of blood the evaporation of serum from which was prevented. Other slides he subjected to pressure, others to heat. He says that under these circumstances he obtained in the red corpuscles amœboid bodies and segmenting bodies identical in appearance with those described as the organism of malaria. In blood impoverished from any cause he finds these appearances more pronounced. He does not state whether he has or has not himself studied malarial blood. I have repeated his experiments with healthy and impoverished red blood-cells, and have seen appearances which correspond fairly closely with what he has described. But in no case have I seen anything bearing close enough resemblance to the so-called hæmatozoon of malaria to justify the belief that they are identical. Klebs states that Rosenstein found in the blood in typhoid fever appearances similar to the so-called malarial organism; that Dujardin found them also in healthy blood, when evaporation of serum was for a time hindered; that Hoffmann saw such appearances in pernicious anæmia.

Pfeiffer claims to have found similar phenomena in the blood in scarlet fever, mumps, and in vaccination.

It has been suggested, too, by others that perhaps these appearances may mean merely a retrograde change in the red cells, and may accompany any of the diseases to which marked organic blood-changes belong.

As a contribution toward the settlement of this point, I have undertaken the examination of the blood in a series of cases of other diseases where a malarial element might fairly be excluded. In every case I have used either a one-eighteenth or one-twelfth oil-immersion objective and the same precautions as in the examination of malarial blood. The cases examined were 76 in number, and were as follows: Chronic phthisis, 11; pernicious anæmia, 3; chlorosis, 14; leucocythæmia, 3; jaundice, 3; cancerous cachexia, 3; chronic lead-poisoning, 1; typhoid fever, 10; pneumonia, 4; diabetes mellitus, 2; anæmia from cardiac disease, 2; acute anæmia following hemorrhage, 4; acute articular rheumatism, 5; cirrhosis of liver, 1; septic fever, 2; chronic Bright's disease, 5; scarlet fever, 3.

In the above cases I found in the blood no appearances that could be confounded with those in malarial blood by one accustomed to examine the latter. There were in the red cells only those changes usually found in blood impoverished from any cause.

As regards the classification of the organism, we place it in the animal kingdom—morphologically, because it is at no time enclosed in a cell-wall of cellulose; physiologically, because it seems incapable of making its protein from simpler substances. It seems at all times to be unicellular, so we call it a protozoon.

Further positive classification is at present unsafe. It seems, however, from its general characteristics, to belong among the flagellated infusoria. In connection with the hæmatozoon of malaria the consideration of the other parasitic protozoa is of interest. The study of these has of late been neglected, and the difficulties in the way of investigation, and especially of cultivation, of these organisms, have put rather narrow limits to our knowledge of them. Cartulis has recently found, in the stools of Egyptian dysentery and in pus from abscesses of the liver in cases of dysentery, large amœbæ which, he believes, have a causative relation to the disease. He has found them in every case of the dysentery, and never under other conditions. He has not worked out their life-history. His work has not been repeated by others.

Deichler has described protozoa in the expectoration of persons with whooping-cough. Pfeiffer and Loeff have very lately described a most interesting series of amœboid organisms, protozoa, existing in the contents of small-pox, varicella, and vaccinia pustules. But the parasitic protozoa of the blood bear an even closer relation to the malaria question.

A peculiar organism has long been known in the blood of many frogs. It was supposed by Gaulé to be merely a metamorphosis of the protoplasm of the red cells. It is often called "Gaulé's Wurmchen." Ray Lankester and others have proved that it is an independent organism—a protozoon. Part of its life is spent in the interior of a red blood-corpuscle.

Wittich has found in the blood of moles protozoa resembling closely those in malarial disease in man.

Marchiafava and Celli, examining the blood of frogs living in ponds about Rome, saw hæmatozoa very like those in malaria. In one case they found a flagellated organism which lost its flagella, these latter then going on to lead an independent existence.

Mitrophanow and Danilewsky find similar flagellated protozoa in the blood of fishes, especially the carp and mudfish; also in various other lower animals—frogs, turtles, lizards, and others.

Lewis and Crookshank, in India and in London, find similar organisms in the blood of apparently healthy rats.

It is interesting to notice that in the above list of animals, most are more or less continuously subjected to the influences and environment that in human beings are popularly supposed to give rise to malarial disease.

The above-mentioned parasites are usually called physiological hæmatozoa, since the animals serving as hosts seem healthy. It is very possible, though, that they may be the cause of diseases on the part of the host, clinical evidence of which we are unable to discover. The question whether certain fish, lizards, and birds are perfectly healthy or not is one difficult or impossible to settle.

The only apparently pathogenic protozoon that has been studied in the lower animals is that of "surra." Surra is a disease occurring in India in horses, mules, and camels. It has a distinctly intermittent character, and is accompanied by high fever, jaundice, and prostration. It is commonly fatal. In the blood of the diseased animals, Evans, Steele, and Crookshank have uniformly found a flagellated protozoon which seems to be polymorphic. The organism disappears from the blood during the intermission, to reappear again during the paroxysm.

The intravenous injection of blood from a diseased into a healthy animal is followed by the disease in typical form, and by the appearance of the hæmatozoa in the blood of the second animal. The organisms are more numerous in severe than in mild cases. They are very like those found in the blood of apparently healthy rats. They have not been cultivated outside the body.

Many of the lower fresh-water plants are infested by parasites which show striking points of similarity to the hæmatozoa of malaria. These are actively moving flagellated bodies which find their way into a vegetable cell. The body loses its flagellum and becomes amœboid. It lives at the expense of the cell it occupies, increases in size, and stores up within itself granules of brownish-black pigment which are changed chlorophyl.

Having completed its amœboid stage, it becomes encysted. The pigment-granules are gradually massed at the centre, and segmentation of the peripheral protoplasm takes place. The segments are spores, usually swarm spores, which are set free and again begin the same life-history.

These organisms were well studied by De Bary and Zopt long before Laveran's first work on the malarial organism was published. They are classed among the mycetozoa or myxomycetes. Each parasite is, as a rule, peculiar to some one plant, usually one of the fresh-water algæ.

The points of marked similarity between the mycetozoa and the hæmatozoa of malaria suggest a possible genetic connection between them, and that the malarial organism may exist outside the body as a parasite of some plant.

If malarial disease is caused by a micro-organism, we must assume that it is capable of indefinite life and multiplication outside the body. Only this supposition would explain the phenomena of intermittent fever. Chlorophyl seems to stand in closer relation to hæmoglobin than any other substance found in the inorganic and plant world.

It seems possible, then, that the malarial hæmatozoon may be also a plant parasite, and that the distribution of malarial fevers may depend upon botanical conditions, or the presence in a given locality of a plant capable of serving as host for the organism.

In conclusion, then, we may state as facts:

1. The presence of the phenomena grouped under the name hæmatozoon of malaria in the blood of persons suffering from malarial disease.
2. The presence of crescentic bodies, only in chronic cases.
3. The presence of the segmenting forms only immediately before and during the chill.
4. The disappearance of all but the crescentic forms after the administration of large doses of quinine.
5. The possibility of transferring malarial disease from person to person by intravenous injection of malarial blood.

But we must at present recognize as hypothetical though probable:

1. An etiological relation between the appearances described in the blood and the disease itself.
2. The absence of these appearances from the blood in all other conditions.
3. The assumption that the bodies described are one and the same organism.
4. The assumption that any of the forms excepting the flagellated bodies are independent organisms.

Finally, I wish to express my thanks to Dr. Francis Delafield and Dr. William H. Draper, and to the house staff of Roosevelt Hospital, for their kindness in allowing me access to the cases in the wards of the Roosevelt Hospital, and to Dr. Councilman, of Baltimore, for many valuable suggestions in regard to the study of this subject.

THE ACTUAL CAUSE OF DEATH IN PHTHISIS.—Under the title of "A Contribution toward the Etiology of Phthisis," Dr. R. W. Philip publishes the results of a study of this subject, more particularly in so far as it relates to the *modus moriendi* in this disease. His conclusions are as follows (*The British Medical Journal*, January 28, 1888): 1. In view of the work of Koch, it is impossible to avoid admitting that a casual relationship exists between the tubercle bacillus and the phthisical process. 2. The mere predication of this relationship is not sufficient in explanation of the clinical facts and the generally fatal termination of such cases. 3. The usually received explanations of the *modus moriendi* in phthisis are insufficient. 4. It appears probable that the lethal influence of the bacillus is due to the production thereby of certain poisonous products. 5. Clinical and experimental evidence appears to indicate that the morbid secretions from the respiratory surfaces afford a good medium for the growth of the tubercle bacillus, and, presumably, for the elaboration of such products. 6. Such a product is separable from the carefully selected and prepared sputum. 7. This product is possessed of well-marked physiological properties, being eminently toxic to frogs, mice, and other animals. 8. The toxic properties of the product are, speaking generally, depressant. 9. More particularly they include a marked depressant influence on the heart. 10. This depressant influence seems to be exerted through the medium of the cardic-inhibitory mechanism. 11. The toxic action of the product is more or less completely opposed by atropine. 12. The amount of the product which may be separated appears to bear a distinct relation to the abundance of the bacillar elements present. 13. Absorption of the poisonous product most probably occurs by way of the lymphatic circulation.

NOTE ON THE SURGERY OF THE ENLARGED PROSTATE.

By WILLIAM T. BELFIELD, M.D.,

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EXPLORATION of the bladder in fifteen cases of severe cystitis dependent upon prostatic enlargement has confirmed the teaching of numerous autopsies, namely, that the severest vesical disturbance is induced, not by diffuse prostatic enlargement—which may be detected by rectal examination—but by localized prostatic outgrowths, which are not discoverable per rectum nor, indeed, in any way other than by the finger in the bladder. These tumors—which, like uterine fibroids, are true myomata—may be associated with much or little diffuse hypertrophy; while often originating in the substance of the gland, they are frequently found, when the cystitis has become severe, protruding at or near the urethro-vesical orifice. In this locality even a small tumor, associated with but little diffuse hypertrophy, may seriously impede the exit of urine and entail the usual cystitis, calculus formation, etc.

Among my fifteen cases such intravesical tumors were found in eight—three times as a single myoma, or so-called "middle lobe," and in five as a more or less complete ring around the vesical orifice. In five of the remaining cases the growths were chiefly intraprostatic; in the two others there was found diffuse hypertrophy, with encysted calculi.

In eight of the fifteen cases, therefore, the prostatic obstructions were, at least from the anatomical stand-point, removable. These obstacles are accessible to the surgeon by two routes—perineal and suprapubic incision.[1] That the suprapubic renders the bladder more accessible for manipulation than the perineal incision is apparent to all who have approached it through both; the inferiority of the latter is extreme when the prostate is enlarged—a fact impressed upon me in many cases, including two where I removed with the cautery portions of prostatic outgrowths through a perineal incision.[2]

In June, 1886, I undertook suprapubic prostatectomy, but after the extraction of two large calculi was forced by the patient's condition to abandon the operation;[3] in October of the same year I executed the plan, removing a "middle lobe" of the size and shape of a small almond.[4] The patient, seventy-three years of age, who for a year had been dependent upon his catheter, has urinated freely since. In a second case I repeated the operation, removing a mass as large as a bean. Mr. McGill recently reported to the London Clinical Society three cases in which the same operation was performed with entire success.[5]

It would seem, therefore, that these cases of severe and protracted cystitis from prostatic enlargement should no longer be universally permitted to suffer without an attempt at operative relief; that in suitable cases, after failure of other means, a suprapubic exploration of the bladder should be made. In a certain percentage of cases the obstacle to urination will be found as a projecting prostatic growth which can be removed with scissors or cautery. The latter minimizes hemorrhage and the chance of septic infection, the bladder-wall being meanwhile protected by a thin sheet of asbestos.

When no removable intravesical tumors are found, the bladder is at least drained and rested, and the prostatic œdema, usual in advanced cases, subsides; in cases by no means rare, calculi undetected by the sound, because encysted or ensconced below the prostate, will be found.

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[1] Operations on the prostate through the urethra, such as Mercier's and Bottini's, were merely tentative, hap-hazard procedures. The surgeon works in the dark, without definite knowledge of the obstacle to be overcome, or of the damage done by his instrument; moreover, two most important advantages of cystotomy—repose for the bladder and a search for hidden calculi—are not obtained.

[2] Journal Am. Med. Assn., September 4, 1886.

[3] THE MEDICAL RECORD, August 21, 1886.

[4] Journal Am. Med. Assn., March 12, 1887.

[5] Brit. Med. Jour., November 19, 1887.

In cases where the prostatic urethra is found to be hopelessly distorted and occluded, a permanent opening above the pubes can be maintained and fitted with a tube, dispensing with the painful and futile employment of the catheter. This proceeding, already successfully employed in a few cases, has, I think, a large field of usefulness in patients too feeble to endure a more radical operation or even the anæsthetic necessary thereto. A little chloroform—possibly even cocaine locally—produces sufficient anæsthesia for the slight incision required for the insertion of a finger and a catheter into the bladder.

In cases of prostatic enlargement where the cystitis is still slight, and operative interference seems therefore unjustifiable, the use of an intense galvanic current, after Apostoli's method with uterine fibroids, is worthy of investigation. During the past year I have used it in four cases, and found, contrary to my expectation, that a current of fifty to ninety milliampères, through the prostate from bladder to rectum or perineum, is well borne. Two of the four cases have greatly improved; yet, as such patients often enjoy comparative comfort for considerable intervals without local treatment, it is by no means certain that the improvement is due to the current.

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A CASE OF HYSTERICAL COMA.

By ELIZABETH L. PECK, M.D.,

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Miss C——, aged twenty, returned to school after the holidays, on Tuesday, January 3d. She suffered from a headache with some nausea during the journey, and the nausea persisted. On Thursday evening she complained of her feet and legs feeling queer, and that she could not walk straight, but as she had been in bed all day her roommate thought little of it. The next morning, however, she seemed very sleepy and would not answer questions. I saw her for the first time at 9 A.M., Friday, and judged the condition an hysterical one. As she was vomiting all food taken, I ordered her to take milk and lime-water in small doses, but the vomiting still continued, and the stupor of the patient increased. Though naturally somewhat fastidious, she seemed not to mind the condition of her own or her bedclothing, and could be roused to move herself only very little, though there were no evidences of paralysis.

This condition lasted from Friday until Wednesday, with only occasional slight indications of consciousness. During this time the temperature was normal, as were also the pulse and respiration, most of the time. Liquid food was taken at short intervals, as the vomiting ceased after the administration of a few doses of dilute hydrocyanic acid; yet swallowing was difficult, the food being retained for some minutes in the mouth and often partially ejected. The urine was passed involuntarily and frequently; the bowels, however, were moved only by enemata, though the sphincter was somewhat relaxed. During sleep the breathing was much of the time stertorous.

One thing at this time was of interest, as a point in diagnosis—a small phial containing some homœopathic remedy was found by the young lady's room-mate, which on Thursday had been nearly full, and on Friday morning was quite empty. Her symptoms were so strikingly like those of some narcotic poisons that, until I had ascertained the nature of the drug, or, in fact, until time had set at rest this question, the state of affairs was puzzling; the more so that on Sunday morning there were, for a short time, indications of heart-failure, although up to this time the pulse and respiration had been fair. This condition was temporary. There was some loss of reflex excitability, the conjunctivæ being markedly yet unequally insensitive, and the response to external stimulation slow and incomplete.

On Sunday afternoon the patient was seen by Dr. Cox, of Holyoke, Mass., who agreed with me that the case was hysterical in nature. This state of profound stupor passed away very gradually, and nothing seemed to possess much power to rouse the patient, except the application of heated iron to the spine. The effects of this treatment would last several hours; she would sit up, perhaps say a few words, but at length relapse into her accustomed lethargy.

During the second week of her illness a rather scanty menstrual discharge occurred. All the time of her illness she made no objection to taking asafœtida—would, indeed, take medicine more readily than food. Her treatment was tonic, as depressing measures seemed at no time indicated. After the stupor had passed away, she was some of the time very restless and wilful. Four weeks from the beginning of the attack the patient was able to leave for her home, about one hundred miles distant, physically in fair condition; her mental balance was not yet fully recovered, and she would become incoherent after talking a few minutes.

The case seemed a peculiar one from the absence of any adequate exciting cause for so profound a disturbance of cerebral functions. She had not been well during the fall term, and I had advised her to remain out of school for a time on account of persistent neuralgia accompanying an anæmic condition, and her return in the winter term was allowed with some hesitation on account of her health. However, she had seemed better during vacation, and she had probably overdrawn the stock of her already exhausted energies in the excitement of a gay holiday season. This, at least, seems the only rational cause to be assigned for the attack. She had never been a hard student, and had always been fond of out-of-door sports. Her muscular development was better than that of the average girl.

A PECULIAR CASE OF FOREIGN BODIES IN THE ALIMENTARY CANAL.

Dr. J. B. Kell, of Delphos, O., writes: "Apropos of Dr. Jones' article on foreign bodies, published in The Medical Record of February 18th, I report below an interesting and almost similar case: Mr. P—— called on me a few weeks ago and stated that his two-year-old boy had got into his mother's work-box, evidently looking for something to eat; at any rate, he detached from the card and swallowed twenty-three small shirt-buttons, probably one-third of an inch in diameter. His father stated that they were about to administer to him a dose of castor-oil, when he concluded it would first be better to consult their physician. Of course I countermanded the oil and fed the child on corn-bread alone for a period of two days, at the end of which time the buttons were passed, lying in the centre of a large, well-rounded fecal mass. Counting them carefully, we found just twenty-three—the exact number he had swallowed."

For Irritable Bladder.—Dr. W. P. Chunn writes to the *Maryland Medical Journal*, January 28, 1888, that the following prescription has been found to allay incessant desire to urinate and irritable bladder, when due to phosphatic deposits in the urine:

℞.	Acidi benzoici	ʒ ij.
	Boracis	ʒ iij.
	Aquæ	℥ xij.

M. Sig.—Tablespoonful three times a day.

This mixture has, upon two occasions, acted so efficiently in what was thought to be cystitis that cystotomy was dispensed with.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, March 10, 1888.

THE STATE CARE OF THE INSANE.

THAT it should be necessary to raise the medical voice in favor of "State care for pauper insane" seems hardly possible.

The opposition to and the false arguments which have been raised against the bill now pending before the Legislature, entitled "An act in relation to the care and custody of the pauper and indigent insane in the counties of this State, excepting New York, Kings, and Monroe," prove, however, the necessity for a note of "no uncertain sound" from our profession in favor of State *versus* County care.

The policy of our State from 1855 to the passage of the law, in 1871, giving power of exemption from the provisions of the Willard Asylum Act to the State Board of Charities, has been unswervingly that the "poor insane are the wards of the State."

The necessities leading up to this policy are well known to those who have made any study of the history of this afflicted class.

The horrors of the so-called care they received in poorhouses and prisons seem almost incredible, viewed with the light of our present knowledge and humanity; and the question must now be asked, most seriously, Shall this State desert her high standard, and drift backward into any of the evils from which she has been trying to free herself?

The struggle begun by the County Superintendents of the Poor crying to the State for help, in 1855, resulted in the passage of the Willard Asylum Act, in 1865, by the provisions of which all chronic insane were to be sent to State asylums.

Since power of exemption from this act was given to the State Board of Charities, in 1871, seventeen counties have been relieved of its action, and we may safely affirm that the number of counties seeking exemption is, and will continue to be, rapidly on the increase.

Appropriations are now being asked for in many counties; other counties are building asylums. Let this go on, and the time will soon have passed when it will be possible to check the evil.

In face of this danger, let us consider what are the advantages of State institutions; what is the exact state of things in the exempted counties; and what is the remedy.

Where, in the course of our medical experience, can we find patients who require early diagnosis and treatment, careful classification, and constant watchfulness more positively than the insane. Add to this the moral treatment, which is ever growing in its importance, and how imperative does it become to have at hand all those resources which a fully equipped institution alone possesses.

This is what State care means: An asylum in the hands of a Medical Superintendent who is an alienist, aided by intelligent assistants, careful, trained nurses, and all that science can provide, with every facility for occupation and diversion, according to the demands of each patient. Over all this the ever-watchful care of a Board of Trustees, entirely removed from politics, appointed by the Governor.

Of the present trustees of Willard, consisting of eight members, four have been in office since the founding of the asylum.

Now, we must remember that in the County system the Superintendent of the Poor and the Board of Supervisors stand for what the trustees of a State institution represent.

They are elected annually, and to their political power only they owe their positions. In this short term they are supposed to acquire the ability to do all that the experience of years alone has taught the management of a State institution.

They tell us that County asylums should be built, and that they can be made equal in every way to State institutions.

Does not an appropriation for a County asylum begin and end in politics?

The statement that per-capita cost for the same degree of care is to be reduced by County care is false. It can never be reduced in the County as compared with State institutions, except by *a reduction of the standard of care.*

For this statement we have the authority of the figures and facts presented by Dr. Wise in his admirable paper, read before the County Superintendents of the Poor of the State of New York in 1886. His deductions are unanswerable; and the State Commissioner in Lunacy, Dr. Stephen Smith, confirms it in his criticism of the way the rules of the State Board of Charities are disregarded, in the following words:

"They have not been strictly conformed to in most of the asylums, but more lax methods have been adopted, greatly to the detriment of the service and general management."

To this testimony we can add that of visitors who have made thorough investigations, all of which goes to prove inferiority of care of the insane in these counties.

The present law does not work well. County asylums allowed to keep their chronic insane are keeping acute cases; while counties allowed to keep a certain number are keeping more than that number. Laxity will creep in, rules and regulations cannot be enforced, and as the number of County asylums grows the trouble must increase, till all intelligent State supervision will be lost.

A crying evil of the present law is the definition of the word "chronic."

The distinction is simply one of time. After two years the law really rules a case *incurable*, and the patient can be taken by the Superintendent of the Poor to his or her county and worked on the town farm. This is monstrous.

The bill now pending provides for the gradual return of all insane to State care, except in the counties of New

York, Kings, and Monroe. These latter counties are not exempted from the action of the bill for any reason except that it is not practicable at this time to legislate for them.

The State is to be districted, each district to have its asylum; increased accommodations to be provided as needed, and the details of transfer are most carefully provided for.

The State asylums, having their executive buildings and entire plant in readiness, can add, at insignificant cost per capita, the needed increase in accommodations.

The stand must be made on the medical merits of the bill, about which there can be no compromise, and it behooves every medical man to give to this humane and scientific measure all the support at his command.

DIGITALIS IN THE TREATMENT OF PNEUMONIA.

The use of digitalis in croupous pneumonia has often been recommended, usually in small doses, as a heart-tonic, but by some as a sort of specific. It has been claimed that the exhibition of very large doses of digitalis tends to abbreviate the course of the disease very remarkably, as well as to reduce the mortality. In most of the statistical tables prepared by the advocates of this method the defervescence is seen to occur from the sixth or seventh to the tenth day, which is the time at which the disease subsides ordinarily, so that not much would seem to be proved as to the virtue of the drug regarded as a specific.

In a recent graduation thesis, Dr. Ilie N. Antoniu, of Bucharest, reports one hundred and forty-two cases of pneumonia treated by Professor Petrescu with large doses of digitalis, and compares the results obtained with the average statistics of pneumonia. The digitalis was given in very large doses—from one to two drachms of the leaves in infusion in the twenty-four hours. In no cases, however, were any evil effects from these large doses observed, and the fatal secondary heart-depression, so feared by some authorities, did not occur. From a careful comparison of the cases reported, it does not appear that the disease was materially shortened, the defervescence occurring in most of the cases at the usual time. The mortality, however, was much below the average, the percentage being only a little over one, while in all the other tables, collected from various sources, the mortality is given as from three to twenty-four and a half per cent.

The author's conclusions, which are somewhat extravagant, are that it is possible to abort pneumonia by large doses of digitalis, especially if the treatment be begun early in the course of the disease. He maintains, also, that from sixty to one hundred and twenty grains of digitalis-leaves may be given in infusion in the twenty-four hours without any fears of heart-failure resulting from over-stimulation and subsequent fatigue.

VACCINATION AGAINST SEPTICÆMIA.

A COMMUNICATION has recently been presented to the Académie des Sciences, by M. Pasteur, which may possess a practical bearing of enormous importance. The communication is the work of MM. Roux and Cumberland, and it claims to show that immunity may be gained against septicæmia by the inoculation of certain soluble substances. The authors state that the septic microbe, in its growth, develops chemical products which act little by little upon it as an antiseptic. Finally it is destroyed by its self-engendered poison. That such a process occurs is in accordance with previously observed physiological facts. Roux and Cumberland have isolated these soluble products, and by carefully injecting them into guinea-pigs have made these animals incapable of being affected by the septic vibrio.

Of course it still remains to be proved that these experiments apply to man. Furthermore, it is well known that several different microbes may cause the phenomena known as septic fever, septicæmia, and pyæmia. But for all this, the principle of the method just described, if established, is an all-important one. It has been known that all the growth of microbes may be attended with the development of potent toxic agents. And it may be shown that this is the case with the bacillus tuberculosis. In the excretions of this parasite, then, we may look for the specific or prophylactic for phthisis.

A MEDICAL PARLIAMENT.

A NEW phase of medical politics has developed in Prussia with the organization by royal ordinance of a Parliament or Chamber of Physicians (*Aerztekammer*). The duties of the body thus newly started on its career will be, as the royal ordinance states, twofold: 1, To take into consideration questions affecting public health; and, 2, to act as the representative of medical interests.

It occupies a position somewhat between the British General Medical Council and the French Académie de Médecine, having less power than the former and more than the latter. The first election for representatives for the medical chamber took place on November 10th of last year. Twenty representatives were elected for Berlin, and twelve for the Province of Brandenburg, in all thirty-two, and an equal number of deputies. The first meeting of the new body took place on the 12th of the present month, under the presidency of Dr. Alhenbach.

It is needless to say that such bodies, which give authoritative utterances upon medical and sanitary topics, are of great value to the profession and the public. They elevate the dignity of the former, and they give direction and certainty to the opinions of the latter. It is most unfortunate that we as yet possess no such organization in this country. But our time will come.

THE MYCOLOGY OF THE FINGER-NAILS.

SOMETIME ago we called attention to the observations of Kümmel and of Forster on the methods of disinfecting the hands. Kümmel showed that this was a by no means easy matter, and recommended the use of hot water, soap, and brush, with a five per cent. solution of carbolic acid. Forster found that the use of sublimate solution (1 to 1,000 or 2,000) gave the best results, but to this Kümmel does not agree. Now Professor P. Fürbringer comes forward (*Annals of Surgery*, February, 1888) and shows that neither method necessarily touches the root of the trouble, for the tests of asepticity used—viz., touching or boring the finger into sterilized gelatine—did not take into account the micro-organisms which may lurk beneath the nail. When the filth of the subunguial space was cultivated in proper media, various micro-organisms developed, and this occurred even if the hands had been previously disinfected by the best known methods. Fürbringer extracted from the subungual space of such disinfected hands particles of matter almost macroscopically invisible, and deposited them upon sterilized gelatine. Assistants and chiefs of clinics were subjects of the experiments. Thirteen men were examined in this way, after they had most painfully and diligently disinfected their hands, fingers, etc.

The time employed in these detergent labors varied from two to ten minutes. The solutions used were carbolic or sublimate, combined with soap. In only one case were no cultures of colonies of micro-organisms obtained.

The author found that if any solution aided the disinfection of the hands better than another, it was sublimate. He also found that the following method gave the surest results, and the most perfect disinfection:

The nails having first been carefully trimmed and cleaned from visible filth, the hands are cleaned for a minute or a minute and a half with brush and soap, especially the subungual space. The hands are then washed in not less than eighty per cent. alcohol for a minute, and then before evaporation of the same they are brought into a 2 to 1,000 solution of sublimate or three per cent. carbolic acid solution, and washed for an additional minute. The advantages of the above are, first, the *certainty* of disinfection, the saving of time, the sparing of the hands, and finally the cheapness. By the above method either none or only one or two colonies (germs) were found in a culture. It is useful to know that in order to prevent decomposition of the bichloride in water, the author finds the following a stable solution, and equivalent after months to a solution of sublimate in distilled water, strength one pro mille: To two litres of clean well-water add 10 c.cm. of an alcoholic solution of sublimate (1 in 5) and one gramme of acid. aceticum.

THE CROWN PRINCE AND HIS PHYSICIANS.

THE medical profession will read with great satisfaction the bulletin of the Crown Prince's physicians denying the stories of quarrelling and conflicting opinions, and announcing that the physical condition of their patient is one of comparative comfort. It is greatly to be hoped that, in the conduct of a case which shows to the public so conspicuously the limits of our art, there will be nothing in the relations of the attending physicians which will detract from the dignity and honor of the profession.

We publish in full the bulletin of the physicians, dated at San Remo, March 6th.

"In view of the reports published in the press alleging differences of opinion among the physicians attending the Crown Prince of Germany, the undersigned declare that, as regards their ideas of the nature of the illness, no such divergencies exist. Just as little do they maintain that a dangerous turn in the malady is imminent. The sole responsibility for the conduct and treatment of the case remains, as prior to the recent operation, in the hands of Dr. Mackenzie. In the interest of the august patient, as well as of the people who esteem, love, and revere him, the doctors once more ask German and foreign papers to abstain from all discussion concerning his illness, or the methods or instruments used in his treatment.

"The local disturbances in the larynx have not appreciably altered. The wound has healed and the cannula lies comfortably. The patient's lungs are in a healthy condition. The cough and expectoration have diminished. The patient's strength is more satisfactory. His appetite is increasing. There is no digestive disorder, no pain on swallowing, and no headache. He sleeps, with interruptions, for hours together. As Dr. Bergmann's mission has terminated he will leave shortly.

MACKENZIE, KRAUSE, BERGMANN,
SCHRADER, HOVELL, BRAMANN."

THE DYSPNŒA OF BRONCHITIS.

CASES of bronchitis are so frequently met with that they usually call for very little medication, and generally yield to the ordinary expectorant treatment.

Far different is it with bronchitis of a subacute or chronic form, as well as acute bronchitis in the aged. No more distressing symptom than dyspnœa can be met with, and to combat this part of the disease is to relieve much anxiety, and often to cure the case.

Dr. Thomas R. Fraser, of Edinburgh, is a man most indefatigable in research. After having brought so recently to the notice of the profession the advantage of strophanthus in some forms of heart disease, he untiringly turns his attention to an investigation of the treatment of asthma and bronchitis (*American Journal of the Medical Sciences*). Finding that the nitrites and nitro-glycerine are of undoubted use in the asthmatic spasm of the bronchial tubes, he applies the same method of investigation to the dyspnœa of bronchitis, where also dry râles, having the same character as those that occur in asthma, are met with. On reviewing a large number of standard authorities, it is seen that the most important factor in the causation of these varied râles is considered to be a swelling of the bronchial mucous membrane. Dr. Fraser having noticed that these râles so often changed their seat, and not being satisfied with the explanation above given, undertook a series of experiments with the nitrites. His method was to carefully auscultate the chest, and after giving one grain of the nitrite of sodium, or some other of the nitrites, he auscultated the chest at short intervals, noting every change, subjective and objective. Out of a total of sixty-one observations, forty-eight were favorably influenced by the nitrites. Knowing the general effect of the nitrites on the circulation, he concludes that the cause of these sounds could not be intumescence by congestion of blood-vessels, or other results of inflammation, otherwise nitrites would increase, rather than lessen or suspend, the sounds. The nitrites, too, have no possible effect on the mucus collected in the bronchial tubes. He infers that the only explanation of the results of the observation that can reasonably be adopted seems to be that in bronchitis the rhonchi and sibili are frequently produced by contractions of the bronchial muscles; that dyspnœa is produced by the impeded movement of air, caused by the constrictions resulting from these contractions; and that both are removed by nitrites, because nitrites reduce the spasmodic contractions of the bronchial muscles. He finds the nitrite of sodium and nitro-glycerine, as stable preparations in solution, more suitable for administration by mouth or subcutaneously. Nitro-glycerine may be given in tablet or pill form, or in an alcoholic solution. He suggests giving the solution of nitrite of sodium with an alkali, as any acid, and in most cases the acid of the gastric juice, would tend to decompose the solution. The other forms of the nitrites, such as the nitrites of amyl and ethyl, are very unstable, and less well suited for administration. The ease with which such remedies can be administered, and the good reports from such a reliable authority, should make it incumbent on all physicians not to leave the nitrites untried in such anxious cases of dyspnœa, whether connected with bronchitis or asthma.

THE NEGRO FROM A MEDICAL STAND-POINT.

It has been asserted, time and again, by writers living at the North, who yet seemed to have reliable data upon which to base their belief, that the negroes in the Southern States were increasing at a much more rapid rate than the whites in the same section of the country. These writers based their assertions upon the census-returns and upon their own observations, and their conclusions seemed to be reliable. The weight of medical testimony is, however, against them, and the facts are, it appears, the reverse of what has been stated.

In a lecture delivered before the Georgia Historical Society, on June 6, 1887, and published in the New York *Medical Times* for October and November, 1887, Dr. E. B. Corson, of Savannah, reviewed the causes which were leading, apparently, to the extinction of the negro as a separate race in America. While they were held as slaves they were well cared for, as it was to the direct interest of the master to keep them in good health. They lived a regular life, and when sick had the most skilled medical attendance. Now, however, they flock to the cities, live in crowded quarters, are given to excesses of all kinds, and are seldom able to obtain as good medical care as they did formerly. At that time, too, the colored man could boast of his insusceptibility to malaria and yellow fever, and even pulmonary phthisis was comparatively unknown to him. Now, Dr. Corson states, this immunity is no more. The negro suffers almost equally with the white from malarial diseases, possibly as a consequence of the continually increasing admixture of white blood; and the mortality from pulmonary consumption is, as is well known, almost double that among the whites. Infant mortality among the negroes is very large, owing in great measure to the utter neglect of the most elementary hygienic and dietetic precautions on the part of those who have the care of young children.

In a paper read before the American Surgical Association, in May of last year, Professor Louis McLane Tiffany, of Baltimore, presented some statistics showing the comparative frequency of certain of the surgical diseases in the white and colored races. He had found that, while negroes bore injuries and operations better than the whites, surgical diseases involving the lymphatic system, especially if tubercular, were more fatal in negroes than in whites. Carcinoma he found to be very rare in the negro, the most common malignant growths being osteo-sarcomata. Rickets occurs with astonishing frequency in colored children, but congenital deformities are very rare. Specific affections of the genito-urinary organs are common enough among the negroes, and are apt to be more destructive because more commonly neglected.

Dr. Swan M. Burnett, of Washington, writes, in the *Archives of Otology* for December, 1887, concerning the relative frequency of ear disease in the white and colored races. He finds that ear disease is comparatively less frequent in the negro than in the Caucasian, and that the former rarely suffers from sclerosis, or dry catarrh, of the middle ear, which is the cause of so much deafness in the white race, although he is apparently more liable to suffer from acute catarrh. Nearly the same conclusions were reached by Dr. T. E. Murrell, of Little Rock, in a paper read before the Otological Section of the International Medical Congress, in September last.

Several other articles upon the condition of the colored race, as seen through medical eyes, have appeared during the past year; but it is unnecessary to review them, since their testimony all points to the same fact, viz., that the physical well-being of the negro has not been improved by emancipation, but rather the reverse. The pure negro has lost the protection which his master, through self-interest, even when not prompted by humanity, gave to him, and he suffers in tenfold degree from the few diseases which were his enemies in the olden time, while he also falls a victim to many to which he was a stranger then. The mulatto is even worse, for he has lost the immunity to certain diseases enjoyed by his fathers of pure African blood, while he has acquired none of the robustness belonging to the Anglo-Saxon. Unless a marked change for the better occurs soon, those who fear that the negro race will soon gain the ascendency over the whites, in the Southern States at least, may banish their apprehensions.

A SOLUTION OF THE SEWAGE DIFFICULTY.

Under this title a London engineer writes in the last number of *The Sanitarian*. His plan is to deodorize and precipitate sewage with ferric chloride. This agent he describes as "essentially a chlorinated compound of the higher oxides of iron, and possessing the remarkable property of parting with a portion of its nascent oxygen in the presence of putrid organic matter, or of matters approaching putrescence, and has little chemical effect upon organic compounds in a fresh state."

He claims that this agent is prepared from easily attainable materials, and from the waste products of certain manufactures. It can, therefore, be cheaply produced on the spot where its use may be required. "Having accomplished its work upon the sewage waters or other foul liquids, it then gathers up and reabsorbs oxygen, either from the air dissolved in the fluids or by splitting up water into its elements, for its own reconstruction, in readiness again for further duty, and so on in perpetuity."

In all refuse there are some healthy bacteria which act as scavengers, the so-called "nitrifying" germs. These the newly suggested agent does not destroy. It has a selective affinity upon the pathogenic and putrefying organisms. The advantages attending its use are summarized as follows:

1. Prevention of nuisances in the streets and thoroughfares by emission of foul gases and vapors generated within the sewers from putrefaction of sewage.

2. Prevention of nuisance in house-drains and their equipments.

3. Complete oxidation of putrescent organic matters,

combined with precipitation of organic matters in solution.

4. Precipitation in the settling tanks by simple subsidence and freedom from offensive smells during the operation.

5. Prevention of secondary decomposition in the sewage sludge, and fixation of nitrogenous compounds, thus securing whatever manurial value the sludge may possess, and avoidance of offensive odors in the process.

6. Arrestment of secondary decomposition in the effluent waters.

7. Economical treatment of sewage, and at less cost than by usual processes, combined with greater efficiency, due to the recuperative action of the fer-chlor.

8. Restraining effect upon disease and putrefactive micro-organisms, but without injury to the harmless and beneficial bacteria.

9. Avoidance of material alterations in the existing arrangement of sewage works, and equal adaptability of the process to towns discharging sewage into the sea or watercourses, or by irrigation of land.

News of the Week.

The Cartwright Lectures for 1888 of the Alumni Association of the College of Physicians and Surgeons will be given by Professor William H. Welch, of Johns Hopkins University, on Friday evenings, March 29th, April 5th, and 12th, at the college, at 8.30 p.m. The subject will be the General Pathology of Fever.

Montefiore Home.—There is a vacancy in the Attending Staff of the Montefiore Home for Chronic Invalids.

Typhoid Fever and Sewer-gas.—It is considered to-day by Professor Victor C. Vaughan a proven fact that typhoid fever may be conveyed by sewer-gas; so that we shall now have another bee in the sanitary plumber's bonnet. The story of the discovery, as told in the *Sanitary News*, is this: "An epidemic of typhoid fever has been prevailing at the Michigan State Prison at Jackson. A committee from the State Board of Health was invited to make an investigation of the causes of the epidemic. The water-supply and milk-supply were first ruled out as possible vehicles by negative evidence. It was then thought that the defective condition of the sewers, combined with the insufficient supply of fresh air, was the most probable cause of the epidemic. The cases nearly all were from a distinct portion of the prison, and investigation proved that the soil-pipe running from the hospital, and the house-drain, into which it entered, were defective, and were pouring sewer-air into that portion of the prison. Professor Vaughan took to his laboratory a sample of the air from within the soil-pipe, and has found within it the specific germ of typhoid fever." The only flaw in the argument lies in the fact that the etiological relation of the typhoid bacillus to typhoid fever is not yet incontrovertibly established.

The Bill for the Reorganization of Quarantine at this Port, abolishing fees and placing the Health Officer on a salary, has, at date of writing, passed its third reading. It seems likely that it will pass the Legislature.

The New Orleans Polyclinic is the name of an institution recently organized in New Orleans, and intended for the clinical instruction of students and physicians. Its first course opens in April. No doubt the school will prove a most helpful one, though it is spelled with a "y."

The Louisiana Medical Library Association is the name of an organization recently formed for the purpose of establishing a medical library, reading-room, etc.

A Hospital at Fitchburg, Mass.—A large sum of money has been left by the late Gardner S. Burbank for the establishment of a hospital at Fitchburg, Mass.

A Chinese Hospital.—We have received the first annual report of the Philander Smith Memorial, at Nankin, China. The total number of out-patients was 11,353, and of in-patients, 230. The terms of treatment are apparently very reasonable, for the authorities charge only five cents a day, with a deposit of $1 as security for good behavior. About one-half the in-patients are victims of the opium-habit. For these the treatment consists in a gradual withdrawal of opium.

Quinine is now quoted at from forty to forty-five cents an ounce.

The Kansas State Medical Society meets at Topeka on May 1st, 2d, and 3d.

The Gonococcus in Legal Medicine.—The number of physicians who are willing to testify on oath that the presence of the gonococcus is a positive proof of a gonorrhœal infection increases, and the small microbe is likely to assume mighty proportions before the court. The latest apostle of this view is Dr. P. Aubert in the *Lyon Médical*.

Epidemic Spinal Meningitis is said to prevail largely among horses in this city, and it is possible that it may be followed, as in 1871, by an epidemic affecting human beings.

Dr. Straus succeeds to the chair of Experimental Pathology in the Paris Faculty of Medicine, left vacant by the death of Professor Velpeau.

The Doctor's Carriage.—The late Dr. Biddle, of Philadelphia, is alleged to have held peculiar views on the question of the doctor and his carriage. He did his work (and he had a great deal of it to do) entirely on foot. The driving of one horse, he held, is evidence of physical weakness, and the driving of two horses is an indication of mental weakness.—*Medical Age.*

The Boston City Hospital is to have an out-patient department.

The Massachusetts State Medical Society and Homœopathic Diplomas.—A physician, Dr. Hipkiss, educated at a homœopathic medical college, has renounced dogmatic medicine and applied for admission to the State Medical Society. He is willing to submit to an examination, but is found to be ineligible because he has a diploma from a homœopathic school. An attempt is to be made to correct this manifest injustice in the requirements for membership.

Erythrophylœine.—Dr. John Tweedy writes to *The Lancet* that the alleged new anæsthetic, erythrophylœine, has no apparent anæsthetic power.

PROSTITUTION IN BRUSSELS.—The Royal Academy of Medicine of Brussels has unanimously passed a resolution to the effect that "the regulation of prostitution is necessary to check the propagation of venereal diseases." Other resolutions were passed, with few dissentient voices, in favor of prohibiting prostitutes from frequenting "streets, promenades, and public places," and providing for the periodical medical examination of recognized prostitutes.

THE PRESIDENT stated that the vacancy in the office o Corresponding Secretary, occasioned by the death of D Wesley M. Carpenter, had been filled by Dr. E. L. Keye

DR. ROBERT W. TAYLOR read a paper (see p. 261) on

XERODERMA PIGMENTOSUM AND ITS RELATION TO MALIGNANT NEW-GROWTHS OF THE SKIN.

THE PRESIDENT understood that in "

A SOCIAL MEDICAL CLUB, called the Galen Club, has been organized in London.

NOT DEAD.—The *Medical Press* recently announced that "our esteemed contemporary THE MEDICAL RECORD has ceased to exist." Not so, esteemed but ill-informed contemporary; THE MEDICAL RECORD was never more alive than at present, never was its circulation so colossal, its contents so interesting, its readers so absorbingly entertained, so practically instructed, or so gratifyingly communicative as regards the benefits bestowed by this same MEDICAL RECORD upon them in moral, intellectual, financial, and professional directions. THE MEDICAL RECORD is not dead; but the *London Medical Record*, its namesake, has changed its name.

THE FORTY-SEVENTH ANNUAL COMMENCEMENT OF THE MEDICAL DEPARTMENT of the University of the City of New York took place on Tuesday evening last, in the Metropolitan Opera House. A class of one hundred and fifty-seven was graduated. The address was delivered by Rev. William M. Taylor, the valedictory by Dr. W. B. Chapin. The Faculty prize of $200, or a hospital appointment, was awarded to Samuel Cummings. Prizes in the competitive examinations were awarded as follows: First, T. J. Dunn, who chose hospital appointment; second, W. G. Frey, $200; third, S. J. White, Jr., hospital appointment; fourth, W. M. McArtney, hospital appointment; fifth, L. R. Scudder, $100; sixth, E. L. Fisk, $50.

A TRAINING SCHOOL FOR NURSES EXISTS at the Eastern Illinois Hospital for the Insane, and is doing excellent work in fitting attendants for the care of this class of sufferers. At a recent Commencement thirty-two graduates received certificates.

DR. HENRY F. LYSTER, of this city, has been appointed successor to the late Dr. A. B. Palmer, in the chair of the Principles and Practice of Medicine in the Medical Department of Michigan University.

AN EMERGENCY HOSPITAL AND DISPENSARY is the name of a new institution just opened in Detroit. It will make a specialty of the care of accidents, and to that end it has in connection an ambulance, with trained attendants, subject to telephone summons night and day.

PROFESSOR R. A. F. PENROSE has resigned from the faculty of the Medical Department of the University of Pennsylvania. It is rumored that a *concours* is to be held. If this is so, it is probably the intention to select the Professor of Obstetrics from among the younger men.—*Boston Med. and Surg. Journal.*

HEALTH OFFICER OF BROOKLYN.—Dr. John Griffin has been appointed Health Officer of Brooklyn, in place of Dr. Andrew Otterson, whose term expired February 1st. Dr. Griffin is an Irishman and a graduate of Queen's University. He received his medical degree from Bellevue Hospital Medical College, in 1873.

SMALL-POX is prevalent in Brooklyn, the number of cases from January 1 to February 21, 1888, being one hundred and forty-five.

A HOSPITAL FOR CONTAGIOUS DISEASES is to be erected in Brooklyn, the sum of $20,000 having been appropriated for the purpose. We quite agree with the *Brooklyn Medical Journal* in protesting against its proposed erection outside the city limits.

LARYNGEAL PHTHISIS CURED.—At a recent meeting of the Berlin Medical Society, Professor Virchow exhibited a larynx, removed *post mortem*, that showed plainly a large tuberculous ulcer under one of the vocal cords, and, in addition—and this was the important point—a long, shining cicatrix, evidently following a tuberculous ulcer that had healed, thus proving that laryngeal phthisis may undergo spontaneous cure.

RELIGIOUS NEWSPAPERS THAT DO NOT ADVERTISE QUACKS.—The number of religious newspapers which do not insert quack advertisements is increasing. A list, which is not, we think, quite complete, is given in the *Medical and Surgical Reporter*. It includes *The Churchman*, *The Church at Home and Abroad*, *The Christian Register*, *The Church Record*, *The Moravian*.

PHOTOGRAPHING THE FUNDUS OF THE EYE.—M. Panel, of Paris, has invented a photographic machine by which the fundus of the eye may be photographed in a few seconds. This machine will enable a physician having a certain knowledge of photography to produce the image of a lesion situated in the eye.

A USEFUL ARTIFICIAL ARM.—M. Gripouilleau has invented an artificial arm, costing only about eight dollars, which will allow the wearer to dig, load, wheel a barrow, mow, etc. This arm, which is applied to the shoulder where the limb has been amputated, is made of wood, zinc, and sheet-iron.

THE ADVANTAGES OF THE SKIN OF BIRDS FOR SKIN-GRAFTING.—Dr. Redard has communicated to the Académie de Médecine of Paris some observations regarding animal grafts on wounds in human beings. In a case of severe burn of the scalp, of eight months' standing, in a child two years of age, he obtained a rapid cicatrization by means of grafts from a fowl. He first tried grafts of frogs' skin, but as these proved to be repulsive to patients and did not give very good results, he substituted others from the fowl, and the wound, which measured three inches by two and a half, had completely healed in two months. He had been equally successful in other and subsequent cases. He takes the skin from beneath the wing of a chicken, carefully securing the subjacent cellular tissue, but avoiding adipose tissue. The transplanted pieces varied from a sixth to a third of an inch in size, and they were maintained in position by means of a little cotton-wool and iodoform gauze. The skin of birds and fowls has the advantage of being supple, delicate, and vascular; it adapts itself readily to the surface of the wound, and adheres without undergoing absorption.

THE TABLET ERECTED TO THE MEMORY OF THE LATE AUSTIN FLINT, M.D., LL.D., by the Alumni Association of the Bellevue Hospital Medical College, will be formally unveiled at the Carnegie Laboratory, 328 East Twenty-sixth Street, at 8.30 P.M. on March 10, 1888. The presentation address will be made by Dr. Leroy M. Yale. The profession is invited to be present.

ANTIRABIC INOCULATIONS AT BARCELONA.—Dr. Ferran, who has charge of the pathological laboratory at Barcelona, has treated eighty-five cases of rabies by inoculations, without a death. Twenty-five of the patients had been bitten by animals positively known to be rabid. At first Dr. Ferran carried out the inoculations of his rabbits according to Pasteur's method, *i.e*, by trephining. Recently, however, he has adopted a new, and, as he believes, an improved plan, viz., the injection of a single drop of the emulsion of the medulla containing the virus into the anterior chamber of the rabbit's eye. This produces exactly the same effects in about the same time as the trephining method.

THE VENERABLE DR. COTTING, OF BOSTON, once at least in his lifetime, rose to such a considerable pitch of moral grandeur as to deserve our hearty commendation. "A notable family," the doctor says, "once sent for me. They had sickness in the house. Their family physician, they said, had become old, and so infirm that they felt obliged to give him up. They had long known of me and of my abilities and standing; had great regard for me, and they felt in this serious emergency that they could confidently trust in me—to tell them whom they had better employ as their physician. Keeping my self-possession as best I could, I told them, without apparent hesitation, whom I would send for were I ill myself. They sent for him, and he ever after attended them."

THE LAW AGAINST MUSIC AND BIER has been, says an exchange, applied to a Grand Army funeral with a band playing a dirge.

TEMPUS EDAX RERUM.—The proverbial belief that time cures all things, with the Cincinnati suffix, "Time will cure a ham," has received a curious substantiation in England. A London doctor, who had treated a lady-patient for a long time without giving her any relief, finally wrote her that he could do no more, and that *tempus edax rerum* was the only remedy. The lady at once started for a drug-store and applied for the remedy. She was given a bottle containing a mixture for which she paid $1.85. She continued using this, and at the end of a year and a half, accidentally meeting her physician, thanked him for his wonderful prescription, which had cured her. The druggist's trick was discovered, and she sued him for money spent on the bogus medicine.

AMERICAN DEGREES.—A correspondent of the *Medical Press* received a letter from a not very patriotic American regarding the value of American medical diplomas. He says: "I would not accept a present of an armful [of such diplomas] from American institutions, save and except a few, such as Harvard and Yale. Almost all others are downright trash, and discreditable to men educated in Great Britain and Ireland to hold. Those named would not, I think, confer degrees *in absentia*. Regretting my inability to aid you."

A SMALL-POX SPECIALIST IN ENGLAND.—Sheffield, England, is suffering from a plague of small-pox, it having no compulsory notification and vaccination law. A Mr. Herring came to the town and gave out that he could cure small-pox in two days. A memorial signed by two thousand persons, requesting the Mayor to convene a public meeting, was drawn up. The meeting was called, and Mr. Herring's claims enthusiastically pro-
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A HOSPITAL AT FITCHBURG, MASS.—A large sum of oney has been left by the late Gardner S. Burbank for ıe establishment of a hospital at Fitchburg, Mass.

A CHINESE HOSPITAL.—We have received the first annual report of the Philander Smith Memorial, at Nan-
The total number of out-patients was 11,-

behalf of the town, and was escorted from the hall amid the cheers of the crowd.

SOLVENT TREATMENT OF URIC ACID CONCRETIONS.—Drs. Posner and Goldenburg have made some experimental observations in the laboratory attached to Dr. Lassar's clinic at Berlin upon the solubility of uric acid in some of the more notable mineral waters, and in alkaline solutions. Their experiments lead them to suggest that in cases of the uric-acid diathesis, especially in acute attacks of gout, the best and most powerful of such waters are those of Vals and Vichy. Less costly is the Fachingen; but others, such as the much-prescribed Wildungen, are not so efficacious as the prescription of bicarbonate of soda, in doses of from three to five grammes per diem, with plenty of water. Next in solvent potency comes Cantani's powder (of sodic bicarbonate, lithia, and potassic citrate), or lithium carbonate alone. In cases where only the diathesis has to be dealt with—*i.e.*, in the intervals of or apart from acute attacks—the Fachingen water is suitable, continued for a few days, or the weaker springs, and, as drugs, borocitrate of magnesia, borax, or Cantani's powder. The urine should not, however, be allowed to become alkaline.—*Lancet.*

THE DOCTOR IN FICTION.—In his remarks upon the value of novels during convalescence, Dr. Weir Mitchell takes occasion to discuss the doctor in fiction, and concludes that, with the exception of Lydgate in George Eliot's "Middlemarch," he is wholly unsatisfactory. This is somewhat severe upon the realistic author of "Dr. Breen's Practice," to say nothing of Miss Jewett, Jules Verne, Hannah More, and the delightful uncorseted female creations of Charles Reade. We are disposed to resent the acceptance of Dr. Lydgate, who was, after all, a weak man, as a satisfactory portrayal of the physician. We fear that Dr. Mitchell has something of a penchant for unpleasant types of doctors—perhaps through the chemism by which contraries are attracted. The New York doctor whom Henry James has described is "satisfactory," and his characteristics are correctly drawn, and Thackeray has given a description of a London doctor which certainly ought to be satisfactory.

A NEW CURE FOR HICCOUGH.—Dr. Dresch, of Foix, France, describes, in the *Bulletin Général de Thérapeutique*, a new and sure method of curing hiccough. The sufferer closes the external auditory apparatus with the tips of the fingers, making firm pressure. At the same time he is given water to drink in small swallows. The hiccough ceases instantly.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 2, 1888.

Abraham Jacobi, M.D., President, in the Chair.

The President stated that the vacancy in the office of Corresponding Secretary, occasioned by the death of Dr. Wesley M. Carpenter, had been filled by Dr. E. L. Keyes.

Dr. Robert W. Taylor read a paper (see p. 261) on

XERODERMA PIGMENTOSUM AND ITS RELATION TO MALIGNANT NEW-GROWTHS OF THE SKIN.

The President understood that in all cases of xeroderma pigmentosum there is absence, in considerable degree, of connective tissue and presence of a good many embryonic cells and elastic tissue. He asked Dr. Taylor whether he was correct in the belief that the connective tissue is wanting.

Dr. Taylor replied that the disease expends itself upon the papillæ rete. The connective tissue may be cut off by involvement of the overlying parts, but only by a mechanical process. This is more likely to occur over bony prominences.

The President was under the impression that the presence of a large amount of embryonic cells is one of the proofs of a relative lack of connective tissue. Then the best examples of this disease have occurred in infants, which goes to show that it is congenital. There is the further fact that malignant tumors develop in them at an early age. These facts, it seems, go to establish the view advanced by Cohnheim, that all pseudo-plasms, whether they occur in infancy, youth, or later in life, are the result of embryonic cells not undergoing the usual change into connective tissue or other tissues, but remaining behind, and afterward, for some cause or other, proliferating and forming a malignant tumor. The fact that the blood-vessels are not properly formed in the cases of xeroderma pigmentosum would seem to naturally follow where a large amount of embryonic tissue remains. Thus may be explained the nævous character of the whole surface. The fact that the reddened spots disappear and others reappear would seem to point to spontaneous thrombosis. The large vessels generally are not sufficiently formed, and a number of them become annihilated by thrombosis. Thus, it seemed to the President that the disease is originally due to arrest of normal changes in the embryonic tissue, which leads to the abnormal changes which afterward appear.

A SUGGESTION FOR TREATMENT

was based upon this view of the etiology of the disease, namely, to so nourish the blood-vessels and other tissues as, if possible, to change the character of the embryonic tissue remaining behind. Surgical treatment can do no good, further than to make the patient look a little better for a time after removal of tumors. But if new connective tissue can be made, perhaps that will do a good deal. He would therefore look for medicinal and dietetic treatment which may bring about that result. He thought that arsenic, and phosphorus particularly, might be beneficial in causing nutritive irritation. It is known that phosphorus, when given in minute doses, causes in a short time beneficial effects in rachitis, and in chronic and subacute bone affections. They should be administered intelligently and persistently, perhaps for a long period of time.

Dr. Taylor would avail himself at the first opportunity to carry out the President's suggestions regarding medicinal treatment, for methods already tried have been unsuccessful. Regarding surgical treatment of tumors already developed, he was convinced that it is rational, and has done good in the case operated upon by Drs. Gruening and Gerster. Of course, it would be desirable to so treat the case medicinally as to do away with the necessity for surgery.

SECTION IN OBSTETRICS AND GYNECOLOGY.

Stated Meeting, February 23, 1888.

J. E. Janvrin, M.D., Chairman.

Dr. H. J. Garrigues read a paper entitled

REPORT OF CASES OF LAPAROTOMY FOR RUPTURE OF THE UTERUS.

The first case which he reported was one which had not yet appeared in medical literature. He was called to see the patient in consultation, on January 21st of the present year. The patient had had six children, two of which had been delivered with forceps, and she said that all of her labors had been hard ones. Dr. Garrigues learned that the labor-pains had come on during the night between January 20th and 21st. The head presented. The bag of waters ruptured at about 5.30 P.M., January 21st. Noticing that the patient was growing nervous, the attending physician again made examination, when he found the head had receded, and rupture of the uterus had taken place. Dr. Garrigues was then called, and found the patient in poor rooms of a tenement-house. The child could be felt through the abdominal walls to the right of the contracted uterus. Vaginal examination showed the superior strait empty, and a large tear in the uterus, communicating with the abdominal cavity. The child was evidently large, while the conjugate diameter measured three and a half inches. Laparotomy was done, as the only possible means of saving the patient's life.

A median incision, about four inches in length, was made to the symphysis pubis. The first object to appear was the placenta. The membranes were easily removed. The child lay to the right, was dead and exsanguinated, and was estimated to weigh between nine and ten pounds. The abdominal cavity contained about a quart of fluid blood and some meconium. The rent in the uterus was eight inches long, ran chiefly in a transverse direction, and comprised the whole of the anterior and part of the posterior wall. Porro's operation was considered inexpedient. He therefore simply sutured the uterus with silk. It was quite difficult to reach the under tear, making it necessary to employ a double set of sutures, the one including the entire walls except the endometrium, and the other closing the peritoneum. As many as thirty-seven sutures were required to prevent folding-in of the peritoneum. The abdominal cavity was washed out with plain warm water until it came away clear. The uterine cavity was washed out with bichloride solution. The patient lived four days, when she succumbed to peritonitis.

It was to be remarked in this case that antiseptic conditions had not been observed before Dr. Garrigues saw the patient, nor was it possible for them to be fully carried out afterward, because of the patient's surroundings. She received the most unsatisfactory nursing, subsequent to the operation, from ignorant friends and relatives.

Dr. Garrigues then gave a summary of some published statistics of rupture of the uterus, and said it appeared from them that the accident occurred once in about five thousand deliveries. During his connection with the New York Maternity Hospital the past six years, it had occurred once in about three thousand deliveries. It took place oftener than the published cases would indicate, for many fatal cases had doubtless not been published.

Regarding the etiology, it was the rule that the accident occurred in those who had borne many children. His own case was no exception. He looked upon the disparity between the size of the child and the pelvic diameters as another important factor.

The prognosis is bad. The child almost invariably dies, and but few mothers escape. The statistics of one hundred recoveries in over five hundred cases were misleading, as all recoveries are reported, while doubtless fatal cases are often not reported. The chief causes of death are hemorrhage and peritonitis. Considering the large size of the child and the proportionately small size of the pelvic diameters in this case, he would, had he been called to it before rupture occurred, have suggested Cæsarean section in preference to other measures.

Dr. Malcolm McLane had had two cases of rupture of the uterus, both of which he had reported before the Section about two years ago. One of the patients recovered; the other was hopeless when he performed laparotomy, and died soon afterward. He believed rupture of the uterus occurs much more frequently than is generally supposed. He had seen during the past nineteen years two other cases, and had heard of others in his neighborhood. In his successful case only a part of the child had escaped from the uterus, and he extracted, after version, by way of the vagina. The rent was in the lower portion of the uterus, and the membranes had protected the peritoneal cavity from blood. For that reason he did not perform laparotomy, preferring to give the woman the chance of recovery without it. A hæmatoma formed, but otherwise the recovery was without interruption. He had lately delivered the woman of another child at term.

Dr. R. A. Murray had seen four cases of rupture of the uterus, all of which terminated fatally. Three were supposed to be incomplete ruptures, but two of them proved to be complete, and the third was made complete by gangrene. He was convinced that what were supposed to be incomplete ruptures occurred quite frequently, and that many of them were really complete ruptures. As an autopsy was not made, and death was ascribed to puerperal peritonitis, the cases failed to go on record as those of rupture of the uterus. Dr. Murray raised the question whether, when the child was delivered by the natural passages, and the mother had recovered from the shock of the injury, it would not be proper to perform laparotomy, if for no other reason than to thoroughly cleanse the peritoneum. In two hospital cases they had attempted to secure antisepsis by drainage, but the attempt was a failure, notwithstanding there was no fetor to the lochia. In three cases the house physicians had failed, notwithstanding their presence at the bedside throughout the labor, to recognize rupture until symptoms of collapse developed.

Dr. J. P. Garrish had seen one case of rupture of the uterus, in which Cæsarean section was performed as soon as the accident had been recognized. He believed in prevention, and therefore applied a bandage from the armpits to the hips during labor, and placed two or three folded towels beneath it over the abdomen.

Dr. R. A. Murray then read a paper on

THE INDICATIONS FOR THE USE OF THE INTRA-UTERINE DOUCHE IN THE PUERPERAL STATE.

The subject was considered under three heads: First, what are the indications for the intra-uterine douche; second, the method of its employment; third, the contra-indications and dangers connected with its use.

The author opened his paper with the recital of a case illustrative of the want of appreciation among physicians of the value of the intra-uterine douche in the puerperal state. The patient lived in a malarial district, which led her physician to regard the fever and other symptoms of blood-poisoning from retained membranes as due to malaria. In spite of her steady progress toward recovery, after Dr. Murray had made intra-uterine injections of an antiseptic fluid, her physician continued to deprecate the use of the douche as meddlesome midwifery.

As a prophylactic measure the intra-uterine douche is sometimes indicated in what are regarded as quite normal labors. In cases in which there is a prolonged second stage, during which the acrid discharges are constantly bathing the vaginal canal, the uterus subsequently relaxing easily, the patulous condition of the genital tract allows of the easy introduction of germs. The douche in such cases not only cleanses the canal, but the effect of the hot water is to promote permanent contraction of the uterus and to close its sinuses. Long labors, even where instrumental aid has not been given, are frequently followed by fever. The shorter the labor, other things being equal, the greater the safety in the puerperal period. When the hands or instruments are introduced into the uterine cavity for the purpose of removing the placenta, etc., there is likely to be more or less bruising and infection of the genital tract, and the douche will have the effect of washing away clots and disinfecting the injured tissues with which it may come in contact. There are also cases in private practice as well as in hospitals of patients showing marked prostration and fever during confinement, being surrounded by an atmosphere favorable to the development of sepsis. In many such conditions one intra-uterine douche, given after labor, would, he thought, render the entire genital tract antiseptic, and avoid fever and the necessity for subsequent interference. When, subsequent to delivery, the lochia become scanty and there is a suspicion that all is not well, one should not content himself with the fact that the lochia are not fetid, but should make a careful examination of the genital tract, and if the cervix be in a patulous state, and the finger has a fetid odor, the indications are to cleanse the uterus at once. The guide to be followed is the septic or the aseptic condition of the uterine cavity. If after the first washing chill and fever occur, and the lochia become fetid with no other apparent cause, the uterus should again be douched. The only instruments required with which to make the douche are a long rubber tube to attach to the intra-uterine tube, the latter made preferably of glass; a thermometer, a sheet of thin rubber cloth, a proper supply of hot water of a temperature of 110° F., and instruments with which, if necessary, to curette the uterine cavity.

The objections which had been urged against the douche were, the disturbance of the patient, the introduction of the finger or tube into the uterine cavity, and the possibility thereby of bruising the parts and causing infection; after the injections, the danger of collapse, the forcing of air into the veins, and the passage of the tube into the peritoneal cavity. In answer to these objections, the author drew attention to the fact that the patient is not lifted at all, but is merely moved around to the edge of the bed, nor is the head raised to endanger syncope; no air can be introduced with the tube, as the water flows during introduction and withdrawal; if introduced properly the endometrium will not be injured; shock, collapse, and peritonitis may be avoided by the assistant firmly grasping the uterus, not pressing downward, but preventing distention of the uterus, and by keeping the cervix patent with the finger. Carbolic-acid or other poisoning by the injected fluid cannot occur if firm contraction of the uterus is maintained, during the injection and subsequently, by ergot. Iodoform had been employed occasionally for protection of the mucous membrane, but Dr. Murray thought it concealed the odor of the lochia, and in that respect is objectionable. The injection should always be made by the physician, and never by the nurse. Only a limited number of labor cases require the intra-uterine douche, but in the classes described it is necessary.

Dr. Andrew F. Currier thought the value of the intra-uterine douche in sepsis after labor had been fully proved, but he did not think it should be used in every case of labor, merely as a prophylactic measure. He had found the Chamberlain glass tube excellent, and the only other quality which he could desire it should possess is that of flexibility. He referred to a case in which a flexible tube was allowed to remain in the uterine cavity after the first washing, and it decidedly favored drainage and facilitated subsequent injections.

Dr. H. J. Boldt did not change the patient's position in bed, but used an ordinary bed-pan as a receptacle for the outflowing douche. To equalize the inflow and outflow he constricts the tube through which the fluid escapes, near its attachment to the bed-pan. He uses plain hot water. By leaving a gum-elastic catheter in the uterus, and employing a fountain syringe, the nurse can make the injection without the aid of the physician. When it is necessary to make a single injection for prophylaxis, as in cases in which the attending physician has neglected antiseptic measures, while introducing the hand or instruments into the uterus, he employs an antiseptic solution.

Dr. Malcolm McLane drew attention to the fact that the holes in the Chamberlain tube sometimes extend down as far as four or five inches from the end. They should be limited to within two inches of the end.

Dr. A. P. Dudley uses ergot in every confinement case, and thinks it prevents the development of sepsis. He has never seen any harm from it. He could not see the necessity for using an antiseptic in the injected fluid, and emphasized its dangers.

Dr. H. J. Garrigues preferred corrosive sublimate as the antiseptic (1 to 4,000), limiting the quantity to within three pints. He employed iodoform pencils after the injections, which rendered it unnecessary to use the douche oftener than once in twenty-four hours. The uterus should be squeezed out after the injection, to empty it of the poisonous fluid. Chloride of zinc should be applied to diphtheritic spots.

Dr. P. F. Mundé said that when he is called to a puerperal case in which there is a rise of temperature and offensive discharge, he proceeds at once to introduce the finger into the uterus, and finding membranes or clots, removes them, and then makes an injection of hot water. Corrosive sublimate should not be used in any of these cases; poisoning has resulted so frequently that he considers its use bad practice. Its germicide properties in washing out the uterus are of no value. When there is nothing in the uterine cavity to be washed out, irrigation is useless, if not worse than useless. He does not always expect the temperature to be reduced by the douche; for if that were the case, death would never result during the puerperal state, as it would only be necessary to use the intra-uterine douche. If the temperature does not go down, he looks for other remedies. He had seen most decided chill and subsequent rise of temperature follow hot irrigation. Severe shock has also attended its use. He wished to call attention to the fact that intra-uterine irrigation may be dangerous, and it should not be employed when not called for. He had seen it used in active peritonitis or cellulitis. He would not use the iodoform pencil in the uterine cavity. In fact, he doubted whether it has any germicidal properties.

Dr. Murray, in closing the discussion, said he believed with Dr. Mundé, that danger attends the use of the intra-uterine douche, and therefore it should be used with care, and only in cases in which it is indicated. A patulous os shows subinvolution, and when the finger has a foul odor after introduction into the os, it is an indication of some form of decomposition there present, and the douche is indicated. An antiseptic is necessary to check commencing decomposition on the surface tissue, which washing with simple water will not disinfect. Bichloride of mercury is the best agent for this purpose. He employs ergot, as a rule, but closure of the mouths of the sinuses and veins will not alone prevent absorption of septic matter when this is present. When the system has once become poisoned with septic material, washing out the uterus alone will not cure the patient; but it should be employed sufficiently to prevent further infection. There may be other causes of puerperal fever than absorption of septic matter from the uterus.

The Uterine Lochia in the normal puerperal state contains no micro-organisms, and may be introduced into the bodies of animals without harm. The vaginal lochia, however, always contains a number of germs of various kinds, which will, when injected into animals, cause abscesses. In fever there are septic germs in the uterine lochia. Such are the results of a bacteriological research made by Dr. Döderlein, of Leipzig.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting held Tuesday, February 8, 1888.

C. L. Dana, M.D., President, in the Chair.

Dr. J. B. Emmerson presented a pile of

RECTANGULAR PRISMS IN A SINGLE FRAME.

The pile consisted of Nos. 2, 4, 6, 8, 10, 12, 14, and 16, which were fixed, and two additional prisms, Nos. 1 and 16, which were movable. By subtracting, Nos. 3, 5, 7, etc., were obtained; and by adding, Nos. 18, 20, 22, etc. The apparatus was used in the same way as ordinary prisms, the advantage claimed being increased facility in rapidly changing one prism for another. The muscles could be tested in one-fourth the usual time. The cost was $16; the ordinary set costs $12.

Dr. Ira Van Gieson presented specimens of

THE BRAIN-CORTEX STAINED BY GOLGI'S METHOD.

Blocks, one to two cubic centimetres in dimensions, were subjected to the action of a two to five per cent. solution of bichromate of potash. The time required for hardening varied with the temperature. A constant temperature of 20° to 25° C. was preferred. In the summer, hardening was completed in fifteen or twenty to forty or fifty days. In winter, five to fifteen weeks were required. In changing the bichromate solution its concentration was increased up to five per cent.

After hardening, the specimen was placed in a solution of nitrate of silver, three-fourths of one per cent. as an average. Where the hardening was incomplete, one per cent. solution might be required. The same result could be obtained by immersion in a corrosive sublimate solution of one per cent. strength, but months were required by this method. The speaker thought it also less certain than the one described. Both methods had been modified by Pal, of Vienna. The modification required the immersion of the silver or sublimate sections in a one per cent. solution of sodium sulphide, which produced a more complete precipitation in the finer processes.

The object of the method was the staining of ganglion-cells and processes, the matrix being left clear.

Literature in connection with the subject was cited, as follows:

1. C. Golgi: "Recherches sur l'Histologie des Centres nerveux," Arch. Italiennes de Biologie, vols. iii., iv., 1883.
2. C. Golgi: "Sulla fina Anatomia degli Organi centrali del Systema nervoso," Milano, 1886.
3. Professor Forel: "Einige hirnanatomische Betrachtungen und Ergebnisse," Arch. f. Psychiatrie, Bd. xviii., No. 1.
4. Bleuler: *Correspondenzblatt f. Schweitzer Aertzte*, March 15, 1886.
5. J. Pal: "Ein Beitrag zur Nervenfarbentechnik," *Med. Jahrbuch der K. K. Gesellschaft*, 1886, No. 8.
6. C. Mondino: "Recherche macro e microscopiche dei Cerebri nervosi," Torino, 1886.
7. Marchi: "Sulla Struttura dei Corpi striati e Thalami ottici" (Memoir dal Instituto Lombardo di Scienze e Lettere, 1887).
8. Tara Tufi: "Sull' Anatomia della Retina," *Internat. Monatsschrift f. Anat. u. Phys.*, Bd. iv., Heft 10.
9. L. Petrone: "Sur la Structure des Nerfs cerebro-rhachidiens," *Internat. Monatsschrift f. Anat. u. Phys.*, Bd. v., No. 1.

Dr. Dana also presented specimens stained by Golgi's method. He had not so far been so successful as Dr. Van Gieson, but in a few specimens he had got staining which showed one interesting peculiarity of the method, viz.: that it at times stained cells of one class; at others, those of another. In his sections the connective-tissue cells only were stained, but these were shown in a striking manner. Obersteiner had stated that by the sublimate method only about one-tenth of the cells were stained. The speaker thought that Golgi's method was a truly epoch-making discovery, comparable to that of Weigert for the nerve-fibre, but, naturally, great care would be required in drawing conclusions from what was seen. He presented Marchi's monograph on the structure of the optic thalamus and corpus striatum, in which it was shown that the cells of the former ganglion were chiefly of the motor type, and those of the latter chiefly of the sensory.

Dr. Sachs asked whether any facts had been demonstrated by Golgi's method which had not been shown by others.

Dr. Van Gieson replied that we have no other method which will stain the ganglion-cell. Golgi's method had shown the axis-cylinder as a branch of the nerve-cell. It had shown, also, that the protoplasmic processes do not inosculate.

Dr. Birdsall objected to this inference. We had no means of knowing that, even by this method, the whole of the process was stained. By Golgi's method we could trace the process farther than by other methods, but we could not say that finer subdivisions, which the precipitate failed to indicate, did not exist.

Dr. A. D. Rockwell read a paper on

NEURASTHENIA AND LITHÆMIA.

A diagnosis of neurasthenia was often made where the stomach and liver were chiefly at fault. Neurasthenia, on the other hand, was often mistaken for lithæmia. Mental depression was common to both; but irritability was peculiar to lithæmia, and the tongue was coated and the pulse slow rather than fast. Neurasthenia presented many symptoms; those of lithæmia were few, and cases were much alike.

In treatment, lithæmia responded to mineral waters and restricted diet; while in neurasthenia relief from work and anxiety, and increased feeding, were required.

Dr. Birdsall remarked that the term neurasthenia was used to cover a variety of nervous disorders not due to organic disease. The term lithæmia also was commonly used in a vague and incorrect manner. He thought it impossible to make a division between the clinical features of the two conditions. There were many intermediate cases which would disprove any classification. All were probably but parts of a vast group of nerve-disturbances based upon faulty conditions of nutrition. Absence of anxiety and rest had a direct effect upon digestion. The results of treatment presented no ground for the conclusions named. Heredity was a marked factor.

Dr. Sachs stated that for a long time he had been sceptical of a true set of lithæmic symptoms, but that he had found them in private practice, and had followed up a number of cases. He agreed with the previous speaker in regarding neurasthenia but a nervous disturbance, of which lithæmia might be an etiological factor. Lithæmia had been, in his experience, almost limited to women of the wealthy class, suffering from an inactive life. Nervous symptoms were proportioned to the amount of uric acid in the urine. With increased exercise or prolonged massage, the uric acid disappeared and the patient improved. Referring to the question of heredity, he considered cases with hereditary lithæmic tendencies as gouty, and when neurasthenic, he classed them as cases of neurasthenia upon a gouty basis.

In treatment, he agreed with the reader of the paper. For lithæmia he used cholagogue cathartics, physical exercise, and massage.

Dr. Birdsall explained that he had referred to the inheritance of neurasthenia, not of the lithæmic symptoms.

Dr. Leszynsky had met with cases which merited the name lithæmic neurasthenia. He recalled a case in which nervous symptoms had alternated with gouty manifestations. He had watched this case for two months, during which no diagnosis but that of neurasthenia could be made. At the end of that time a true gouty attack had developed. While the gout lasted the nervous symptoms were absent, but these returned when the gout disappeared. Concentration was common in neurasthenia and other states.

The speaker added that the late Dr. McBride had been accustomed to say that all neurasthenia was caused either by lithæmia or muscular anomalies.

Dr. Emmerson had seen neurasthenia cured by the correction of errors of refraction and muscular anomalies.

Dr. Dana favored the classification of neurasthenic symptoms into further clinical groups, the subdivisions to be based upon the etiology, symptomatology, and the chief seat of the disorder.

Etiologically, there were the hereditary and the acquired forms. Among the acquired were to be placed the lithæmic, etc. He did not think that lithæmia could be sharply separated from neurasthenia.

Symptomatologically, there were the irritative and the depressive forms.

Anatomically, there were the cerebral, gastric, and sexual forms. By establishing symptom groups, we might eventually make some progress in dealing scientifically with what was at present a vague condition. In the classification here, as in insanity, the various factors above indicated would for the present have to be used.

Dr. Rockwell explained that he had not represented neurasthenia and lithæmia as separate types of disease. He had not said that there was a distinct dividing line between them. He agreed at to the lithæmic origin of neurasthenia in some cases. There was, however, a distinct difference in the behavior of certain cases toward food. In the purely nervous case an abundance of albuminous food was indicated, while in lithæmia the quantity of such food was to be curtailed. Notwithstanding the existence of intermediate cases, there were others which were distinct, requiring distinctive treatment.

Dr. Dana asked whether Dr. Rockwell excluded albuminous food in lithæmia.

Dr. Rockwell replied that he did. He had, indeed, cured himself of excessive irritability, accompanied by lithæmia, by dispensing with meat and living mainly on a farinaceous diet.

Dr. Dana referred to the fact that Dr. Draper had, in the Practitioners' Society, about two years ago, recommended a purely nitrogenous diet in these cases, and this was, he believed, the prevalent habit in treating lithæmia, as ordinarily understood. He had followed it in his own practice, but latterly with a conviction that it did not always answer.

Dr. Birdsall stated that he, too, had followed Dr. Draper's rule. In defective digestion, sugars and starches were many times at the bottom of the trouble. Fats, too, were often the offending agent. It was not even known that uric acid was the poison in these cases.

Dr. Sachs, in his treatment, preferred non-nitrogenous to albuminous food.

Pathogeny of Hydatid Urticaria.—Urticaria sometimes follows the puncture of hydatid cysts and the spontaneous rupture of them into the peritoneum. Some slight irritant in the hydatid fluid, becoming absorbed into the circulation, is held to be the mechanism of production of the urticaria. M. Debove has attempted to prove the truth of this theory by injecting hydatid fluid into the subcutaneous tissues of individuals never having had nettle-rash. In one nothing happened; the second developed a local urticaria; and the third showed characteristic swellings about the site of puncture, and four large plaques on the posterior part of the trunk, twenty minutes after the injection; six hours later there appeared a confluent and typical eruption on the front of the arms and forearms. This kind of experimentation, from a logical point of view, is not perfect. A much larger number of injections should have been made to be of value, because different individuals vary greatly in their mode of response to mere injections of apparently inert fluids. Nevertheless, the observations are interesting, though made by experimentation which would hardly find favor in England.—*The Lancet*, January 7, 1888.

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

ANALGESIC ACTION OF ANTIPYRINE—CAUSE OF DEATH FROM INHALATION OF COAL-GAS.

PARIS, February 24, 1888.

AMONG the numerous therapeutic applications of antipyrine, Dr. Legroux, physician to the Hôpital Trousseau (hospital for children), has lately brought to notice its value in the treatment of chorea. The analgesic action of antipyrine, explained by its influence on the elementary nutrition of the nervous system, extends also to the motor sphere. In an experiment performed at a meeting of the Société de Biologie, Professor Bouchard demonstrated that if one of the sciatic nerves of an animal under the influence of antipyrine be cut, the ensemble of the muscular system enters into resolution, with the exception of those muscles which receive nervous filaments from the divided sciatic nerve. Guided by the observations of Dr. Dujardin-Beaumetz concerning the sedative action exercised on the reflexes by the nervous antithermic agents, Dr. Legroux experimented with antipyrine in the treatment of chorea. He cited six cases of cure of the malady, more or less ancient, obtained by the administration of three grammes per day during a period extending from six to seventeen days, and without the manifestation of any sign of intolerance for the drug. This is considered a great therapeutic victory, as the affection in question, the average duration of which is from seventy to eighty days, may now be suppressed in the course of a few days.

Antipyrine has also been employed for arresting hemorrhage, whether external or internal, but at a recent meeting of the Société de Thérapeutique it was shown that the internal administration of the drug for this purpose was of no value, but externally it was a powerful styptic and antiseptic.

Like all drugs that have a certain vogue, antipyrine has been much abused by its too indiscriminate use in almost every case that is now brought to the notice of the physician. At a recent meeting of the Academy of Medicine, Professor Ball read a note for Dr. Oscar Jennings, in which the author brings to notice some of the toxic effects of this most useful remedy. He related, among others, the case of an old lady affected with chronic rheumatism. On January 23d, Dr. Jennings prescribed two and a half grammes of antipyrine, to be taken daily. On January 31st this patient was surprised to find her arms covered with an erythematous eruption. On the following night the feet were icy cold. On the next day the face became red and swollen, the eyelids almost completely closed by the swelling. The rash became generalized, the patient lost all appetite, and she felt a peculiar sensation as if her whole body were filled with ice. The next day the eyes presented a catarrhal conjunctivitis, which would give one the idea of an iodic intoxication. The body temperature was lowered. These symptoms were combated by the administration of a few doses of the tincture of belladonna, and, of course, the antipyrine was suspended. A rather warm discussion followed, in which Professor Germain Sée took the most active part. He expressed his surprise that the patients treated by Dr. Jennings with antipyrine should have been affected as described by him, and he can only attribute the result of the administration of antipyrine, in the cases referred to, to idiosyncrasy, as he had frequently administered the drug in much larger doses without any evil effects resulting therefrom. He vehemently protested against the employment of belladonna or atropine, as recommended by Dr. Jennings, to combat the toxic effects of antipyrine, as being irrational and dangerous.

M. Gréhant has analyzed the gas which proceeds from the combustion of coal-gas, or that employed for lighting, and he submitted, at the last meeting of the Société de Biologie, the following as the result of his researches. He ascertained that the air in which a gas-lamp burns contains as much as 5 c.c. per cent. of carbonic acid, and that the oxygen diminished to a little more than half of its normal proportion. He therefore concludes that, in the rooms where there are one or more gas-lamps burning, it would be advisable to place above them a small funnel communicating by a tube with the exterior, in such a manner as to prevent the vitiation of the air.

According to Dr. P. Bruneau, in an article published in the Annales d'Hygiène Publique, the author states that when coal-gas suddenly penetrates into the lungs, the victims are at once struck down. More frequently the grave incidents which precede the prodromata are more or less intense and durable, such as a peculiar languor, inappetence, cephalalgia, followed by giddiness, nausea, and even vomiting. To these symptoms, which disappear when the patient removes from the place, succeeds a profound trouble of all the faculties, and in an instant there is total loss of consciousness and prostration of strength. The respiration is affected and death soon follows, with the phenomena of asphyxia. These accidents may be observed as well among those who work in gas-manufactories as in private individuals who are daily subjected to the emanations of burning coal-gas, which emanations little or no attention is paid to, as one gets accustomed to them. In case of intoxication by the gas, the first indication consists in removing as soon as possible the patients from the place where they became affected, and in employing proper means to favor the oxygenation of the blood, and in stimulating the economy. Artificial respiration by different means should be employed, followed by inhalations of oxygen. The body should be well wrapped up and revulsives applied. Bleeding, at this moment, would have the good effect of preventing the accumulation of blood in the organs. It is even logic to believe that the organism would greatly benefit from the transfusion of blood into the veins, as it would have the effect of infusing new blood into the patient. If it be a case of medical jurisprudence, and it be necessary to ascertain the cause of death supposed to be due to burning gas, the expert may find himself perplexed in the case where the gas filtering through the soil should be freed of its odor. In such a case experiments should be performed on animals, such as dogs, for instance, in the place contaminated by the gas, and the phenomena presented by them should be properly studied and the blood submitted to spectral analysis.

OUR CANADA LETTER.

(From our Own Correspondent.)

A NEW DEPARTURE IN MEDICAL EDUCATION—MEDICAL RECIPROCITY—CANADIAN QUACKERY—NEW HOSPITALS—A PROVINCIAL MEDICAL LIBRARY—ACTION FOR MALPRACTICE.

March, 1888.

THE cause of higher medical education in Canada has, it is generally admitted, been strengthened by the establishment of a medical faculty in connection with the University of Toronto, an institution supported by, and under the control of, the Government of the Province of Ontario. The chief promoters of the scheme are now congratulating themselves on the successful inauguration of this strong arm of our national university. The various schools of medicine in the Dominion have been doing good work, but while this fact was admitted there has, for some years, existed a feeling in favor of having, in connection with the Provincial University, a faculty of medicine whose aims and efforts would command the sympathy and support of the profession and the general public. There has, too, during recent years, been a marked desire for a confederation of the various degree-conferring institutions of Ontario with the Provincial University, and a strong feeling that the consummation of such a union would raise the standard of education required for the different professions. Canada prides herself on the superiority of her educational institutions, and the increased interest shown in the welfare of her colleges and universities is certainly a hopeful sign of the times.

In these days, when Reciprocity has become the watchword of some of the politicians, the opinion has been expressed that steps should be taken to render more accessible admission to American physicians desiring to enter the ranks of the profession in the Canadian Provinces. At present, while every year Canadian medicos settle in different parts of the United States, the strict rules of our provincial medical councils are such as to exclude from practice all who have not passed through a regular course of four years of professional study (one session of which must be spent at one of our Canadian colleges), and passed the regular examination of the Medical Council. This final examination must be passed by everyone before a license to practise is issued, so that the young Canadian with his college-won M.D. must, if he desires to locate in his native province, submit to a second examination. The penalty for practising without the diploma of the Medical Council is a severe one, and the law is so well enforced that few irregulars are left. Canada has no homœopathic or eclectic schools of medicine.

The Dominion, however, cannot be regarded as a medical paradise, free from the presence of the genus quack. Occasionally some weak member of the fraternity, who has attained regular qualifications, falls from grace and, forsaking orthodox methods, enters the field, and with fulsome, bold advertisements proclaims his wondrous skill (?) through the public prints. Toronto, Montreal, and some other large cities are generally chosen as their abiding-places, and the smaller towns are spared the infliction of their presence, except when occasional visits are made by some of these worthies.

Canadian liberality has lately manifested itself in generous donations to several hospitals. The gift of $500,000 to Montreal by Sir George Stephen and Sir Donald Smith, for the erection of a new hospital in that city, has encouraged some of the citizens of Toronto to start a fund for the erection of another hospital in the Queen City, and the Hon. John Macdonald (not Sir John A.) has lately donated $40,000 for that purpose. The hospital accommodations of these two leading Canadian cities will be greatly increased by these munificent gifts. A new hospital for sick children is at present in course of erection in Toronto, and when completed will, it is claimed, be the most convenient and perfect children's hospital on this continent. The Medical Library Association of Ontario has had a successful commencement, and already a large number of valuable works have been contributed. The library is established in Toronto, but members of the profession in any part of the province can readily enjoy the privilege of membership.

An action for malpractice has recently been tried in Hamilton, the defendant being Dr. Leslie, an old and highly esteemed practitioner of that city. The plaintiff was the widow of a man who died during the administration of chloroform by Dr. Leslie. There was no evidence to show any lack of care or skill in the administrator, but the jury unfortunately failed to agree, notwithstanding the fact that nearly a score of leading medical men testified in favor of the defendant. The case may be tried again, and even if the doctor wins in the end, it is extremely questionable whether he can recover his costs. As Canadian law at present stands, any practitioner, no matter how careful, may be subjected to an expensive trial by an irresponsible patient, who is not asked to give any security for costs. This leaves many a medical man who may win his case with the reflection that, although he has vindicated himself, he has little or no prospect of collecting the expenses of the trial from the person who has subjected him to so much annoyance. It is generally the worthless that bring such suits. The feeling prevails that in such cases trial by jury, that fossilized bulwark of English liberty, is little short of a huge farce. It does seem absurd that the treatment of a case by a medical man should be pronounced upon by a body of men utterly ignorant of the intricacies of medical and surgical cases, and susceptible to sentimental influences which too frequently influence decisions in such cases.

INSUFFICIENCIES OF THE OCULAR MUSCLES.

To the Editor of The Medical Record.

Sir: In your issue of February 4th, Dr. Stevens, not satisfied with all the authorities already cited, makes a request for some more, in regard to the insufficiencies of the ocular muscles, and particularly in regard to insufficiency of the externi and the tenotomy of the internal recti where there is no strabismus.

Turning to Donders[1] we find quite an elaborate discussion on this subject, in which the following occurs: "We may also assume that, even when asthenopia existed without strabismus, the rest, which the patient had to observe for some time after the operation, caused the fatigue on endeavoring to read to occur less quickly. Besides, it is easy to understand that when the musculus rectus internus was cut through, stronger tension of the accommodation, with convergence of the visual lines to a certain point, became possible." Can it be possible that Donders also does not know the difference between insufficiency and strabismus? Donders then refers to Bonnet, "for whom the priority of the application of the division of the muscles in these cases is claimed." Bonnet's work appeared in and about 1841. Thus we see that cutting of the internus where there was no strabismus is at least some fifty years old.

Now as to the detection and treatment of insufficiency of the externi. In a paper written some twenty years ago (1868) the writer dwells at some length upon the existence of insufficiency of the externi, and declares that it may depend upon three causes:

"1. Through an abnormal preponderance of either volume or force of the interni over the externi recti muscles, which may in themselves be below the normal standard.

"2. From faulty insertion of the muscles themselves.

"3. From a state of debility, either temporary or permanent."

Furthermore, a division is made into "actual and apparent insufficiency"—"actual where the weakness is inherent to the muscles themselves, apparent where it is due entirely to the efforts of the accommodation to overcome the error of refraction."[2]

In the same paper, p. 114 (1868), it is stated: "This fact led Giraud Teulon to express the belief that there was the same inherent tendency in hypermetropic eyes toward weak externi that there was in myopic eyes toward weak interni."

Also, "that in non-squinting hypermetropic eyes (under certain conditions) there is an absolute insufficiency of the externi, which shows itself the minute the colored glass is placed over one eye by homonymous images."

In another paper, written the same year, there is rather a lengthy discussion of insufficiency of the externi, with five cases, in which it is expressly stated there is no strabismus, and no double vision unless it was produced artificially by the colored glass. And here I stop to remark, by the way, that occasional double vision, where the images separate for a moment and then coalesce, is one of the surest signs of insufficiency that can be had. And I should also like to add, what is indeed well known to most oculists, that the colored glass, by reducing the instigation toward binocular single vision, will invariably bring out an insufficiency of the externi, if of a high degree, without the use of the prism; and that when it does, it is the surest test we have, for the reason that it does not produce a displacement of the images, but only reduces the instigation toward binocular single vision.

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[1] Accommodation and Refraction, p. 273. 1864.

[2] Transactions of the American Ophthalmological Society, p. 115 et al. 1868.

In 1869 the writer again returned to the subject, in a paper entitled "Relative Accommodation in Strabismus and Insufficiency of the Recti Muscles," and insufficiency of the externi are treated of in emmetropia, hypermetropia, and myopia. It is very evident that Dr. Stevens has never read Donders, or Bonnet, or Guerin, or Philips, or, indeed, even my own three papers just cited.

It is in this last paper that the case was reported as having been operated upon as a case of "insufficiency of the externi," but which Dr. Stevens says was not a case of insufficiency of the externi, but a case of strabismus, because the patient had homonymous images at twenty feet, and diplopia, which continued up to eight inches. Dr. Stevens forgets to state that the diplopia was produced under a colored glass and a prism. This omission is not, I think, wilful, but simply because Dr. Stevens is not very well acquainted with the physiological principles of binocular vision, and the effect upon it of the colored glass. I cannot otherwise account for this suppression of facts. Neither Graefe nor anybody else would have called it anything but a case, exaggerated if you will, of insufficiency of the externi.

Here is another one just like it, but of less degree. L. T——, has 18° of insufficiency under colored glass at twenty feet; images do not coalesce until the candle reaches six inches. Without my knowledge the patient saw Dr. Noyes for another opinion. Dr. Noyes informs me by letter, "the muscular conditions are pre-eminently those of insufficiency of the externi."

But besides the cases related there is this general statement in the same paper, in relation to insufficiency of the externi, to the effect that, "if a marked degree of insufficiency of abduction is shown, a tenotomy is, in my opinion, not only justifiable, but necessary, notwithstanding the fact that no actual strabismus exists." [1]

In the face of this, and all that has preceded it, Dr. Stevens declares, "the first notices of cases of treatment of insufficiency of the externi, in which no strabismus existed, and in which important results were obtained, were reported by myself in various papers, from 1876 forward." [2] That is to say, eight years after my own publication, ten years after Pagenstecher, and forty years after Bonnet and his colleagues divided the interni for preponderance of power over the externi in cases in which there was no strabismus. It is simply impossible to argue against such statements, and I will leave this matter here.

It would appear to me that Dr. Stevens is wrong in regard to my accusing him of want or originality. It was rather that I thought he had been unjust to the illustrious Graefe and others; for instance, every one of the tests for insufficiency are von Graefe's which are mentioned in Dr. Stevens' work, together with the measurement of the adduction and abduction of the muscles, and yet Graefe's name is connected with only one of them, and that in its oldest form. In regard to my own want of originality I have no objection to make, for an elementary text-book must be, perforce, about "as original as wind in bellows," as Lowell has it. As a matter of fact, however, in regard to the colored drawings, there are fourteen of them, all told. Seven of these are original with the book, four are Jaeger's, and three are Liebreich's. I am free to confess, moreover, that if I could have found among the drawings of these masters, ones that were suitable for the particular points I wished to illustrate, there would not have been a single one of my own among the entire lot. It is not the newest of a kind, but the best of a kind that a student wants, and should have. As all the foreign ones are accredited to their rightful authors, and as my own are unsigned, I can easily see how, to those not very conversant with ophthalmic literature, the drawings should appear to be all foreign.

Yours truly,
E. G. LORING.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from February 19 *to March* 3, 1888.

VOLLUM, EDWARD P., Lieutenant-Colonel and Surgeon. Granted leave of absence for four months, with permission to go beyond sea and to apply for an extension of two months. S. O. 41, A. G. O., February 20, 1888.

GARDNER, E. F., Captain and Assistant Surgeon. Granted leave of absence for one month and twenty-one days. S. O. 41, A. G. O., February 20, 1888.

APPOINTMENT.

SHILLOCK, PAUL, to be Assistant Surgeon, with the rank of First Lieutenant. January 31, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 3, 1888.

HEYL, T. C., Surgeon. Orders to the receiving ship St. Louis revoked.

WHITE, C. H., Surgeon. Present duty continued to October 1, 1888.

STREETS, T. H., Surgeon. Ordered to the receiving ship St. Louis.

DRENNAN, M. C., Surgeon. Ordered to the receiving ship Vermont.

BRUSH, G. R., Surgeon. Detached from the receiving ship Vermont, and ordered to the Pensacola.

MEANS, V. C. V., Passed Assistant Surgeon. Detached from Naval Hospital, New York, and ordered to the Pensacola.

HOEHLING, A. A., Medical Inspector. Detached from the Pensacola, and wait orders.

HARMON, G. E. H., Passed Assistant Surgeon. Detached from the Pensacola, and wait orders.

EDGAR, J. M., Passed Assistant Surgeon. Detached from the Pensacola, and wait orders.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 3, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	10	3
Scarlet fever	151	25
Cerebro-spinal meningitis	8	6
Measles	63	6
Diphtheria	149	41
Small-pox	7	0
Yellow fever	0	0
Cholera	0	0

THE CAUSE AND CURE OF ABNORMAL SEXUAL DESIRE.—A philosophical and ascetic writer in the *Medical Standard* says the following regarding abnormal sexual desire: "In the great majority of cases sexual desire, which cannot be healthily controlled by the will, is due either to constipation, improper food, improper clothing, improper literature, ascarides, leucorrhœa, or analogous causes. Satisfaction of sexual desire will not remove these causes. Until they are removed the satisfaction of it in any way is but adding fuel to the flame. The results of so-called sexual starvation are due to partial sexual gratification in an abnormal, albeit unconscious, way, not to abstinence from sexual intercourse, and are cured by it. Cold sponging, proper diet, proper clothing, proper literature, and proper attention to the rectum will cure all cases of sexual starvation, except such as are reversions to the savage type of unrestrained debauchery, or depend upon cerebral or spinal disease or malformation. In the first case, training is indicated, and in the last, hospital treatment, not marriage or sexual intercourse. Christianity teaches restraint of the 'old man Adam.' Evolutionary ethics teach that the higher the organism, the better developed and the greater the checks on the primitive instincts of the race. Where theology, the dominant philosophy, and clinical experience join in condemning a procedure of doubtful morality intended to benefit one individual at the possible expense of another, the physician incurs a great responsibility who prescribes it."

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[1] Transactions of the American Ophthalmological Society, p. 40. 1869.

[2] Functional Nervous Diseases, p. 207.

New Bandage for the Eye.—Dr. Wolfberg recommends a new material for use as a bandage in cases of ophthalmic disease. It is made by Eugen Müller, of Düsseldorf, who has named it "Hydrophilous Paper for Eye Bandages." It consists of linen and cotton wool, made in the form of paper, and impregnated with twenty-eight per cent. of glycerine. When used it should be saturated with a disinfecting fluid, squeezed, and then placed over the eye, wet wool being applied as an external dressing.—*Zehender's Zeitschrift*, September, 1887.

The Society of St. Luke, St. Cosmos, and St. Damien held its annual reunion in Paris, on October 17th last. There was a large attendance of physicians and students. On the first day several scientific papers were read and discussed, and on the second day, which was the feast of St. Luke, the members attended mass in a body at the Church of the Sacred Heart at Montmartre. The associate members of the Society at Lille also held a reunion at the same time. The Society is composed of French physicians who hold to the truths of Christianity, and its object is to oppose the spread of infidelity among the physicians, and especially the medical students, of France.

Gouty Urethritis.—Gouty urethritis is a disease the existence of which is not by any means universally admitted, but, in a thesis published in Paris by M. Turbure, some observations are made which claim attention. The discharge, he states, in gouty urethritis appears suddenly, and is abundant, and at first thick. Its color and nature is that of ordinary gonorrhœa at the acutest period. The pus is yellowish green, and it gradually diminishes in quantity and consistency, until it disappears. The functional symptoms which accompany this urethritis are said to be almost negative. The inflammatory reaction is *nil*, there is no redness, and no swelling of the meatus. No pain is caused during micturition, and no burning sensation is noticeable in the urethra. In some cases, however, there is more or less complaint of pain. The prognosis is generally favorable, because, in the opinion of the author, general treatment is all that is necessary to bring about a good result.—*Medical Press.*

Nutrient Enemata.—Physicians will generally indorse the conclusions of Professor Ewald, of Berlin, who has recently made some experiments with different nutrient enemata, and has found that enemata of eggs were of decided service, and that they were as efficient and satisfactory without being peptonized as when they were subjected to this process.

Masturbation in Women and Girls.—The vice of masturbation is far from being limited to the male sex. The ancients designated female masturbators as *tribades* (*tribein*, to rub), and the Lesbian women from the time of Sappho, that ancient erotic woman, had the reputation of solitary sacrifice to Venus. There is evidence that phalli of wax or of wood were offered publicly for sale among the Romans, as now among the Chinese. That the odious practice has come down to modern times is also evident enough, and more than one romance of our day has called attention to the prevalence of the solitary vice (tribadism) among women. Instances of each of the three following forms of masturbation frequently come under the notice of the physician: vaginal, clitoridian, urethral. Of these three forms, the clitoridian (simple titillation or friction of the clitoris by the hand) is the most common. Peculiar movements of the body, often calculated for this end, may accomplish the same titillation of the clitoris ending in voluptuous spasm. In one large tailoring establishment Pouillet found a number of girls who had become addicted to masturbation by the use of the sewing-machine; they had learned the habit of sitting in such a posture that the motion of the feet on the treadle brought about a pleasurable friction of the clitoris by the thighs. A confirmed female masturbator will practise the vice by rubbing the genitals against the arm of a chair, the corner of a piece of furniture, or even by divers contortions of the body. Vaginal and urethral masturbation has sometimes resulted in the lodgement of foreign bodies in those passages, and the intervention of the surgeon to remove the foreign body has been necessary. Dupuytren in one instance extracted a *tin cup* from the vagina of a confirmed masturbator; and, in another, a needle-case, introduced into the urethra, was successfully removed, after being present in this canal for a month. The list of substances used for the purpose indicated is varied: from spools, needle-cases, bottles, glass cups, etc., in the vagina, to needles, ear-picks, pieces of wood, and hair-pins in the urethra. Confirmed victims of secret vice have been known even to provoke titillation of the uterus by hair-pins, pieces of reed, etc., as in an instance recorded in the *Journal de Médecine et de Chir.*, vol. xiv., p. 70.—*Medical and Surgical Reporter.*

The Seat of the Ano-vesical Centre.—A case observed by Professor Rosenthal, together with one by Kirchoff, seem to show that the ano-vesical centre is in the conus terminalis of the spinal cord.

Plaster-of-Paris in the Treatment of Club-foot.—Dr. Burrows, of Lindsay, Ontario, referring to the article by Dr. Post on this subject in a recent issue of The Medical Record, writes that he has for years been in the habit of encasing the foot in plaster-of-Paris immediately after operation. He reported in the *Canada Lancet*, in 1878, a case in which the plaster was applied the day following the operation, and since that time he has been accustomed to put on the splint immediately after the performance of tenotomy. In order to avoid the frequent renewal of the splint, he removes a small piece of it from over the internal malleolus, in talipes varus, and after bending the foot outward fills up the space with fresh plaster. The writer also uses a padding of cotton under the plaster, in order to allow for shrinkage and to protect the parts. In the case of a young child he employs the plaster-of-Paris alone without previous tenotomy.

The Eyes of School Children.—Dr. H. P. Allen, of Columbus, O., was appointed by the Board of Education, of that city, to examine the eyes of the children in the public schools, and the results of his examination are now published in the report of the Board for 1887. The examinations were made chiefly to determine the condition of vision of the children, and to find, in cases where vision was defective, the correcting-glasses. The number of children examined was 4,700, and of these 1,175 were found to have defective vision in one or both eyes, 936 of whom had trouble in two eyes. The prevalence of near-sightedness increased steadily from no per cent. in the primary schools to thirteen per cent. in boys, and seventeen per cent. in girls, in the senior class of the high school. And, according to the ages of the scholars, it increased from no per cent. at six years to eleven and three-tenths per cent. at seventeen years. Other defects were about equal in the different classes, showing them to be independent of increasing age and increasing demands upon the eyes. Of all the children who were found to require correcting-glasses, only about ten per cent. had them.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 11 New York, March 17, 1888 Whole No. 906

Original Articles.

THE TREATMENT OF FLAT-FOOT.[1]

By BERNARD ROTH, F.R.C.S.,

ENGLAND.

I am glad to be able to comply with the request of my friend Dr. Gibney, to contribute to a symposium on the treatment of flat-foot, especially as some of my views have materially altered since I wrote the article on this common deformity in "Heath's Dictionary of Practical Surgery," upward of two years ago.

Flat-foot may be defined as a falling down or giving way of the normal arch of the foot, which may be so slight as to escape notice, except from the discomfort it causes, or be so severe that the whole tarsus presents as great a convexity inward as it ought to present a concavity, with the foot so everted that the internal malleolus touches the ground, while the outer border of the foot is raised, with the sole directed outward, as in some cases of infantile paralysis.

Sir James Paget speaks of "the constant pain and weariness of the lower limbs associated with flat-foot. The feet are elongated, flat, low, without insteps; the heels are too little prominent, the plantar arches sunken, the ankles thick; the astragalus, navicular, and inner cuneiform bones are below their right level. The pains complained of are those of the muscles and tendons, which are habitually overworked in the task of keeping the body erect when its proper bearings on its supports are disturbed." I consider this description applies to a severe case not due to infantile paralysis. Pain and much deformity are not always associated together; growing boys and girls approaching puberty are frequently brought to me, complaining of severe pain in the insteps, whose feet exhibit scarcely any deformity. Again, the severest cases of deformity, those due to infantile paralysis, frequently have no pain or discomfort in the feet, although sensation is perfectly normal. Flat-foot is, therefore, a very general term, and requires some sort of clinical classification if surgeons are to come to any agreement on the proper treatment. I think the best classification is one I proposed some years ago, viz.: (1) Cases in which it is possible to restore the foot completely to the normal shape by passive manipulation, without any force exerted by the surgeon, or by making the patient stand with the heels raised; (2) cases where the tarsal bones have become more or less fixed in their displaced positions by shortened ligaments and tendons, osseous deformity of the articulating surfaces, and fibrous or osseous anchylosis, which require forcible manipulation under anæsthetics to restore more or less of a normal arch; (3) intermediate cases, in which a partial restoration of the tarsal arch is possible without "brisement forcé."

A few words must be devoted to the causation of flat-foot, to enable us to obtain a correct view of the proper treatment. Mr. Le Gros Clark says: "In reviewing the action of the various muscles around the foot, it is obvious that their attachment is designed to preserve the plantar arch; and that such healthy condition must depend in great measure on the evenly balanced action of those muscles upon their several attachments. Thus the peronei and tibial muscles antagonize each other, and the expanded insertions of two of them into the tarsal bones is very instrumental in preserving the transverse as well as the antero-posterior arch."

I find that all infants on commencing to walk are normally flat-footed, without any tarsal arch, whereas after they have stood and run about a few months, and the leg-muscles have become developed, a perfect arch is formed. I have several times been consulted by an anxious mother about her baby's feet, when the child begins to run alone, the normal absence of a tarsal arch being at first exaggerated by a pad of fat opposite the plantar aspect of the tarsus. I have always been able to reassure her, and to tell her that the feet would become arched in time and the adipose instep-pad disappear, and the result has proved my prognosis to be correct.

Anything that tends to weaken the general muscular system during years of growth will also predispose to flat-foot. Thus I find that out of every three cases of lateral curvature of the spine two suffer from flat-foot, and every other one severely so. Flat-foot is also intimately associated with knock-knee; the one may follow close on the other, or both deformities may arise simultaneously.

Injury or chronic disease of one leg, throwing extra work on the sound limb, is also apt to produce flat-foot in the latter.

Although the bones of the tarsus are apparently so well supported by their ligaments and the tendinous prolongation of the muscles inserted in the sole, yet, as soon as these muscles shirk their work, from weakness or paralysis, undue strain is thrown upon the tarsal ligaments and they gradually yield, accompanied by more or less aching and pain, or none at all, according to the idiosyncrasy of the sufferer. At first there is no osseous malformation, and, so long as this is so, more or less complete restoration to the normal is possible; but in time the articulating surfaces become altered in shape, the bones distorted, and the ligaments so shortened and thickened that, even with extreme "brisement forcé," under anæsthetics, only a partial improvement is brought about. Indeed, the production of osseous deformity of the feet is caused in exactly the same way as is that of knock-knee. Flat-foot is therefore directly due to the weakness of the leg-muscles which are attached to the bones of the feet.

In the *treatment* of flat-foot we have to aim at the restoration and maintenance of the previously depressed plantar arch and the strengthening of the leg-muscles which tend to produce and preserve the normal arch of the foot. We have therefore to discuss (*A*) mechanical means for replacing and keeping up the plantar arch, and (*B*) therapeutic methods for strengthening the weak tibial muscles.

(*A*) In groups (1) and (3) a boot or shoe should be worn broad enough across the metatarso-phalangal articulations, best made from a tracing of the stockinged foot; and, if the toes are much deformed or displaced, the stocking should be digitated and the toes well spread out on the ground. The heel of the boot should be low and broad, not more than double the thickness of the sole in front. For raising the depressed arch I have employed for many years a pad made of superimposed layers of felt, and this, combined with treatment for improving the muscular power, has had good results; every now and then, however, a case proved very obstinate. For the last eighteen months I have discarded pads altogether, and I no longer insist upon laced-up boots being worn; indeed, the more freedom left to the movements of the ankle the better, and I therefore allow shoes to be worn when desired.

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[1] Read at the Meeting of the New York Academy of Medicine, March 1, 1888.

Instead of a pad which, if efficient, tends to bruise and irritate the already tender tarsus, I employ an increased thickening of the sole opposite the ball of the great toe, and on the inner margin of the heel, according to the method of my friend Mr. H. O. Thomas, of Liverpool. His theory of the mechanical production of flat-foot appears to me to be the most rational; it is that in the normally constructed foot the lower end of the tibia is placed too much toward the inner border of the foot, so that the tendency of the tarsal arch is to give way under the pressure of the weight of the body, and has to be constantly combated by the efforts of the strong leg-muscles inserted into the foot. If we had to create a new foot and leg, simply with the view of preventing flat-foot, we should plant the lower end of the tibia rather more toward the outer margin of the foot. The device of the wedge-shaped sole, with the base inside and the apex outside, tilts or rotates the foot on its longitudinal or antero-posterior axis and carries the lower end of the tibia toward the outer margin of the foot, and thus removes all or most of the pressure of the weight of the body as transmitted through the lower end of the tibia from over the tarsal arch, in the same way as in the imaginary newly created foot and leg. The increased thickness of sole is from one-fourth to one-half inch, according to the severity of the case; an addition of a corresponding one-fourth or one-half inch is added to the inner margin of the heel, and this thickness gradually diminishes to nothing at the outer margin, which should be protected by a thin plate of iron or steel studs to prevent further differences of level of the two halves of the heel from wear. The same remarks apply to the increased thickness of the sole, which gradually tapers to nothing at the tip of the sole, as well as at its outer margin. This wedge-sole can be applied to boots already worn, and is equally efficacious applied to shoes. I believe that the benefit obtained by valgus-pads under the depressed instep is really due to the patient being forced to walk on the outer border of the foot to avoid the discomfort and annoyance of the pad pressing against the tarsal arch. Boots made, and so much advertised, with movable or spring-like waists are useless, and even injurious if the spring is prolonged to the outer margin of the sole, where the foot ought to rest entirely on the ground. As the chief movement in walking is at the metatarso-phalangal articulations, it would be an advantage if this portion of the sole could be made of a more yielding leather.

In group (2), where the displaced arch cannot be replaced except by "brisement forcé," I would recommend this being effected by Mr. H. O. Thomas' club-foot wrench, under anæsthetics, and the foot kept in a suitable splint in the improved position till all symptoms of the traumatism have disappeared, and the patient then treated as in groups (1) and (3).

(*B*) Therapeutical methods for strengthening the weak tibial muscles: I know of no better exercise than walking on the toes with the heels raised an inch or so, taking care that they are not raised too much, for when the longitudinal or long axis of the foot behind the metatarso phalangal articulation is raised too vertically there is less work for the muscles, as much of the weight of the body is transmitted directly through the bones of the tarsus and metatarsus standing on end.

It is a good plan to order the patient to walk fifty steps on the toes before and after each meal.

The chief "medical gymnastic" exercises I employ are the two following: (a) is "sitting, foot inward circumduction, repeated forty times." The patient, sitting on the floor or couch, with the back supported and the knees extended, circumducts the foot down, in, up, and out, while the toes are directed inward the whole time; the knee and hip should be kept perfectly still. The leg should rest on a small pad just above the tendo Achillis, to leave the foot free. (b) is "sitting, foot adduction (surgeon resisting) and abduction (patient resisting)," repeated twenty times. The patient is placed in the same position as before; the surgeon fixes the leg just above the ankle with one hand, while the palm of the other exerts a gradually yielding resistance to the patient's effort to adduct and invert the foot. On the completion of the adduction the patient strives to maintain this position of the foot while gradually yielding to the pressure of the surgeon's hand gently pushing the foot back to the commencing position.

I sometimes employ another exercise, viz., walking on the outside edges of the feet with the soles directed inward and forward. Patients with flat feet will frequently assume this last position instinctively, to give relief to the overstrained ligaments of a displaced tarsus.

In cases of extreme weakness of the leg-muscles, rubbing (massage) of the leg-muscles for half an hour, once or twice daily, should be employed; for the technique, I can only refer those interested to my article "Massage" in "Heath's Dictionary of Practical Surgery."

Necessarily in cases of infantile paralysis, where the muscles have completely wasted, only the mechanical portion of the above treatment can be carried out, with the addition of an elevating spiral steel spring to lift up the foot, for clearing the ground during walking, if there is foot-drop.

In all cases due attention should be paid to the general health, and to the removal of all debilitating causes.

Such severe treatment as the removal of a wedge-shaped piece of bone from the tarsal arch, under antiseptics, does not appear justifiable, and I have not yet seen a case which offered any reasonable probability of this treatment being of permanent benefit to the mutilated patient.

The effects of the treatment I advocate begin to be felt within a week or two by the patient, and I seldom see cases where all pain and discomfort have not disappeared within three or four weeks, some even within a few days. For the cure of the deformity, even slight cases require several months, and for severe cases I generally find that a year or more of perseverance with the boots and treatment are necessary.

I append a typical case, illustrating the treatment above described.

Mrs. ——, wife of a member of the British Parliament, consulted me, July 7, 1884, with the following history: Two years ago she began to have discomfort in the feet after walking—"a feeling as if the ankles were too soft." The discomfort increased for six months, when she became a vegetarian, and, for a time, the pain in the feet was less. Since then the pain has become gradually worse up to the present. The patient is an active, extremely intellectual woman, fairly well nourished; menses still quite regular, but inclined to be rather profuse; she can only walk up and down stairs, or a few yards out of doors, and that with considerable discomfort. I found both feet severely flat (intermediate, or group (3)), with the pain and aching just under the arch of the instep, and described as "a dull, aching soreness" which becomes acute pain at times; standing causes even more pain than walking. On August 25th, viz., *six weeks* later, patient wrote: "I am following your prescription as far as I can, and feel much better." Again, on November 18th, four months later: "I am a great deal better. . . . I have worn the boots, and, though painful at first [I employed pads at that time], I find now that they give me the greatest support. . . . I must thank you most heartily. . . . When I was in London I was trying to school my impatience to resignation to a walk of not more than a hundred yards at a time; now I can walk two miles without much fatigue, and am astonished at the elasticity and youthfulness of my movements. I consider myself a walking advertisement of your surgical capacity!" This lady has continued well up to the present time.

Chlor-anæmia.—This condition—deficiency of hæmoglobin in the blood—Dr. R. C. Hutton considers pathognomonic of endo-cervicitis, arriving at this conclusion after carefully examining forty cases. A notable and important fact is that, in cases of chlorosis or chlor-anæmia, the system never responds, in any appreciable degree, to the effect of tonic or restorative medicines until the local conditions are changed.—*Post-Graduate.*

A FURTHER CONTRIBUTION ON LOCAL MEDICATION OF THE SPINAL CORD, WITH CASES.[1]

By J. LEONARD CORNING, M.D.,

NEW YORK.

SOME time ago, in an article published in the New York *Medical Journal* for October 31, 1885, I showed that when a given amount of a medicament is injected into the vicinity of the spinal cord certain modifications in the functions of the latter may be induced.

Thus, when strychnine is injected in this manner, the functions of the cord, and notably the reflexes, are greatly exalted; much more so, in fact, than if the medicament had been simply injected into the general circulation, as in ordinary hypodermic medication. On the other hand, the modifications in function which I observed after injection of an anæsthetic, such as cocaine, were sensory in character—such, for example, as more or less complete anæsthesia, tingling, numbness, and various other paræsthesia, these phenomena being principally confined to the parts below the point of injection. The line of argument which led up to these results it is not necessary for me to detail on this occasion; enough, that the experiments, which were at first conducted on dogs, were afterward verified in man; and the expedient has since been resorted to on several occasions. I was careful, too, to point out that this principle of medication offered an admirable and heretofore unsuspected and potent means of treating certain derangements of the spinal cord. Thus, it was shown that the painful phenomena which are present in spinal irritation may be combated by resort to this exceedingly direct and effective therapeutic procedure; and to this I may add that the permanency of the effects produced are enhanced by the combination of cocaine with other remedies.

Having ascertained this much, it occurred to me that it would be a matter of practical interest to pursue these researches further; accordingly, shortly after the publication of the paper above referred to, I conducted the following experiments:

1. I injected a solution of sulphate of strychnine under the skin of a rabbit in sufficient quantity to induce general convulsions. I then injected a quarter of a grain of hydrochlorate of cocaine subcutaneously, but without modifying in the slightest degree the convulsive phenomena; in a word, I may state that I continued to inject this drug (hydrochlorate of cocaine) until well-marked toxic symptoms had been developed, but was not successful in modifying the convulsions to the slightest extent. The results thus obtained are directly at variance with those recorded by certain recent German observers.

2. In this experiment I again induced the convulsions by subcutaneous injections of the sulphate of strychnine, but instead of injecting the cocaine under the skin of the animal, I injected ten minims of the four-per-cent. solution *between the spinous processes of the vertebræ.* The first injection was not followed by any marked reduction in the tetanic symptoms for several minutes; therefore, at the end of ten minutes I injected the same quantity as before, except that it was distributed in several intervertebral spaces. After the lapse of about fifteen minutes from the first injection the severity of the convulsions had markedly decreased, and the animal could be handled without their induction.

From the first experiment, therefore, it is clear that the injection of cocaine preparations into the general circulation, even in large quantities, is not sufficient to counteract the toxic effects of strychnine. Experiment shows, on the other hand, that when the drug is brought in a concentrated form into the immediate vicinity of the cord the reflex phenomena may be markedly diminished, provided, of course, that a too large quantity of strychnine has not been taken. When we consider how much greater the local than the general action of the drug is, this disparity of effect is easily accounted for. But it is in the painful affections of the cord, such as ataxia, that I believe we shall attain notable results by resorting to this direct method of medication. So convinced have I become of the necessity of making some radical departure in our mode of attacking these painful maladies, that when I had observed the phenomena recorded in my first paper,[1] I resolved, as soon as an opportunity should present, to test this local medication in the painful affections of the cord. There was one obstacle to the execution of these plans, however, which puzzled me for a long time. Briefly stated, the problem in question is this: How is the physician to know how far he may thrust the hollow needle, used in transmitting the medicament from the syringe to the vicinity of the cord, without danger of wounding the latter?

As I have said, this problem puzzled me for a long time; and yet there was no evading it, for I saw at once that if the procedure were to prove effective it could only be by depositing the medicinal substance as close to the cord as possible. There are not many problems in this life, however, which cannot be solved by hard and properly directed thinking, and this one proved no exception to the rule. To make a long story short, I succeeded completely; and this is how the matter was accomplished. Having examined the vertebræ of the lower portion of the spinal column, I observed that the posterior surface of the transverse process, even at its greatest depression, though almost on a level with the posterior aspect of the foramen vertebræ, did not fall at all, or, in rare cases, possibly very slightly below it. This is especially true of the ninth, tenth, eleventh, and twelfth dorsal, and of the first and second lumbar vertebræ. As soon as I had observed this anatomical coincidence, I saw at once that, in so far as the lower vertebræ were concerned, the problem of approaching the immediate vicinity of the cord with the point of a hypodermic needle, without danger of wounding it was solved. In a word, to make the matter short, the simple technique which I elaborated on the basis of these observations is as follows:

1. I first, as a rule, induce a condition of cutaneous anæsthesia in the vicinity of the spinous processes of the tenth and eleventh dorsal vertebræ almost as large as a silver dollar. This I do simply for the comfort of the patient and for no other purpose. The electro-chemical method[2] elaborated by me, or the hypodermic syringe, may be employed for the purpose.

2. I now call into requisition a fine needle, about three inches long, provided with a handle and a sliding nut (Fig. 1). The latter may be fixed at any portion of the continuity of the needle by means of the screw. This needle I thrust down (about half an inch laterally from the spinous process of the tenth dorsal vertebræ) until the bone is reached. The nut is then pushed down till it rests lightly upon the skin, and is secured in place by means of the screw (Fig. 2). I then withdraw the needle.

It is now clear, from what has already been said, that the distance from the nut to the point of the needle corresponds almost exactly with the distance from the surface of the integument to the cord. To make assurance doubly sure, however, I am in the habit of subtracting two or three millimetres from the measurement thus attained.

3. Upon a fine cannula (Fig. 3), likewise provided with a sliding nut, the distance previously noted upon the needle is measured off (minus two or three millimetres), and the nut secured firmly in place.

4. This hollow needle is then attached to a syringe (Fig. 4) of one hundred minims capacity, filled with a one-and-a-half-per-cent. solution of the hydrochlorate of co-

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[1] Read before the Medical Society of the State of New York, February 7, 1888.

[1] Spinal Anæsthesia and Local Medication of the Cord, by J. Leonard Corning, M.D., the New York Medical Journal, October 31, 1885; see also Local Anæsthesia, by J. Leonard Corning, M.D. D. Appleton & Co.

[2] See the New York Medical Journal for November 6, 1886.

caine, to which is added about gr. $\frac{1}{75}$ of pyrogallic acid. I have used solutions of various strengths, but am inclined to give preference to those of one-and-a-half per cent.

5. The cannula is now thrust into the tissue between the spinous processes of the tenth and eleventh dorsal vertebræ (I have sometimes inserted it between the ninth and tenth) until the nut, previously firmly fixed as described, rests upon the integument.[1] The contents of the syringe are now slowly emptied, and the needle withdrawn.

6. The patient should now be allowed to lie on his abdomen, with his legs hanging over the edge of the sofa or bed in such wise as to put the dorsal muscles on the stretch. This manœuvre presses the fluid in the direction of the least resistance, *i.e.*, the cord, besides causing the rigid muscles to act in a certain sense as an incarcerating mechanism; that is to say, that in their rigid condition they prevent the medicament, to some extent, from being absorbed by the tissues outside of the spinal canal. Of course, when the solution has once entered the spinal canal, we can do nothing to keep it in permanent contact with the latter. The circulation at the lower segments of the cord is, however, as is well known, extremely lethargic, so that the solution cannot be washed away very rapidly. This torpid state of the circulation, already alluded to by Brown-Séquard in his papers on paraplegia, no doubt accounts for the persistence of numbness and anæsthesia more or less profound after the injections have been made.

FIG. 3..

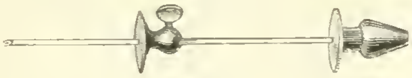


FIG. 1..

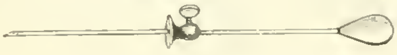
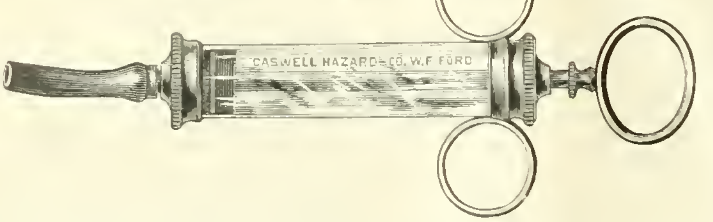


FIG. 4..



So much, then, for the technique of this mode of treatment. Relatively long as is necessarily the description, the execution of the manipulations themselves is by no means so difficult as might be imagined. I have employed the procedure many times, sometimes using cocaine alone, and sometimes combined with the tincture of aconite or pyrogallic acid, according to the effects which it is desired to obtain.

In the affection commonly known as spinal irritation, whether there be a condition of congestion or anæmia I care not, its effects are certainly in the highest degree beneficial, as I have already had occasion to demonstrate to my entire satisfaction in several cases. How much may be obtained in inflammatory affections of the cord only an extended experience can, of course, determine. In purely functional derangements, however, its efficacy is beyond question.

The following brief synopsis of cases will serve to exhibit the promptness and permanency of the effects often obtainable by resort to this mode of treatment.

1. Mrs. C——, a young married lady, consulted me some months since on account of severe pains between the shoulders and at the back of the neck. These pains were exceedingly persistent. They were readily evoked by slight exertion, such as bending forward, walking, or lifting small objects, and they had failed to yield to any sort of treatment whatsoever. Previous to consulting me, this good lady had submitted to an ordeal in the way of treatment which was as unique as it was ineffectual. Her back had been cauterized repeatedly; she had been plied with all manner of drugs, so that her stomach was in an exceedingly bad condition; and last, but not least, her vagina had been bedouched, besalved, and bestuffed, according to the most exacting tenets of modern uteromania. It was natural, in the face of all this, that the mind of the patient should have become somewhat hypochondriacal; and it was equally to be anticipated that her morbid reflections would centre upon the pelvic organs; so that when, during consultation, she asked me, with considerable trepidation, whether I did not believe that she "had better have her womb cut out to cure the pain in her back," I was not inordinately astonished.

An examination of the spine revealed three exceedingly tender points at the upper and middle dorsal region. At two of these points pain was at once induced by pressure, at the third spot it could only be evoked by the application of the electric brush.

Such being about the condition of affairs, I decided, with the patient's full concurrence, to try the effect of local medication at the seat of pain.

Having filled the large glass syringe already referred to with a solution containing gr. $\frac{1}{75}$ of pyrogallic acid and one-and-a-half grain of cocaine to one hundred minims of water, I injected the entire contents of the syringe (one hundred minims) into the upper painful spot. Ten minutes later there was no pain at the point of injection; and what, at the time, seemed still more remarkable to me, the tenderness had entirely disappeared from the painful spots below the point of injection. As I now look at it, I am inclined to ascribe this striking phenomenon to the gradual deportation of the anæsthetic into the regions below the point of introduction. This explanation would seem to accord well with what we know of the distribution of the blood-vessels in the spinal canal; but I will not incur the danger of wearying you by further speculations on this point.

Enough that after this single injection the patient was able to execute all kinds of movements, such as bending forward, lifting objects from the floor, and the like, without the slightest pain. This exemption from suffering continued during the eleven following days, when having, as she thought, exposed herself to the effects of cold while riding in a horse-car, there was a return of severe pain. I again made an injection as before, selecting for the purpose the region about the second painful spot. A like happy issue was the result, complete abolition of pain, an

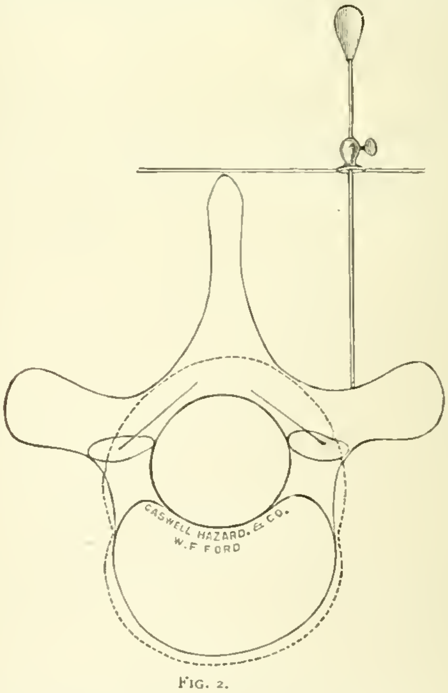


FIG. 2.

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[1] When the injections are made in the upper and middle dorsal regions the precautions detailed above are not so necessary, though, perhaps, on the whole, they are preferable.

exemption which has continued, so far as I know, up to date.

2. Neurotic youth of sixteen. Has been addicted to masturbation for some years, a habit which he says he acquired at school. His parents, however, insist that he was addicted to the practice before going to school. That as it may be, there is pretty good evidence that he has masturbated more or less since his tenth year.

Six months ago I was consulted by the parents of the boy on account of a severe pain located at the lower portion of the back. On examination tenderness on pressure was found at the eighth dorsal and tenth lumbar vertebræ. When the patient attempted to bend forward the pain evoked was quite acute. Of late he has been able to indulge in walking but little, owing to the painful sensations to which it, as well as all forms of exercise, gives rise. Is sleepless, irritable, and depressed.

Most of the conventional remedies having been tried without avail in his case, I determined, his parents readily consenting, to try the efficacy of local medication. Accordingly, I injected seventy-five minims of an aqueous solution containing gr. $\frac{1}{75}$ of pyrogallic acid, and gr. $1\frac{1}{2}$ of cocaine at each point of tenderness.

In ten minutes the patient could execute all kinds of bodily contortions, such as bending forward, laterally, and even backward.

The relief lasted for hours, and, indeed, for the next four days there was marked improvement. At the end of that time, however, the local tenderness again appearing, if anything, in a more aggravated form than at first, I again made the injections precisely as before, and with the same results, except that the effects were altogether more permanent, lasting for the following three or four weeks. A slight degree of tenderness then made its appearance, and, strange to relate, at a point higher up. An injection was at once made at the painful point, resulting, as usual, in complete abolition of all tenderness. Several months having now elapsed and no complaint having been made, except on account of occasional cutaneous hyperæsthesia, which is as usual relieved by a strip of ordinary belladonna plaster, I think that we are perhaps justified in looking upon the case as practically cured.

3. A young man, twenty-two years of age, was referred to me some time since by Dr. L. Bolton Bangs. Briefly, the patient had been operated upon for stricture by Dr. Bangs, and six days afterward developed severe spinal irritation.

More or less dull pain was felt in the lumbar region and sacrum, extending to the lower dorsal vertebræ. At the seventh dorsal vertebra pain on pressure was exceedingly acute; and from this point intercostal pains of great intensity, particularly on the left side, were radiated, so that breathing was shallow and accompanied by much distress.

Dr. Bangs had recourse to large doses of ergot, and applied the actual cautery to the back of the patient in a most thorough manner. Still, though there was apparently some amelioration, it was felt that the relief experienced was far from satisfactory.

Accordingly, Dr. Bangs, being cognizant of my interest in local medication of the cord, requested me to ascertain whether the severe pains, and particularly those about the chest, could not be relieved by local means.

Appreciating the necessity of affording as speedy relief as possible, I at once injected one hundred minims of an aqueous solution containing about one-sixtieth of a grain of pyrogallic acid, and one grain of cocaine, into the painful zone in the immediate vicinity of the seventh dorsal vertebra.

Ten minutes after the injection had been made, patient experienced complete relief from the intercostal pains. He could bend the body from right to left, backward and forward, and inflate his lungs to their fullest capacity without the semblance of pain. Pressure upon the seventh dorsal vertebra also failed to evoke the slightest sensation of discomfort. During the following two hours patient remained in my office, and at the end of that time, there being no sign of returning discomfort, I allowed him to walk home unattended. Three days later he again reported at my office, and, though an examination of his spine revealed some superficial soreness, the deep-seated pains were not evoked, nor had there been any return of the intercostal pains. For the relief of the cutaneous soreness the simple application of a strip of belladonna plaster was found sufficient.

The subsequent course of the case presents some interesting genito-urinary features, which I trust at some future date Dr. Bangs will elucidate with his accustomed skill. As for the spinal irritation, I feel that a cure has been practically effected, although the severe changes in temperature experienced during the last few weeks have evoked at times a slight return of soreness. This soreness has been easily controlled by moderate doses of antipyrine.

4. Old case of spinal concussion in a gentleman of fifty, who met with a railway accident some years ago. Has been under my care for many months, and, although able to dispel the psychical depression from which he has long been a sufferer, I was, until recently, unable to abate a severe soreness at the region of the lower dorsal vertebræ. This soreness he ascribes to the fact that he was caught between two seats of the car on the occasion of the railway accident above referred to.

Having tried all the usual superficial local measures without success, I undertook, with the patient's consent, to abate the symptoms by resort to deep local medication. As in the previous cases, the injections were conducted at the seat of pain, with every precaution, and with the result of affording complete and immediate relief from the painful symptoms. Four days after the injections there was some slight return of soreness, but this was at once controlled by supplementary injections. Some weeks have now elapsed since the last injection was made and there has been no return of pain. I shall take the liberty of reporting more at length on the course of this case at some future time. Finally, I desire to thank the Society for the courteous attention with which they have listened to this somewhat long discourse—a recital, however, which I trust may prove not without practical result.

26 West Forty-seventh Street.

Gonorrhœal Peritonitis.—Dr. E. Ceppi, of Porrentruy, reports a case of chronic purulent peritonitis in a previously healthy and robust woman, aged twenty-nine, which was cured by abdominal incision and drainage. The disease proved to be of gonorrhœal origin, small accumulations of Neisser's gonococci being found in the pus-cells. Similar microbes were discovered also in the purulent discharge from the uterus. This case is said to be the first in which the gonococcus has been found in the peritonitic exudation.—*Revue Médicale de la Suisse Romande.*

Mental Derangements and Malaria.—From an inquiry into the relations existing between malaria and certain disorders of the mind, Drs. Lemoine and Chaumier have arrived at the following conclusions: Violent mania, without clearly defined characteristics, may accompany an attack of intermittent fever in predisposed persons. In the same class, but far less often, convalescence may be the starting-point of a mild form of insanity, stupor, or mania of uncertain duration. This is usually curable. Old subjects of malaria, with masked manifestations, are liable to recurrent intellectual disturbance, or to chronic insanity. The diagnosis of the latter is impossible without a full previous history of the patient. There probably exists a form of pseudo-general paralysis of a malarial origin. It is an important matter in treatment to ascertain the presence or not of intermittent fever as an etiological factor in the history of all cases of insanity. Quinine gives good results in intermittent mania and its convalescence. It is apparently of no value in the chronic cases, but even in these the drug may quiet transient attacks of agitation as if they were masked phenomena of the disease.—*Annales Medico-psychologiques.*

GANGRENE OF THE ISCHIO-RECTAL FOSSA—RECOVERY.

By ROBERT ABBE, M.D.,
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THERE is a rare and interesting form of acute inflammation of the contents of the ischio-rectal fossa which, while it resembles in some of its features the abscess-formation in this region which is so common and usually leads to fistula, yet differs, not only in its intensity, but in its progress and termination. It is very definitely termed an "idiopathic gangrenous cellulitis around the rectum." It is not mentioned in most surgeries, and no statistics have been gathered, because of its rarity. It usually occurs, as observed by Mr. Furneaux Jordan in 1879, in men of active habits who live well, drink freely, and go about regardless of the weather. It was also spoken of by Nunns (*Lancet*, 1866).

The seizure is usually sudden—some pain and restlessness in the rectum, perhaps a chill, malaise, and rapidly ensuing fever. Attention being drawn to the fundament, a brawny cellulitis is found on one side the bowel, an erythematous blush suffusing the buttock. It differs from the commencing abscess by being more diffused, and not pointing. It runs a rapid course, creeping, in upward and lateral directions, around the bowel, and has even extended to the gluteal regions. There is sometimes agonizing neuralgic pain, depending on whether the hard mass runs deeply and involves nerves of any size; pains not only local, but into the legs. The bowel-action may be paralyzed, and the bladder suffer from retention.

As early as the third day, though sometimes delayed to the fifth, there appears a black slough of the skin covering the fossa. This may be wanting in many cases, and then only the cellular tissue filling the fossa is found to be a black sloughy mass when the skin is incised.

One would expect to find pus on cutting into such a mass, but this is not the case. There is a darkish puriform fluid sometimes in the slough, as is met with in gangrene tissues, but no abscess, and, moreover, the malady does not eventuate in fistula.

The sloughy tissue comes away in time, if the patient survives the inflammation, which frequently he does not, and leaves a granulating wound which, when healed, leaves a surprisingly small cicatrix.

A disposition has been observed, in a few cases, to recurrence of the cellulitis before the wound heals; this is rare. Furneaux Jordan saw it in one of three cases he knew of, and as another sequel there occurred pleuro-pneumonia in the same man, from all which he recovered. These would be properly regarded as septic.

The etiology is uncertain. The patient may sometimes assign a cold, exposure, or a hard chair, or some other improbable cause, but the progress of the disease has a decidedly septic look, as much so as erysipelas. The author above mentioned likens its course, very properly, to the gangrenous cellulitis of the neck, or Ludwig's disease.

Two years ago I was asked by Dr. A. B. Campbell to see, in consultation with him, a typical example of this disease.

A man aged forty, in good health, a carpenter, was seized on Sunday, February 7th, with a chill, followed by fever and restlessness about the bowel; no pain.

On Monday, pain was severe at the coccyx, in the fundament, and down the back of both thighs. He evacuated his bladder all right, but on Tuesday and Wednesday his bladder filled up nearly to the umbilicus, and was evacuated by catheter. His bowels were confined.

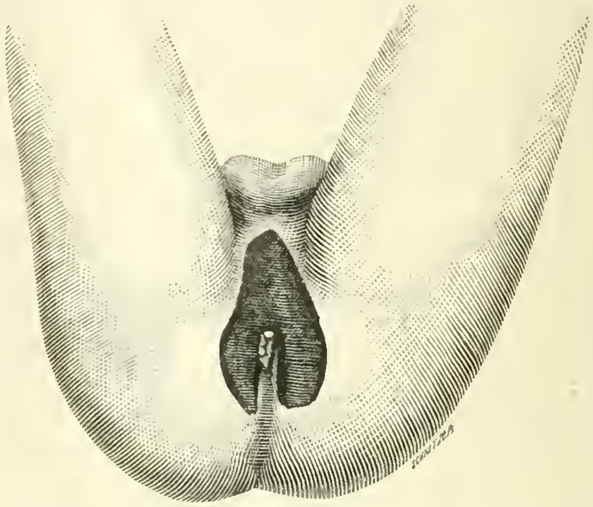
On Monday he took three compound cathartic pills; on Tuesday a bottle of citrate of magnesia and two Seidlitz powders; on Wednesday a whole bottle of Hunyadi Janos water; on Thursday an enema, which acted.

On Wednesday the erythema of the beginning gangrene extended from one tuber ischium to the other, surrounding the anus. By Saturday it had gangrened, and the entire space, as illustrated, was black. No swelling preceded the gangrene. By the following Tuesday the margins were well defined and the gangrene quite symmetrical.

The pain subsided, Thursday of the first week, and did not recur. The temperature reached 104° F. on the fourth day and declined to 102½° on the tenth day.

There were no more chills, nor did he sweat. He passed his urine voluntarily on the eighth, ninth, and tenth days, but atony came on again; yet the bladder gave him pain if partially full. The bowels also acted. There was no albumen or sugar in his urine. He had no strictures or leaking of urine, and no heart trouble to cause emboli.

We cleared away the gangrene, which amounted to sloughing of the entire cellular contents of the fossæ, leaving the deep perineal fascia naked, and the rectum a tube unsupported in this space, except by a neck of skin posteriorly. The gangrene stopped at the edge of the bowel, and no opening into it was ever found. Recovery was slow but perfect, and the patient has a good sphincteric control of the bowel.



In considering the possible causes of such an affection, one would think of diabetic gangrene, or Raynaud's disease, or an embolus, though it is hardly conceivable that plugging of the internal pudic or any vessel supplying the perineum could do damage which arterial anastomosis, so free here, could not repair. We must regard it, then, as a septic cellulitis in all probability, and congratulate ourselves that, if incised early, it tends to recovery.

It has lately occurred to me to see one other case of gangrene of the parts in this neighborhood, which I will briefly narrate, for its rarity and for contrast:

A lady, thirty-three years of age, had repeated peritonitis from suppurative salpingitis. In last October this caused a large pelvic abscess, which, after I had advised operation, opened spontaneously into the rectum. She was slightly phthisical, and was greatly exhausted by it all.

She picked up after evacuation, but soon declined again, and four days before death developed, in as sudden a time as twenty-four hours, a gangrenous area, an inch and a half in diameter, with a fecal fistula following later in its centre, and found on post-mortem to connect with a large extravasation of fæces into the abscess-sac of the pelvis. This had gone out of the aperture through which the pus evacuated into the bowel.

THE MIND AND THE HAIR.—Professor Pohl-Pincus has been studying the effect of emotions upon the physical and morphological condition of the hair. As an illustration of the proficiency which he claims to have obtained in detecting changes in the hair-roots, he states that, from a mere examination of the hair, he was able to point out as the cause of disease, in the case of a chaste young priest, a severe temptation which he had manfully withstood, but which had nevertheless caused a serious mental shock.

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[1] Read at the Section on Surgery, New York Academy of Medicine, February 13, 1888.

CHRONIC ATROPHIC SPINAL PARALYSIS IN CHILDREN.

By D. F. KINNIER, M.D.,

NEW YORK.

Of late years electro-diagnosis has materially aided in elucidating many disputed points in that form of paralysis known as "atrophic paralysis." Having carefully observed a few cases of this disease in the clinics of Professor A. Hughes Bennett, and at the Hospital for Paralysis and Epilepsy, Bloomsbury Square, London, I venture to offer a few remarks on this interesting form of paralysis.

This form of paralysis is characterized by a rapid wasting of the tissues, owing to degenerative atrophy of the muscles and of the nerves directly associated with these muscles.

Owing to the rarity of this disease, or, perhaps more correctly, failure to detect it, in children, I trust the few observations which I have made will be of interest in helping to a correct diagnosis of it, as well as to point out the peculiar electrical phenomena characteristic of this form of paralysis.

My first case is that of a child, three years of age, who always enjoyed good health until one year ago, at which period of his life he had a very severe attack of measles, recovery from which left him in a very weak physical condition. Two months after recovery from his illness the patient was not inclined to engage in his usual amusements, and some difficulty in his mode of progression was observable. When asked to stand he could hardly do so except with assistance, and usually wished to rest his hands on a chair or table if one were near by him. The limbs were weak and shaky, and he was in danger of falling if allowed to stand unprotected. His walk was very defective, owing to lack of co-ordination.

His cutaneous sensibility appeared to be normal, as tested by the æsthesiometer. The plantar reflexes were well marked, as were also the knee-jerks of both sides.

There was no rectal or vesical paralysis, but there was a marked atrophic condition of the extensor muscles of the forearms and hands. There was no apparent loss of bulk in the muscles of the lower extremities, but the circulation was sluggish and the local temperature was below normal.

Electrical reactions could not be determined with accuracy, owing to the irritability of the child.

A *faradic* current applied to the median nerves showed the reactions to be very much diminished on both sides, but, on the contrary, normal muscular contractions were observed when a like current was applied to the ulnar nerves, especially in the vicinity of their trunks. But the most noticeable failure of nerve-response to electrical stimuli was observed when the faradic current was applied to the musculo-spiral nerve near the elbow, at which point the strongest current failed to bring forth contractions in the muscles supplied by this nerve. The flexors of the forearm when stimulated gave rise to normal muscular contractions, but a negative result was obtained when a powerful current was applied to the extensor muscles of the forearm.

A very delicate point in the examination of this case was demonstrated when the faradic current was applied to the extensor indicis of the right and the extensor ulnaris of the left side. When a powerful current only was applied to these muscles there was produced a slight contraction, thus showing that there was not complete degenerative atrophy of these muscles.

The *galvanic* current was next applied to the ulnar and median nerves, giving rise to apparently normal contractions. A strong galvanic current when applied to the musculo-spiral nerves produced extension of the wrist and fingers, the ACC being more increased than the KCC. The ACC was decidedly increased when a strong galvanic current was applied to the flexors of the forearm, giving rise to vigorous contractions of these muscles.

Next turning our attention to the smaller muscles, namely, the extensor indicis of the right side and the extensor ulnaris of the left side, we found a difference of electrical reactions, as compared with the larger muscles referred to. While in the case of the flexors of the forearm powerful contractions were set up by galvanic stimulus, in the two smaller special extensor muscles the response to electrical stimulus was diminished, the contraction being slow and tonic, illustrated by the following: ACC > KCC, as distinguished from the effect of the current on the flexors, where the ACC was decidedly increased. These were the only extensors of the wrist and fingers which readily responded to the galvanic current. The muscles of the lower limbs responded readily to the electrical stimuli, as did also the nerves in the same region. I carefully watched the progress of this case while under observation, the patient having been kept in bed the greater part of the time, and galvanism was faithfully applied to the spine for a lengthened period. At the end of six months a decided improvement was effected and a favorable prognosis was given, which opinion proved, later, to be correct, as the child made a complete recovery.

Another case was observed in a child, five years of age, who had a neurotic family history. The patient had had measles and whooping-cough, but no other sickness of any account, and no trouble in walking till she was four years of age, when one day she came in from playing and complained of pain in her left foot and leg. No particular attention was paid to this matter, as it was thought the foot might have been slightly sprained. About two weeks after the child began to complain of these symptoms she was observed to slightly drag the left foot, which gradually became more marked, and like symptoms showed themselves, later, on the right side.

The case promising to be very interesting, a most careful examination was instituted. The disease evidently was slow and gradual in its onset, and paretical signs were now well marked.

When first seen the patient presented slight impairment of the functions of the bladder and rectum, but this slight paresis disappeared in a short time after treatment with the battery was begun. Both legs showed signs of paralysis; the child could not walk without assistance, and her gait was very unsteady and staggering. The muscles below the knee were evidently wasting; the knee-jerk and plantar reflexes were very much decreased; cremasteric response defective. Galvanism of the muscles gave rise to sluggish contractions, with the ACC less than the KCC.

A nice point in the diagnosis of this case was the demonstrating of partial reaction of degeneration, very well brought out when electrical stimulus was applied to the vicinity of the trunks of the peroneal nerves. Galvanism was applied three and four times a week to the paralyzed limbs, notwithstanding which the disease continued to advance, and three months later the patient was unable to walk. The child at this period, although being of fair physical constitution, yet had marked evidences of weakness of the lower limbs, with paralysis of the muscles in the tibial and peroneal regions. Sensation was intact, as tested by the æsthesiometer and pins, with the exception that when the two points of the æsthesiometer were separated by a distance of one-fourth to one-half an inch there was difficulty in detecting two distinct points of touch by the patient. The atrophy of the legs had increased to such a degree that the limbs were now distinctly wasted.

The following measurements of the legs were noted: Circumference of right thigh directly above the patella, 25 ctm.; left, 26 ctm.; circumference of right calf, 15 ctm.; left, 16 ctm. This case was carefully observed and treated, and signs of improvement began to show themselves at the end of six months; movements of both feet more pronounced, and there was also manifest a more ready response of the tibial muscles to electrical stimulation. Contractions of the muscles of the thigh, both extensor and flexor, more marked when stimulated than earlier in the disease. The circumference of the calf of the legs had now increased about 1 ctm. The patient continued to improve to such an extent that at the end of nine months the knee-jerk had to a considerable degree returned; movements of feet were also better, and the muscles were less flabby. The contractions were more active when irritated by electrical stimulus, as, for instance, sixteen cells, slow ACC; twenty cells, rapid KCC on right side. For the ensuing few months the patient was seen at irregular intervals, and at the end of one year, the disease in the meantime making continuous progressive improvement, the patient was subjected to a careful examination, when it was found that the faradic and galvanic stimulation called forth an almost normal response, except that there yet remained a little flaccidity of the muscles of the left leg, in which the electrical phenomena will no doubt return to their normal condition and the contractions become less protracted than they are at present. ACC still exists slightly in the muscles. In this case recovery took place a little over one year from the commencement of treatment.

Another case is that of a girl, seven years of age, whose mother was a trained nurse, and hence the source of information was very reliable. The mother says the child always enjoyed good health till she was six and one-half years of age, at which time she was confined to bed for a few days with catarrhal inflammation of the stomach, and after this affection had passed away the mother noticed slight weakness of the patient's legs. This symptom gradually increased, and at the end of three months she had much difficulty in walking. At present she maintains herself only on her feet by assistance, and frequently crawls on her hands and knees as a method of progression. The child is apparently enjoying good health; there is no impairment of rectal or vesical functions, no existing deformities, and she complains only of inability to use her legs. She cannot maintain the weight of her body on her lower limbs, but with assistance walks with a shuffling gait for a short distance, when she becomes completely exhausted and falls to the floor if not protected. Joint-movements are slow and jerky, the muscles of the legs are soft and flabby, and the plantar reflexes and knee-jerk are totally abolished on both sides. The muscles of the peroneal regions and in the calves of the leg are atrophied to a considerable degree, as a result of which the thigh-muscles have also suffered, as on inspection it is apparent they are not in their normal condition, and there is loss of response when electrically stimulated. Cutaneous sensibility normal; cyanotic condition of the feet. Electrical reactions show that when *faradic* currents are applied to the nerve-trunks above the knee there is but feeble response, even to powerful currents; faradic currents to legs *nil*.

A powerful *galvanic* current applied to the nerve-trunks of the lower limbs gives rise to imperfect contractions. Careful galvanism of the thigh-muscles produces strong contractions—KCC > ACC; the latter is, however, increased. Galvanism of the flexors and extensors of the feet and toes shows diminished electrical reaction; the contractions are slow and tonic in character, and ACC = KCC.

This patient was treated with powerful galvanic and faradic currents, which, when applied at the beginning to the nerve-trunks failed to induce muscular contraction, now demonstrate the return of the muscles to their normal condition. For several months treatment by means of local and central galvanization was persevered in, and there is hope of a good recovery.

Such, then, is a brief history of the few cases of this disease which I have observed, and it is in these cases where electro-diagnosis is of so great importance in helping us to arrive at a definite conclusion and an accurate diagnosis of atrophic spinal paralysis. We should bear in mind that atrophic paralysis is a gradual and progressive disease, which, invading the lower extremities, where its symptoms are most marked, becomes less severe as the disease extends upward. These cases are, in my opinion, illustrative of atrophic paralysis, the course of which may be due, as observed by Erb, to an inflammatory lesion of the anterior horns of the lumbar enlargement, and which diminishes as it ascends into the upper half of the lumbar plexus, the right side being more deeply affected than the left. As regards the electrical reactions in these cases, it was observed that stimulation of the nerve-trunks of the affected parts gave but feeble response to either the galvanic or faradic currents.

Dr. Hughes Bennett has pointed out that in cases of failure of the muscles to respond to the induced current galvanic irritation gives rise to slow and tonic contractions. The occurrence of this disease in children may be partly explained by the inability of the physician to readily recognize the true nature of this disease. In the foregoing cases it is evident that we had to deal with an atrophic paralysis which was gradual and progressive in its onset. There is no doubt that in these cases the galvanic treatment was the chief factor which effected a complete recovery, and that electrical investigation demonstrated the existence of an atrophic condition of the nerves and muscles, and also the presence of reactions of degeneration. Erb speaks of this disease as consisting of a more or less creeping and gradual development of paresis or paralysis, with atrophy and reaction of degeneration, and considers it to be gradual in its ascent, not being limited to single nerves, but involving a whole extremity.

INDICATIONS FOR THE USE OF THE INTRA-UTERINE DOUCHE IN THE PUERPERAL STATE.

By ROBERT A. MURRAY, M.D.,

NEW YORK.

In May, 1887, I was called about forty miles from the city to see, in consultation, a lady living in a malarial region, who had been confined seven days previously with her fourth child.

I learned from her physician that the labor had been normal, with a head presentation, and lasted but two hours; the placenta being expelled, as he believed entire, in about twenty minutes.

Up to the third day everything seemed normal; when, after some nausea and slight pain in the abdomen, a sudden and severe chill in the morning was followed by a temperature of 105°, pulse 120, intense headache, photophobia, and delirium.

Abdominal tenderness and tympanites were soon marked; the lochia became scant and fetid; the secretion of milk was arrested. Believing the attack to be malarial, the physician put the patient on large doses of quinine, with a moderate amount of stimulants, and sought by the use of morphia to quiet the delirium and abdominal pain; but these efforts were ineffectual.

Vomiting of a dark, black watery matter set in on the fourth day, abdominal pain and tympanites increased, headache was intense, the delirium became of a low muttering character, with great prostration; the fever ranged from 103° to 105° each day, and the lochia were scant and very fetid.

Such was the history I received, at the same time being assured that the patient was better, the attack was malarial in its origin, and that he had frequently observed similar cases.

I found the patient in an almost utterly collapsed state; a profuse, cold, clammy sweat covered the body and limbs; face pinched; lips cyanosed; complaint of intense headache and thirst; the pulse, 130 and small; temperature, 104½°; respiration, 40 and panting; abdomen tympanitic; uterus enlarged to umbilicus, very tender to pressure; lochia scant and fetid. I at once expressed the opinion that the patient was suffering from septic endometritis and peritonitis, and that an examination of the genital tract was necessary. This was finally acceded to by the patient, although the physician did not deem it necessary. After a vaginal douche of carbolized water, inspection showed the vulva somewhat swollen, some small lacerations of the introitus, and a laceration of the perineum partially healed but sloughy looking; the vagina was hot to the finger and tumefied; the cervix enlarged, patulous, and badly lacerated; the finger in the uterine cavity detected blood-clots, shreds of placenta, adherent and detached, and a scant, tenacious secretion which, on withdrawing the finger, was found to be ichorous and very foul smelling.

It was advised to use an intra-uterine carbolic injection, to detach with the blunt curette the adherent placenta, and the fetid blood-clots in the mouths of the uterine sinuses, and then to thoroughly wash out the uterus, which would remove the cause of the infection, and prevent its overwhelming the patient. This I did, and, with ergot to keep the uterus contracted, vaginal douches of dilute carbolic acid to render the vagina and cervix aseptic, and a sublimate napkin to the vulva, the patient was left in a clean, comfortable condition. The reaction was slight, and, with the aid of tonics, the convalescence was complete in four weeks, the fever having departed absolutely the day after the douche. The attending physician objected to this treatment, saying that he had always found nature competent to take care of any retained fragments of placenta, and he believed intra-uterine douches an unnecessary interference.

I have not the slightest doubt that without this treatment the patient would have succumbed. I have narrated this case in detail, as its history is similar to that of many cases which I have seen in consultation, and to show the prejudice entertained by some practitioners against antiseptic midwifery, and particularly against the antiseptic intra-uterine douche. It is understood, in the study of the subject of this paper, that this measure is but a part, but still a very important part, of thorough antiseptic midwifery.

No one who knows of, or who has seen, the frightful ravages of puerperal fever in hospital or private practice, will withhold his admiration and respect from those who have worked so earnestly to introduce this method for the benefit of humanity. It is due to them that to-day a patient in a well-conducted maternity has not only as good, but even a better, chance in confinement than she would have ordinarily in her private dwelling.

We shall then inquire:

1. What are the indications for the intra-uterine douche.
2. The method of employment.
3. The contra-indications, and the dangers connected with its use.

As a prophylactic measure, the uterine douche is indicated even in non-instrumental labors—what are frequently called normal labors—when the amniotic sac has ruptured before full dilatation of the cervix, and a prolonged second stage has allowed of contusing and laceration of the parts by the presenting head, and an acrid discharge has constantly bathed the vaginal canal; here, if, as is frequently the case, the uterus relaxes easily, the patulous vaginal canal, unless rendered strictly aseptic, allows readily the introduction of germs, and we are very apt to have subsequent sepsis.

The douche in this case not only cleanses, but, by the stimulant effect of the hot water, promotes efficient and permanent contraction of the uterus, thus closing the mouths of the uterine sinuses, effectually preventing septic absorption. There is no fact more emphasized by statistics in midwifery than this one: That long labors, even where instrumental interference has not been given, or necessary, are frequently followed by fever. The shorter the labor, other things being equal, means safety in the puerperal period.

In complicated labors, where manual or instrumental aid has been rendered, the hand or instruments introduced into the uterine cavity, and the placenta removed manually, more or less bruising and laceration of the vagina, cervix, and endometrium has been caused; in post-partum hemorrhage, not only the result, but often afterward the cause, of uterine relaxation; in placenta prævia, to cleanse the lower zone of the uterus and close the mouths of the sinuses and veins, and prevent sepsis from discharges flowing over the placental site; in rupture of the uterus, complete or incomplete, to wash the débris of clots, shreds of placenta, etc., away, and to disinfect the peritoneal cavity; and, again, in those few cases observed in hospital and poorer private practice, the conditions of atmosphere being favorable to development of sepsis; where the patient has a chill, marked prostration and fever during the confinement, precursing a fever that is ofttimes extremely malignant, a real putrid infection—in all these conditions one intra-uterine douche, given immediately after labor, completes the antisepsis of the entire genital tract, is clearly indicated as a proper prophylactic measure, and in my experience has yielded the most happy results, almost absolutely obviating the occurrence of fever and avoiding any necessity for subsequent interference with the patient. In the treatment of some forms of puerperal fever, we have, in the intra-uterine douche, perhaps our most powerful remedial measure. Puerperal fever presents an almost protean aspect, in its lesions and in its names; to one it is always puerperal peritonitis, to another septicæmia or pyæmia. When we have observed—and with my colleagues in the Maternity I have frequently seen—severe lacerations of the mucous membrane of vagina, cervix, and uterus heal, and extensive exudations in the pelvis absorb, without the slightest fever, thorough antisepsis having been maintained, it is hard to believe otherwise than that all cases of fever depend on septic absorption from without, and are to be treated by removing the source of the infection.

To fulfil this indication the uterine douche should be employed.

Whenever, in the puerperal condition, fetid lochia appear, accompanied by relaxation and uterine tenderness on pressure, with high fever and chill, showing septic endometritis, the uterus should be thoroughly explored with the aseptic finger, and if shreds of placenta, clots, and débris are found, together with adherent placenta, the latter should be detached by the finger or blunt curette, and the cavity of the uterus thoroughly disinfected and cleansed. But I have observed many times pain and tenderness of the womb with high temperature, where the lochia were not offensive and, what to most practitioners is the guide for the intra-uterine douche, namely, fetid lochia, were absent.

There are several causes which may operate to deceive us; the antiseptic we use on the pad or napkin is almost always a deodorizer, or may have a powerful odor of its own which effectually destroys the lochial odor.

The lochia may be very scant, or, what often occurs, may be pent up in the uterus by clots; these facts should be constantly borne in mind.

In all such cases a careful examination should be made of the genital tract, to see that there is no point where sepsis may occur apart from the uterus; if a digital examination shows the cervix enlarged and patulous, the uterus in subinvolution, and the finger when withdrawn has the the necrotic odor of dead tissue, whether there is adherent placenta or not, we should cleanse the uterus immediately. I have never seen a case where, on this being done properly, the temperature has not been reduced, and the injection has seldom had to be repeated. In the treatment of abortion and premature labor the same rules necessarily apply. As here advocated, the necessity for frequent repetition of the douche will seldom arise, but the guide is the septic or antiseptic condition of the uterine cavity; if chill and fever recur and the lochia be fetid, with no other apparent cause, the uterus should be again washed out. The only instruments necessary for the proper administration of an intra-uterine douche are a fountain-syringe with a long rubber tube attached, so that a continuous stream of water may be maintained; an intra-uterine tube of glass perforated with holes, the edges of the latter being smooth, with a terminal opening—Chamberlain's is the one I prefer; a thermometer to indicate the temperature of the water, though the hand will do as a test, if this instrument be not available; and a sheet of thin rubber cloth, such as is used for protecting the mattress.

As portions of placenta and clots may be adherent, in order to thoroughly cleanse the uterus, it is better to have a good Thomas' blunt curette, and a placental forceps—Simpson's I prefer—being made like a bullet-forceps, and narrow at the uterine portion, so that it may be introduced without injuring in the least a cervix slightly larger than to admit a finger.

Having a proper supply of hot water ready, of a temperature of 110° F., the patient is moved and placed in the lithotomy position on the edge of the bed, the rubber cloth is pinned around the waist, extended under the hips, and gathered below so as to form a funnel conducting the water to a receptacle on the floor.

The patient is covered with a blanket to keep the limbs warm, and the tube, with the water constantly flowing so as to exclude air, guided by two fingers, introduced, the vagina washed out; then it is passed, following the curve of the pelvis, into the uterus; the external end, being gradually depressed, causes the internal end to follow the curve of the uterine cavity, the two fingers forming a groove in which the tube lies, and allows of the free exit of the water. One of the assistants, holding the thigh, grasps the uterus firmly with his free hand and keeps it contracted, but does not press the uterus, as a whole, downward into the pelvis—a procedure which often bends the body on the neck and occludes the canal, also causing contusion of the cervical mucous membrane.

The flow is continued until the discharge is perfectly clear and inoffensive, when the tube is withdrawn with the same care as in its introduction, the water still flowing, to free the vagina of débris which may have lodged there.

An antiseptic napkin is applied immediately to the vulva, the rubber unpinned, the patient is washed, the bandage applied, and she is now restored to her ordinary position.

The composition of the injection is usually carbolic acid 2 to 100, or corrosive sublimate 1 to 3 or 4,000. Liquor sodæ chloriatæ, permanganate of potassa, and other disinfectants may be used, but I believe carbolic acid and sublimate to be the best.

Our next inquiry is as to the dangers supposed to attend the use of, and the objections to, the intra-uterine douche.

The first objection urged is that the proper administration of the injection requires movement of the patient, and there is danger of hemorrhage—dislodging of clots, causing embolism. Again, the introduction of the finger and tube into the uterine cavity may bruise the endometrium, abrade some granulating wounds in uterus or vagina, and open new points for infection; or possibly infective material may be carried from the vagina and outside into the uterus. After intra-uterine injections collapse has been witnessed from over-distention of the uterus. Passage of fluid into the peritoneal cavity by the tubes, and entrance of air into the veins, has caused sudden death. Poisoning has occurred by the absorption of the disinfectant employed.

In answer to these objections, I would direct attention to the fact that, as described, the patient is not lifted at all, but merely moved around, while on the bed, to its edge; nor need the head be raised, which might lead to syncope. No infective material can be carried into the uterus, if the flow of water douche the vagina thoroughly, as described, before the fingers and tube are introduced into the uterus.

The endometrium will not be abraded if the curve of the uterus and pelvis be followed, and the raw surfaces left by the use of the curette are immediately disinfected and constringed by the hot water and acid, and, if sublimate be used, are coated with a layer of albuminate. Shock, collapse, and peritonitis may be avoided by the firm grasping of the uterus by the assistant, and by the retention of the finger at the cervix to keep the outflow free.

The cases of collapse and peritonitis reported have mostly, if not altogether, occurred when iron or other styptics have been employed, in a relaxed condition of the uterus, to control hemorrhage; sudden contraction of the uterus was produced; the exit of the injection being arrested by firm clots in the cervix, the fluid was expelled through the tubes into the peritoneal cavity.

For the reasons given before, the flow of the syringe being continuous, and the canal of the vagina being full of water, air cannot enter the uterus. Carbolic or other poisoning cannot take place if firm contraction of the uterus is maintained at the time by the hand and the hot water, and subsequently by ergot, as the fluid is thoroughly expelled and the mouths of the placental veins and sinuses are closed.

Iodoform, according to Spaeth's formula, I have employed in conjunction with the douche occasionally, but only to heal the lacerations of the mucous membrane, as I, similarly, dust the powder over the external genitals, when lacerated; but I believe the powerful odor of the iodoform conceals the offensiveness of the lochia, and tends to a feeling of security which is sometimes prejudicial.

Many cases of iodoform-poisoning have been reported, so that its use is not unattended with danger, and lately experiments have seriously called in question its germicidal powers.

It is not my intention to convey by this paper the idea that it is advisable or necessary to employ antiseptic intra-uterine douches in each midwifery case. Only a limited number require them; but in the class of cases described their use, I believe, is advantageous, and ofttimes imperative, if we would save our patients, and, what is also to be thought of, diminish the number of puerperal fever cases, each one of which may be the source of contagion for others.

Finally, the physician himself should always administer the injection; he alone understands what is sought to be attained and the possible dangers—it never should be left to the nurse, however experienced.

235 West Twenty-third Street.

Acid Bichloride Solutions in Antisepsis.—Dr. Ernest Laplace, of New Orleans, has, since last March, been working in Berlin under the direction of Dr. Koch. He has been engaged chiefly in bacteriological investigations, and one result of his labors will, no doubt, have great influence upon the future of surgical dressings. Bichloride of mercury, demonstrated by Koch in 1881 to be the best of antiseptics, did not do all the work that had been anticipated for it in surgery. It was found that, as soon as a sublimate solution came in contact with an albuminous fluid, the albumen coagulated and formed, with the bichloride, a precipitate which had lost all disinfectant properties. Dr. Laplace proved, by a series of experiments, that not only is the precipitate devoid of disinfecting power, but also the supernatant liquid. In order to retain in dressings all the virtues of the sublimate, Dr. Laplace perceived that it would be absolutely necessary to prevent the formation of such a precipitate. After many fruitless experiments he found at last the principle of the action which he was seeking, namely, the addition of an acid to the solution of corrosive sublimate; such an acidulated solution will not form an insoluble albuminous precipitate. Dr. Laplace usually added five parts of hydrochloric acid or tartaric acid to a thousand parts of a solution of corrosive sublimate (1 to 1,000), though occasionally he substituted tartaric or carbolic acid. Of this acid solution Dr. Laplace says that: 1, It makes no deposit of sublimate after standing (as all the sublimate solutions do), thereby retaining a permanent strength; 2, when brought in contact with an albuminous fluid, the albumens will remain in solution, and the whole strength of the solution of sublimate will be obtained as in non-albuminous fluids; 3, an acid medium is unfavorable to the development of micro-organisms. The addition of an acid to a sublimate solution also increases its disinfecting powers, so that a much weaker solution is required.—*N. O. Med. and Surg. Journ.*

Clinical Department.

ALCOHOLIC ATAXIA.[1]

By JOHN M. CLARKE, M.D.,

BURLINGTON, VT.

THE case is that of a man, aged thirty-one, single, by occupation a woollen manufacturer. His work was the supervision of the weaving department, having twenty-five or thirty men under his charge, making his position one of great responsibility to the concern. He is a man of good intelligence and fair education. For the year previous to my knowing him he had not attended to any business. His family history had nothing to influence the case; general health usually good; not given to excessive venery. I made careful inquiry as to his occupation and manner of life, and could find nothing to bear upon his condition except alcoholism. He had drunk alcohol for five or six years, at times to excess; and during the past two years had taken it, mostly whiskey, to great excess. For weeks at a time he drank day and night, often going without food for two days at a time. Had had delirium tremens twice, the last attack about three weeks before coming here. The history showed that his alcohol-habit was certainly sufficient to produce any form of trouble that may arise from its use. I understand he showed considerable difficulty in walking several weeks before coming here, but it was thought to be a stagger and tremor, and no particular attention was paid to it.

He finally became so bad in his habits and unmanageable in manner that it was necessary to send him from home, where his appetite could be restrained and such treatment pursued as he needed. When admitted he was quite wild, bordering upon mania. He had a quantity of whiskey with him, and had been allowed to drink on the route; consequently he was full. He had what I thought was an ataxic gait, but the circumstances were such that I paid but little attention to it at the time. During the following week he went through the usual form of "cleaning up," only that his stomach was more irritable than is usual in cases of alcoholism, and this was complicated with a profuse diarrhœa, which added severity to the condition. He became excited, incoherent, and noisy. During the first month there was no improvement, but a failure of strength, until it became an anxious question whether he would live to demonstrate his real condition. However, under a tonic form of treatment he came rapidly up again. Appetite became good, and he regained his normal condition to a good degree.

I have passed rapidly over this time, only wishing to bring out such points as will give you an idea of what he passed through while producing the ataxia. As soon as practicable several very careful and thorough examinations were made, and I became convinced that I had a case of locomotor ataxia. Every test used I tried. His gait was very characteristic, patella-reflex gone; he could not stand with his eyes shut, or walk without looking at his feet. He was also ataxic in the upper extremities. He could not rapidly touch his nose or any specified part of the face; could not put drink to his lips without spilling it. He had lancinating pains in spots in his legs and feet. These were so severe that he would scream out at the pain. If it was necessary to touch his limbs, it was done in the most careful manner. In short, I thought it a well-marked case of locomotor ataxia, and I informed the family of my conclusions. My prognosis was of course unfavorable to recovery. Mentally he was excited, at times wandering in thought—called upon old associates, and lived over old scenes. The treatment was variable, but electricity, both galvanism and faradism, was persistently used, together with rubbings. Iron, strychnine, and tonic, with nourishing diet, and such other medication as was indicated, were prescribed. In about six to eight weeks from the commencement of the active treatment he began to improve. First he could stand better, next he could walk alone, then he fed himself, and so the change went on. Friends came to visit him. I explained to them that he was much improved, but I thought only temporarily, still adhering to my original diagnosis. He was so much better that he was removed home to a distant State, to be near the family and friends. The treatment I was pursuing was to be continued by the physician there.

I have been in constant correspondence with the family, and he is now, after two years' duration, considered well. I have a letter from him in his own handwriting, dated September 21, 1886, which says he is perfectly well, except a weakness in the hands.

The recovery of this case has satisfied me of my error, and that it was alcoholic ataxia instead of locomotor ataxia.

It is very difficult to decide between two diseases with the same symptoms in each, and it is well to be a little slow in committing one's self to so important a decision. In looking up this subject, I find the literature is not plenty.

J. Dreschfeld published his observations on alcoholic paralysis in 1884, which excited general interest and brought out able articles, with report of cases, in Europe and America. In a subsequent article he refers to these.

He now divides alcoholic paralysis into two groups—alcoholic ataxia and alcoholic paralysis, the more prominent symptoms naming the class. He very properly claims that it is necessary to distinguish between cases where there is marked inco-ordination without much paralysis and those where paralysis is most marked, and considers the ataxic form the milder type of the disease. In the ataxia, patients complain mostly of pain in the legs and feet. He gives the usual ataxic symptoms—ataxic gait, ataxia of the hands, inability to stand with closed eyes, and loss of patella-reflexes. All these symptoms I have noted as well marked in this case. The mental symptoms in this case, perhaps, are characteristic of this condition. His favorite illusions and delusions were holding repeated conversation with former friends and acquaintances, giving orders about his wants to old companions, directing about his business as if in active occupation. Another frequent idea was travelling to and from familiar places. He would reply to questions correctly, at the same time calling the person addressing him by the name of some old friend.

The pathological change which causes locomotor ataxia is central—that is, in the posterior columns of the cord—and is permanent. In alcoholic ataxia the change is peripheral, and is transient, as a rule, with treatment. The recovery in this case demonstrates this fact.

Ross, in his admirable work on nervous diseases, has a short article on alcoholic paralysis, giving similar symptoms in the ataxic form which I have noted, and says recovery is the rule.

Buzzard, of London, published a little book in 1886, on "Paralysis from Peripheral Neuritis from Gouty, Diphtheric, and Alcoholic Origin." After citing several cases of paralysis from these causes, which were peripheral, and recovered, he concludes the cause to be neuritis.

It is pretty satisfactorily settled that alcoholic paralysis, as also paralysis from diphtheria, gout, and lead, is peripheral in origin, and caused by multiple neuritis. Neuritis is usually due to exposure, or to some toxic element taken into the system. Among these are alcohol, diphtheria, arsenic, rheumatism, lead, and syphilis.

An editorial article in THE MEDICAL RECORD of September 25, 1887, brings out some points which were prominent in the case I presented, particularly as to the ataxic form, in which the symptoms resemble locomotor ataxia—marked ataxia without any great loss of muscular power, tendon-reflex gone, etc. These may deceive the physician and lead to a wrong diagnosis and prognosis.

The experience of the case which I have related has taught me, 1, that great care should be exercised in making a diagnosis from symptoms of ataxia, and that the prognosis should be guarded; 2, that the origin of alcoholic paralysis and ataxia is peripheral, and caused by neuritis; and, 3, that alcoholic or peripheral paralysis is curable under favorable circumstances and with proper treatment.

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[1] Abstract of a paper read before the Vermont State Medical Society.

COMPLETE PROCIDENTIA—ALEXANDER'S OPERATION—CURE.

By WILLIAM H. NAMMACK, M.D.,
NEW YORK.

Ella J——, aged twenty-nine, married six years, III.-para, has never had a miscarriage, and was delivered of her last child two years ago, since which time she dates her illness. The patient came under my care in June, 1887, and gave the following history: For the past two years she has had profuse menorrhagia, occurring at intervals of three weeks and continuing for from seven to ten days, constant pains in the back and loins, great difficulty and pain in locomotion and defecation, severe vesical irritation, profuse leucorrhœa, and has progressively lost strength, so that at present she is scarcely able to stand erect. She is very much emaciated and has become a confirmed invalid, stating that she has not enjoyed a single hour's freedom from pain, and believing, in view of the many failures to obtain relief, that she is destined to a life of perpetual suffering. She has been kept in bed for weeks at a time, has been tamponned and douched assiduously, has worn pessaries of various descriptions until she is unable now, even after careful preparatory treatment, to retain an instrument for the shortest space of time, and has had her perineum repaired, having been persuaded that an operation was her only hope. But her symptoms have grown steadily worse, and she is now thoroughly discouraged. Examination reveals complete procidentia, rectocele and vesicocele, rupture of perineum down to sphincter ani, and extensive bilateral laceration and hypertrophy of the cervix. The left ovary is found to be enlarged, distinctly prolapsed, and very tender. The uterine sound shows retroversion, but without adhesions, as the displacement of the organ can be readily reduced.

In view of these facts, it was determined to attempt a permanent return of the uterus to the pelvic cavity by the following means: To shorten the cervix by amputation, to repair the perineum, and to lift the organ upward and forward in the pelvic cavity by shortening the round ligaments. On July 30th the cervix was amputated to the extent of half an inch, the cut edges being united with silver sutures, and a stem of hard rubber being introduced into the os to prevent complete closure. The perineum was repaired by Emmet's method, and a tampon placed in the vagina to retain the rubber stem in the os of the cervix. The tampon was removed next. One week later the sutures were removed from the cervix and perineum, and union was found to be perfect. The uterus was still down on the perineum, retroverted but freely movable. The left ovary was prolapsed, enlarged, and sensitive. On the tenth day after the removal of the sutures from the cervix and the perineum, the round ligaments were shortened and attached to the pubic spines with silk-worm gut. The external wounds were united with continuous sutures of coarse silk and dressed antiseptically, and a flexible rubber ring was introduced into the vagina to support the uterus and to relieve the ligaments of tension. The external sutures were removed on the third day and the wounds united by first intention. This was my third case of Alexander's operation, and from the first of these, as well as from some others which I had an opportunity of seeing, I had learned that, if suppuration took place in the external wounds, it was often followed by separation of the round ligaments from the pubic spines and consequent failure of the operation.

The patient continued to improve, and the flexible ring gave her so little inconvenience that she was unaware of its presence until it was removed by me in order to cleanse it. She was out of bed in twelve days, and was advised to continue wearing the rubber ring for a few weeks longer. Five weeks from the day on which she came under my care she was in splendid condition, and had had no pain, no discharge, no vesical trouble (with the exception of slight incontinence of urine on the day following the shortening of the round ligaments, probably due to pressure from the anteverted uterus), and, as she expressed it, "was able to dance a jig." Examination now showed that the uterus was in normal position, and that the left ovary was of normal size, not at all tender, and restored to its proper place. This was in August, 1887, and now, nearly seven months later, the patient states that she has never had one bad symptom since, while examination reveals no sign of any return of the trouble. In fact, she is practically cured.

This case seemed of some interest, because of the previous futile efforts to retain the uterus in the pelvic cavity by the usual means, and because it illustrates conditions under which, in the face of the complete failure of all other measures, the operation of Alexander can effectually procure a thoroughly and permanently successful result.

27 Jefferson Street.

Progress of Medical Science.

The Imbibition of Poisons.—Professor Reese discusses the question of the post-mortem imbibition of poisons and the means by which such a condition may be distinguished from ante-mortem poisoning. The vital point in determining this matter, in Professor Reese's opinion, is to settle whether the poison can reach the brain and spinal cord by imbibition. The evidence is not as yet conclusive in regard to it, and he points out the necessity for care in making experiments on this point, for, if any fluid were allowed to regurgitate from the pharynx into the posterior nares, it might reach the brain readily through the ethmoid cells, but it has yet to be proved that it can reach it by imbibition from the stomach. Another point on which decisive information is wanting is whether poison can get into the urine by imbibition; it is well known that the walls of the bladder may be invaded by the poison in this manner, but it is not certain whether the poison has actually found its way into the urine under such circumstances. If it cannot, then we should have a reliable test of ante-mortem poisoning in the presence of poison in the urine, though the absence of poison in the urine would be no proof that the case was not one of poisoning during life. The discovery of poison on the surface of organs and not in the interior would, if clearly made out, be strongly presumptive of post-mortem imbibition.—*The Medico-Legal Journal.*

Syphilitic Ulcerations of the Female Urethra.—Dr. Landau has described the different forms of ulceration of the urethra in women and their causes—mechanical injury, parturition, diphtheria, bacterial infection, gonorrhœa, chancre, tubercle. He also records five cases of what he calls "ulcus rodens urethræ." This consists of a process of ulceration which slowly and continuously destroys the walls of the urethra, but not the adjacent tissues. It gradually extends from the urethral orifice toward the bladder, and only ceases when the whole extent has been involved. There is no tendency to new formation, nor to healing. For a long time it gives rise to so little inconvenience that the patient is quite unaware that there is anything wrong until the occurrence of marked suppuration or of incontinence of urine attracts her attention. On examination, the meatus urethræ is found covered with pus and studded with a number of uneven swellings, between which are deep fissures. These swellings resemble pointed condylomata, are soft to the feel, bleed very readily when touched, and often fill the urethra as far as the neck of the bladder. If the finger is introduced a rough surface is felt, and the canal is found to have become narrower toward the bladder, so that it seems to be conical in form, the apex of the cone being toward the bladder. From the vagina the urethra and periurethral tissue feel thickened and infiltrated. Four of Dr. Landau's patients were undoubtedly syphilitic, and the fifth also had probably suffered from syphilis. The author considers the ulceration to be syphilitic in character; but he only looks upon syphilis as the foundation on which the ulcerative process —the exact nature of which is unknown—develops itself. The prognosis, as regards life, is not unfavorable, unless the process extend to the bladder and the kidneys become implicated. But a perfect cure is never to be looked for, and complete cessation of the destructive process is very rare. Scraping, followed by the application of lactic acid, is the treatment recommended by the author. Antisyphilitic remedies proved useless in his hands, but he thinks they might be of service at an earlier period.—*Archiv für Gynakologie.*

The Modern Climatic Treatment of Phthisis.—Dr. J. A. Lindsay has published an instructive paper on "Climate as a Therapeutic Agent in Phthisis" (*The Lancet*). He is decidedly of opinion that phthisis is a curable malady. To the question, "How does climate cure phthisis?" he answers, "by removing the consumptive from the evil influences of unfavorable meteorological conditions and of an injurious soil, and by transferring him to a climate where fresh air, sunshine, and an out-door life may be freely enjoyed, and where, in consequence, the processes of respiration, digestion, and sanguification proceed with sufficient energy to combat successfully the hereditary tendency or individual proclivity to pulmonary disease." After giving an account of those climates which are most likely to cure phthisis, the author concludes as follows: "Hippo, paregoric, and squills have almost disappeared from our treatment of phthisis; and climatic sanatoria, which soothe the patient's cough at the expense of his appetite and strength, must follow them into deserved oblivion. The consumptive does not die of his cough. He dies of progressive wasting. We have thrown aside expectorants and anodynes in favor of good food, exercise, and such aids to nutrition as cod-liver oil, hypophosphites, maltine, etc., and we must, when possible, choose climatic resorts which are tonic and stimulant rather than those that are mainly sedative. The vital point about any climate is, will it promote nutrition? In early uncomplicated cases with vigorous circulation the mountain climates offer the best hope. If the circulation be feeble, or if there be much nervous irritation, the choice will lie between the sea-voyage and residence in such dry inland resorts as Upper Egypt or the interior plains of Australia. The sea-voyage has the great recommendation that it rarely does harm, except in those very advanced cases which are beyond the reach of all treatment. If the patient objects to the mountains and shrinks from the long sea-voyage, Algeria or Morocco should be preferred to France or Italy. Climatic change is a snare instead of a help, a curse rather than a blessing, if it be regarded as a complete therapeusis in itself, and as enabling the patient to dispense with the usual lines of treatment and his customary precautions. Climate is not a specific. At best it is only a condition of cure, and we may expect it to be effectual only when the patient's food, habits, occupation, and mode of life are wisely regulated so as to facilitate its beneficent influence."

Primary Mycotic Nephritis in Children.—According to Dr. S. Miscoli (*The London Medical Record*), during one month of the autumn of 1887, in a town of three thousand inhabitants, fourteen cases of primary nephritis occurred in children from three to ten years of age. No epidemic prevailed at the time, and there was no rheumatic cause of any kind. The illness began with high fever, lasting three or four days, and giving place to œdematous collections of peculiarly hard character. Death ensued, or else convalescence, within a fortnight; there were three deaths in all. Microscopical examinations were made in the laboratory of Professor Guido Tizzoni, of Bologna, during the past month. 1. Sections of the kidneys of a boy, three years of age, who died on the fifth day of illness, showed, when treated by Gram's method and after-stained with carmine, numerous violet spots in the cortical periphery, the glomeruli, toward the middle of the pericanalicular vessels, and, lastly, in the tubules. Highly magnified, these spots showed longish ovals, some being even rod-shaped, surrounded by a whitish capsule, and always in pairs. Sometimes they were in series or chains of four or six together, more often grouped to form the violet spots. The thrombi, which either merely filled up or else dilated the vessels of the cortex and pyramids, were made up of these spots. At present no hypothesis is ventured as to these elements, but the author considers them to be certainly very like pneumonococci, as Klebs has delineated them in "Pathological Anatomy," and as he found them in the kidneys of a patient who had died of pneumonia. No micro-organisms were found in the kidneys of the two other children, who died on the sixth and tenth day of illness respectively, but only signs of general inflammation. 2. Sections of the first case, treated with logwood and carmine, showed the epithelium of the tubules in a state of cloudy swelling; the cell-nuclei were almost entirely lost to view, and only their peripheries were visible (nuclear membrane). But the cells contained numerous well-stained small bodies, which gave the impression of micro-organisms. The chromatin had escaped from the nuclei, and resembled Flemming's colored granules in the cell (the cell-membrane showed mulberry-like projections), as Madame Dr. Cattani has observed in rabbits after artificial pneumonia from pneumo-thorax, but the process has not yet been seen in the kidneys. The inflammation was not glomerular or glomerulo-capsular, but rather a general mycotic inflammation of the whole kidney. Primary nephritis is always rare in children, and has not yet been described as an epidemic.

Penetrating Gunshot Wounds of the Chest.—Dr. Gouzier has published some observations and statistics regarding the penetrating gunshot wounds of the chest occurring in the French expeditions to Formosa and Tonquin in 1883–85. From his work we gather that such wounds showed a mortality of ten per cent., which is only about a sixth of that due to similar wounds in recent European wars and in the American war. Apparently, as he suggests, the general employment of antiseptic methods was the cause of this great amelioration. Chest-wounds from revolver-balls of seven millimetres in diameter generally proved comparatively harmless. Traumatic pleurisy and pneumonia usually terminated favorably, but hemorrhage, empyema, and compound fracture of the ribs gave much more serious results. He found that the best practice was not to explore unless it was necessary to extract the ball, and not to attempt extraction unless the ball was just beneath the skin or was setting up dangerous complications. In ordinary cases he found the best plan was to close the wound antiseptically; but if there were empyema, to make a counter-opening and to wash out and drain the pleural cavity. Warm antiseptic baths were also found very useful in Tonquin.—*Lancet*, January 7, 1888.

Pleasant for Lady Medical Students.—The increase of female medical students at the École de Médecine in Paris does not excite pleasure among their male colleagues. We learn from a correspondent of *Daniel's Texas Medical Journal* that "it is only necessary to make a start for a manifestation, and everybody joins in, lecture or no lecture. Especially when a young lady comes in a little tardy, a demonstration is almost inevitable. A drawling 'o-h,' passing through every note for a nine-scale piano comes from several hundred strong vocal apparatuses, and as the grand closing finale a general smacking of the lips, kissing, and other indefinable sounds make themselves heard from every corner."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos 56 and 58 Lafayette Place

New York, March 17, 1888.

THE PATHOLOGY AND CLINICAL TYPES OF TYPHLITIS.

In a paper read by Dr. J. H. Musser, before the Philadelphia County Medical Association, recently, some interesting points were brought up regarding the difficult subject of the pathology and diagnosis of pericæcal inflammations. Dr. Musser introduces, first of all, more specific terms for the various forms of inflammation occurring in and about the cæcum and appendix. Thus he says: "By typhlitis is understood inflammation of the cæcum; by perityphlitis, inflammation of the peritoneum covering the cæcum; by paratyphlitis, inflammation of the connective tissue behind the cæcum. The term appendicitis is used for inflammation of the appendix; appendicular peritonitis for typhlitis of the appendix and its serous covering, and paratyphlitic, or pericæcal inflammation, for inflammation of the connective tissue around the appendix."

The term typhlitis may be also used as a general one to cover all the forms of inflammation occurring in the right iliac fossa.

Next, as to the anatomy of the parts, Dr. Musser gives the results of the studies of Treves and Fitz on this subject. Treves thinks that the cæcum is most frequently found, not in the right iliac fossa, but on the psoas muscle itself, or in the pelvis; that the cæcum is entirely surrounded by peritoneum rather than only partially, and therefore that behind there is no areolar tissue, as was described by the older anatomists. He does not believe, moreover, that there is a mesocæcum.

The usual position of the appendix is behind the ileum and its mesentery, with the tip pointing toward the spleen. The second most usual position is behind the cæcum, with the tip pointing upward. Long appendices usually take this upward direction.

The appendix may also stretch across the pelvis and become adherent to the sigmoid flexure. It varies in size, being from one and a quarter to nine inches in length.

Regarding the pathology of the appendix, it may be the subject of simple catarrhal or ulcerative inflammation. In the latter case there is local peritonitis, perforation, and formation of abscess. The location of the abscess, for it is usually circumscribed, depends upon the position of the cæcum. There are three positions in which it is most frequently found—in the right iliac fossa just above Poupart's ligament, or behind the cæcum, or in the pelvis. The size of the abscess varies, sometimes containing only two or three ounces of pus, and in other instances as much as a pint or more has been removed. The walls of the abscess differ according to its position.

The perforation always occurs within one and a half or two inches of the colon.

The important point made by Dr. Musser, if we understand him correctly, is that most cases (ninety per cent.) of typhlitis, using the word in its general sense, are cases primarily of perforative appendicitis, due generally (sixty per cent.) to the presence of a foreign body occluding the canal.

In the discussion of the paper above briefly outlined, Dr. William Pepper stated that he believed there were two classes of cases coming under the head of typhlitis. In one, the affection is limited to the cæcum and pericæcal connective tissue, while the appendix is very little affected. These cases are comparatively frequent, and they generally end in resolution.

In regard to symptoms, more cases are characterized in the beginning by pain, not excruciating in character, not associated with evidence of collapse, often accompanied with nausea and vomiting, and with elevation of temperature, which continues to rise until decided fever is present. With these symptoms there is excruciating tenderness in the right iliac fossa, a sense of fulness and induration, not rarely with dorsal decubitus and flexed thigh, with a constipated condition of the bowels, possibly preceded by one or two irritative movements during the first day, and with these there is considerable acceleration of the pulse. In proportion as the induration and swelling is early and marked, the chances are that the appendix is not seriously involved, but that the affection is chiefly one of inflammation of the walls of the cæcum and of the pericæcal connective tissue, with exudation, usually accompanied with considerable fecal impaction of the cæcum.

The treatment consists of abstinence from food and absolute avoidance of interference with the state of the bowels, local depletion, counter-irritation followed by the application of the ice-bag, or warm fomentations and the early internal use of opium and mercury.

The second class of cases includes those of appendicitis with perforation. The first symptom here is usually intense and excruciating pain, so severe at times as to cause collapse, occasionally so severe as to be followed by death in a few hours. Following this there is the rapid development of the signs of peritonitis. The pulse becomes frequent. There is marked tenderness, not in the iliac region only, but also toward the middle of the abdomen. The belly becomes distended, but there is no induration to be felt; there may even be no fulness in the right ileo-cæcal region. The appendix often lies under the cæcum, and there may be no evidence of dulness or of induration.

The fever may be moderate for a few days, with only slight pain. There is less vomiting than in the other form, and the patient may, for a short time, seem to be improving. The bowels are quiet and not so obstinately constipated as in the other form. After a time symptoms of general peritonitis appear, and unless there has been surgical interference the patient dies in from five to ten days.

As so much depends upon proper surgical measures, Dr. Pepper rightly dwells upon the importance of distinguishing these two forms from each other. It seems, however, as yet impossible to lay down any absolute rules of diagnosis. Rectal examination and the use of the aspirator needle are often very important and helpful measures.

A LAW DISPENSARY.

THERE has been established in this city a bureau to which poor people can resort for legal advice free of charge. This bureau was opened under the auspices of reputable lawyers in connection with Rev. Mr. Goss' People's Mission.

There is an opportunity for much good to be done by such a dispensary, and we congratulate the legal fraternity on having joined hands with the medical profession in the organization of philanthropic work.

Law and benevolence are not ordinarily thought to go hand in hand; but no doubt, with the aid of some pastoral appliances, they can be jerked along together for a bit.

We only hope, out of brotherly feeling, that law dispensaries will never grow into such an incubus as medical dispensaries have done, that they will never be used for advertising purposes, or for working up a private business, or for exploiting the good works of the business managers. The medical profession can tell the legal profession a great deal about the lights and shadows of the dispensary system.

THE PROBLEM OF DISSOLVING URIC-ACID CALCULI.

EVER since urinary calculi were first recognized, the attempt has been made to find some means of dissolving them in the body. The operation of lithotomy, though not particularly hazardous under favorable conditions, too often hastens death to be attempted when milder means will cure. The brilliant experiments in the laboratory as to the solubility of calculi at first led physicians to believe that their removal was a very simple matter, but, unfortunately, clinical experience in no way justified this inference, and, as time went on, the prevention and dietetic treatments were the only ones in use.

Dr. C. Posner and Dr. H. Goldenberg (*Zeitschrift f. klin. Med.*, 1888, xiii., H. 6.), however, not willing to be discouraged at the hitherto unsuccessful task, have endeavored to study this subject anew, hopeless as it may seem, and in the first series of experiments they confine their attention to the most important constituent of all calculi, viz., uric acid, and to a study of the different alkalies which are well-known solvents of these calculi.

At the instigation of Ebstein, Jahns (*Archiv d. Pharmacie*, vii., 1883), in Göttingen, studied this subject, but he made the mistake of forgetting that substances, however capable of dissolving uric-acid calculi outside of the body, underwent great changes in their passage through the body and often lost their effect. As an example of this is given the carbonate of lithium, which ordinarily forms with uric acid the most soluble compound, while, when taken internally, it appears in the urine, in combination with chlorine, as the chloride of lithium, a most insoluble substance.

Emil Pfeiffer and F. Bergmann ("Verhand. d. V. Congr. f. in. Med.," Wiesbaden, 1886, S. 444) came nearer to the clinical aspect of the question when, instead of using the mineral waters themselves, they took the urine passed after the use of the mineral waters, at the same time taking into consideration the individual peculiarities of the individuals themselves. Posner and Goldenberg followed the method of Pfeiffer, by taking two hundred cubic centimetres of filtered urine from individuals to whom had previously been given one of the drugs or mineral waters supposed to dissolve the calculi. This urine was passed through a filter containing a known quantity of chemically pure uric acid. At the beginning of these experiments they took two hundred cubic centimetres of "normal urine," that is, urine from one individual to whom none of these drugs nor mineral waters had been given. These two hundred cubic centimetres of normal urine were passed through a filter containing a known quantity of chemically pure uric acid, and, after the uric acid had been weighed, it was found not only not to have lost by the filtering action of the urine but even to have slightly increased in weight, the normal urine exerting no solvent action on the uric acid.

After experimenting with a number of alkaline mineral waters, among which were Vals and Vichy (Grand Grille), and also with such drugs as the bicarbonate of soda; Cantani's alkaline powder, consisting of bicarbonate of soda; effervescing carbonate of lithium and citrate of potash, the carbonate of lithium, borax, the boro-citrate of magnesia, and a remedy called "litholydium," they found that these remedies, although not having exactly the same effect on the urine, made it less acid or even alkaline, increased its amount, and, *pari passu*, decreased its specific gravity. The conclusion seems to be, that the bicarbonate of soda deserves the lion's share of the success, and the two most beneficial mineral waters, Vals and Vichy, are richest in sodium. The other effects of this treatment, namely, the increase in amount and decrease in specific gravity, are not to be left unconsidered. The solvent power of the urine increases with its lessening specific gravity, and the large quantity washes out and dissolves the small gravel. Experience showed that such waters as Vals or Vichy were more powerful than twice the quantity of a water one-half as effective; *i.e.*, that the concentration was important. Also, the mineral waters were much better than the salts contained in them and taken in the same doses, for the effect was most marked when the urine was slightly acid or neutral, intense alkalinity of the urine causing a precipitation of the almost insoluble salts and earths; the mineral water containing free as well as combined carbonic acid, a slightly acid or neutral reaction was easily maintained.

Now, what can be deduced from the above experiments for the benefit of our patients? There are cases of the uric-acid diathesis where deposits may be formed in the kidneys, leading to attacks of gout. If it is a question of an acute attack, then the most powerful means should be used, as Vichy and Vals water. Unfortunately, the waters of these springs are not always accessible, and often expensive, and so a resort to the bicarbonate of soda, in doses of from fifteen to seventy-five grains a day, taken in divided doses in large quantities of effervescing water, is often advisable. The next best thing is Cantani's effervescing powder or the carbonate of lithium. In the more chronic conditions, and in the interval of an attack, the weaker mineral waters, or such drugs as the boro-citrate of magnesia or borax, are to be recommended. Too long use of Cantani's powder is not to be advised, on account of the lithium and potash contained in it.

In the whole treatment it is necessary to control the reaction of the urine as far as possible, and not let it get too alkaline. The difficult thing is to completely dissolve large calculi. Such a thing is possible, but almost more difficult in proportion to the surface exposed to the volume of the stones. Ebstein seemed to think that the effect was principally due to the flushing action of the increased quantity of urine; but Posner and Goldenberg are convinced that the mineral water or drug in medium doses is borne well and exerts a favorable solvent action on these calculi. These experiments are certainly very valuable, and the treatment is one to which all patients will willingly submit. The dangers of using mineral waters in excess has of late been pointed out, and these should be considered in the treatment.

THE PHYSICAL PROGRESS OF WOMAN.

One of the most striking signs of the advancement and emancipation of woman may be noted by the student who philosophically observes the posters of Barnum's circus. The number and variety of wonderful feats performed do not increase, but they are gradually being done more and more by women. We see in the future a time when the only share of ignoble man in and about the arena will be feeding the elephants and driving the horses. It was but a short time ago that a lady lion-tamer nearly had her head bitten off, being the first woman who has ever had a professional experience of this kind. Mr. Barnum announces "the only lady knife-thrower," to say nothing of lady snake-tamers, a lady who walks on the ceiling, a troupe of lady "trapezists," a lady wolf-tamer, a lady who is shot out of a cannon, and a lady who "warns, comforts, and commands" some twenty odd elephants.

BACTERIOLOGICAL WATER-TESTS.

At a recent meeting of the Society of Medical Officers of Health, a report of which appears in *The Lancet* of January 7, 1888, the value of testing the fitness of water for drinking purposes by means of bacterioscopy was discussed. Our readers, doubtless, remember the valuable researches of Prudden on the bacteria of ice, which were published in The Medical Record. The results obtained by this author are not altogether paralleled by the conclusions of Mr. Bischof, who read the paper of the evening at the meeting referred to.

Among other things Mr. Bischof investigated the influence of an extension of the time of culture in Koch's bacteriological water-test. He found a large increase of colonies of bacteria by extending the time ordinarily allowed for their development. This extension of time is produced, according to the author, by spreading a minute quantity of potassic permanganate or spongy metallic iron upon those colonies which encroach unduly upon the development of the others. In this way certain colonies are sterilized, while others are given a chance to develop. Samples of potable water to be tested should, for obvious reasons, be taken as much as possible subject to the conditions under which the water is consumed.

The conclusions formulated by Bischof, as the result of his studies, are as follows: 1. No bacteriological water-test can satisfy the demands of hygiene unless it is qualitative, distinguishing between harmless and pathogenic microphytes. No such test is at present known. 2. Merely numerical results without such distinction are entirely unintelligible, unless the time and other conditions of culture of each test be specified. 3. A small portion only of the colonies capable of growing in gelatine-peptone is indicated by three days' culture. 4. The ratio of colonies thus indicated by three days' culture to that of the total present appears to differ so widely in different samples that the numbers of colonies obtained from them cannot be compared with each other. 5. Instead of any such comparison, the changes taking place from time to time should be followed up in each sample separately. 6. Extension of culture beyond three days increases the reliability of the results; how far this holds good, and how far culture should be extended, we have at present not sufficient evidence to show. 7. The usefulness of results is probably still further increased by combination of extension of culture with storage in sterilized flasks for a certain time. 8. As regards the control of the working of sand-filtration at water-works, *any* bacteriological test, to be of practical utility, should be repeated at intervals certainly not exceeding a fortnight. 9. It is desirable for the purpose of such control to test the water entering and leaving each filter.

INTERMITTENT OR SO-CALLED CYCLICAL ALBUMINURIA.

In an article on this subject, published in *The Lancet*, Dr. George Johnson recalls the well-known fact that in the vast majority of cases of albuminuria the proportion of albumen varies at different periods of the twenty-four hours. In cases of persistent albuminuria associated with structural degeneration of the kidneys, it will commonly be found that the urine passed at bedtime, and which has been excreted after food and exercise, contains about twice as much albumen as that passed before breakfast, and which has been excreted after prolonged abstinence from food and rest in bed. Again, it is common enough to meet with cases in which, while the urine which is passed after resting in bed and before breakfast is quite free from albumen, that which is excreted after food and exercise contains albumen in greater or less amount.

Dr. Johnson insists upon the importance of testing the urine in all cases of intermitting albuminuria at frequent short intervals. He prefers the picric-acid test to all others. The term "cyclical albuminuria," as applied to cases of the above-described kind, he very properly regards as misleading, implying as it does that the morbid condition recurs regularly, without reference to ascertainable and often avoidable influences. It is of the greatest practical importance to ascertain the probable exciting cause in every instance of intermittent albuminuria; for these cases, if neglected, have a tendency to assume a chronic form.

Contrary to a widely received notion, Dr. Johnson does not believe that the condition under consideration has any relation to the period of adolescence. He fails to state anything definite in refutation of this view, however. It is certainly true that this form of albuminuria is oftener seen in young persons approaching adult life, than at later periods. Possibly the greater activity of adolescence may have some influence in bringing about transient albuminuria.

Not long ago we had occasion to point out in these columns that the term "physiological albuminuria" was really a misnomer. Dr. Johnson evidently shares this opinion, for he states that he knows of no such condition. Normal urines unquestionably contain no albumen. And if the absence of other symptoms of disease signifies anything, then Dr. Johnson affirms that the greatest possible amount of albumen in the urine might in many cases be designated physiological.

REGULATING THE SALE OF PATENT MEDICINES.

Professor Chandler, in discussing the subject of the proposed law licensing patent medicines, recently referred to in The Record, said to a reporter of the *Evening Post* that the bill was a good one, but that the proprietors of patent medicines are too strong for it. This was the view which we took of the matter. It is a question of might against right; and might will prevail, unless, perchance, the medical profession will gird its loins and show the law-makers that it has some fighting qualities in it when a good cause is to be defended. The great trouble lies in the fact that the patent-medicine men practically buy up the local newspapers throughout the State, and they have already written a threatening circular letter intimating that unless the bill against the cause of patent medicines be opposed their advertising patronage will be withdrawn. Small country newspapers live largely on these advertisements, while their readers die largely from them. It is a most unrighteous state of affairs, and one for which there should be a remedy.

THE PRESENT POSITION OF EVOLUTION.

Apropos of the publication of the "Life and Letters of Charles Darwin," *The Lancet* devotes some space to a discussion of the present status of evolution. It points out that evolution is still merely an hypothesis, and not an established doctrine. It says that, for the present, "the attitude of the scientific world is one of almost universal acceptance of evolution as a working hypothesis of unparalleled value and suggestiveness, but of reserve toward it as regards its final issues and ultimate limits. Whatever may be the final form assumed by the doctrine of evolution, we owe an immense debt to Darwin for having unlocked some of the most mysterious recesses of nature and shown us the way of future hopeful advance. His teaching has been of untold value in bringing order into the chaotic mass of scientific material, and in suggesting methods of inquiry which have proved most fruitful and profitable. In physiology, especially embryology, and in pathology, its value has been altogether incalculable. To withdraw the conception of evolution from the domain of science would now seem to us quite as impossible as to return to the Ptolemaic system of astronomy. Just as Newton bound the spheres together by his great hypothesis, so Darwin has succeeded in uniting in one the multiform phenomena of life. If, as has been said, 'the end of science is the detection of unity,' few doctrines have so just a claim to be reckoned scientific as the doctrine of evolution."

Speaking next of the opposition to evolution, *The Lancet* observes that this "has been due in no small measure to a mistaken notion as regards its correct interpretation. It has been often forgotten that it explains processes, not origins; that it elucidates the *method* of creation, but has no explanation to offer as to its *cause*. The recognition of evolution leaves the argument for and against a Creator just where it was, although it undoubtedly modifies our conceptions of his modes of operation. It was one of the chief merits of Comte as a thinker that he clearly perceived that science could only explain processes and transitions, and was unable to grapple with the question of causes. Hence, quite consistently, he ruled out all inquiries into causes as unscientific. In like manner the doctrine of evolution, correctly understood, has nothing to say about causes, and the evolutionist can have just as elevated a conception of a First Cause as the man who vaguely misapprehends evolution as a sort of substitute for a Creator."

It is certainly a favorable sign of the times that questions of this kind can at present be discussed in a spirit of calm inquiry, which alone permits us to see things in their true light. Not many years ago, so much sentiment and so many bitter personalities were always mixed up in bringing matters of this sort before the public that amid the harsh strife of controversy the real questions at issue were commonly lost sight of. Evolution does not run counter to religion, as was formerly asserted. On the other hand, evolution does not explain all things. There may be a healthy atmosphere permeated as well by a scientific appreciation of the one as by a spirit of dignified tolerance of the other. In other words, evolution and religion are not incompatible, but may actually become adjuvants in the endeavor of humanity to grasp truth.

FAILURE OF THE HEART IN VALVULAR DISEASE, AND ITS TREATMENT.

The last few years have witnessed a gradual change in our ideas on the subject of cardiac diseases. The opinion is now firmly rooted in the minds of the advance-guard of the profession, at least, that cardiac murmurs are often devoid of the grave significance that was formerly always attributed to them. So, too, we have come to learn that considerable damage to the valves may be so thoroughly compensated by hypertrophy that it seems permissible to speak of recovery from organic disease of the heart. True, the anatomical lesion persists. But the individual thus affected may live for years, without impairment of his health, and with a working capacity in no way reduced from his normal standard.

It is a very decided step in advance if we are able to state positively that organic cardiac disease is not *per se* fatal. How often, in the past, the doom of some poor sufferer has been sealed by the gloomy prognosis of the physician, will probably never be known. But the time has now come when the "prognosis of despair"—a prognosis from which there was scarcely an exception in former years—must make way for the modern doctrine of hope in the possibility of a cure. What was formerly equivalent to a sentence of death may be commuted then to carefulness for life.

One of the most noteworthy contributions to modern cardiology appears in *The Practitioner* of January, 1888. Dr. J. Mitchell Bruce, the author of the article in ques tion, points out that the subjects of *perfect compensation* of valvular disease are devoid of morbid symptoms. Cardiac hypertrophy, while indicating disability of the heart in some respects, denotes at the same time that nature has made up for this disability by supplying added force to the muscular mechanism of that organ.

From this point of view we can readily agree with the author when he says: "We search anxiously for hypertrophy, we welcome its oncome, we work to establish and maintain it."

When, however, in these cases of perfect compensation, symptoms of cardiac distress arise, we are warned that "failure of the heart" is setting in. We no longer regard these symptoms as due to the valvular lesion *per se*, but as brought about by failure of the cardiac wall.

Careful treatment of this condition may often remove the parietal weakness, and when we have succeeded in doing this, we say that compensation is re-established. The patient then enters upon a fresh period of freedom from symptoms, although the valvular disease itself remains unchanged.

Now, Dr. Bruce argues that "if cardiac failure make its appearance in chronic quiescent valvular disease, it must have originated in some conditions or circumstances unfavorable to compensation; and prognosis and treatment, to be sound and successful, must be framed on a full knowledge of what these conditions or circumstances are." He does not refer to the necessity for a general acquaintance with the causes of broken compensation, but to the application of this knowledge in each individual instance of cardiac failure that comes before us. In his experience it is "by no means common for the physician to inquire into the causes of cardiac failure in every case that seeks his advice." When a patient with palpitation, dyspnœa, cough, and threatening dropsy presents himself for treatment, he doubts "whether we are always careful to put the question to ourselves—What has happened to this man that he should come to me with these symptoms after twenty years of freedom from suffering since the original rheumatic endocarditis? Time was when we were satisfied in such a case with the diagnosis—mitral incompetence. We should now consider this diagnosis as insufficient, and would complete it by saying—mitral incompetence with cardiac failure." He ventures to say that "this diagnosis is still short of the full truth, and that when we proceed to offer a prognosis based on such a conclusion only, and to apply treatment, we proceed on insufficient information. We must first determine the *cause of the failure*, why the heart has broken down—whether from muscular strain, or nervous exhaustion, or alcohol, or other discoverable cause." He maintains that until this point is satisfactorily settled we are not justified in offering a forecast or ordering a therapeutical course.

Dr. Bruce next proceeds to consider the most frequent causes of broken compensation. According to him, they may be described as follows: 1. Muscular overwork. 2. Nervous causes, such as the depressing emotions of fear, grief, distress, and anxiety. Worry, here as elsewhere, is potent for much mischief. Nervous excitement of a pleasurable kind may also work evil. 3. Imperfect blood-supply to the heart. This may result from general hæmatic impoverishment, or from a diseased state of the coronary arteries. 4. Intercurrent diseases, among which rheumatism and pulmonary mischief are most to be dreaded. 5. Causes peculiar to women, such as pregnancy, confinement, protracted lactation, the climacteric, or even difficult menstruation. 6. The every-day use of tea, coffee, tobacco, and alcohol, which act, according to Dr. Bruce, as cardiac poisons. 7. Increase of the valvular lesion, due to endocarditis, rupture of a diseased valve, etc. 8. The advent of what may be called the "limit of compensation." By this is meant the limit that is placed on life and health by the occurrence of secondary changes in the lungs, liver, kidneys, and indeed in the cardiac wall itself. Cardiac dropsy is finally developed. Judicious treatment "may again and again secure for a time a fresh accommodation, a new adjustment of the physiological balance; but the end cannot be indefinitely averted—the limit of compensation is finally reached."

Sound treatment must be based on a sufficient knowledge of pathology, and also on correct views concerning etiology. Dr. Bruce utters these warning words, in which we heartily concur: "Do not treat cardiac disease without sufficient evidence that treatment directed to the heart is required. Let us be sure that the heart is failing before we proceed to apply our remedies. The day has gone by when men with any pretension to therapeutical judgment did not hesitate to treat murmurs—when they ordered digitalis and iron, let us say, for a mitral *bruit* which they happened to discover in a dyspeptic patient. If the heart is really failing, and treatment called for, do not apply treatment in a routine fashion. Cardiac failure is but an effect: rational treatment begins with attention to the cause. We must discover the cause of the break-down, and remove it if possible. Our means of treatment will vary widely in different cases. We have an extensive choice of remedies. We are not confined to a few routine methods or a few habitual drugs, but can turn to account every means hygienic and therapeutic that is suggested by faithful investigation and sound judgment. This is a very encouraging consideration. The poor overworked, half-starved laborer must be ordered rest and warmth and food in hospital. The sedentary free-liver requires the very opposite line of treatment—he must be sent to climb mountains or to hunt, to endure for a time the miseries of palpitation and breathlessness, if compensation is to be successfully restored. We treat intercurrent rheumatism with remedies—such as salicylates—calculated to quickly dispel it. We interdict the consumption of cardiac poisons. We remove the overworked, ill-fed, anæmic girl from business in town to the country."

Of course, there will always remain a certain proportion of cases of heart-failure in which the cause is not discoverable. Here a rational symptomatic therapy is alone indicated. The balance of circulation is to be restored as quickly as possible by such direct cardiac remedies as digitalis, strophanthus, or convallaria. But even here the general condition of the patient is not to be lost sight of, and what hygienic surroundings, rest, and proper nutrition can do is never to be underestimated.

THE NEW ANÆSTHETIC ERYTHRO-OPHLŒINE has been tested by Mr. John Tweedy, of London, who writes to *The Lancet* that the drug is irritating and has very little anæsthetic effect.

News of the Week.

Death of Dr. F. R. S. Drake.—Medical circles were much shocked to learn of the sudden death, on March 11th, of Dr. F. R. S. Drake, at the age of forty-three years. Dr. Drake was very widely known and esteemed by the profession of this city. He was born in Windsor, Conn., and graduated in medicine at the University Medical College in 1871. He became associated with Professor Lerrius, and for some time had been Professor of Clinical Medicine at the University, and Visiting Physician to Bellevue Hospital. He was a member of the County Medical Society, at one time being a vice-president. He was Chairman of the Board of Censors, and was very active in securing the medical legislation of the State as member of the Legislative Committee of the Medical Society of the State, of which committee he was a member for two years. He was also a member of the Academy of Medicine, the Pathological Society, and a prominent mason, having been a Deputy Grand Master and a member of Prince of Orange Lodge. For a while he was Secretary of the Alumni Association of the Medical Department of the University of New York.

Bellevue Hospital Medical College held its annual commencement at Carnegie Laboratory on the evening of March 12th, during the time of the great blizzard. The diplomas were bestowed, and then class and faculty made their way to the Hotel Brunswick and celebrated with a supper.

The Long Island College Hospital held its twenty-ninth annual commencement on March 9th, graduating a class of thirty-six.

The New Asylum for the Criminal Insane.—The proposed asylum buildings for insane criminals, for which the Legislature appropriated $185,000 recently, are to be located about one and one-quarter miles east of the villages of Matteawan and Fishkill, Dutchess County. The hospital buildings proper will number ten, consisting of six pavilions of ward buildings, two infirmaries, and two isolated buildings planned especially for the most dangerous and vicious class.

The American Veterinary College held its thirteenth annual commencement on March 1st, and graduated a class of thirty-two.

Dr. Thomas D. Swift died in this city last week. He was graduated at the College of Physicians and Surgeons in 1879, and had practised here since that time.

The Emperor of Germany.—Medical opinion in England, and perhaps this country, is inclining to the belief that the Emperor of Germany has only a perichondritis, and may get well.

The Blizzard almost paralyzed medical work for a day or two, both in private practice and at hospitals. It was with great difficulty that ambulances could be sent out, even on Tuesday.

New York College of Dentistry.—The twenty-second annual commencement of the New York College of Dentistry was held at Chickering Hall, Saturday evening, March 10th. Seventy-two graduated. The address was delivered by Rev. Dr. Gallaudet.

Measures for the Antiseptic Treatment of the Throat in Diphtheria.—1. M. Gaucher's method is to rub the affected surface with a cotton-covered probe soaked in an alcoholic solution of camphor and carbolic acid. This is done twice daily. In the intervals the parts are washed with a one per cent. solution of carbolic acid.

2. The method of Bouffé is to give one teaspoonful, every two hours, of the following:

℞. Lemon juice		300.0 grammes.
Sodæ sulphat.,		
Sodæ chlorid	āā	5.0 "
Ferri saccharat		3.0 "
Sodæ phenat		♏ xxv.
Mel		3.0 grammes.

M. The same solution is used as a gargle.

3. The treatment suggested by Osicki is to paint the parts with the following:

℞. Tinct. rhatan	10.0 grammes.
Tinct. benzoin	5.0 "
Tinct. aloes	3.0 "

M. After each application the following powder is insufflated:

℞. Sulphur. precip.,		
Potas. chlorat	āā	5.0 grammes.
Tannin		1.5 "

M.

4. The so-called combined antiseptic treatment consists of painting the parts four times daily with an alcoholic solution of corrosive sublimate, 1 to 1,000. In the intervals the parts are irrigated with a one per cent. solution of boric acid. Internally there is given every hour a teaspoonful of the potion of Letzovich. The formula for this is:

℞. Soda benzoat	5 to 15 grammes.
Aquæ q. s. to dissolve.	

To this add:

℞. Aquæ menth. pip	50.0 grammes.
Syr. aurant. cort	10.0 "

M. With the above is given plenty of alcohol internally.

The Address before the Alumni of Bellevue Hospital.—The first annual address before "The Society of the Alumni of Bellevue Hospital" will be delivered at the Academy of Medicine, on Wednesday evening, April 4th, at half-past eight o'clock, by Dr. Wm. T. Councilman, Associate Professor of Pathology in the Johns Hopkins University; subject, "Predisposition in Tuberculosis." The profession of the city are cordially invited to be present.

Correction.—Dr. H. J. Garrigues writes: "On page 281 of the last issue of The Medical Record, in a report of my paper on 'Laparotomy for Rupture of the Uterus,' I find the statement that as many as thirty-seven sutures were necessary to *prevent* folding-in of the peritoneum. Will you kindly insert a correction to the effect that the reporter has misunderstood me. The numerous sutures were necessary in order to fold the peritoneum in between the edges, so as to apply one serous surface against the other, which gives the most rapid agglutination."

STATE MEDICAL SOCIETY OF ARKANSAS.—The Thirteenth Annual Session of the State Medical Society of Arkansas will be held at Fort Smith, Ark., Wednesday, Thursday, and Friday, April 25, 26, and 27, 1888, commencing on Wednesday at 11 A.M.

NEW YORK HOSPITAL.—At a meeting of the Governors of the New York Hospital, March 6th, Drs. A. B. Ball and E. L. Partridge were elected Attending Physicians and L. A. Stimson Attending Surgeon.

MEDICAL STUDENTS' DUELS.—The custom of duelling, which still survives with astonishing pertinacity among German students from one generation to another, has recently given rise to two sad accidents in Berne. One of the combatants had the whole of his nose slashed off, while another, who was on the point of taking his M.D. degree, had his right arm so entirely disabled by a foil that his medical career has come to a premature end. These accidents, however, did not prevent another series of duels, which took place on February 4th (that is, a couple of days after the above-mentioned accidents), in Berne, between several members of the Corporation Helvetia and as many students from the University of Zurich, who had come to Berne expressly for the purpose.

"L'ÉLECTROTHÉRAPIE" is the title of a new journal devoted to electro-therapeutics, and published in Paris under the editorship of Dr. Léon Danion.

THE PHILOSOPHER can draw an interesting moral from the following tale of the revolt of the Cyprians at Naples. Seven hundred women, suffering from venereal diseases, were under treatment at a large charity hospital devoted to such kinds of disease. It was found that lovers, who must indeed have been ardent, came to visit the patients under the guise of parents, etc. The visits were forbidden, whereupon the patients rose in revolt, turned out the authorities, defeated the police, and only succumbed to military force.

"THE CLIMATOLOGIST" is the name of a new quarterly journal published in Washington, and edited by William C. Chase. Its mission is "public, not technical."

THE CONSTITUTIONALITY OF THE LAW REQUIRING LICENSING OF DENTISTS IN INDIANA was recently affirmed by the Supreme Court of that State.

PROGRESS IN SANITARY LEGISLATION IN 1887.—In Vermont a State Board of Health has been organized. In Wisconsin the powers of the State Board have been extended and its relations to local boards more clearly defined. In Alabama a special quarantine fund has been appropriated. In Michigan a laboratory of hygiene has been established in connection with the University of Michigan. In Ontario the provincial board has power to act as a local board in the absence of such an organization, and in emergencies. In New Jersey laws have been passed creating a *per capita* tax for health purposes. In West Virginia laws have been passed extending quarantine to cattle, making county boards of health less medical, licensing medical practitioners, and establishing a system of vital statistics. In Illinois a law permitting cities to maintain abattoirs has been declared constitutional. In Kentucky efforts are being made to secure a law prohibiting adulteration of food. In California a special quarantine fund of $25,000 was created. In New Hampshire health authorities have been given power over slaughtering and rendering establishments, permitting them to close polluted wells, and to close up dwellings in bad sanitary condition. Physicians must report all cases of scarlet fever and diphtheria to the local board of health. —*Sanitary News.*

DR. WILLIS W. FRENCH died at his residence in this city, on March 11th. Dr. French was a native of Portsmouth, N. H. He graduated at Bowdoin College in 1878, and studied medicine and was graduated at the New York College of Physicians and Surgeons in 1883. After getting his diploma he went West, but returned to New York in 1886 and was connected for a time with the Board of Health.

THE CODE OF ETHICS AND THE OATH OF HIPPOCRATES. — The suggestion is made that physicians be obliged to subscribe to the Oath of Hippocrates, instead of the Code of Ethics. This oath is a noble piece of writing, and shows that the ideas of the moral dignity of the profession of medicine were as great two thousand years ago as now. Barring the matter of gods and goddesses, the educational methods, and the cutting for stone, the doctor who followed its injunctions could not fail to lead an honorable life. It may interest our readers to read this ancient document again: "I swear by Apollo the Physician, by Æsculapius, by Hygeia, and Panaceia, and all the gods and goddesses, calling them to witness that I will fulfil religiously, according to the best of my power and judgment, the solemn promise and the written bond which I now do make. I will honor, in the same degree as my parents, the master who has taught me this art, and endeavor to administer to all his necessities. I will consider his children as my own brothers, and will teach them my profession, should they express a wish to follow it, without remuneration or written bond. I will admit to my lessons, to my discourses, and to all my other methods of teaching, my own sons, and those of my tutors, and those who have been inscribed as pupils and have taken the medical oath, but no one else. I will prescribe such a course of regimen as may be best suited to the condition of my patients, according to the best of my power and judgment, seeking to preserve them from anything that might prove injurious. No inducement shall ever lead me to administer poison, nor will I ever be the author of such advice; neither will I contribute to an abortion. I will retain religiously the purity and integrity both of my conduct and of my art. I will not cut anyone for the stone, but will leave the operation to those who cultivate it. Into whatever dwellings I go, I will enter them with the sole view of succoring the sick, abstaining from all injurious views and corruption, especially from any immodest action toward women or men, freemen or slaves. If, during my attendance, or even unprofessionally in common life, I happen to see or hear of any circumstances which should not be revealed, I will consider them as a profound secret, and observe on the subject a religious silence. May I, if I religiously observe this oath, and do not break it, enjoy good success in life, and in the practice of my art, and obtain general esteem forever; should I transgress and become a perjurer, may the reverse be my lot."

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 1, 1888.

Abraham Jacobi, M.D., President, in the Chair.

Dr. Edward B. Bronson read a paper entitled,

SHOULD WE TREAT SYPHILIS DURING THE PRIMARY STAGE?

By preventive treatment was not necessarily meant abortive treatment, but measures which abridged the course and ravages of the disease upon the constitution. To carry this out most intelligently it would be desirable to know the essential qualities of syphilis, but of this we had not yet any knowledge. But the question as it now presented itself to us was, Are the indications thus far afforded by our imperfect knowledge of syphilitic affection such as to render any attempt at preventive treatment in the primary stage of the disease unavailing and absolutely helpless? For that is what many maintain.

There were two modes of approaching the question, the one theoretical and the other clinical; in the former the first inquiry was directed to the essential cause of syphilis, called the syphilitic virus. Here all was hypothetical. No theory so satisfactorily explained it as that which attributed it to the presence and growth in the tissues of a specific micro-organism. But this had not been demonstrated. If it could be established, it was by no means certain that preventive treatment would then prove successful. The efficacy of antiseptic methods was far from insured, even in those diseases which had been traced to a known micro-organism.

The author said all facts seemed to point to a local affection in the beginning; there was a temporary sojourn of the virus in the region where it was first implanted. Local manifestations remained for a considerable period the sole evidence of the disease. Later, constitutional symptoms manifested themselves. From here the virus sooner or later contaminated the neighboring lymphatic glands, and then passed to the general system. Whether several lymphatics were affected simultaneously in the beginning had not been determined. Those who claimed that the disease was constitutional from the beginning offered as proof of this that immediately after infection the person obtained immunity from subsequent inoculation; that this immunity took place before the chancre developed; also, that extirpation of the chancre had not prevented advance of the disease. There was reason to believe that the virus soon passed beyond the reach of the cautery or the knife. The case of Berkley Hill was cited in proof of this view. It could not be said that the results of excision were conclusive either for or against the hypothesis of a local affection at the commencement. Nor would want of success prove that the syphilis was not at first local.

If the disease was in the beginning a local affection, what hope was afforded by preventive interference? Empirically the answer was so ambiguous that we were forced to fall back on theory. In the first stage of syphilis most authorities advised only expectant treatment. But, the author asked, must all the virtues of that wonderful drug, mercury, be waited for until after the appearance of the second stage of syphilis? Were there no other resources during the first stage except excision of the initial lesion, and, as some had advised, the internal administration of mercury and iodide of potassium? Excision of the initial lesion was proper when practicable, but it was a question how far it should extend, how many glands should be excised, and its efficacy could only be surmised. But it was desirable that these experiments be continued. With regard to medicinal treatment during the primary stage, it had been claimed that it delayed the appearance of the later symptoms, while it had also been claimed that when they did appear they were more severe than when treatment had not been instituted during the primary stage. It seemed to the author that there was a singular inconsistency in using mercury so freely during the secondary stage in those who believed syphilis was general from the commencement, and yet opposing its use during the primary stage through fear of rendering tertiary symptoms, should they develop, more severe.

But it appeared to Dr. Bronson extremely doubtful whether during the primary stage the local affection could be reached by internal medication; the local use of mercury seemed to him more rational. Yet, if the disease was due to a micro-organism, it was not unreasonable to suppose that mercury might be efficacious through its germicidal qualities. Although mercury might act as an antiseptic in syphilis while the disease was local, yet it was very doubtful whether it would have such an effect after the virus had entered the blood. Mercury was more likely to exert its peculiar influence when syphilis was a topical disease.

The primary object of his paper was to call attention to the more direct employment of the bichloride in the region where the chief source of danger had its seat. It was purely on theoretical grounds that he recommended this method. The scheme was to bring mercury in contact with the region of the infection during the primary stage. The field of operation might extend to all those glands which might be supposed to be the channel through which the virus found its way to the general system—the inguinal and iliac glands, and the glands on the upper thigh. It was rational to suppose that the mercury used by inunctions or injections at this stage might destroy the germs or hinder their progress. When an injection was used, it was unnecessary to employ more than $\frac{1}{100}$ of a grain. As an inunction, mercurial soap was preferable to mercurial ointment.

The author thought that this treatment, although based on theoretical grounds, was better than to let the patient go away without any hope until the disease should break forth as a constitutional affection.

Dr. E. L. Keyes said he would have been much more interested in the proposed plan of treatment had the author given his results. Had such a course been in any way beneficial?

Dr. Bronson said that if his paper had any virtue at all, it was that it did not try to give results of treatment. The conditions made it very uncertain and difficult of practice, and considerable experience would be required to enable us to judge of its merits. He had attempted to employ it in several cases, but in some the patients failed to carry it out, in others there was uncertainty of diagnosis, in all, some weeks had elapsed since the suspicious connection.

Dr. Keyes had never tried this method, but he would be willing to do so if the results obtained by others were encouraging. But it seemed to him that after the initial lesion had manifested itself, the disease was beyond the reach of local applications. His own impression had always been that syphilis became general from the first, before the appearance of the primary lesion, which formed after a period of incubation. Perhaps he could not prove the correctness of this view, but the contrary had not been proven to his satisfaction. Dr. Keyes referred again to a case in which he extirpated an initial lesion about twelve hours after its appearance, yet the man went on to have the secondary symptoms in a most marked degree. The wound made during excision healed, and no ulceration or induration occurred subsequently.

The objection to the treatment of the primary sore with the only remedy which was customarily relied upon as being capable of attenuating, modifying, or more or less doing away with the subsequent symptoms, namely, mercury, until the diagnosis of syphilis had been confirmed by subsequent lesions, consisted in the fact that more or less discord was thereby thrown into the whole life of that patient. He had seen a number of such cases, and they had confirmed him in the belief that it was best never to treat syphilis until one was satisfied of the diagnosis.

Dr. R. W. Taylor thought with Dr. Bronson, that the history of the syphilitic sore and the analogical evidence offered by other diseases, like cancer and tuberculosis, and the knowledge which we were acquiring regarding the action of bacteria, went to show that at first syphilis was a local affair, but unfortunately we did not know how far it was local. He thought extensive experience had shown that neither cauterization nor excision of the initial lesion would remove the virus. But he thought Dr. Bronson's idea was a most laudable one, and if this terrible disease could be strangulated from the first, we should use every rational means to that end. It was his opinion, however, that this could not be done, for the reason that we could not reach all the affected cells which lay in the adventitia of the blood-vessels and lymphatics. He did not believe there was a single case of true syphilis which had ever been aborted by excision or cauterization, and he had read the reports of all the cases in medical literature. Dr. Taylor believed the mother could bear a syphilitic child without herself acquiring the disease, the father having transmitted the disease to the offspring; but he also believed she could afterward acquire syphilis in the regular way. The bearing of a syphilitic child, he thought, gave her no immunity.

There was good reason for employing very active treatment, as by injections and inunctions of mercury, when constitutional syphilis became manifest; it required a most powerful remedy, and it was necessary to bring the remedy into immediate contact with the syphilitic cell-formations in order to destroy them. In the region in which the mercury acted immediately the papules disappeared in about half the time of those on which it operated mediately. The suggestion made by Dr. Bronson, to get the local effect of the bichloride solution, would have greater weight if he had not employed so mild a solution. In order to get a good effect large doses must be used; yet hypodermic injections of bichloride solution in fair strength about the legs would always produce abscesses. Such had been his experience.

It was Dr. Taylor's opinion that to treat syphilis in the primary stage was to make it disorderly. If the disease were allowed to take its regular course until the development of secondary symptoms, until the appearlance of the rash, the man would then be satisfied that he had the disease, and would prove tractable; but if he had not seen such symptoms he would be likely to disobey all instructions, go on and drink and carouse, and refuse in every way to aid the physician in his efforts at cure. The sickening smile which came over the man's face on seeing the general rash of syphilis, and which Dr. Taylor called the syphilitic countenance, was a sure sign that his spirit had been humbled. There were some cases in which early treatment could only with difficulty be avoided, as when a man wished to be "fixed up" before his wife returned home. He believed mercury acted by producing fatty degeneration of the syphilitic cells. These had not developed all over the body until the appearance of constitutional symptoms; then why begin to dose for a condition which would not appear until thirty days later? There was evidence to prove that syphilis did not run as tractable a course in those who were early medicated as in those whose treatment dated from the general manifestations.

Dr. Leónard Weber had promised to read a paper on regional treatment of syphilis. This he postponed, but he expressed his agreement with the majority of writers that it was not desirable to institute constitutional treatment until the disease had thoroughly manifested itself.

Dr. Bronson closed the discussion. He claimed that the subject which he had raised for discussion was one which must be approached from a speculative standpoint before facts could be developed. He had only tried to point out possible indications with the hope that the treatment might be forthcoming, that the trial might be instituted. Patients thought the argument, that if the disease were treated in the beginning it would become disorderly in the future, was only worthy of derision; they would not accept such an excuse for refusing to institute treatment at once. He had seen no thickening or ulceration follow injections in the neighborhood of the thigh and inguinal region when the mercurial solution had been of the strength mentioned, and which he regarded sufficiently strong to produce the antiseptic effect.

The President apologized for making some remarks after Dr. Bronson had spoken, and said some of the difficulties in this line of study might be stated as follows: 1, The length of time required before the secondary symptoms became manifest was uncertain; 2, we did not know what amount of poison, or the nature of the poison which had been introduced; 3, we could not tell what was the exact change in the lymph vessels which had carried the poison into the general system.

Some of these points could be best illustrated by comparisons with what had been seen in certain infectious diseases, as in diphtheria. We knew that diphtheria was local; that it might remain local, or it might become constitutional very soon. It remained local when it was in a neighborhood in which there were very few lymphatic vessels, as on the tonsils. But when it appeared in the posterior nares the disease became constitutional at once, and manifested itself in enlarged glands at the angle of the jaw. Constitutional infection did not always take place to the same extent. Why was this so? Because, he replied, the lymphatics differed in different persons and at different ages.

Again, there were some cases of nasal diphtheria in which there was not much swelling of the glands near the angle of the jaw, but the poison seemed to enter the general circulation in a more direct way than by the lymphatics; it seemed to go directly into the blood. Such patients often died in a few days after the development of diphtheria. The President thought the action of the syphilitic poison might be analogous to that of diphtheria.

THE TREATMENT OF FLAT-FOOT,

was the title of a paper sent by Mr. Bernard Roth, F.R.C.S.E., and read by Dr. Gibney (see p. 289).

Dr. Ridlon approved of the use of the Thomas shoe and of gymnastics in flat-foot. It had been claimed in this country that one cause of the deformity was spasm and contraction of the gastrocnemius, and stretching of that muscle had been resorted to. Dr. Ridlon believed this spasm and contraction, when they occurred, were preceded by the foot deformity, and that the deformity was not the result of the muscular contraction. Regarding pads and springs worn under the foot, they might relieve tenderness and pain for a time, but they did not cure the deformity, and when the patient once began using them he found it necessary to continue their employment.

Dr. A. M. Phelps treated valgus by putting the patient under the influence of an anæsthetic and forcing the foot into a desirable position, holding it there for a time by a plaster-of-Paris splint, and repeating the procedure as might be necessary. In this way, placing the foot in a position to get the weight of the body transmitted through the arch in another direction, and then allowing the ligaments time to regain their normal strength, as much could be done as could be expected in valgus. An apparatus for accomplishing this object was described. In certain cases in which there was want of muscular development the use of massage and electricity was indicated.

On motion of Dr. Agramonté a resolution was taken from the table and passed, petitioning Congress to remove the import duty on all medicines and surgical instruments and apparatus.

SECTION IN SURGERY.

Stated Meeting, February 13, 1888.

R. F. Weir, M.D., Chairman.

EXCEPTIONAL FRACTURE AT THE LOWER EXTREMITY OF THE HUMERUS.

Dr. Charles A. Powers presented a boy, aged eleven, who, April 24, 1887, fell from a wagon, striking on the inner aspect of the left elbow. Immediately thereafter he sought treatment at the Chambers Street Hospital. There was found to be almost complete disability at the elbow, very much pain, and moderate swelling at the inner aspect of the joint. There was no fracture through either condyle nor through their base, and the ulna was intact. There was no difference in the contour of the epicondyles when the elbow was carefully compared with its fellow.

Between the internal epicondyle and the inner aspect of the olecranon lay a loose body about the size of a bean; it was freely movable and could be made to grate on the adjacent bone. When the ulna was firmly grasped antero-posteriorly at the coronoid process it could be made to slip internally on the humeral trochlea, and in so doing carried with it the loose fragment. The inner ridge of the trochlear surface could not be felt. The examination was made under ether.

From the preservation of the contour of the internal condyle, and the free lateral motion of the ulna, Dr. Powers concluded that this fragment could come only from the inner trochlear surface of the humerus.

The forearm was placed at ninety degrees, midway between pronation and supination, and a plaster-of-Paris splint applied which was kept in place four weeks, at the end of which time the condition noted was as follows: Moderate thickening at the inner aspect of the humerus below and without the internal epicondyle, flexion to eighty degrees, extension to one hundred and twenty degrees, pronation and supination almost complete.

The patient was directed to poultice, bathe, and massage the elbow. The functions gradually returned, and six months later all were complete except extension, which was some ten degrees short of normal.

Dr. Powers called attention to the fact that there was an independent epiphysis for the trochlea, and the question was raised whether this might not have been a separation of that epiphysis.

The Chairman thought the lesion was a rare one. He had had no experience with it.

Dr. Powers also presented two cases of

PRIMARY EXCISION OF THE ELBOW.

The first was that of a man, aged twenty-three, who was brought to Chambers Street Hospital, April 23, 1887, with a history of having had the right elbow crushed between an elevator and its shaft fifteen minutes previously. The lower end of the humerus was the seat of a compound comminuted fracture. The soft parts were very severely lacerated over the whole posterior, external, and internal aspect of the elbow, from the junction of the lower fourth of the humerus with its upper three-fourths above to a point two inches below the olecranon at the back of the forearm. The musculo-spiral nerve was exposed through three and one-half inches, it was contused, and about one-fourth of its fibres were torn across. The ulnar nerve was exposed, but it was intact. The triceps was completely torn across, and was so severely lacerated that a portion of its lower muscular part, the size of one's fist, required removal. The soft parts were freely stripped up in every direction. The radial and ulnar arteries pulsated. Motion and sensation in the hand and fingers were good. There was slight shock.

Four hours later the fragments of the humerus were removed, and the shaft of the bone was sawn through two and a quarter inches above the external epicondyle. The anterior surface of the olecranon was taken off, and the fresh surfaces wired to the lower end of the humerus with the elbow at ninety degrees. Lacerated tissue was freely cut away, the wound very thoroughly drained in all directions, and packed with an antiseptic dressing. A fenestrated plaster-of-Paris splint was applied over all. Moderate traumatic fever followed. The wound gradually filled with granulations and was skin-grafted from time to time. Three months later there was necrosis of the lower end of the humerus. This was removed, and also the wire. The sinus quickly closed.

Now, ten months after the injury, the patient's condition is as follows: Flexion to seventy-five degrees; extension to one hundred and forty-five degrees; forearm fixed midway between pronation and supination; no lateral motion, and elbow strong.

The second case was shown for comparison by the courtesy of Dr. Bull. The patient was a man, forty-eight years of age, who, March 3, 1883, fell three stories to a floor beneath, striking on the left elbow. Immediately afterward he was taken to Chambers Street Hospital. The olecranon was severely comminuted, one of its fragments protruding from a posterior wound just above the process. There was moderate shock. Stimulants were administered, an antiseptic dressing was applied to the elbow, and twelve hours later the joint was excised through Langenbeck's incision. The ulna was sawn across on a level with the upper surface of the head of the radius. The humerus was found to be the seat of a longitudinal fracture extending into the olecranon fossa, and sawn off at the upper limit of that fossa. Moderate necrosis of both ulna and humerus followed, the wound healed by granulation, and at the end of three months was closed. Motion gradually returned. At the expiration of two years the joint was "flail"-like, yet of considerable strength; the patient could flex strongly, extend fully, pronate and supinate well, yet the bones of the forearm rested above and within the lower end of the humerus, and there was much lateral motion as well as hyperextension.

Dr. Powers thought that a comparison of these cases would show the preservation of the olecranon, possible in the first but not in the second, to be a measure of value, and adding much to the strength of the joint. The humerus was sawn at a higher point in the first case, yet it found an excellent resting-place in the greater sigmoid cavity, and there was at this time no lateral motion.

Attention was called to the fact that in the first case there was very extensive loss of substance in the lower part of the triceps, yet the patient had excellent power of extension; also to the preservation, at the time of the injury, of sensation and motion in the parts supplied by the radial and musculo-spiral nerves, yet the musculo-spiral was partially torn at a point just above its division.

NON-RECURRENCE OF CANCER OF THE LIP AFTER EXCISION.

The Chairman, Dr. Weir, presented a man on whom he operated for cancer of the lip in 1878. There had been no return of the disease. Nearly the entire lip had been involved. The method of operating was that of Burow. He had seen good surgeons fail to take the precaution of so shaping the flap as to have it lined with mucous membrane. Regarding the results of operation in this class of cases, Wörner had collected six hundred and ninety-eight cases, with recovery in twenty-nine per cent., the length of time the patients were under observation after the cancer was removed being at least three years.

Dr. Abbe had removed somewhat more than the entire breadth of the lower lip for cancer once by this method, and once by another, and in neither had there been a recurrence, at least within a year, the operation having been performed four and six years ago. Enlarged glands were removed at the time of the operation.

Dr. A. Jacobi had had two cases of cancer removed by operation, there being no recurrence in either, the operation having been performed, in one case fourteen and in the other twenty-three years ago.

Dr. Robert Abbe read a paper on

GANGRENE OF THE PERINEUM (see page 294);

also one on

DUPUYTREN'S CONTRACTION OF THE FINGERS,

which will be published in THE MEDICAL RECORD.

The Chairman recalled distinctly one instance of gangrene of the ischiatic fossa of the character described by Dr. Abbe, and one other but indistinctly. The first occurred in a large, burly man, subject to constipation. Pain and swelling developed about the anus, and the parts were in the condition illustrated in the diagram of Dr. Abbe's case, except that the dark or gangrenous portion did not extend quite so far in circumference. Dr. Weir made incisions into it; no pus was found. The condition disappeared after a time, and subsequently an opening was found into the rectum. The fistula was divided, and the patient got entirely well.

He had seen a case of gangrene around the rectum, the result of a faulty injection, in an insane patient. The nurse made the injection to relieve constipation, but the patient being analgesic the nurse was not aware that he was making the injection not into the rectum but into the surrounding cellular tissue. The patient's life was saved with difficulty. Dr. Weir also cited another similar case which occurred at the New York Hospital when he was house-surgeon.

Regarding the cause of the gangrene in the class of cases described by Dr. Abbe, the Chairman thought it probably originated in certain germs.

Dr. A. Jacobi had not seen any cases of gangrene of this form, but he thought it might be compared with advantage with other forms of gangrene. Local gangrene would result from insufficient circulation and nutrition of the parts. This he thought might take place, although it seldom did, around the rectum as well as in parts most remote from the centre of circulation—the usual seat of gangrene of this form. Persons who lived a sedentary life, and were subject to constipation, were more likely to develop proctitis and periproctitis than were others, because of interference with nutrition of the parts; there was partial obstruction with emigration of leucocytes. If this obstruction went further, gangrene might result. The obstruction was more likely to result from thrombosis than from embolism, as in the latter case one would expect the circulation to be carried on through the very free anastomosis here present. He did not think it was necessary to resort to the germ-theory to explain these cases.

Dr. Weir thought Dr. Jacobi's explanation of the cases would not necessarily preclude the influence of germs in the causation of the disease.

Dr. Weir had formerly believed more or less fully in the gouty or rheumatic origin of Dupuytren's contraction of the fingers, but Dr. Abbe's experience went far to prove a nerve-origin.

Transmission of Tuberculosis by the Respiratory Passages.—From experiments recently made on animals, MM. Cadéac and Mallet have shown that the respiratory passages are very favorable seats for the development of tuberculosis when the bacilli which penetrate to their interior are conveyed in distilled water or an inert liquid. The development of the bacilli, however, finds no encouragement if the respiratory passages be sound and the bacilli conveyed in the dust. The net result of their experiments goes to show the importance of preventing simple catarrh of the respiratory passages. It would seem as though irritation of the air-channels and the presence of tubercular bacilli were the only two necessities for the development of tuberculosis. The animals experimented with were rabbits, notoriously subject to tubercle; so that it is possible that there must be a proper soil for the growth of the bacilli, as well as some simple lesion affording a point of entrance for them into the system.—*The Lancet.*

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

MR. HUTCHINSON ON THE ABORTIVE TREATMENT OF SYPHILIS—THE WATER-SUPPLY OF LONDON—ALCOHOL AS A PATHOLOGICAL FACTOR—A POST-GRADUATE COURSE FOR DENTISTS—PROPOSED ROYAL COMMISSION ON HIGHER EDUCATION IN LONDON—INSANITATION AT THE BROMPTON CONSUMPTION HOSPITAL.

London, February 29, 1888.

Mr. Jonathan Hutchinson has long been an earnest advocate for the plan of treating syphilis by means of a prolonged course of mercury given in small doses. Gray powder is the preparation which he prefers, given three times a day, in doses of a grain. At the last meeting of the Medical Society of London he read a paper entitled "The Abortive Treatment of Syphilis," in which he laid down the proposition that it is quite possible by the early and continuous use of mercury to suppress the secondary stage of syphilis, or, at any rate, to greatly modify it. In very few cases in which mercury had been used without interruption has he seen a well-marked secondary eruption or a typical sore throat. He remarked that he thought all were agreed that characteristic and considerable induration always yielded quickly to the influence of mercury; that high temperatures in syphilis always abated under its influence, and that in cases where a patient had had no treatment until his eruption was well out the use of mercury would usually cause the eruption to vanish. If these propositions were true, he did not see much improbability in the assertion that mercury would prevent the development of the fever and eruption, if administered and steadily continued, before they showed themselves. As regarded tertiary symptoms, abortion was quite another matter. It was possible that in our present modes of using mercury we neither began early enough nor continued long enough to secure that result. There was a sense in which tertiary symptoms might be said not to be syphilis at all. There was neither proof nor probability that the microbe or virus was present in their lesions. They did not develop symmetrically, and were not contagious. They were due to processes of inflammation occurring in tissues which had formerly been under the influence of syphilis and had been modified by it. Returning to the question of the abortive action of mercury, Mr. Hutchinson observed that he had notes of many cases in which a patient came under his care with a well-indurated chancre, he advised a long course of small doses of mercury, the induration melted away, and nothing else followed so long as he had been able to observe the patient. He remarked that he had seen scarcely any eruptions in those for whom he had prescribed during the primary stage, and of really troublesome eruptions, such as were common enough when mercury had not been used, he might confidently say that he had seen none.

Some discussion followed Mr. Hutchinson's paper. Mr. Astley Bloxam remarked that the great question was, whether the patient had syphilis or not. An experience of ninety thousand cases had led him to conclude that induration was quite without value in the diagnosis. Only a general and symmetrical enlargement or hardening of the glands sufficed to place this beyond a doubt. As to treatment, he preferred subcutaneous injections.

Mr. Marmaduke Sheild asked Mr. Hutchinson's opinion of the merits of excision of the primary sore. Mr. Malcolm Morris suggested that, as induration of the glands indicated elaboration of the poison, the early administration of mercury might really (by stimulating metabolism) aid in the prompt dissemination of the virus. In replying, Mr. Hutchinson maintained that the character of the sore afforded much more information toward making a diagnosis than the glands, as to which he had often been in doubt. In his experience, well-marked induration of the sore meant syphilis, but many specific sores did not show this induration. Mr. Morris' views required to be put to the test of experience. Excision of the sore might be desirable whenever practicable, but its influence would depend largely on the site and age of the sore. When once the induration was marked the system was infected.

One of the metropolitan water companies is seeking parliamentary powers to transfer its intake from the Thames to a point about twenty miles up the river. As, however, they propose at the same time to discontinue the present process of filtration, it is doubtful whether in the end the consumer will be much benefited. It has been proposed more than once to tap one of the English lakes for the benefit of the water-consumers of London, but no practical scheme toward the realization of the project has as yet been brought forward.

Alcohol is again coming to the front as a factor in the causation of disease, and one worthy of serious attention. The Pathological Society has determined to set apart in the early part of next session three evenings for the discussion of the pathological changes produced by chronic alcoholism. Illustrative specimens will also be shown.

Our dental friends are evidently resolved not to be outdone by their medical brethren. A post-graduate course at the Dental Hospital of London is being arranged, and will commence in April next.

It is believed that a Royal Commission will shortly be appointed to inquire into the present state of higher education in London. If such prove to be the case, it is probably to this body that the question of medical degrees will be referred.

The drainage of the Brompton Hospital for Consumptives has been found to be very defective, and is being thoroughly overhauled. Some additions to the buildings are also being made.

SHALL A SURGICAL INVENTION BE PATENTED?

To the Editor of The Medical Record.

Sir: Permit me to propose a subject for discussion by the editorial staff of your estimable journal, or by any one of your readers who has an unbiassed judgment—if that is possible—to express upon the question, which is, the propriety of patenting surgical inventions.

That the writer's personality may contribute no bias to the discussion, please allow me to remain Dr. Incognito—one who has always been an obedient disciple under the code of ethics of the American Medical Association, but who, nevertheless, regrets the introduction into said code of the fourth paragraph as written under Article I., "Duties for the Support of Professional Character."

The paragraph mentioned is illogical, unreasonable, and unjust.

It is illogical because there is no parallel between a patent medicine and a surgical instrument. The one is a secret nostrum, very likely calculated to deceive, while the other bears on its face any worth it may possess. The paragraph is unreasonable and unjust because there is neither reason nor proof presented why a surgical invention should be so degraded.

"Equally derogatory to professional character is it," says the paragraph in question, that is, as reprehensible as any of the quackish procedures previously mentioned, "for a physician to hold a patent for any surgical instrument or medicine; or to dispense a secret nostrum, whether it be the composition or exclusive property of himself or of others. For if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice."

It is very far from my intention to defend secret nostrums of any kind. What I do want to find out is, how came it that the whole medical profession was so duped by illogical legislation with reference to something that had no craft nor secrecy about it; but, on the other hand, must have manifest merit in it, or any legislation with regard to it would be undeniably useless? It is no wonder that such looseness has worked disruption and estrangement among medical men and organizations.

Perhaps you will say that the natural magnanimity of our medical fathers led them to allow this blunder to pass rather than to so publicly put themselves on record as maintaining any personal rights whatever of their own in the premises.

This is probably the best excuse that can be given for this hybrid paragraph. It is the one most likely to be given by the professors of surgery in certain medical colleges, who are extensively advertised by themselves and instrument-makers for the little changes they have added to this or that surgical instrument. Verily, they have their reward, whether they merited it or whether they "borrowed" the idea from some country doctor or hospital interne, who would either not see his advantage, or would naturally be discouraged about perfecting his invention.

Allow me, Mr. Editor, to propose a hypothetical question which I hope you will answer. It is a perfectly fair one.

Supposing a surgeon of inventive genius originates an improvement, or a new appliance in surgery, to perfect which extensive experimenting is required; to manufacture which, cheaply, dies and special machinery are imperatively necessary, and to introduce which into use requires considerable outlay in diagrams, printed explanations, etc., extensively distributed. If, under such circumstances, the inventor has confidence in the venture, should there be any odium attached to his protecting his discovery by letters patent? Will not the law of supply and demand settle the whole question, so that the mass of the medical profession will profit more by his discoveries than in any other way—namely, by the success of his improvements, their perfection, and cheapness? Is it not probable that the conclusion of such persistent labor would be more valuable, even if the results were expensive, than the dribbling way that many instrument-makers potter with half-completed inventions? Is it not also probable that the cost of manufacture by machinery would be so much less, under the protection of a patent, that the retail price would be less than when everybody tries to make it by hand? Then why not encourage invention among surgeons and allow them to protect themselves as other people do, instead of throwing all the profit into the hands of the instrument-makers?

Incognito.

January, 1888.

THE TREATMENT OF BOILS AND CARBUNCLES.

To the Editor of The Medical Record.

Sir: The editorial in your issue of February 25th, in which you called attention to the experience of M. Verneuil in regard to the treatment of carbuncle without incision, is of practical interest to all. As is well known, Sir James Paget, so long ago as 1869, in an article in *The Lancet*, condemned the treatment by incision, and I had supposed his methods were extensively followed. A method involving the same principles as those of M. Verneuil, but differing in detail, is one which I adopted several years ago, and have followed since, with much satisfaction. A man with a carbuncle on the back of the neck consulted me at my office, and as there were already some half-dozen small openings, it occurred to me to apply within the openings Battey's solution of iodified phenol, which was standing on my table for gynecological use. This solution consists of the scales of iodine one drachm, to carbolic acid crystals just liquefied by water, four drachms. I wound a probe with cotton, and, dipping it in the solution, thrust it in all directions into the openings, and, as well as I could, saturated the sloughing tissues with it. I gave the man tonics, and no opiate, and that night for the first time he slept; and a few days, with a couple more applications of the local treatment, sufficed for his recovery. Since that time I have used this treatment in several cases of carbuncle, and always with relief to the pain. The anæsthetic effect of the strong carbolic acid, and the caustic stimulant effect of the combination, seem to be just what is needed in this painful and indolent disease. I think I have sometimes aborted furunculi and hordeoli by applying this in the early stage to the apex of the swelling, and after a boil is opened, its application to the interior is useful. I usually give quinine in tonic doses, and sulphide of calcium, and I think that the suggestions of Sir James Paget, that, if able, it is well for patients with carbuncle to keep in the open air a part of each day, and to eat moderately of easily digested but nutritious food, are eminently wise.

C. G. Carleton, M.D.

Lawrence, Mass., February 27, 1888.

COLORADO AS A HEALTH RESORT.

To the Editor of The Medical Record.

Sir: In an October number of The Medical Record there appeared a paper read before the New York Academy of Medicine by Dr. Clinton Wagner, entitled "Colorado Springs and Davos-Platz compared as Winter Health Resorts." In his paper Dr. Wagner was so fair and lucid in description of this place and its chief features as a health resort that there remains little to be said. The discussion, however, following the reading of the paper brought out at least two points which I desire briefly to consider. First, Dr. Loomis casually alluded to the *aseptic* quality of the air of high altitudes. This special quality embraces a subject which I wish to more fully emphasize, and which I think has not heretofore been sufficiently appreciated by medical men, or received the attention its importance demands.

Years ago the hunters and trappers of this region noticed the fact that game killed and left upon the plains, and in the mountains, instead of soon undergoing decomposition, as is usual in lower altitudes, remained for a long time in a state of purity and freshness. Medical observers in this section have doubtless experienced but little difficulty in the treatment of their strumous patients, and have noticed the rapidity with which such cases are restored to health. Old cases of scrofula involving indurated and suppurative glands, cases showing markedly the cachectic appearances of blood-impoverishment, as a rule recover perfect health here with the aid of little if any medication. Chronic cases of syphilis in the secondary or tertiary form in the large majority of cases are frequently restored to health by virtue of the antiseptic nature of the atmosphere. The stimulating effect of the air aids in throwing off old accumulations, diseased tissues assume new life from the impetus derived from a purer quality of blood, the rarefied air acting as tonic, alterative, and antiseptic. Most cases of phthisis defer change of residence to climatic resorts until the disease is so far advanced that when they reach such resorts their condition is one of general enfeeblement, and we find them suffering with torpid functions and poverty of blood. Softening and suppurative changes are in progress, and there is loss of tone and vitality. Such cases recover health in high altitudes, the aseptic air bathing, as Dr. Loomis suggests, the diseased surfaces and causing arrest of unhealthy processes, and also causing reparative changes to more rapidly occur. In the antiseptic quality of mountain air there is an important curative factor in the treatment of numerous chronic diseases, and that the subject will enlist the attention its importance demands there is no question of doubt.

The second point alluded to in the discussion of Dr. Wagner's paper was also by Dr. Loomis, who thought that phthisical patients who recovered health here would find it necessary to remain in the climate two or three years after recovery was established, and also that the *permanent* cases of recovery were not so great in number as those cases recovering in lower altitudes and in warmer climates.

It is quite true that many cases coming here with extensive area of lung-tissue involved, softening and breaking down, find it necessary to remain several years after recovery has taken place. The majority of such cases, usually considered hopeless, are, after the ravages of the disease have become arrested and recovery has been assured, left with delicate constitutions and enfeebled vitality, subjecting them to greater susceptibility to changes of atmospheric temperature, and are, as a consequence, in no condition, if even so inclined or advised, to take the risks of a permanent residence in a less dry and sunshiny climate. Such classes of cases are advised to remain here until all diseased processes are not only healed, but until there occur strength and elasticity of tissue and a complete gain in the general condition. Unfortunately, most patients leave before these results have been attained. They grow better, become impatient to return home and to business, are not fully recovered when they leave, and hence in a few months are compelled to return and go again over the same ground. As a rule, individual results depend to a great extent upon individual temperament, and hence it is impossible to correctly say just what effects will be, or how long cases will be compelled to remain before recovery takes place. In looking over my book of recorded examinations of phthisical cases, I find it contains many cases who recovered health here, and who are now living and pursuing their former vocations in the East.

One case I notice which, I think, would alone entitle this climate to consideration as a means of effecting permanent cure. The case is that of an actor who came to Colorado in September, 1884. His disease was catarrhal phthisis, involving the upper third of the left lung. His general condition was feeble. Weight, one hundred and twenty pounds. Evening temperature, 103°; profuse night-sweats, loss of appetite, racking cough, and insomnia. This patient remained here one year, and then returned to New York and his profession. His weight was one hundred and sixty-five pounds, and his general health excellent. The lung was perfectly clear, respiratory murmur normal, and diseased lung fully restored to healthy function. This gentleman, whose profession has taken him to every portion of the United States, since leaving here, has continued in perfect health, and in a letter received from him two weeks since he informs me that he has had no return of his former trouble, that his general health is excellent, and his weight, at the date of writing, was one hundred and seventy pounds.

Another case demonstrating the permanent curative effect of this climate which I recall is that of a young lady whose residence is Norwalk, Conn. She came here in 1877, had been an invalid for four or five years, was a fair, fragile girl, and had tried Nassau and Florida without effect, and ventured to Colorado with but little hope of benefit. Examination revealed right upper third involved; caseous infiltration and tubercular deposit, summit and infra-clavicular space, left lung. This patient remained here until spring of 1882, since which time she has resided in the East, and in the enjoyment of perfect health.

If, within the limits of this article, I could describe in detail the histories of many cases who fully recovered health here and are now living in different portions of the United States! I am fully aware that every health resort has its enthusiastic admirers and defenders, and many have advantages, while none are perfect in each and every particular. There are cases coming each year to this climate who would in all probability receive more benefit somewhere else, and the conscientious physician of this region frequently advises patients to seek a more suitable climate. I wish, however, to be understood that those cases recovering here derive more permanent effect, and good results continue longer, than obtains in any other region on the globe. When we consider the vital properties of the air, its aseptic qualities causing the disappearance of blood-impurities and the repair of diseased tissues; its stimulating qualities relieving sluggish circulation, and causing torpid accumulations to be thrown off; its electrical properties in such diffusible state as to make up the best tonic that could be prescribed for enfeebled constitutions; and, added to all these, the greater number of sunshiny days, which invite the morbid invalid out-of-doors, enabling him to regulate his exercise, so essential to producing solid tissue and strength of body—an air entirely free from malaria, fog, and the usual dampness found in warmer and lower elevations during the winter months. With such elements of climate, and the abundant experience of many cases of recovery who are living in Eastern homes, there can be but little question that the *permanency* of the cures are established facts, and that such a climate cannot be judged adversely as regards its curative properties.

B. P. ANDERSON, M.D.,
Ex-President Colorado State Medical Society.

COLORADO SPRINGS, COL., February 20, 1888.

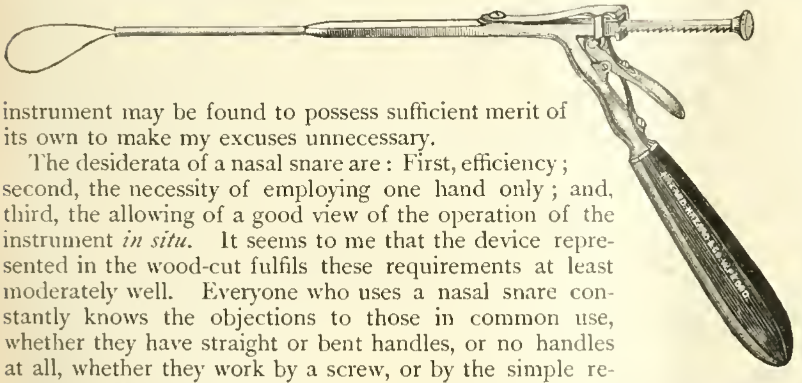
New Instruments.

A MODIFIED NASAL SNARE.

By JONATHAN WRIGHT, M.D.,

LARYNGOLOGIST TO THE ROOSEVELT AND DEMILT DISPENSARIES, NEW YORK.

IN presenting a new nasal and laryngeal instrument, or, rather, a new modification of an old one, I feel that I owe an apology to the medical public. So many excellent nasal snares already exist that it may seem superfluous to add another to the list. However this may be, I hope the instrument may be found to possess sufficient merit of its own to make my excuses unnecessary.



The desiderata of a nasal snare are: First, efficiency; second, the necessity of employing one hand only; and, third, the allowing of a good view of the operation of the instrument *in situ*. It seems to me that the device represented in the wood-cut fulfils these requirements at least moderately well. Everyone who uses a nasal snare constantly knows the objections to those in common use, whether they have straight or bent handles, or no handles at all, whether they work by a screw, or by the simple retracting power of the fingers.

The instrument represented here was recently made for me by the surgical department of Hazard, Hazard & Co., and I am indebted to them for several valuable suggestions as well as for obliging services.

It consists of the cannula and stilette of a Sojou's snare to which a handle with a lever of the first kind has been adapted. The stilette is screwed into a small straight bar, on the under surface of which is a set of cogs in which works a small tongue propelled by the short arm of the lever. Pressure of the thumb of the hand grasping the handle upon the long arm draws the stilette through the cannula and tightens the wire loop at the end. Both the long arm of the lever and the little tongue on the short arm are provided with springs which throw them into a new position when the pressure of the thumb is removed. A spring on the top of the sheath in which works the cogged bar catches the latter below as it is drawn out, and prevents it from slipping forward.

When the operator desires it, pressure on this spring with the index-finger of the employed hand releases the cogs, and with the thumb the bar, with stilette and loop, can be pushed forward to the original position.

The lever can be worked so rapidly as to almost immediately cut through the tissues, or as slowly as desirable. The power attained, depending as it does on the length of the long arm of the lever, is great enough to break the strongest No. 5 piano-wire. For a laryngeal or post-nasal attachment, all that is necessary is to unscrew the cannula and stilette at the point marked in the wood-cut by the beginning of rectangular sheath and replace them by a bent cannula and a flexible stilette. The handle also unscrews, so that the instrument may be packed in a small compass. The cogged bar may also be withdrawn, and this allows of the instrument being quickly and thoroughly cleaned.

Those not liking Sojou's method of securing the wire loop can easily adapt a clamp for the wire to the cogged bar and dispense with the stilette.

I can only say, in conclusion, that in my work at the Roosevelt and Demilt Dispensaries I have found that it removes some of the difficulties of intranasal surgery. It seems to do all that a snare can do, and its preparation for use is the work of a moment. The same wire can be repeatedly used if wished.

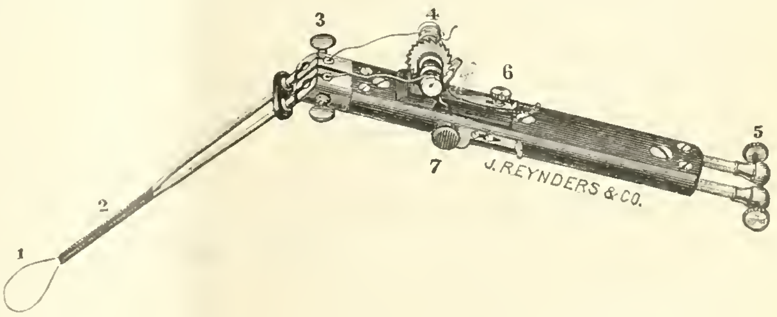
73 REMSEN STREET, BROOKLYN.

A NEW CAUTERY-SNARE FOR REMOVAL OF POSTERIOR HYPERTROPHIES OF THE TURBINATED BONES.

By J. W. GLEITSMANN, M.D.,

NEW YORK.

THE instrument to be described is constructed on the principle of Jarvis' snare, and is intended to shorten the length of time consumed in the operation and to guard against possible subsequent hemorrhage. Very slow traction is recommended by the originator of the cold snare himself, and practised by all operators, but, nevertheless, two cases of very annoying hemorrhage occurred to the writer in spite of faithful observance of all precautions. The desire to overcome these two disadvantages led to the construction of the following cautery-snare:



1, Loop; 2, draw-tubes; 3, set screw for draw-tubes; 4, windlass; 5, binding posts; 6, movable spring-catch to secure windlass; 7, current-interrupter.

The handle is the usual universal handle used with Fleming's cautery-battery. The windlass secured by the spring-catch holds the wire in position, and allows of tightening the wire, thereby answering the same purpose as the small screw in Jarvis' snare. To obtain the spring and elasticity of the cold wire, a composition of platinum and iridium was devised which offers the same resiliency as the ordinary steel wire, and retains the same outward turn of the loop necessary for engaging the posterior hypertrophy. While the platinum wire bends at each obstacle, the platinum iridium snare resumes its original form and curve as soon as it leaves the nares and enters the naso-pharyngeal cavity. It does not require more heat than platinum, and when the hypertrophy is once caught the operation can be finished without delay. The removal of the redundant tissue by heat guards against bleeding, and the whole procedure is considerably less distressing to the patient on account of its shorter duration. Among several operations, this fact was most exemplarily demonstrated in a patient from whom one hypertrophy was removed with the cold, the other with the cautery-snare, and who could not express sufficient gratification in comparing the two methods.

The combination of platinum and iridium can also be used in other instances with advantage, where it is thought advisable to press the loop firmly against the tissue; f. i., anterior nasal hypertrophy, nasal polypi, etc. When the dense longitudinal granulations of so-called lateral pharyngitis, in the neighborhood and behind the posterior palatine pillar, are to be removed by the cautery, a loop formed of heavy platinum-iridium wire, and large enough to encircle the patch of granular tissue, can be used. The wire, being elastic, will remain *in situ* by a slight pressure. After destroying the tissue to a certain depth the current is interrupted, and subsequently the granulations slough away.

117 SECOND AVENUE.

LEVELLED ABDUCTING PRISMS.

BY WILLIAM H. WILMER, M.D.,

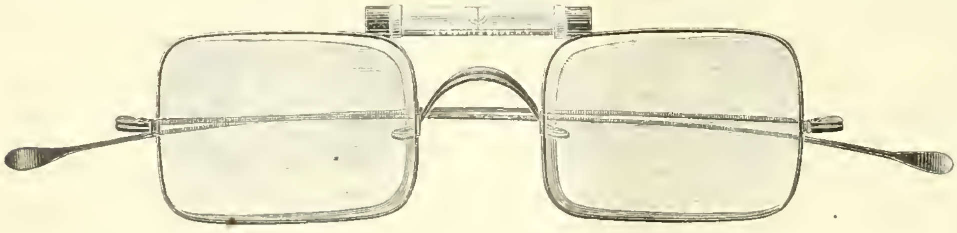
ASSISTANT TO THE CHAIR OF OPHTHALMOLOGY IN THE NEW YORK POLYCLINIC, AND VISITING PHYSICIAN TO THE OUT-DOOR DEPARTMENT OF BELLEVUE HOSPITAL (DISEASES OF EYE AND EAR), NEW YORK.

AT the present day many neurotic conditions are attributed to a want of equilibrium in the ocular muscles, especially to slight dynamic differences in the superior and inferior recti.

The methods, however, that are generally employed for detecting *slight* degrees of insufficiency of these muscles are certainly not reliable; for, with ordinary abducting prisms, vertical diplopia may be produced by inclinations of the head too slight to be noticed by either the physician or the patient.

In making our examinations together, Dr. Gruening and myself were never sure that our prisms were placed with absolute correctness; and, to our queries regarding the supposed position of the head, the patients invariably replied that they could not judge whether the head was held exactly straight or not. It will readily be understood that any asymmetry of the brows, or other landmarks of the face, presents another source of perplexity to the observer.

To meet this difficulty, the simple device of having a delicate level placed upon the prisms, as in accompanying cut, was resorted to by the writer, and this little contrivance has now been used in a number of cases with satisfaction.



The illustration represents abducting prisms of eight degrees each, set in an immovable frame, and surmounted by a spirit-level marked to indicate its centre. The glasses are made by Meyrowitz Bros., New York.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from March 4 to March 10, 1888.

FISHER, W. W., First Lieutenant and Assistant Surgeon. Sick-leave extended one month on surgeon's certificate of disability. S. O. 50, A. G. O., March 2, 1888.

SHILLOCK, PAUL, First Lieutenant and Assistant Surgeon (recently appointed). Ordered for duty at Fort Assiniboine, Mon. Terr. S. O. 50, A. G. O., March 2, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 10, 1888.

STONE, E. P., Assistant Surgeon. Detached from the Coast Survey Steamer Bache and ordered to hospital, New York, for treatment.

KEENEY, JAMES F., Assistant Surgeon. Commissioned March 1, 1888.

BRUSH, GEORGE R., Surgeon. Ordered to the Omaha when the Pensacola arrives at Aspinwall.

MEANS, VICTOR C. B., Passed Assistant Surgeon. Ordered to the Omaha when the Pensacola arrives at Aspinwall.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 10, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	3	2
Scarlet fever	159	17
Cerebro-spinal meningitis	7	6
Measles	69	5
Diphtheria	144	40
Small-pox	16	1
Yellow fever	0	0
Cholera	0	0

THE HUMAN BREATH A POISON.—At a recent meeting of the Académie des Sciences, Professor Brown-Séquard referred to some experiments he had conducted with a view to determine what, if any, were the toxic effects of the human breath. In condensing the watery vapor coming from the human lungs he obtained a poisonous liquid capable of producing almost immediate death. This poison is *an alkaloid* (organic) *and not a microbe* or series of microbes, as might have been imagined. He injected this liquid under the skin of a rabbit, and the effect was speedily mortal. The animal died without convulsions; the heart and large vessels were engorged with reddish blood, contrary to what is observed after ordinary death, when the quantity of blood is moderate and of a dark color. In conclusion, this eminent physiologist said that it was fully proved that respired air contained a volatile toxic principle far more dangerous than the carbonic acid which was also one of its constituents, and that the human breath, as well as that of animals, contained a highly poisonous agent.—*The Medical Press*, February 1, 1888.

SPASMODIC RIGIDITY OF THE OS.—This is really a state of tetanus in the anterior lip of the uterus, according to Doléris, found usually in neurotic primiparæ when premature rupture of the membranes has allowed the waters to entirely escape. The suffering is, of course, intense, and the patient's state of mind pitiable. Under chloroform the condition disappears at once, and labor, as a rule, progresses favorably. Dr. Doléris utters a protest against antispasmodics of all kinds in this complication, and against the classic views upon the subject of spasmodic rigidity that are found in books.—*Post-Graduate.*

"LA RIFORMA MEDICA," a daily medical journal, formerly published in Naples, has removed its editorial and publication offices to Rome.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 12 NEW YORK, MARCH 24, 1888 Whole No. 907

Original Articles.

CHOLERA INFANTUM AND THE WEATHER.[1]

BY A. SEIBERT, M.D.,

NEW YORK.

MR. PRESIDENT AND FELLOWS OF THE ACADEMY: It almost appears superfluous to read a paper on so well known a subject as the relations between acute gastro-intestinal disturbances of infancy and the weather. It almost sounds like asking a fellow-sufferer in mid-summer, and the thermometer in the nineties: "Is it hot enough for you, old boy?" But if one will but take the trouble to collect some of the opinions regarding this subject, he will be astonished to find quite a variety of them, proving that as yet definite knowledge has not been arrived at.

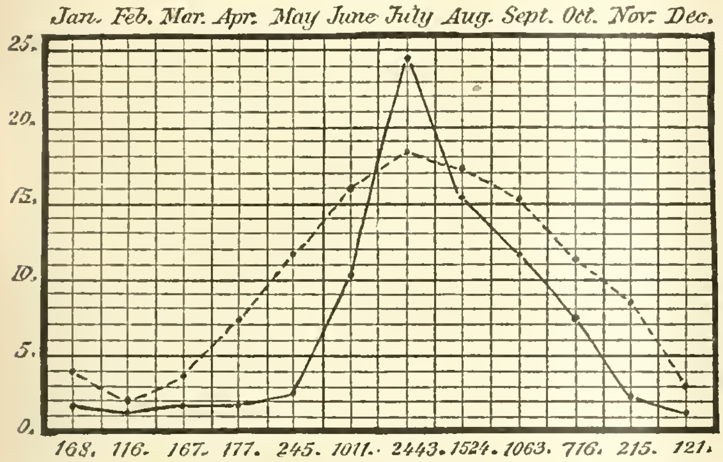


CHART I.—Morbidity of Cholera Infantum. German Dispensary: 8,036 cases, and average monthly temperature.

Curious to gain some real facts, based upon figures, regarding this question, I gathered all cases of acute gastro-intestinal catarrh, in children under five years of age, treated during the time of my service in the children's department of the German Dispensary, a period of ten years. These cases I arranged according to date, and then compared their frequency with the exact meteorological phenomena of every day, during these ten years. In this investigation I have been guided by the experience gained in my examinations regarding the weather and fibrinous pneumonia, published in the *American Journal of the Medical Sciences*, January, 1882, the *Berlin Klin. Wochenschrift*, Nos. 18 and 19, 1884, and No. 17 of 1886.

From January 1, 1878, to January 1, 1888, the total number of cases of acute gastro-intestinal catarrh in our department, occurring in children under five years of age, was 8,036.

Arranging our cases according to the different months of the year in which they appeared, and adding up their sums (as the ten January months, ten February months, etc.), we gain the black line on Chart I., demonstrating that November, December, January, February, March, and April show very few cases; that May is a little more inclined that way; but that during June, July, August, September and October this disease is very frequently met with; and the difference between the two halves of the year is so marked and great, that the term "summer-complaint" seems very appropriate. This difference at once suggests that potent agents must prevail during the warmer months of each year, aiding the development of this malady. Adding up the temperature means of the different months, we get the red line on Chart I., showing that the highest temperature is found when the greatest number of cases appear (the ten July months with 2,443 cases), and the smallest number during the coldest weather (116 cases during the ten February months).

Having gained this result, we might stop, feel entirely satisfied, and live on under the impression that statistics have verified our supposition, that heat will produce this trouble; but, as I pointed out years ago, that monthly averages are simply guides to the truth in statistics of this kind, and that they are absolutely unreliable as conclusive evidence, it certainly would not behoove me to stop here. On again looking at our chart, we notice (1) that our disease is found all the year around, not frequently in January and February, it is true, but the fact remains that it does appear during the coldest weather; (2) we notice a decided difference in the morbidity- and temperature-lines; they have the same direction, but do not run parallel to each other. For instance, the greatest difference exists in morbidity between June and July, while the difference of temperature is not near as great as between May and June; the August months, with but 1,524 cases, show a morbidity less than one-third of that of the July months; while the corresponding red line shows the difference of temperature to be but a small one. We notice the same, the very same phenomenon on Chart II., showing the mortality from diarrhœal diseases of the ten years in this city, of children under five years of age, compared with the mean temperature. The same enormous difference between the Junes (with but 4,103 deaths) and the Julys (with 12,468 deaths); while the August months

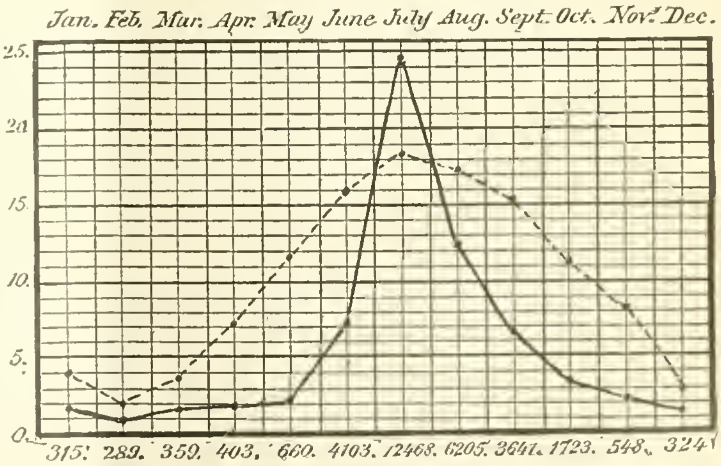


CHART II.—Mortality of Diarrhœal Diseases in Children under Five Years of Age. New York City: 31,048 cases, and average monthly temperature.

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[1] Read at the Stated Meeting of the New York Academy of Medicine, February 16, 1888.

show exactly one-half as large a mortality as the Julys—namely, 6,205 deaths. These two charts, which look alike enough to be twins, demonstrate, first, that in the long run, with a large material, mortality and morbidity must show proportionate figures, and must and will sustain each other as correct; second, that children not alone get sick from cholera infantum all the year round, but that the proportion of deaths is exactly the same in winter as in summer—during the hottest as well as during the coldest weather! So no doubt we are not yet at the bottom of this question concerning the temperature. Some other facts will show that still more.

In July, 1881, the mean temperature was 80° F., that of August 82°, and that of September 81°; yet we have 290 cases in July, 223 cases in August, and 137 in September. And in July, 1884, we notice 75.6° F. as the mean, and in August and September, each, 76.7° F.; yet July has 266, August has 156, and September has 164 cases; while the mortality of both July months was nearly double that of the August, and three times as large as in the two September months!

The mystery becomes more obscure when we figure out the mean temperature of the six summer months of each year, and compare these figures with the morbidity-line. We notice (on Chart III.) no similarity whatsoever, demonstrating the fact that one summer (as, for instance, 1880) may be decidedly warmer than another (as 1879 or 1884), and yet will bring forth less summer-complaint.

The same result we obtain after comparing months instead of years; for instance, the ten July months (on Chart IV.). Here we notice also no similarity in the running of the temperature and morbidity, both being apparently independent of each other; showing that one July may be hot and have many cases (as in 1879), and the next may be exactly as warm and have less than half the number of cases (as July, 1880). The same result we have on comparing all the other months. Only one point appears peculiar upon comparing the temperature of the May months, that whenever the mean temperature is below 58° F., the amount of cases is no larger than during an average cold winter month—a fact I wish you to keep in mind till later.

Now, then, we have found so far that, though the temperature evidently has some decided relation to the frequency of cholera infantum, yet we have no right to accept our first impression, that the higher the more, and the lower the temperature the less, frequent do we find this complaint; on the contrary, we must admit that "comparison of monthly means of temperature during the summer months shows that the frequency of summer-complaint (like its mortality) is independent of the rise and fall of atmospheric temperature."

Before finishing the question of temperature, we will look up other factors of the weather. Suffice it to say, that a careful comparison of the barometric figures of the warmer months failed to give even the slightest evidence of influence, as we have many and few cases during high as well as during low pressure, compared as to months as well as to daily ranging.

On Chart IV. we can compare the average humidity of the ten July months with the temperature- and the morbidity-line, showing that a hot and dry July (like that of 1879) and hot and medium moist atmosphere (as in July, 1882) may bring forth very large numbers of cases (299 and 303, in our collection the two largest); while still hotter atmosphere, impregnated by large quantities of moisture (as in July, 1885 and 1887, the hottest and muggiest months of our collection), shows but a medium number of cases (232 and 196, respectively). I have carefully selected all moist-warm and all dry-warm days of the ten summers, and compared their position with our morbidity-lines, and I have failed to find even the slightest trace of influence. For the monthly sums of mortality this statement also holds good. I can further report that, though the ten August and ten September months (with three exceptions of each) show by far a greater amount of moisture than the Julys, yet their inclination to the production of this disease is by far less. So we may lay the popular opinion at rest that warm-moist weather predisposes more to the causation of summer-complaint than warm-dry atmosphere.

The rainfall necessarily appeared to me a meteorological factor of great interest. Through the kindness of Chief Engineer Birdsall, of the Croton Water Works, I was enabled to get exact figures on the water-supply of this city, including the amount of water used daily, the varying depth of Croton Lake, the rainfall in this and other lakes in Putnam County occasionally used as storage-lakes, the number of days in the different months when the storage-supplies (from the upper lakes) were drawn upon (as their water is not so clean as that of Croton), and the amounts of these drafts. All these figures I carefully compared with our figures and also the mortality figures of the Health Department, according to years, months separate and collected, and many an hour of the night did I spend on this part of the investigation; but my results were absolutely negative, I am sorry to say—all the more sorry because it had been a pet idea of mine to believe that want of water in the upper stories of our tenements lent conspicuous aid in the causation of summer-complaint. As an example, you can see on Chart V. the amount of rain (by inches) of each of the August months, together with the temperature-line, which is quite even. In August, 1878, and August, 1884, both temperature and large amounts of rain are even, yet the morbidity differs like 2 to 3, 99 cases for 1878 and 156 for 1884. Again, August, 1880, had four and one-half inches of rainfall, August, 1882, but one and one-half inch, the temperature being the same, and the morbidity-figures vary but little, 146 to 164. The same result in 1885 and 1886. Again, we must admit that the local rainfall does not influence the prevalence of cholera infantum.

The velocity of the air-current shows no effect upon our morbidity-figures.

At this point of our investigation you may fittingly quote Goethe's "Faust:" "I know as much as I knew before;" but you will pardon me for having taken you over these lost battle-fields of figures, where the figures got the best of me, for it is essential to the understanding of the second half of our work. Six years ago I first pointed out the necessity of careful detail-work for investigations of this kind, and demonstrated the doubtful value of monthly means, averages, and sums. Time does not permit me to discuss this point over again. You will be satisfied to know that my former arguments and methods have been universally accepted since then as conclusive and correct. So now we will return to the temperature and go into detail.

As yet it is a point for discussion whether atmospheric heat is capable of directly affecting an infant's body in such a way as to produce cholera infantum. Those believing in this theory speak of reflex action from the peripheric nerves to the nerve-centres, and from there to the alimentary canal; others seem to regard the cooling-off of the child's body in hot weather as the agent bringing about, or aiding to bring about, gastro-intestinal troubles, and therefore believe in protecting the stomachs of infants with flannel bandages as a prophylactic measure of importance. To find what statistical truth there was in these theories I collected all hot days of the ten summers, days where the temperature reached 85° F. and above. Evidently, those months showing the most of these hot days ought to show the greater number of cases, and *vice versa*, and those days ought to be followed by the greater number of cases—in case these theories were founded on facts.

On comparing the ten July months on Chart VI., we find no evidence supporting these views. July, 1887, had eighteen days with the temperature mounting to 85° F. and above, twelve of this number going into the nineties; yet the number of cases treated was far below the average and one-third less than July, 1882, where only fifteen hot days were noted, and showing the greatest number of cases—303. July, 1878, with fourteen hot days only, had 99 cases, while July, 1884, with only four hot days, had 266! Neither did I find a greater mortality in those months having the greater number of hot days.

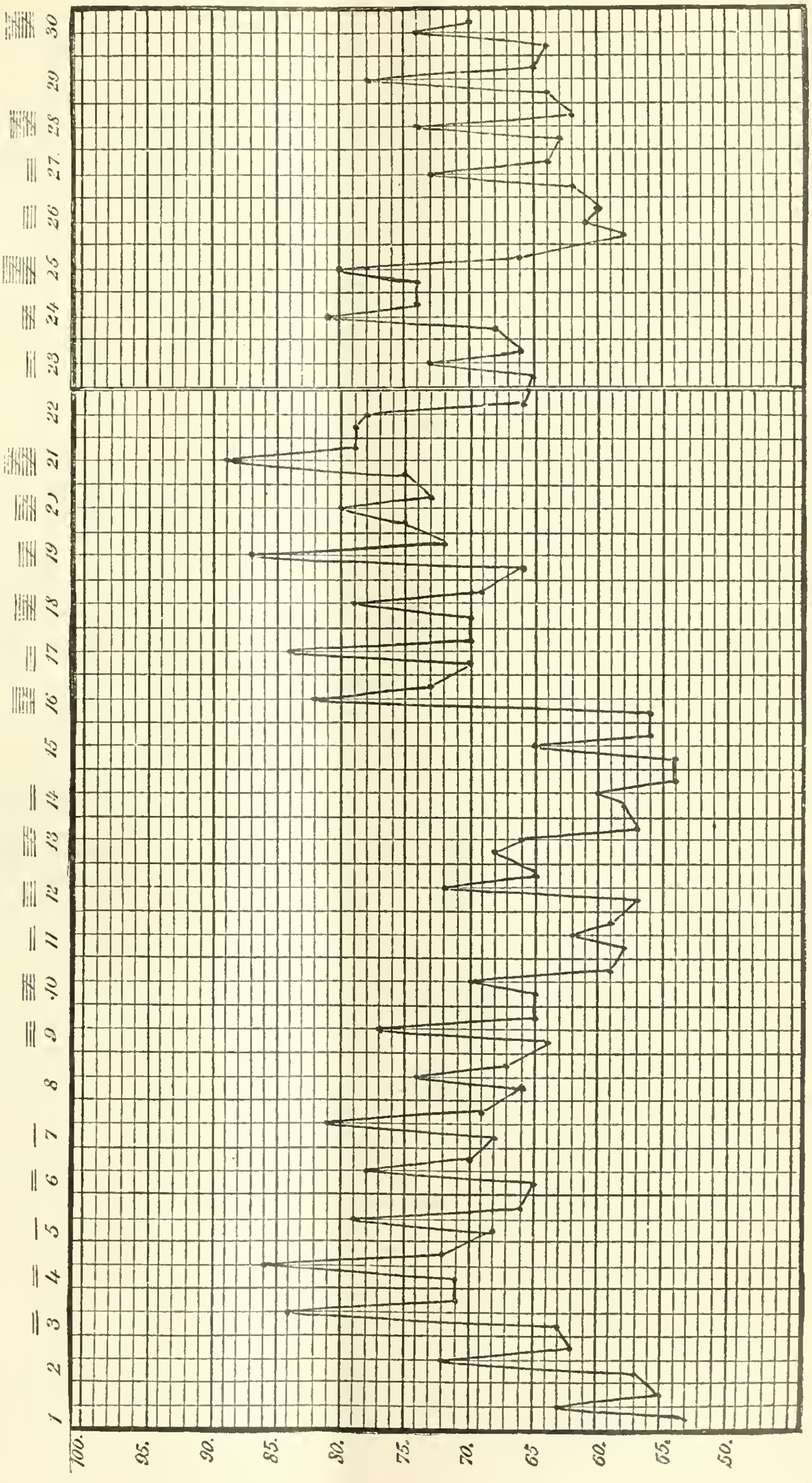

CHART X.—June, 1884.

On Charts VII. and VIII. (showing the maximum and minimum temperature of each day of the respective months, together with the number of cases overhead), we can study these circumstances in detail.[1] In June, 1880, we notice the temperature rising often above 80°, especially during the latter half of the month; while in the latter half of June, 1887, the temperature seldom goes above 80°, and yet we have the same number of cases in the last two weeks of both months. On Chart VIII. we notice in July, 1887, the maximum temperature constantly nearer to 85°, and very often above this line, the minimum temperature being constantly much higher than that of July, 1881, whose maximum temperature only reached 90° on one day and passed 85° on only three more; and yet we notice that the cooler month has 290 cases and the by far hotter one only 196, a proportion of 3 to 2! But the most striking example is July, 1884, during which time the temperature never reached 90°, passed 85° but on three days, and altogether reached 80° but on eight days, showing a remarkably cool summer month, and yet we have 266 cases of summer-complaint; while the following August had sixteen days where the temperature reached 80°, four days with 85°, and one with 90°, and yet the number of cases is but 156, one-third less than in the preceding decidedly cooler July! The mortality stands 1,109 for July and 633 for August, a bit over one-half. I might keep on for hours and give you any quantity of evidence that very high temperatures do not favor the production of cholera infantum more than medium warm weather. This July of 1884 is a month showing peculiar healthy weather, as we would call it: Humidity very variable, changing markedly three times a day, cloudy rainy days changing with bright sky, refreshing westerly air-currents, and yet so many cases of illness and so many deaths. How, then, do we account for the phenomenon that the warm months show such a decided preference for this disease? Well, we are now convinced that *hot* weather is not necessary—we have buried another favorite idea long fostered in our bosoms, so let it rest, and turn to its relative, *warm* weather.

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[1] The charts alluded to were all demonstrated, the larger ones showing all the weather-constituents of each day.

You will notice on the large charts that I have drawn a lower heavy line near the temperature and humidity line; it points out the place for 60° F. Now, by glancing over all these charts, watching the relation between the red temperature-line, and especially its lower points (denoting the minimum temperature of each day), you at once perceive that as soon as the minimum daily temperature reaches about 60° F. and above, and stays so for a few days, we notice more than the usual number of cases of gastro-intestinal catarrh (as May 19th, 20th, 21st, and 27th, and June 3d to 7th). If the minimum temperature remains above 60° F. for a longer period, say one week or more, then we notice cholera infantum becoming epidemic—no matter if the maximum temperature goes into the nineties or remains below 85° or even 80° F. The same law we find in October, the month of departure for summer-complaint. On the 2d and 3d the temperature goes down to 55° F., but for the next five days never below 60° F., showing an elegant exhibition of epidemic summer-complaint; again, on the 9th and 10th the minimum temperature is below 60° F., resulting in four meagre days, the 10th, 11th, 12th, and 13th; and the 20th to the 23d, with higher minimal temperatures, result in two corresponding attempts to keep up the high morbidity; then the air cools off for good, and cholera infantum only appears in sporadic manner, but even then more often after a warm night.

As you here see these large charts, so I have examined every summer month of these ten years, and every batch of days in them, and you will have to take my word for it that in every instance this law, or rule, is found to exist.

So we can make the statement:

1. Hot weather (either dry or moist) is not necessary for the epidemic appearance of summer-complaint.

2. Warm weather (either dry or moist) showing minimum daily temperatures of not less than 60° F., brings on the epidemic appearance of cholera infantum invariably in every year, irrespective of the height of the maximal daily temperature, as in the latter part of June of nearly every year.

3. Summer-complaint loses its epidemic character as soon as the minimal daily temperature remains below 60° F., as in the latter half of October of nearly every year.

4. Therefore, this disease cannot be brought about by the direct working of high temperatures on the infantile body, but must have other causes.

What may these causes be? Let me suggest one of them. The lowest temperature of each day in summer is at night; the milk feeding our children is brought to the city during the night, shaken and jolted in cars and wagons, absorbing impurities from the time it leaves the cow until it enters the mouth of the child; thus, the conditions for decomposition are given, in every instance, without exception. The only question remaining is: How far is your New York City milk advanced in decomposition when you get it? Now, we know that low temperature retards putrefaction and decomposition of any animal or vegetable substance, and that higher temperature aids it, and especially milk. Now, Dr. Cyrus Edson sent me a letter two days ago, in which he states (in answer to a written request of mine) that, according to his experience and that of others, milk will begin to turn readily at 60° F. and over. Chief Engineer Birdsall made the statement that as soon as the temperature of the water in Croton Lake reaches 60° F. and above, it has a peculiar taste, due, no doubt, to decomposed material in it, or development of organisms of decomposition. My only explanation for the so much higher morbidity and mortality of July over August is, that it takes a few weeks of high morbidity and mortality every year to fully arouse the public, and especially the poorer classes, to the dangers threatening their children, and to impress upon the parents' minds the very simplest fundamental principles of how to avoid them—a beginning of which was made by the distribution of the rules of how to handle milk and babies, written by the President of this Academy about fifteen years ago.

I have promised our President not to speak about teething, and so I will stop, thanking you for your kind attention, and especially thanking Dr. Nagle and Dr. Cyrus Edson of the Board of Health, Chief Engineer Birdsall, Department of Public Works, and Sergeant Dunn, of the Signal Service Office, for the kind aid they all gave me in this work.

122 East Seventeenth Street.

SOME POINTS IN THE TREATMENT OF CHRONIC ALBUMINURIA, OR BRIGHT'S DISEASE.[1]

By CHARLES S. WOOD, M.D.,

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In speaking of the above-mentioned disease, I do not propose to dwell upon its etiology, only mentioning the more generally recognized causes of the same, as they are so numerous that their mere recital would occupy the time allotted to this paper.

Formerly, the chief causes of this disease were supposed to be inflammation or congestion of the kidneys, or both combined—such as the congestion accompanying pregnancy, from the pressure of the child upon the uterus, thereby preventing the flow of urine from these organs to the bladder; the exanthemata, in which the acute form is so often seen; a rigor following a sudden suppression of the excretions of the skin; the abuse of alcohol, etc. But undoubtedly much the most potent cause, and the one which must be constantly borne in mind in the successful treatment of the disease, is degenerative changes occurring in the different organs and tissues of the body as a result of hereditary tendencies, as well as of climatic and telluric influences. A notable effect of the latter may be observed in the condition of the atmosphere and its surroundings generally recognized as malaria, which is by many good observers believed to be provocative of the disease under consideration to a greater extent than any other one cause. I think it is a common observation by physicians that in localities where ague is frequent among the people there is to be found the greatest number of cases of Bright's disease. That during and subsequent to the chill, albumen in the urine is frequent, but soon passes off as the chill and fever are controlled by appropriate treatment. That when we get a condition, so often seen, of chronic malarial poisoning where distinct exacerbations do not occur, yet where there is a marked anæmia with poor appetite, sluggish bowels, torpid liver, or even enlarged with the spleen, with all the secretions depraved, physical and mental hebetude, etc., then a condition exists directly tending to convert a temporary acute albuminuria into the chronic form, so difficult to treat and so fatal in its results. This cause should, it seems to me, be constantly borne in mind, as an important guide in the way of treatment.

I will quote a few authorities, among the large number available, who are strong believers in the doctrine of the malarial origin of the disease, or at least of its being one of the most important factors in its production.

Blackhall, in 1818, believed nephritis and albuminuria to be frequently caused by intermittent fever, and described the disease as having immediately followed such attacks.

Chenoriard, in the Department of the Loire, France, in

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[1] A paper read at a meeting of the Northwestern Medical and Surgical Society of the City of New York, February 23, 1888.

1845, expressed the opinion that intermittent fever, so common in that locality, was one of the principal causes of nephritis and albuminuria.

Neret, also of France, described many such cases in 1847, and declared that one-fourth of all cases of intermittent fever either had at the time, or were followed by albuminuria. Lenz, in his inaugural address, claims that intermittent fever was a frequent cause of nephritis, and of the chronic form of which we are speaking. Rosenstein, in 1870, saw in Dantzic, on the Baltic Sea, two hundred and thirty-nine cases definitely attributable to malaria. Bartels, in his clinical lectures, says, while admitting that he had not been able to trace the granular, contracting kidney to malaria, that chronic inflammatory enlargement of the kidney may, in isolated cases, from acute nephritis following a severe chill or scarlet fever, pass into that variety, but that malaria was the most frequent of the well-established causes of this disease. Hertz asserts that it is no uncommon thing to find albumen present in considerable quantities, in intermittent fever. Atkinson, of Maryland, says albumen is to be found in the urine either only on the fever days or during the intermission as well, and disappears on recovery. Still, cases frequently occur which pass into a chronic diffuse nephritis. Soldaton, of the Russian army, detected derangements of the kidney in three hundred and fifty soldiers of the Russian army in cases of autopsy, dead of malaria in East Roumelia during the summer of 1878. Dickinson, while denying malaria the first place in its etiology, admits that he had seen several instances of persistent albuminuria and symptoms of the granular kidney in persons recently returned from India, who, while there, suffered severely from malarial fever. McLean says: "I can confirm, from personal observation, Dr. Parke's remark that chronic Bright's disease is a consequence of malaria. Many old Indians who have suffered from malarial fever die of this disease." Woodward, of our own army, says of the results of chronic malarial poisoning: "Disorder of the kidneys frequently complicates the condition under consideration. Scanty, more or less albuminous urine is often observed, and those cases which occasionally perish with the symptoms of acute uremic toxæmia not infrequently terminate in chronic Bright's disease, with confirmed albuminuria, œdema, or general anasarca and the whole train of the symptoms of that disorder." Busey reports a number of cases of renal disease in children, the origin of which he attributes to malaria. Dacosta states that he has seen a large number of cases of Bright's disease following malaria. Observations upon renal alterations due to malaria have been made by Loring, Pepper, Clemens, and others.

PATHOLOGICAL ANATOMY.—For all practical purposes it is only necessary to note the two more commonly recognized morbid conditions of the kidneys, viz., the large, white, swollen appearance of the organ and the contracted, granular, or fibroid. The former is believed to be largely due to malarial poisoning; the latter to chronic degenerative changes, taking place not alone in the kidneys but in the different organs of the body. The former, constituting the diffuse tubal variety, may lead, and often does (unless proper therapeutic measures are adopted), after a greater or less lapse of time to the second or granular form and thereby become exceedingly intractable. Rosenstein remarks that, although cases usually get well or die before granular kidney develops, there can be no doubt that this form of kidney may result from malarial poisoning. Admitting the fact that, with the greatly improved methods of analyzing the urine, both chemically and microscopically, which we now possess, not only albumen but hyaline and granular casts are found in the urine in very many diseases, such as the exanthemata, rheumatism, pneumonia, the various forms of continuous fever, etc., as well as in apparent health as after violent exercise, sea-bathing, severe mental emotions, after eating certain kinds of foods, as tapioca, or eggs in large quantities, in epilepsy or the eclampsia of children, and as a rule that these temporary conditions are not dangerous, seldom requiring treatment; still, the form under consideration, depending largely upon malaria, should never be neglected, as I am convinced, from many years' observation, that the tendency is for the disease to pass into the granular or cirrhotic stage. True, the transitory attacks of malarial albuminuria, like those from other causes, usually recover of themselves, for the reason that the symptom is due to the visceral hyperæmia alone, and disappears on the subsidence of this. Its persistence is the only alarming feature. Alexander Rey studied the pathological anatomy of renal alterations of malarial origin; the kidneys examined by him owed their changes to intermittent fever. Soldaton observed in kidneys, after remittent fever, enlargement sometimes reaching twice their normal size. Having briefly glanced at the etiology and pathology of Bright's disease of the kidneys, I will claim your attention for a few minutes to some points in the treatment, especially of the form produced by malaria, as intimated in the heading of this paper.

But before proceeding to do so, it may be well to note that a so-called theory of albuminuria was recently presented at the Paris Academy of Medicine by M. Semmola, of Naples, with regard to its etiology—especially with reference to the chronic form called Bright's disease, viz.: That the malady is not essentially renal, but consists of a general, morbid alteration of nutrition; and he observes that albumen in such cases is not passed by the urine only, but by all the secretory organs. This alteration deprives the albuminoid materials of the blood of their power of being assimilated, and so causes their excretion by the emunctories. The renal lesions he ascribes to mechanical irritation of the tubules of the kidneys by the constant passage of albumen through them.

Albuminuria is, therefore, a cause, not a result, of renal disease. He founds these views on a series of experiments made on animals. He injected into the blood-vessels various substances containing albumen—as white of an egg, milk, and blood-serum—with the result of inducing artificial Bright's disease. White of egg was most active in this way. He therefore concluded that the more nearly albuminoids approach the character of serum-albumen, the less likely they are to injure the kidneys by irritation, and vice versa.

Admitting, however, the correctness of his deductions, we are confronted with the fact that there must be a cause of some kind not recognized or referred to by him, aside from the changes in the economy, to produce this excess of albumen in the blood, and the conjecture is a reasonable one that these very changes which he describes are quite likely to be produced by the poison, whatever it may be, that develops intermittent fever, as it is one of the most potent means of depressing the vital energies and sapping the foundations of health.

In the further elucidation of this subject as being caused largely by malarial influences, let us look at some facts undoubtedly familiar to most of the general practitioners who have lived and been engaged in their profession for a period of twenty years in the city of New York; viz., that in portions of the city where improvements have been going on most rapidly, as in excavating the earth for the purpose of erecting a block of buildings, not only in that particular street, but including quite an area of territory in the vicinity, there has been an increased amount of intermittent fever, with a more general association of malarial toxæmia among its inhabitants where chills and fever were not absolutely produced. In such neighborhoods we find a much larger proportion of cases of albuminuria, especially among the young and middle-aged, in contradistinction to the cirrhotic kidney which, as a rule, occurs in persons past the middle age, and arising from entirely different causes, as arterial degeneration, etc.

I have dwelt somewhat largely upon the etiology of this affection in order to emphasize certain points in the treatment which require modifications according to the greater or less amount of influence exerted by this subtle but deleterious poison. It is well known that in an ague chill the kidneys, as well as all the other internal organs, become congested; that a frequent repetition of this condition has a tendency to produce structural changes, especially of the kidneys; and that an interstitial change in these organs of a permanent character is more likely to occur than in any other of them, excepting, perhaps, the spleen—and although the albumen usually disappears from the urine after the subsidence of the chill and fever, still, this is not always the case, of which fact we have abundant evidence.

In a certain proportion of these cases, even after the chill and fever are brought under control, the urine will contain a small amount of albumen, which may continue for months or years without the patient being conscious of the fact, and unless he is being examined for some other ailment the physician, even, may not suspect any renal mischief. But after a variable period of time, when the ankles become œdematous, with shortness of breath on exertion, with cardiac hypertrophy and the general debility associated with these organic changes, he examines the urine, and at once discovers the cause of the patient's ailments.

First in the treatment should be prophylaxis, consisting, so far as possible, in not only removing the chills and fever by the appropriate use of quinine, but in using other remedies for a considerable time thereafter, in order to eliminate the malarial poison from the system, which can usually be done, providing the physician impresses upon the mind of his patient the necessity of continuing treatment for some time after the chills shall have entirely subsided; because by so doing the susceptibility of the system while living in a malarial region, as we are doing, is sensibly diminished. As experience has proved, the most important remedies for accomplishing this desirable result are arsenic and iron, the form which I am most accustomed to use being sol. potass arsenite, combined with the solution of the ferrous malate—five minims of the former, for an adult, to thirty of the latter, continuing the same until the usual health and vigor are fully restored.

In the early period of this form of Bright's disease, now under consideration, where we find albumen in greater or less quantities, there is often an absence of casts in the urine, but which will appear later on in the disease, and this fact is of diagnostic importance in contradistinction to the atrophic kidney, in which the casts are usually coexistent with that of albumen.

The prognosis is much more favorable in this variety of the malady than in the cirrhotic form, as there is not such complete degeneration of the different tissues of the body, including the kidneys, while the response from the use of appropriate remedies is much more prompt. I have notes of quite a large number of cases of this form of the disease, in some where it has existed for six, eight, and ten years, where the general health of the patients is much better than it was at the periods mentioned, and apparently less involvement of the kidney structure. In some, albumen has entirely disappeared, although the gravity of the urine remains persistently below the normal, while in others the albumen never entirely disappears, even when they appear in perfect health.

As an illustration of the effects of remedies, I will mention one case out of many where the treatment has been of similar character.

Mrs. G——, now thirty-eight years of age, married, with four children (besides one that died several years since), the youngest three years of age. Father died in the Utica Insane Asylum of general paresis. Mother died of apoplexy. Came under my observation six years since, on account of œdema of the feet and legs, with general anasarca, dyspnœa on the slightest exertion, anorexia, constipation, etc.

On examining the urine, found the specific gravity 1010, which on boiling and adding nitric acid showed three-fourths of the volume of urine in the test-tube to be albumen, but on repeated microscopical examination no casts were found. She had lived the first two years in Jersey, and the three preceding ones in Greenpoint, L. I., both notoriously malarial localities, in both of which she had been a constant victim to chills and fever. Had never had any trouble after her confinements, and always enjoyed good health previous to that time. She was passing but a small quantity of urine; recumbent position almost impossible. On account of the urgency of the case (she having taken quinine until the chills were broken) I put her upon a pill much used by my old preceptor, Dr. Beckwith, of Litchfield, Conn., more than fifty years ago, in all cases of dropsy, and which has of late been rediscovered and lauded in the periodicals by several writers as one of the most potent means yet discovered of increasing the renal secretions and removing dropsy, viz.: calomel, pulv. scillæ, and pulv. digitalis, gr. 1 of each *ter in die.*

As usual, within three days she was passing more than a gallon of water in the twenty-four hours, after which the dropsy soon disappeared, and her improvement was everything desired. Three days was all that was required in the use of the calomel pill. From this time to the present, although the urine has always contained albumen, the quantity has never approached the relative amount at that time.

As soon as the urgent symptoms had disappeared, I commenced the use of a pill composed as follows: ℞. Hyd. bichlor., chloride of gold and sodæ, of each one-twentieth grain; ferri pr. hydrogen, two grains. Of these pills she took one three times a day for several months, substituting ext. digitalis for the iron when there was any diminution in the quantity of urine. Also Fowler's solution of arsenic three times a day, commencing with five minims, and increasing to fifteen or twenty gradually as the stomach would tolerate it. These remedies were continued most of the time for a period of two years, with constant improvement. Since which time, or during the past four years (although there has always been a small quantity of albumen in the urine), she has had but little trouble, bearing one child in the meantime, when, during the latter months of pregnancy, she had more or less dropsy, for which she took infusion of digitalis with the bichloride of mercury.

She now appears and feels in every way well, and takes no medicine, excepting at times when she will recognize the old mental stupor of uræmic poisoning as being the same that she had during the first years of her illness, although nothing like so severe, when, for a few days, she will use digitalis infusion, and be in good condition again.

Had I the time I could give the history of a large number of cases of which I have notes taken at the time, which I have treated substantially in the same manner, and with nearly the same results, in both sexes, and of all ages.

Admitting the etiological factor, as suggested in this paper, recognized by most authors, I believe we have in the remedies mentioned a means of materially mitigating the severity of the symptoms, and of prolonging life, sufficient to warrant the more general adoption of the same. It is not claimed that the disease is wholly eradicated, but that by proper treatment, with care in food and dress and hygienic surroundings, life may be prolonged for many years, and a state of comparative health enjoyed.

The treatment of Bright's disease by the use of corrosive sublimate is not a new thing. Professor Willard Parker, as long ago as 1850, urgently recommended its use in this disease, and was such an enthusiastic believer in the remedial virtues of the same, that he repeatedly asserted, both in his lectures and in his private practice, that Bright's disease, when recognized in the early stages, could be cured by this remedy alone, in connection with proper hygienic and sanitary surroundings.

Dr. John C. Peters reports that the treatment of this disease by the use of bichloride of mercury began in New York more than forty years since, by Dr. J. A. Smith, and was followed by Drs. Griscom and Joseph M. Smith.

The number of cases noted by them was twenty-six; and the majority of them were very much improved, although the urine still contained albumen. It was given in doses of one-sixteenth, one-eighth, and even one-fourth of a grain, every four hours, in tinct. cinchona. Its effects in these cases was diuretic.

It will readily be perceived that the dosage was, in these last cases reported by Dr. Peters, too large and the frequency of its administration too great to be tolerated by the system for any length of time; hence its disuse which followed. The disease being essentially of a chronic nature, the remedies should be continued for a long time, and must be given in small quantities.

Nitro-glycerine has, in the hands of many observers, as well as my own, proved a valuable addition to our therapeutical resources in the affection under consideration, not as a curative agent, like the remedies above mentioned, but for favorably modifying certain unpleasant symptoms so often observed, such as dull throbbing headache, caused by deficient elimination of urea, with a diminished secretion of urine, the insomnia connected with the same, the palpitation of a hypertrophied heart, etc. Given in one-fiftieth-grain doses and repeated every two hours, it will do more to dissipate these unpleasant sequelæ than any other remedy with which I am acquainted. As soon as its specific effect is produced a sense of relief will follow, when the remedy should be withdrawn, only to be renewed when the symptoms may occur indicating its use.

Its effect is usually to promote the action of the kidneys and increase the flow of urine as well as the greater elimination of urea.

In summing up the points I wish to make, then, I should say that in my experience with this form of kidney difficulty, quinine should be given until the chills are broken, in doses of five grains three times a day; then smaller doses with iron (preferably the solution of the ferrous malate) until the cachexia is removed, after which give a pill containing each, grain one-twentieth acid. arsenious, chloride of gold and sodæ, and two grains Queevennes' iron, to be taken after eating, and continued for a long time. Also bichloride of mercury one-sixtieth grain, gradually increasing to one-twentieth grain (which should never be exceeded), dissolved either in tinct. cinchona or infusion of digitalis, the latter being preferable in the majority of cases on account of its action in steadying and slowing the heart, and by so doing increasing the urinary secretion. This, also, should be used three times a day. For the numerous troubles we have associated with the disease, glonoin will be found to more often relieve them than perhaps aught else. When dropsy occurs, as it often does, we have in calomel guarded by opium, one grain of the former with one-third grain of the latter, given three times a day, a very sure means of relief; but when giving this remedy all other medicines should be temporarily withheld. Where a person comes from a distance, or is to be absent for a considerable time, I am in the habit of prescribing two grains each of chloride of gold and sodæ, bichloride of mercury, and acid. arsenious, to be made into forty small pills, with the instruction to take one after each meal three times a day, and continue them until he or she returns.

By pursuing a course thus briefly outlined, persistently and steadily for a long period of time, the disease may be largely controlled and in many cases cured; but where this is impossible, as is unfortunately sometimes the case, its progress may be arrested and the patient may live in comparative comfort for a number of years. This is a plan of treatment I have pursued for many years with the most satisfactory results, and one I shall continue until some better means may be devised for arresting this terrible malady.

THE Post Graduate Schools have had a very successful season and have proved their utility to a large and widespread attendance of medical men. Both schools here are in a prosperous condition, and post graduate medical study in New York has come to stay.

A SERIES OF HEART LESIONS.[1]

By J. WEST ROOSEVELT, M.D.,
NEW YORK.

I PRESENT the following eight specimens of lesions of the heart which illustrate certain pathological and clinical facts worthy of note. In preparing these specimens I studied the records of eight hundred and fifty cases which came to autopsy at Roosevelt Hospital. The cases were taken as they came, and embrace various diseases and injuries. I looked for cases of valvular disease in which there was stenosis or insufficiency of a valve, or in which there were vegetations found on one. Cases of malignant endocarditis, and cases of valvular insufficiency from dilatation of the heart or ascending aorta, are excluded.

Among the 850 cases I find 123 of valvular heart disease, or 14.1 per cent. In these the mitral valve alone was diseased in 50; stenosis existed in 15; insufficiency in 27. Both stenosis and insufficiency are noted in 6; vegetations, not producing stenosis or insufficiency, in 2. The aortic valve alone was diseased in 24 cases. Stenosis existed in 2; insufficiency in 12; both, in 3; vegetations, not producing either, in 7. Both aortic and mitral valves were diseased in 44 cases. The following combinations were found: Aortic and mitral insufficiency in 13; mitral stenosis and aortic insufficiency in 8; aortic and mitral stenosis in 5; aortic stenosis and insufficiency, and mitral stenosis and insufficiency, in 3; aortic insufficiency and mitral stenosis and insufficiency in 3; aortic stenosis and insufficiency and mitral stenosis in 3; aortic stenosis, mitral stenosis and insufficiency in 1; vegetations on both valves, without interference with functions, in 2; vegetations on aortic valves with mitral stenosis, in 3; vegetations on aortic valves with mitral insufficiency, in 2; vegetations on mitral valve with aortic stenosis, in 1. The tricuspid alone was insufficient in one case. It alone was covered with vegetations in one case. In one case there were vegetations on the tricuspid, mitral, and aortic valves, the mitral being stenosed; and in one there was tricuspid insufficiency with aortic and mitral stenosis and insufficiency.

In these cases the most common lesions are those of the mitral valve. The next most common are combinations of aortic and mitral lesions. Then we find lesions of the aortic valves, and lastly, those in which the tricuspid, alone or in combination with other valves, is diseased. I would call attention to the rarity of cases of pure aortic stenosis, two only being found.

In the series the males exceed the females in the proportion of 94 to 29. The excess is due, partly at least, to the fact that many more males than females come to the hospital, and partly to the fact that in a number of cases death was caused by injuries to which the male sex is more exposed. A distinct history of acute articular rheumatism is found in 44, among whom 10 were drunkards and 1 had syphilis; 3 gave a history of both rheumatism and Bright's disease. Chronic diffuse nephritis seemed to precede the cardiac lesion in 20 cases, and in 5 of these there was a history of intemperance. A clear history of syphilis was noted in 6 cases, two being drunkards; none had had rheumatism. Alcoholism alone is mentioned in 7 cases. No mention of any of these causes occurs in 24 cases, as the histories are imperfect. In 7 all of them are denied; in 2, scarlatina and measles are noted. Four cases of sudden death are recorded, 3 with mitral insufficiency, one aortic insufficiency. In none of these cases was death sudden, in the sense of having been preceded by no symptoms, but the end came suddenly, the patients having done well before. Death occurred from accident or from disease which was not dependent upon the heart or kidney lesions in 22 cases. Uræmic coma or convulsions terminated 8; 3 died of cerebral hemorrhage, 3 of acute pericarditis, and the remainder died with the usual symptoms of dropsy, dyspnœa, etc.

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[1] Read before the New York Pathological Society, February 22, 1888.

In attempting to draw any conclusions from these cases, the following points should be borne in mind: First, as to the relative proportion of cases of valvular disease to other diseases in hospital cases in New York, the number of autopsies studied is, I think, sufficient to show about the right proportion, namely about fourteen per cent. Second, as to the one hundred and twenty-three cases noted, no reliable deductions can be drawn, as they are not numerous enough. Third, the excess of males over females is probably too great, for the reasons mentioned. Fourth, in studying the etiology it must be remembered that in twenty-four cases the history is imperfect, and that these must be excluded. Fifth, that cases of sudden death do not often come under observation in a hospital, and are more frequent than the figures show. Sixth, cases dependent upon acute infectious disease are not fairly represented, because few children are treated in Roosevelt.

Bearing these facts in mind, we find that rheumatism was present in nearly forty-four per cent., chronic diffuse nephritis in nearly twenty per cent., syphilis in nearly six per cent., alcoholism alone in nearly seven per cent.; but that, taking cases with rheumatism, chronic diffuse nephritis, and syphilis, as well as cases without these, alcoholic excess was noted in nearly twenty-four per cent.

Aortic Insufficiency.—Calcareous Plates in Aorta Surrounding the Origin of the Coronary Arteries—Angina Pectoris.—Male, aged forty-six, admitted May 28, 1886. No rheumatism. Syphilis twenty-five years ago. Alcoholic habits marked at one time. No cardiac, pulmonary, or renal symptoms, except the attacks of angina. Attacks first began five weeks ago. First, has oppression in chest and dyspnœa. Then severe pain in *right* side of chest, radiating over whole front of chest; felt in both shoulders and both arms. During attack, fears immediate death. Shortly after admission, had an attack. The pain was severe. The radial arteries were hard and cord-like. Sweating profuse. Under amyl nitrite and magendie pain subsided for an hour. Then was seized with abdominal cramps without chest pain. Subsided under magendie. At 3 A.M., May 29th, after going to closet, patient returned to bed and suddenly died.

Autopsy May 29th, at 1 P.M., by Dr. Delafield. Rigor mortis very marked. Well-nourished man. All organs normal but congested, except the heart. The left ventricle is slightly dilated and thinned. The heart is not contracted, and the cavities contain a moderate amount of red clotted blood. The aortic valves are thickened and insufficient. A good deal of degeneration of the aorta. Just above the aortic valves the changes are very pronounced, and there is a calcareous plate which surrounds the origin of the coronary arteries. The coronary arteries themselves are perfectly normal. The mitral valve is a little thickened.

This case is interesting, as showing the relation of interference with the coronary circulation to attacks of angina.

Chronic Pericarditis with Adhesions and Calcification.—Aortic and Mitral Stenosis—Hypertrophy of the Left Ventricle—Absence of Chronic, Passive Congestion—Death from Slight Causes.—Christopher B——, aged fifty-six, German, married, conductor. Admitted to Roosevelt Hospital at 2.05 A.M., January 15, 1888.

Had been drinking hard for five or six weeks. Between 1 and 2 A.M., to-day, attempted to commit suicide by cutting both arms in the fold of the elbow. Wounds, about three inches long, had not divided the arteries. He did not seem to have lost much blood. He was conscious. Pulse fair strength, but rather rapid. Respiration normal. Had several slight convulsions, and died at 6.50 A.M. Heart was not examined during life.

Autopsy January 15, 1888, at 2.30 P.M., by Dr. Delafield. Body well nourished. Thick layer of subcutaneous fat. The wounds in the arms have only divided the superficial veins and have not injured the arteries. The organs generally were not anæmic. There was no congestion, such as is usual with heart disease. The liver was fatty. The kidneys were normal, save that the surfaces were a little irregular, and the fat about the pelvis was increased. The stomach, intestines, and spleen were normal. There were some old adhesions over the lungs.

I show you the heart. The pericardium is firmly adherent everywhere. In it, near the base, are some old calcific plates. Surrounding the tricuspid orifice, except that portion of it which is next to the mitral, is a ring of calcification which divides the auricle from the ventricle, and infiltrates the substance of the heart. The aortic valves are stenosed, and show numerous vegetations. The mitral valves are stenosed and thickened. Both of these valves show evidences of long-standing chronic endocarditis. The left ventricle is hypertrophied, but not dilated. There were post-mortem clots in all the chambers, and in the right ventricle some small ante-mortem clots.

The case is interesting, because it shows how little damage is done to the body in some cases by severe disease of the endocardium and pericardium. This heart must have been seriously crippled both by the valve lesions and the adherent pericardium, yet there was no passive congestion produced, nor did the man's nutrition suffer. Adhesions of the pericardium are not very uncommon. When such extensive lesions as those seen in this heart exist, one would expect much interference with the heart action, and marked symptoms and lesions of cardiac disease.

Another point of interest is that, although the man's heart seemed able to do its ordinary work, yet, after he had been on a prolonged debauch, a not severe hemorrhage was sufficient to kill him. He did not present the symptoms of severe hemorrhage. It is possible, of course, that, in addition to cutting his arms, he may have taken some alkaloidal poison, but he did not have symptoms of poisoning by any ordinary alkaloid, and it is most probable that his death was due to the exhausting effects of his spree and the slight hemorrhage, which were too much for the diseased heart.

Aortic Stenosis and Insufficiency.—General Dilatation of the Heart—Dilated Right Auricle Lying against the Chest Wall, at the Right of the Sternum, Causing Pulsation and Thrill, Simulating Aneurism.—Thomas K——, aged sixteen, admitted to Roosevelt Hospital August 3, 1881. Family history unimportant; denies syphilis, but has indulged in sexual intercourse; is temperate.

Rheumatism three years before admission. At that time had præcordial and epigastric pain, and has suffered from attacks of similar pain from time to time ever since. For one year has had frequent palpitation of heart and pretty constant dyspnœa, worse on exertion. Never had œdema of face or feet. Noticed no trouble with the urine. He has had frequent passing attacks of coughing, but during the past three months has suffered from constant cough, worse in the morning and evening, with mucopurulent expectoration. The cough is very violent, and sometimes a paroxysm produces vomiting. Never spat blood. For the last month has sweat much at night; has been losing flesh and strength.

On admission patient is cyanozed. Urine acid; specific gravity, 1.026; without albumen. Has marked dyspnœa and orthopnœa.

Physical examination: Marked visible pulsation of the superficial arteries; typical "water hammer" pulse; heart apex beat in sixth space, one inch to the left of left mammary line; impulse diffuse and heaving; area of dulness increased. In the first and second spaces to the right of the sternum is an area of dulness, about two inches in width, beginning at the right border of the bone. Over this area is felt a systolic thrill. Auscultation over the same area gives a loud, rasping, systolic, and softer blowing diastolic murmur. A systolic murmur is audible in carotids and subclavians on both sides, about equally clearly. At the level of the third right costal cartilage the quality of the systolic murmur is entirely different from that heard above and in the vessels. It is very sharp and whistling. The diastolic murmur also, at this point, becomes loud and harsh; it is transmitted down the sternum to the ensiform cartilage. A short, blowing, systolic murmur is heard at the apex and to the left of it. Systolic murmurs can be heard in both vertebral grooves. A double murmur is very distinctly audible in the left supraspinous fossa. Markedly exaggerated breathing and voice at the right apex. Over the rest of both lungs subcrepitant râles and diminished breathing.

The patient spat considerable blood a few days after admission. His dyspnœa improved.

During his stay in the hospital the patient had several attacks of severe dyspnœa, accompanied by severe pain in præcordium and down the left arm, and marked sweating. He also suffered at times from pain in the epigastrium, which radiated through to the back. After being in the hospital about seven months he was greatly improved. His attacks of pain became less frequent, the cyanosis disappeared, and on April 6, 1882, he was discharged improved.

I wish to direct attention to the fact that there was an area of dulness at the right of the sternum, in the first and second space, and that over this area a systolic thrill could be felt and a double murmur heard, and that there was well-marked "water-hammer" pulse. It is worthy of note that the quality of the double murmur changed at the level of the third right costal cartilage. It is possible that a marked increase in intensity may have been mistaken for a change in quality, but I think this is not so. A diagnosis of aneurism of the ascending arch, with aortic stenosis and insufficiency, was made at the time of his discharge.

The patient was readmitted June 21, 1884. After leaving the hospital he remained in pretty good health, suffering apparently at times a little from præcordial and epigastric pain. He was able to work, however. He had some cough. Two weeks before readmission, after exposure to cold and damp in an ice-house, cough became worse, and he suffered from cramps in the abdomen and legs. He also had pain in the right side of his chest; he lost appetite; sweats a good deal.

On admission he suffers from pronounced orthopnœa; has severe dyspnœa on exertion; urine alkaline; specific gravity, 1.030; albumen abundant; epithelial and hyaline casts.

At this time there are numerous moist râles heard over the bases of both lungs. Heart apex beat in same position as before. Diffuse and heaving impulse. Cardiac dulness enlarged. In the first, second, and third interspaces, for a distance of about one inch to the right of the sternum, there is dulness, and distinct pulsation with systolic thrill. Harsh systolic murmur can now be heard over the whole chest. Diastolic murmur audible the whole length of the sternum. Visible pulsation of carotids and subclavians, and over these vessels a systolic thrill. Finger in supra-sternal notch is lifted with the systole. Water-hammer pulse. Præcordial bulging.

Patient suffered from dyspnœa pretty constantly. He had a number of angenoid attacks. Profuse sweating was a prominent symptom. Orthopnœa was present until the end. On June 27th, at 4.10 A.M., became cyanotic. At 4.20 died.

Autopsy made by the writer eight hours after death. Body poorly nourished. Rigor mortis fairly marked. Brain not examined. The kidneys, spleen, intestines, and stomach were in a condition of passive congestion. The liver was firm and congested, and the upper surface showed a depression where the enlarged heart had rested upon it. The left lung was in a condition of pigment induration. The right pleural surfaces were everywhere adherent. The lung was in a condition of pigment induration. The lower lobe was compressed by the enlarged right heart. The bronchi were congested in both lungs, and contained muco-pus.

The heart weighed two pounds when emptied of clots. All of the chambers were dilated, their walls were about as thick as those of the normal heart. The aortic valves were stenosed and insufficient. One cusp is almost gone, and the others are thickened. Mitral valve thickened, but seems sufficient. Tricuspid and pulmonary valves normal. The dilated right auricle lay against the chest-wall behind the second and third ribs to the right of the sternum, and it was this which had given the dulness, thrill and pulsation described. The aorta was healthy and not dilated.

The case was peculiar because of the close resemblance to aneurism in the physical signs. When the patient returned after an absence of two years from the hospital, it was thought that, if he had had an aneurism, it would probably have killed him before that time. The absence of symptoms of pressure upon the trachea or bronchi, œsophagus, or recurrent laryngeal nerves, and the absence of pain in the neighborhood of the pulsating area at the right of the sternum, together with the youth of the patient, were all against aneurism. On the other hand, the dulness, thrill, and pulsation on the right of the sternum were pretty strong evidence in favor of that diagnosis.

ACUTE PERICARDITIS WITH EFFUSION COMPLICATING DOUBLE LOBAR PNEUMONIA.—Male, aged nineteen. Laborer. Austria. Admitted February 13, 1888. History imperfect, because patient could speak no English. Sick eight days. Pain in right chest. No chill. When admitted was very weak. Restless. Pulse weak, 94. Respiration, 34. Temperature, 102.8°. Extreme dyspnœa. Urine, specific gravity 1.019; trace albumen; to casts. The physical examination gave signs of consolidation over lower part of both lungs, behind. Over the right chest, in front, the resonance was normal. The breathing and voice were normal from the apex to the second rib, and thence to the bottom were broncho-vesicular. Over the left chest, in front, dulness began at the second rib and was found from thence down. Breathing broncho-vesicular. Heart apex in normal position. Sounds obscure, but no murmur. Patient sank and died February 15th, at 8.10 A.M. Autopsy showed red hepatization of lower lobes of both lungs, with a very thick layer of fibrin on the right side. The hepatized right lung had prevented the pericardial fluid from distending the sac on that side. The left lung was pushed backward and upward by the pericardial effusion. The pericardium was distended with purulent serum. I show the heart, which has no endocardial lesions. The visceral and parietal layers are covered with a pretty thick layer of recent fibrin.

The case is interesting because of the position of the effusion caused by the right lung, and also as illustrating a not infrequent, but often unrecognized, complication of lobar pneumonia. The absence of friction sound, I presume, was due to the effusion. Possibly, could the patient have been made to lean forward, it might have been heard.

ADHERENT PERICARDIUM.—This heart was taken from the body of a man who died in Roosevelt Hospital July 18, 1886, of meningeal hemorrhage. No history could be obtained, except of the fatal apoplectic attack. The autopsy showed meningeal hemorrhage and some phthisis. There were no evidences of chronic venous congestion. The visceral and parietal layers of the pericardium are everywhere firmly adherent. The walls of both ventricles are somewhat thinned. The valves are normal.

This lesion is not very rare. It is probably but rarely diagnosed during life, however. I looked through the records of the autopsies made at Roosevelt Hospital since 1880, and among these I find a number of cases. The lesion does not necessarily do the patient much harm, when uncomplicated by valvular disease, or at least it may exist for some time without producing the ordinary lesions of passive congestion. In this case there were no evidences of such congestion.

In another case, a young man of extraordinary muscular development worked as a roofer, and carried very heavy weights, and gave absolutely no history of anything pointing to heart disease. He died of disease of the ependyma with serous effusion into the ventricles of the brain. His pericardium was firmly adherent throughout; the heart, otherwise, was normal. There was no history of rheumatism or syphilis, and the time at which the adhesions were probably formed is unknown.

In looking for other cases I find only two in which the lesion was uncomplicated by valvular disease. In one, there was also chronic peritonitis and ascites, and the heart was normal, save for the adherent pericardium. The other was a case of tubercular pericarditis, which has been reported to this Society. In this case the heart-muscle was much thinned. In neither of these cases was a diagnosis made. As very little is really known about the physical signs produced by this lesion, I tried to see whether the records would throw any light upon them. In the case of the young man who died of disease of the ependyma, the heart is recorded as normal. In the case in which chronic peritonitis existed, it is simply stated that the heart action was irregular, intermittent, and feeble, and that there were no murmurs. In the case of tubercular disease, it is recorded that the heart impulse was imperceptible and the heart action weak. In another case of complete adhesions, which were very thick, there were no signs noted save the murmurs caused by complicating stenosis and insufficiency of the mitral valves. A fifth case gave the usual murmurs of aortic stenosis and insufficiency and mitral insufficiency which existed, and, in addition, it is noted that "there was visible pulsation with perceptible impulse in the third, fourth, and fifth spaces at the left of the sternum." In a sixth case, with thickening and insufficiency of the aortic and mitral valves, the usual murmurs were heard and the impulse of the heart was felt in the sixth space, nipple line, and is noted as "forcible, but diffuse."

These, with one mentioned in another part of this paper, are the only cases I could find in which the physical signs are recorded. In none, so far as I could ascertain, was a diagnosis made of the pericardial lesion. It is probable that the possibility of its existence may have been forgotten, and that, therefore, some more distinctive signs were overlooked. It is very likely that, in all of the cases, the apex beat would have been found not to change its position when the patient's attitude was changed; and it is possible that the impress on the left of the sternum noted in the fifth case may have occurred with diastole, and not with systole. I shall not weary you by mentioning the physical signs usually described as indicative of this condition, but simply record the cases and call attention to the difficulties in diagnosis in adults.

MITRAL STENOSIS AND INSUFFICIENCY.—TRICUSPID INSUFFICIENCY—DILATATION OF BOTH AURICLES AND OF THE RIGHT VENTRICLE.—Patient, a boy aged fifteen, had scarlatina, followed by some pains in the joints, twelve years ago. Came under observation January 26, 1888. No history of cardiac symptoms until three weeks ago. Then cough, followed in a week by œdema of the feet and legs, abdominal swelling, and some dyspnœa. Grew rapidly worse. Dyspnœa and orthopnœa became extreme. Remained in hospital for about three weeks and was then taken home. Died February 15th. When admitted to hospital, urine was acid, specific gravity 1.027, small amount of albumen. He was very dropsical, and suffered much from dyspnœa and orthopnœa. The apex beat was in the fifth space, nearly in the left anterior axillary line. Impulse was diffuse and slapping, and could be seen causing indentations in the third, fourth, and fifth spaces to the left of the sternum. There seemed to be a drawing in of the lower part of the præcordium with the systole, but the heart action was too rapid to be sure of this. A distinct systolic thrill could be felt over the whole præcordium. Area of cardiac dulness enlarged. Systolic pulsation of veins of neck very marked. Rough loud præsystolic murmur audible to the left of the sternum from the third rib to the apex. This murmur sounded almost like a friction sound. Systolic murmur over whole præcordium, loudest above the apex, transmitted to the left, and heard in the left vertebral groove. Pulmonary second sound much accentuated. The pulse was small but regular, 110; respiration, 28; temperature, 101.8° F. There were signs of fluid in both chests and abdomen. The apex beat was hardly at all changed in position by such changes of posture as the patient could be made to take, but owing to his distress it was not possible to test this point thoroughly. From the signs I thought the boy had mitral stenosis and insufficiency, with dilated right heart; and from the apparent systolic depression thought he probably had an adherent pericardium. At the autopsy we were only permitted to examine the heart. There was ascites and hydrothorax. The pericardium contained a very slight excess of fluid, but was otherwise perfectly normal. The heart I present to you. The left ventricle is very slightly dilated. The aortic valves are very slightly thickened, and on one cusp is a small recent vegetation. The mitral valve and chordæ tendinæ are very thick. The cusps of the valve are glued together so as to make a rounded opening less than one-fourth inch in diameter, which evidently cannot be closed. The left auricle is dilated and thickened, its endocardium is thickened and white. The right ventricle is much dilated; the tricuspid valves are much thickened, their chordæ tendinæ are thickened and shortened. The right auricle is much dilated. The pulmonary valves are normal. As the heart lay in the chest the dilated right ventricle was in front of the left, and so great was the dilatation that the heart had been caused to rotate on its axis, so that the left ventricle was not only behind, but its left border was about one inch to the right of the right ventricle. The dilated right auricular appendix pressed upon the aorta, lying between it and the chest-wall.

MITRAL STENOSIS, AORTIC STENOSIS, AND INSUFFICIENCY.—TRICUSPID INSUFFICIENCY—GENERAL DILATATION OF THE HEART WITH HYPERTROPHY—SYSTOLIC MURMUR MOST DISTINCT AT THE APEX.—The patient's history is of the ordinary symptoms of cardiac disease for one year. He was fifty-two years of age. He had had rheumatism, scarlatina, chancroids, and gonorrhœa. The only point of interest for my present purpose is that the only murmur audible was a systolic one, which could be heard over the whole præcordium, but was most distinct at the apex.

His heart is hypertrophied and dilated, and there is calcification, with stenosis and insufficiency of the aortic valves; very close stenosis of the mitral valve, and well-marked insufficiency of the tricuspid valve.

In connection with this case I show another heart with stenosis and insufficiency of the mitral valve, in which a systolic apex murmur alone was audible.

In the records of the Roosevelt Hospital I find the following cases, which are of interest when considering the relations of heart murmurs to lesions. It is needless to say that they are all cases in which an autopsy was made:

1. Area of cardiac dulness enlarged. Feeble and irregular action. No murmurs. Lesion: Aortic stenosis and insufficiency. Mitral insufficiency. Hypertrophy with dilatation of left ventricle.

2. Heart enlarged. Feeble and irregular action; no murmur. Aortic valves thickened. Mitral valves stenosed. Hypertrophy of right ventricle.

3. Systolic apex murmur. Lesion: Mitral valve stenosed, and insufficient and calcified. Hypertrophy with dilatation of right ventricle. Slight dilatation of left ventricle without hypertrophy.

4. Systolic apex murmur, loudest at the lower end of the sternum. Lesion: Aortic insufficiency. Mitral stenosis and insufficiency.

5. Loud systolic murmur over the whole præcordium. Lesion: Aortic valves calcified, rigid, and insufficient. Mitral a little thickened. Great dilatation of left ventricle.

6. Systolic apex murmur. Lesion: Stenosis and thickening of the mitral valve. General hypertrophy and dilatation.

7. Systolic base murmur. Force of heart action great as compared with feeble pulse. Lesion: Mitral stenosis so marked as nearly to close the valve.

8. Forcible impulse against chest-wall. Irregular action. Heart-sounds obscure, but no murmur. Increased area of præcordial dulness. Small, weak pulse. Lesion: Hypertrophy of right ventricle. Thickening and stenosis of mitral valve. Marked thickening of the endocardium of the left auricle. Left ventricle normal.

9. Loud systolic murmur heard at apex, and transmitted to the left. Diastolic murmur over aortic valves, and transmitted down the sternum. Lesion: Dilatation and hypertrophy of the left ventricle. No valvular disease. This patient died of uræmia, due to atrophic chronic diffuse nephritis. It seems probable that the dilated heart permitted regurgitation through the aortic and mitral orifices during life.

10. Heart action forcible; rhythm somewhat irregular. A loud systolic, rough murmur heard over the whole præcordium, loudest at apex, and transmitted toward the axilla. No mention of possible transmission up great vessels. Lesions: Left ventricle normal. Right ventricle somewhat dilated. Pericardium distended with clear serum. Mitral and aortic valves are both much thickened and stenosed.

11. Double murmur, heard loudest at the apex and transmitted to the left. Lesion: Aortic valves covered with old vegetations, ulcerated, and partly calcified. Old pericardial adhesions.

Of course, it is well known that murmurs do not correspond to lesions with absolute exactness, but it is interesting to see how little relation they may have to valvular disease. Among these cases are two with feeble and irregular action, but no murmurs, although the valves were diseased. The feebleness of action may have explained the absence of the murmurs. The murmur produced by mitral stenosis, if we may judge from these cases, is sometimes systolic and loudest at the apex, sometimes systolic and heard only at the base, and sometimes not audible. I do not speak of these cases as showing anything new, but I wish merely to emphasize something old and well known, but often forgotten. I do not wish to waste words, as some are now doing, by theorizing about the mode of production of murmurs; nor to worry about the possibility of the murmur of mitral stenosis being caused by systole of the auricle or the ventricle; nor whether it should be called "præsystolic," or "post-diastolic," or anything else. We have a murmur which precedes the first sound, and is usually only heard at or near the apex, and this indicates mitral stenosis. The murmur is of a generally peculiar quality, and begins softly and ends much louder. We have also in mitral stenosis a murmur of the same quality, which may take the place of the first sound; we may have no murmur, or the murmur in some cases seems actually to follow the sound. These facts are important. As for the theories, we do not know enough yet to really prove any of them. The Pathological Society is not a place in which we should discuss theories too much. The aim of these meetings is to give opportunities to study lesions and to learn from facts. From the study of lesions we can say: That extensive valvular disease may exist without murmur; that murmurs are not always heard in the situations usually described, nor are they always transmitted in the classical manner; that the murmur of mitral stenosis is peculiarly apt to be irregular in its time and situation; and finally, that although basic systolic murmurs, transmitted up the great vessels, are not uncommon, yet aortic stenosis is a rare lesion, and these murmurs usually only indicate disease of the valves without stenosis. I repeat that I present these facts not because they are new, but because they are so often forgotten.

In conclusion, let me summarize the facts which I have desired to illustrate by this series of hearts.

First, the specimen of calcareous plates in the aorta, obstructing to a considerable degree the coronary circulation. This specimen shows the influence of obstructed coronary vessels in producing angina pectoris.

Second, the case of pericardial adhesions and calcification with valvular disease. The point of greatest interest here is the death of the patient from a slight hemorrhage. It shows how feeble is the vitality in some cases of organic heart disease, even when the lesion of the heart has neither yet interfered with the nutrition of the patient nor produced passive congestion.

Third, the case of adherent pericardium is presented, with the epitomes of other cases, to call attention to the lesion, and also to the fact that its diagnosis is not easy.

Fourth, the acute pericarditis complicating pneumonia is presented to show the lesion, and to bring to mind a complication often overlooked.

Fifth, the case of valvular disease with general dilatation, and with dilated right auricle pulsating to the right of the sternum, is reported because of its resemblance to aneurism.

Sixth, the case of extreme mitral stenosis and insufficiency, with tricuspid insufficiency, is interesting because of the lesion and the physical signs.

The seventh and eighth cases, and the histories of certain others, illustrate the peculiar physical signs produced by some valvular lesions.

Clinical Department.

UNUSUAL CASE OF CANCER.[1]

By T. H. SQUIRE, M.D.,

ELMIRA, N. Y.

Edward M—— died suddenly on Wednesday, November 9, 1887, aged fifty-one. For years his business had been to measure and sell lumber in connection with a planing mill, and he was a man much relied upon in this capacity. He carried in his right hand a long, flexible, wooden rule, tipped with a brass flange, which he hooked on to the boards and planks and light timbers, turning them over and moving them as his business required, and thus his right hand and forearm did a great deal of hard and peculiar work, continuously, for many years.

About four years before his death he began to feel pain in this forearm, extending to one or two of the fingers. This pain gradually became more and more constant and severe. It was called rheumatism and neuralgia. Several physicians, in succession, were consulted, and many remedies were used to overcome the pain, but all of little or no avail. The forearm began to enlarge, and he began to lose perfect use of some of the fingers. Finally the forearm and hand became nearly useless, the fingers rigidly flexed, the wrist somewhat flexed, the muscular part of the forearm swollen, hard, and the seat of constant and increasing pain. Treatment seemed to have no influence in staying the progress of the disease, and nothing but opiates could materially lessen the pain. The time came when amputation above the elbow was advised, and then he consulted Dr. Thomas Markoe, of New York, who coincided in this measure. The amputation took place on January 22, 1887, at the junction of the lower and middle thirds of the humerus. At that time the patient was greatly prostrated by long suffering and general poor health. He had done no work for more than a year. He began very quickly to improve after the amputation.

The amputated member was sent to Professor Markoe, through whose kindness, in due time, the following report was received from the pathologist of the New York Hospital:

"The muscles of the right forearm are involved extensively by an interstitial lesion, which extends from a level four centimetres anterior to the elbow-joint down to the junction of the middle and lower thirds of the forearm.

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[1] A paper read before the Elmira Academy of Medicine, February 1, 1888.

All the muscles in front and on the sides of the forearm are involved, except the flexor carpi ulnaris and the extensor carpi radialis longior.

"The tissues of the forearm anteriorly are extensively broken down. There is a soft, pulpy, reddish mass of broken-down tissues, extending from the middle of the forearm upward a distance of seven centimetres. This broken-down area is ovoidal in shape and five centimetres in diameter. Surrounding this mass there is a great increase of fibrous tissue at the expense of the muscles. The nerves and blood-vessels cannot be satisfactorily traced through the affected region. The bones of the forearm are not invaded, but the connective-tissue thickening is continuous with the periosteum. The walls of the larger vessels show no variation from the normal to the unaided eye. There is contraction of the fingers and thumb, and the hand is slightly flexed. The tissues everywhere along the line of the incision in the amputation are healthy.

"The microscope reveals great thickening of the walls of the smaller arteries and capillaries, extensive capillary obliteration, and very extensive endarteritis obliterans. There are extensive areas of inflammation along the planes of the fibrous tissue, in places giving the appearance of granulation-tissue. Diagnosis—myositis interstitial.

"(Signed,) F. FERGUSON."

In a brief note accompanying this report Professor Markoe says: "At first the pathologist was inclined to pronounce it sarcoma, and he showed me some sections that looked like it; more thorough study, however, brought him to the conclusion that it was essentially an inflammatory condition of the muscular tissue itself."

Mr. M—— continued to improve in his general health, after the amputation, for about four or five months. The stump healed kindly, he gained in appetite, was free from pain, and he became engaged in business which did not require any special physical exertion. But in the middle of the summer he began to have a pain in the upper third of the right thigh, and he was observed to limp in walking. He began also to have a slight cough. These symptoms continued and others supervened, so that it was not long before he was again confined to the house. He was obliged to lie on the bed, or on a lounge, with the right thigh and leg flexed. A peculiar tubercle was discovered in the substance of the lower lip just beneath the skin and a little to the left of the median line. It continued to approach the surface, the skin gave way, and a small circular and very indolent ulcer appeared there. It was not painful. It never healed, but very slowly grew larger, involving the skin and deeper tissues nearly to the bone. At the time of his death it was still circular in outline and half an inch in diameter. There was scarcely any discharge from this sore. It never bled. During the month of August, and afterward, other subcutaneous tubercles began to show themselves in different parts of the body. A little group of them were felt like small shot beneath the skin, or in the lower stratum of the skin, on the lumbar region, to the left of the spine. This group was composed of four tubercles so near to each other that, as they enlarged, they touched each other, and at the time of his death they occupied a space one and one-half inch in diameter, and the skin had given way over the largest one of the group. After death I removed them in mass and laid them open with the knife, finding the interior of each tubercle a broken-down tissue of dark venous color, nearly black, suggestive of the melanotic variety of cancer. At the time of his death there were tubercles of this character, in various stages of development, on different parts of the chest, neck, abdomen, back, thighs, and other parts of the body. The hip-joint was the centre of the most of his pain. Toward the close of his life the disease made rapid progress in the lungs. He first coughed blood on November 3d, and on November 9th a fatal hemorrhage from the lungs took place. There was no post-mortem examination.

There is no evidence of any marked hereditary taint in the family. His father is still living.

SOME RANDOM CLINICAL NOTES.

By MARCELL HARTING, M.D.,

BUFFALO, N. Y.

A QUESTION FOR CHEMISTS.—Twice I have observed a curious effect of chloroform, which I have not seen mentioned in the literature. Upon chloroforming a patient, my friend Dr. Bode began coughing so violently that he almost vomited. A second time, a robust lady was helping, and she started in the same strain, and actually vomited, while I myself felt only a scratching in my throat. Undoubtedly, this is an effect of the gas-lights upon the vapor of chloroform. But what gas is produced? It is not chlorine, as it has no odor.

PUERPERAL CONVULSIONS.—We expect such where intense nephritis and general œdema exist during confinement. I saw such a case of late, three weeks before confinement. Digitalis was of some slight benefit. During the confinement, which a midwife attended to, no convulsions occurred. Three months afterward the woman was nursing her baby, the œdema had vanished except in the face, but suddenly perfect coma supervened, from which she was restored again after ten hours. The urine remained as full of albumen as before. Urinous smell of the breath was never perceptible. This case shows that, even in the most pronounced case of parenchymatous nephritis, puerperal convulsions do not necessarily appear.

PHOSPHORUS IN RACHITIS.—I wonder that medical men are so divided in their opinions concerning the efficiency of this remedy. Not many cases occurred in my practice since Kassowitz published his observations, but those I had to attend were among the very worst I have seen, and the results, compared with those of former treatment, were simply marvellous. One child, which was already three years of age, could not walk a step. Forearms and legs were distorted in all possible shapes; the large fontanella was enormous. In four weeks it walked, and the fontanella was almost closed. In another case, almost as bad, with laryngismus stridulus, the result was the same. The explanation of the differences of results by Casali seems to me deficient in one point; *i.e.*, I do not think rickets can be mistaken for arrest of development by a half-way competent observer. A puny, ill-nourished child is not a rickety child, but where decided swelling of the epiphyses, the "rosary" at the ends of the ribs, and softness of the os occipitale exist, there is rickets, whether laryngismus stridulus exists or not, whether the swollen epiphyses are painful (a too subjective symptom for a test) or not. The idea, again, that phosphorus can make up the deficiency of phosphorus in the bones is simply ridiculous, because one-third to one-half grain for a whole month can only act as a peculiar stimulant, as proven by Wegner, who showed that healthy bones became eburnated. Another fact demonstrated by Wegner, namely, that granular atrophy of the liver follows the prolonged exhibition of minute doses of phosphorus, must not be forgotten, and phosphorus must not be exhibited too long. One month is enough, and if more should seem necessary I should certainly interpose one month without the drug. Research is desirable as to the question how long impunity exists—I mean, how long we do not risk a granular atrophy of the liver. The want of results with some observers remains unexplained.

SUBCUTANEOUS DRAINAGE IN ASCITES.—I proposed this once in THE MEDICAL RECORD, but have not heard of anybody having tried my plan. I myself had only one opportunity. There I was prevented from going further than inserting a double thread of stoutest braided silk in a loop. I hoped it would act like a lamp-wick, and it did so for a few days; great œdema of the labia and neighborhood of the pubes was the consequence. This disappeared in a few days, and the thread ceased to act as a drain. It remained, though, aseptically embedded till death. A simple subcutaneous puncture would not do either. My original plan of inserting a tube, at least a decalcified-bone tube or an artery of an animal treated like catgut, ought to be tried next; if they should cease to act too soon, nothing less than rubber or hard rubber would do. If the œdema, especially at the start, should appear too great, a puncture with a trocar should be performed simultaneously with the operation.

GENU VARUM OR VALGUM.—Though I have not executed it, I take the liberty of proposing a new operation. In the large majority of cases the cause of genu valgum or varum is an uneven growth of the internal or external condyle of the femur. In valgum, whether always I will not say, but since I paid attention to it I saw deficient development of the external, and in varum of the internal condyle. The correct conclusion, then, is: If we would make the lesser condyle grow quicker we would restore the equilibrium, *i.e.*, cure the deformity. For this purpose it may be sufficient to implant into the condyle a disinfected ivory nail. Irritation causes reaction, and if the irritation would be produced in the aseptic manner mentioned, I should expect just enough reaction to cause the condyle to grow to a proper size. Danger and suffering are not to be anticipated, for the condyles are on both sides easily accessible. Ogston's and Macewen's operations are formidable as compared to the one I am proposing, while theirs are not in such conformity with physiology and pathology.

VERATRUM VIRIDE IN PUERPERAL CONVULSIONS.

BY J. S. PRETTYMAN, JR., M.D.,

MILFORD, DEL.

I VISITED Mrs. W—— at eleven P.M. on February 16th. She is thirty-eight years of age, married, and was pregnant, at full term, with her eighth child. Dropsy was general and decided. Her previous labors were normal and easy. She complained of severe pain over the region of the stomach, and had vomited freely without relief. At noon she ate a hearty dinner of ham, cabbage, etc., and this returned from the stomach undigested. I administered morphiæ sulph. gr. $\frac{1}{3}$ hypodermatically, and in half an hour left her resting quietly. She remained comfortable until 1 A.M., when local spasmodic contractions began, and I was again summoned.

In fifteen minutes I entered her room, just as she was seized with a hard convulsion. I gave her ♏x. of tr. veratrum viride hypodermatically, and in half an hour, another convulsion occurring, I repeated the dose. As soon as she recovered consciousness I also gave her, by the mouth, ♏v. of veratrum, with ʒ iij. of tr. lobeliæ compound (Am. Dis.) in hot water. She retained this, and did not vomit until after the third convulsion, which occurred in an hour from second, when I again gave ♏x. of veratrum hypodermatically, as before. The drug was continued, by the mouth, in six-drop doses, every hour, until 6 A.M., when patient was thoroughly relaxed and nauseated, with pulse at 58.

She was perfectly conscious until 8 A.M., when her first labor-pain was felt. A second pain came on in five minutes, and the child was expelled. Instantly she went into convulsions, before the cord was severed, and I again repeated the veratrum (♏x.), subcutaneously, and continued the same, by the mouth, in six-drop doses, every two hours, until noon. No other convulsions having occurred, I then withdrew the veratrum, and ordered tr. bellad. in ten-drop doses, every three hours, rather as a placebo, but at the same time having regard for its action upon the vaso-motor system and hoping to slightly overcome the excessive relaxation.

The day was passed without further trouble until five in the evening, when she was again seized with a convulsion, and I gave her ♏xv. of veratrum hypodermatically, and continued the same in four-drop doses, every two hours, through the night and succeeding day. I attribute this convulsion, which was her last, to the action of the belladonna in increasing the vascular tension, for five minutes before it occurred her pulse was 85, and firm and hard.

A microscopic examination of the urine passed at six o'clock on the morning of the 17th revealed many large epithelial and granular casts, while the heat-test indicated in bulk one-half albumen. I have several times since examined the urine, and find that the casts and albumen are both gradually disappearing.

The ease with which the child was born and the freedom from hemorrhage were remarkable. I have never been present at a birth where so little blood was lost, the placenta being itself almost dry.

WILL THE INDUCTION OF PREMATURE LABOR RESTORE SIGHT IN THE ALBUMINURIC RETINITIS OF PREGNANCY?

BY GEORGE STERLING RYERSON, M.D., C.M.,

PROFESSOR OF OPHTHALMOLOGY AND OTOLOGY, TRINITY MEDICAL SCHOOL, TORONTO, CANADA.

IN THE MEDICAL RECORD of March 3d the question is asked by Dr. J. L. Thompson, of Indianapolis: "Is it ever justifiable to provoke premature labor for the restoration of sight in albuminuric retinitis?" He is of the opinion that it is justifiable, and quotes cases in support of his contention. I was of this opinion so long ago as 1881, and I am pleased to find myself in such good company as that of Drs. Loring, Pooley, and Thompson. In a matter so important as this, I think all cases bearing on it should be put on record. I submit the following one. My notebook says:

"Mrs. E——, aged twenty-two. June 1, 1881. Referred to me by Dr. Temple. Is in the fourth month of first pregnancy. Complains of severe headache and vomiting. Her sight has been failing for a month. She could see well before. Everything seems hazy to her. V., R., counts fingers at five feet, reads 16 Jaeger. V., L., fingers at three feet, reads 20 Jaeger. On examination with the ophthalmoscope the usual signs of retinitis albuminurica are found in a marked degree in both eyes. The urine contained a large amount of albumen. She was advised by Dr. Temple and myself to have labor brought on, but declined doing so. Three weeks later she was seized with uræmic convulsions. Labor was induced, and she recovered on August 4th. V., R. and L., $\frac{20}{50}$, 16 Jaeger. She could see to write a letter. The patches in retina still remained, but there was less swelling, and the extravasations were disappearing. Late in fall of the same year she again became pregnant, and the sight again failed. During the fourth month of her second pregnancy she was again seized with uræmic convulsions, became comatose, and died."

SOME ETHICAL REFLECTIONS.—"If your work is first with you, and your fee second, work is your master, and the Lord of work who is God. But if your fee is first with you, and your work second, fee is your master, and the lord of fee who is the devil."—*Ruskin.*

"He who is jealous of a rival acknowledges his own inferiority." This is an old aphorism, but specialized by a Detroit doctor for the benefit of the profession.

"The prime qualities of a physician may be summed up in the words: *Cassax*, *perspicax*, *sagax*, *efficax*. *Cassax*—there must be room to receive, and arrange, and keep knowledge; *perspicax*—senses and perceptions, keen, accurate, immediate, to bring in materials from suitable things; *sagax*—a central power of knowing what is what, and what it is worth, of choosing and rejecting, of judging; and, finally, *efficax*—the will and the way—the power to turn the other three—capacity, perspicacity, sagacity, to account in the performance of the thing in hand, and thus rendering back to the outer world, in a new and useful form, what you have received from it."—JOHN BROWN, M.D.—*Horæ Subsicivæ.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, March 24, 1888.

THE FUNCTIONS OF THE SUPRARENAL CAPSULES.

THE question of the uses of the suprarenal capsules is one that has heretofore quite baffled the researches of physiologists, the weight of opinion being that they were fœtal or rudimentary bodies, having no especial function in the adult life of man. A careful study of the subject, however, has recently been made by Dr. C. A. Macmunn (*The British Medical Journal*, February 4, 1888), with the result of furnishing a very plausible theory as to these organs, and of rehabilitating them into functional importance in the economy.

Dr. Macmunn shows, first of all, that from the point of view of comparative anatomy the suprarenal capsules are not rudimentary structures, but that they increase in relative size and anatomical complexity with the rise in the scale of animal life. They are formed in part from the ectoderm and in part from the mesoderm. The ectodermal part is furnished by sympathetic ganglia, and it forms the medullary or nervous portion of the gland. The mesodermal part forms the cortical or glandular portion. In mammals this part predominates, making of the capsules an essentially glandular organ. The increase in size and importance of the suprarenals in birds and mammals, as compared with fishes and reptiles, corresponds with the increase of the respiratory pigments.

As to the physiological chemistry, there have been found certain chromogens (Krukenberg), besides hippuric and taurocholic acids—benzoic acid, taurin, and inosit. The presence of these products indicate a very active downward or retrograde metamorphosis.

Dr. Macmunn has found, by spectroscopic test, the bands of hæmochromogen or reduced hæmatin. Now, this substance is never found in any but excretory fluids of the body (liver, bile). Hence it is concluded that the suprarenals have an excretory function. He also found substances, such as histohæmatin, which are antecedent to the hæmochromogen. This fact supplied additional evidence that the capsules were excretory bodies.

If these glands are excretory, it ought to follow that in Addison's disease, involving the suprarenals, and impairing their function, the urine would contain incompletely metabolized pigments. This is exactly what he did find. In the urine of Addison's disease he observed a peculiar pigment which he calls urohæmatin, or, more strictly, "urohæmato porphyrin." This pigment is only found in the urine when an excess of effete hæmoglobin is present in the circulation, so that the blood-glands are unable to use it up; or when the hæmoglobin being normal, the blood-glands are diseased and cannot reduce it, as in cirrhosis of the liver, Addison's disease, and Hodgkin's disease, involving the suprarenal capsules, and causing bronzed skin. Since in many cases in which he found this pigment the only glands diseased were the suprarenals, these, he thinks, must be blood-glands.

In cases of Addison's disease there are often very severe nervous symptoms of a depressive character, combined with hyperthermia or subnormal temperature. The symptoms sometimes resemble those of sepsis. Foa and Pellacani found that aqueous and alcoholic extracts of the suprarenals injected into the veins of rabbits produced toxic phenomena of a severe and characteristic type. The poison was of a septic nature, causing, finally, paralysis of the spinal cord and of the bulbar centres. It was believed to be a nitrogeneous, non-crystallizable substance, akin to Panum's septic poison. The conclusion is, that another function of the suprarenals is to remove or use up certain poisonous metabolites that accompany the worn-out pigments.

Summarizing the foregoing, therefore, it is concluded that the suprarenals are blood-glands having the function of removing effete pigments and effete proteids. When the organs in question are diseased, these products circulate in the blood, producing, on the one hand, pigmentation of the skin, on the other, the depressive effects of a septic poison.

As the suprarenals are not the only blood-glands, it does not follow that serious phenomena always result from their disease. Their duties may be performed by other organs having allied function.

A CONTRIBUTION TO THE ETIOLOGY OF CONGENITAL SYPHILIS.

IN addition to the intrinsic importance of the subject, the question of congenital or hereditary syphilis is one that possesses great interest to the student, because of the many uncertainties connected with it. Syphilographers are now very generally agreed that a syphilitic woman may beget a syphilitic child without infecting her husband, and some believe that a man who is a sufferer from the disease in its later stages may beget a syphilitic child while the mother escapes infection.

Although there is little doubt concerning the first of these points, there is, nevertheless, much dispute as to the time at which the child becomes infected. It was formerly held that a woman who did not acquire the disease before the seventh month of gestation would give birth to a healthy child. Chabalier has reported a case in which a woman became infected sixty-three days before the birth of a syphilitic child. But an instance is now related by Dr. F. Sorrentino, in *La Riforma Medica* of December 23, 1887, in which the date of infection was but fifty-two days before delivery.

A woman, twenty-six years of age, of sound general health, had been married at the age of twenty to a coffee-house keeper, by whom she had had two healthy children born at term. In May, 1886, her husband left her, when she was two months pregnant, and went to Marseilles on business. He returned home on November 14th, and had intercourse with his wife at that time, infecting her with a syphilis which he had contracted during his absence. Fifteen days after the primary sore was noticed an extensive roseola appeared, which was treated energetically by subcutaneous injections of mercuric chloride. The child was born on January 5th, fifty-two days after the mother's infection. It seemed at first to be healthy, but soon manifested the symptoms of hereditary syphilis. There was no sore about the lips, mouth, or pharynx to suggest the possibility of infection from the mother post-partum.

This case, if all sources of error can be excluded, would appear to demonstrate conclusively that a woman may give birth to a syphilitic child when her disease is contracted later than the seventh month of gestation.

THE PHYSIOLOGY OF INTESTINAL ABSORPTION.

The chief seat of absorption is in the small intestine. This is shown, not only by experiment, but by ordinary physiological and anatomical considerations. The immense convoluted surface exposed, the peculiar arrangement of the villi, capillary plexuses, and lacteals, all indicate that this tract is a specialized organ for the important object of absorption. It has always been admitted that osmosis, and, to a slight extent, filtration, were prominent factors in the mechanism of absorption. The products of digestion diffusing through the epithelial layer are taken up partly by the rich capillary plexus lying about the lacteals, and partly by the lacteals themselves. Naturally, the more diffusible substances, like mineral salts, sugar, and peptone, would be caught by the blood-vessels, while the fats would mostly pass through the mesh-work of capillaries to the lacteals.

The question, however, which has been hotly discussed by physiologists is, whether the epithelial cells lining the mucous membranes take any vital part in the process. Many observers have noted the fat particles in the bodies of these cells, and they have argued that the epithelial protoplasm took an active part in picking up these particles and conveying them through their substance to the reticular spaces beneath. In some animals ciliary processes exist which seem to have for their object the catching of the fat and drawing it into the body of the cell. Lannois found (*Archives de Physiologie*, 1882) that by the injection of alcohol into exposed loops of intestine the epithelial cells were destroyed, and absorption of oil, sugar, peptone, and mineral salts was delayed. The tendency of opinion of late has been in favor of the epithelial cell as an active factor in absorption, as it is in secretion.

M. Leubuscher (*Centralbl. f. Med. Wissensch.*, 1886) has made some experiments which seem to confirm this view. He found in isolated loops of intestine that the absorption of twenty-five to fifty per cent. solutions of salt took place just as rapidly as that of pure water, a phenomenon which would not take place if the law of diffusion were the sole factor in the process. The salts of soda were absorbed more rapidly than the salts of potash, and absorption was not hastened by the presence of bile—contrary to the general belief.

Gumelewski (*Pflüger's Archiv*, xxxiv., 1886) made a somewhat similar series of experiments, and reached much the same conclusion. Strong solutions of sulphate of soda increase the rapidity of absorption.

Thus, it seems that the process of absorption is as much a vital one as that of secretion, and that the epithelial cell not only aids the taking of fat into the blood, but also that of peptone (changing it to albumin), and of sugar and salts.

SEA-SICKNESS.

It is strange that during the ages in which man has suffered from sea-sickness no one has succeeded in finding a remedy for the malady, or, indeed, in solving satisfactorily the riddle of what it really is. Many, it is true, have been the explanations offered of the nature of the trouble, and specifics without number have been vaunted for the relief of its victims; but still those "who go down to the sea in ships" suffer just as did their fathers before them.

At a meeting of the Academy of Medicine of Paris, held on January 10, 1888, M. Ossian-Bonnet read an interesting paper on the subject, in which he settled, satisfactorily to himself at least, the question both of the pathogenesis and of the treatment of sea-sickness. He holds that the affection is purely nervous, and rejects the mechanical theories of its nature as unsound and leading to useless, or even harmful, methods of treatment. The one constant and essential symptom of naupathia, to use the author's favorite term, is not nausea, but vertigo. It is true that nausea and vomiting are exceedingly frequent accompaniments of the vertigo, yet they are not essential symptoms of sea-sickness, and may even be due to causes independent of those producing the latter. Thus, the vomiting which is so common during the first few days of a sea-voyage is as apt to be chargeable to indiscretions in eating and drinking just before sailing as to any motion of the vessel.

The chief cause of this vertigo is, the author believes, the motion of the ship. Yet not every motion is equally liable to cause the affection. Many persons are not sick during the rolling of the vessel, but suffer extremely when the ship begins to pitch. This is due to the giddiness caused by the sudden descent of the boat into the hollow of the wave. The same sensation is noticed by many persons while in an elevator that is descending rapidly; it is a feeling of "goneness" at the pit of the stomach, and this causes dizziness. The vertigo may also be excited by the apparent instability of surrounding objects, as sometimes is noticed on land in those riding in a merry-go-round. In short, the author's belief is that sea-sickness is a purely nervous affection, and that it is not to be explained by succussion of the brain or of the cephalo-rachidian fluid, by movements of the abdominal viscera, or by any other mechanical condition.

The treatment which M. Ossian-Bonnet found eminently successful was based upon this view as to the nervous pathogenesis of the trouble. In order to prevent the acute indigestion from which many suffer, he advises the use of some saline laxative every morning for two or three days preceding the setting sail. If there is vomiting after the voyage is begun, he recommends the sufferer to take half a glass of water after each attack. By this means *lavage* of the stomach is accomplished, and the act of vomiting is made less painful by reason of the water, which prevents the distressing contractions occurring when the organ is empty. But the remedy which the author has found to be a true curative agent, never having failed him in nearly sixty consecutive cases, is antipyrin. He was struck with the action of the drug in diminishing the excito-motor power of the cord, and was led to believe that it would be useful in controlling sea-sickness, which he had come to regard as a purely nervous affection. In order to test the remedy he made a voyage from Havre to Buenos Ayres and return, and the results of his experiments fully answered his expectations. In no case did the remedy fail, and in several instances of confirmed sea-sickness a cure was obtained after cocaine, morphine, atropine, and other drugs had given no relief. In most cases a dose of from twenty to twenty-five grains was sufficient, but in some it was necessary to repeat the dose, or to give the remedy in larger amounts. When vomiting was persistent it was necessary to give the first dose subcutaneously, a second dose, if one were needed, being administered by the mouth.

M. Ossian-Bonnet was fully persuaded that he had at last found a genuine remedy for this troublesome malady, but others before him have expressed themselves with equal confidence, and further trials of their supposed specifics have caused disappointment. It seems to be the fashion now to ascribe almost miraculous powers to antipyrin, but it is not a cure-all. Its power to relieve headache is undoubted, yet it often fails in this respect, even in cases which are supposed to be of just the kind to be most benefited by it. And doubtless the experience with the drug in sea-sickness will be of much the same character, it will relieve in many cases, and will fail to relieve in others. But even if it gives relief to but a few, it will be a boon to those, and would seem, at all events, to be worth trying.

THE MODERN PATHOLOGY AND TREATMENT OF CATARRHAL JAUNDICE.

THE pathology of catarrhal jaundice, first established by Budd, and more completely elucidated by Virchow, Vulpian, and Charcot, has long been considered one of the better-known problems of medical science. Many contributions in recent years, however, have been made, which tend to modify older views and to add preciseness to our knowledge of this interesting and by no means rare condition. The ordinarily accepted theory of catarrhal jaundice is that there occurs a duodenitis, or gastro-duodenitis, which extends into the ductus choledochus. The swelling and accumulation of mucus obstructs the exit of bile, which is thus dammed back and absorbed by the lymphatics.

The experiments of Oscar Wyss, in 1868, showed that in some cases at least (as in catarrhal jaundice from phosphorus poisoning) the catarrh of the ducts affected most their proximal portions, and that the obstruction occurred high up near their origin.

This view, that ordinarily the parts of origin of the bile-ducts are affected is, we believe, shared by Ebstein. The cause of the inflammation in the ducts, however, whatever its locality, has been thought to be extension from the duodenum, and Frerichs has reported clinical cases showing that in thirty-four out of forty-one cases the symptoms of gastro-duodenitis preceded those of jaundice.

M. Chauffard has made an ingenious argument to show that in many cases, at least, the sequel of events is first an accumulation of irritant products in the liver, causing an irritation and inflammation of the hepatic ducts, with intestinal inflammation following it. The investigations of Bouchard and his pupils, showing the important rôle played by toxic products of digestion and metabolism, lend support to Chauffard's view. The liver ordinarily destroys much of the toxic substances carried to it. But if the portal blood is overloaded with these, then there is "hepatic insufficiency," and a poisonous, irritating bile results.

The predisposing causes of catarrhal jaundice are exposure to cold, indigestion, abuse of alcohol, climatic and seasonal influences, and finally sometimes an epidemic infectious influence. The so-called epidemic jaundice has been recognized and described by Murchison, Kelsch, and many other writers. The observations of military surgeons, of which a number are cited by M. E. Parmentier in a critical review of this subject (*Gazette des Hôpitaux*, 1887, p. 1142), throw much light upon this form of the disorder. It seems to be proven that jaundice may be a specific infectious malady, developed in marshy regions, and in much the same surroundings as those that produce malaria or typhoid fever.

M. Kelsch is even of the opinion that all forms of ordinary catarrhal jaundice, sporadic or epidemic, are due to an infectious organism.

With regard to the symptomatology of jaundice, M. Parmentier calls attention to one interesting point, viz., that in those slight forms in which the bile pigments do not appear in the urine in appreciable quantity, the spectroscope furnishes a very delicate and accurate test. Besides this, M. Chauffard (*Revue de Méd.*, September, 1887) has established the fact that, in some cases at least, the urine is diminished in amount during the attack. By the tenth or twelfth day there is a crisis, with larger excretion of urine (3 litres), and a corresponding increase in urea (35 grammes).

Several German investigators have of late investigated the intestinal disturbances produced by the absence of bile from the intestine in jaundice. Müller, in particular, claims to have shown (*Zeitsch. f. klin. Med.*, xii., 1, 2) that in this condition there is an increase of undigested fat in the stools from 6.9 and 10.5 per cent., the normal amount, to 55.2 and 78.5 per cent. Strümpell claims that the clay color of the stools is due to the undigested fat, and that in jaundiced patients fed on fat-free food this peculiar color is not present. It is well known that the pancreatic duct may be also obstructed in jaundice; but Müller denies that this is the cause of the stearrhœa, and he cites cases in which this duct was obstructed, despite of which the stools contained less fat than is the case in catarrhal jaundice. The absence of the bile does not affect the dejection of starchy foods, but lessens slightly that of albuminoids.

Catarrhal jaundice has been divided into (1) the simple form, (2) the severe form, and (3) the malignant form. In the second type, the severity may be due to renal disease or some enfeeblement of the system, or to an excessive dose, perhaps, of the exciting poison. The malignant form often appears epidemically. There is, it is believed, an essential unity in the three types, and Kelsch concludes that they are all only different expressions of the same process, simple jaundice being only an abortive form of malignant jaundice, "just as gastric fever is only the expression of an attenuated typhoid fever."

In the treatment of catarrhal jaundice only one especially novel measure has of late been developed. This is the method of Krüll (*Berlin. klin. Woch.*, 1877, p. 159). It consists simply in the rectal injection daily of one to two litres of cold water, at first of a temperature of 12° R., then of 13° to 15° R. The fæces become colored on the second to fourth day, and general symptoms rapidly improve. Lowenthal, who employed this method in forty-one cases, speaks highly of it (*Berlin. klin. Woch.*, 1866, p. 159). He usually found that four injections were sufficient. Pregaldino, Kraus, and Eichhorst (cited by Parmentier) praise this plan of treatment, as do also Parmentier, Hayem, and Chauffard. The latter physician states that while ordinarily the stools are clay-colored for from four to six days, by the use of the injections the natural color is obtained in two days, and this return of color is accompanied by the critical polyuria and azoturia which we have already described.

THE QUESTION OF RHAMNUS.

The medical profession of Brooklyn is taking an active and justifiable interest in the subject of *rhamnus*. Dr. Squibb recently came out in favor, if we understand him correctly, of *Rhamnus frangula*, or alder buckthorn, as against *Rhamnus purshiana*, or California buckthorn (Cascara sagrada). Dr. Alexander Hutchins has expressed himself a champion of rhamnus, meaning, we infer, *R. frangula*, while Dr. T. M. Rochester begs to differ (*Brooklyn Medical Journal*). The question of the real therapeutical value of rhamnus, whether frangula, purshiana, or otherwise latinicized, may not seem of so profound importance as that of the political convulsions in Europe, but it may very seriously affect the personal comfort of many more or less dyspeptic citizens, and it quite deserves the serious consideration of practitioners.

The enterprise of manufacturing pharmacists has almost obscured the fact that there are at least five varieties of rhamnus. These are *R. frangula*, the bark of the old officinal alder buckthorn; the *R. catharticus*, or common buckthorn; the *R. infectorius*, a plant furnishing what is known as the French berries; the *R. purshiana*, or California buckthorn, better known as Cascara sagrada, or sacred berry; and the *R. ziziphus*, a shrub used in making jujube paste.

Of the above, only the *R. frangula* and *R. purshiana* are much in use at present, and, in particular, the exact value of the *R. purshiana* seems yet to be determined. The common experience of physicians, with regard to the *R. purshiana* is decidedly in its favor as a trustworthy laxative.

But Dr. Squibb seems to think that *R. frangula* is equally good. And Dr. Hutchins is very emphatic in its praises, for we take it to be the *R. frangula* that he recommends, though his language is a little obscure upon this point.

With regard, then, to *R. frangula*, Dr. Hutchins thinks that it has no place as a purgative, nor is it suited to cases of constipation due to organic disease. Its action is slow, and it has to be given for some time. It does, however, relieve chronic constipation, and it is an alterative in the sense that its continued use cures dyspeptic and constipated habit.

"In its use," says Dr. Hutchins, "two things are clear: first, that, ingested with food, it, at the same time, sooner or later, produces catharsis; if, then, the size of the dose, the frequency, one or both, be reduced, the effect can be maintained. The reduction of dose and frequency continued, a point is ultimately reached when a normal secretion is established, and beyond this rhamnus is an irritant; second, and a corollary to this, in health rhamnus is always an irritant. The rhamnus, therefore, within its own scope of action, regulates perverted functional secretion. If words have any meaning, rhamnus is alterative."

But though an alterative, and potent help in chronic functional dyspepsia, some interesting words of warning are given by the writer referred to, who says: "Except the patient be rich enough to afford continuous visitation, and pliant enough to submit to much mortification of the flesh, to say nothing of the world and the devil, a compact specimen of chronic dyspepsia is the worst kind of projectile dynamite to explode among the daisies that bedeck the busy doctor's path; and if he happen to pin his faith on rhamnus, he must not push it to illogical conclusions; for if his patient should happen, for instance, to have come to the knowledge of his stomach through the wearing experience of nervous strain and watchful, anxious, carping care, all the purshiana from the Sierras to the Golden Gate, and all the frangula from the gunpowder districts of Fatherland, would be inefficacious as an alterative, unless, perchance, with brain rested and pulse brightened by an Atlantic voyage or transcontinental trip, he shall himself pluck and peel and dry the small quill bark with his own right hand."

The mode of administration is to give drachm doses of an equal mixture of rhamnus, glycerine, syrup of ginger, and peppermint-water. This is taken after each meal.

Dr. T. M. Rochester, in the discussion that followed Dr. Hutchins' paper, said that he had been greatly disappointed in using the rhamnus, especially *R. purshiana*, the *R. frangula* he had found the most trustworthy of the two drugs.

PAY FOR THE TREATMENT OF PAUPERS.

If the State undertakes to take care of its paupers, it ought to pay reasonably for medical services, just as it should for services rendered by those who supply clothing, food, and shelter. This self-evident proposition has become modified in practice because, 1st, doctors have always shown a willingness to treat the poor for nothing; and, 2d, because where the poor are aggregated in large institutions the clinical experience afforded sometimes makes the position of medical attendant valuable. Neither of these facts, however, at all invalidates the proposition that the State should pay a reasonable sum for medical services.

In Ohio this question of compensation has come up in a practical shape. The law, we are told by the *Columbus Medical Journal*, in regard to compensation for professional services rendered to the poor (outside of the infirmaries) is in a very unsatisfactory state, as the amount to be paid seems to be left to the judgment, or caprice, of the township trustees.

Dr. R. Harvey Reed, of Mansfield, O., has brought suit to collect a bill for professional services rendered to paupers under care of township trustees.

The North Central Ohio Medical Society has adopted a resolution deploring and condemning the habit of township trustees in reducing medical bills to the lowest limit, and they recite the following: "*Whereas*, The township trustees, whose duty it is to care for these indigent citizens, do, in many townships, discourage and cripple the proper attention to said citizens, by either refusing to pay for medical attention to the same, or by reducing said medical bills to one-third or one-fourth of what would be considered a fair, reasonable amount, thereby either compelling physicians to take an unreasonably low compensation for their services, or resort to the expense of litigation to secure reasonable fees, at an additional expense to the township as well as to themselves——"

News of the Week.

UNHEALTHY ROYAL FAMILIES.—The London correspondent of The New York *Times* writes: "It is recalled now that Bismarck, who was already the chief man in Prussia, in 1858, strenuously opposed the marriage of the Crown Prince with the English Princess, saying that he was against any 'blood alliance with those scrofulous Guelphs.' The existing situation is a strange retributive comment on that utterance. Scrofula, or that worse allied disease with which so many royal strains of blood are contaminated, lays a heavy hand on the Hohenzollerns at San Remo and Berlin alike; but the taint has not come from England. A fact which has been privately known here for some months may now properly be mentioned. The present aged Dowager Empress of Germany, mother of the Emperor, has been a victim to hereditary scrofula, or a cognate malady, for many years. She got it from her mother, Marie Paulowna, who was a daughter of the crazy Czar Paul, one of the most thoroughly diseased men of his generation. All of Paul's daughters transmitted the taint to their descendants. One of them, Anne Paulowna, was mother of the present King of Holland, and the recent death of both his sons and the extinction of his male line are attributed to this. In the male Romanoff line the same malady caused the death of the Czarowitz, who was the elder brother of the present Czar, and now renders it very doubtful if the present youthful Czarowitz will ever reach manhood. In the Hohenzollern case, not only is the Emperor suffering from this hereditary taint, but his son William, who in a few weeks or months will be Emperor, is hereditarily deaf, and was born with a mere shapeless ball of flesh where the right hand ought to be. The Emperor's only sister is the Grand Duchess of Baden, and of her two sons one died last month, and the other is ill at Cannes and not expected to recover, both from scrofulous developments. The malady can, in truth, be traced all through the Almanack de Gotha among descendants of the Czar Paul. The disease only showed itself in the Empress Augusta when she had advanced in life, since when she has worn high dresses, and frequently was not visible to the public for months at a time." It may be recalled that one of Queen Victoria's sons had epileptic attacks and died of purpura hemorrhagica.

A SMALL MEDICAL STUDENT IN A BIG MEDICAL COLLEGE.—We have received from a medical student who has been attending a large medical college in this city, by no means meagrely endowed, a graphic description of his experiences in trying to get a medical education. The classes are enormous, the amphitheatre crowded, and the one that gets in first gets the best seat, consequently, there is a tremendous rush at the time of the lectures. Our correspondent, being a somewhat minute man, has been able generally only to get a back seat, and that in a more or less bruised condition. He states that he put his name down for a subject for dissection. He waited three months and his turn did not come, so he had to take out dissecting tickets in a homœopathic college not so well patronized. As for personal contact with the professors, he had had but one experience. Suffering from some gastric trouble, he made a call upon a member of the faculty, who received him courteously, prescribed some salts, and charged him five dollars.

OPHTHALMIC MEDICINE AND SURGERY holds its seventh international congress at Heidelberg from August 9th to 12th next.

PROFESSOR E. WAGNER, Professor of General Pathology and Pathological Anatomy in the University of Leipsic, who died at Leipsic on February 10th, had just completed the twenty-fifth year of his tenure of the chair of Pathology in the University there. In celebration of that event there has appeared, almost simultaneously with the announcement of his death, one of those volumes of collected memoirs with which it is customary in Germany for pupils to celebrate the jubilees of their esteemed masters. Professor Wagner's most noted work was his Handbook of General Pathology, first published in 1862. He was also editor of the *Archiv der Heilkunde*.

NOT FOR FREE TRADE IN SURGICAL INSTRUMENTS.—The New York Neurological Society, at its last regular meeting, voted unanimously not to indorse the resolutions of the Georgia State Medical Society, asking for the removal of all duties from surgical instruments and supplies. The ground taken was that the charges made against native instrument-makers were too intemperate and sweeping. Surgeons were better served by having their instrument-makers at hand rather than in Europe.

THE METROPOLITAN CLINIC, established at 445 West Forty-eighth Street, New York, for Surgery and Diseases of Women and Children, is opened Tuesday, Thursday, and Saturday, under the management of Dr. A. H. Goelet and Dr. W. B. Pritchard, both North Carolinians.—*North Carolina Medical Journal.*

HEART DISEASE AND MARRIAGE.—With regard to the question whether young girls affected with an organic lesion of the heart should be allowed to marry, Professor Jaccoud, in opposition to the views expressed by Professor Peter, believes that no absolute rule can be laid down. If the valvular lesion has never produced disturbance, then marriage is permissible. If symptoms of asystolia (especially in lesions of the mitral valve) have been observed, then there is considerable risk in marrying. Pregnancy would be very dangerous, on account of the pulmonary congestion which it would cause.—*British Medical Journal.*

Syrup of Tar and Apomorphine are highly recommended by Dr. William Murrill in the treatment of winter cough and chronic bronchitis.

State Medical Society Meetings.—The Arkansas State Medical Society will meet at Fort Smith on April 25th, 26th, and 27th.

The North Carolina State Medical Society will meet at Fayetteville on May 8th, 9th, and 10th.

A National Pharmacopœia to be published by the Government.—Mr. Randall has introduced into the House a bill appropriating $5,000 for the purpose of publishing a national pharmacopœia. It is to be edited by two officers of the Marine Hospital Service and two officers of the medical staff of the army and of the navy. The proposed work is to be held and accepted as the standard for the purveying, compounding, and dispensing of drugs or medicinal agents, and shall be taken as authority in the Treasury Department on all questions arising under the tariff laws of the United States with regard to the nomenclature, description, and purity of drugs or remedial agents, and shall further be received as evidence in the United States courts.

Lipanim is the name given by Dr. Von Mering to a mixture of oleic acid (6 parts) and olive-oil (100 parts), which he thinks answers as well as cod-liver oil.

Bequest to a Hospital.—By the will of the late Rev. Dr. Ryder the Chicago Hospital for Women and Children gets $10,000.

The Monopoly of Antipyrin (Dimethyloxyquinicin).—A Paris medical society, some of whose members are pharmacists, has been discussing the question of the sale of antipyrin, of which a German chemist, Dr. Knorr, has the monopoly. The conclusion adopted was, that as the substance dimethyl-oxiquinisin has been known since 1884—*i.e.*, since before the name "antipyrin" was registered in France—and as the process of its manufacture is perfectly familiar to chemists, it is open to pharmacists to dispense dimethyl-oxiquinisin prepared in France when "antipyrin" is prescribed. It was also remarked that the substance in question is exclusively used for medicinal purposes, and that according to French law medicines may not be patented.

America: Prehistoric and Present.—This subject, in its largest anthropological significance, will be discussed in a series of four sittings by the International Congress which meets at Berlin on October 2d next. The provisional committee consists of Drs. Virchow, Reiss, Bastian, von Richthofen, Voss, Olshausen, and Hellmann.

Succi, the Fasting Man, has begun a thirty-day fast at Florence, under the direction of Professor Luciani and the Medico-Physical Institute. M. Succi wants to persuade men of science that for periods hitherto considered impossible he can maintain the organism in health and activity without food.

A Truss for Straightening Crooked Noses is among the novelties in orthopedics. A mask of leather was at first devised for this purpose, but Mr. W. J. Walsam has lately (*The Lancet*) invented a felt skull-cap to which an apparatus is attached that produces any degree of lateral pressure on the deformed organ.

The Bill to Establish a National Bureau of Public Health is opposed by the Surgeon-General of the Marine Hospital Service, on the ground that things are well enough as they are, and that sanitary legislation and executive work can best be done by the Treasury Department. The friends of the bill, according to the *Sanitary News*, are the American Public Health Association, all the various medical societies, who realize that some more adequate system of national quarantine than we now have is to be required, and all the working sanitarians of the country.

Dr. Stonebridge has been sent to South America by the President to investigate yellow fever.

Penalty for Disseminating Infectious Diseases.—A bill has been introduced in the House of Representatives, by a Chicago member, which provides for a penalty to be inflicted on persons bringing infectious diseases into the United States, authorizes the supervising Surgeon-General of the Marine Hospital Service to build a laboratory, and repeals the act creating the National Board of Health. The bill is put forward, it is said, in order the more easily to kill the bill establishing a Bureau of Public Health.

Per Cent. of Graduates.—Our esteemed contemporary, *The American Lancet*, comments somewhat loftily upon the working of the Harvard Medical School, and thinks it gives "very poor teaching," because among 282 students only 76 were graduated, and of 87 applicants for degrees, 11 failed. By proper teaching, our contemporary thinks that no student is so dull or ignorant or generally unfit but that he can be made a doctor. This is an optimistic view of humanity surely. Some such plan may possibly be carried out in our contemporary's local institution (organized in 1885), since it graduates yearly almost forty per cent. of its matriculates. On the other hand, by the *Lancet's* rule, teaching is also a failure at Ann Arbor, which in 1884–85 graduated only 80 out of a class of 334, and next year 83 out of a class of 325, being a smaller percentage than that at Harvard. Does the *Lancet* wonder also why Ann Arbor does not increase in popularity among medical students?

A New Amylolytic Ferment.—Professor Ellenberger and Drs. Hofmeister and Goldschmidt report in the "Veterinary Archives" ("Archiv. f. Thierheilkunde," Bd. xiii., H. 3, *Medical Press*) a series of experiments on the amylolytic action of the saliva of the horse. These show that the natural mixed saliva has a much stronger amylolytic action than an artificially prepared mixture of the same saliva, and that the conversion of the starch into its soluble modifications—dextrine, sugar, and lactic acid—takes place within the stomach of the horse to a greater extent than can be accounted for by any mere fermentative properties of the saliva alone. Further experiments showed that oats themselves contain in or upon them an amylolytic ferment, which is an active factor in starch-digestion in the horse.

The Murderer of Preller.—We quite sympathize with the views of the *Medical Review* with regard to Maxwell, now the confessed murderer of Preller. His story of administering chloroform in order to pass a catheter seems plausible, and the idea that a little fellow five feet tall could have forcibly chloroformed and injected a hypodermic of morphine in a big man is improbable.

College Commencements.—The College of Physicians and Surgeons, of Chicago, recently graduated a class of forty-six.

The Medical College of Ohio, at its annual commencement, March 7th, conferred degrees upon sixty-nine graduates.

The Southern Medical College held its annual commencement on February 29th, and graduated thirty-two students.

The commencement exercises of the Louisville Medical College were held on February 17th. The degree of Doctor in Medicine was conferred on ninety-five graduates.

The Fort Wayne College of Medicine held its annual commencement on March 6th.

Rush Medical College has graduated a class of one hundred and thirty-two.

The University of Buffalo has graduated a class of forty-four, and Meharry Medical College (colored) a class of eighteen.

The Baltimore Medical College held its eighth annual commencement on March 9th.

The Medical Department of the University of Tennessee held its thirteenth annual commencement on February 22, 1888. The degree of Doctor of Medicine was conferred upon seventy-six graduates, and the degree of Doctor of Dentistry upon nine.

The Annual Dinner of the New York Polyclinic took place on the evening of March 20th, at Delmonico's. Besides the members of the Faculty there were present the Board of Trustees and several invited guests. Dr. James B. Hunter, the President of the Faculty, presided. Speeches were made by Mr. Coudert, President of the Board of Trustees, Commissioners Porter and Simmons, of the Charities and Correction, Dr. James B. Hunter, and Dr. John A. Wyeth, Dean of the Faculty. The latter gave a gratifying account of the growth of the school, especially that of the past year, stating that during the latter period three hundred and fifty-three medical practitioners had matriculated. The total attendance from November, 1882, to March 1, 1888, was 1,343, an average of more than 250 a year. In concluding his report, Dr. Wyeth urged that some of the clinical advantages of Bellevue be given to his school, claiming that the representatives of the College of Physicians and Surgeons were, by the remoteness of their new building, unable to avail themselves of their present appropriated share of appointments.

Aborting Syphilis.—Mr. Jonathan Hutchinson, in a recent paper, gives the weight of his authority to the view that syphilis can be in a measure aborted—*i.e.*, the secondary symptoms suppressed by the use of small doses of mercury. He gives half-grain doses of gray powder from three to six times daily.

The Coffin Trust.—We learn that even the coffin manufacturers have gotten up a trust, and have forced up the price of coffins over one hundred per cent.

The Kansas Medical Law Association is the name of an organization which proposes, by the aid of competent legal advice, to compare the laws of the States having medical practice acts, and, selecting the best parts of each, to frame an act which shall meet every requirement. Its work should receive support.

Bloomingdale Asylum will undoubtedly have to move, but it does not wish to be hurried, nor does it wish to be taxed. The counsel of the Society of the New York Hospital, in opposing the attempts to cut a street through the property, made the following statement with regard to the resources and work of the Society which owns the Asylum in question. Bloomingdale Asylum has, during its existence, received from the State $1,143,429.17; in bequests, $664,158.67; in donations, $282,752.14; making a total of about $2,000,000. The Society of the New York Hospital owns property, including the Hospital and Bloomingdale Asylum, assessed at about $5,355,000. This brings in an income of about $155,000. There is a bonded debt of $300,000. Bloomingdale Asylum is valued at $1,677,700.

Women Physicians have got ahead in Corea, if reports can be credited. A Mrs. Dr. Ellis is physician to the queen on the modest stipend of $18,000 a year, and another woman physician has been appointed assistant physician.

The Hoagland Laboratory in Brooklyn will, it is said, when completed, add another to the list of thoroughly equipped pathological and physiological laboratories in this country.

The Gothenburg Method of Dealing with the Alcohol Question has met with success in Norway and Sweden, and deserves to be known here. The essential features of this system, according to the *Medical and Surgical Reporter*, are that a responsible society purchases the right to sell liquors, and that the profits are used to pay interest upon the capital of the society, and the excess above this interest is devoted to public and charitable uses. A detail of the system, which is not without influence in diminishing the abuse of alcoholic beverages, consists in the fact that the keepers of drinking-places may not sell alcoholic beverages for their individual account; but may so sell non-alcoholic beverages and articles of food. This gives them a direct interest in diminishing the use of alcohol, and encouraging that of articles of food and drink which contain no alcohol. As a result of these measures, and of careful supervision by the government, the average consumption of strong drink in Norway, which was fifty-four litres *per capita* annually fifty years ago, is now only eight litres, or about one-seventh of the former figure.

Phthisis Conveyed to a Cat.—Dr. Léon Petit, at the Société de Médecine Pratique (*Journal de Médecine*, January 1, 1888), lately described a curious case of pulmonary tuberculosis transmitted to a cat by human sputa. M. Petit has already observed two cases of tuberculosis transmitted to dogs by human beings. The cat was in the habit of devouring the sputa of consumptive patients. This taste had become a passion; the animal followed the patients about, waiting for them to expectorate; it used to devour the tuberculous sputa which had served for microscopical examination in M. Petit's laboratory. After a time signs of phthisis appeared, the cat died, and autopsy showed tuberculosis.

St. Francis Hospital, New York.—The successful candidates fot vacancies on the House Staff were Drs. Leitner, Bennett and MacHale.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 16, 1888.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR

STATISTICS OF MORTALITY IN THE CITY OF NEW YORK,

in the form of a table, covering nine years since 1879, and being a continuation of statistics formerly arranged and published from 1804 to 1879, were presented to the Academy by DR. JOHN T. NAGLE. The gift was accepted with thanks.

THE PAUPER INSANE.

DR. SAMUEL SEXTON made some remarks on a bill before the State Legislature concerning the care of the pauper insane, and offered the following resolution, which was seconded and discussed by Dr. C. R. Agnew:

Resolved, That the New York Academy of Medicine heartily indorse the action of the management of the State Charities Aid Association, having in charge the bill providing for the better accommodation of pauper lunatics in this State, and recommend it to the favorable consideration of the Legislature.

The bill provided for State care of the insane of the several counties at an expense to the counties of $1.50 per head per week, the deficiency to be made up by the State. The asylums were to be distributed throughout the State by districts.

The resolution was adopted.

DR. AUGUST SEIBERT read a paper (see p. 317) on

CHOLERA INFANTUM AND THE WEATHER.

The paper was based on an analysis of all the cases of acute gastro-intestinal catarrh occurring in children under five years of age during his service at the German Dispensary, a period of ten years, extending from 1878 to 1888. These statistics were also shown to harmonize with those of the mortality from this disease during the same period as recorded at the Board of Health. The frequency and mortality of acute gastro-intestinal catarrh were compared with the exact meteorological phenomena of the different years, months, and days. In these experiments the author had been guided by experience gained during examinations into the causes of fibro-pneumonia, some years previously.

The total number of cases of acute gastro-intestinal catarrh in children under five years of age, treated at the German Dispensary during the ten years of his service, was 8,036. Charts were exhibited showing the number of cases occurring during the several months of the several years, the daily temperature-record, rainfall, and velocity of air-currents. The cases for each month during the ten years were also arranged separately, and compared with the meteorological phenomena.

It was found that very few cases occurred during November, December, January, February, March, and April; May had a few more; but during June, July, August, September, and October, this disease was very frequently met with. The difference between the two halves of the year was so great as to justify the use of the term summer complaint, or to show, at least, that some potent agent prevailed during the warm months to aid in the development of this malady. Of all the months of the year, the disease showed its greatest morbidity during July. For the ten years the number of cases occurring in July had been 2,443; August came next, with 1,524 cases, or one-third less than July; February, the coldest month, had the smallest number of cases, 117, during the ten years. Yet it was a noticeable fact that no month was entirely free from the disease. While July showed a greater number of cases than August, the temperature during these two months was nearly the same. The city mortality-statistics also showed during the ten July months 12,428 deaths from acute gastro-intestinal catarrh in children, while the number of deaths during the August months was only 6,205. The deaths in proportion to the number of cases was the same all the year round.

To show that high temperature alone was not the cause of the disease, it could be seen by the charts that in July, 1881, the mean temperature was 80° F., that of August, 82°, and that of September, 81°, yet the number of cases in July was 290, in August 223, and in September only 137. This same want of relation between height of temperature and number of cases of this disease during the summer months was also noticeable for other years and other summer months. It was also shown that one summer may be decidedly warmer than another, yet not bring forth a decidedly greater number of cases of summer complaint. One peculiar fact was observable, namely, that when the mean temperature of May was below 58° F. it brought forth no more cases than the winter months. Thus far it had been shown that the frequency of summer complaint, like its mortality, was, during the summer, independent of the rise and fall of the atmospheric temperature.

It was a general impression that during dry weather summer complaint was less common than during humid weather. To test the truth or falsity of this view, Dr. Seibert had obtained the daily barometric records for the ten years covered by his observations, and it was found that the number of cases and mortality of the disease had no constant relation to the dryness or humidity of the atmosphere, nor to the amount of rainfall, nor to the velocity of the air-currents.

There was also a prevalent opinion that heat had something to do with causing summer complaint, yet, on studying his charts in detail, it would be found that the summer days on which the temperature was highest showed no greater number of cases than those on which the temperature was moderate. Nor did he find the mortality greater during those months having the greater number of hot days. Thus it was shown that high temperature does not favor the production of cholera infantum more than medium warm weather.

Having gone thus far in his investigations, Dr. Seibert asked what are the special causes which give rise to this disease. He had shown that when the temperature rose to 60° F., it begins to prevail, and as to the cause of this he suggested that it is due to milk, which readily undergoes decomposition at 60° F. As it is milked in the heat of the day, brought to the city at night during the time the atmosphere is warm, and jostled over the streets, it is before its consumption exposed to all the conditions favoring decomposition. He would account for the lesser mortality in August, as compared with July, by the fact that in August public attention is fully awakened to the dangers of cholera infantum, and the people take precautions against its development.

DR. L. E. HOLT complimented Dr. Seibert on the excellent and laborious investigations he had made regarding the relations of summer complaint to the weather. We had learned much respecting any disease when it was shown us that our ideas of it were fallacious. Some statistics regarding this disease had been collected by a Liverpool physician, the period covering five years, and in one respect there was a significant harmony between them and those of Dr. Seibert. By those statistics it was seen that when the temperature approached very closely to 60° F., a further rise, bringing it even but a few tenths of a degree nearer the minimum established by the author, caused nearly three times as great mortality from acute gastro-intestinal catarrh. This, however, did not hold true of the month of September when compared with August, for the death-rate in September was more than August, notwithstanding the temperature-average was lower.

Dr. Holt was disposed to think we are yet including cases of different diseases under the term cholera infantum. He believed the main factors in the production of summer complaint are four: Heat, food, surrounding, constitution.

The most important single factor, acting directly or indirectly, is heat, but the more that are present the greater the frequency and the greater the mortality of the affection.

Dr. J. Lewis Smith fully agreed with Dr. Holt, that cases called cholera infantum are not always of the same disease. Even in the warmest weather he had certainly seen aggravations of the disease from sudden reduction in the temperature. So he believed that in the cold months we have a very different disease from that which prevails as acute gastro-intestinal catarrh in children during the warm months. We might be misled in estimating the comparative number of deaths in the different months, from the fact that those occurring in September and October were often in patients who had contracted the disease in July or August. He had not observed that difference between the mortality of July and of August spoken of by Dr. Seibert, and he believed the statistics of the Health Board showed nearly as large a mortality in August. He thought heat could be regarded as the cause of this complaint, but in what way it operates has not been definitely ascertained. Heat itself does not produce it, for, if it did, the disease would be as frequent in the country as in the city.

It may be the gaseous emanations and other atmospheric impurities present in warm weather develop it. But the opinion is gaining ground, and has already been accepted by those who have given most attention to this malady, that it is a microbic disease; that micro-organisms enter the stomach and intestines and are the active agent in causing summer complaint. As the comma bacillus causes Asiatic cholera by its own irritative qualities upon the intestinal tract, so may a certain micro-organism act in the causation of summer complaint.

Dr. Augustus Caillé said Dr. Seibert's investigations had not only shown that warm weather is a factor in the causation of this diarrhœal disease, but he had brought out certain points which had not been well understood. He took exception to the title cholera infantum. The author had considered spoiled milk as the chief cause of diarrhœa in children, and in that view Dr. Caillé concurred, yet he also thought that heat, inasmuch as it exerts a pernicious influence upon the human economy, paves the way for the reception by the system of the noxious material which is the immediate cause of summer diarrhœa. The reason why there are fewer cases in August is perhaps partly due to children being taken from the city and on excursions on the water.

Dr. A. Jacobus suggested, as one reason for the greater mortality from this disease in July, the fact that the children who take it in the earlier summer months have not yet regained their wonted strength after winter confinement.

The President said that in some cases of so-called cholera infantum there are the symptoms simply of a gastro-intestinal catarrh, but in others the secretions are less of a mucous than of a serous character, and they go hand in hand with early collapse, terminating fatally in a day or two, or perhaps running along four or five days. In those cases terminating early, the lesions may be trifling while the secretion has been immense, but the viscera generally are in a condition of granular degeneration. These latter cases are more apt to occur during the hotter weather, and the President believed heat had something to do with their causation. This view is perfectly reasonable, when we consider the influence of heat upon the nervous system and myosin. Cases of this class of cholera infantum are apt to occur in wealthy families as often as among the poor, while the more common form is rarely found among the well-to-do who keep the milk in refrigerators and follow instructions regarding the feeding of their children. The principal thing in keeping children healthy lies in how the food is selected, prepared, and given.

The President called attention to the fact that about ten years ago Clark Miller had stated that when the atmospheric temperature rose to 75° F. for six or seven days in succession cholera infantum would soon make its appearance.

Dr. Seibert said he did not include among his cases all of those of diarrhœal diseases; they were limited to acute gastro-intestinal catarrh. He had used the name cholera infantum because it took the least space on the invitation card. Whether the cases of acute gastro-intestinal catarrh, a disease commencing suddenly with vomiting and diarrhœa, are all due to but one cause or to different causes he was unable to say.

Regarding the mortality-statistics given, they could be relied upon as exact. Dr. Smith was not the only physician who had had the impression that the mortality in August was as great as in July, but the statistics at the Health Board and those of his own cases proved the error. Regarding the temperature of May and September, the average for the two months was nearly the same, but in September it often reaches a much higher point.

Dr. Seibert said one lesson to be learned from a study of these statistics is the importance of teaching the poor to take precautions against cholera infantum with the commencement of warm weather, and not to wait for hot weather before putting milk into the refrigerator.

NORTHWESTERN MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, February 23, 1888.

A. R. Robinson, M.D., President, in the Chair.

Dr. Charles S. Wood read the paper of the evening (see page 320), entitled

SOME POINTS IN THE TREATMENT OF CHRONIC ALBUMINURIA, OR BRIGHT'S DISEASE.

The paper being open for discussion, **Dr. S. Baruch** expressed surprise that malaria was so prominent an etiological factor of Bright's disease. In a fifteen years' practice along the river-banks in a strictly malarial country he had seen hundreds of cases of fever, from May until November, but he stated that he had seen more cases of Bright's disease in New York in one year than in the fifteen years' experience in the South. Albuminuria was common during the paroxysms of fever, but chronic Bright's disease was extremely rare, not only in his experience, but in that of every physician practising in the same section. Dr. Baruch inquired if Dr. Wood expressed his own personal experience in stating that in the sections of the city where there is an increase of malaria there is an increase of albuminuria, and whether the diagnoses have been verified by autopsies. The cases described by Dr. Wood seem to have been of a rather mild form, lasting a long time, and many were cured, which is unusual with well-pronounced cases of Bright's disease.

With regard to treatment, Dr. Baruch is convinced that medicinal treatment is of very little value in Bright's disease; that hygienic measures, the ground of which is suggested by physiological laws, should be used. It is a well-known fact that highly nitrogenized foods increase tissue-metamorphosis, not only of the food which is ingested, but also of the nitrogeneous substances in the human body, and therefore, by the ingestion of this food we give the kidneys, which are the eliminators of the products of tissue-metamorphosis, a great deal of work to do; while, on the other hand, by the use of hydro-carbons we find that the tissue-waste is limited, and, therefore, the kidneys will have less work to do in throwing off this waste. Rest, a proper regulation of the diet, and abstention from active exercise form the most successful elements of treatment. The patient should have plenty of fresh air, but active exercise increases the metamorphosis of tissue, even in health. Leube, in the examination of large bodies of soldiers, found that a large number had albumin in the urine after the manœuvres. Therefore, by abstaining from active exercise, and by acting upon the skin, much more will be accomplished than by medicine.

With regard to the medicinal treatment, there is only one remedy in which Dr. Baruch has confidence, and to which the author of the paper referred with commendation, and that is nitro-glycerine. It relieves all the headaches and faintness, and it staves off the occurrence of cardiac hypertrophy. Dr. Baruch recalled a case of chronic nephritis, under treatment during the last two and a half years, which illustrates the effects of this treatment. Patient's urine was scant, although of a low specific gravity (1.007); it had an abundance of casts and kidney epithelium. Patient had been under this treatment, eating no meat until recently. Examination of his urine about a week ago revealed a mere trace of albumin, while the specific gravity and quantity were normal. Altogether, this is one of the most remarkable results after so serious a beginning.

While Dr. Willard Parker recommended bichloride of mercury, Dr. Baruch inferred that he also recommended the use of hygienic measures. If an organ be crippled it must be given rest, and that can be accomplished in Bright's disease by dieting the patient, excluding animal food entirely.

Dr. R. C. M. Page believed it impossible to cure chronic Bright's disease by medication, but there are a few medicines which are certainly invaluable for the relief of symptoms. For instance, nitro-glycerine sometimes relieves uræmic headache like magic. He usually gave one drop of a one per cent. solution, increased gradually up to five drops three times daily, and continued until the patient begins to have flushed face and to complain of laryngeal constriction.

Regarding uræmic dyspnœa, nothing acts so well usually as a hypodermatic injection of five or even ten minims of Magendie's solution of morphine. Chloroform by inhalation is the best remedy known for uræmic convulsions, while ether should never be administered. As to ether, the almost concurrent opinion is that it ought not to be used in any surgical operation where Bright's disease of the kidneys exists.

Pilocarpin has been recommended for the purpose of eliminating this so-called uræmic poison. The chief objections to this remedy are its depressing effect upon the heart, and sometimes it causes such a profuse salivary secretion that the patient almost strangles. His practice, for several years, has been to give pilocarpin in a solution of morphia, *e.g.*, one-eighth of a grain to ten minims of Magendie's solution. The morphine holds the heart up to its work, while the pilocarpin causes the patient to sweat profusely.

In a summary of one hundred and seventy-five cases Dr. Page has found that the old remedy, pulvis purgans, is the most trustworthy hydragogue cathartic, although the dose is large and unpleasant. Elaterium is more readily administered, but it is uncertain. He has never found any way of giving it hypodermically.

Mercuric chloride is without doubt a proper remedy in cases of Bright's disease, especially when depending on syphilis. But it is used indiscriminately. In the old New York Hospital it was the routine practice to give one-thirty-second of a grain of mercuric chloride in some bitter tonic. Its use should, perhaps, be restricted to those cases of cirrhotic disease depending upon syphilis.

Dr. P. C. Cole doubts the importance of malaria as a factor in Bright's disease. In his experience as an army surgeon, principally in Louisiana, where malarial fever was prevalent, Bright's disease was very rare. In Italy Bright's disease is practically unknown, and many parts of Italy are very malarious during a large portion of the year. Also in New Mexico, where ardent spirits are largely used, Bright's disease is unknown. If malaria were the predominating cause of Bright's disease, we should have more of it, and it would prevail in the malarial districts of Italy and other countries, which is not the case. With regard to treatment, while chronic Bright's disease, involving marked tissue-changes, must be regarded as incurable, much can be done to alleviate distressing symptoms in the later stages by the use of opiates. In the early stages, when small granular casts first make their appearance, great benefit is derived from counter-irritation by means of dry cups over the region of the kidneys every two or three days.

Dr. Robert Newman took exception to the general idea that remedies do no good in chronic Bright's disease. He narrated a case which was unquestionably Bright's disease, and which was cured by medical treatment. The diagnosis was verified by the visiting staff of the New York Hospital, during ten months of treatment there. Though it was expected that she would die, Dr. Newman afterward treated her for twenty-one years. At last she drank herself to death after acquiring a pension.

Dr. M. Blumenthal's experience in Bright's disease would not allow him to concur in the malarial origin of the disease; but that there is some ground for believing that malaria more often causes Bright's disease than we are generally willing to concede, is proven by the array of authorities quoted in the paper.

Dr. Blumenthal cited the case of a girl, aged ten or twelve, who was given up as hopeless, but, like Dr. Newman's case, she did not die, but lived to enjoy perfect health for many years. She died finally of another disease. As to the curability at all of chronic nephritis, that question is not yet ready for final decision. Physicians who have been in practice for a number of years have seen cases in which there was no possible mistake as to diagnosis, and in which, seemingly, there could not be much chance of error about the prognosis, where the patients did recover. As a rule, the most precocious children, the most intelligent and refined organisms, are those most frequently attacked with the disease, and who most readily succumb, while the rougher, coarser-grained constitutions seem to have greater powers of resistance and a firmer hold on life.

Dr. C. A. Leale believes that the original cause of chronic Bright's disease may be intermittent fever, and he had followed up such cases with this cause over a long series of years. Whatever induces frequent congestion of any of the internal organs might act as a provoking cause of a nephritis.

Dr. W. M. McLaury believes that malarial poison may enter into the clinical course of chronic nephritis as a special factor. He cited a typical case of albuminuria in which the urine was loaded with albumin; patient had general anasarca, and was unable to move about except with the greatest effort. Dr. Alonzo Clark saw this patient several times in the course of six weeks, but gave no hope of his recovery. The treatment in his case consisted mainly of mercuric bichloride, arsenic, and tincture of iron. He entirely recovered, so that there was no trace of albumin in his urine within six months after the beginning of this régime. The patient is still living, is forty-seven years of age, and it is twelve years since he came under treatment. Dr. McLaury mentioned two other cases of albuminuria with dropsy, in which nitro-glycerine was used with negative effects, except to clear up the dropsical effusion.

Dr. J. H. Fruitnight did not think that malarial poisoning was so prominent a cause in the production of chronic nephritis as was maintained by the author in his paper, yet he was positive that it did at times exist as an etiological factor. He briefly narrated two cases, one of which was seen in consultation by Dr. Fessenden Otis, which were obviously influenced by malarial poisoning. This patient was a young man who lived on Staten Island, sixteen years of age, and who suffered from malarial fever nearly all the time. Albuminuria, convulsions, and dropsy succeeded each other in the usual order.

Dr. Fruitnight thinks that the effects of medicinal measures in this affection are entirely problematical. The only rational method of treatment is that of abstention from activity, with the ingestion of a nitrogenous diet.

Dr. Henry L. Taylor asked Dr. Baruch whether the protection of the skin from sudden changes of tempera ture by the adoption of some such thing as the Jaeger underclothing would not help to protect the system against adverse conditions?

Dr. Baruch replied that it would most certainly, and that it is a very important measure.

Dr. S. H. Dessau said that the views expressed in Dr. Wood's paper confirmed him in the opinion he has lately entertained, that the large majority of cases of Bright's disease are dependent upon some obscure neurotic cause. In this way malarial poisoning may be explained as the cause of certain forms of chronic Bright's disease. In this way, also, are explained in great part, the beneficial effects of sedatives and the action of nitro-glycerine.

Dr. T. H. Burchard had seen cases of Bright's disease in undoubtedly malarious patients. Whether the malaria was the cause of the Bright's is another matter. Still, there are no pathological reasons why malaria, which certainly produces great constitutional changes, cannot produce changes in the kidney, just as well as in the spleen and other organs. During this summer, while in Europe, Dr. Burchard asked Sir William Gull, of London, his opinion of the etiology of cirrhotic kidneys. The laconic answer was, "Gout, syphilis, climatic changes, and renal plethora." He defined renal plethora as "that condition of chronic congestion of the internal organs which is so common in Englishmen after they have passed sixty years of age." He said, "As a nation we have, as you know, a seeming predisposition to the development of organic congestion of a chronic character. I believe that that condition is one of the special predisposing causes of renal metamorphosis. I have seen so many cases for which no other cause could be assigned that I have been compelled to regard this form of plethora in advanced life as one of the principal causes." Charcot, of Paris, stated the most exciting cause of chronic Bright's disease among the French to be the peculiar nervous excitability of the people. He is a great believer in the nervous origin of chronic Bright's. At Berne, Professor Dennie, who is highly respected in this department of professional labor, and who is in a position to see, probably, as large a representation of the different nationalities as any other man in Europe, said: "The more I have seen of Bright's disease, the more thoroughly I am convinced that it is dependent principally upon two causes. In the first place, upon a rheumatic or gouty, or syphilitic condition. I presume that one-third of the cases I see have either a latent or an acute rheumatic or gouty condition as a direct causative agent of the renal disease. The second class are cases in which we have chronic Bright's disease, resulting from an imperfectly cured acute attack." Upon inquiry if he had ever known malaria to be an exciting agent of Bright's disease, he said that he knew nothing about malaria, except as it exists in East Indians or in Americans: "We don't know what it is in Berne, I have seldom seen it here." Professor Dennie sees patients from every part of Continental Europe, while Sir William Gull sees English, Irish, Scotch, and Americans; Charcot, however, sees French, and some English and Americans. All are competent observers, and all gave as diverse opinions as were possible. Hence, we must conclude that cases are attributable to different causes; to gout in some cases, to syphilis, to the nervous element, and probably to malarious influences in other.

Dr. A. M. Jacobus did not think that malaria produced chronic Bright's disease, but that it had a very deleterious influence upon its course. While in the section of the South where Dr. Baruch had lived there was little chronic Bright's disease, it must be remembered that malaria as known in the city is quite a different thing from malaria in the country. People in large cities are very susceptible to climatic changes, and many of the cases of Bright's disease in New York City, Hoboken, and Jersey City have been largely due to malaria.

As a treatment, Dr. Jacobus thinks iron and quinine, in tonic doses, are indicated for albuminuria, while the patient should be restricted largely to a milk-diet. The case of a woman was cited, where there was no reason to suppose any renal difficulty. She went to Flushing and came down with intermittent fever. Then she came back to the city and developed albuminuria, followed by uræmic convulsions.

Dr. Baruch desired to be understood as not denying the possibility of Bright's disease being caused by malaria, because the fact that a careful observer like Dr. Wood had noticed it was sufficient evidence that his claim rests on a good foundation; besides, he has cited an array of authorities and statistics to fortify the theory. However, many cases are attributed to malaria, as Dr. Jacobus has said, because of an indistinct diagnosis. Dr. Baruch repeated the assertion, that since he had lived in New York he had heard more about malaria, and had seen less of it, than he had in the South.

The President (Dr. A. R. Robinson) agreed with Dr. Baruch almost entirely, except as regards the prognosis. In New York City it would be a very difficult thing to say whether in a given case of Bright's disease malaria was an etiological factor or not. For an accurate etiological study of Bright's disease, as regards this agent, a malarial district should be chosen, and comparisons made as regards frequency of the disease with a non-malarial district, the habits of the people being similar in both places. In examinations of a large number of cases every year, his attention had not been drawn to any relationship between malaria and Bright's disease, although the poison of malaria, no doubt, could so change, directly or indirectly, the blood-constitution, or the circulation in the kidneys, as to cause a nephritis. Recovery from acute parenchymatous nephritis frequently occurs, but I do not believe that this ever happens in cases of chronic interstitial nephritis.

Dr. Page added that he had never been able to trace a case of Bright's disease to malarial poisoning, but he did not doubt it might have more or less effect in bringing about the disease in individual cases. He further stated that in England, Ireland, and Scotland, where intermittent fever is unknown, Bright's disease is as common as in New York.

Dr. Burchard stated that he saw, while in Lucerne, a case that was singular in its way. A Swiss peasant was brought into the hospital one day, whose cadaverous appearance was marked and peculiar. He had every appearance of a man on the point of dissolution. He stated that a week before he had been feeling perfectly well. He then began to complain of rapidly increasing debility. On this account he came into the hospital. Upon examining him the house-physician in charge was unable to detect any organic change that would account for the man's excessive debility and his peculiar appearance, except extreme weakness in the heart's action.

Upon questioning the man on the amount of urine that he voided, it was found that he was making less than half a pint a day. Some urine passed at that visit was examined after standing a few minutes, and found to contain thirty to forty per cent. of albumin. Three days after this the albumin had increased very much, but no casts were found and no blood. At the end of a week after his admission to the hospital, Dr. Burchard again saw him, and the albumin was still increasing in his urine, although his general condition had somewhat improved. That night the man developed symptoms of cerebral œdema, and died the following morning. Dr. Burchard was present at the autopsy, and, very much to the surprise of every one who witnessed it, not the slightest change was found in the kidneys that would account for the albumin in the urine. Several physicians who saw the kidneys pronounced them absolutely healthy. The kidneys were anæmic—both cortical and pyramidal portions of normal consistency.

The question that was naturally excited by reason of this pathological discovery was, What caused the albumin in the urine? Certainly it was not dependent upon any disease in the kidneys that investigation could discover; and there were neither casts nor blood.

In closing the discussion Dr. Wood stated that the majority of the profession would not concur in regarding malaria as an etiological factor of chronic nephritis, but the authorities adduced were undisputed; for instance, Rosenstein, who is perhaps as thoroughly versed in kidney disease as any man in Europe. It is true that, during the war, chills and fever prevailed, while Bright's disease was not common; but many of those very men who returned, and established themselves in the city or country, did develop this so-called form of Bright's disease. With regard to the management of a case of chronic nephritis, Dr. Wood regards abstinence from exercise in the open air as most prejudicial to the patient's welfare. Dr. Wood protests against regarding the disease as incurable. A certain proportion of cases of Bright's disease are cured, or, at least, so alleviated that the patient may go on for years and enjoy comfort in life. Cases of cure are rare, but still there are sufficient to encourage us to persist in treatment.

Malaria, which produces chills and fevers in the country, has not the same tendency to produce Bright's disease that malaria has in towns and cities; and this form of the disease is amenable to treatment. In the early stages there are no casts, in contradistinction to the gouty form; and, although albumin persists, with low specific gravity, and the system is in a condition leading to Bright's disease, quite a number of these cases can be cured.

It is distinctly to be borne in mind that Bright's disease implies the presence of casts, irrespective of albuminuria.

In reply to Dr. Powell, Dr. Wood declared his belief that malarial poison does not effect any direct influence on the kidney in the production of Bright's disease, as, for instance, congestion, but that the nervous system becomes depressed by malarial influence, and progressive degeneration of renal tissues results.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE RADICAL CURE OF HYDROCELE—MEDICAL MEN AND THEIR MANNERS—CHEERFULNESS AS AFFECTING PROGNOSIS—A MEDICO-LEGAL CASE—THE WATER-SUPPLY OF LONDON—THE SKIN HOSPITAL SCANDAL—THE GALEN CLUB AND ITS PROMOTERS.

London, March 5, 1888.

At the last meeting of the Medical and Chirurgical Society only one paper was read, but the ensuing discussion filled up the remainder of the sitting. As, including the author of the paper, the speakers comprised surgical representatives from six of the London hospitals, the opinions expressed may be said to represent, not unfairly, present theory and practice on the subject in the London hospitals. The subject was an eminently practical one, viz., the radical cure of hydrocele. Mr. Henry Morris, Surgeon to the Middlesex Hospital, read a paper in which he reviewed various methods of treatment. He thought there was not much to choose, either as to duration of treatment or certainty of result, between injection on the one hand and incision or excision on the other. He believed there was no method yet devised which was not liable to occasional failure, and related two cases in which the hydrocele recurred after excision of the sac. Incision or excision was, however, to be preferred to injections whenever we were in doubt as to the precise nature or relations of the hydrocele, in some cases in which a hydrocele was complicated by hernia, when the hydrocele was caused by the presence of a foreign body in the tunica vaginalis, when the testes were diseased, or when a vaginal hydrocele was associated with an encysted hydrocele of the cord and a bubonocele on the same side (as in a case of his own). The President, Mr. Pollock, opened the discussion by narrating a case he had treated. The hydrocele was tapped and injected twice, but in vain. A silver wire was then passed through and kept in for three weeks, but also failed to prevent recurrence. The sac was then laid open and dressed with lint from the bottom, day by day, for a fortnight. Profuse suppuration ensued, but on allowing the wound to heal the hydrocele returned again. The patient declined any further treatment than simple tapping.

Sir Joseph Fayrer observed that hydrocele was both a commoner and graver affection in India than here. It was often the local expression of malaria, and nearly always the precursor of elephantiasis. He had seen cases in which the wall of the sac was half an inch thick and contained cartilage and bone. For such there was no treatment but excision. For hydroceles of moderate size he believed the best treatment was to inject two drachms of strong tincture of iodine. He had never seen recurrence after that method.

Mr. Willett showed a patient in whom a recurring hydrocele had been unsuccessfully treated by excision of a portion of the tunica vaginalis. The cavity was found obliterated by a buboid growth, from the meshes of which fluid escaped. An unsuccessful attempt was made to peel off this buboid tissue.

Mr. Bryant said he used as an injection equal parts of the tincture of iodine and liquor iodi into an emptied sac. He had had good success with this method. He had incised twice, and performed excision once. In all three cases recurrence followed, but they were all cured by subsequent iodine injection. He had employed injections of simple hot water with success, and recommended it in those cases where iodine injections had failed, and as a measure to be tried before incision. In the case of old hæmatoceles with thickened walls, and hydroceles with thick, viscid fluid, incision was required.

Mr. Harrison Cripps said he had experienced failures even when all the fluid had been withdrawn and pure tincture of iodine injected.

Mr. Treves said the method he now adopted was to open the tunica vaginalis and swab out the sac with crude carbolic acid. This destroyed the endothelium and set up suppuration.

Mr. Walsham thought the only really radical cure was to stuff the sac from the bottom and allow it to granulate up. That was too serious an operation in many cases, and for out-patient hospital practice he recommended simple tapping.

The manners of doctors with their patients vary very greatly. Some are extremely affable, some—well, somewhat the reverse. Some are very taciturn; others very voluble and full of details of treatment to be carried out by their patients. Whether justly or unjustly, it is said that one eminent and titled physician owes no inconsiderable share of his large and ever-increasing practice to his attention to detail in the instructions he gives his patients. Some doctors seem to take a delight in altering a patient's habits as far as possible; others will let him "gang his ain gait" as far as possible. That the latter is not inconsistent with the giving of a seasonable warning where required was made clear by an incident which came under my notice two or three days ago. Visiting an old friend at some distance, whom I had not seen for years, he related to me one of his medical experiences. He once had occasion to consult a hospital physician for some symptoms of circulatory derangement. He was an officer in a volunteer corps, and asked whether it was advisable that he should retire. The physician rejoined to the effect that he was old enough to know what he could do and what he could not, but that if he died suddenly, and he (the physician) were called as a witness at the inquest he should at any rate state that he had warned him. I need scarcely say the hint was taken, and probably proved all the more efficacious from the way in which it was conveyed. Some doctors are much more cheerful in their manners and countenances than others, and as cheerfulness is proverbially contagious, such probably encourage their patients more to struggle manfully against disease. Apart from personal cheeriness, too, cheerfulness in prognosis is not without its value both to patient and doctor. I may add, of two physicians at the same hospital, both of repute for their experience in cardiac affections, I have known one recommended for consultation in preference to the other on this very ground, viz., that he would take a more cheerful view of the case and not frighten the patient, and thus perhaps make him worse.

I briefly chronicled, some months ago, a case in the law-courts, in which a gentleman who had dined in a restaurant sued the restaurant-keeper for expenses which he had been obliged to incur through having (as he averred) swallowed a needle, which had, it was suggested, found its way into some chopped spinach in the process of preparation. The suit was unsuccessful, but a somewhat similar one has lately taken place with better success to the plaintiff. A baker sold a bun with a pin in it. It injured the throat of the purchaser, and finally had to be removed from her throat by a medical man. His fees amounted to thirty shillings, and the plaintiff sued for, and obtained, two pounds. I remember a medical friend once fancying he had got a pin lodged in his throat, from which he made vain efforts to dislodge it. He made his way to an eminent laryngologist, who soon showed him that his fancy was fact by withdrawing the pin with a pair of forceps from a fold of mucous membrane in the pharynx, where it had been arrested.

The Grand Junction Waterworks Company's Bill, for securing a supply of purer water to London, has been somewhat summarily thrown out by the House of Commons. It was not rejected on sanitary grounds, but on the plea, as alleged, that the new powers sought by the company would, if conferred, enable them to abstract from the Thames and its tributaries such a volume of water as would seriously and appreciably lessen the river, and even possibly cause a subsidence of the foundations of Windsor Castle. The latter was scouted as an absurd idea. I suspect that it was a feeling of mistrust toward the water company that led to the rejection of their bill. It was such an unprecedented procedure for a London water company to propose something to really benefit the consumers of what they are pleased to call pure water, that it is not much wonder that honorable members conjectured the presence of some sinister motive in the background.

The scandal at St. John's Hospital for Skin Diseases shows no sign of abatement. The Duke of Northumberland has withdrawn his patronage, but the managers persist in their refusal to grant an inquiry. Special hospitals seem particularly prone to become the arena of unseemly squabbles, possibly because, in some cases at least, they are, although nominally public institutions, really conducted in the interests of certain individuals. Whether this be the case at St. John's Hospital further investigations will doubtless disclose in due course.

The new medical club has not as yet made a very brilliant début. It is stated that the club will be under the control of the committee, and a "First Committee" is announced. Some secessions have, however, occurred from the latter, and whatever control the committee may ultimately obtain, it is pretty clear at present from what I hear, even adding the proverbial grain of salt, that this same committee will be very much under the control of the lay speculators who are launching the club. The Galen Club will probably share the fate of other medical clubs and find a premature grave.

ON TRACHOMA AMONG THE NEGROES IN THE UNITED STATES.

To the Editor of The Medical Record.

Sir: Your editorial in the issue of The Medical Record for the 10th inst., on "The Negro from a Medical Standpoint," was both interesting and timely, and, I hope, may be influential in calling forth more detailed and accurate statistics on the subject of race-influence in disease.

In regard to the general facts you mention respecting the greatly increased mortality among the negroes of the South since the war, there is unquestionably some showing of truth, though it must be remembered, in this connection, that we have no reliable vital statistics of the antebellum days with which to compare those we are getting now, and that isolated individual experience, while valuable, is by no means conclusive.

Undoubtedly there has been, since the war, a rapid thinning out of those of the negro race least fitted to survive in the struggle for an existence into which they were thrown without any preparation, but it by no means follows that the negro is going to die out in this country.

As a race, the negroes possess some qualities which will enable them to hold their own with the white man. Notwithstanding what has been said, I still think it is true that he can stand heat and malaria better than the white man, and his equable and cheerful temperament certainly stands him in good stead in warding off the worries and vexations of life, which sap the vitality as surely as disease. "Nervous prostration" has not yet established itself among them. It may also astonish many to learn that some competent observers, with a wide experience, are convinced that syphilis is much milder in its course, and much less deleterious in its effects in them than in their white brothers.

My own experience in syphilitic affections of the eye tends to confirm such an opinion. And to say that the negro had an immunity from certain diseases under a condition of slavery which he does not enjoy as a freeman seems to me like accepting the fact of revolutions going backward.

The negro in this country, from a medical stand-point, is as interesting a study as he is from a political or social point of view, and in assisting him in working out his problem (in which we are interested as well as he), we should, above all things, avoid too hasty generalizations from insufficient and unreliable data. You mentioned, in your editorial referred to, some recently published statistics of my own in regard to the comparative frequency of ear diseases in the two races, as they were observed at my clinic, and it is in the interest of a further scientific investigation of this question of race-influence in disease that I desire to again call the attention of the profession to some observations in the department of ophthalmology to which you did not allude, and which seem to me too remarkable to leave out of consideration in the study of this question.

In 1876, in a paper read before the Fifth International Ophthalmological Congress, held in New York, I called attention to the fact that, according to my observation, the negro enjoyed a comparative immunity from trachoma, or granulated lids. The observations of subsequent years have confirmed me in this belief, and I have published, at various times, statistics bearing on the point gathered at my clinical service at the Central Dispensary of this city, where the material is composed of whites and negroes in the proportion of two of the latter to one of the former. In 4,000 eye-cases available for statistical purposes, of which 2,600 were colored and 1,400 white, there were 70 cases of trachoma in the whites and but 2 among the negroes, and these were in mulattoes. An equal proportion in the two races would call for about one hundred and forty in the negroes. This discrepancy is due, I deem it, purely to race-influence, since the hygienic surroundings of the negro are certainly no better than those of the white contingent.

These are the observations of but one man, and at one clinic, it is true, but the information I get from other clinicians in other cities is corroborative in the main. One or two, however, claim to see trachoma in the negro very frequently, and others have reported isolated cases, and have thought thus to invalidate my conclusions. I have never contended that the negro *never* has trachoma. I only say that, according to my observation, which has been careful on this point, and has extended now through a number of years, he seems to enjoy remarkable immunity from it, and if anyone will furnish reliable statistics, as extensive as my own, showing that the negro does have trachoma as frequently as the white man, then I shall consider that we have either got hold of a peculiar race of negroes in Washington, or that there is something in the atmosphere of the national capital antagonistic to the development of the disease in that race. It is my firm belief at present, however, that it is a race-peculiarity, and, being so, throws a great deal of light on the much-vexed question as to the etiology of trachoma. It removes it from the category of purely local and contagious diseases, and places it among the dyscrasia. Were this the time and place, I could adduce other facts and advance other arguments in support of this proposition. My communication has, however, already overrun the limits I had fixed for it, and I will close it by asking those practising among a mixed population to make observations on this point, being careful, however, not to confound true trachoma and hypertrophied papillæ, and send them to me. They will be most thankfully received, and due credit will be given in a publication which will be made on the subject, probably in the near future.

I am, Mr. Editor, yours most sincerely,

Swan M. Burnett, M.D.

Washington, D. C., 1734 K Street, March 13, 1888.

INSUFFICIENCIES OF THE OCULAR MUSCLES.

To the Editor of The Medical Record.

Sir: In Dr. Loring's communication, March 10th, he modestly asserts: "It is very evident that Dr. Stevens has never read Donders." I have read this in Donders: "Strabismus is a deviation of the eyes in consequence of which the two yellow spots receive images from different objects. In strabismus the visual lines do not cross one another at the point it is desired to observe." Donders does not tell me that strabismus must of necessity present an appearance of deformity which one might stand off and observe. Whatever may be my familiarity with Donders, I have not offended by prostituting the words of the great oculist, who has written in honesty, by making them convey to the unwary a meaning which he never designed to express. Such an unworthy practice should awaken resentment from every right-minded member of the medical profession.

Dr. Loring says that in his case of strabismus, called improperly by him "insufficiency of the externi without strabismus," "Dr. Stevens forgets to state that the diplopia was produced under a red glass and a prism." I did not forget that, for there was no prism. The occasion for that prism arose twenty years after the examination was made. The double homonymous images were not made by a prism, and its introduction into the case at this late date, like the misfitting quotation from Donders, is calculated to deceive.

Dr. Loring accuses me of a want of acquaintance with the effect of a colored glass upon vision. It is true that I am not acquainted with any effect of a colored plane glass whereby, by placing it before an eye, diplopia of 30° is produced at twenty feet, which continues in all points of the field of vision and can only be abolished in the median line at a distance of eight inches from the eyes. I am acquainted with a great many cases of strabismus, some so extreme that Dr. Loring might see the squint, and others of less degree, in which the patients are unconscious of diplopia until the two images are colored differently. I do not hesitate to say that one who supposes that 30° diplopia is produced by a plane colored glass, is laboring under a profound misconception.

We are at liberty to assume that this strabismic case is a typical example of all the observations which Dr. Loring has made in respect to "insufficiency of the externi," since he now quotes his remark about non-strabismic eyes in which there is insufficiency of the externi, "which shows itself, the minute the colored glass is placed over one eye, by homonymous images;" and especially as he now introduces a hitherto "unpublished exploit" of much the same character as his other case of strabismus, and which he also calls a case of "insufficiency without strabismus." This being true, the doctor can assure himself that I have not written of the same grade of "insufficiency of the externi," under the title of non-strabismic insufficiencies, as that which has engaged his attention. In any systematic arrangement of his class of cases they would come where the definitions of Graefe, Donders, and others have properly placed them, in the category of strabismus.

Should this controversy be the occasion of calling the attention of the profession to the crudities of doctrine entertained by those who think that there are no more problems in respect to the ocular muscles, and that their "illustrious predecessors" have closed the doors against further inquiry; should it promote new interest respecting the conditions known as "insufficiencies," and suggest the value of a more systematic arrangement and more critical study of the anomalies of the ocular muscles, it will have accomplished, not what the originator desired, but a more honorable and worthy result. George T. Stevens.

33 West Thirty-third Street.

THE "ORAL WHIFF."

To the Editor of The Medical Record.

Sir: I was much interested in Dr. Cheesman's article on the "Oral Whiff" in The Medical Record for March 3d, having had the symptoms he describes since my sixteenth year.

I can hear the "whiff" when lying on the left side, with the mouth open, and it is audible to others after running or similar exercise; it is observable with erect posture also.

It used to be a source of great annoyance and anxiety, and, while studying medicine, of course led me to reckon a heart disease as *one* of my incurable maladies. So I was examined by the late Professor Jewell, of Chicago, in 1866, and a year or two after by Professor N. S. Davis, both of whom gave me a clean bill of health as to heart and lungs, to my most intense satisfaction. From that time, owing to my entire change of habits as to out-door life and exercise when I began to practise medicine, the symptom has gradually decreased, and for the past two years I seldom observe it, and when I do, it seems to accompany some indigestion.

As a boy I was sedentary in my habits, fond of reading, and averse to exercise. I also formed the habit of smoking at the age of fifteen, and have kept it up ever since (finding it an excellent aid to digestion, a reliable remedy for worry, and promoter of calm reflection). I have, however, always considered this dietetic "whiff" responsible for the pathological one.

The "whiff" was never accompanied by pain or shortness of breath. I could, and can now, run up two or three flights of stairs without puffing. It never occurred during inspiration, but was audible in expiration, "loudest at the commencement and fainter toward the close."

I have examined the leading authorities on the heart and other medical literature for some notice of this symptom, but the article referred to is the first I have met. Although watching for it in practice, I have never encountered it. E. S. Cleveland, M.D.

Burlington, Kan., March 18, 1888.

THE PATHOLOGICAL IMPORTANCE OF THE NOSE.

To the Editor of The Medical Record.

Sir: No. 898 of The Medical Record (January 21, 1888) reached me to-day, and I feel obliged to ask you a small space in this valuable journal, to make some remarks about your editorial, "The Nose, the Source of all our Woes." (P. 74.)

Firstly, it was not a Dr. Gacy (as you call him abusively) who reported the question of aprosexia at the Congress lately held at Wiesbaden, but Dr. Guye, professor of the diseases of the ear at the University of Amsterdam (Holland), whose disciple I had the honor to be.

Secondly, the name the author gave to this condition was not "aproxia," but "aprosexia," from προσέχειν τὸν νοῦν, which grammatically might be placed parallel to "aphasia," "alexia," "amnesia," etc.

Thirdly, I wished to protest against the ironical manner with which you communicated this to your readers; the cases related by Professor Guye, also in the "Nederlandsch Tydschrift voor Geneeskunde," 1887, ii., p. 381, ought rather to excite others to make further investigations about this important question, also in relation to the "surmenage scolaire." Professor Guye thinks probable that many cases of "céphalée des enfants," which Germain Sée, in the "Académie des Sciences à Paris," attributed to the "surmenage" were rather caused by nasal disturbance, obstruction of the sinus frontalis, etc; and I might add, that during the last month I have met in my practice with many such cases also (as was often proved "ex juvantibus") whereabout I hope later to find an occasion to write more.

I am, sir, yours truly,
W. B. VAN STAVEREN, M.D.

ROTTERDAM, February 27, 1888.

[We are happy to publish the communication of Dr. Van Staveren, and to assure him that we did not intend to speak with any uncalled-for levity regarding the subject of the nose, an organ for which, æsthetically and pathologically, we have a high respect.

There is, however, a tendency just now, among certain rhinological specialists, to put forward the nose into undue prominence as a pathological centre, to encourage lopping at the branches instead of digging at the roots. This tendency we deplore, and cannot promise always to speak of it with respect.—ED.]

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from March 11 to March 17, 1888.

STERNBERG, G. M., Major and Surgeon. Ordered to proceed to Brunswick, Ga., on official business, and upon completion of same will return to his proper station. S. O. 57, A. G. O., March 10, 1888.

CROSBY, WILLIAM D., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, with permission to apply for an extension of one month, to take effect after being ordered to a new station. S. O. 60, A. G. O., March 14, 1888.

KEAN, JEFFERSON R., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Sill, Ind. Terr., and ordered for duty at Fort Robinson, Neb. S. O. 56, A. G. O., March 9, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 17, 1888.

RUSH, W. H., Passed Assistant Surgeon. Detached from Navy Yard, New York, and ordered to Naval Hospital, Philadelphia, Pa.

STEELE, J. M., Passed Assistant Surgeon. Detached from Naval Hospital, Philadelphia, and ordered to Coast Survey steamer Bache.

OBERLY, A. S., Medical Inspector. Detached from Navy Yard, Portsmouth, N. H., and wait orders.

DUBOIS, F. L., Surgeon. Ordered to the Navy Yard, Portsmouth, N. H.

KEENY, JAMES, Assistant Surgeon. Ordered to the receiving ship Minnesota.

DEANE, C. W., Passed Assistant Surgeon. Detached from Marine Rendezvous, San Francisco, and ordered to Coast Survey steamer McArthur.

AUZAL, E. W., Assistant Surgeon. Detached from Coast Survey steamer McArthur, and ordered to Marine Rendezvous, San Francisco.

BIDDLE, CLEMENT, Passed Assistant Surgeon. Ordered to Naval Academy, Annapolis, Md.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 17, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	8	2
Scarlet fever	146	29
Cerebro-spinal meningitis	3	3
Measles	48	6
Diphtheria	118	51
Small-pox	9	3
Yellow fever	0	0
Cholera	0	0

A DOCTOR BANISHED.—A Russian physician, Dr. Dreipelker, of St. Petersburg, has been banished because he sent a patient away from the Information Office insufficiently clad, and in very cold weather, without giving her any assistance. The patient, an old woman, died in consequence. The Information Office corresponds very nearly to the Bureau for Out-door Relief. The officer in charge directs applicants to various hospitals. Dr. Dreipelker had no means of relief at his office, and it is difficult to see how he was to blame.

THE SECRET OF DR. DARWIN'S PROFESSIONAL SUCCESS.—In the "Life of Charles Darwin," many references are made to his father, Dr. Darwin, a very successful practitioner, and, as his son says, "the wisest man he had ever known." Dr. Darwin "hated his profession," yet he achieved great success in it. The two great causes of his success were his capacity of inspiring confidence, and his patience and fertility of resource in devising schemes for promoting the comfort of sufferers.

LAPAROTOMY IN NEW YORK CITY AND IN NORTH CAROLINA.—These men, teaching in the great hospitals here, are great men and great teachers, and far be it from me to take one jot or tittle from their merited honor, but oh, how great are their opportunities! If a big operation is to be done in New York, the surgeon can familiarize himself with the parts by immediate dissection. He is supported by able counsel, aided by trained assistants, and last, but by no means least, he goes into the operation without feeling if his patient die he will be looked upon as a sort of semi-murderer; for, if an unfortunate result follow, it is quickly forgotten in the hurry and innumerable death-rate of the great city. But with us, how different! A great emergency arises—a serious operation must be done immediately, and at best one can rarely obtain more than one professional assistant. Ofttimes the assistant will be a common laborer, the best light obtainable a pine-torch or kerosene lamp minus a chimney, and with a paucity of instruments, because too poor to buy a complete outfit, the surgeon gropes his way through delicate tissues till the work is done and the life of his patient is saved. I recall to mind now a case of successful laparotomy done for gun-shot wound of the abdomen, and reported at the last meeting of our medical society, in which I am reliably informed the operator had only the assistance of a negro field-hand and worked solely by the light of a pine-torch. —*Correspondence of N. C. Med. Journal.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 13 New York, March 31, 1888 Whole No. 908

Original Articles.

A YEAR'S WORK IN ABDOMINAL SURGERY, WITH A REPORT OF SEVENTY NINE LAPAROTOMIES DONE IN 1887.[1]

By W. GILL WYLIE, M.D.,

NEW YORK.

At the last annual meeting of this Society I reported one hundred and twenty-five laparotomies, fifty-five of which had been done in the year 1886. I wish to put on record all of my cases of abdominal section, with an accurate account of the results, and to show that since we have learned the importance of cleanliness, and how to attain it, very great progress has been made; and although opening the peritoneum should always be considered a serious undertaking, yet when carefully done it is not a very dangerous operation, and its field of usefulness can be greatly extended and many lives saved when all other means are of no avail.

I have now to report seventy-nine laparotomies done during the past year under the following heads.

Suprapubic Hysterectomies.—Eight cases, all for uterine fibromata. Seven recovered and one died. This one was complicated by syphilitic pyosalpinx.

Ovariotomies.—Sixteen were for large ovarian tumors. Fourteen recovered and one died. Death was due to an acute interstitial nephritis, starting up on a chronic diffuse nephritis, the former being caused by the ether.

Laparotomies for Removal of the Uterine Appendages.—Forty-one laparotomies were done. Forty recovered and one died. The autopsy showed chronic and beginning of acute interstitial nephritis.

Miscellaneous Laparotomies.—Fifteen were done. Nine recovered and six died. In many of these the operation was done as a last resort, and with little chance of success. Of the six that died, the first was for a large septic pelvic abscess, with the patient very weak from prolonged septic peritonitis. Two efforts had been made to reach the pus by the vagina, with very imperfect results. Patient died of shock.

The second was a case of abdominal pregnancy, done out of town, on a patient too weak from prolonged sepsis to be moved. She died of shock.

The third was an extreme case of ascites, complicated by a large umbilical hernia, which was on the point of suppurating. There was a cirrhosed liver and diseased kidneys. She died of exhaustion on the seventh day.

The fourth was a case of strangulated hernia in a very fat woman. There was stercoraceous vomiting, but her general condition was good. The mistake was made in giving ether. During the operation she vomited once, but the strangulated gut was relieved without difficulty, and the operation completed. She came out from ether, talked, and seemed in fair condition, but again vomited, choked, and died in a few minutes.

The fifth was the saddest of all. A fine, healthy woman had an abortion; on the third day puerperal sepsis developed. On the fourth day of the disease I was called in consultation. Intra-uterine douches had not been tried; they were given every hour through the night; her temperature fell from 104½ to normal the next morning.

The family physician hardly thought another consultation necessary, but in eight hours her temperature was 104°. I saw her and advised laparotomy, but it was deferred until her condition was hopeless; pulse, 150; temperature, 105½°. She was literally soaked with sepsis. The abdomen was opened, and more than a pint of pus was emptied at once. She rallied well, but it was too late.

In puerperal sepsis which threatens life, if washing out the uterus every hour with solution 1 to 60 carbolic acid does not control the temperature, and if no lymphangitis or phlebitis or septic abscess can be found in the broad ligaments to be opened and washed out, then laparotomy should be done at once.

The sixth was another case of a splendid woman lost by delay. The case had been seen by Dr. A. Jacobi and Dr. E. L. Keyes, and diagnosed as pyelonephritis, and operation advised. When I saw her she was in a very feeble state, due to septic perinephritic abscess. This I opened freely and drained. More than a pint of pus was evacuated, and the index finger came in contact with a distended kidney; this was punctured, and a large amount of pus escaped. A calculus could be felt, but the patient was too feeble to warrant any attempt at removal. She rallied well, and for a week improved, but soon began to fail. Nephrectomy was then done, but she died from exhaustion on the sixth day. An attempt was made to remove the stones through the old opening, but it could not be done.

This was my third case of nephrectomy; the other two are alive, and in good health. Except in a certain number of cases, such as septic perinephritic abscesses, I would always elect to remove the kidney by abdominal section. When diseased and requiring operation, it is nearly always enlarged, and when enlarged, is pushed forward. In my two first cases, one reported in my paper referred to, and the other—the fourth—in the table of miscellaneous, there was no shock, and the operation was no more difficult than the removal of any deep-seated abdominal tumor.

The Results of Operations for Removal of the Uterine Appendages for Disease.—Taking all the cases that I have operated upon for removal of the appendages, up to January 1, 1888, there are 115 in number with 6 deaths: In the first 25 there were 3 deaths; in the second 25 there were 2 deaths; in the third 25 there were no deaths; in the fourth 25 there were no deaths. And I had a run of 61 consecutive operations without a death.

It seems to me that we have proved that it is not a very dangerous operation, so far as loss of life is concerned. Now as to the results on the health and life of the patient afterward.

In pyosalpinx there is no reasonable doubt but that it is the only way that any real relief can be had in the great majority of cases, and that it actually saves lives. The number of women who have died from the extension of local peritonitis due to pyosalpinx is very much greater than is generally known.

In hydrosalpinx the operation is not so imperatively needed, but often nothing short of removal relieves the pain of hydrosalpinx. It is nearly always bilateral, and as one tube only usually lies low enough to be tapped by the vagina, this operation can and should be excluded.

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[1] Read before the New York State Medical Society, February 7, 1888.

In catarrhal inflammation, where the tubes are occluded by adhesions it is only a question of time for disturbance to functions and fixation of the uterus by adhesions in the broad ligament to necessitate removal of the appendages to effect a cure. Where there is no occlusion of the tubes, except in rare cases of hydatids of the tubes they should not be removed unless disease of the ovaries or uterus makes it necessary to remove them.

Hæmatosalpinx, if uncomplicated by disease of the tubes or ovaries, may not require removal; but, as a rule, the hemorrhage is the result of disease, which necessitates operation.

In tubal pregnancy, if diagnosed, or if rupture takes place, removal is the best treatment. If tubal pregnancy is complicated by disease, hemorrhage, or inflammation, laparotomy is frequently the only means of saving life, and if uncomplicated, then the operation for removal is attended with very little danger, and makes it certain that no further complication will arise.

As to the removal of the appendages for the purposes of stopping the menstrual function. It is justifiable in many cases of fibromata of the uterus, for it will nearly always stop the further development of the fibromata. Not infrequently the severe pains supposed to be due to the fibroids will be found to be caused by associated pyosalpinx. Submucous fibromata are not always cured by removing the appendages, if these are diseased or adherent, and now and then a case of this kind will bleed and increase in size, although the ovaries and tubes have been carefully removed. I make it a rule to curette the lining membrane of the uterus in all such cases before resorting to the removal of the appendages.

I know of no other uterine disease than fibromata that justifies removal of the appendages when *normal*, except perhaps some case of endometritis that cannot be helped by any other known treatment. Uterine hemorrhage, when due to disease of the uterus, can be stopped by curetting, if properly done, with a good steel instrument, although the little copper instrument so highly recommended will often fail to remove the tissues necessary to stop hemorrhages.

Dysmenorrhœa is undoubtedly due to uterine disease, and in almost all cases can be readily cured by either dilatation or divulsion, etc.; and removal of the appendages, when healthy, should never be done for uncomplicated dysmenorrhœa.

Where there is atrophy and degeneration of the uterus, with perversion of all the functions, and where menstruation prostrates and makes life miserable, removal of the appendages may be justifiable when all other means have failed to give relief; but it is still doubtful whether the characteristic cystic ovaries nearly always found in such cases can be called *normal*. Many of these cases taken early can, by dilatation and other stimulating local treatment, and by proper attention to the general condition, be developed into strong and relatively healthy women; but when over thirty years of age, and bedridden, the operation for removal can do little harm, and certainly in some cases gives the only relief; but it rarely ever makes strong and vigorous women of them.

In epilepsy, or so-called hystero-epilepsy, the operation for the removal of the appendages may seem for a time to do good, but rarely effects a cure, and, in my experience, in three out of four cases it did no permanent good. In such cases, unless I can definitely make out objective signs of local disease of either the ovaries or tubes, I will not operate.

I can say the same for all mental diseases that seem to be connected with functional disturbance of the tubes and ovaries, that is, I will not operate unless I can diagnose by the touch actual disease of the tubes or the ovaries, indicated by adhesions, marked enlargement, or fixation. There can be no doubt but that in a certain number of cases the operation is followed by marked mental depression for a time, which condition would be pretty certain to intensify mental disease. Subinvolution of the uterus, after labor and abortion, is not infrequently associated with serious mental symptoms that can be relieved by treatment which restores the uterus to a normal state. But the fact of the generative functions being disturbed or being abnormal in mental disease, does not necessarily imply disease of these organs, or that the generative organs have caused the mental disease.

I have found, as the number of cases operated upon increases, that about three per cent. continue to menstruate after removal of the appendages, and I know of two cases where, after operation, menstruation ceased for a year, and then started up and has been regular ever since. A close investigation of these cases that continue to menstruate after complete removal of both ovaries and tubes has led me to conclude that this occurs in those where the adhesions are great, especially where the inflammation contracts and shortens the ovarian ligament, and makes it very difficult to remove the ovary and not leave more or less of it in the stump, or where the adhesions make it necessary to tear the ovary into pieces to get it out, usually a small part being left on the floor of the pelvis or on the broad ligament. I do not know of a case where the ovaries and tubes, being entirely free from adhesions, have been removed close to the uterus in which menstruation returned and remained regular.

I suppose if the tubes and ovaries were removed before puberty, that the effect would be great in changing the character and nature of the woman; but when removed after full development they do not appear to have any marked effect on her appearance, character, or temperament in any manner whatever.

The use of large saline enemata during the operation, to make up for loss of blood and prevent shock.—In my report last year I advocated the use of hot water, at 115° F., poured freely into the peritoneal cavity during operation to prevent shock. During the past year I had two cases of profuse bleeding during operation. In one, a case of hysterectomy for a large vascular fibromata, several large venous sinuses were torn in lifting out the tumor, and as it had a double source of blood supply—one from the uterus, the other from enormously distended vessels passing into the tumor from the omentum—at least three pints of blood were lost before both pedicles could be secured. Immediately an eight-ounce salt solution of beef peptones was injected into the rectum while I was operating, and the injections were repeated every twenty minutes till four were given. They were all retained. Although there was at first marked symptoms of shock, the patient quickly rallied, and three hours later all signs of shock had disappeared. The enemata were repeated at longer intervals, and she made a good recovery.

The object of the hot saline injections was not merely to stimulate reaction or to nourish the patient, but have the hot saline solution absorbed and take the place in the circulation of the volume of blood lost. It is surprising how much the rectum will absorb under such conditions. I have had the opportunity to test this treatment in two formidable cases, and *I now propose to give large eight- to ten-ounce hot saline enemata during and immediately after laparotomy or surgical operations, to prevent shock and take the place of transfusion whenever loss of blood indicates their use.*

SUMMARY OF STATISTICS.—Of the 204 laparotomies 110 were private cases with 12 deaths, but 6 of the 12 were in extreme cases under the head of miscellaneous. Taking ovariotomies, removal of appendages for disease, and hysterectomies, there were six deaths—five in the first 50, and only one in the second 50 cases.

In the 94 cases done in Bellevue Hospital there were nine deaths—seven in the first 44, and only two in the last 50 cases, and both of these had chronic Bright's disease, rendered active by the ether or operation. As no cases have been refused operation where there was the least chance of saving life, either in or out of the hospital, it is plain that our methods of operating have greatly improved.

TABLE I.—*Removal of the Uterine Appendages.*

No. of case.	Where operation performed.	Date.	Age.	Married or single.	No. of children.	No. of abortions.	No. of tappings.	Diagnosis.	Operation.	Drainage.	Results.	Remarks.
		1887.	Years.									
1	Hospital..	Jan. 24...	36	W.	2	..	....	Salpingitis and ovaritis.	Complete removal of appendages.	No.	Recovery......	Has had severe pain in back and left iliac region for four years, making her totally unfit for work; cystic ovaries and catarrhal salpingitis.
2	Hospital..	Jan. 31...	45	M.	1	1	....	Salpingitis, ovaritis..	Complete removal of appendages.	Yes.	Recovery......	History of peritonitis after miscarriage. Intestines very adherent to uterus and its appendages. Tubes occluded and much thickened, ovaries both very adherent.
3	Private...	Feb. 19...	35	M.	..	..	....	Salpingitis and ovaritis.	Complete removal of appendages.	No.	Recovered without bad symptom.	Had symptoms of repeated attacks of local peritonitis, and bed-ridden for three years.
4	Private...	Feb. 23..	26	M.	1	1	....	Cystic ovaries, salpingitis?	Complete removal of appendages.	No.	Recovered without bad symptom.	Both ovaries enlarged and prolapsed. Has always had dysmenorrhœa, which became worse after the birth of her child, so that she spends much time in bed.
5	Hospital..	Feb. 24.	35	W.	..	..	....	Uterine fibroids, pyosalpingitis.	Complete removal of appendages.	Yes.	Recovery.....	Small fibroids on left side, posterior and anterior walls. Right tube contained pus. Both ovaries and left tube inflamed.
6	Hospital..	Feb. 28...	24	M.	1	..	No.	Ovaritis and salpingitis.	Removal of appendages on left.	No.	Recovery	Left ovary cystic, size small orange; tube also enlarged and inflamed; right side normal.
7	Hospital..	March 5..	24	M.	..	..	...	Pyosalpingitis and ovaritis.	Complete removal of appendages.	Yes.	Recovered without trouble.	Both tubes enlarged, firmly adherent. Ovaries cystic, and rolled up in broad ligaments.
8	Hospital..	March 5..	29	M.	..	..	....	Salpingitis or disease of ovaries.	Complete removal of appendages.	No.	Recovered without bad symptom.	Small fibroid on uterus, and left ovary enlarged and very hard, having undergone fibroid degeneration. Intense local pain since miscarriage. Could not stand local treatment.
9	Hospital..	March 7..	32	W.	1	..	No.	Uterine fibroid......	Complete removal of appendages.	No.	Recovery.....	For several years suffered greatly with pains in pelvis and thighs, and profuse and irregular hemorrhage. Fibroid in posterior wall.
10	Private...	March 30.	23	M.	..	?	....	Pyosalpingitis and ovaritis.	Complete removal of appendages.	Yes.	Recovered....	Tubes occluded and strongly adherent with the ovaries and broad ligaments. Ovaries undergoing suppurative inflammation.
11	Hospital..	April 2...	20	M.	1	..	No.	Ovaritis and salpingitis.	Removal of left tube and ovary.	No.	Recovery.....	Severe pain in left iliac region, especially during menstruation. Left ovary bound to mesentery and had a small hæmatoma attached.
12	Private...	April 9...	37	M.	.	..	....	Fibroids............	Complete removal of appendages.	No.	Recovered; no trouble.	For three years has been very feeble on account of severe uterine hemorrhage. Curetting was tried.
13	Private...	April 13..	30	M.	2	?	....	Ovaritis............	Complete removal of appendages.	No.	Recovered; no trouble.	For past four years been in bed with symptoms of repeated attacks of local peritonitis. Under constant treatment. Uterus retroverted. Ovaries prolapsed, adherent, and enlarged.
14	Hospital..	April 16..	22	M.	4	..	No.	Ovaritis and salpingitis.	Complete removal of appendages.	Yes.	Recovery.....	After using vaginal injection, ten months ago, had symptoms of local peritonitis. Uterus bound down by adherent appendages. Left ovary cystic, tubes occluded.
15	Private...	April 30..	32	M.	..	..	....	Fibroid tumor of the uterus complicated by salpingitis and ovaritis.	Complete removal of appendages.	No.	Recovered; no trouble.	Fibroid size of orange in posterior wall of uterus. Uterus, tubes, and ovaries matted together in bottom of pelvis. Tubes distended with muco-pus. Ovaries cystic. Five years practically in bed and under constant treatment for pain. Severe hemorrhages for several months. Very feeble condition.
16	Private...	May 5....	..	M.	..	..	....	Pyosalpingitis and cystic degenerated ovaries.	Complete removal of appendages.	No.	Recovered; no trouble.	Tubes contain muco-pus, adherent and occluded; ovaries adherent, and had cystic degeneration. Had worn pessaries for retroversion, but without much relief. Several attacks of local peritonitis lately.
17	Hospital..	May 28...	30	M.	..	..	No.	Uterine fibromata and cystic ovary.	Complete removal of appendages.	No.	Recovery.....	Has had constant pain in left inguinal region for sixteen months; severer during menstruation. Has been in insane asylum for five months. Fibroids in anterior wall; right tube dilated, and ovary cystic.
18	Private...	May 30...	..	M.	2	?	....	Cystic ovaries.......	Complete removal of appendages.	No.	Recovered; no trouble.	Five years bed-ridden. Several months in a hospital; had cervix sewed up; had become an opium eater.
19	Private...	May 30...	19	S.	..	..	....	Hystero-epilepsy; small ovarian tumor.	Complete removal of appendages.	No.	Recovery.....	Ovarian tumor, size of orange, filled with dark, bloody fluid on right side. Left ovary much atrophied and hardened. Clear history of epileptiform convulsions monthly.
20	Private...	June 11...	40	M.	3	..	....	Uterine fibromata...	Complete removal of appendages.	No.	Recovery.....	Left tube much enlarged; ovary, size of egg; four small fibromata on fundus.
21	Hospital..	June 11...	26	M.	..	..	....	Ovaritis, salpingitis, and fibroid.	Complete removal of appendages.	Yes.	Recovery.....	Patient more or less unfit for work on account of pain in pelvis for eight years. Uterus seemed to be about three times normal size from fibroid. Appendages bound down by adhesions on both sides.
22	Private...	June 20...	29	M.	..	..	....	Enlarged sensitive ovaries.	Complete removal of appendages.	No.	Recovered; no trouble.	Elongated fibroid-degenerated ovaries. Severe dysmenorrhœa.
23	Private...	June 20...	30	M.	..	..	....	Salpingitis and ovaritis.	Complete removal of appendages.	No.	Recovered. .	Occluded adherent tubes and cystic ovaries.
24	Private...	June 25...	29	S.	..	..	...	Fibroid of uterus and ovarian neuralgia.	Complete removal of appendages.	No.	Recovered....	Uterus studded with small fibroids. Constant pain for years. Small fibroids on ovaries also.
25	Private...	June 30...	36	M.	2	2	....	Fibromata.........	Complete removal of appendages.	Yes.	Recovered....	Fibroid size of three and a half months' pregnancy. Enormous enlargement of veins of broad ligament. Violent hemorrhages, not controlled by curetting.
26	Hospital..	July 26...	26	S.	..	..	...	Ovaritis and salpingitis.	Complete removal of appendages.	No.	Recovery.. ..	Suffered for past twelve years with pains in right iliac region, which have been getting worse and unbearable, with menstruation. Both ovaries and tubes inflamed and bound down, especially on right side.
27	Private...	July 30...	28	M.	1	..	...	Peritoneal adhesions fixing uterus backward, obstructing rectum; ovaritis.	Laparotomy; separation of adhesions.	No.	Recovered....	Except for adhesions, appendages apparently normal. Partial intestinal obstruction; constant backache.
28	Private...	Sept. 14..	29	M.	1	..	....	Old peritoneal adhesions fixing uterus backward and obstructing rectum.	Separation uf adhesions, of appendages, and uterus.	Yes.	Recovered....	Appendages apparently about normal, except from adhesions.
29	Hospital..	Sept. 15..	23	M.	1	..	...	Ovaritis and pyosalpingitis.	Complete removal of appendages.	Yes.	Recovery.....	Has had hemorrhage for a year; two months ago had severe pain in left iliac region, and a few days later noticed a lump. Left tube and ovary contained about five ounces of pus. Sac of abscess was very adherent, especially to rectum. Right appendages also very adherent; abdomen washed out with water; temperature, 100°.
30	Private..	Sept. 18..	27	M.	2	..	....	Fibromata.........	Complete removal of appendages; curetting.	No.	Recovered....	Ovaries twice normal size and fibroid-degenerated, having several small fibroids dependent from them. Fibroma in left cornu of uterus, of size of orange, and several smaller ones in posterior wall.

TABLE I.—*Continued.*

No. of case.	Where operation performed.	Date.	Age.	Married or single.	No. of children.	No. of abortions.	No. of tappings.	Diagnosis.	Operation.	Drainage.	Results.	Remarks.
		1887.	Years.									
31	Hospital..	Oct. 1....	26	S.	..	..	....	Ovarian neuralgia...	Removal of left of appendages.	No.	Recovery.....	Ever since puberty has had more or less pain in left iliac region, which has become worse and worse, especially during menstruation. Pain incapacitates her for work. Left ovary much atrophied.
32	Hospital..	Oct. 8....	34	W.	3	..	....	Uterine fibroids.....	Complete removal of appendages.	No.	Recovery.....	Painful fibromata with uterine displacement, and hemorrhagia.
33	Hospital..	Oct. 8....	21	M.	1	..	...	Cystic ovaries.......	Complete removal of appendages.	No.	Recovery.....	Constant pain. Both ovaries atrophied and cystic.
34	Private...	Oct. 12...	29	M.	2	1	....	Salpingitis and enlarged cystic ovary right side.	Complete removal of right tube and ovary.	Yes.	Recovery.. ..	Left tube and ovary removed previously. Large tube occluded: cystic ovary size of orange, containing coffee-colored fluid.
35	Hospital..	Oct. 15...	39	M.	..	..	No.	Uterine fibroid; multiple.	Complete removal of appendages.	No.	Died.........	Multiple, irregular, and painful fibromata seven in number Autopsy showed no signs of sepsis or peritonitis. Kidneys in state of chronic interstitial nephritis. With six other cases was poisoned by sewer-gas after operation.
36	Private...	Oct. 23...	38	M.	3	6	....	Pyosalpingitis both sides.	Complete removal of appendages.	Yes.	Recovery.....	Both tubes much enlarged, one containing about two ounces of pus; ovaries much inflamed and cystic; many adhesions.
37	Private...	Nov. 1...	36	M.	.	..	....	Double pyosalpinx and ovaritis.	Complete removal with abscess.	Yes.	Recovery.....	Bed-ridden for several years. Seven attacks of peritonitis in two years. Abscess held fifteen ounces.
38	Private...	Nov. 23..	38	S.	..	..	.	Ovaritis. Left side hæmatocele.	Removal of left ovary and tube.	Yes.	Recovery.....	Constant pain left side. Unable to walk without increase of pain. Ovary size of a duck's egg.
39	Hospital..	Nov. 12..	32	W.	1	..	....	Cystic ovaritis.......	Complete removal of appendages.	No.	Recovered....	Constant pain.
40	Private...	Dec. 1....	25	M.	1	1	....	Double pyosalpinx: ovaritis; tubercular?	Complete removal of appendages.	Yes.	Recovered....	Tumor size of a large orange in the right broad ligament, and one the size of a lemon in the left. Large abscess, tubes large and cheesy.
41	Hospital..	Dec. 12...	46	M.	2	4	....	Atrophied and adherent ovary; uterine fibroma.	Complete removal of appendages.	Yes.	Recovered....	Repeated attacks of local peritonitis—constant pain.

TABLE II.—*Ovariotomies.*

No. of case.	Where operation performed.	Date.	Age.	Married or single.	No. of children.	No. of abortions.	No. of tappings.	Diagnosis.	Operation.	Drainage.	Results.	Remarks.
		1887.	Years.									
1	Hospital..	Jan. 22...	30	M.	..	1	....	Intra-ligamentous cyst?	Ovariotomy.	Yes.	Died on fourth day from suppression of urine.	Cyst size of cocoanut imbedded in broad ligament of right side. Autopsy revealed chronic and acute diffused nephritis and cirrhosed liver.
2	Private...	Jan. 26...	52	M.	1	..	....	Parovarian cyst.	Ovariotomy.	No.	Recovered; no temperature.	Parovarian cyst size of cocoanut was buried in right broad ligament.
3	Private...	Feb. 23...	26	M.	..	..	....	Ovarian tumor?	Removal of papillomatous fluid and material by laparotomy.	Yes.	Recovered; relieved and improved by drainage.	Greatly distended fluid from ascites due to bursting of papillomatous ovarian tumor. Omentum, intestines, etc., all covered with papilloma. Drained for six weeks.
4	Private...	March 17.	31	M.	..	..	....	Ovarian tumor; ascites.	Ovariotomy; removal of several gallons of fluid and myxomatous material.	Yes.	Recovered; much improved by permanent drainage.	Omentum, intestines greatly enlarged by hundreds of jelly-like masses. Myxomatous material.
5	Private...	March 21.	27	M.	..	..	...	Ovarian tumor size of full-term pregnancy.	Ovariotomy; both ovaries.	Yes.	Recovered; hemorrhage.	Tumor was removed without difficulty. Drainage-tube showed hemorrhage three hours after operation. Patient collapsed and pulseless. Abdomen opened and quarts of clots turned out. Pedicle needle had split a vessel; re-tied. Patient made good recovery.
6	Private...	April 27 ..	21	M.	1	..	....	Ovaritis?	Ovariotomy; typical parovarian tumor.	No.	Recovered; no temperature.	Local peritonitis around a parovarian cyst size of duck's egg; had to remove tube and ovary with it.
7	Hospital..	May 10...	27	S.	..	..	....	Osteo-sarcoma attached to sacrum size of large child's head fixed in pelvis.	Ovariotomy; solid tumor; sarcoma?	Yes.	Recovered; no temperature.	Diagnosed by several as osteo-sarcoma and incurable. Pelvis filled by fixed *very hard* solid tumor. With abdomen open, very difficult to dislodge; the pedicle not larger than thumb. No adhesion, only wedged in the pelvis. Ten months after operation no signs of return.
8	Private...	May 21...	21	S.	..	..	...	Two elastic tumors—one on either side of pelvis.	Ovariotomy, complicated by pregnancy, fourth month.	No.	Recovered; without temperature: pregnancy not disturbed.	Ovarian tumor size of child's head. Uterus distended by pregnancy, fourth month.
9	Private...	May 30...	19	S.	..	..	....	Small ovarian tumor, complicated by hystero-epilepsy.	Ovariotomy, both sides.	No.	Recovered; without temperature.	Clear history of epileptiform convulsions monthly. Ovarian tumor size of orange made out.
10	Private...	July 20...	48	M.	3	..	....	Multilocular ovarian tumor.	Ovariotomy, both sides.	No.	Recovered; no temperature.	Simple multilocular cyst, twenty-five pounds; some omental adhesions.
11	Private...	Sept. 21..	33	M.	1	..	....	Ovarian tumor.	Ovariotomy; papillomatous sac had bursted; both ovaries removed.	Yes.	Recovered.	Papillomatous growth had burst the sac and caused peritonitis and very extensive adhesions.
12	Private...	Sept. 22..	57	M.	2	..	....	Ovarian tumor.	Ovariotomy, right side.	No.	Recovered; without temperature.	Simple multilocular cyst, twenty pounds. Some omental adhesions.

TABLE II.—*Continued.*

No. of case.	Where operation performed.	Date.	Age.	Married or single.	No. of children.	No. of abortions.	No. of tappings.	Diagnosis.	Operation.	Drainage.	Results.	Remarks.
		1887.	Years.									
13	Hospital..	Oct. 1....	43	S.	..	..	....	Ovarian cyst.	Ovariotomy, both ovaries.	Yes.	Recovered; temperature, 104°.	Simple ovarian tumor, ten pounds. Both ovaries cystic. High temperature due to sewer-gas poisoning. Several others affected by it.
14	Private...	Oct. 17...	28	M.	..	..	....	Fibroma? Dermoid cyst?	Ovariotomy, both sides.	No.	Recovered; no temperature.	Case long standing. Much local pain. Dermoid both sides—one size of cocoanut. Hair, bones, etc.
15	Private...	Oct. 27...	40	M.	..	..	....	Dermoid cyst? Fibroma?	Ovariotomy, both sides.	Yes.	Recovered; slight temperature.	Twelve years' standing. Diagnosed as fibroma. Dermoid both sides—one fifteen pounds. Hair, bones, etc. Pyosalpinx both sides.
16	Hospital..	Nov. 28...	30	S.	..	..	....	Dermoid cyst; ascites.	Ovariotomy.	Yes.	Recovered; highest temperature, 101½°.	Leg œdematous. Several quarts of ascitic fluid removed. Dermoid cyst size of an orange, hard and rough; long pedicle. Hair, bone, etc.
17	Private...	Dec. 29...	23	S.	..	..	....	Parovarian cyst.	Ovariotomy, both sides.	No.	Recovered.	Bedridden for several years. Intense local pain. Cyst size of a large orange.

TABLE III.—*Suprapubic Hysterectomies.*

No. of case.	Where operation performed.	Date.	Age.	Married or single.	No. of children.	No. of abortions.	No. of tappings.	Diagnosis.	Operation.	Drainage.	Results.	Remarks.
		1887.	Years.									
1	Hospital..	Jan. 12...	38	M.	..	..	....	Painful uterine fibroma.	Hysterectomy; suprapubic; pedicle extra peritoneal.	No.	Recovered; highest temperature, 101°.	Local pain and hemorrhage. Solid tumor filling pelvis and abdomen above umbilicus. Large fibroma, involving uterus, twenty pounds.
2	Hospital.	March 19.	28	M.	1	..	....	Uterine fibromata.	Suprapubic myomotomy; hysterectomy: pedicle extra peritoneal.	No.	Recovered; highest temperature, 100.5°.	Abdomen distended by a large vascular fibroma, twenty-three pounds. Severe hemorrhage and local pain. Immense veins attach the tumor to omentum. Pedicle involves right cornua of uterus. Ligated with silk and sewed in abdominal wound.
3	Private...	May 26...	28	S.	..	..	....	Multiple fibromata.	Suprapubic hysterectomy; enucleation of fibroma; pedicle extra-peritoneal.	No.	Recovered; no temperature.	Two tumors size of man's head, and third size of fist below vaginal junction. Broad ligaments and large tumors cut away. Small tumor enucleated. Patient size of full-term pregnancy before operation.
4	Private...	June 6...	35	M.	..	1	....	Fibroma size of a child's head. Old salpingitis syphilitic.	Suprapubic hysterectomy; pedicle extra peritoneal.	No.	Died fourth day of sepsis.	Fibroid size of head of six-year-old child. Tubes and ovaries imbedded in side of tumor. Pyosalpinx. Dense adhesions. Pedicle through the tubes. Patient feeble. Died fourth day, with high temperature. No distention or sign of peritonitis.
5	Hospital..	June 6...	37	M.	..	..	....	Uterine fibroma; rapid growth.	Suprapubic hysterectomy; pedicle secured extra peritoneal.	No.	Recovered; highest temperature, 101°.	In six months tumor grew as large as eight months' pregnancy. Dragging pains. Fifteen vascular fibroma were removed without difficulty.
6	Private...	Oct. 13...	54	S.	..	..	....	Uterine fibromata. Cystic degeneration.	Suprapubic hysterectomy; pedicle secured extra peritoneal.	No.	Recovered; no temperature.	Tumor for several years. Since menopause, two years ago, it has rapidly increased in size. Fibroma twenty pounds, involving whole uterus. Removed in centre was a cyst of a pint of clear straw-colored fluid.
7	Hospital..	Oct. 15...	34	S.	..	..	....	Uterine fibroma.	Suprapubic hysterectomy: pedicle secured extra peritoneal.	Yes.	Recovered; highest temperature, 101.2°.	Abdomen as large as eight months' pregnancy. Severe uterine hemorrhage. Much local pain. Large, very vascular, lobulated fibroma; eighteen pounds. Extensive adhesion. Large sinus. Great loss of blood. Hot saline rectal enemata during and after operation every twenty minutes. Twenty ounces or more absorbed and shock prevented.

TABLE IV.—*Laparotomies—Miscellaneous.*

No. of case.	Where operation performed.	Date.	Age.	Married or single.	No. of children.	No. of abortions.	No. of tappings.	Diagnosis.	Operation.	Drainage.	Results.	Remarks.
		1887.	Years.									
1	Private...	Jan. 6......	44	M.	1	..	..	Small ventral hernia one year after simple ovariotomy.	Laparotomy for cure of ventral hernia.	No.	Recovered. Without temperature.	No drainage-tube. Patient very fat, and had a severe cough soon after the ovariotomy.
2	Private...	Jan. 16.....	37	M.	..	..	..	Large septic pelvic abscess filled left side of pelvis.	Laparotomy; emptying and draining abscess.	Yes.	Died in twenty-six hours of shock and sepsis.	Abscess in left side of pelvis, involving the tube, ovary, rectum, and side of uterus. Patient had septic peritonitis at the time of operation.
3	Private...	Feb. 10.....	32	M.	1	..	..	Abdominal pregnancy; child had been killed by hypodermics of morphia at seven and a half months; septic for several weeks.	Laparotomy; fœtus. placenta, and several quarts of decomposing fluid removed.	Yes.	Died in thirty-six hours of shock and sepsis.	Patient weak from sepsis of several weeks' duration. Greatly distended. No loss of blood during the operation. Sponges left in cavity by mistake.

TABLE IV.—*Continued.*

No. of case.	Where operation performed.	Date.	Age.	Married or single.	No. of children.	No. of abortions.	No. of tappings.	Diagnosis.	Operation.	Drainage.	Results.	Remarks.
		1887.	Years.									
4	Private...	March 10...	35	?	..	..	..	Enlarged and displaced kidney; pyelo-nephritis; septic attacks; renal calculus.	Nephrectomy..	Yes.	Recovered; no shock; highest temperature, 101°.	Imbedded in the calicis was an irregular, mixed, hard stone, 100 grains. Chronic diffuse and acute nephritis; pyelitis. Patient, one year after, perfectly well.
5	Private...	March 17...	..	M.	..	..	..	Ascites from myxoma; peritonitis.	Laparotomy and permanent drainage for several weeks.	Yes.	Recovered; no temperature.	Several months before ovariotomy had been done. One cyst had burst, and myxomatous matter escaped in abdomen.
6	Private...	March 21...	..	M.	..	..	..	Collapse from hemorrhage three and a half hours after ovariotomy.	Laparotomy for hemorrhage from stump after ovariotomy.	Yes.	Recovered....	Not less than two quarts of clots and serum were turned out of the abdomen. The pedicle-needle had split a vein in the stump; when held up it did not bleed. Retied. Hot saline douches were used to prevent death from shock.
7	Private...	March 28...	..	M.	..	.	..	Strangulated umbilical hernia.	Herniotomy for strangulated umbilical hernia.	No.	Died one hour after operation; vomited matter in trachea.	Very fat woman. Operation completed. Patient revived from ether and choked to death on stercoraceous matter.
8	Private...	April 30....	..	M.	1	3	..	Suppurative puerperal peritonitis; sepsis.	Laparotomy; emptying more than a pint of pus, and washing and draining peritoneum.	Yes.	Died of shock and sepsis in twenty hours.	Septic peritonitis of several days. Temperature, 105⅗° at the time of operation. Inter-uterine injections failed. Laparotomy deferred. Sepsis extreme.
9	Hospital..	May 12.....	51	M.	..	1	..	Chronic pelvic peritonitis; partial intestinal obstruction.	Laparotomy; breaking up adhesions.	No.	Recovered....	Pelvic pains and intestinal obstruction relieved.
10	Hospital..	May 19.....	50	M.	14	..	..	Carcinoma of liver?..	Exploratory laparotomy.	No.	Recovered; no bad results from operation.	Cancer of liver and gall bladder.
11	Private...	May 21.....	34	M.	..	..	..	Abdominal dropsy and large ventral hernia; Bright's disease.	Laparotomy; removal of fluid; closing hernia; drainage.	Yes.	Died on fifth day; uræmia; suppression.	Contracted liver—size of hand. Ether caused acute congestion of kidneys.
12	Private...	July 1......	..	M.	..	..	..	Ascites; myxoma; peritonitis.	Laparotomy; permanent drainage.	Yes.	Recovered; relieved by drainage.	Second time the abdomen filled with fluid. Every organ has myxoma growing on it. Omentum a large solid mass.
13	Private...	Sept. 4.....	50	M.	1	2	..	Sarcoma?........ ..	Exploratory incision.	No.	Recovered; no bad effects from operation.	Sarcoma involved uterus and broad ligaments and intestines. Wound closed.
14	Private...	Dec. 17.....	28	M.	2	?	1	Renal calculi; pyelonephritis; perinephritic abscess; septicæmia.	Laparotomy; nephrectomy.	Yes.	Died in five days of sepsis and exhaustion.	Three weeks before had opened a large septic perinephritic abscess. Kidney enlarged; calicis filled with three large stones, 125 grains. Patient very weak from sepsis.
15	Private...	Dec. 21.....	23	M.	1	..	..	Necrosis of pelvic bones.	Exploratory incision.	No.	Recovered; no bad effects from operation.	No pelvic abscess found. Deformed pelvic bones and old periostitis. Wound closed.
16	Private...	Dec. 31.....	37	M.[1]	..	..	..	Perityphlitic abscess.	Incision and drainage; pint of fetid pus.	Yes.	Recovered without bad symptoms.	Local peritonitis and partial intestinal obstruction for six days. At the time of operation no temperature, good pulse; bowels moved naturally. Under ether the tumor was felt. Nucleus came away the second week. Recovery complete.

[1] Male.

PROGRESSIVE PERNICIOUS ANÆMIA: TWO CASES WITH ONE POST-MORTEM EXAMINATION.[2]

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PROGRESSIVE pernicious anæmia is a rare but very dangerous form of blood disease, obscure in its origin, somewhat difficult of diagnosis, and seldom benefited by treatment. Developing in the most insidious manner, it progresses slowly but surely toward the fatal termination. Its main characteristics may be summed up as follows: The blood exhibits an extraordinary reduction in the number of the red corpuscles, which are also altered in shape and in their constituent elements, while the plasma is unnaturally fluid and coagulation does not occur, or is very imperfect. Hemorrhages also are frequent and from various parts of the body. A third characteristic of the disease is slight fever, of an irregularly intermittent type. But, with the gradual failure of the bodily powers, there is seldom any apparent loss of adipose tissue. Finally, the patient is inclined to be apathetic during the whole course of the affection, making few complaints of any personal suffering, and is often quite indifferent to things transpiring about him.

It seems to be clear that pernicious anæmia was first described by Dr. Walter Channing, of Boston (*New England Quarterly Journal of Medicine*, 1842), for in an article entitled "Anhæmia, particularly in Connection with the Puerperal State and with Functional Disease of the Uterus, with Cases," he evidently portrayed certain types of the disease, though he had not the modern means at his command for effecting a diagnosis. And there is also reason to believe that quite a number of Boston physicians were more or less acquainted with pernicious anæmia as early as 1830. Twenty-five years later Addison described it under the name of *idiopathic anæmia*, though it is claimed by transatlantic writers that he had spoken of its essential features when lecturing to students in 1842. The most important contributions to our knowledge of the subject, however, have been made since the time of Addison, notably by Wilks ("Wilks and Moxon's Pathological Anatomy," p. 636), the veteran pathologist, and others who have been in and about Guy's Hospital, who first appears to have pointed out that in this form of anæmia there is a marked fatty degeneration of certain organs, especially of the heart. In the years 1871–72, Biermer, of Zurich, came forward with new views on the subject, fancying, however, that he had discovered a disease hitherto unknown.

He first directed our attention to the marked changes in the blood, and their importance in making a differential diagnosis. During the past sixteen years contributions have been numerous and important, and American physicians have added their full share to the accumulating fund of information.

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[2] Read before the Clinical Society of the New York Post Graduate Medical School and Hospital, February 18, 1888.

The names that are usually employed to designate the disease are as follows: idiopathic anæmia, essential anæmia, and progressive pernicious anæmia. Personally, I dislike the first of them, because the term idiopathic suggests that there is *no* cause, whereas there is a real cause for it, as for every disease, though we have certainly failed to discover it in this particular instance. The word *essential* in medical terminology indicates, as applied to a particular disease, that it is not dependent on another disease. Now, this may or may not be true of this variety of anæmia. The word pernicious correctly describes the gravity of the affection, and the word progressive a very uniform characteristic. Using the two together, we depict a form of anæmia that cannot be well mistaken, and it will certainly serve us until we have a clearer knowledge of the etiology of this and of some other forms of blood disease.

It may be proper to say at this point that, while we find the term anæmia convenient, it does not aptly describe the true condition of the individual. It is not so much that there is a lack of blood—if, indeed, there be any lack—but a deficiency in some of the normal constituents of the blood, as we shall see at another place.

Let us now note some of the clinical characters of progressive pernicious anæmia. It appears to be doubtful whether one sex is more prone to it than the other. For, though Fagge ("Pract. of Med.," vol. ii., p. 609), in twenty-eight cases that occurred at Guy's Hospital, found that sixteen were males and twelve females, others, whose experience has been in the line of obstetrics, have found it more frequently in women than in men. On the other hand, in studying a greater number of cases, it does not appear that sex has any positively determining influence. Pernicious anæmia is most common in the middle period of life, between twenty and sixty years of age, and is rarely found under fifteen or over sixty years of age. It does not appear to have ever occurred under the age of five years.

As the disease has not been so carefully studied in some localities as in others, we have been led to infer by statisticians that it is comparatively infrequent in certain countries. And so it happens that, while instances of the disease have often been reported in England, France, Germany, and Switzerland, some countries, like our own, have been thought to be exempt. While, however, I believe that the disease is by no means common in New York, it does really occur here, and there have been instances in most, if not all, of our general hospitals. And a recent writer (Musser: Wood's "Reference Handbook," article "Idiopathic Anæmia"[1]) instances no less than forty-two cases occurring in the cities of Philadelphia, Montreal, and Toronto. Reasons for failure to detect the disease will be given further on.

There seems to be an effort on the part of some pathologists to separate this malady into the primary progressive pernicious and the secondary. Such persons would find that in a certain number—the majority—no derangement of the health has preceded the attack, while, in what they would call sequential anæmia, there have been a number of ailments or, at least, unusual states of the system. In the present state of our knowledge, it seems hardly worth while to make these divisions, because we have yet to learn that the antecedent conditions, which have been described here, had any causal relation with the disease. Some of them may be enumerated, however. They are: (1) The parturient state, especially when there has been hemorrhage, or prolonged lactation; (2) inadequate food; (3) yellow fever; (4) mental shock or anxiety, and lastly, (5) infection by parasitic disease. And I would venture to suggest that in this last named direction we may well look with more care in endeavoring to find a causative factor. Now, though hemorrhages and mental disturbances have been quite frequently assigned as causes, we should not fail to remember that, as a rule, the disease develops without assigned cause; and this characteristic was urged by Addison in his description, which I will now quote, because it is a most remarkable pen-picture of the disease. He says: "It (pernicious anæmia) makes its approach in so slow and insidious a manner that the patient can hardly fix a date to the earliest feeling of that languor which is shortly to become so extreme. The countenance gets pale, the whites of the eyes become pearly, the general frame flabby rather than wasted, the pulse perhaps large, but remarkably soft and compressible, and occasionally with a slight jerk, especially under the slightest excitement. There is an increasing indisposition to exertion, with an uncomfortable feeling of faintness or breathlessness in attempting it; the heart is readily made to palpitate; the whole surface of the body presents a blanched, smooth, and waxy appearance; the lips, gums, and tongue seem bloodless; the flabbiness of the solids increases; the appetite fails; extreme languor and faintness supervene; breathlessness and palpitations are produced by the most trifling exertion or emotion; some slight œdema is probably perceived about the ankles; the debility becomes extreme; the patient can no longer rise from his bed; the mind occasionally wanders; he falls into a prostrate and half torpid state, and at length expires; nevertheless, to the very last, and after a sickness of several months' duration, the bulkiness of the general frame and the amount of obesity often present a most striking contrast to the failure and exhaustion observed in every other respect."

With such a description one could rarely fail to make a diagnosis. We have but little to add to the clinical picture. It may, however, be said that vomiting is a very distinguishing symptom; that fever of an irregular intermittent type is usually present, that hemorrhages are frequent, and that a microscopic inspection of the blood will reveal changes that are unknown to any other disease; though on this point I may differ from a very able observer and may be wrong (Fagge, *loc. cit.*, p. 610).

The changes in the blood are as follows: Besides the deficiency in the red globules there are corpuscles present which are not usually found in normal blood. They are very small, globular, and of a deep red color. Whether the presence of micocytes is pathognomonic may be uncertain, but they occur in almost all, if not all, cases. Besides these are nucleated red corpuscles, which are also found in the adipose tissue of the body.

There is little in the macroscopic morbid anatomy of this disease that throws light on its character. Fenwick once found atrophy of the hepatic lobules, and conjectured that this condition might have caused the dyspepsia and vomiting. Pepper, in 1875, first observed that the fatty tissue of the long bones was replaced by the red marrow of infant life. The color is at first purplish, and then light red. Changes in the nervous system have also been noted, but they are said to occur in other forms of anæmia.

There is usually no insuperable difficulty in making a diagnosis, but it should be done by exclusion, mainly. It is not possible to make a diagnosis until the case has been under observation some little time; we have to differentiate from chlorosis, anæmia from losing blood, from known parasitic causes, from malignant disease, Bright's disease, Hodgkin's disease, from malarial and syphilitic disease, and phthisis. In the absence of any one of these, and with the pallor, dyspeptic symptoms, apathy, and changed conditions of the blood, there need be no error committed, though, as a matter of fact, mistakes are sometimes made even among our best clinicians. It is almost uniformly a fatal disease, though treatment may possibly hold the disease in check for some years, if early applied. Death usually takes place in from three months to one year, but patients have lived for upwards of seven years. In so far as treatment is concerned, iron is useless, and though phosphorus has been vaunted, there is probably but one remedy that is of utility. It is arsenic. Possibly this mineral sometimes effects cures, and this opinion is held by Pye-Smith, of London. Personally, I have never known a case to be cured, but the reason of my pessimistic view of treatment may be due to the fact that the disease was not seen in its early stages. It is very desirable that we should collect, as speedily as possible, all data bearing on this point, and the two cases which I append may, therefore, be useful in adding a trifle to existing data.

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[1] The reader who is interested in the subject of pernicious anæmia, will do well to consult this article, which contains a good list of bibliographical references.

Case I.—M——, a middle-aged man, was admitted to the Post-graduate Hospital, under my care, as a private patient, on December 3, 1887, and gave the following history: He had led an active life, as a laboring man, in a position where his health was not in any way jeopardized, nor had he been obliged to work for his living, as his family was in comparatively easy circumstances. A few months before admission he was taken with diarrhœa and vomiting. His physician had treated him presumably for malarial anæmia, and he had taken quinine in large quantities, but without avail. The diarrhœa had exhausted him extremely. Thanks to the devotion of his children, he had never wanted for anything that money could provide. When he appeared at my clinic, on December 3, 1887, he was extremely weak, had a soft, compressible, and rapid pulse, with rapid respiration. The pallor of his countenance and the whiteness of his mucous membranes was extreme; but he complained of no pain or distress of any kind. On examining his chest I found indications of slight œdema of the lungs, at their bases, and some hydropericardium. He was exhibited before the class as a case of pericardial effusion. The sac was dilated and the heart-sounds were muffled. The impulse was also faint. Area of præcordial dulness enlarged. Slight œdema of face and of extremities. When admitted to his room the temperature was 99.8°; pulse, 87; respiration, 24. Suffering from great irregularity of the pulse, he was put upon the infusion of digitalis. A blister was also applied for the hydropericardium. The patient slept well, and in the morning his pulse had fallen to 84; the respiration to 18. Vomiting was arrested by beef-tea and oat-meal gruel at short intervals. Patient expressed himself as feeling very comfortable. On December 7th he had several very loose movements, and felt much exhausted, so that stimulants were ordered him. On December 8th he vomited for the first time after admission, but it was perhaps due to opiates taken to check his diarrhœa. Temperature, 98.5° to 99.4°; pulse, 84 to 90; respiration, 22 to 24. Sulphate of quinine and iron, in moderate doses. Whiskey, one-half ounce every two hours. December 11th: Examination of blood. Red globules, 1,425,000. The red corpuscles are much deformed, some swollen and colorless, and some nucleated. December 13th: Temperature, 98.4°; pulse, 94; respiration, 21. The amount of urine slightly diminishing, but is not abnormal otherwise. December 20th: Temperature, 101.4°; pulse, 102; respiration, 22. December 21st: Temperature, 101.4°; pulse, 116; respiration, 22. December 22d: Patient attempted to sit up, but was too weak. Was now put on Fowler's solution, in three-drop doses. To-day he coughed up some blood. December 23d: Vomiting has again begun. December 24th: Patient is with difficulty aroused. Temperature, 100.5°; pulse, 114; respiration, 24. On December 27th, transfusion of a saline solution was resorted to, and repeated on December 28th. Patient died December 28, 1887, at 9.40 p.m. No post-mortem examination obtained. The patient was apathetic during the whole course of his sickness.

Case II.—M. A. C——, aged twenty-seven, England, was admitted to St. Luke's Hospital during my service there as pathologist, on October 1, 1879. Father and mother probably died of consumption. Patient had enjoyed excellent health until a few months ago, when she had an attack of intermittent fever. Œdema of the feet followed. Quinine stopped the malaria, but her hair fell out. Three weeks before admission she was exposed to severe weather and had a thorough wetting. On the following day she vomited a great deal, and continued to vomit ever since. She also became very anæmic. No appetite. She was a woman of dark complexion, somewhat jaundiced, but the body was well covered with fat. Slight œdema of feet and legs. No fever. Tongue large, pale, and flabby. Slight attacks of pain extending from epigastrium to back and into lumbar regions. Frequent nausea and vomiting of food and clear yellow fluid. Lungs, kidneys, and heart normal. Urine abundant. Sleeps well.

Under treatment by the citrate of iron and quinine the patient improved, the vomiting was lessened, and œdema diminished. Seventeen days after admission the patient suddenly became restless, the breathing stertorous, the pulse became greater, and the patient died of heart-failure.

At the post-mortem examination it was found that the apparent plumpness was largely due to subcutaneous œdema. On opening the thoracic cavity the heart-sac was found to contain thirty-eight ounces of a clear, serous fluid. The lungs were found normal, except that there was a small cheesy nodule at the apex of the right lung, and that this organ was encased by a fibrous deposit. The spleen was enlarged and flabby; weight, sixteen ounces.

The kidneys were pale and white. In the pelvis numerous ecchymotic spots were seen. The liver was considerably enlarged. Weighed sixty-six ounces. The gall-bladder contained two gall-stones. Both kidneys and liver were found infiltrated with small, round corpuscles. All the bones of the body were soft, the ribs especially. This case was diagnosticated as one of pernicious anæmia, and the condition of the bones and of the adipose tissue, with the dropsical and dyspeptic symptoms, would sustain this view. I can find no notes bearing on the examination of the blood, so that an important diagnostic criterion is absent from the case. And I would take occasion to say, in conclusion, that in cases of this sort, and, in fact, in all grave cases of anæmia, the physician will find great advantage in using some instrument for determining the number of the red and of the white blood corpuscles. In pernicious anæmia, especially, any good hæmatometer will furnish us with the most important data for forming a differential diagnosis. And in my opinion the physician who makes use of this instrument in suspected cases will *never* fail to make a diagnosis, if he finds the peculiar condition of the blood referred to, in the absence of the diseases I have already enumerated.

In blood-counting I have latterly employed Gowers' Hæmatocytometer, a better instrument than any I have heretofore used.

17 East Forty-fourth Street.

Some Dermatological Negatives.—Psoriasis is never seen upon the tongue. Ringworm of the scalp is not found in grown persons. Lupus (vulgaris) is a specific disease, and is not due to syphilis. Arsenic does not cure, nor even improve, *all* skin diseases. Eczema is not pronounced ec-*ze*-ma. Premature baldness is not always hereditary, but, on the contrary, is frequently due to neglected dandruff. Lotions are not, as a rule, as good for applications as ointments. The majority of cases of eczema display no vesicles; and the vesicles, when present, are frequently small and quickly broken. The animal parasitic diseases cannot always be diagnosticated by observing the presence of the parasite. Papular syphilis is not "syphilitic psoriasis." Skin diseases frequently penetrate deeper than the skin, and the study of them is deeper still. Acne is not cured in a day, nor pemphigus in a week. The skin presents sixteen square feet of exposed surface, and is unlike other organs, inasmuch as it is more liable to frequent irritation from without. Non-volatile substances dissolved or suspended in water are not absorbed by the skin to any appreciable extent.—*Philadelphia Medical Times.*

REPTILIAN HEART;

OR, RUDIMENTARY AURICULAR SEPTUM, RUDIMENTARY VENTRICULAR SEPTUM, OBLITERATED PULMONARY ORIFICE AND TRUNK, ABSENCE OF PULMONARY VEINS, ABSENCE OF MITRAL ORIFICE, ANOMALOUS VEINS AND ARTERIES.[1]

By W. P. NORTHRUP, M.D.,

NEW YORK.

THE child from which this specimen was taken lived thirty-one days; its chief symptom was cyanosis (a "blue-baby"). At death it was found to have one auricle and one ventricle.

A female child, two weeks old, was brought to the New York Foundling Asylum and entered upon the books with the note, "Condition miserable—cyanosis." She remained under observation two weeks, continuing in the same miserable condition, becoming temporarily less and more cyanotic, and died at the age of one month.

Diagnosis during life was patent foramen ovale and ductus arteriosus.

Autopsy.—The body was small, weighing seven and a half pounds, poorly nourished, and livid, more especially about the head and upper portion of the trunk. The heart inclined to the right side at the angle it usually bears to the left, the left lung, however, bearing the usual two lobes. Posterior portions of both lungs were congested; otherwise normal. The pleura, pericardium, and peritoneum contained a small quantity of clear, straw-colored fluid. The heart consisted of one auricle, into which emptied two veins, the superior and inferior vena cavæ, and one ventricle giving off one artery, the aorta. The ventricular walls were of uniform thickness, showing, without, an intraventricular groove, and within, a ridge of rudimentary septum. The auricle presented externally the usual outline of two auricles with their appendices. Within there was a thin triangular membrane, having the location and appearance of an enlarged Eustachian valve; otherwise, there was no attempt at partition. The superior vena cava opened by a valve-like orifice to the left of the rudimentary septum, corresponding nearly to the usual position of the pulmonary veins. The inferior vena cava opened in its normal position at the right of the base of the Eustachian membrane.

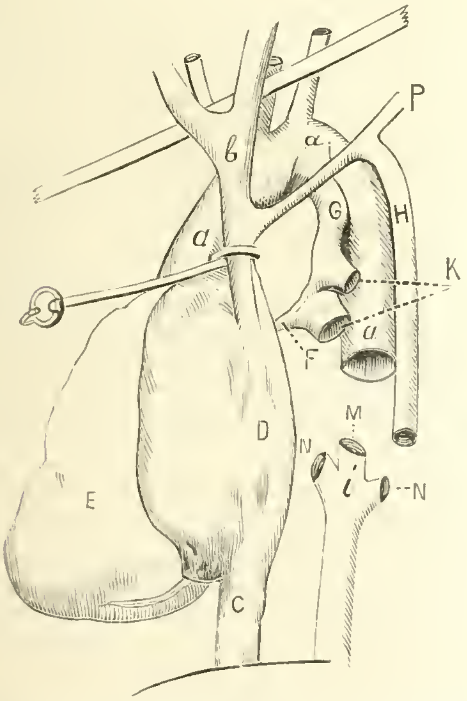

FIG. 1 (life size).—Shows the heart in position. *a*, Aorta; *b*, vena cava superior; *c*, vena cava inferior; *d* and *e*, auricle and ventricle; *f*, rudimentary pulmonary artery; *g*, ductus arteriosus, patent; vena azygo, anomalous; *i*, gastro-hepatic artery, anomalous; *k*, pulmonary branches from ductus arteriosus; *n*, pulmonary veins; *p*, superior intercostal vein.

The pulmonary artery was represented by a fibrous string attached to the base of the heart in the angle formed by the right auricle and origin of the aorta. Its orifice had no rudimentary trace, and its trunk, as far as the ductus arteriosus, was impervious.

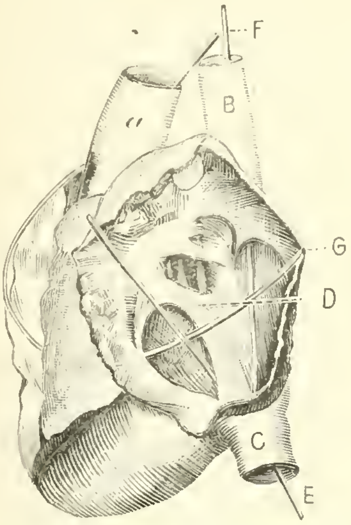

FIG. 2 (life size).—Showing anterior half of auricle laid open. *a*, Aorta; *b*, vena cava superior, through which passes a probe into left half of auricle; *c*, vena cava inferior, through which passes probe (*e*) into right half of auricle; *d*, rudimentary septum or persistent Eustachian valve; *g*, probe passing through auriculo-ventricular opening and out through aortic orifice.

The aorta was given off from the common ventricle in the median line, having upon its right the interventricular groove and rudimentary pulmonary artery. Its relation to the left heart was obvious.

The superior vena cava passed down the median line to the left of the aorta, instead of taking its usual course upon its right.

The valves of the heart were two in number, the usual valves of the aortic orifice and the tricuspid auriculo-ventricular.

Ductus arteriosus Botalli was pervious and equal in calibre to the innominate artery. It descended from beneath the arch of the aorta in a wavy, twisted course for half an inch, when it was joined by the fibrous rudiment of the pulmonary trunk, at this point giving off several branches to each lung.

Below the root of the left lung was a large vessel, receiving blood from the ductus arteriosus by a small straight trunk (Fig. 1, *m*, represented here too large), and from a large vessel coming from each lung. This vessel was without valves, one-third the size of the aorta, conducting arterial blood, and receiving most of its current from the pulmonary veins. It seemed to be physiologically the pulmonary veins, but, instead of emptying into an auricle, it continued downward in an anomalous course, and applied itself to the lesser curvature of the stomach, giving to that organ a rich supply of branches and continuing out to furnish a large trunk to the liver. It was then pulmonary vein and gastro-hepatic artery.

At the usual position of the cœliac axis the aorta gave off a group of arteries as follows: Two renal, superior mesenteric, and splenic.

There were also anomalies among the veins. The left common iliac emptied into the left renal vein. The right common iliac received the blood from the right renal and joined with the left renal at the border of the liver to form with the hepatic vein the inferior vena cava. The azygos veins, major and minor, were represented by an anomalous vessel of large size running along the left side of the aorta, which, having received the superior intercostal, curved forward over the arch of the aorta and emptied into the superior vena cava.

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[1] Presented at a meeting of the New York Pathological Society.

The circulation, then, was maintained by single heart. The auricle received the customary vessels of the right side; the ventricle discharged its blood into the aorta. At each circuit a portion of the current was turned aside to pass through the lungs, become aërated, pass on to the viscera, return by a short route to the auricle and ventricle, and thence for the most part to pass to the general circulation.

From likeness to the blood-course in lower forms of life, this heart is denominated "reptilian."

THE DIAGNOSIS OF EAR DISEASES WITHOUT INSTRUMENTS.[1]

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The title which I have chosen for the following brief paper is one which will surely be accounted a contradiction in terms, both by an otological specialist, and by a general practitioner who has had any considerable experience in diseases of the ear. The subject-matter of the paper is, nevertheless, one which should interest medical men, whether they be "specialists" or "family physicians;" and if it fail to do so in this instance, or if the paper prove quite barren in suggestions of a practical kind, it will be the fault of the writer alone.

Accurate diagnosis, in the case of a vast majority of diseases of the ear, is certainly impossible without the aid afforded by properly-constructed instruments, and is not invariably easy of accomplishment, even with this aid. On the other hand, it will not be disputed that in many cases of aural disease relief is first sought, and must be first sought, at the hands of a physician, who either has no good apparatus for examining the ear, or who lacks experience in the handling of such apparatus. Moreover, in many cases of aural disease, right diagnosis in the very earliest stage of the disease is a matter of the greatest importance. Particularly is this true of that class of cases wherein a disturbance in the function of hearing is the leading symptom; for, unless the family physician be on the watch for the first beginning of the disease and knows how to recognize its symptoms, an incurable deafness is but too often the result.

It is well known that chronic suppurative disease of the middle ear very frequently begins in childhood, or in early infancy; sometimes as an acute inflammation of the tympanum occurring during the course of, or as a sequela to, an attack of scarlet fever, measles, diphtheria, or whooping-cough; sometimes as an accompaniment of, or sequela to, the far milder "cold in the head" or a common sore throat. It is not so well known, or, at least, it is too apt to be forgotten, that the disease in question, instead of commencing as an acute attack, is sometimes very insidious in its beginnings; that often it is, to all appearances, quite independent in origin of other pathological conditions; and that, when violent in its onset and occurring in an infant or young child, its symptoms may be readily misinterpreted as indications of disease of the brain.

The damage to the hearing caused by this disease, and the many annoyances to which it subjects the patient and the patient's friends, are also widely, but not fully, appreciated. The dangers of the disease are by no means properly appreciated; although the saying of Wilde, "So long as otorrhœa" (meaning otorrhœa of tympanic origin) "is present, we never can tell how, when, or where it will end, or what it may lead to,"[2] is as true now as it was the day it was uttered, twenty-five years ago.

The importance of early diagnosis in the case of suppurative disease of the tympanum cannot be over-estimated; the same is true of the non-suppurative forms of disease in this cavity, both acute and chronic, and it is self-evident that upon the family physician must fall the responsibility of making such diagnosis. The preventive treatment of these and of all other affections of the ear is wholly in his hands; the curative treatment is largely in his hands, at times it is wholly so; and it is the manifest duty of every physician to make himself more familiar with the etiology of aural diseases than he is apt to be at the time of graduation, to perfect himself so far as he can in the methods of diagnosis applicable to such cases, and, when not in possession of the instruments of diagnosis, or when unskilled in their use, at least to familiarize himself with such non-instrumental methods as may lead him to the formation of an approximately correct opinion concerning the nature of the affection with which he has to deal.

Diseases of the auricle require for their diagnosis no special apparatus. On the other hand, diseases of the external auditory canal, and those of the middle and internal ear, do require such apparatus for their accurate diagnosis, although a probable, or an approximate, diagnosis of them can sometimes be made without any apparatus whatever. The history of the case, as to the presence or absence of such symptoms as deafness, pain in or about the ear, a discharge from the auditory canal, itching of the skin lining the latter, etc., will often give valuable information upon which to form a probable diagnosis, especially if due attention be paid to the comparative severity of each symptom, to the manner, time, and frequency of its occurrence; and, when two or more such symptoms are present in a given case, to their relative sequence, or the order in which they have appeared, and to their relative severity and relative frequency. The character of a discharge, where such is present, will often be an aid to more accurate diagnosis. Thus, for example, a mucous discharge, or a purulent or serous discharge, containing an admixture of mucus, points infallibly to disease of the middle ear, with loss of continuity in the tympanic membrane. The occasional appearance of blood in a chronic discharge is a pretty sure indication of the presence of polypoidal growths in the ear, or of granulations which may lead to such growths. A malodorous discharge frequently, but by no means always, points to the tympanum as its place of origin. The purulent or sero-purulent discharge of a chronic external otitis is apt to have a bad odor, peculiar to itself, and by this peculiarity is easily differentiated from the equally, or even more, badly smelling discharge of tympanic disease. A discharge from the ear, accompanied by persistent itching of the canal, is usually due solely to otitis externa of the eczematous variety, although the mere presence of itching by no means excludes tympanic disease.

Pain in the ear, increased by traction on the auricle, is a symptom rather of external, than of tympanic, otitis; although such traction may increase the pain in either case. Noticeable displacement of the auricle is, as a rule, found only in cases of severe otitis media. Pain in the ear or head, combined with swelling, tenderness, and redness of the integument behind the auricle, are frequently, but not always, indicative of severe inflammation located in the tympanic cavity and involving the antrum and other mastoid cells; while, as a general rule, where the swelling and tenderness are located below, rather than behind, the auricle, they point to the extra- rather than to the intra-tympanic portion of the ear as the seat of the trouble which has given rise to them.

Deafness unaccompanied by discharge or by pronounced pain, is usually a symptom of middle-ear catarrh of the chronic or of the mild subacute variety; following upon persistent itching of the auditory canal, it may indicate obstruction of this channel by exfoliated epithelium, or by an inflammatory thickening of its walls; when very sudden in its onset, and especially when it has been first observed directly after bathing the head or washing the ears, such deafness may be due to the presence of water at the fundus of the canal, or to impaction of cerumen—quite as frequently to the latter as to the former. Sudden and pronounced deafness occurring in a patient who has a syphilitic taint, is very apt to arise from specific involvement of the internal ear; including in this term the auditory nerve throughout its course, from the points of origin in the cerebellum and medulla oblongata to its terminal distribution in the cochlea, vestibule, and ampullæ of the semicircular canals. When we are told that a patient's deafness has been of long duration, that it has not been accompanied by any discharge from the ear at any time (a point, by the way, concerning which the history given by the patient, or by his friends, is often misleading), and that it varies considerably with seasonal or weather changes, it is probable that we have to deal with that commonest of all aural affections, simple chronic catarrh of the tympanum. The diagnosis, under such circumstances, is rendered more probable by a discovery of the symptoms and visible signs of chronic nasal and naso-pharyngeal catarrh, or by a history of past trouble from this affection. This chronic middle-ear catarrh is the disease which is responsible, in greater degree than all other aural affections combined, for the "hardness of hearing" of adult life, and for the deafness, in its slighter degrees, often mistaken for "inattention," of school children. Nay, more than this: to it, and to it alone, are unquestionably to be attributed a goodly percentage of cases of deaf-mutism, and by its early detection and treatment this great affliction could often be averted.

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[1] Read before the Manhattan Medical and Surgical Society, February 4, 1888.

[2] Practical Observations on Aural Surgery. Philadelphia: Blanchard & Lea. 1853.

The history of an injury inflicted by a blow, or incurred by a fall, together with the sudden onset of a deafness which is accompanied by noises in the ear and by dizziness or faintness, may point merely to a sudden impaction of cerumen or of a foreign body in the auditory canal, or may indicate a traumatic rupture of the membrana tympani. Followed immediately, or within a few days, by an odorless discharge of blood-stained serum, more or less profuse in amount, such a collection of symptoms and a history of such an injury would point with tolerable certainty to traumatic rupture of the membrane; and a noise in the ear made by inflation, according to Valsalva's method, when loud enough to be heard by the examiner, would confirm the diagnosis to the point of almost absolute certainty; provided, always, that the patient be seen very shortly after the occurrence of the supposed or alleged injury, and that it be possible to exclude the pre-existence of disease of the middle ear.

Concerning the symptoms of tinnitus aurium, vertigo, reflex ear cough, vomiting from mechanical irritations of the ear, from disease of the internal auditory apparatus, or as a symptom accompanying middle-ear disease, and concerning convulsions due to aural disease, I shall not attempt to speak; one symptom, of rather unusual occurrence, viz., the so-called "autophony," an exaggerated hearing by the patient of the tones of his own voice. is worthy of passing mention as being highly characteristic of obstruction in the external auditory canal, and also an accompaniment of middle-ear catarrh. The congeries of symptoms generally considered characteristic of the so called "Ménière's disease," I shall merely allude to in order to remark that this pathological condition is about the rarest and least understood of all diseases affecting the ear, and that its symptoms are not pathognomonic.

When speaking of traumatic ruptures of the drum-membrane, I made mention of Valsalva's inflation. Where the Eustachian tube remains fairly pervious, this simple and well-known procedure may often be of service in confirming the diagnosis of any perforation of the membrane, whether traumatic or pathological in origin. But the physician will do well to avoid its use where pain in the ear is present, and also in cases of long-standing deafness where he is unable to get a view of the drum-membrane. A fair view, sometimes a very good view, of this membrane may, under certain circumstances, be had without the employment of a speculum or forehead-mirror. This will be the case where the patient has an auditory canal of exceptionally large calibre, and one which is exceptionally straight in its general direction or axis, and is free from the usual tortuosities. Gentle traction of the auricle, in a direction upward, backward, and outward in the case of an adult; downward, outward, and backward in the case of a child, will materially aid in straightening the canal. For illumination of the canal reflected light may be thrown into it from a common hand-mirror, and in this way a substitute may be found for the vastly superior concave forehead-mirror, concerning the use of which, as well as of the aural speculum and all other instruments of diagnosis, I have by the title of this paper pledged myself not to speak.

For the same reason, as well as from lack of time, I am practically debarred from any allusion to some of the rarer forms of aural disease, and from a discussion of the diagnostic import of the various stenoses of the auditory canal, and of the polypoidal growths which are too often, and other pathological growths which are but rarely, found therein. These stenoses and growths may sometimes, indeed, be detected without the use of any form of instrument; but their full extent, exact form, and precise location can very rarely be appreciated, or their diagnostic value duly estimated, without the use of the speculum and forehead-mirror, and it may be of the probe and other instruments as well. With rare exceptions, also, foreign bodies in the ear call for the use of the speculum, at least to insure a proper degree of knowledge respecting their nature and position; and their mere presence in the ear can often be ascertained only by one made familiar by practice with the use of this almost indispensable instrument.

I trust that those to whom I have presumed to address these remarks will be able to believe me, when I tell them that I purposed laying before them in this paper, not rules indeed, but hints, by which they might be in some measure aided toward a correct diagnosis of the commoner affections of the ear. In practice I myself constantly find such points as have been herein touched upon an aid to diagnosis; although, being in the habit of employing instruments for diagnostic purposes, I never realized how very dependent I was upon the use of tools until I had attempted to tell others how much could be done without them. I do not doubt you will believe me when I add, that a close adherence to the limits marked out by its title has balked my pen at every sentence, I may almost say at every word, of this paper; and while I feel that I must apologize for having given those whom I have addressed a very meagre stock of information concerning the diagnosis of ear diseases, and that my remarks, regarded under the aspect of instruction in such diagnosis, are a fairly apt illustration of the "lucus a non lucendo;" nevertheless, I trust that I have negatively succeeded, in that I have presented a tolerably clear demonstration of the fact that, without instruments there is no *accurate* diagnosis of ear diseases, even though in exceptional cases an *approximate* diagnosis may be possible to one who is deprived of their aid; while in all cases valuable guidance toward a really accurate diagnosis is furnished, by the symptoms and history of the disease, to one who supplements these by the much greater assistance afforded by an instrumental examination of his patient.

EXPULSION OF THE PLACENTA.—Dr. S. W. Squires, of East Avon, N. Y., writes: "When the after-pains are tardy and the obstetrician wishes to hasten their appearance, it can be quickly effected by instructing the patient to take a deep inspiration and blow against the back of her hand. I have never known it to fail to bring on uterine contraction immediately. Of course blowing on the hand has nothing to do with the phenomena; it is the full inspiration that stimulates the uterine contractions. This is a practice I always follow with the most gratifying result of getting the woman soon bandaged up after the birth of the child."

A NEW METHOD FOR SUPPLYING THE CONTINUOUS OR GALVANIC CURRENT IN THE TREATMENT OF FIBROID TUMORS OF THE UTERUS.

By A. B. CARPENTER, M.D.,

CLEVELAND, O.

EVERY physician who has had occasion to use electricity knows well the difficulty he has experienced in keeping his battery in working order.

Change in temperature, the dry and moist condition of the atmosphere, evaporation, polarization, the frequent inspection, renewal of the battery elements and fluids, together with the labor and expense incurred, has placed a tax upon the time of the busy practitioner, and made the operating of large batteries no trivial matter and withal a burden.

The treatment of fibroid tumors of the uterus, according to the Apostoli plan or method, necessitating, as it does, a large number of cells, has only resulted in increasing this burden, and, I venture to predict, that after the renewal, once or twice a year, of the battery elements, to say nothing of the labor in keeping the fluids in proper condition, will necessitate not a few physicians to discard this valuable form of treatment, and result in expensive plants falling into comparative disuse.

So long as electrolytic work was confined to the use of a small number of cells, the labor and expense of keeping in order was proportionately light; but with our increasing knowledge of the subject, together with the more general use of the milliampère-metre, whereby we are more intelligently, as well as accurately informed of the strength of the current used, and thereby giving us the knowledge to administer this form of treatment in great strength on the basis of exact dosage, the task of caring for batteries made up of from seventy-five to one hundred and fifty cells, impose a task that is something formidable.

Dr. F. H. Martin has called the attention of the profession to a small dynamo that he has had constructed with a view to the supplanting of the cumbersome battery, and claims for it both the electrolytic and galvano-caustic currents. It is designed to be run by an electric motor or any other convenient power. I had the pleasure of witnessing a test of the machine while on a visit to Chicago a short time since, and must say that it worked most admirably. I would venture the suggestion, however, that the noise made in running will be somewhat objectionable to it for office use.

The device which we have the pleasure of calling the attention of the profession to consists simply in that of using the current of the incandescent lighting system direct from the street wire passing the door—Thompson-Houston or Edison. We have the wires of the former system placed in our office, and by the means of a rheostat resistance sufficient to reduce the current to a minimum is interposed then by the use of an ordinary switch-board, the current is increased or diminished according as resistance is cut in or out. A milliampère-metre is made use of whereby the current is accurately measured while the patient is in the circuit.

The device is absolutely safe, as the entire voltage of the wire can be handled without the rheostat being used. My wire furnishes a very smooth continuous or galvanic current, with an electromotive force of one hundred and ten volts with a maximum strength of $\frac{1}{10}$ of an ampère, equal to about eighty Leclanché cells. This current is constant, does not vary in voltage, and is always ready, night or day, as the main line from which my connections are made is used for commercial purposes, and furnishes lighting for basements, dark shops, and rooms. This, I am informed, is the case in all large and in many small cities, so that little trouble will be met with in securing a wire with a day current. When a wire is once placed in our office, the task of caring for a battery of cells is at an end, and we have an apparatus that is at once always ready, reliable, economical, cleanly, and durable. The rapid introduction of the incandescent lighting system, together with the great increase in the use of this form of light, will place within the reach of very many physicians this current for electrolytic work.

The charge for the annual rental of the wire is $10, not including the cost of putting in, which, if the main line passes the door, should not exceed $5. This device, as will be seen, does away with cells entirely, as well as the time, trouble, and expense of keeping them in order, and I venture to express as my opinion that we have a current superior to any that it is possible to have generated from chemical action, besides economy of room, which is not a small item in cramped quarters.

A word regarding the danger from contact with the electric-light wire. The Thompson-Houston or the Edison incandescent system of an electromotive force of one hundred and ten volts, and of a strength of $\frac{1}{10}$ of an ampère is harmless, *and must not be confounded with the arc system of Brush and others, as the strength of the latter is six ampères, and of course dangerous and must* NEVER *be used.*

For the purpose of meeting and providing against any unforeseen complications, as well as to anticipate criticism, I have placed at the office terminal of the wire a fuse box, the connections of which are so constructed that they will instantly melt, thus breaking the circuit, should anything unusual occur. Then if it is remembered that the entire voltage amounts to only about eighty Leclanché cells, I think it will be recognized that we have a current at once safe and practical.

I am under obligations to Mr. William D. Graves, of this city, for perfecting and superintending the construction of my apparatus, which, so far as I can now see, fulfils the object for which it was designed, viz., that of supplying the continuous or galvanic current, independent of battery cells.

I may say that I have had the apparatus in daily use since its completion some weeks since, and my expectations have been fully realized by the simplicity and beauty of its action. The apparatus is not patented, and I shall endeavor to place the models in the hands of some reputable electric manufacturing company to insure the profession against extortion.

143 EUCLID AVENUE.

IODINE TRICHLORIDE.—Iodine trichloride has been brought forward as a disinfectant and germicide. It is prepared most conveniently by passing a full current of chlorine into a three-necked flask, into which iodine is vaporized from a small retort fitted to the central neck. The trichloride forms orange-yellow crystals, which are darker if contaminated with the liquid monochloride. This compound is rather freely soluble in water, forming a strongly acid, yellow liquid, with a somewhat penetrating, pungent odor. Although soluble also in ether and alcohol, the alcoholic solution undergoes change, even in the cold, chloral being formed. Strong aqueous solutions keep better than dilute preparations, the latter undergoing decomposition, especially when subjected to direct light, hydrochloric and iodic acids being formed, as well as monochloride of iodine. Professor von Langenbuch reports that its germicidal action far exceeds that of carbolic acid, and comes nearer to that of corrosive sublimate, over which it possesses the advantage of being relatively non-poisonous. He considers an aqueous solution of the trichloride of iodine of the strength of 1 in 1,000, or 1 in 1,500, as equal to a four per cent. carbolic acid solution, or a 1 in 1,000 or 2,000 sublimate solution, for the disinfection of wounds, the hands, or instruments. A solution ot 1 in 1,200 is recommended as an injection for gonorrhœa, or taken internally, in the dose of a teaspoonful every two hours, as a remedy for dyspepsia dependent on the presence of bacteria in the stomach or intestines.—*The Provincial Medical Journal,* February, 1888.

Progress of Medical Science.

A Rapid and Simple Method of Reducing Dislocation of the Shoulder.—In all the methods ordinarily employed for the reduction of dislocations downward of the humerus the trunk is fixed and the head of the humerus is raised into the glenoid cavity. Dr. Abril inverts this proceeding; his plan is to fix the humerus and to make the glenoid cavity descend on to the head of the humerus. He claims for his method that it is most simple, easily and quickly done, that chloroform is not necessary to obtain muscular relaxation, that the pain is trifling, and that no assistants are required. He makes the patient stand with a crutch in his axilla; he then holds the hand of the affected side, making slight traction downward; the patient is now to let himself down as if he were going to fall on his knees, and as he falls the head of the humerus glides into its normal position, and the patient is surprised at finding himself cured.—*The London Medical Record.*

The Physiological and Therapeutical Action of Hypnone.—The medium dose in adults is from five to six grains. When given in quantities greater than eight or ten grains it causes pain and heat in the stomach. Dr. Pensato administers it in capsules, two and a half grains. He finds that as a hypnotic it is not inferior to chloral, and it does not depress the heart's action. In phthisis it answers well, in doses of three capsules at bedtime. The patient generally has a quiet night, with some hours' sleep, the cough is lessened, and the patient wakes refreshed, without pain or headache. Hypnone has a decided antifermentative and antiseptic action. It delays the ammoniacal decomposition of the urine, and prevents the alcoholic fermentation of sugar and yeast; it delays, too, considerably the putrefaction both of organic animal and vegetable substances. Thinking that this antiseptic action might be useful in phthisis, and having found that when given as a hypnotic the cough and expectoration was notably diminished, Pensato has lately given it as an inhalation, five drops every four hours. The effect is undoubtedly good—the cough is lessened, and the expectoration altered both in quantity and quality; in one case the purulent sputum became mucous. In some cases, but not in all, the temperature was lowered. Dr. Pensato thinks that these results are sufficiently encouraging to warrant a further trial of these inhalations.—*La Medicina Contemporanea.*

Mesenteric Cyst.—At a recent meeting of the Bradford Medico-Chirurgical Society, Dr. Horrocks reported an instance of this rare disease. The patient was a married woman, aged thirty-one. Before admission to the hospital the tumor had been aspirated several times, and a considerable amount of fluid drawn off. In November, 1886, she was admitted with violent pain in the abdomen, vomiting, and diarrhœa. A rounded swelling was found on the left side below the ribs. The motions were frequent, very offensive, and liquid, but never appeared to contain pus. In December she gave birth to an eight-months' child, and after its birth the general outline of the tumor became more distinct. A few days after, she had a severe attack of diarrhœa, during which the lump became smaller and finally disappeared. She shortly afterward left the hospital, but was readmitted on September 1, 1887, for exploration of the swelling, when it was found there was an elastic tumor in the left hypochondriac and epigastric regions, extending under the ribs and nearly as far forward as the umbilicus. It was freely movable under the abdominal walls. The area of dulness over the tumor varied from time to time. There was no vomiting or diarrhœa when liquid food was taken, but she complained almost constantly of pain, and was on this account kept under the influence of morphia. On September 10th an exploratory abdominal incision was made, but the tumor was so firmly fixed to structures around that the wound was closed. On October 1st she became very restless, complained of chills and headache, but no abdominal pain or tenderness. On October 2d the wound had opened up superficially, but the peritoneal borders remained closed. She continued restless, with vomiting and diarrhœa, until she died, on October 7th. After death the superficial layers of the wound were opened, but the peritoneal edges had healed. The general smooth inner surface and thickened regular wall of the cyst would favor the idea that it is a serous cyst of the peritoneum. Such cysts are extremely rare. They are formed by exudation in the interstices of the serous membrane, and hold at first a thick reddish fluid containing blood-corpuscles, cells resembling pus-cells, and colloid granules, besides large quantities of leucin and tyrosin crystals. These crystals may attain a large size, become adherent to abdominal viscera, and empty themselves by fistulous openings.—*The Medical Press*, February 1, 1888.

Cannabis Indica in Tropical and Dyspeptic Diarrhœa.—In an article on the uses of cannabis indica, Dr. J. F. P. McConnell, of the Bengal Medical Service (*The Practitioner*, February, 1888), strongly advocates the employment of this drug in what is termed dyspeptic diarrhœa. He states also that, even in more advanced cases of tropical diarrhœa, cannabis will sometimes prove very useful. All observation and experience in India have led him to believe that this disease is primarily and essentially one of the liver, and that unless means are taken to influence the functional disorder of that organ by cholagogue remedies—*i.e.*, treatment directed to the liver principally—all attempts to control the diarrhœa will prove unsuccessful. And of all such remedies none is so reliable as *mercury*—either in the form of blue pill or gray powder. But while such direct medication is attempted, as for example by the exhibition of a mercurial pill every night or every other night at bedtime, the cannabis may be employed during the day. For this purpose he usually prescribes it in the form of mixture, beginning with ten minims of the *tincture* and gradually increasing the dose to fifteen, twenty, or even thirty minims, three times a day or oftener. A suitable combination is the following:

℞.	Tincturæ cannabis indicæ	♏x.–xx.
	Bismuthi subnitratis	grs. x.
	Mucilaginis acaciæ	ʒ ss.
	Spiritus chloroformi co..........	♏xx.
	Aq. cinamomi *vel* aq. menth. pip..	℥ j.

M.

This mixture may be given before or after food, preferably the latter, and more particularly when the dose of the tincture is increased. By exhibition soon after food the liability to unpleasant symptoms (headache, giddiness, hallucinations, etc.) is greatly reduced, even in persons who are very susceptible to these effects of the drug. In both true tropical diarrhœa and the more simple dyspeptic diarrhœa, cannabis has this distinct advantage—that it in no way interferes with the bile-forming function of the liver, as opium undoubtedly does.

Pneumonia Death-rates.—The death-rate of the British Collective Investigation Committee in 1883 was $19\frac{4}{10}$ per cent. Under the old system, Louis lost (hospital patients) $28\frac{4}{7}$ per cent.; Dietl $19\frac{5}{10}$ per cent.; Grisolle $15\frac{11}{12}$ per cent.; Dasori $22\frac{2}{9}$ per cent.; Laënnec 10 per cent. The last had better results than the British Collective Committee, who consider the $11\frac{3}{5}$ per cent. death-rate among total abstainers a favorable one. The modern death-rate among the same class as were treated by Louis, is about as high, if not higher (26.6 per cent.) since the intemperate were excluded from enumeration (death-rate 40.5). Grisolle found his death-rate under thirty years of age to be $7\frac{1}{7}$ per cent.; the British death-rate was $8\frac{16}{23}$ per cent. Bennett found the death-rate in the army and navy to be $7\frac{9}{13}$ per cent.; the modern death-rate was $14\frac{2}{7}$ per cent.—*Medical Standard.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, March 31, 1888.

SULPHUROUS ACID IN THE TREATMENT OF PULMONARY CONSUMPTION.

THE French seem determined to get sulphur in some form into the body to cure pulmonary consumption. Dr. Darien (*Bulletin Général de Thérapeutique*, t. cxi., 14) gives the history of the treatment with sulphurous acid. It had been used as far back as the second century. Dr. Solland came upon this treatment accidentally in the following way: It seems that a sergeant having phthisis had been through different kinds of treatment, and was finally sent to the East without improvement. Nothing could stay the march of the malady, and weary of continued hospital treatment, he demanded his release and left. Wishing some light employment, he was given the work of opening the doors of the rooms of the barracks where sulphur was burned for disinfecting purposes. To do this he was obliged to pass nine hours of his time each day in a sulphurous atmosphere. In sixty-five days he had completely recovered. A case of chronic bronchitis also recovered after inhaling for fifteen days. M. Auriol was led to its use in phthisis from these facts. He found in a factory at Bellegarde, in a room where sulphur was used, a number of consumptive women who refused to work elsewhere, because they always felt better in this room.

He had a large and closed room fitted up; in one corner he had a small brazier in which was sulphur slightly moistened with alcohol, and in the other corner the patient was placed, standing erect and taking deep respirations. Soon the effects of the sulphur were felt, and then the patient continued inhaling until chemically prepared paper in the room showed the lead reaction. At times, when the fumes of the sulphur were too strong, the windows were opened for a short time. To make the inhalations less irritating, a little benzoin or powdered opium may be added to the sulphur. In a little while the patient becomes accustomed to the fumes. These inhalations were practised in the morning and evening, on an empty stomach, and were followed up by exercise in the open air. Medicated inhalations were also used. Sixty-six tuberculous patients were treated in this way, in all of which an examination of the sputa showed the presence of the tubercle bacilli. Thirty of these, who were very ill, had their disease arrested so that the sweats and fever disappeared, the appetite and weight increased, and the bacilli disappeared. The lungs cleared up, and the caseous deposits became fibrous and innocuous. This state of things continued for a year and, no bad symptoms returning, they were considered cured. Many of the others were so far advanced in the disease, and took the treatment so irregularly, that they did not show the same improvement.

M. Dujardin-Beaumetz feeling convinced that there is something in this method of treatment, has fitted up a room in the manner above described, and makes the patients inhale the sulphurous fumes, letting in air from time to time to make it more bearable. In using the fumigation, a lamp or sulphurous "candle" is employed. The lamp increases the amount of CO_2 in the room, but M. Dujardin-Beaumetz thinks this causes the gases to be taken up more quickly. In the small number of patients treated (only seven), he has had excellent results, and he expects to make another report when a larger experience justifies it.

His conclusions are that it is not as good as the iodide of potassium in syphilis, but he thinks it is a cure for many cases. It is not only effective in stopping the trouble, but it acts well in ameliorating the bad symptoms when a cure is not possible. The French are so intensely enthusiastic over everything that seems to promise good results, that they are apt to rush into print before their theories are fully justified by facts. This treatment can, of course, only be carried on in hospitals, and it is to be hoped that equally good reports may be heard later, and that it may not share the fate of the rectal injection treatment.

SALICYLATE OF MERCURY IN SYPHILIS.

THERE is probably no disease which responds quicker to treatment than syphilis in most of its forms. In the earlier stages, particularly, mercury, as a salt, has generally been very effective. Of late, salicylic acid, combined with a base, has been the fashionable remedy for a variety of affections.

The latest combination is the salicylate of mercury, which Dr. Sylva Aranjo, of Rio Janeiro, has been using with some success in certain obstinate cases of syphilis. In a letter to the *Bulletin Général de Thérapeutique*, he gives some details of his method. The salt is formed by the double decomposition of the salicylate of potassium with the acid nitrate of mercury. He began by administering one milligram in a pill in milk every morning, and if this was borne well, one, morning and evening, until it was given three times a day, and increased to such doses that the patient took in the end twenty-five milligrams during the day. It was also used externally as an ointment in the strength of fifty centigrams to one gram to thirty grams of vaseline. As an injection for blennorrhagia, it is employed in the strength of ten grams to two hundred and fifty grams of water, with enough of carbonate of sodium to make a solution. The advantages which Dr. Aranjo claims for this drug, are:

1. It is supported easily by the stomach without any bad effects.
2. It does not cause mercurial stomatitis.
3. It acts much more promptly than the other salts of the same base.
4. Used externally, it has a curative effect on the mucous patches and the other ordinary syphiloderms.
5. In many of the parasitic diseases it is of great advantage.

6. It is very effective where other forms of mercury have no effect.

In one case Dr. Aranjo had used without effect the protiodide, the bichloride, the biniodide, the tannate, and phenate, as well as the iodides of potassium and sodium.

7. It is of use in lepra.

8. As above stated, it forms one of the many injections for blennorrhagia.

Also in catarrhal and granular conjunctivitis, as a collyrium, in the following prescription it has been very effective:

℞.	Salicylate of mercury	0.50
	Distilled water	30
	Carbonate of potassium	q.s.

M. For eye-wash.

RECENT STUDIES OF THE TYPHOID BACILLUS.

Dr. Edwin Klebs, in his "Allgemeine Pathologie," records the work that has been done in studying the natural history of the typhoid bacillus up to, and including, the year 1886. Naturally he inclines to side with those who believe in the pathogenic function of this bacillus. But further observations were needed to satisfy most persons, and such observations continue to be made.

In 1886 Fraenkel and Simmonds claimed to have produced true typhoid fever in guinea-pigs and rabbits by inoculations of pure cultures. The same authors report the continuation of their work in 1887 (*Zeitsch. f. Hygiene*, i.). They found, as had Sirotinin and Brieger, that the typhoid bacillus, in its growth in certain media, developed poisons which, when injected into animals, produced morbid phenomena. They reassert the correctness of their experiments, by which the anatomical appearances of typhoid fever were produced in animals by injection of the micro-organisms.

Dr. Sirotinin (*Zeitsch. f. Hygiene*, i.) obtained pure typhoid cultures; then having sterilized these, or by filtration removed the organisms, he injected the cultures so treated into the veins and peritoneum, and also gave some of the material by mouth. He obtained the same pathological phenomena by this method as he did when the living organs were injected. Furthermore, the severity of the symptoms stood in definite relation to the amount of the culture-material used. Hence he thinks that the symptoms produced by the inoculation of typhoid bacilli are due, not to "infection," but to intoxication by ptomaïnes. In further support of this, he asserts that the cultivated bacilli do not notably multiply in the blood (this opinion is directly contradicted by Fraenkel and Simmonds). The poisonous ptomaïne produces clinical symptoms and pathological changes much like those of typhoid fever. The phenomena are most intensely marked in dogs, next in rabbits, and barely at all in guinea-pigs.

Beumer and Peiper (*Zeitsch. f. Hygiene*, i.) confirm the view of Sirotinin that the consequences of intravenous or intraperitoneal injections of typhoid cultures varies with the amount of the substances used, and that, therefore, the morbid symptoms are due to a poison, and not to a multiplication of the bacilli. In a subsequent communication, the authors say that the symptoms of typhoid are due, primarily, to an intestinal mycosis, the micro-organisms secreting a poison which is the cause of the phenomena of the disease. They suggest the possibility of securing immunity against the disease by inoculating attenuations of the active poison.

This virus was separated by Brieger, and analyzed chemically. The formula given is $C_7H_{17}NO_2$, which combination may be assumed, provisionally, to be the chemical equivalent of typhoid fever.

Dr. C. Seitz, of Munich, has reported some results of bacteriological studies of typhoid fever (München, J. A. Finistertin, 1886, *Centralbl. f. Klin. Med.*, 1887, No. 15). His observations are, in the main, confirmatory of those of others. He failed in eleven cases even to find the specific bacilli in the papules or in the blood of typhoid-fever patients. He did not always find them in the dejections (eight times in nineteen trials in six patients). In the urine the bacilli were found only in those cases in which there was albuminuria.

Wiltschur (*Wratsch*, 1886, No. 25; *Centralbl. f. Klin. Med.*, 1887, No. 15) and G. Lepidi-Chioti (*Giorn. intern. delle Sc. med.*, 1886, fasc. 4) have reported results of observations upon the methods of cultivating, staining, etc., and of diagnosticating the typhoid bacillus. Their work has but a purely technical interest.

STOMATITIS IN MILK.

The origin of aphthous stomatitis of adults and follicular stomatitis of infants has always been supposed to lie in a disordered digestion. Recent researches by David, reported in the *Archives de Médecine*, seem likely to throw important light on the pathology of the affection. He believes that it is identical with a similar disease of domestic cattle, cows and sheep especially. It is infectious and contagious. The latter property would more likely cause the disease in adults; the former through the medium of the milk in children.

To support this view, David adduces four arguments: *First*, the macroscopic and microscopic appearance of the human and bovine diseases are identical; *second*, he cites cases of the actual transmission from the animal to man, and the reverse; *third*, an epizoötic of the one is paralleled by an epidemic of the other; and, finally, he has actually observed the disease in man within three or four days after taking milk from animals affected.

Thus we have a specific contagium, the habitat of which is the mucous membrane of the mouth and upper portions of the gastro-enteric tract. How the milk becomes affected is a difficult question to decide. Many cases of stomatitis in children are characterized by constitutional symptoms of no little severity. They require general, as well as local treatment. We regard the malady, practically, as a general one. On this principle it is easy to account for milk infection. As David reminds us, cows very frequently lick the udder, and this habit affords easy transmission of the affection from the seat of its development to the source of the milk. Of a similar bearing is the sucking of the udder by calves in whom the disease may have developed.

If this new view is correct, inspection of dairies by State veterinarians is in order. It would not be necessary for animals to be killed; but during the prevalence of an epizoötic the milk of the infected herd should be destroyed. The possible danger of contagion is another argument for the boiling of each day's supply of milk, whereby the germs would be destroyed, or, at least, rendered powerless.

This view of the disease does not entirely banish the causative relation of digestive disorders. They may still be regarded as strongly predisposing circumstances.

THE HARM OF MODERATE DRINKING.

It is very well known that hard drinking surely kills; it is equally well known that moderate drinking is usually injurious. There are, however, two forms of the latter habit: in one, the individual drinks moderately and only at his meals, in the other, he drinks over a bar, taking a "nip" of whiskey, a "cocktail," "fizz," etc., in accordance with the idiosyncrasy of his palate, his geographical location, or personal associations. These last-named indulge in what our continental brethren call "nipping" or "pegging," and the practice of nipping has been apparently shown by Dr. Harley and others to be injurious to health and life.

Dr. Harley gives the following telling statistics:

Death-rate of men between the ages of twenty-five and sixty-five.

Men Exposed to the Temptations of "Nipping."

	Liver diseases.	Urinary diseases.
Commercial travellers	61	44
Brewers	96	55
Innkeepers, publicans, vintners, barmen, and waiters	240	83

The comparative death-rates of men of the same age engaged in other industries, not exposed to the temptation of "nipping," are, again, as follows:

Death-rate of Men not Exposed to the Temptations of "Nipping."

	Liver diseases.	Urinary diseases.
Gardeners and nurserymen	18	39
Printers	28	30
Farmers and graziers	41	31
Drapers and warehousemen	35	37

In addition to the above Dr. Harley cites the following statistics of beer, which apply to Prussia:

Probable Duration of the Life of Men.

Age.	In the liquor trade.	Not in the liquor trade.
25	26.23	32.08
35	20.01	25.92
45	15.19	19.92
55	11.16	14.45
65	8.04	9.72

Further statistics are given, showing the extraordinary excess of mortality from liver disease among innkeepers, bar-tenders, vintners, waiters, and publicans, as compared with persons in other occupations. The ratio is as six to one.

To all this it may be said, on the other hand, that nothing lies like figures, and that, after all, the mortality-rate is not greater, for example, in a whiskey-drinking country like Scotland, than in presumably temperate regions like certain States of New England or the West. It is more than probable that Dr. Harley's figures point to the truth; but the question rises, in view of the pretty even range of mortality in countries of temperate and "nipping" habits, whether, if liquor is taken away, some other death-producing agency does not set at work? We believe that the medical profession must, at any rate, accept the fact that "nipping" shortens life.

OUR NEW LABORATORIES.

Within the past three years, practically, four new medical laboratories have been opened in this city and immediate vicinity. Their establishment has been heralded as marking a new era in medical study, and so much has this idea been harped on that we may forget one very important fact. A laboratory established is a great thing. A laboratory properly endowed is a much greater thing. For suitable endowments, therefore, we plead.

It cannot be denied that, under the present circumstances, the laboratories are virtually inaccessible to many medical students. The expense of running such institutions is large. College fees—those absolutely necessary—are a burden to many, and to increase them by laboratory charges is outside the ability of many a man, however ardently he may long therefor. The supply of hay is ample, but it is too high up for the sheep to reach it.

Of far greater importance than the mere subject-matter of a college course, are the habits of study which it should inculcate in every man. Very few develop a taste for scientific work after graduation, unless the seed has been planted in their undergraduate days. The habit of careful observation is better cultivated by laboratory work than in any other way.

Only a small percentage of the students in our colleges work in the laboratories. The courses in them, though recommended, are not required. Probably the question of expense is the great deterring factor. Yet, in all of our institutions, a fee is absolutely necessary, in order to render the practical department self-supporting. The last three years have witnessed a grand departure in the matter of elevating the standard and broadening the scope of medical education; but unless endowments are forthcoming the new facilities will be accessible to only a comparative few. The regular college fees are now about as high as is proper. We regret to believe (as we are compelled to) that in some cases the return for the money paid is so unprofitable from an educational point of view. Endowments we must have. Will not the benevolent citizens of New York thus supplement the good work already done?

INEQUALITY OF THE PUPILS IN HEALTH.

In many diseases of the encephalon inequality of the pupils is regarded as a sign of considerable diagnostic value, this condition being thought, indeed, by many, to be pathognomonic of cerebral disease. That this is, however, not always reliable, is shown by the results of a number of examinations of healthy persons made by Dr. G. C. Ivanoff, and reported in *Vratch*, No. 7, 1887. His investigations were conducted without the aid of instruments of any kind, the differences being estimated solely by the eye. The subjects of the investigation were peasants from the government of Novgorod, serving in the army, and numbered 134. Of this number the pupils were equal in only 12, or about 9 per cent.; in 73 instances, or 54.5 per cent., the left pupil was larger than the right; and in 49, or 36.5 per cent., the right pupil was the larger. In most of these cases there was also asymmetry of the two halves of the face, the left side being larger than the right in 99 individuals, the right being the larger in 32. Although the totals in these two sets of figures corresponded in a general way in as far as the left side of the face was more commonly the larger, and the left pupil was the more dilated, yet there seems to have been no real connection between the two, as there were many cases in which the left side of the face was the larger, while it was the right pupil that was the more dilated, and *vice versa*.

From the results of this series of examinations Dr. Ivanoff came to the rather hasty conclusion, considering the comparatively small number of cases, that equality of the pupils, as well as of the two halves of the face, is of not very frequent occurrence. And he thought that the inequality so often present was due, doubtless, to the unequal development of the two cerebral hemispheres.

In the *Revue Internationale des Sciences Médicales*, No. 1, 1888, Dr. Martel relates an instance of intermittent inequality of the pupils. One day the left pupil would be widely dilated, while the right was normal, and the following day, or perhaps several days later, the right pupil would become dilated, while the left returned to its normal size. There was no other trouble with the eyes, except a slight degree of exophthalmia. This was not a case of hippus, a condition allied to nystagmus, in which contraction and dilatation of the pupils follow each other at very short intervals, for the changes occurred slowly and never at intervals of less than twenty-four hours.

TOLSTOÏ ON THE MEDICAL PROFESSION.

The literary world is suffering with an intense *furor* Tolstoï-icus, if we may so express it, and the words that drop from the lips of the noble Russian or flow from his pen are receiving a wide and profound attention. Hence, we venture to comment upon a recent utterance of Tolstoï regarding the condition and tendency of modern medicine. Tolstoï does not believe in science, and he thinks in particular that medical science is progressing in an entirely wrong direction.

"Medical science," he says, "is entirely arranged for the wealthy classes, and it has adopted for its task the healing of the people who can obtain everything for themselves; and it attempts to heal those who possess no superfluity, by the same means. The physician has studied with celebrities in the capitals, who only retain patients who can be cured in the hospital, and who, in the course of their cure, can purchase the appliances requisite for healing, and even go at once from the north to the south, to some baths or other. Science is of such a nature that every rural physician laments because there are no means of curing working-men, because he is so poor that he has not the means to place the sick man in the proper hygienic conditions; and at the same time this physician complains that there are no hospitals, and that he cannot get through with his work, that he needs assistants, more doctors and practitioners."

What the physician, according to Tolstoï, should do, would be to join the toiling masses, "live under the same conditions and exactly as they do;" then he will be able to apply his knowledge to the healing and the hygiene of the laboring people.

Tolstoï's idea seems to be that the physician should become a kind of devotee, living in tenement-houses on bread and beer, perhaps, teaching those about him how to live properly, and treating their infirmities as they arise.

This is a picturesque view of medical life; but it would be very difficult to put it in practice. The idea that the working-people need sanitary missions is an old one; the idea that they need a charitable medical service is still older, and is practically carried out in all civilized countries. But the idea that the two kinds of work should be done by the doctor alone is certainly new. Medical science, out of Russia at least, is tending more and more to make it possible for the poor to get their treatment free, and to make the treatment of those who have money more expensive. Hence, while Count Tolstoï's reflections may apply in his own land, they will hardly do for the United States. The distinguished novelist having no little Tolstoïwitches to support, can afford, perhaps, to go, as is his custom, and weed the onions for four hours daily. But the average doctor has personal duties and encumbrances which prevent his indulging in this form of altruism.

PNEUMONIA IN GENERAL PARALYSIS.

Diseases of the lungs are responsible for a large proportion of the deaths in general paralysis of the insane, and of these pneumonia is one of the most common. According to some clinical and experimental studies made by Drs. Bianchi and Armanni, and communicated by them to the Royal Medico-Chirurgical Academy of Naples (*Rivista Clinica e Terapeutica*, February, 1888), this pneumonia is peculiar, and differs markedly from the forms usually encountered. The following are the chief points brought out by the authors in their communication:

1. Pneumonia occurring in general paralysis of the insane differs from the ordinary forms—croupous, hypostatic, and broncho-pneumonia—met with in those of sound mind.

2. It was found constantly associated, in all the cases studied, with degeneration of the pneumogastric nerves, and was produced experimentally in animals by resecting the vagi in them.

3. Its immediate causation may be the entrance of the buccal secretions and of fragments of food into the air-passages. But doubtless the lesion of the pneumogastric nerve predisposes to it, by means of a rather complex mechanism, in which figure, as the chief factors, paralysis of the larynx and of the œsophagus, disturbances of innervation, and, perhaps also, vaso-motor paralysis, and that of the bronchi.

A micro-organism has been found in certain cases of vagus pneumonia, and inoculation experiments with it on rabbits have excited pulmonary inflammation; but concerning this bacillus the authors were unprepared to give an opinion. They wished simply to emphasize the more than coincidence of the occurrence of pneumonia with evident degeneration of the pneumogastric nerve.

MERCURY IN THE CURE OF MERCURIAL STOMATITIS.

Somewhat in the nature of a paradox seems to be the assertion that the best remedy for the cure of sore mouth caused by mercury is mercury. Yet such is the claim made in the *Rivista Clinica e Terapeutica* for February, 1888, by the director of the journal, Dr. E. De Renzi, and which he supports by the recital of two cases. The first case was that of a man, thirty years of age, who was admitted to hospital for treatment of some tertiary manifestations of syphilis. He was put upon mixed treatment of iodide of potassium and bichloride of mercury, the latter by subcutaneous injection. He made use at the same time of a mouth-wash of chlorate of potassium. After the seventh injection he began to show symptoms of stomatitis. A mouth-wash consisting of a solution of corrosive sublimate was then given him, and in four days the gingivitis had entirely disappeared, although the mercurial injections were continued. The second case was similar, except that the stomatitis was much more severe; ulcers being present on the gingival and labial surfaces, and the breath being very fetid. The specific treatment was discontinued, a mouth-wash of bichloride of mercury was prescribed, and in four days the fetor of the breath had disappeared, and the ulcers were nearly healed.

Dr. De Renzi explains the good effects observed in these cases by assuming that mercurial stomatitis differs in no way from any other form of sore mouth, except in its predisposing cause. He thinks that the mercurial treatment does not produce stomatitis directly, but only by modifying the nutrition of the buccal mucous membrane so that the micro-organisms directly instrumental in exciting the inflammation effect an easy lodgement and find there a soil well adapted to their growth and multiplication. The sublimate mouth-wash destroys these microbes, and thus cures the disease. The strength of the solution employed is three grains and three-fourths to two pints of water, of which one pint is consumed daily in rinsing the mouth and bathing the inflamed gums.

SECRETION OF MILK IN THE NON-PREGNANT CONDITION.

Quite a number of cases are upon record of non-pregnant women, either married or unmarried, who have had a more or less abundant secretion of milk, or of a milk-like fluid, from the mammary glands. In some of these it was mentioned that there was at the same time some uterine or ovarian trouble present, but the coincidence has not been noted with sufficient frequence to establish the rule. Dr. Otto Engstrom, writing in the *Finska Läkaresällskapets Handlingar*, No. 10, 1887, adds five hitherto unreported instances which have come under his own observation. The first was a married woman, thirty-six years of age. She had had a secretion of milk for over three years. A large dermoid cyst of the ovary had been removed, but the operation was not followed by a cessation of the secretion. In the second woman, in whom there was a slight endometritis only noted, pressure upon the breasts caused a few drops of a fluid resembling colostrum to exude. The third case was that of an unmarried woman, thirty-four years of age, who had marked anteflexion of the uterus and endometritis. There was a slight secretion of a yellowish fluid from the breasts, which disappeared after a cure of the uterine trouble. In the fourth instance there was retroflexion with endometritis, and, as in the preceding case, the secretion of a milk-like fluid by the mammary glands ceased upon the rectification of the uterine malposition. The fifth woman was married, twenty-six years of age, and suffered from a complication of uterine disorders. There was a secretion of milk from the right breast, which decreased markedly in proportion as the inflammation of the uterine structures was reduced.

These cases, which we have been unable to more than refer to, possess a double interest. They will go to strengthen the opinion of those who regard the mammary functions as regulated, or at least started, by reflex uterine influences. They are also of interest from a medico-legal point of view, showing that the presence of a slight mammary secretion is not indubitable evidence of recent pregnancy or child-birth.

URINARY PARAPLEGIA.

Various writers have described, under this title, certain paralyses occurring without evident cause in individuals suffering from some affection of the kidneys or of the urinary organs. Others, again, have denied the existence of an affection of this nature, maintaining that the paraplegia, when present, was due to actual lesion of the cord or peripheral nerves. In the *Revue Générale de Clinique et de Thérapeutique* of December 22, 1887, Dr. Étienne contributes a critical review of the supposed cases of this nature reported by writers from the time of Graves to Charcot, and rejects most of them as inconclusive. He accepts a few, however, and, weighing all the evidence presented, inclines to the belief that urinary paraplegia, so-called, though rare, is nevertheless occasionally met with. The following are the conclusions formulated by him in this paper:

1. In the course of an affection of any part of the urinary apparatus there may supervene disturbances of sensation or of motion in the lower extremities.
2. The demonstration of the possibility of these disturbances, and the theory of their production, were established at a period long in advance of any conclusive clinical evidence of their existence.
3. Instances of undoubted urinary paraplegia are very rare.
4. In the greater number of cases of urinary paraplegia, cited by different authorities, the lesions of the urinary apparatus, far from being the point of departure of the nervous disturbances, were in reality caused by them.
5. These reflex disturbances, when they occur in the course of some affection of the urinary organs, are seen most frequently in neuropathic individuals who are already predisposed to the occurrence of nervous troubles.

A NEW INTERPRETATION OF NATURAL SLEEP.

Certain disorders of sleep, somniloquy and somnambulism, bear a striking resemblance in many respects to hypnotism, yet one usually looks upon the latter as something wholly distinct from normal sleep. Dr. Maurice Vincent, writing in the *Gazette Hebdomadaire des Sciences Méaicales ae Bordeaux*, of January 29, 1888, expresses his belief in the existence of an intimate relationship, physiological and psychical, between these two processes. In hypnotic sleep, he says, the person fixes his attention upon some object, and after a longer or shorter time he gradually loses the power of association of ideas and falls asleep. In normal sleep this fixation is not generally noticed, yet it exists, he believes, and can often be clearly demonstrated. Thus, many people, it is known, can sleep only by fixing their thoughts on something. One figures to himself an endless line of sheep jumping over a low-barred gate; another sees the drops falling one by one in rapid succession from the tip of a long icicle; a pious soul will tell her beads, and so get the sleep she prays for; another counts from one up to the point where sleep interrupts him, and so on. It is true that physical fatigue leads more rapidly to slumber; but so, says the author, is hypnotic sleep induced more easily in those whose physical powers are depressed. In hypnotism there are two persons concerned, the experimenter and the subject, and in natural sleep there is but one, who, as it were, hypnotizes himself. Sleep might therefore be called, by those accepting M. Vincent's theory, auto-hypnotism, were they not satisfied with its present designation.

PROFESSIONAL VISITS.

The number of professional visits which a physician can make in a day has of late been the subject of some discussion. A New England doctor is credited with having made thirty-five calls in twenty-four hours, besides attending three confinements. The West produces something far ahead of this in the person of a Sacramento doctor who claims to have made one hundred visits a day, besides attending four confinements! The *Medical Age* promises something from Detroit that will even surpass the hyperkinesis of Sacramento, and we await the anecdote with eagerness. It appears to us that the conscientious physician can hardly make more than twenty or thirty calls a day and do his patients justice. Naturally much depends upon the distance which one is obliged to travel. But allowing fifteen minutes for travelling and fifteen more for the briefest average of visits, it will be seen that a doctor must work fifteen hours a day to make even thirty visits. And fifteen hours' work in these days turns even conservative knights of labor into raving anarchists.

It has been related that certain physicians in this city have habitually made forty to sixty visits daily; but inquiry has shown that the story is false, or the physicians have been homœopaths.

We trust that there will be no ambition to break the record in number of daily visits. It is quality, not quantity, that is needed.

The New Local Anæsthetic Erythrophlaline has been tested by Dr. Felix Loewenhardt, who finds that it does produce anæsthesia, but is quite irritating. Karewski has used it in neuralgias with success. Schöler has made experiments with the drug regarding its influence upon the eye. He finds that it produces conjunctival anæsthesia slowly (after five minutes), which lasts for several hours. There develops some weakness of the lids, and the patient sees colored rings of light, but the third nerve and the sympathetic do not seem to be affected. The action of the drug suggests in some respects that of aconite.

We regret to chronicle the fact that a highly esteemed and accomplished physician, Dr. F. M. Hamlin, of Auburn, N. Y., has become a victim to the morphine and cocaine habit, and has had to be removed to the Utica Asylum.

News of the Week.

The Tennessee State Medical Society meets at Knoxville on April 10th.

The Twentieth Annual Session of the Texas State Medical Association will be held in the city of Galveston, beginning on the fourth Tuesday in April, 1888.

The Miami Medical College held its Twenty-eighth Annual Commencement at Cincinnati on March 9th. A class of twenty-two was graduated.

The Mississippi State Medical Association meets at Jackson the third Wednesday of April.

Our prophecy some months ago that there would soon be a society of gastric specialists is not yet fulfilled. But the penumbra of such an institution has fallen upon Paris, which has just organized a Stomatological Society, for the study of the diseases of the mouth, teeth, and adjacent parts. After stomatology will come œsophagology, and then by easy stages gastrology and enterology.

The Gynecean Hospital is the uniquely qualified title of a new institution in Philadelphia, intended, we presume, for the treatment of the "gynecea," a name which used to be applied to the catamenial discharge as well as to the diseases of women.

The Action of Heart Tonics.—Digitalis and strophanthus especially stimulate the heart muscle; convallaria stimulates the heart muscle and nerves; caffein chiefly stimulates the cardiac nerves (Rumino and Ferranini).

Bloomingdale Asylum.—The property-holders of the Morningside Park Association ask for a report to the Legislature recommending: "1. That a law be passed subjecting the Asylum to visitation by the Board of State Charities. 2. That all real estate of the society at Bloomingdale, outside of the boundary of One Hundred and Sixteenth Street, One Hundred and Twentieth Street, Tenth Avenue, and the Broadway Boulevard be made subject to taxation. 3. That power be given to the Board of Street Openings in said city to open One Hundred and Fifteenth and One Hundred and Sixteenth Streets through the Asylum grounds whenever, in their judgment, it may seem proper. 4. That a limited time, not exceeding two years, be given to the society to remove the lunatics at Bloomingdale to quarters outside of the city. 5. That, after the Asylum shall be removed, like power be given to the Board of Street Openings to open One Hundred and Seventeenth, One Hundred and Eighteenth, and One Hundred and Nineteenth Streets through the Asylum grounds."

The Quarantine Bill, which places the Health Officer of the Port on a salary of $10,000 a year, has become a law.

It is announced in the daily papers that Dr. William S. Bryant, of Boston, has made a great anatomical discovery. This consists in his finding that there are valves in the portal and mesenteric veins, during infant life, in seventy-five or eighty per cent. of cases. These disappear as the child grows.

Dr. William C. Spencer, United States Army, died of pneumonia at Fort Trumbull, Conn., on March 22d, after two days' illness. He was appointed Assistant Surgeon in 1861, promoted to Captain and Assistant Surgeon in 1866, and to Major and Surgeon in July of the same year. He was breveted Lieutenant-Colonel March 13, 1865, for faithful and meritorious service during the war. He was fifty years old.

Dr. O. W. Holmes' Medical Books.—Dr. Oliver Wendell Holmes has presented to the Medical Library, Boylston Place, his very valuable and extensive collection of medical books.

The Memphis Hospital Medical College held its Eighth Annual Commencement on March 1st, and conferred degrees on fifty-four graduates.

The Medical Department of the Arkansas Industrial University held its Commencement March 1, 1888, and graduated twenty men as physicians.

The Baltimore College of Physicians and Surgeons held its Annual Commencement on March 15th, and graduated a class of seventy-seven.

The State Medical Law of Virginia has recently been amended by the Legislature, and it is believed made still more efficient. No one can now practise medicine in Virginia without passing an examination and getting a licence from the Medical Board. The diploma-giving and licensing powers are separate.

The so-called Cancer Bacillus.—Dr. Emil Senger has made a series of bacteriological experiments (*Berl. klin. Woch.*) to test the truth of Scheurlen's alleged discovery of a specific bacillus of cancer. He tried to obtain cultivations in sterilized gelatine, agar-agar, blood-serum, and ascetic fluid, making sixty-five trials in all, but with no success whatever. He concludes, therefore, that the bacillus described by Scheurlen is not characteristic of cancer.

The Emperor of Germany.—Whatever may be thought regarding the nature of the present German Emperor's illness, there can be but one opinion as to the great skill, tact, and firmness shown by Sir Morell Mackenzie in his management of the case. We learn that the order of the Star of Hohenzollern is to be presented to him in recognition of his services. As a contemporary has truly said, many a man has been made a duke for less than Sir Morell has done.

Tincture and Powder of Pyrethrum Roseum are said by Dr. Jaeger, of Singapore, to be a sure prevention of, and relief from, the stings and bites of insects. New Jersey can take notice.

A very typically clumsy and thoroughly Teutonic refinement in medical art has been put forward by Dr. Wachsner in the *Deut. Medizin Wochenschrift*, No. 51. His claim is that the application of the induced electrical current for several minutes after the hypodermic injection promotes absorption and prevents the formation of abscesses. That such is the case we can well imagine to be true, but that the battery is specifically more efficient than careful massage is doubtful; and the addition of an electrical battery as an annex to the hypodermic syringe makes a cumbersome combination.

Leprosy not Spreading in Minnesota.—The State Board of Health of Minnesota gives out the statement by Dr. Grondold, of Norway, Minn., that "no case of leprosy has ever originated in Minnesota by contagion, and that of all the children of lepers living here not one has exhibited any signs of the disease."

The Illinois State Board of Health has suffered a second defeat in its efforts to enforce the law against unlicensed practitioners of medicine. The defendants were T. G. Gilfillan and T. W. Gray, who operated a medicine lodge at Kirkwood. Their defence was the emergency clause of the law. The jury disagreed.—*Sanitary News.*

Thallin in Gonorrhœa.—Goll claims that injections of two to two-and-a-half per cent. solutions of thallin sulphate will cure almost all cases of gonorrhœa in a few days. Two to four injections must be made daily.

Swedish Movement Cure.—There seems to be just now a general immigration of Swedish masseurs into this country. Few months pass without the receipt of the card of some new and highly indorsed arrival. We beg to warn Scandinavia that this thing may be overdone.

The Decoction of Thyme (*Thymus Vulgaris*) is claimed by Dr. J. B. Johnson, of Washington (*Medical and Surgical Reporter*), to be a most satisfactory and useful drug in the treatment of whooping-cough.

Property in Clinical Lectures.—The question as to whether a medical student or medical reporter can report and have published clinical lectures delivered at medical colleges has been recently discussed as though it were a new one. It has given rise to much trouble in this city and elsewhere in times past. The law in the matter, as laid down in the case of Abernethy *vs.* Hutchinson, and Nicols *vs.* Pitman (quoted by R. V. Rogers, Jr.) is that pupils and others admitted to hear the lectures of medical men can only take down such lectures for purposes of their own information, "and cannot publish the lectures for profit without the consent of the lecturer."

Dr. Hartwig's name was not properly printed in our last issue.

Dr. Lippe a Count.—We learn from German exchanges that Dr. Adolph Lippe, a homœopathic physician of Philadelphia, who died on January 23d, was a German count, who preferred homœopathy in Philadelphia to the prince business in his native land.

Association of the Alumni of the Long Island College Hospital.—At the annual meeting, held March 7, 1888, the following officers were elected for the ensuing year: Charles E. De la Vergne, M.D., '78, *President;* F. H. Colton, M.D., '64, *Vice-President;* H. Messenger Ayres, M.D., '80, *Secretary;* Robert L. Dickinson, M.D., '82, *Corresponding Secretary;* Charles N. Dixon Jones, M.D., '82, *Treasurer.* The Alumni Prize of one hundred dollars was awarded to A. H. Buckmaster, M.D., '83, for an essay entitled "The Galvanic Treatment of Fibro-myomata: An Experimental Research." The Association also makes honorable mention of the essay by Charles N. Dixon Jones, M.D., '82, entitled "Etiology and Pathology of Rachitic Deformities, with Report of One Hundred and Two Osteotomies without Suppuration."

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON PRACTICE OF MEDICINE.

Stated Meeting, February 21, 1888.

R. C. M. PAGE, M.D., CHAIRMAN.

DR. GEORGE R. ELLIOTT was elected Secretary in place of Dr. George B. Fowler, who had resigned.

DR. FREDERICK A. BURRALL presented a specimen of chylous urine obtained from a lady seventy years of age. She had had attacks of chyluria for the past forty years. She had lived in the South until within the past twenty years. No filariæ had ever been found in the urine. The patient had done better under a nutritious diet and tincture of the chloride of iron than under any other treatment.

DR. A. D. ROCKWELL then read a paper on

THE CUMULATIVE ACTION OF THE GALVANIC CURRENT, WITH ESPECIAL REFERENCE TO CERTAIN FORMS OF PARALYSIS AND EXOPHTHALMIC GOITRE.

(It will appear in THE MEDICAL RECORD.)

DR. W. R. BIRDSALL agreed with what Dr. Rockwell had said respecting the use of the strong galvanic current in infantile spinal paralysis. It is certainly possible to do harm by using too strong a current rapidly interrupted; yet he believed that the most serviceable effects are obtained by the interrupted galvanic current properly applied. We should watch the effect and avoid rapid exhaustion of the muscle. The current should be strong, but it should not be used to the degree of causing muscular weakness.

In exophthalmic goitre and some other cases of functional disturbance referred to in the paper, Dr. Birdsall had obtained better results from the uninterrupted current.

DR. HERMAN M. BIGGS then read a paper on

SOME OBSERVATIONS ON AORTIC ANEURISMS, WITH REPORT OF CASES AND AUTOPSIES.

He believed aneurismal dilatation of the aorta to be a more common affection than is generally supposed, and the object of his paper was to record a series of thirty-one cases, with two cases of rupture of the aorta, and to call attention to some features of the affection which he thought have not been sufficiently emphasized. He was indebted to Deputy Coroner Jenkins for the opportunity to see many of the cases, for it is in the service of the coroner that a large proportion of this class of cases are seen. His paper went to show how frequently the affection exists without producing any symptoms, or at least symptoms marked enough to cause the patient to consult a physician, or characteristic enough to make a diagnosis possible by physical examination.

Of the series of 33 cases, 29 were of either fusiform or circular dilatation of the aorta, with death from rupture or other causes in 28; 1 is still living. Of the remaining 4, 2 were dissecting aneurism, and 2 were simple ruptures of the aorta. An autopsy had been held in 32. Twenty-five were of the arch of the aorta and of the thoracic aorta; 4 were of the abdominal aorta. Twelve were of the ascending portion of the arch; of these about one-third were in the sinuses just above the aortic valves; the remainder were situated higher. Three were of the ascending and transverse portion; 1, of the transverse portion alone; 4, of the transverse and descending; and 5, of the thoracic aorta. As to the character of the aneurism in those cases in which only one aneurism was found, 20 were saccular, 4 were simple fusiform, and 2 were dissecting. In 5 cases the aneurism was multiple, 2 of which were fusiform and saccular, and in 2 there were two and five saccular aneurisms respectively. In the fifth there were saccular and fusiform aneurisms.

Sixteen of the aneurisms ruptured into the pericardium, one each into the right pleura, œsophagus, left bronchus, left pleura, left lung, left bronchus and lung, spinal canal, and retro-peritoneal tissue; two into the left pleura and lung; and three into the peritoneal cavity. In two cases death occurred from some other cause without rupture. The average of those whose age was obtained was forty-three and one-half years. Eight were in females; 25, in males. The females were all domestics; of the males all but 6 were engaged in some laborious occupation. The history was in many cases imperfect. In only 5 was there evidence of syphilis. An alcoholic history was given in 8 cases, and was probably present in many more.

In the 25 cases of thoracic aneurism in which rupture occurred a history suggestive of aneurism was present in only 11. In 7 of these the aneurism was situated at or beyond the junction of the ascending and transverse aorta. Thus in 9 out of 12 aneurisms situated wholly on the ascending portion of the arch there was no history suggestive of aneurism. The aneurisms of the abdominal aorta were all made out during life.

In almost every case in which a second person was present, death was almost instantaneous. In a number of cases there were several attacks of hæmoptysis, some time before the fatal hemorrhage occurred, and in every instance the hemorrhages were ascribed by the physician in charge to pulmonary tuberculosis, but the autopsy revealed no such lesion. In three cases rupture occurred first into the lung, and then blood found its way into the pleural cavity. In all of these pulmonary hemorrhage occurred before and at the time of death, and in two a large amount of blood was found in the stomach, having entered by way of the pharynx and œsophagus. In ten cases death occurred instantly, without warning. In others the subjects were found dead. Contrary to what would *à priori* be supposed, death occurred in but few instances during severe muscular exercise. The site of the aneurisms as regards frequency corresponded pretty closely with the site of greatest strain on the aorta.

Primary rupture of the aorta, without previous dilatation, is of infrequent occurrence. In such cases there is usually thinning of the coats. In his first case the patient was a female suffering from tubercular peritonitis. The aorta was the seat of endarteritis, and the rupture occurred about one and a half inch above the aortic valve, where a calcific plate had broken through the superficial layers of the intima. The second case was that of an iron-worker, and the rupture took place when he was going upstairs. A physician was sent for, who prescribed for him, and told him he would soon be well, but death resulted a few moments later. The autopsy showed the pericardium filled with blood, and a transverse rupture of the aorta, one inch in length, situated about an inch above the valves. At the point of rupture there was little change in the coats, except that they seemed thin.

Dissecting aneurisms differ from rupture of the artery only in the greater resistance of the outer coat. The history of one of his cases was like that of the one of rupture, except that death did not occur so early.

In commenting upon the cases, Dr. Biggs said he agreed with Dr. Jenkins that rupture of thoracic aneurism is one of the most frequent causes of sudden death. Such cases, however, are frequently classed among those of death from cardiac disease or cerebral hemorrhage. As to the pathology of aneurismal dilatation of the aorta, it had seemed to him that far too much emphasis had been placed on the influence of endarteritis and atheroma. These are not the changes which ordinarily or necessarily lead to dilatation, and in themselves, if they do not produce secondary changes in the media, are not followed by dilatation, at least in the aorta. The changes which precede the dilatation in the aorta are, in the majority of cases, situated in the middle coat, and seem to be degenerative rather than inflammatory. There is a granular degeneration and disappearance of the elastic fibres and fatty degeneration in the muscle-cells. When the process is slow there is a secondary new-growth of connective tissue, which Dr. Biggs regarded as a conservative process. After degeneration of the elastic fibres they are not reproduced, but their place is taken by newly formed fibrous connective tissue. Occasionally the process in the media is inflammatory in character, and is properly designated an endarteritis; but these cases are the exception rather than the rule. In these the adventitia is also often involved, and a dense round-cell infiltration is found around the vasa vasorum.

The etiology of aortic aneurism is somewhat obscure. He thought there could be no question about the influence of syphilis in the production of aneurisms, and there are many reasons for regarding this disease as the chief factor in the causation. The degenerative changes in the middle coat which precede the formation of aneurism are just such changes as would be likely to be produced by syphilis. A large proportion of cases of aortic aneurisms are found in a class of persons most likely to have been the subjects of syphilis. Very frequently, where an accurate history could be obtained, the patients were found to be syphilitics. Severe exercise can be productive of dilatation only when preceded by morbid changes in the coats of the vessel.

Dr. J. West Roosevelt thought that we are likely to get an erroneous idea of the frequency of these cases if we judge by the number which fall into the coroner's hands. Most of them are coroner's cases because in most of them death takes place suddenly. As to thoracic aneurism frequently being unattended by symptoms, this is not astonishing when we consider the cause of the principal symptom (pain), namely, pressure or inflammation. Then we are apt to look for too marked symptoms instead of giving attention to the lighter ones which are more frequently present. In one autopsy he had found a saccular aneurism large enough to contain eight ounces of blood which had started from the right side of the aorta, near the base of the heart; yet it had given rise to no symptoms from pressure on the recurrent laryngeal nerve or other structures. The patient did, however, have pain in the back during his last days, because of secondary inflammation. Another case which he had seen at Roosevelt Hospital was that of a man who, months before death, had profuse muco-purulent expectoration with no other physical signs than those of general bronchitis until three months before death, when evidences of small cavities in the upper part of the lungs developed. They were then able to detect the bacillus tuberculosis in the sputa. Death took place suddenly, when an aneurism, four inches in diameter, was found pressing upon the trachea just above its bifurcation. In addition thereto was a sacculated dilatation of one bronchus and a large number of fresh miliary tubercles. In the other case the patient complained of nothing but slight dyspnœa, preceded by temporary attacks of aphonia, which developed a few weeks before death. There were no physical signs. Death was sudden. A large aneurism was found to spring from the transverse portion of the arch, pressing upon the trachea.

Regarding the pathology, it had also seemed to him that endarteritis and endartheroma are not common causes of aneurism of the aorta. In Roosevelt Hospital he had found a large proportion of patients of middle life suffering from more or less advanced disease of the intima, yet, as Dr. Biggs had said, persons in whom there had been most disease of the intima had not been those affected by aneurism.

In his cases it had been rather the rule not to find blood in the lungs. Regarding causes of sudden death, aside from rupture of an aneurism, he thought it resulted not infrequently from heart-trouble, although no valvular cardiac disease was present.

Dr. W. H. Katzenbach could speak of aneurism only from a clinical stand-point. He knew of no disease which gave rise to more suffering in the way of dysphagia, dyspnœa, and vomiting than occurred in some cases of aortic aneurism. For some years he had entertained the view that syphilis is the chief cause of the degeneration of the arterial coats which leads to aneurism. Yet he had seen some cases of aortic aneurism which seemed undoubtedly due to gout or rheumatism. Dr. Katzenbach cited some cases, in one of which the man lived a week after rupture of the aneurism, the autopsy revealing an aneurism of the thoracic aorta which had ruptured into the lungs and left pleural cavity. With regard to symptoms, he said that when a patient over forty years of age came complaining of dysphagia, peculiar barking voice, perhaps crowing respiration, and expectoration of bloody mucus, he would suspect aneurism. It was the exception for a bruit to be heard in thoracic aneurism.

Dr. S. S. Burt's clinical experience supported the observations made in the paper. The aneurism usually occurs on the ascending aorta, and the patient fails to consult a physician because the pressure-symptoms, especially that of pain, are absent, or but slight in degree. He had noticed alteration of the voice oftener than difficulty in swallowing. It had been mostly by discovering dulness and pulsating tumor that he had been able to make the diagnosis.

Dr. William H. Thomson thought that aneurisms of the thoracic aorta are among the most difficult of all cases for clinical study. It would be hard to conceive how aneurism of the ascending portion of the arch can produce many symptoms, as long as it is intra-pericardial. The heart usually maintains its normal size, and in quite a number of cases it retains its normal position. By pressure upon the bronchus it may cause changes in the breathing, and now and then lobar pneumonia, but not as commonly as does aneurism of the transverse portion of the arch. But when the transverse portion is affected the symptoms are likely to be marked, on account of the involvement of so many important organs in that immediate neighborhood. These symptoms point strongly toward aneurism, and are likely to be confounded with those of but one other condition, namely, a tumor. In the case of a tumor the veins over the thorax, as far down as the diaphragm, are distended; in aneurism their dilatation is limited to the region of the sternal notch. He had yet to see a case in which there was implication of the recurrent laryngeal nerve and yet the breathing remain natural.

In aneurism of the descending portion of the arch there is frequently pain, and it is of a significant character, being limited to one or more intercostal nerves. It shoots from the back, and is not aggravated by the movements of respiration.

Dr. Thomson felt much like coinciding with the views of Dr. Biggs regarding the part taken by syphilis in the etiology, notably in aneurism of the aorta. The only remedy which he had found of any avail was iodide of potassium, administered in the manner indicated in constitutional syphilis.

There was one point in the etiology of aneurism which he did not yet fully understand, namely, the part taken by severe muscular exercise, which is so commonly present in the history of these cases. He had observed the affection oftener in iron moulders, and those who do heavy lifting and breathe intermittently than in any other class of workers. In holding their breath while lifting heavily they throw a great strain upon the mitral valve, it is true, but next, the strain falls upon the aorta.

The Chairman had always regarded thoracic aneurism as somewhat difficult of diagnosis. Some years ago a patient was shown at Bellevue Hospital as a typical case of pleurisy with effusion. Death resulted suddenly from rupture of an aortic aneurism. No pleuritic effusion was present. Regarding causes of sudden death in general, he thought heart disease, in which nothing but aortic regurgitation can be found during life, is a frequent cause. He, too, had found iodide of potassium the only remedy of benefit. Regarding syphilis as a cause of aneurism, he had not seen a case of aortic aneurism in a patient under thirty years of age who had not a syphilitic history.

Dr. Leonard Weber had in his early professional career seen three or four cases of aortic aneurism in which there was no other apparent cause than lead-poisoning. As to the influence of muscular exertion, he had seen about a dozen cases of aortic aneurism, and in none had there been a history of over-muscular exertion. Syphilis was present in most of them, but in one it was excluded. That patient was subject to chronic alcoholismus. There were also two cases of gout, in which syphilis could be excluded. Regarding iodide of potassium, when he wished to give it for a long period he administered it in small doses.

Dr. Birdsall said the changes produced by syphilis, in the small arteries at least, are a proliferation and occlusion. This was not the condition found by Dr. Biggs in aneurism of the aorta, which he believed usually to be due to syphilis.

Dr. Biggs could not say that the changes in the artery in aortic aneurism are not those of syphilis, yet they are not those alterations of syphilis found in other organs. He had arrived at the conclusion that aortic aneurisms are due to syphilis, more from exclusion than from anything else.

He had found in very few of the cases changes in the valves or muscle of the heart. That the cause of aneurism in the small arteries, especially those of the brain, is not the cause of aneurism in large arteries is evident from the fact that the affection seldom exists in the two localities in the same individual; aneurism of the aorta is usually unaccompanied by aneurism in the small arteries.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, January 25, 1888.

W. P. Northrup, M.D., President, in the Chair.

Dr. W. B. James presented a series of microscopical preparations of blood taken from patients suffering from malarial fever, which demonstrated the various forms of the

MICRO-ORGANISMS OF MALARIA (see p. 269).

Dr. Mendelson asked whether any relationship possibly existed between the Hæmatozoön malariæ and the Filaria sanguinis hominis, since they had some points in common, namely, that both were blood-parasites; both appeared intermittently, giving rise to paroxysmal seizures.

Dr. James did not know of any connection between the two. Zoölogically they were quite distinct—the filaria belonging to the nematodes, the hæmatozoön to the protozoa. The presence of filaria in the blood was interesting, however, in that it suggested the possibility of a parent-organism existing within the body, and there discharging its young. It has been surmised that in malaria the parent-organism resides in the spleen, and there discharges its young, this discharge being the exciting cause of the malarial paroxysm. In the blood taken from a patient after the chill we find spores and pigmented amœboid forms, but whether these are a brood which will later become mature we are as yet unable to say. Laveran regarded the flagella as the fully developed organisms.

Dr. Prudden wished to call attention to one point suggested by the paper. This was the change which is taking place in regard to the proof deemed necessary to establish an etiological relation between micro-organisms and disease. In the early period of modern bacteriological investigations—that is, those carried on by means of the methods devised by Koch—it was deemed necessary, in order to definitely establish an etiological relationship between a given species of bacteria and a disease in man, first, to show its constant occurrence in connection with the lesions of the disease; second, to completely isolate it by culture; third, to produce, by inoculation with the pure culture in some of the lower animals, lesions identical or closely analogous with those found in man; and, fourth, to demonstrate the presence of the micro-organism in the lesions. It is noteworthy that the first diseases completely investigated in the light of the new methods were those which are frequently found in both men and lower animals. But we have learned that there are other diseases, common in man, to which the lower animals are not only not naturally subject, but to which they are quite invulnerable by any of the experimental methods yet known to science. So that at present, while in every case positive results from inoculations of pure cultures are ardently sought after, we must always be prepared to find that one step in the chain of evidence must perforce be dispensed with. Unfortunate as this is, we should not forget that, with every acute infectious disease whose relationship to bacteria has been completely demonstrated, the morphological evidence alone becomes stronger in those other diseases which we cannot reproduce in animals.

Thus it was that the accumulation of morphological data such as Dr. James had laid before the Society in his paper assumed a significance greater than was evident before the limits of experimentation had become as well defined as they are to-day.

The President announced as the

COMMITTEE ON MICROSCOPY

for the ensuing year, Drs. J. S. Thacher, Ira Van Gieson, and H. M. Biggs.

The Society then went into executive session.

Stated Meeting, February 22, 1888.

W. P. Northrup, M.D., President, in the Chair.

The President presented, on behalf of a candidate, a *kidney of a dog containing a large calculus.*

Dr. Frank Ferguson presented, on behalf of a candidate, a specimen of *cancer of the pylorus with secondary neoplasms in other organs.*

Dr. Ferguson then presented a specimen of

GUMMATOUS TUMORS OF THE LIVER,

the larger ones being about three-fourths of an inch in diameter. The patient was a man, about twenty-nine years of age, who was admitted to the Chambers Street Hospital a few hours before death. He was in a comatose condition on admission, and no history of the case could be obtained.

A second specimen was one of

ENCHONDROMA OF THE STERNUM,

removed from the body of a man who had died of general peritonitis following perityphlitis. The tumor was composed of cartilage with strands of fibrous tissue running through it, and in places small fragments of bone were found. It measured 12 ctm. in length, 7 in width, and 4½ antero-posteriorly.

Dr. Mary A. Dixon Jones presented a specimen of a large

FIBROID TUMOR OF THE UTERUS,

removed by operation from a woman six days before. The patient was forty years of age, had been married twice, but never had had any children. Examination showed the presence of a large solid, fibroid tumor of the uterus, filling the whole abdomen as far as the ensiform cartilage. The growth had evidently existed for a very long time, but had troubled her more especially during the last five or six years. The abdomen was opened, the tumor freed partly from adhesions, and a portion cut away. Then the clamp was secured lower down and another portion was removed. The pedicle thus secured was seen to consist of a mass of tumors, so it was decided to perform vaginal hysterectomy to remove the rest of the tumor.

The entire tumor-mass weighed thirteen and one-half pounds. The upper third consisted of a single solid mass, the remainder being composed of a number of smaller tumors, varying from one and a half to four and a half inches in diameter. The left ovary was enlarged, containing a hæmatoma two inches in diameter. The tube measured five inches in length and was filled with pus, the fimbriated extremity being closed and adherent to the ovary. The right tube was enormously enlarged and was coiled upon itself. The end, which presented no trace of fimbriæ, was closed, the tube measuring here three and four-fifths inches in circumference, and being filled with a bloody fluid.

DR. D. BRYSON DELAVAN related a case of

EPITHELIOMA LARYNGIS.

"A. S. J——; United States; aged fifty-eight; married; merchant. Family history excellent. Ancestors remarkably healthy and long-lived. Was brought up on a farm. Has always enjoyed perfect health. No diathesis discoverable. Has never used tobacco or alcohol in any form. Has lived much in the open air. In the summer of 1885 he caught cold, which affected his larynx. The resulting hoarseness never entirely disappeared, but became worse by degrees until the winter of 1886, when he became aphonic. About this time marked irritation of the larynx set in, causing considerable annoyance. Dysphagia followed, and later, dyspnœa. The latter became so severe that in June, 1887, he applied for relief at the Throat Department of the New York Polyclinic, having been referred by Dr. M. Allen Starr. On examination, the patient appeared a large, splendidly developed, vigorous man. His heart, lungs, and abdominal viscera, so far as could be ascertained, were normal. He was aphonic and was suffering from urgent dyspnœa. Laryngoscopic examination revealed the following condition: The mucous membrane of the larynx was deeply congested; the left arytenoid prominence was tumefied, the swelling extending over the whole of that side of the larynx; the left false cord was greatly enlarged and projected so far beyond the median line as to cause almost entire occlusion of the glottic aperture; the left vocal band was partially destroyed by a deep ulcer, which had its origin, apparently, in the adjacent sacculus laryngis, and which extended throughout the middle third of the band and downward below the glottis. There was no cachexia apparent and no involvement of the neighboring cervical glands. The appearance of the ulcer, together with the history of the case, at once suggested malignant disease, and, by reason of the urgency of the dyspnœa, an immediate tracheotomy was advised. To this the patient objected. On his return home the dyspnœa increased and by the following afternoon became so severe that asphyxia was threatened, and I was hastily summoned. Tracheotomy was performed and a cannula was inserted, to the patient's immediate relief. Microscopical examination of fragments of the tumor proved it to be epitheliomatous. Following the introduction of the tube, as is common in such cases, the condition, both general and local, improved, and all of the laryngeal lesions ameliorated to a marked degree. About this time he was seen in consultation by Dr. William T. Bull, who advised laryngectomy. This he would not permit until, as he said, he had seen the result of a similar case upon which Dr. Bull had just operated. The danger of delay was urged, but his decision was unalterable. During July the improvement ceased, and in August the disease again began to make steady progress. When, in the latter part of August, having seen the brilliant result attained in the case above mentioned, he at last consented to an operation, it was found that the whole of the thyroid, the cricoid cartilages, and even the hyoid bone were involved, and the neighboring tissues were infiltrated, so that extirpation of the larynx was no longer justifiable.

"The progress of the disease was now rapid, the whole interior of the larynx becoming involved and the cartilages increasing in size until, finally, they attained about four times their usual dimensions. There were profuse and annoying expectoration, cachexia, considerable emaciation and insomnia, but little dysphagia and that easily relieved by the application of cocaine, a fair degree of general strength, and no glandular involvement.

"The patient's condition grew gradually worse until January 1, 1888, when he complained that the tube seemed to be obstructed, and that removal and cleansing of the inner cannula did not relieve it. Examination of the trachea with a soft, flexible probe revealed the presence of a mass of tissue, of soft, friable consistence, upon the left side of the trachea and extending downward below the end of the tube. The removal of the most prominent part of this obstruction gave relief to the dyspnœa for several days; the attendant was instructed to remove the tracheal tube and insert far down the trachea a large soft catheter whenever an attack of dyspnœa occurred. This succeeded in temporarily relieving the tracheal stenosis, but the attacks of dyspnœa came on with increasing frequency, and during one of unusual severity the patient died.

"The principal points of interest, pathologically, in the above were, first, the extension of the growth into the trachea to so great a distance; and second, the fact that the adjacent glandular structures remained uninvolved."

DR. J. WEST ROOSEVELT presented (see p. 233)

A SERIES OF HEART LESIONS.

DR. FRANK FERGUSON presented a specimen of

TUBERCULAR PERICARDITIS,

showing marked thickening of both layers of the pericardium. The patient was a boy, ten years of age, born in Italy. For a year he had been in the habit of drinking from three to seven glasses of beer a day, and had smoked cigarettes excessively. One year ago he had a violent cough, accompanied by fever, which lasted for ten days, during which time he was delirious. There was no expectoration, but the boy had pain in the right side of the chest and was unable to lie on that side. There was no dyspnœa. This attack lasted for two months, and left the patient weakened and drawn over to the left side. Two months ago he had a similar attack, and for a year he had had some fever and a cough in the morning. One week before admission to the hospital, on November 5, 1887, he began to have increased cough and fever. There was no chill. The patient had dyspnœa and pain in the right side on coughing. The fever lasted but one night. and there was no expectoration nor spitting of blood.

Physical examination.—The right side of the chest was markedly retracted, and expanded scarcely at all during respiration. There was dulness anteriorly at the apex. Vocal fremitus was exaggerated, and there were many fine moist râles. On the right side, posteriorly, below there was dulness—lost vocal fremitus, and diminished breathing. The cardiac action was rapid—no murmur. The abdomen was distended, and the abdominal veins were markedly enlarged. There was a well-marked sensation of fluctuation. The liver extended from the fifth rib to a full hand's breadth below the free border, and it was somewhat tender.

Both chests were tapped and clear serum was withdrawn from the left. Urine yellow, acid, 1.006; no albumin. The patient became progressively worse, complaining of pain, sleeplessness, and dyspnœa, and getting weaker daily. He died on November 27th.

Autopsy.—Four hours after death. The peritoneum contained 1,500 c.c. of straw-colored serum. The diaphragm was on a level with the fifth interspace on each side.

There were firm old adhesions everywhere on the right side, and the pleura was much thickened. The pleural cavity contained lymph. On the left side were found old adhesions at the apex and 1,000 c.c. of clear serum. The upper lobe of the left lung was in the condition of gray hepatization. The lower lobe was œdematous. The right lung was firmly compressed and contained no air.

There were recent adhesions everywhere between the two layers of the pericardium. The heart was drawn toward the right. Its cavities were moderately dilated, but the valves were competent and the endocardium was normal.

Dr. H. M. Biggs presented a specimen of

ULCERATIVE ENDOCARDITIS.

The patient had been an attendant at the Charity Hospital for a number of years. He had never complained of any heart-trouble, and was sick only about eighteen hours before his death. On post-mortem examination both lower extremities were seen to be covered with a large number of petechiæ. The heart was hypertrophied and dilated, following an old pericarditis with obliteration of the pericardial sac. The mitral valve was the seat of an old trouble, as shown by the presence of some calcareous nodules, and also presented the lesions of recent endocarditis. The case was interesting on account of the sudden onset and short duration of the symptoms, and also because the changes in the heart were not of such a nature as to furnish the source for the numerous emboli necessary to account for the large number of petechiæ on the lower extremities. There had been a number of cases of small-pox in the hospital, and the man had had charge of the clothes of these patients. It was possible, therefore, that the case was one of hemorrhagic small-pox.

A second specimen was one of

RUPTURE OF THE HEART,

occurring in a man, fifty-eight years of age, a stone-cutter by occupation. He was apparently perfectly well, with the exception of some dyspnœa, on retiring one night, and was found dead in bed the following morning. At the autopsy the pericardium was found filled with blood, which had escaped through a small rupture in the antero-lateral wall of the left ventricle. There was no thinning and little, if any, dilatation of the heart. There was a clot along a branch of the coronary artery, but the vessel was almost perfectly normal, and was not ruptured.

Dr. Biggs also presented a third heart, removed from a patient in whom there had been heard, before death, a

MUSICAL SYSTOLIC APEX-MURMUR.

Death occurred from pulmonary trouble, and at the autopsy no cause was found to account for the murmur except a small chorda tendinea running through the ventricle.

The fourth and fifth specimens showed

MULTIPLE SECONDARY GROWTHS.

In the first case the growths were in the myocardium of the right auricle and ventricle, and followed primary carcinoma of the kidney. The lesion had not manifested itself by any physical signs before death.

In the second specimen there were similar growths, mostly in the walls of the left ventricle. The primary cancer was in the left ovary, and was of small size. The patient had died suddenly in an attack of cardiac syncope, there having been no symptoms suggestive of a serious affection previously, with the exception of one or two not very severe attacks of syncope.

The last specimen was one illustrating

ULCERATIVE ENDOCARDITIS,

occurring in a case of pyæmia. Pure cultures of the staphylococcus pyogenes aureus were obtained from the vegetations on the valves, and from necrotic patches in the kidneys.

Dr. G. L. Peabody presented specimens showing a

TRAUMATIC ANEURISM OF THE LEG,

following the lodgement of an embolus, and valvular heart-lesions. The patient was a man, twenty-two years of age, born in England, a nurse by occupation. He gave no history of any heart-trouble or of any disease ordinarily causing cardiac lesions. He was, according to his own report, perfectly well up to one week before admission to the New York Hospital. At this time he began to be troubled with dyspnœa, and soon after felt a sudden sharp pain in the calf of his right leg. Upon admission an examination showed an increased area of precordial dulness, and there was a distinct mitral systolic murmur and also a double aortic murmur. The pain in the calf steadily increased, and a pulsating tumor appeared in this situation. The patient died from exhaustion without presenting any further symptoms of interest.

Autopsy.—Two hours after death. The right leg and foot were found to be greatly swollen and œdematous.

The pericardium was normal. The heart was large, there was great hypertrophy of the left ventricle, and the muscular tissue was pale and flabby. The valves of the right side were normal. On the ventricular surface of one aortic cusp was a recent vegetation with a base of attachment measuring one-half by one-fourth of an inch. The ventricular surface of the mitral valve was roughened and covered by recent fibrinous masses, which were firmly adherent to the surface of the valve. The surface beneath them was roughened. The free edges of the segments of the mitral valve were ulcerated. Several of the tendinous cords were seen to be completely separated from the cusps. The lungs showed hypostatic pneumonia, besides the interstitial process common in mitral disease.

The spleen was somewhat larger than normal, and contained several old decolorized infarctions.

The only other parts of the body that presented lesions of interest were the tissues of the right leg. In this the femoral and popliteal arteries were normal. A rent was discovered in the posterior tibial artery, near its origin, which established a communication with a large, irregular, ill-defined cavity filled with recently coagulated blood. The inner surface of the walls of this traumatic aneurism was seen to be smooth in some places; in others, it was made up of lacerated muscular tissue. The intermuscular spaces of the calf of the leg were filled with blood, as was also, in some places, the subcutaneous tissue.

The length of the aneurismal sac was twenty centimetres, and its diameter half as great.

Dr. Peabody regarded the case as one of interest from its unusual features, especially the development of the traumatic aneurism following the lodgement of an embolus in the posterior tibial artery, together with the absence of all previous history of heart disease, or of any of the usual causes of heart disease.

Dr. F. T. Hopkins presented a specimen of

INCOMPLETE CLOSURE OF THE FORAMEN OVALE; PATENT DUCTUS ARTERIOSUS.

The patient, Louise F——, came under his care at the New York Foundling Asylum on February 3, 1888, when she was two weeks old. She was suffering from diarrhœa, which had begun two or three days before. She was a small, miserable-looking baby, weighing about five pounds. At this time she was decidedly cyanotic, and the mother stated that she had been a "blue baby" from birth. No signs of pulmonary trouble, and no abnormal cardiac sounds could be detected. There was a slight improvement noticed in the cyanosis upon the cure of the enteritis, but it was only temporary. The cyanosis again deepened, and the child became somewhat stupid, and died on February 9th.

The autopsy was made two days after death by Dr. Northrup. The lungs were fully developed. There was no inflammation, but a moderate hypostasis of both lungs. The heart weighed six drachms. The foramen ovale was in part closed by a semilunar membrane, imperfect in its upper anterior portion, where it was thick and redundant, and retained its fœtal, valvular character. In addition to this, there were two openings in the lower posterior portion of the septum, which had no valvular character, and could not prevent the passage of blood through them. These last two openings were respectively about one and two millimetres in diameter, and allowed the venous blood to pass directly into the left auricle. The ductus arteriosus was pervious, and an ordinary grooved director could easily be passed through it. The heart and great vessels were otherwise normal. The liver was fatty, and weighed four ounces. The spleen weighed half an ounce. The other organs were normal.

THE PRESIDENT presented a specimen of

REPTILIAN HEART (see p. 353).

The President then presented a second specimen, showing

ANEURISM OF THE INTERAURICULAR SEPTUM WITH PERVIOUS FORAMEN OVALE.

The patient was a male child, one week old. He was brought to the New York Foundling Asylum, three days before death, with a history of having been moderately "blue" from birth, and of frequently crying very hard, at which times he became "black in the face." During the remaining days of life he became more and more cyanotic; the temperature of the body fell below normal; the pulse gradually failed; the breathing ceased. At death the contrast of the child's purple skin against the white bed was strongly marked.

At the autopsy the lividity was seen to be most pronounced about the head and upper portion of the trunk and arms. The body was well developed; the umbilical cord undetached. The lungs were fully inflated and normal.

The heart was large, the left ventricle distended, its walls thin. The foramen ovale was pervious, and large enough to allow an ordinary lead-pencil to pass through. This opening was at the anterior upper margin of the fœtal foramen, the remaining portion being filled by a crescentic membrane advancing from attachments upon the entire remaining periphery. This membrane, instead of being tense and tending to contract the orifice, was lax, and, together with the adjacent portion of the auricular septum, became prolonged into an aneurismal sac. The finger-tip, pushed gently against the lax membrane, carried it forward half an inch, the first phalanx being covered as with a glove-finger.

The specimen showed the aneurismal sac, which had been distended; also the aperture, which was as large as the average fœtal foramen, though apparently partially closed by the valve-like margin of the crescentic membrane.

The other organs were normal. The condition of the foramen ovale was believed to be the cause of the cyanosis. The ductus arteriosus was contracted, and allowed little or no blood to pass.

The Society then went into executive session.

THE DRUG-STORES IN GERMANY AND THE UNITED STATES.—The drug-stores have a curious way here of shutting up just about the time you want them. And as soon as it begins to grow dark, down go the shutters, and if you need anything you go to a little bell-handle outside of one of the iron shutters and ring it. Then you hear someone at a crank inside, the massive frame rolls up, and a head looks out the window. Finally the man or boy inside opens part of the window and you talk through a pane of glass and make known your wants. Instead of angry at being aroused, the man begs your pardon for keeping you outside and says: "I thank you for your order." If you have not the exact change, and the man inside is in the same predicament, he will beg you most politely and thank you to allow him to change it. Having done so he will thank you for calling (evidently taking the visit as a social one), bow, close his little peep-hole, bow again, and then smile sweetly as he grinds down his iron shutter, and his smiling face is lost to view. How different from the druggists in America! I remember I once woke one up in the States and he came down-stairs with a shotgun after me. But, as I remarked before, they have a curious way of doing things in Dresden.—*Dresden Correspondence.*

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE PRESIDENTIAL ELECTION AT THE COLLEGE OF PHYSICIANS—THE BRITISH MEDICAL ASSOCIATION AND RELATIVE RANK—SUCCESSFUL TREPHINING FOR CEREBRAL ABSCESS—THE ASSOCIATIONS OF GASTRIC ULCER—THE PROGNOSTIC SIGNIFICANCE OF LOW ARTERIAL TENSION IN KIDNEY DISEASE—THE PATHOLOGICAL SOCIETY—SOME RECENT DEATHS.

LONDON, March 13, 1888.

THE topic of the day is the coming election at the College of Physicians. Having served seven years, it is understood that Sir William Jenner will not consent to be re-elected; a fresh president has, therefore, to be chosen. A year ago it might fairly have been said that the running lay between Sir William Gull and Sir Andrew Clark, and though the former has made many enemies, he would, I think, have gained more votes than Sir Andrew Clark had there been a real contest last year for the Presidency. Sir William Gull's state of health, however, precludes him from being now nominated. Among others, Sir Andrew Clark, Sir Edward Sieveking, Dr. Quain, and Sir Henry Pitman may be regarded as likely candidates. Sir Henry Pitman has been Registrar of the College since 1858, and was an unsuccessful candidate for the Presidential chair in 1876, on which occasion the choice of the Fellows fell on Sir Risdon Bennett. Sir Henry Pitman is considerably advanced in years, but it is suggested that his intimate acquaintance with college routine would prove very valuable at the present juncture, and he is known to be in accord with Sir William Jenner in most matters of collegiate policy.

The British Medical Association received a somewhat decided snub in the House of Commons yesterday evening. Dr. Farquharson asked the Secretary of State for War whether he had received from the Association a statement containing an analysis of the opinions of nearly twelve hundred army medical officers with reference to the abolition of relative rank, and also whether a widespread feeling of dissatisfaction had not been shown to exist throughout the department. Mr. Stanhope replied that he had received the communication, but that the opinions contained in it appeared to have been obtained in a manner altogether in contravention of military rules. Medical officers, like others, had a proper channel through which to be heard, and he was not prepared to accept a civilian circular from any association on their behalf. Mr. Stanhope, whose remarks were greeted with cries of "hear, hear," further proceeded to state that the status of medical officers was precisely what it was before the recent changes.

At last week's meeting of the Medical Society of London Dr. Ferrier and Mr. Victor Horsley contributed a joint paper of considerable interest. In it was narrated the case of an artisan in whom acute otitis media was succeeded in a few weeks by cerebral abscess. The abscess was tapped and six drachms of pus withdrawn. Antiseptic precautions were employed, and the wound united by first intention. It had completely healed by the twenty-fourth day after the operation. The case was a remarkable one of recovery from a grave condition, as before the operation there was intense optic neuritis in both discs, with hemorrhage into the right. There was also almost complete motor aphasia, paresis of right side of face, and (less marked) paresis of the right upper limb. The abscess was situated one centimetre from the surface. An inch disc of bone was removed after incising the soft parts. On removal of the bone the dura mater was found congested and bulging. On opening it œdematous brain bulged out. This was tapped with a trocar and cannula, and creamy pus withdrawn.

Dr. Ord read a paper on gastric ulcer, and narrated some curious coincident conditions which he had observed. In an anæmic woman under his care, suffering from gastric ulcer, some heart symptoms (from which she was suffering) underwent further development. He had previously noted the coexistence of symptoms of gastric ulcer with those of pericarditis and endocarditis, in three cases. In a case at present under his care, signs of gastric ulcer, cardiac inflammation, and optic neuritis were all present, in conjunction with extreme anæmia. He was inclined to regard the curious combinations of lesions noticed as consequent on anæmia. A short discussion ensued, in the course of which Dr. Maclagan mentioned a case in which a lady aged fifty, after sudden, profuse gastric hemorrhage, developed an endocardial murmur with a slight rise of temperature. In another case, a neurotic patient, subject to gastric irritation, developed an apex systolic bruit.

Dr. Broadbent then read a paper on the prognostic significance of blood-pressure in acute renal disease. In almost every form of kidney disease, he said, arterial tension was high, but he had twice seen low tension when symptoms of renal cirrhosis were present. In acute renal dropsy, when the pulse-beats were short and easily arrested, it indicated temporary dilatation and weakness of the left ventricle. Continued low tension might be due to persistent cardiac weakness, and the prognosis of this was unfavorable. It might also be due to diminished peripheral resistance, which was also unfavorable. Low blood-pressure indicated a long illness and the necessity for using vascular stimulants.

Dr. Maguire remarked that he had found cases of high tension best relieved by calomel and salines. Where tension was low, nux vomica and iron were indicated.

At the last meeting of the Pathological Society several specimens of interest were shown, and also some living patients. Mr. Shattock exhibited a specimen of epithelioma of the kidney associated with calculus. The growth was not of the glandular type usual in malignant renal tumors, but was a true epithelioma, and probably due, he thought, to the irritation of the calculus. Mr. Walsham observed that such cases afforded a powerful argument for early interference in cases of suspected calculus. Mr. Bernard Pitts showed a specimen of villous carcinoma removed from the breast of a lady fifty-three years of age. Dr. Norman Moore showed two specimens of renal disease. Mr. Hurry Fenwick brought forward statistics of sixty cases of villous papilloma of the bladder from different sources, showing the varying conditions which might be encountered by surgeons in dealing with these growths. In regard to carcinomata, he had found that they might exist in the same bladder with benign growths in the proportion of ten per cent., and observed that this would be an important factor in the surgical treatment of such cases. He also showed some specimens to prove that carcinoma might propagate itself by contact. Several of these specimens showed growths on both sides of the bladder where the walls would obviously be in contact when the bladder was empty.

The oldest Fellow, but one, of the College of Physicians —Dr. John Burdett Steward—died a week ago, at the age of ninety-four. He took the degree of M.D. at the University of Cambridge in 1829, having become a member of the College of Physicians a year previously.

Mr. Thomas Blizzard Curling, F.R.S., formerly President of the College of Surgeons, died at Cannes a few days ago at the age of seventy-six.

THAT "ORAL WHIFF."

To the Editor of The Medical Record.

Sir: The Medical Record of March 3, 1888, on page 235, contains an article entitled "The Oral Whiff," by Dr. W. S. Cheesman, of Auburn, N. Y., which interested me particularly because I have noticed the same phenomenon in myself, and because the manifestation seems to be looked upon as something somewhat unusual.

The origin of the phenomenon in question can be easily accounted for if we cease to look for a pathological explanation.

Now, what were the physiological conditions in the few cases given in detail by Dr. Cheesman? The heart was in unusual activity, in one case from active exercise, in the other from mental excitement—after running, during a political wrangle, etc. It is stated in Case I. that the whiff ceased when the heart's action became composed, only to reappear upon renewal of the exertion. In a case which came under my own observation the patient noticed the "oral whiff" only after the completion of the sexual act, while both respiration and the heart's action were accelerated, passing off as the heart ceased its tumultuous action.

Of course, auscultation at this time will reveal the puff at each systole, and, as the excited action lessens, the puff gradually becomes weaker, until nothing is heard but a slight emphasis of the natural vesicular breathing at each systole, which may also be heard in most persons irrespective of unusual activity of the heart.

Looking at the phenomenon from a physiological side, we would not expect any pathological manifestations, such as dyspnœa, abnormal heart-sounds, etc.

Gerhardt[1] considers it to be physiological, and even claims that from its absence it might be possible to diagnosticate adhesions of the pulmonary borders proximal to the heart.

Wintrich[2] speaks of the phenomenon as occurring quite often, and calls it "systolic vesicular breathing." He explains it in the following way: The lungs are constantly endeavoring to adapt themselves to changes in the volume of the chest, not only such as are manifest externally, but also those occurring within the chest, such as the contraction of the heart. The heart becomes smaller, and the contiguous portions of the lungs become overfilled with air, striving to fill out the extra space as it were. This rush of air is heard as systolic vesicular breathing. He goes on to say that the presence of this phenomenon seems to be the rule, but its absence is often noted.

Guttmann[3] says it is caused by the sudden rush of air into the alveoli of those parts of the lung contiguous to the heart, which rapidly expand and occupy the space rendered vacant by the shrinking of the heart in systole.

Julius Otto, M.D.

125 State Street, Chicago, Ill.

SHALL SURGICAL INVENTIONS BE PATENTED?

To the Editor of The Medical Record.

Sir: In your issue of March 17, 1888, there appears an article by Dr. Incognito entitled, "Shall a Surgical Invention be Patented?" and upon the same he invites discussion by the readers of The Medical Record—if unbiassed. Now since I do not know Dr. Incognito, and am not an inventor, this may be considered as unbiassed.

The doctor at once disclaims the propriety of defending secret medicines, yet compares his (an) invention to them. Now, Mr. Editor, space to you is valuable, and as one's mind can as well be understood in a few words as many, let me ask, briefly, What is a surgical invention the result of, and what is it for? We understand it to be the result of the doctor's patient study of the disease in hand, and the outcome of his professional education. It is intended for the relief of suffering humanity and to assist him in complying with the promise he made when graduated a doctor of medicine to do all in his power for the relief and cure of those under his care. If the doctor does not approve of the proprietary medicine, he certainly would disapprove the conduct of a brother physician, who, discovering a specific for a certain disease, withheld it from the profession (thus making himself proprietor), that all suffering from the disease should be compelled to consult him, thereby elevating his professional standing among men and increasing his income. Yet where is the difference? If the invention is of value, the instrument-maker gladly takes it at a specified royalty, or the doctor manufactures it himself, and puts the profits into his pocket. In either case it is saying plainly to the profession: You can have it, but must pay me for it. Your sick ones can have it, but they are indebted to me to such or such an amount for the good it may do them.

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[1] Lehrbuch d. Auscultation u. Percussion, 1876, p. 181.

[2] Gerhardt: Lehrbuch d. Auscultation u Percussion, 1876, p. 181.

[3] Handbook of Physical Diagnosis, 1877, p. 98.

To my mind it is unprofessional, and a physician or surgeon should be above it. They should not consider their inventions or discoveries as commodities, to be sold or exchanged as luxuries, and the profits resulting for their personal benefit. As he would not withhold a remedy known to cure a certain ill, so should he give to the profession and people the result of his inventive mind. If for no other reason, this one is sufficient, that he alone was permitted to give to medicine or surgery something to mitigate the suffering he daily witnessed, mindful of the fact that if good came of it his name would be connected with it, and, if not pecuniarily benefited, he would have the grateful remembrances of the user and the respect of his professional brethren.

HOWELL WHITE, M.D.

FISHKILL, N. Y., March 19, 1888.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: After reading "Dr. Incognito's" letter in your last issue, I am prompted to ask a question which has occurred to me before.

What difference is there between a physician's holding a patent on an instrument and holding a copyright on a book? Are not both virtually patents? A copyright gives the author exclusive control over the publication of his book, and gives him a royalty on each copy published. A patent gives the patentee exclusive control over the manufacture of his invention.

Where is the difference?

A book is the result of a man's brains; so is an instrument. Both are a benefit to the profession. Both cost money to elaborate, and time and labor to perfect.

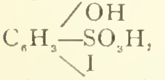
But do we give the book to the publisher and let him reap the profits? I pick up from my desk a book on "The Eye," by a noted specialist, and on a front page find "Copyrighted by so and so," and in italics "*All rights reserved.*" In other words, it is patented. But if it is an instrument that has cost years to perfect, we must not patent it; it would be unprofessional. "Oh, consistency, thou art a jewel!"

In closing, I will say that I am not an inventor, nor have I any axe to grind; but what is sauce for the goose, ought to be sauce for the gander.

E. C. ATKINS, M.D.

MILFORD, MASS.

SOZOIODOL, THE NEW DERMATOLOGICAL REMEDY.—This agent, introduced by Trommersdorff, appears in pure white crystals. It combines three of the best parasiticides known, being composed of iodine, carbolic acid, and sulphur. It is expressed chemically by the formula



$C_6H_3(OH)(I)—SO_3H$, or $C_6H_3ISO_3H$ (OH). Its usefulness is enhanced by its ready solubility in water and alcohol, and its chemical stability when mixed with various vehicles. Sozoiodol is free from odor, and is well borne by the sound and the diseased skin. It appears to have decided curative properties in eczemata of all descriptions, in herpes squamosus and tonsurans, impetigo, and ulcers. It is applied in the form of a powder or a lanolin paste. In barber's itch a ten per cent. paste has been found particularly useful. Its chief activity appears to be in parasitic affections of the skin.—*Therapeutische Monatsschefte.*

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from March 18 to March 24, 1888.

BAXTER, J. H., Colonel and Chief Medical Purveyor. Will proceed to Augusta Arsenal, Ga., on public business. S. O. 62, A. G. O., March 16, 1888.

SPENCER, WILLIAM C., Major and Surgeon. Died March 22, 1888, at Fort Trumbull, Conn.

GREENLEAF, CHARLES R., Major and Surgeon. Will proceed to Cambridge, Mass., on official business. S. O. 62, A. G. O., March 16, 1888.

FORWOOD, W. H., Major and Surgeon. Granted one month's leave. S. O. 20, Department of Dakota, March 10, 1888.

BROWN, H. E., Major and Surgeon. Assigned to temporary duty at Fort Barrancas, Fla., during the absence on leave of Assistant Surgeon M. C. Wyeth. On the return to duty of Captain Wyeth, Major Brown will rejoin his proper station. S. O. 65, A. G. O., March 20, 1888.

O'REILLY, R. M., Major and Surgeon. Will proceed to York, Pa., and make an examination of Captain Edward B. Rhum, Twenty-first Infantry. S. O. 62, A. G. O., March 16, 1888.

WORTHINGTON, J. C., Captain and Assistant Surgeon. Granted leave of absence for four months, to take effect May 15th, or as soon thereafter as his services can be spared. S. O. 65, A. G. O., March 20, 1888.

WYETH, M. C., Captain and Assistant Surgeon. Granted leave of absence for two months, to take effect about April 1st. S. O. 65, A. G. O., March 20, 1888.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 24, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	11	1
Scarlet fever	147	24
Cerebro-spinal meningitis	2	2
Measles	64	3
Diphtheria	134	57
Small-pox	23	3
Yellow fever	0	0
Cholera	0	0

IS LEUCOCYTHÆMIA CANCER OF THE BLOOD?—The question proposes an ingenious hypothesis supported by the histological contention that the blood, though fluid, is as much a tissue as the most solid of them all. M. Bard has written an article on the subject in the *Lyon Médical*, No. 7, in which he takes up the line that the disease is a new-growth, and remarks that if this process does not give birth to a tumor in the original sense of the word, it is because the neoplastic tissue obeys a pathological law and preserves the evolutionary attributes essential to its tissue of origin—the blood.—*The Lancet.*

THE ASSOCIATION OF SUPERINTENDENTS of Hospitals for the Insane has for years admitted homœopathists to membership, yet sends delegates to the American Medical Association. The College of Physicians and Surgeons of Chicago numbers an eclectic among its professors.—*Medical Standard.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 14 NEW YORK, APRIL 7, 1888 Whole No. 909

Original Articles.

THE CARTWRIGHT LECTURES ON THE GENERAL PATHOLOGY OF FEVER.[1]

BY WILLIAM H. WELCH, M.D.,

PROFESSOR OF PATHOLOGY IN JOHNS HOPKINS UNIVERSITY, BALTIMORE.

LECTURE I

THERE is no subject in medicine of more general and varied interest than fever. The practitioner in every department of medicine, the pathologist, and the physiologist are equally interested in the investigation of the nature and effects of fever. Even the physicist and the chemist, who are not directly concerned with medical science, have lent their aid to the study of animal heat and its disorders. The history of opinion regarding fever is in great part the history of medicine itself, for no feature of the great systems of medicine, from Hippocrates and Galen to the present century, so characterizes these systems as the views held concerning the nature of fever. In consequence of the importance of the subject and of the number and ability of those engaged in its investigation, it might be supposed that no chapter in medical science would be better understood than that pertaining to fever. That such is not the case is due to the fact, which is becoming more and more evident, that the reaction of the animal system which we call fever is dependent upon the most fundamental and essential properties of protoplasm and of nerve-energy. In proportion as our knowledge of these properties increases and becomes more accurate, we gain a clearer insight into the complicated processes involved in the production of fever.

I should hardly have selected for this course of lectures a subject where so many problems remain unsolved, and which must necessarily be presented in so fragmentary a form, were it not that in all ages the opinions held concerning the nature of fever have controlled measures employed in its treatment. In proof of this one need not go back to the time when fever was regarded as an almost conscious struggle of an anima with a noxious principle, in which struggle the physician was to interfere as little as possible; or to the time when fever was supposed to result from morbid humors, which the physician should aim to eliminate by the production of a critical discharge; or to the period when the treatment hinged upon the belief either in the sthenic or the asthenic nature of fever. In our own time the treatment of fever is intimately connected with the answers variously given to such questions as, whether fever aids in the elimination or destruction of infectious agents concerned in its production; whether increased waste of tissue is a constant condition and a source of danger in fever; what part is played by infection, and what part by elevation of temperature, in causing the grave symptoms of fever; what, in addition to lowering of temperature, are the effects of so-called antipyretic measures of treatment.

I need hardly say that the subject of these lectures relates to fever as a condition common to all febrile diseases. Some writers understand by the term fever, used in this sense, merely abnormal elevation of temperature; others, elevation of temperature and the symptoms directly caused by this; and still others, a complex of symptoms of which increased temperature is the most prominent symptom, but not necessarily the cause of the others. In considering the general pathology of fever it is convenient to adopt the last meaning, although it would doubtless be less confusing if the word fever were applied only to abnormal elevation of temperature.

Increased temperature being the dominant and essential symptom of fever, all discussions as to the nature of fever centre around the question, How is febrile rise of temperature produced? It is to the consideration of this question that I first invite your attention. As there are other aspects of fever which I wish to discuss, it will be necessary to present the matter belonging to this division of the subject in as succinct a form as is compatible with clearness. Twelve years ago Burdon-Sanderson brought together, in an admirable critical review, the results of investigations upon this subject up to that period. Since that time important additions have been made to our knowledge of the mode of production of fever.

In the wonderful preservation of a nearly constant temperature which characterizes in health the warm-blooded animals, three factors are concerned, viz.: The production of heat within the body, the loss of heat from the body, and the regulating mechanism by which the varying heat-production and heat-loss are so balanced that the internal temperature remains practically constant. It is theoretically possible that the rise of temperature in fever may be due to the disturbance of any one or more of these factors. It becomes necessary, therefore, to consider the behavior of heat-production, of heat-loss, and of the regulating mechanism in fever.

We will begin with a consideration of the production of heat in fever. The amount of heat produced by the body is estimated by two methods, one known as direct calorimetry, the other as indirect calorimetry. In the method of direct calorimetry the animal is placed in a closed ventilated box, surrounded on all sides by a compartment containing water or air, and the amount of heat discharged from the body is determined by the quantity of heat imparted to the surrounding water or air. If the temperature of the animal remain unchanged during the period of observation, the heat-production is equal to the heat-loss; if the temperature rise or fall, the amount of heat corresponding to this change of temperature—an amount determined by multiplying the weight of the animal by its specific heat and by the number of degrees of altered temperature—is added to or subtracted from the quantity of heat imparted to the calorimeter. Time will not permit me to enter into experimental details in this connection; it must suffice to say that the method of direct calorimetry necessitates the introduction of a number of corrections which cannot be determined with absolute accuracy, so that the results obtained are of relative rather than of absolute value.

Hitherto the estimation of heat-production in fever, by determining the entire amount of heat liberated from the body, has been made only upon animals in which fever has been artificially produced. The most elaborate researches of this nature are those of Senator and of Wood.[1] The experiments of Wood are of the greater value, because he extended his observations over longer periods of time.

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[1] Delivered before the Alumni Association of Physicians and Surgeons, March 29, 1888.

[1] Senator: Untersuch. üb. d. Fieberhaften Process. Berlin, 1873. Wood: Fever; a Study in Morbid and Normal Physiology. Philadelphia, 1880.

In four of the seven calorimetrical experiments of Wood, on different fevered dogs, comparison can be made of the amount of heat produced hourly in fever with that produced by the same animal when fed, and when in a state of hunger. During the period of fever the animal was also in a condition of hunger. I have computed from Wood's tables that the average hourly heat-production during seven days, described as first and second fever days, is a little over twenty-three per cent. greater than that produced by the healthy animal during a state of hunger, the minimum excess being one per cent., and the maximum 55.5 per cent. If a comparison be made of different periods during the existence of fever, there are found to be even greater fluctuations in the amount of heat-production than these figures would indicate; this amount being sometimes more than double that in hunger, and sometimes considerably less than the average production in hunger. Moreover, these experiments show no definite relation between the height of the temperature and the amount of heat produced, nor is it possible to deduce from them any relation between heat-production and the different stages of fever, such as the more recent calorimetrical experiments of Wood, Reichert, and Hare appear to show, and which will be described later. An important outcome of these, as well as of all similar calorimetrical experiments, is that although the heat-production of an animal in fever is greater than that of one under like conditions of nourishment, it is, as a rule, less than that of the same animal upon a full diet.

There are many reasons which make it important to control the experimental results obtained from animals in fever by corresponding observations of human beings. The agents used in producing experimental fever have been generally putrid fluids or pus, the injection of which causes, sometimes, diminution instead of elevation of temperature. When fever is thus produced it is usually of short duration and of only moderate intensity, the rise of temperature being rarely more than four degrees and sometimes not more than one degree, Fahrenheit. Moreover, a large part of the important rôle played by the skin in the regulation of the bodily temperature in man is assumed by the lungs in these animals.

Complete calorimetrical observations of human beings in fever encounter difficulties which have not yet been overcome. The imperfect or incomplete methods employed by Liebermeister and by Leyden [1] in determining the heat-production of human beings in fever justify the inference that this production is increased, and apparently, as a rule, to a greater extent than in animals, but they do not warrant positive conclusions as to the quantity of heat produced.

We turn now to the results regarding febrile production of heat obtained by what has sometimes been called indirect calorimetry. Inasmuch as the heat-energy of the body is the result of chemical changes of its proteids, fats, and carbohydrates, it is evident that if we know the kind and the amount and the heat-value of the substances consumed in a given time within the body, we can compute their heat-production. These chemical changes, so far as their final products are concerned, are processes of oxidation. The heat-values of the substances consumed in the body were determined first by Frankland, and more recently, with greater accuracy, by Von Rechenberg, Danilewsky, and Rubner. The investigations of Pettenkofer and Voit have shown that in hunger almost exclusively fats and proteids are oxidized, and that in this condition, by determining the amount of oxygen absorbed and of nitrogen and of carbon excreted, we can estimate the quantity of fat and of proteid substance oxidized during the period of observation.

Physicians of past centuries regarded increased consumption of the material of the body in fever as so evident that it needed no especial demonstration, and after Lavoisier made apparent the sources of animal-heat it was accepted almost unquestioningly, until the last quarter of a century, that fever is essentially a process of increased combustion or oxidation. The immense historical importance of the promulgation, in 1863, of Traube's theory, which denied the dependence of fever upon increased production of heat, is that this theory has led to a careful inquiry into the grounds of beliefs hitherto generally accepted, and to the demonstration of the unsatisfactory nature of the evidence hitherto thought to be conclusive.

The striking loss of weight of most fever-patients is, as is well known, a fact of great clinical importance. Weber and Finkler have demonstrated that animals in fever lose weight more rapidly than healthy animals in hunger, and although observations on human beings with reference to this point are not concordant in their results, there can be little doubt that the tendency of fever is to cause a greater loss of weight than can be explained simply by insufficient nutriment. This tendency, however, may be masked by the retention of water within the body, as the investigations of Leyden and others have shown. While, therefore, the studies of the loss of weight in fever leave no doubt that there is increased destruction of tissue in this condition, we cannot consider this loss as an accurate measure of the increased destruction, nor, without further knowledge, as an indication of increased oxidation, still less as proof of excessive production of heat.

It was for a long time believed that the excessive excretion of urea in fever afforded satisfactory evidence of increased oxidation and of greater production of heat. We now know, especially from the researches of A. Fraenkel, that this is so far from being true that we can explain the excessive elimination of urea better upon the assumption of diminished than of increased oxidation of tissue. In certain pathological conditions, notably phosphorus-poisoning, the amount of urea excreted may be increased more than threefold notwithstanding, or, as Fraenkel believes, in consequence of diminished absorption of oxygen and elimination of carbonic acid. It can, moreover, be computed that even without any diminution of the respiratory gases the discharge of urea may be increased without greater production of heat. While, therefore, the enormous increase in the discharge of urea in fever sheds valuable light upon a most obscure subject, the nature of febrile metabolism, it does not, regarded by itself, afford us any information as to the production of heat.

Failing to find satisfactory proof of increased oxidation in the loss of weight of the body, or the excessive excretion of urea in fever, attention was then directed to the elimination of carbonic acid, an excretory product which bears a much closer relation to the production of heat than does urea. Immense importance has been justly attached to the determination of the amount of carbonic acid excreted by an individual in fever. No point in the whole battle-ground of fever-pathology has been more hotly contested than whether increased production of carbonic acid is an essential part of the febrile process. The first investigators of this question—Leyden, Liebermeister, Senator—contented themselves with the determination of the amount of carbonic acid eliminated by an individual in fever and in apyrexia. There are several considerations which greatly diminish the value to be attached to the mere estimation of carbonic acid excreted without simultaneous determination of the amount of oxygen absorbed. As has been urged by Senator, and with especial clearness by Pflüger, increased discharge of carbonic acid does not necessarily imply increased production of the same. The discharge of carbonic acid varies, independently of its production, with the rhythm and depth of respiration and with the temperature and the alkalinity of the blood, all factors which are altered in fever in such a manner as to favor increased liberation of carbonic acid. It is true that the influence of these factors would cause increased discharge of carbonic acid out of proportion to its production only for a limited period, and that the prolonged increase in the amount of carbonic acid discharged in fever, which has been found by several observers, can hardly be interpreted otherwise than in favor of increased production. There is another point which detracts still further from the value of exclusive determinations of the quantity of carbonic acid discharged, and this is that it makes a great difference, so far as the production of heat is concerned, whether the carbonic acid is the result of oxidation of carbohydrates, of fats, or of proteids, a difference amounting, according to Rubner, to 29.5 per cent.; or, if only the proteids and fats be considered, to over twenty per cent. In investigations of nutrition, it is now known to be of the utmost importance to determine the so-called respiratory quotient, that is, the ratio between the amount of carbonic acid discharged and that of oxygen absorbed. This quotient varies in a definite way with the kind of material oxidized in the body, and an accurate knowledge of it would enable us to draw conclusions as to the substances consumed in fever.

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[1] Liebermeister: Handb. d. Path. u. Therap. d. Fiebers, Leipzig, 1875. Leyden: Deutsches Arch. f. Klin. Med., Bd. v.

The investigations which have been published within the last few years upon the absorption of oxygen, as well as the discharge of carbonic acid in fever, are to be ranked as most valuable contributions to our knowledge of fever. The first estimation by trustworthy methods of the amount of oxygen absorbed and of carbonic acid excreted in fever was made in Pflüger's laboratory by Colasanti upon a guinea-pig, and was published in 1877. Since that time two careful and elaborate researches upon this subject have been made, the one by Finkler and the other by Lilienfeld.[1]

These experimenters found that in fever there is increase of the amount both of oxygen absorbed and of carbonic acid excreted. Making comparison with healthy animals, under the same conditions of nutrition, Colasanti found that the increase in the absorption of oxygen amounted to eighteen per cent., and in the excretion of carbonic acid to twenty-four per cent. Finkler, whose experiments were made also upon guinea-pigs, found under varying conditions of external temperature the average febrile increase of oxygen to be 13.8 per cent., and of carbonic acid 13.3 per cent.; and Lilienfeld, who experimented on rabbits, found the average increase of oxygen to be 15.9 per cent. The statement of these averages gives an incomplete conception of the oxidation in fever as they are derived from all stages of fever and varying elevations of temperature. No constant proportion was found to exist between the height of the temperature and the amount of oxidation. On the other hand, a relation was observed between the oxidation and the stages of fever, viz., the initial stage with rising temperature, the acme with constant high temperature, and the defervescence with falling temperature. During the period of rising temperature oxidation was increased, and in this stage Finkler found the highest percentages, amounting to 36.6 per cent. in the increase of oxygen, and 37.6 of carbonic acid. There were, however, marked fluctuations in this stage, both in the temperature and the amount of oxidation. In the stage of constant high temperature, such high percentages were not noticed, and the fluctuations were less marked. The processes of oxidation, according to Lilienfeld, are increased on the average less in the acme than in the initial stage of fever.[2] During defervescence of the fever the increased oxidation falls, and may sink below the normal. Taking a broad view of these stages, we may say, therefore, that the periods of rising, constant, and falling temperatures in fever correspond to the periods of rising, constant, and falling oxidation, but we must bear in mind that the fluctuations in oxidation are much greater than, and bear no constant relation to, those of temperature, so that in each period there are times when oxidation may rise or fall most decidedly without corresponding changes of temperature.

Inasmuch as these experiments have shown that the increased excretion of carbonic acid in fever is accompanied by increased absorption of oxygen, and, as will be explained presently, that the respiratory quotient, if it change at all, sinks, it is evident that we need not discard experiments in which only the amount of carbonic acid excreted has been estimated by good methods. The most accurate of these experiments are those of Leyden and Fraenkel upon fevered dogs.[1] They found that without exception carbonic acid is excreted in larger amount in fever than in health under the same nutritive conditions, the excess amounting sometimes to seventy per cent., and in general being larger than in the experiments which have been previously considered. The earlier and meritorious experiments of Senator upon this point did not give uniform results, and he felt justified in concluding that there is no evidence of increased production of carbonic acid in fever. Subsequent experiments with far more accurate methods have demonstrated the incorrectness of Senator's conclusions. It may be well to call to mind that Burdon-Sanderson's deductions, which have naturally had great influence among physicians here and abroad, were based in great part upon the data derived from Senator's experiments.

Hitherto the methods employed in studying the respiratory gases of human beings in fever have not approached in accuracy those used in the experiments described. If the discordant results of Wertheim, which were obtained by methods manifestly very inaccurate, be discarded, all other investigators have observed augmented discharge of carbonic acid in fever of human beings. Leyden found an excess of fifty per cent. in the febrile discharge of carbonic acid, and Liebermeister, whose observations were made chiefly on cases of intermittent fever, found an excess of thirty to forty per cent. in the period with rising temperature, and of nineteen to thirty-one per cent. in the acme of the fever. During the defervescence of the fever the excess of carbonic acid discharged diminished and sometimes wholly disappeared. In one instance in which the determination was made during the rigor of intermittent fever the carbonic acid excreted was two and one-half times the normal amount, an excess so enormous that it was undoubtedly due in great part to the muscular movements which attended the chill.

Although we cannot consider these figures as absolutely accurate, they indicate clearly that in human beings as well as in animals fever is characterized by increased oxidation, and apparently that, as a rule, in man the excess of oxidation is greater than in the experimental fever of animals. This was to be expected, as it is difficult to produce experimentally in animals anything approaching in intensity the well-marked fevers of human beings.

As the result of these laborious researches, we may consider it established that increased oxidation is a part of the fever-process. It has been claimed that this augmented oxidation is simply the result of the elevation of temperature, but it can be proven that this is not true. Pflüger has demonstrated that the processes of oxidation are more active at high than at low temperatures of the body, and he has also established the increment of oxidation which corresponds to each degree of rise of temperature. By means of these data Finkler has computed that in guinea-pigs the febrile elevation of temperature of 1° C. would cause an increase of the absorption of oxygen of only 3.3 per cent. Moreover, Lilienfeld found decided increase in the processes of oxidation before there was any marked elevation of temperature, and all the experiments have rendered it quite evident that there is no such relation in fever between the height of the temperature and the energy of oxidation as would be expected if the augmented oxidation were merely the result of the increased temperature.

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[1] Colasanti: Pflüger's Archiv, Bd. xiv.; Finkler, ibid., Bd. xxix; Lilienfeld, ibid., Bd. xxxii.

[2] In the period of rising temperature there was an increase of oxygen absorbed of twenty-seven per cent.; in the acme, of 14.9 per cent.

[1] Leyden and Fraenkel: Virchow's Archiv, Bd. lxxvi.

There is no reasonable doubt that the more energetic oxidation which we find to be an essential part of the process of fever indicates increased production of heat. Exactly what amount of heat-production corresponds to the increased oxidation we cannot know until the kind and the quantity of substances oxidized in fever have been determined. It is to be regretted that no experiments have been made in which the amount of nitrogen excreted has been determined at the same time with the estimation of the oxygen absorbed and of the carbonic acid discharged. These data would enable us to form some estimate, although not an accurate one, of the amount of heat-production corresponding to the oxygen absorbed, unless very different laws from those in health control the oxidation-processes of fever.

Mention has already been made of the importance of determining in fever the respiratory quotient, or the ratio between the carbonic acid discharged and the oxygen consumed. A few words will make this clear. It is well known that under ordinary circumstances in health not all of the oxygen consumed reappears in the carbonic acid discharged. This indicates that a part of the oxygen absorbed is used in other oxidations than those resulting in the production of carbonic acid. According to the extent of these other oxidations, therefore, the respiratory quotient must vary. It is probable that these oxidations, of which carbonic acid is not a product, result, at least in part, in the formation of water, which is therefore one of the excretory products of the body, as has been urged especially by Professor Austin Flint. The influence of various circumstances upon the respiratory quotient has been studied, but what especially concerns us here is that in hunger this quotient sinks, which is to be expected, from the fact that in this condition almost exclusively fats and proteids are oxidized. We evidently possess in the determination of the ratio of carbonic acid discharged to the oxygen consumed a means of reaching a conclusion as to a cardinal point in the pathology of fever, viz., whether the processes of oxidation in fever conform to the laws which govern them in health, and particularly whether, as has been often asserted, unusual or incomplete products of oxidation are formed to any considerable extent in fever. Colasanti and Lilienfeld found that the respiratory quotient in their fevered animals did not vary from that of healthy animals under similar nutritive conditions. Finkler observed that the respiratory quotient fell in fever somewhat more rapidly than in hunger, and this he explains by the more active oxidation in fever. All three experimenters reached the conclusion that the substances oxidized are the same in fever as in health, and that other than the normal products of combustion are not formed in fever in any considerable amount. That the metabolism in fever does differ in at least one important respect from that in hunger is evident from the excessive amount of urea excreted in fever, but considerable variations in the disintegration of albuminous material may occur without much change in the respiratory quotient.

The only determinations of the febrile consumption of oxygen and discharge of carbonic acid in man are those of Wertheim and of Regnard. Both investigators found a decided diminution of the respiratory quotient. The method employed by Wertheim was so defective that no confidence can be placed in his results. The experiments of Regnard[1] are presented with great neatness, but his results on other points differ so much from those obtained by trustworthy physiologists, and by better methods, that we cannot accept his conclusions as to the respiratory quotient in fever without confirmation. Regnard found in all fevers which he studied a most marked diminution of the respiratory quotient. If this were true, it would follow that in fever a much larger part than in health of the oxygen consumed is employed in other oxidations than those yielding carbonic acid. This would confirm the widely accepted belief that water and products of incomplete oxidation are formed in excessive amount in fever.

From the unfortunate discrepancy of these results it is evident that the knowledge which we now possess of the processes of oxidation in fever is not sufficient to enable us to form an accurate estimate of the heat-production. In hunger, from one-fourth to one-third of the absorbed oxygen is available for combination with hydrogen to form water, the remainder uniting with carbon to form carbonic acid (Regnault and Reiset). If in fever the same ratio exists, then the excess of heat production would be proportionate to the excess of oxygen absorbed, assuming that the substances oxidized are the same in both conditions; if, however, as Regnard's experiments indicate, a larger proportion of oxygen is available in fever for the oxidation of hydrogen, then the increment of heat-production would be still greater, for the same amount of oxygen produces more heat when employed in the oxidation of hydrogen than in that of carbon. It is also to be considered that the same quantities of hydrogen and of carbon, in their oxidation, yield varying amounts of heat according to the chemical compounds in which they are contained, and we cannot say positively whether the compounds oxidized are the same in fever as in health, under like conditions of nutrition. Upon the whole, the weight of evidence is in favor of the view that the excess of heat-production in fever is approximately proportionate to the increase in the consumption of oxygen, but it would be rash to assert this positively. It is evident that in fever ordinarily a much smaller amount than in health of the energy resulting from chemical processes is transformed into external mechanical work, so that, relatively, more remains in the form of heat.

In connection with this discussion of the possibility of unusual sources of heat in fever, may be mentioned an hypothesis which has been advanced with much ingenuity by Dr. Ord.[1] This hypothesis is based upon the assumption, which is probable enough, that there are in the body chemical processes in which heat-energy is transformed or rendered latent. These processes are thought to be chiefly those concerned in the building up of tissue. It is argued that inasmuch as the construction of tissue is manifestly in abeyance in fever, the amount of heat in the body may be increased not only by disintegrative processes, but also by "the persistence, in the form of heat, of energy which should have taken another form." That these building-up processes influence decidedly the amount of heat produced in the developing ovum has been demonstrated by d'Arsonval's calorimetrical determination that the egg, during incubation, absorbs heat, notwithstanding the consumption of oxygen and the excretion of carbonic acid. This fact, which might have been predicted, certainly does not justify us in refusing to attach any calorimetrical value to the determination of the respiratory gases and the urinary nitrogen. From the little we know of these constructive processes in human beings, we should infer that the amount of energy in the form of heat which they appropriate bears only a very small ratio to the total heat-energy set free by heat-producing processes, so that their cessation would not bring a large increment to the heat of the body. Moreover, these constructive processes are also in abeyance, although doubtless to a less extent, in starvation, with which experimental fever is usually contrasted, as regards heat-production and heat-loss. It is not probable that any extraordinary difference in the behavior of the processes of tissue-building in fever and in starvation can occur without affecting the respiratory quotient. For the present, therefore, we cannot attach any great importance, so far as the increase of heat-energy in fever is concerned, to the inactivity of heat-absorbing processes.

We have now gone over the evidence which, in my judgment, establishes the fact that there is increased production of heat in fever. The same conclusion is reached also by the study of the loss of heat from the body in fever. That fever is accompanied by increased production of heat, and by more active combustion, has been in all ages the belief of the majority of physicians. This belief, however, has been rather instinctive than based upon actual demonstration. It has been contested by investigators of great ability and on the ground of scientific observations. For these reasons, and on account of the importance of the subject, it has seemed to me desirable to present to you the exact evidence, although many of its details, I fear, may have wearied you. We have learned, moreover, certain facts concerning febrile thermogenesis which the mere observation of fever patients does not render so apparent. We have found that there is no definite relation between heat production and the height of the temperature, so that we may have excessive thermogenesis with low as well as with high temperatures. There appears to be, however, a relation between the stages of fever and heat production, this being in spite of remarkable fluctuations, greatest in the initial stage and least in defervescence. Although, for reasons which have been mentioned, and others might have been adduced, we can attach hardly an approximative value to figures which purport to give the actual heat production in fever, still, unless far more serious errors than seems possible inhere in the methods of direct and of indirect calorimetry, we can draw one important conclusion. This is, that while an individual in fever produces more heat than he would in health, under similar conditions as to food and muscular movements, he does not produce, necessarily, in fever more heat than he would in health on a full diet. And it is certain that he usually produces far less heat in fever than he often does under circumstances which normally increase heat production, such as a cool environment and muscular exercise. That one in health, with little or no change of temperature, may produce twice or more the quantity of heat which he produces in fever, makes it plain that it is impossible to explain febrile rise of temperature simply on the basis of increased thermogenesis, or what probably comes to the same thing, of increased oxidation. That in health vastly increased heat production may occur, with comparatively little change of temperature, is, of course, due to the fact that the dissipation of heat is proportionately increased. It is self-evident, and so far as I know has never been disputed, that in fever the equilibrium is so disturbed that heat loss does not correspond to heat production as it should in health. This disturbance of equilibrium can be brought about in various ways, and it is only by the determination of the actual heat production and heat loss in fever that we can say in what direction the balance is disturbed.

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[1] Regnard: Recherches exp. sur les Variations pathologiques des Combustions respiratoires. Paris, 1878.

[1] Ord: British Medical Journal, 1885, vol. ii.

We have found that the production of heat is increased in fever when the comparison is made with like conditions of nourishment and of environment. It is obvious that the total loss of heat cannot equal the total production of heat during the period of febrile rise of temperature.

As is well known, most of the heat of the body is liberated from the skin and from the lungs; from the former by radiation and conduction and by the evaporation of moisture, and from the latter by evaporation of moisture and warming the respired air. It has been estimated that in man about eighty per cent. of the total heat dissipation is from the skin.

The method of direct calorimetry already described has been applied only to animals for the determination of the total heat loss in fever. Here Wood's experiments are the best which we possess. Leyden and Liebermeister have furnished calorimetrical data which, although unsatisfactory in many respects, indicate the general direction of febrile heat loss in human beings. All of these experiments show that more heat is dissipated in fever than under like conditions in health. The fluctuations of heat loss during a febrile paroxysm are so great that the statement of an average for the entire period has little significance. Such an average, according to Wood's results on fevered dogs, would fall between twenty to thirty per cent. excess of heat loss as compared with the loss in health under like conditions of food. The dissipation of heat in fever, however, may be at times more than double the normal amount, and again may sink below the normal. We have not sufficiently accurate estimates either of the total amount of heat produced, or of that dissipated, during a febrile attack to enable us to strike a balance between the two. Some persons have been so impressed with the large amount of heat lost during certain periods of fever, that they have concluded that there must be far greater excess of heat production than previous investigations have shown to be probable. They suggest that there are sources of febrile heat of which at present we have no idea. Such conclusions seem to me quite unwarranted when we consider the behavior of heat loss, not for a limited time, but throughout the different stages of a paroxysm of fever. We have already seen that we obtain no satisfactory conception of febrile production of heat unless we follow it during the stages of fever, and this is no less true of heat dissipation. The observation of the condition of the skin, as regards temperature and moisture, must in all ages have afforded an insight into the general behavior of heat dissipation during the different periods of fever. It does not require any instruments of precision to make plain the fact that a cold, dry skin, such as we observe during a febrile chill, liberates less heat than normal; or that a hot, moist skin, such as we are likely to find at the defervescence, loses more heat than normal. Not quite so transparent is the direction of heat loss during the hot stage or acme of a febrile paroxysm or fastigium of a continued fever. Here the skin usually appears hot and dry. The ordinary impression that more heat than normal is dissipated during this stage is supported by calorimetrical experiments. There can be no doubt that the elevation of the cutaneous temperature which we observe in the hot stage of fever causes an increase in the amount of heat lost by radiation and conduction. Similar elevations of cutaneous temperature in health, such as those caused by muscular exercise, are accompanied by increased moisture of the surface. Not only is visible perspiration usually absent during the hot stage of fever, but the invisible perspiration is, as a rule, relatively, although not absolutely, diminished, as Leyden has shown. The dryness of the skin, therefore, is a factor which in the hot stage of a fever tends to lessen heat dissipation. Clinical observation, however, shows that fevers differ markedly from each other as regards perspiration during the hot stage, the skin being sometimes bathed in perspiration without any depression of temperature. It would undoubtedly be of great interest to possess trustworthy data as to the exact loss of water from the surface of the body in different fevers, and at different stages of fever. We cannot place much reliance upon the indications afforded by Weyrich's hygrometer, which has been repeatedly used for this purpose. More is to be expected from the method employed by Peiper[1] in studying insensible perspiration under physiological conditions.

The general impressions regarding febrile loss of heat derived from clinical observations are supported by calorimetrical experiments. The dissipation of heat is least during the initial stage of fever, and greatest during the period of defervescence. During the hot stage or fastigium, heat dissipation exceeds the normal, but usually, on account of the dryness of the skin, not so much as one might infer simply from the impression of heat received by the hand when placed upon the skin.

During the initial period the loss of heat, although on the average less than in the following stages, is usually greater than normal. If, however, the rise of temperature be rapid the heat loss falls below the normal amount. As there is now increased production of heat, there is evidently a glaring disproportion between the two factors, heat production and heat loss, and under these circumstances the febrile attack is likely to be ushered in by a chill. During the febrile chill all the efforts of nature combine to produce in the shortest time the greatest possible elevation of temperature. Not only is heat loss reduced to a minimum, but heat production is excited to the utmost.

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[1] Peiper: Zeitschr. f. klin. Med., Bd. xii.

During the period of defervescence, on the other hand, the relation between heat loss and heat production is reversed. This is, of course, most apparent when the fever terminates by crisis, with rapid fall of temperature. Then the loss of heat is excessive, being sometimes threefold that in the normal state, and heat production is relatively and often absolutely diminished.

It is of importance to remember that there are continual and irregular fluctuations in the dissipation of heat during the different stages of fever. These fluctuations bear no definite relation either to the momentary production of heat or to the height of the internal temperature. We deal in ordinary life so much more with units of temperature than with units of heat, that it is difficult for us to keep constantly in mind the fact that no inference can be drawn as to the height of the internal temperature from the knowledge of the momentary heat production and heat loss. If the heat loss fall behind heat production the temperature of the body rises, and it can remain at this elevated point, with either diminished or increased heat production, so long as the heat loss equals heat production.

No correct conception of the condition of the heat-regulating mechanism in fever can be obtained without taking into consideration these irregular variations in the discharge of heat, and it is a merit of Senator and his pupils to have emphasized particularly this point. These variations are made apparent not only by calorimetric measurements and direct observation, but also by the studies which have been made of the cutaneous temperature in comparison with the internal temperature in fever. Hankel's law, that the difference between the temperature in the axilla and that of the surface of the body in the febrile condition is less than in the normal condition, manifestly does not hold for the chill, in which it has been proven that the superficial temperature falls while the internal temperature rises. Jacobson, Wegscheider, and Schülein[1] find that there constantly occur, in the course of most fevers, changes of the superficial temperature which stand in no relation whatever to alterations of the internal temperature. Schülein thinks that he has discovered some facts in this regard which are available in diagnosis. However this may be, these observations indicate that contraction and dilatation of the cutaneous vessels are constantly occurring, and without any regularity, in fever. These irregular variations in the calibre of the blood-vessels are also apparent to the eye in the vessels of the rabbit's ear during fever. When it is considered, furthermore, that these irregularities of cutaneous circulation vary decidedly in different situations, no further proof is needed that the mechanism which regulates the discharge of heat from the surface of the body is profoundly disturbed in fever.

These alterations in cutaneous circulation are such striking phenomena that it is, perhaps, not surprising that two great medical authorities should have based upon them exclusively theories of fever—Traube assuming excitation, and Marey paralysis, of vaso-motor nerves as the primal element in fever. We need not discuss these theories, now generally abandoned in their exclusive form. From what has been said concerning the loss of heat in fever, it is evident that we cannot explain febrile rise of temperature solely by the behavior of heat dissipation, any more than we can explain it solely on the basis of increased heat production. In rejecting Traube's theory that fever is the result solely of retention of heat, we must still recognize the fact that decrease in the dissipation of heat, at times absolute, at other periods relative, is a factor of the utmost importance in the febrile process.

From whatever point of view we consider the question, we cannot avoid the conclusion that it is the mechanism which controls the relation of heat production to heat loss which is primarily disturbed in fever.

Heat production is increased in fever, but if the regulating mechanism were normal, then the discharge or heat would be proportionately increased, and the temperature would not be materially affected. Nor would the force of this argument be changed if febrile thermogenesis were twice as energetic as we suppose it to be.

The loss of heat is increased in fever, so that on this ground alone we should be obliged to assume increased heat production. But even if it were proven that heat dissipation is diminished, as has been recently claimed again by Rosenthal,[1] and that fever is the result of heat retention alone, it would still be necessary to admit that the regulating mechanism is at fault; for Pflüger has demonstrated that when this is normal, changes in the temperature of the skin are attended by such changes in heat production that the internal temperature remains, within wide limits, unaltered.

I repeat, then, that the conclusion is forced upon us that the fever-producing agents must act, either directly or indirectly, upon the mechanism regulating the harmonious relation of heat loss to heat production. That the heat-regulating mechanism, although profoundly disturbed, is not entirely paralyzed in fever is proven by the effect of heat and cold upon fevered individuals. Although Colasanti believed that his fevered guinea-pig had lost all power of heat regulation under varying external temperatures, a similar conclusion has not been reached by others who have investigated this question. We can best describe the condition of heat regulation in fever as unstable or ataxic. External cold stimulates, to some extent, the heat production of an individual in fever, but by no means as much as it does in health. A person in fever is not able to retain his bodily temperature under the influence of heat and cold to the same degree that he can under normal conditions. Liebermeister, as is well known, held that heat regulation in fever is simply adjusted for a higher point, although he admits not perfectly adjusted. Experience shows that this so-called adjustment is so unstable that it does not seem proper to compare it with that to normal temperatures in health, so that it is not clear what deep meaning lies in Liebermeister's idea.

We cannot imagine the heat-regulating mechanism to be other than a nervous one.

Some years ago this was about as far as the theory of the mechanism of fever could be carried. All paths led to this mysterious nervous apparatus, and beyond this nearly all was speculation. As has been said, we stood before imposing processes veiled in the deepest obscurity. Since then the veil has been lifted here and there, and we have caught glimpses of the nature of these processes. I refer particularly to the results of researches which have brought to light a more immediate and direct dependence upon nerve energy than had been supposed of chemical processes concerned in the disintegration and construction of tissue, and therefore in the production of heat.

With one side of the nervous mechanism concerned in temperature regulation, the classical investigations of Claude Bernard have made us tolerably familiar. This is the vaso-motor nervous apparatus presiding over the circulation of blood in the superficial parts of the body, and thereby controlling in great measure the discharge of heat. That the important part taken by the perspiration in the dissipation of heat is likewise under nervous influence, has been demonstrated by Luchsinger. The facts concerning this side of the regulation of heat are too well known to require elucidation on this occasion.

Heat regulation, however, is effected not only by variations in the elimination of heat, but also by changes in the production of heat. Familiar as the fact is, it can never cease to arouse our admiration that the temperature of the body remains the same in cold and in warm atmospheres. Man has become so dependent upon clothing that in the naked condition his capacity of preserving his normal temperature in a cold environment is much less than that of most animals. Pflüger has demonstrated that the heat regulation under varying external temperatures is accomplished by changes both in heat production and in heat loss, so that in a cold atmosphere more heat is produced, and in a warm atmosphere less heat, provided the external temperature is not so high or so low as to make it physically impossible to preserve the body temperature. It is evident that this is the most rational and economical method of retaining the internal temperature of the body. To regulate the body temperature simply by variations in the discharge of heat, as was formerly supposed to be the method, would be, as has been said, like regulating the temperature of our rooms summer and winter by opening and shutting the windows without controlling the source of heat.

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[1] Jacobson: Virchow's Archiv, Bd. lxv. Schülein: Ibid., Bd. lxvi. Wegscheider: Ibid., Bd. lxix.

[1] Rosenthal: Deutsche med. Wochenschrift, 1888.

A heat-producing or thermogenic apparatus, therefore, is no less a part of the heat-regulating mechanism than is the heat-discharging or thermolytic apparatus, to use the terms employed by Foster. As the thermogenic apparatus is less generally understood, it is not permissible to dismiss its physiology in this connection so briefly as I have the thermolytic, although our knowledge of the former is very imperfect.

I can assume that the convincing reasons are known to you which have led physiologists to conclude that most of the animal heat is produced in the muscles and the glands, and that the muscles have the larger share in this function. It is also well known that stimulation of secretory and motor nerves causes not only visible physical alterations in the glands and muscles, but also production of heat. This sort of dependence of heat production upon innervation has been long admitted. It may, however, not be so generally known that there are reasons to believe that nervous impulses control chemical changes which result in the production of heat, independently of visible physical alterations of the tissues; in other words, that heat production or thermogenesis is at least in considerable part under the immediate and direct control of the nervous system. The idea is not a new one, and was advocated especially by Claude Bernard. Recent discoveries, however, have given it unexpected support.

This subject of the relation of innervation to thermogenesis is most pertinent to the pathology of fever, but it is essentially a physiological one, and as I wish to confine to a single lecture what I have to say concerning the theory of fever, it is impossible for me to do more than summarize the most essential points belonging here. This I can do the more readily as Dr. MacAlister,[1] in his admirable Gulstonian Lectures on the nature of fever, which were delivered last year, has clearly and forcibly presented the main facts.

The larger part of these facts relate to the chemical changes and heat production of muscles under varying conditions.

That a large part of the chemical changes in a muscle in the condition which we call repose is under the influence of the nervous system is made apparent by the great diminution in its consumption of oxygen and formation of carbonic acid which follows the separation of the muscle from all connection with the central nervous system. This is conclusively shown by the experiments of Bernard, Pflüger, Von Frey, and others. It is, of course, possible, and it has generally been supposed that, under these circumstances, it is simply the withdrawal of motor impulses which lowers the heat-producing energy of the muscle. Far more suggestive as regards the point under consideration are the results of investigations which have been carried on in Ludwig's laboratory by Meade Smith, MacAlister, and Lukjanow. These experimenters have shown that heat production and contraction are in a measure independent properties of the muscle. By various influences the thermogenic property may be so impaired that a stimulus causes contraction with scarcely any development of heat. The laws governing the restoration and the fatigue of the thermogenic function differ from those controlling the mechanical function. These researches, upon which I here only touch, have made it extremely probable that there are in the muscle chemical processes resulting mainly in the production of heat, and chemical processes causing mainly contraction, and that these processes, although co-ordinate, are not identical. A new light is shed upon the meaning of the term chemical tonus of muscle, which has for some time been used by some physiologists. Great caution is properly exercised by Ludwig and his pupils in the interpretation of these interesting results. They do not infer from them, necessarily, the existence of so-called thermic or calorific nerves. They suggest that it is possible to explain the phenomena upon the supposition that there are in the muscle two kinds of material, thermogenic and contractile, and the nervous impulses acting upon these may pass through the same set of nerves. Proof of the existence, in connection with muscles, of thermic in distinction from motor nerves, would be afforded if we could succeed, after paralysis of the motor nerves, in exciting by nerve-stimulation the thermogenic function of the muscle. We possess in curare a drug which paralyzes the terminations of the motor nerves. Meade Smith attempted by its aid to determine whether possible thermic nerves may be differentiated from motor, but he reached no positive conclusion on this point. There are, however, on record some observations which suggest the possibility that in moderate doses curare may leave intact thermic nerves after the suspension of the function of motor nerves. When an animal is profoundly under the influence of curare the internal temperature falls, and the processes of oxidation are greatly reduced. The animal is no longer able to resist the changes of external temperature, its own temperature rising and falling like that of a cold-blooded animal when exposed to heat or cold. This effect of curare-poisoning is another proof of the dependence of heat production upon nervous influences. Claude Bernard, in his early researches on the action of curare, noted elevation of temperature soon after its administration. Recently, U. Mosso[1] claims that an animal may be placed so far under the influence of curare as to paralyze completely the voluntary muscles, and the internal temperature either remain normal or rise. He infers that these moderate doses of curare, although sufficient to paralyze the motor nerves, must have left intact the thermic nerves. That rise of internal temperature is not due to retention of heat, he thinks is evident from the normal or elevated temperature of the skin. Mosso is strengthened still further in his conclusion as to the existence of thermic nerves by finding that, after complete paralysis of the motor nerves by curare, injections of strychnine cause an elevation of rectal temperature which may amount to three degrees centigrade. Under these circumstances strychnine produces no spasms or other visible mechanical effect upon the muscles. Mosso brings forward a number of other experiments (decidedly open to criticism) intended to demonstrate the existence of nerves directly controlling heat production, but those which I have mentioned are by far the most striking. It seems to me that the natural interpretation of these experiments is in favor of the view that there are nerves controlling heat production in the muscle distinct from motor nerves. Far more conclusive, as to thi spoint, than thermometric observations, would be calorimetric experiments determining the heat production of animals under varying doses of curare.

This whole line of experimentation, directed toward the differentiation of the mechanical and the chemical functions of muscle, is certainly most suggestive, but so long as the interpretation of the results is not perfectly clear we should be very guarded in drawing far-reaching conclusions. I cannot refrain, however, from pointing out that, as mentioned by MacAlister, all of these thermogenic phenomena may be found eventually to depend upon nerves whose chief function, on the one hand, is the disintegration, the katabolism of tissue, and, on the other hand, the restoration, the anabolism of tissue. From the study of the electrical changes which stimulation of the pneumogastric nerve produces in the heart-muscle Gaskell concludes that this nerve puts the heart in a condition of relative rest, during which the energy of the muscle is increased. During this period there is reason to believe that the material of the muscle, which when disintegrated gives rise to heat and mechanical work, is in the process of restoration. Hence, Gaskell speaks of the pneumogastric or inhibitory nerve of the heart as anabolic—that is, it directs the restorative, formative, anabolic processes in the muscle. On the other hand, the accelerator nerve of the heart induces the opposite electrical changes in the heart-muscle. Gaskell describes this nerve as katabolic—that is, its stimulation causes disintegration of the muscle materials, and liberates energy in the form of heat and of mechanical work. If it be found that similar inhibitory and accelerator nerves preside over the chemical changes in the voluntary muscles and other tissues of the body, then Gaskell's induction as to the existence of anabolic and katabolic nerves must be regarded as one of the most important and profound in modern physiology. Thermo-excitory nerves we should then rank as katabolic, thermo-inhibitory as anabolic.

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[1] MacAlister: The Lancet, 1887, vol. i.

[1] Mosso: Virchow's Archiv, Bd. cvi.

These investigations, tending to demonstrate the independent existence of thermogenic properties in the muscles, and possibly of nerves directly controlling thermogenesis, have prepared us for the consideration of the relation of the central nervous system to the heat producing properties of the body. Here you will willingly permit me to confine my remarks to the more essential and best established facts, without entering into a full discussion of one of the most perplexing subjects in the physiology of the nervous system.

The clinical basis of the doctrine that lesions of the central nervous system influence directly the temperature of the body was laid by Sir Benjamin Brodie, who reported the well-known case of fracture of the cervical vertebræ and injury of the spinal cord, followed within a few hours by a rise of temperature to 111° F., measured between the scrotum and the thigh. Since then many similar instances have been reported. It is well to remember, in framing theories on the basis of these cases, that there are also on record not a few instances in which apparently similar injuries of the same parts of the spinal cord have been followed by equally striking fall of temperature.

The experimental basis for the acceptance of an influence of the nervous system on temperature was laid by Bernard in his celebrated experiments on the effects of division of the sympathetic nerve in the neck. Bernard interpreted the increased temperature of the ear following this operation as referable, not only to the larger amount of blood in the part, but also to increased tissue metamorphosis and consequent heightened heat-production. The latter part of this interpretation is not generally accepted. It may be said here that the common idea that an organ or tissue, simply because it receives a larger supply of blood, indulges in more active metabolism, is opposed by the investigations of Pflüger, who finds that the amount of oxygen taken up by the cells depends in a far higher degree upon the state of their innervation at the time than it does upon the supply of oxygen. The demand of the tissues for oxygen is not increased simply because the supply is greater. The arguments upon which Pflüger bases this line of reasoning, although not without opposition, would dispose of the idea that when any considerable increase of heat-production in the muscles occurs, this can be explained simply by vaso-motor changes. I mention this here because the opinion has been advanced that a large part of the increased production of heat in fever, and after certain injuries to the nervous system, is referable simply to vaso-motor changes in the muscles.

In 1866 Tscheschichin[1] published experiments which he interpreted as indicating the existence in the brain of centres which, when irritated, moderate the production of heat, and which he called heat-moderating or heat-inhibitory centres, and in the spinal cord of centres which, when stimulated, excite the production of heat, heat-excitor centres. These conclusions were not justified by the experiments, but they have been widely accepted.

I may say here that in this connection I use the term heat-centres as a convenient and generally adopted one. There is a proper reaction against the prevailing misuse of the word " centre " for all sorts of little understood localization of nervous functions. It would undoubtedly be more accurate to use some such expression as thermically active region, instead of heat-centre.

It is not easy to reconcile the clinical fact that in human beings lesions of the spinal cord may be followed at once, or in a very short time, by extraordinary elevations of temperature with the results of experiments on animals. That the rise of temperature in human beings is not due to inflammatory fever is apparent from the rapidity with which it follows the injury. It cannot be explained by vaso-motor lesions, for the paralysis of the vaso-motor nerves accelerates the discharge of heat from the surface of the body. The high temperature can be explained on Tscheschichin's assumption. The lesion either directly stimulates the spinal thermogenic centres or removes the influence of the thermo-inhibitory centres. These clinical observations are the strongest support which has been found for the belief in the existence of centres in the spinal cord which accelerate heat production. Section of the cervical part of the spinal cord in a dog or a rabbit is, under ordinary conditions, always followed by a rapid fall of the internal temperature and diminished oxidation.

These varying results in man and in animals have been explained by supposing that after section of the cervical cord, on the one hand, the discharge of heat is increased by dilatation of the superficial blood-vessels in consequence of vaso-motor paralysis, and, on the other hand, the production of heat is increased by withdrawal of thermo-inhibitory cerebral impulses. If, as ordinarily happens in dogs and smaller animals, the first factor predominates, then, in consequence of sinking of the internal temperature, the heat-producing processes are so reduced that the influence of the second factor is not manifest. The attempt has been made to test this explanation by placing the animal, after section of the cord, in a warm atmosphere. If thereby the heat discharge be reduced to a minimum, it is found that the internal temperature of the animal with severed cord rises more rapidly than that of a normal one under the same external conditions. Here thermometric observations are not conclusive as to the point to be tested, for the more rapid rise can be explained simply by failure of the heat-regulating mechanism. Wood's calorimetric experiments, however, seem to show that there is greater heat-production under these circumstances in the animal with cut cord. These experiments admit of various interpretations, but if they be regarded as establishing the assumption from which we started, then it is evident that in man and in large animals the increased heat production after injury of the cord would not be so readily overcome by the increased discharge of heat from the surface, for in proportion to its volume a large animal has less surface than a small one. The interplay, therefore, of those opposing tendencies might cause different results, according to the size of the animal.

Tscheschichin found that a transverse section made at the junction of the pons and medulla oblongata is followed in a short time by rise of internal temperature. As the superficial temperature is also elevated, he concludes that there is no retention of heat; moreover, the section is made above the dominant vaso-motor centre. Wood has shown, by means of the calorimeter, that after this operation there is actual increase in the production of heat. He, as well as Tscheschichin, interprets the experiment as indicating thermo-inhibitory centres above the lower border of the pons. Bruck and Gunter[1] repeated and modified these experiments under Heidenhain's direction. Out of seven cases in which they separated the pons from the medulla, they observed only in two rise of temperature; of eleven cases in which they punctured the pons with a needle, in five they noted increased temperature. Heidenhain thinks these experiments indicate heat-exciting, rather than heat-moderating centres, and it must be admitted that the evidence is not conclusive in support of either view.

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[1] Tscheschichin: Reichert u. Du Bois-Reymond's Archiv, 1866.

By far the most interesting and conclusive experiments showing the influence of the central nervous system on thermogenesis are those of Isaac Ott, followed by Richet, Aronsohn and Sachs, Baginsky and Girard.[2] The observations of Ott, Richet, and Aronsohn and Sachs were made independently, and at about the same time, but Ott was the pioneer. The experiments of Aronsohn and Sachs are reported with especial fulness and detail. These investigators find that if the skull of a rabbit be trephined at the junction of the coronal and sagittal suture and a needle be passed vertically down so as to puncture the anterior part of the caudate nucleus near its median convexity, there follows a rise of body-temperature which may amount to three degrees or more, and which may persist for two or three days. The rapidity and the duration of this elevation of temperature vary somewhat with the depth of the puncture, parts immediately beneath the caudate nucleus being also thermically active. Puncture of the overlying cortex or medullary substance has no such effect upon temperature. With the exception of some increase in the frequency of the respiration and of the pulse, the animal, after puncture of the anterior median part of the caudate nuleus, presents no abnormal symptom other than the rise of temperature. I have several times repeated this experiment, and always with the result described. That the pyrexia induced by puncture of the caudate nucleus is not due to vaso-motor changes causing retention of heat is proven by Richet's and Ott's calorimetric experiments and by the determination by Aronsohn and Sachs that the consumption of oxygen and the elimination of carbonic acid and urinary nitrogen are increased. Aronsohn and Sachs and Girard find that electrical stimulation of the anterior median part of the caudate nucleus causes the same thermic phenomena as the puncture, and they therefore conclude that this region contains a thermo-excitor heat-centre. This is the natural interpretation of their experiment, although Baginsky and Ott regard the centre as thermo-inhibitory on grounds which cannot be considered convincing.

Ott claims that there are four cerebral heat-centres: One about the corpus striatum, the second in the caudate nucleus, the third in the anterior inner end of the optic thalamus, and the fourth near the median line between the optic thalamus and the corpus striatum. The greatest rise of temperature he found after injury of the thalamic centre.

No adequate demonstration has been afforded of any influence of the cerebral hemispheres upon thermogenesis. Corin and Van Beneden[3] find that pigeons, after removal of their cerebral hemispheres, exhibit no change of temperature, no failure of the heat-regulating mechanism, and no alteration in the excretion of carbonic acid.

I have endeavored to present to you the main physiological facts bearing upon the relation of the nervous system to thermogenesis. It must be admitted that we are left to surmises as to the interpretation of many of the facts, and particularly as to their connection with each other. But certain important points come out clearly. We have found evidence of the existence in the body of chemical processes resulting chiefly in the production of heat energy. We have learned that these processes are under the direct control of the nervous system, and possibly of nerves distinct from those now recognized as motor or secretory. We have seen that there are regions in the central nervous system which are doubtless in some way connected with these nerves, and through them control the chemical processes resulting in the production of heat.

The bearing of these facts upon the theory of fever is evident. The study of heat production and of heat loss in fever has led us, by arguments which need not be repeated, to the conclusion that the pyrogenic agent must in some way act upon the heat-regulating mechanism. The study of this mechanism, more particularly of its thermogenic side, affords some insight into the manner in which the fever-producing agent may affect the regulation of heat. The main difficulty in the neurotic theory of fever has been to understand how, by any action of the fever-producing agent directly upon the nervous system, the chemical processes leading to heat production could be stimulated. I have dwelt thus at length upon the innervation of thermogenesis, to show that this difficulty has been overcome. To some it seems more reasonable to suppose that the pyrogenic agent circulating in the blood acts directly upon the tissues, altering and stimulating their chemical changes. This is the hæmic theory, which, in some form, has always stood over against the neurotic theory of fever. Although it may at first glance appear simpler, the hæmic theory is really the more complicated, for it has already been set forth that we cannot explain fever simply by increased heat production; so that, even if the primary effect of the fever agent were upon the heat-producing processes, there must be a secondary influence upon the nervous system, for heat dissipation is no less disturbed than heat production.

If an animal be thoroughly curarized, so that no impulses from the nervous centres can reach the muscles, the great heat producers, then it is found to be impossible to produce febrile elevation of temperature by the injection of pyrogenic agents. This fact, first demonstrated by Zuntz, is justly held to weigh heavily in favor of the neurotic theory of fever.

Contrary to the results of Murri,[1] I have not been able to induce rise of temperature or check its fall by the injection of pyrogenic agents into the jugular veins of dogs whose spinal cords have been cut in the lower cervical region. In these experiments I have employed various pyrogenic agents, and especially pepsin and papoid. One specimen of the latter which I used possessed very striking pyrogenic properties.

The pyrexia produced by puncture of the caudate nucleus, in the manner already described, possesses all of the essential properties of fever, regarded as abnormal elevation of temperature. In this experimental condition there are increased production of heat, increased dissipation of heat, excessive elimination of urea and of carbonic acid, and excessive absorption of oxygen. The breathing and the pulse are increased in frequency. The elevation of temperature (usually after a brief fall) begins within half an hour after the puncture, attains a febrile height, and persists sometimes for days. As no observations exist as to the heat regulation of these animals, I have made experiments on rabbits, after puncture of the caudate nucleus, by placing them in a cold environment and in a box heated to various temperatures, and I find that their power of temperature regulation is less than that of normal animals. These animals, in a word, present all of the essential symptoms of fever, and I do not know why we should not call the condition fever. If so, we must admit that injury to a circumscribed, definite region of the brain is capable of causing fever. This experiment, therefore, is of the greatest importance in support of the neurotic doctrine of fever. It indicates, of course, that we may have fever of purely nervous origin without any pyrogenic agent in the blood. This experimental evidence is supported by the clinical cases collected by White in "Guy's Hospital Reports" (1884). It is to be hoped that, by careful thermometric study of focal brain and cord lesions, a more accurate idea may be reached than is now possible of the topography of the thermically active regions in the central nervous system of man.

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[1] Bruck and Gunter: Pflüger's Archiv, Bd. iii.

[2] Ott: Journal of Nervous and Mental Diseases, April, 1884; Medical News, July, 1885; Therapeutic Gazette, September, 1887; Richet: Arch. de Phys., 1884; Aronsohn and Sachs: Pflüger's Archiv, Bd. xxxvii.; Baginsky and Lehman: Virchow's Archiv, Bd. cvi.; Girard: Arch. de Phys., 1886.

[3] Corin and Van Beneden: Arch. de Biologie, 1887.

[1] Murri: Teoria della Febbre. Fermo, 1874.

Admitting the dependence of fever upon the nervous system, I do not regard as particularly profitable, with our present knowledge, the discussion as to whether febrile thermogenesis is excited by the withdrawal of thermo-inhibitory impulses, or by the stimulation of thermo-excitory nerves or nerve-centres. If we regard, and there are forcible arguments for doing so, the heat inhibitory nerves as anabolic, and the heat-exciting nerves as katabolic, then, inasmuch as the formative or anabolic processes are manifestly in abeyance in fever, we can reasonably infer that the function of the heat inhibitory nerves is impaired. The phenomena of the febrile chill, in which both the contractile and the thermogenic properties of muscle are stimulated, speak strongly in favor of direct irritation of the heat-exciting nerves in fever. We might infer, therefore, that both sets of nerves are affected.

But my aim in this lecture has been not so much to construct a theory of fever—a theory which, although it may be useful, must necessarily be largely speculative if it be coherent and rounded—but to bring before you the main facts concerning heat production, heat loss, and heat regulation in fever, and to point out the physiological basis on which their solution is to be expected.

Doctors in Politics.—The "organ" of a Philadelphia medical college says: "The medical legislator is not usually a pleasant figure to contemplate. The methods of 'practical politics' are so degrading that the physician of high standing is seldom found who will stoop to their employment. The doctor who has attained eminence in this field is scarcely to be found." Now this is demonstrably untrue. At the head of medical men in legislatures stands the renowned pathologist Virchow, who, amid the herculean labors which have resulted in the vast pathological treasures with which he has enriched the science of medicine, has been able to carry on a fight for individual rights and good government against the monopoly socialism of Bismarck and the mobocratic socialism of the social democrats. The history of the United States is full of similar illustrative instances of the value to a community of medical men taking part in politics. Foremost among the signers of the Declaration of Independence were Drs. Josiah L. Bartlett, of New Hampshire; Lyman Hall, of Georgia; Matthew Thornton, of Massachusetts; Benjamin Rush, of Pennsylvania; and Oliver Wolcott, of Connecticut. Dr. Cadwallader Colden, of New York, was prominent among those who guided New York during and after the Revolution. His work on botany was adopted by Linnæus as an authority on American botany. It is a striking fact that the very physicians who decry interference in politics by medical societies and medical men, are the first to use social influences to force politicians to appoint them to medical positions, or to aid them in securing dispensary subsidies for the "clinics" of diploma-mills. In the American Government the interference of the physician as a physician has always proved beneficial. —*Medical Standard.*

A CLINICAL PAPER ON PYLORIC STENOSIS DUE TO ULCER—ON ACUTE INTUSSUSCEPTION IN AN ADULT, WITH SPONTANEOUS REDUCTION—ON PARALYSIS OF THE LARGE INTESTINE FROM TUBERCULAR ULCERATION, SIMULATING ACUTE GENERAL PERITONITIS.[1]

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The clinical cases which are recorded in the present paper have been selected as presenting points of interest both to the physician and the surgeon.

I. Dilatation of the Stomach from Pyloric Stenosis, the Result of Ulcer.—In November, 1886, I was asked to see a gentleman who had recently arrived in New York. The following history was obtained from the patient: For the past ten years he had been almost a constant sufferer from severe digestive disturbances. Five months previous to the date of consultation he had vomited blood on a single occasion, but he was unable to state whether there had been earlier hæmatemesis.

During the past two months all his symptoms had been aggravated; there had been much epigastric distress, pain, and vomiting, and for six weeks he had been unable to retain any food, vomiting occurring almost immediately after its ingestion. The vomited matter was frequently of a grumous consistence and of a dark-brown color. He had also been troubled greatly by acid eructations and obstinate constipation.

On examination the patient was found to be greatly emaciated, weak, and suffering from the symptoms described above. The contour of the stomach was plainly visible through the thin abdominal walls, the lower boundary reaching a point four inches below the umbilicus in the median line.

There was marked succussion on palpation, and even on any voluntary movement of the body by the patient. A feeling of resistance was detected at the normal site of the pylorus, but the stomach was so distended as to preclude an opinion in regard to the existence of a tumor. All fluids and solid food by the mouth were prohibited, and rectal alimentation ordered. At the expiration of forty-eight hours the contents of the stomach were withdrawn by a stomach-tube, and were found to consist of a discolored fluid, of an intensely acid reaction, containing undigested remnants of food, with a small amount of mucus and hæmatin. An examination of the abdomen immediately afterward distinctly revealed the presence of a tumor, the size of an English walnut, at the usual site of the pylorus. It was firm to the feel and immovable.

Dilatation of the stomach from pyloric stenosis evidently existed. The nature of the obstruction admitted of doubt; the history of the case, the small size of the tumor, with the great dilatation, which had evidently existed for a very considerable period, and finally the hypersecretion and hyperacidity of the gastric juice, led me to express the *belief* that a pyloric ulcer, with stenosis dependent upon its partial cicatrization, or upon hypertrophic changes, was present rather than malignant disease. During the subsequent fortnight the patient's strength rapidly failed, and the emaciation reached a degree rarely seen. Any attempt to feed the patient by the mouth was followed by great distress and vomiting. Lavage was employed, but failed to afford any relief. A hypersecretion of the gastric juice, independent of the presence of food, was demonstrable by the withdrawal of a considerable quantity of a clear, intensely acid fluid, containing free hydrochloric acid, at intervals of two, three, and four days after the ingestion of food of any kind by the mouth. Death occurred on the fifteenth day from the date of my first visit to the patient.

I am indebted to Dr. Ferguson for the following notes of the necropsy: On opening the abdomen and examining the stomach *in situ*, it is found to be greatly dilated; a tumor, the size of a pigeon's egg, hard to the feel, is present at the pylorus. On opening the stomach, its walls appear to be hypertrophied, especially so in the pyloric region. A circular ulcer, two centimetres in diameter, extending through all the coats to the serous covering, is present at the pylorus, in the line of the lesser curvature. The ulcer is only fully exposed to view by incising the pylorus. A band or cord of adhesion extends from its site to the undersurface of the right lobe of the liver, in the neighborhood of the gall-bladder. The edges of the ulcer are thickened and the pylorus is contracted, admitting no more than the tip of the little finger. By the adhesion of the pylorus to the liver, the duodenum is bent at an acute angle upon the former, still further occluding the outlet of the stomach. The remaining viscera do not present any noteworthy pathological changes.

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[1] Read before the Practitioners' Society, March 2, 1888.

Histological examination reveals a moderate degree of fatty degeneration of the epithelial lining of the gastric tubules, especially marked in the pyloric region. In the tissues immediately surrounding the ulcer there is a zone of infiltration, with small round cells. There is a marked increase in the intertubular connective tissue at the pyloric extremity, and the muscularis mucosæ is greatly thickened.

Remarks.—The presence of hypersecretion, with hyperacidity of the gastric juice, in the present case is a pathological condition which obtains very constantly in gastric ulcer, and is of interest from an etiological stand-point.

That hyperacidity may well be a factor in the pathogenesis of gastric ulcer, and an obstacle to repair, may be granted; that it is primary, that it alone may suffice to produce ulcer, as Reigel claims, may certainly be questioned. In cases both of cicatricial and hypertrophic stenosis, I believe, as a rule, the existence of a small tumor can be detected. The thinness of the abdominal walls which usually obtains in these cases facilitates physical exploration. In five cases of pyloric stenosis of the above nature, which have fallen under my observation during the past two years, a pyloric tumor was easily detected in all.[1]

My comparatively limited experience also leads me to believe, contrary to the opinion of several authorities, that the mobility of the tumor may afford some clew as to the presence or absence of adhesions. In two of the above cases the tumor was freely movable, and adhesions proved to be absent; in two the tumor was fixed, and firm adhesions were discovered at the necropsy.

A practical question naturally suggests itself in connection with the case which has been described: Can medical or surgical skill avail to relieve suffering and considerably prolong life in pyloric stenosis of this degree, by whatever cause produced?

Among therapeutic measures, lavage alone may temporarily ameliorate some of the more distressing symptoms, but it fails to avert a painful death by gradual inanition. A review of the results obtained by surgical operations will be of interest. In a very complete paper by Winslow, on "Pyloric Stenosis," published in the *American Journal of the Medical Sciences* (April, 1885), the various surgical operations which have been devised for the relief of this condition are described in detail, and a statistical summary is given of all cases of resection of the pylorus, of gastro-enterostomy, and of digital divulsion recorded to February 1, 1885. In this summary the pylorectomies number sixty-one, performed in various quarters of the globe, with sixteen recoveries—23⅔ per cent.

In fifty-five cases the operation was performed for cancerous disease, in five for idiopathic ulcer, and in one for stenosis due to swallowing caustic soda. Eleven of the sixty-one resections were performed by Billroth, with six recoveries—54½ per cent. In two of his successful cases five inches were removed from the greater curvature. In the six cases of stenosis due to ulcer and non-malignant causes, there were three recoveries—50 per cent.—and the cure was apparently radical. In the same summary are found records of thirteen gastro-enterostomies, and of six cases in which digital divulsion of the pylorus, after Loreta's method, was practised.

The proportion of recoveries in the former was about 30¾ per cent.[1] In eleven of the cases the disease was carcinoma; in one stenosis of the duodenum, due to ulcer, existed; and in one pyloric stenosis, caused by swallowing sulphuric acid. In the six cases in which digital divulsion was performed, the stenosis was cicatricial in character and due to ulcer. The percentage of recoveries was 60 per cent., and in these the relief was almost immediate, and the cure apparently a permanent one.

From February 1, 1885—the date of Dr. Winslow's summary—to January 1, 1888, I have been able to collect the records of twenty-four cases of resection of the pylorus, and of twenty-two gastro-enterostomies. The summary is necessarily an incomplete one, but it embraces all the cases reported in accessible literature.

In the twenty-four cases in which pylorectomy was performed there were eleven recoveries and nine deaths, the result being unknown to me in four cases.

Four of the twenty-four cases were operated upon in Billroth's clinic during the year 1887. In three the stenosis was due to cicatricial contraction from ulcer. Recovery followed the operation in two of the cases; death in one. In the former, 6.5 ctm. and 2.5 ctm. of the lesser curvature, and 4.0 ctm. and 8.5 ctm. of the greater curvature, respectively, were removed.

In the fourth case, which recovered, sarcoma, involving the anterior and posterior walls of the stomach, was present. Five centimetres of the lesser curvature and 18 ctm. of the greater curvature were removed.

The proportion of recoveries in the twenty-two cases in which gastro-enterostomy was performed was 50 per cent. In eighteen of the twenty-two cases the disease was carcinoma, and there were seven recoveries. In two cases the stenosis was due to ulcer, and recovery followed the operation in each. In one case tubercular stricture was present; the operation was successful; the patient died, however, four months later, of tuberculosis.[2]

I have only been able, with the literature at my disposal, to find the records, since 1885, of three cases in which digital divulsion has been performed, with two deaths and one recovery. They were all cases of stenosis, due to ulcer. A statistical summary, embracing, I believe, a number of other cases of digital divulsion, which has lately been published in Italy, will soon be accessible to complete the present record.

The following conclusions may be drawn from a study of the results obtained up to the present time by surgical operations for the relief of pyloric stenosis.

1. That the mortality incident to the operations, both of pylorectomy and gastro-enterostomy, although still very high, has apparently decreased with an increased knowledge of, and skill in, the technique of the operations.

2. That in cancerous disease they offer the possibility of at least temporary relief from suffering, and oftentimes of a very considerable prolongation of life; that recurrence occurs no sooner than in cases of cancerous disease elsewhere situated, in which the growth has been removed by surgical operations, and that such recurrence rarely causes renewed obstruction.

3. That the percentage of recoveries, both in resections of the pylorus and in gastro-enterostomies, is much higher in cases of stenosis due to non-malignant than to malignant disease.

4. That the recoveries in the former cases are usually permanent.

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[1] In four of the cases a necropsy was obtained, and the diagnosis confirmed. The fifth case is still under observation. There is, however, a typical clinical history of gastric ulcer, extending over a period of several years, and of a gradual dilatation of the stomach.

[1] The result in one case was unknown.

[2] In one case the nature of the obstruction is not mentioned.

II. ACUTE INTUSSUSCEPTION IN A MALE, AGED FORTY, WITH SPONTANEOUS REDUCTION.—Mr. B——, aged forty, had noticed a slight irregularity of the bowels for two days, consisting of two or three loosish movements daily, unaccompanied, however, by pain. On the morning of November 17, 1887, he had a copious, painless, semifluid stool immediately on rising. It was followed by a slight feeling of abdominal discomfort, and an hour and a half later by a second movement, watery in character, and accompanied with very considerable "straining." With the effort he was suddenly seized with agonizing pain, distinctly localized to the right of and below the umbilicus, and accompanied with vomiting. The pain recurred in paroxysms every two or three minutes. Mr. B—— was seen by me an hour later. The patient was in a state of partial collapse, he was sweating profusely, the temperature (in the mouth) was 97.3° F., the pulse small and feeble, the extremities cold. He was suffering acute pain, sharply localized over a region midway between the umbilicus and the right anterior superior spinous process of the ileum. On examination, a tumor the size of a small egg could be distinctly felt in the diagonal line above mentioned. Over its site there was dulness on percussion and sensitiveness on palpation. Exquisite paroxysms of pain were produced by manipulation of the tumor. Fifteen minims of Magendie's solution were given hypodermatically in the course of twenty minutes, with only very partial relief of the patient's suffering. Examination two hours later: The tumor has distinctly increased in size, the pain is still very acute, although the patient is well under the influence of the morphine administered. The temperature is still subnormal and the pulse feeble. No further movement of the bowels has occurred, and there is no tenesmus. A large enema of water was given, which was passed, slightly discolored, shortly afterward. A second enema was administered, with similar results. Examination three hours later: The patient's condition is much the same, the pain is still acute, paroxysmal in character, and localized over the same region. The patient dreads physical examination. There has been no movement of the bowels, and no more than two ounces of urine have been passed during the past twelve hours. Dr. William T. Bull, who kindly gave me the advantage of his counsel, agreed with the diagnosis of an acute intussusception. It was determined to employ further enemata of water, and additional morphine during the night, and, on their failure to produce relief, to advise immediate laparotomy. Before the administration of either the patient fell asleep, and an hour later awoke, declaring himself wholly relieved from pain and "well." Careful examination failed to reveal a trace of the tumor which had been present two hours previously, and, beyond a feeling of general abdominal soreness, all physical signs had disappeared. A small dose of morphine was given hypodermatically. The patient slept well and quietly during the night, and awoke feeling much as usual. A further examination confirmed the results of that of the previous night. Later in the day, there having been no movement of the bowels. a simple enema of water was given, with the effect of producing two copious, markedly bloody stools. From this date there were no further symptoms, with the exception of the occurrence of a third slightly bloody movement of the bowels.

Remarks.—The group of symptoms, viz., the sudden onset with straining at stool, preceded by an irregularity of the bowels, the very acute pain distinctly localized and paroxysmal in character, the presence of a well-defined tumor, and, finally, the sudden disappearance of all symptoms coincident with that of the tumor, and the subsequent passage of bloody stools, presents a typical clinical picture of an acute intussusception. From the position of the tumor it would seem probable that the intussusception was either of the ileo-cæcal or ileo-colic variety. The absence of tenesmus may be explained by the height of the portion of the gut involved.

A study of the case would seem to justify the opinion that a spontaneous reduction of the intussusception occurred. That this mode of termination is extremely rare, and probably impossible, except in quite recent cases, must be admitted. The enemata employed cannot be considered as a factor in the reduction, as an amelioration in the symptoms and the disappearance of the tumor only occurred several hours later; the influence of the morphine administered was apparently the indirect one of producing a state of nerve-repose.

III. ACUTE PARALYSIS OF THE LARGE INTESTINE, DUE TO TUBERCULAR ULCERATION, SIMULATING GENERAL PERITONITIS.—A. W——, aged thirty-four, housemaid, was admitted to my wards in St. Luke's Hospital, March 11, 1887. The patient's mental condition on admission was such that no history of her illness was obtainable. The following facts were elicited from her friends immediately previous to her death: The patient had enjoyed good health previous to three months before admission to hospital. At about this date she had "caught cold," and had been troubled with more or less cough up to the present time. For the past two weeks she had vomited after the ingestion of food of any kind, and had complained of severe and continuous pain in the abdomen, which had gradually increased in acuteness up to the date of admission. There had also been obstinate constipation, but it was impossible to obtain more exact information as to the date of the last movement of the bowels than that there had not been one for "several days." For a week, the patient had been "queer and a little out of her head." Two days before admission the abdomen suddenly began to swell, and this symptom had rapidly increased.

Examination on admission.—There is marked mental confusion, the patient being unable to answer any questions intelligently. The temperature is subnormal, the pulse 132°, small, and very compressible. The abdomen is greatly and uniformly distended, tense and tympanitic, and extremely sensitive on palpation. Examination per rectum and vaginam gives negative results. The heart's apex is displaced upward, and is felt in the third interspace. There is evidence of a limited area of consolidation, with softening, at the apex of the right lung. There is no physical evidence of other visceral disease. The urine is free from albumen, sugar, and casts. The case was believed to be one of general peritonitis of doubtful origin.

March 13th.—The patient's condition is worse; only eight ounces of urine have been passed during the past thirty-six hours. The abdomen is greatly distended and tympanitic. There has been no movement of the bowels since admission; temperature, 101.2°F.; pulse, 134, small and weak. Catheterization shows the presence of only a small quantity of urine in the bladder; that withdrawn is free from albumen and glucose, but contains very numerous hyaline casts. An enema was followed by a small movement, consisting, presumably, of the contents of the lower bowel. The patient's temperature continued to rise, reaching 104.4°F.; the pulse to increase in frequency; the abdominal symptoms remained unchanged, and death occurred on the 14th, four days after admission.

Necropsy.—The pathological changes were confined to the lungs and intestines. The following notes are taken from Dr. Ferguson's report: The right lung is infiltrated with miliary tubercles; an occasional caseous mass is found, and at the apex three small cavities, each the size of a bean, are present. There is also a small focus of softening in the upper portion of the middle lobe. The left lung contains numerous miliary tubercles.

The peritoneum is normal.

The large bowel is enormously distended throughout and is filled with fluid fecal matter; the distention is especially great in the cæcum and the ascending and transverse sections of the colon. Just above the cæcum the gut laid open measures ten inches in width. The mucous membrane of the lower portion of the ileum is intensely congested. There are numerous ulcers in the cæcum and ascending colon, oval in shape, measuring from one inch to one and a half inch in length and half an inch in breadth. The long axes of these ulcers are transverse to the axis of the gut. The muscular coat is involved in many of the ulcers, but nowhere has perforation occurred. An ulcer, similar to those described above, is found in the lower portion of the descending colon. The total number of ulcers is thirteen. The intestinal canal throughout is absolutely free from obstruction of any kind.

Remarks.—The diagnosis in the above case was necessarily based upon the physical signs described, as no history of the patient's illness was obtainable until immediately previous to death. The extreme and symmetrical distention of the abdomen, the tympanites with marked sensitiveness on palpation, the gradual increase in these symptoms, and the pyrexia, combined to form a clinical picture of an acute general peritonitis. Its origin and nature admitted of varied opinions. My colleague, Dr. McBurney, kindly examined the case at my request, and concurred in the diagnosis of general peritonitis. The necropsy demonstrated the incorrectness of this diagnosis, and at the same time the dependence of the symptoms, and physical signs described, upon a paralysis of the large intestine, the result of tubercular ulceration. The not infrequent occurrence of acute paralysis of the intestine after surgical operations on the abdomen is at present well recognized; a similar pathological condition of the bowel, the result of deep ulceration, in typhoid fever, has also been described. The present case is of interest, in the extreme degree of the paralysis (in itself an efficient cause of obstruction) and abdominal distention, in its causation, and finally in its clinical simulation of acute general peritonitis.

CEREBRAL SYMPTOMS IN THE PNEUMONIA OF CHILDREN.[1]

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Two points about pneumonia are brought out very prominently in almost every text-book devoted to diseases of children. The first is that disturbances of the central nervous system are much more likely to be met with in young children than among adults; the second, that these are almost invariably associated with disease of the apex of the lung. My own experience abundantly confirms that of others regarding the first point. Since the second one, however, has been denied by an eminent authority,[2] I have gone over my own clinical records with reference to nervous symptoms, and submit the results in this paper for your consideration.

There existed for analysis one hundred and seventy-three cases, which may be briefly characterized as follows: Seventy-three were lobar pneumonia,[3] with two deaths; and one hundred, broncho-pneumonia, with a mortality of thirty-four. The sexes in broncho-pneumonia were nearly equal; while in lobar pneumonia the males predominated, forty-three to thirty. As to age, one hundred twenty-three patients were two years of age or under, and only thirteen were over five years of age.

Thirty-four cases, or twenty per cent. of the whole number, presented decided cerebral symptoms. I have divided these into three groups: Those attended by convulsions, of which there were fourteen; those where delirium was the principal symptom, twelve in number; and the third class, where neither convulsions nor delirium existed, but other symptoms decidedly cerebral in type—of these there were eight cases.

The convulsions of pneumonia differ in no respect from those seen in meningitis or other acute disease. In half of the cases they were a symptom of invasion, in the other half they came on toward the close of the disease. Only one case presented both early and late convulsions. In almost all instances the movements were general, and in by far the larger number they were repeated more than once. Initial convulsions were succeeded by drowsiness or semi-stupor, sometimes a light delirium or great irritability; there being nothing usually in the symptoms to indicate pulmonary disease during the first twenty-four, or even forty-eight hours.

Delirium was rarely seen for the first two or three days. It was most marked at the height of the disease—fourth to the seventh day—and, if intense, generally lasted until the crisis. It varied much in intensity—in the milder forms amounting only to incoherent rambling during sleep; in the severer forms being sometimes low and muttering, like that in typhoid, but more commonly wild and excited, like that of cerebro-spinal meningitis. In this condition some of the patients could with great difficulty be kept in bed. In addition to delirium, they had dilated or contracted pupils, involuntary passages of urine and fæces, boring of the head into the pillow, retracted abdomen, sordes on the lips and teeth, muscular twitchings, tremor of the tongue on protrusion, irregular pulse; in short, almost every symptom of cerebro-spinal meningitis.

Other patients had persistent drowsiness or semi-stupor, these occasionally alternating with periods of great irritability or excitement, sometimes terminating in convulsions, simulating very closely tubercular meningitis.

Vomiting I have not included in my analysis among the cerebral symptoms, as it is almost a constant symptom in the invasion of pneumonia. Headache was frequent in children old enough to describe their sensations, but as the great majority of my cases were not, I have not included this symptom.

Continued irregular respiration I have not seen, although this has been mentioned by Rilliet and Barthez. Nor have I met with the decubitus *en chien de fusil* or gun-hammer position, although cases have been reported by Starr, of Philadelphia, Jenner, of Toronto, and others.

The two classes of symptoms made by the French writers, viz., eclamptic or convulsive, and the meningeal or delirious, serve very well for purposes of description, but almost every combination of the symptoms enumerated has been met with.

Diagnosis.—How are these cases to be distinguished from meningitis? is the practical question of most importance in this discussion. First, only by careful and repeated examinations of the chest. And just here I wish to say that there is no sin of omission of which the general practitioner in his care of children is more often guilty than this. It is something which is often beset with difficulties, no doubt, yet there are very few cases in which, with patience and tact, as satisfactory examination cannot be made of a child's chest as an adult's. I have made it a rule, in cases of acute illness, to make a physical examination of the chest every day until the diagnosis was clear beyond the shadow of a doubt; and I have been surprised over and over again to find in how many cases, obscure and often indefinite symptoms have been found to depend upon pneumonia. Its great frequency in early life lays upon us always the necessity of excluding it, before accepting any other explanation of a persistent high temperature in a child.

The difficulties in the case are much increased by the late appearance of positive physical signs, as in central pneumonia, although the time when they are manifest depends quite as much upon the physician's acuteness of observation as upon the state of the lungs. In my own experience I have found that the number of cases with late physical signs gradually grows smaller year by year.

Cough is usually present, but it is wanting in the first two or three days in a sufficient number of cases to make it of little value in the doubtful, obscure ones.

Activity of the alæ nasi may be seen in many other conditions, but it is rarely absent in pneumonia.

Alteration of the pulse-respiration ratio is more important than any other single symptom. Accelerated respiration, out of proportion to pulse and temperature, should always lead us to suspect the lungs, whatever other symptoms are present. Irregular respiration, especially of the Cheyne-Stokes type, is almost never seen in pneumonia.

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[1] Read before the New York County Medical Society, March 26, 1888.

[2] Eustace Smith: Clinical Studies of Diseases of Children, 1887.

[3] I recognize the fact that many cases are *clinically* lobar which do not give at autopsy the lesions of croupous pneumonia.

The slow, irregular or intermittent pulse in meningitis does not occur in pneumonia. Irregularities and intermissions in a rapid pulse are quite common but are of no significance.

It is very rare for the temperature in meningitis, either tubercular or cerebro-spinal, to remain so high as we commonly find it in pneumonia. In fact, Thomas (" Gerhardt's Handbuch ") asserts that a persistent high temperature almost certainly excludes meningitis. The loss of knee-jerk is the rule in meningitis (Hughlings-Jackson and Angel Money). I am not aware that it has been recorded to be absent in pneumonia and can see no reason why it should not form as valuable a symptom for differential diagnosis of meningitis from pneumonia as it is said to be from typhoid fever.

Localized paralyses are not met with in pneumonia unless there be a complicating disease of the brain.

The cerebral symptoms of pneumonia are commonly less severe and not so continuous as those of meningitis, so that the progress of the case nearly always clears up the diagnosis by the rapid subsidence of the nervous symptoms at the crisis, although we may have been in some doubt up to this time.

Between broncho-pneumonia with cerebral symptoms and pulmonary tuberculosis with a few tubercles in the brain, I quite agree with Jürgensen that a diagnosis may be impossible.

Etiology.—Cerebral symptoms in pneumonia may depend upon complicating meningitis. This is asserted by almost all writers to be exceedingly rare. I have never seen it.

Steiner,[1] Bridge Lees,[2] and others have shown that they may arise from suppurative otitis media occurring as a complication, but this also must be rare, if we are to believe the writings upon the subject; perhaps not so uncommon, however, as the small number of recorded cases would indicate. I have met with but one instance.

Only one of the fourteen cases of convulsions was over two years of age, so that of one hundred and twenty-three cases two years of age and under, ten per cent. had convulsions. Delirium, on the contrary, was most common between the ages of four and eight years. Of the fifty cases over two years of age, thirty-three per cent. had delirium.

Temperature : Of thirty-three cases in which this was recorded there was hyperpyrexia in fourteen. In eight of these it reached 106° F., or over. Delirium and stupor were much more commonly associated with very high temperature than were convulsions.

In twelve cases the temperature was about the average for pneumonia (*i.e.*, 102° F. to 104.5° F.), and in six it was below the average.

Constitution : Fourteen children were reported in good health prior to the attack, seventeen were delicate, and one was markedly rachitic. Convulsions were more common in delicate children (nine out of fourteen cases). Of the twelve cases with delirium all but three were previously healthy.

Form of disease : Nineteen were cases of lobar pneumonia, fourteen were broncho-pneumonia, and one was not determined. Early convulsions were most often seen in the lobar form (seven of nine cases), while late convulsions in every instance but one, occurred in broncho-pneumonia. Delirium was seen much more often in the lobar form (nine of the twelve cases).

Location of the disease : The part of the lung affected has been a subject of special investigation, as I wished to ascertain whether these records supported the idea of the intimate association of cerebral symptoms with disease at the apex.[3]

There were thirty-eight cases of pure apex-pneumonia : Right, twenty-three ; left, fifteen. Of these cases seven, or eighteen per cent., had cerebral symptoms ; two, delirium ; three, convulsions ; two, other symptoms.

There were thirty-six cases of pure base pneumonia : Right, thirteen ; left, twenty-three. Of these cases four, or eleven per cent., had cerebral symptoms ; two, delirium ; one, convulsions ; one, other symptoms.

In seventy-three cases there was extensive disease : Both apices in two ; both bases in four, and in the remainder nearly the whole of one lung or large areas in both lungs were involved. Of these cases twenty, or twenty-seven per cent., had cerebral symptoms ; seven, delirium ; eight, convulsions ; five, other symptoms. In other words, in fifty-six per cent. of the thirty-four cases with cerebral symptoms the lesion was extensive. I have studied these cases with extensive disease a little further. In twenty-one of them the lesion involved either both apices, or the apex and some other part of the lung ; seven, or one-third, had cerebral symptoms. In thirty-six cases both bases, or one base and some other part, not the apex, were affected. Of these, twelve, or one-third, had cerebral symptoms ; a striking agreement with the apex cases.

These figures are not large enough, it is true, to establish the proportion of cases in which cerebral symptoms are met with when the disease is situated in the various parts of the lung, but they are large enough to show very clearly that no such predominance of apex cases exists as we have been led to believe. So far as they show anything, it is that the extent of disease is a far more important factor in producing nervous symptoms than its location.

The great predisposing factor here is to be found in the susceptibility of the nervous system in early life, which is one of the striking peculiarities of all the acute pathological processes of infancy and childhood. Sudden impressions by the abrupt development of symptoms, as in lobar pneumonia, are more likely to disturb the nervous centres than those coming on more slowly. Very extensive disease acts in a twofold manner, both by the nervous depression which it induces, and by the interference with hæmatosis, due to a large part of the lung being crippled, so that blood deficient in oxygen and overcharged with effete products is supplied to the brain and cord.

The fact that high temperature, from any cause whatever, when maintained for any considerable time, will produce marked disturbance in the functions of the brain, is so well known that it scarcely needs to be mentioned here. When we have given the old explanation that these symptoms are due to the effect of the overheated blood upon the brain, we have said about all that is positively known upon the subject.

Prognosis.—The general mortality of the cases here analyzed was twenty-two per cent. ; of the thirty-four cerebral cases ten, or thirty per cent., proved fatal. Of eight cases in which convulsions occurred at the onset of the disease only one died. The others were not specially severe. Every case of late convulsions died within twenty-four hours. One of these cases also had convulsions at the beginning of the pneumonia. Only one of the twelve cases with delirium succumbed. These cases, however, included some of the most severe ones in the series. We may conclude, then, that, excepting late convulsions, the occurrence of cerebral symptoms in pneumonia does not very much increase the danger of the disease.

It will be of interest to compare these cases with those of pneumonia in older children.

In the reports of the Pendlebury Hospital, Manchester, for the years 1881 to 1886, there are tabulated two hundred and thirty-four cases of lobar or croupous pneumonia. The hospital admits children from two to fourteen years of age. The ages of the cases of pneumonia were as follows : Under five years, 67 ; five to ten years, 121 ; ten to fourteen years, 46—total, 234. Only three cases are mentioned as proving fatal ; two of these had marked delirium. One hundred and forty-two were males, ninety-one females.

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[1] Jahrb. für Kinderh., N. F. ii.

[2] Practitioner, August, 1886.

[3] This term will be used synonymously with " upper lobe " in the subsequent discussion. I have found it impossible to draw the line of distinction between them in making up my statistics, nor has it been done by most writers.

Table II., which I have constructed from these reports, shows the proportion of base and apex cases, the number in which there was extensive disease upon one side, or in which both lungs were affected, together with the number of cases with delirium and convulsions when the disease was situated in the different parts of the lung.

For convenience of comparison I have placed alongside of it, in tabular form, the one hundred and seventy-three cases which have been discussed in the earlier part of this paper (see Table I.).

TABLE I.—173 *Cases of Pneumonia* (123 *under two years of age*).

Location	Apex, 38 R., 23 L., 15	Base, 36 R., 13 L., 23	Extensive disease, 73. (Both apices, 2; both bases, 4.)	Whole number, 173
Delirium	2	2	7	12
Convulsions	3	1	8	14
Other cerebral symptoms	2	1	5	8
Total with cerebral symptoms	7	4	20	34
Percentage	1	11	27	20

TABLE II.—234 *Cases in Older Children* (121 *between five and ten years of age*).

Location	Apex, 61 R., 47 L., 14	Base, 84 R., 29 L., 55	Extensive disease, 89. (Both apices, 4; both bases, 20.)	Whole number, 234
Delirium	14	13	28	55
Convulsions	.	3	2	5
Total with cerebral symptoms	14	16	30	60
Percentage	23	19	33	25

In all the five cases of convulsions they occurred at the onset of the disease; only one was a severe case and none were fatal.

In looking at these two tables we are struck with the fact that the right apex and the left base are the parts of the lung attacked by preference, these two being involved with nearly equal frequency. The proportion of cases having cerebral symptoms is slightly larger (twenty-five per cent. to twenty) among the older children, a fact which rather surprised me.

We see, however, that with the exception of all the percentages being slightly larger in Table II., there is a striking agreement in the two series of cases. Thus, in both tables the proportion of cerebral cases in those of disease at the apex falls a little below the general proportion. The proportion among apex cases is considerably larger than among the base cases, but it is far below that among the cases with extensive disease.

We may then safely draw the following deductions:

1. Cerebral symptoms in the pneumonia of children are very common.

2. Convulsions belong almost without exception to infancy, being rarely met with after two years. Occurring at the onset, they belong essentially to lobar pneumonia; they do not indicate a bad prognosis, nor even, in most cases, a severe attack. When late convulsions come on, death within twenty-four hours may confidently be predicted.

3. Delirium comes oftenest between the ages of five and eight, usually in conjunction with extensive disease and high temperature. These cases, although severe, with but few exceptions recover.

4. There is no such intimate association between cerebral symptoms and apex disease as has been frequently stated. Such symptoms occur in only about one-fifth of the apex cases.

5. Nervous symptoms occur much more frequently (one-third of the cases) when the disease is extensive and the temperature very high.

It was not my purpose to enter into the subject of the treatment of these symptoms in pneumonia, as I have nothing new to contribute. I wish to emphasize two points which my experience has taught me. The first is that in hyperpyrexia the cold pack is safe, and the most efficient means to reduce the temperature and thus abate the brain-symptoms dependent upon it. The second is the use of antipyrine, not so much for reducing very high temperature—for I think the cold packs are safer than very large doses, and altogether more satisfactory—but to allay restlessness, quiet delirium and cough, and promote sleep. For this purpose, doses of two or three grains are sufficient in an infant of from six to nine months, and double the dose at eighteen months or two years. The dose may be repeated every six or eight hours.

15 EAST FIFTY-FOURTH STREET.

Clinical Department.

A PIN LODGED IN THE PHARYNX.

DR. GEORGE WHITE, of Chicago, writes: "As an illustration of how long the human pharynx will tolerate a severe and constant irritant, allow me to place on record what seems to me to be an extremely interesting case. On February 1st I was hastily called to remove a pin from a child's throat. The history of the case was simple. Sometime during the month of June, 1887, the little girl (then about eighteen months old) put a pin into her mouth, and in a little while it slipped over the tongue, and the customary symptoms followed. The family doctor was summoned, but the pharyngeal walls were so œdematous that he was unable to locate the pin. A second physician was called and he, too, failed. As week after week went by the baby's condition grew no worse, but there were irregular seasons of coughing till I took up the case. At first I would not believe the history, but every statement was corroborated. To inspect the throat, I passed a finger of my left hand over the tongue, and then pressure on the middle and posterior parts of the tongue caused some nausea. This sensation being always accompanied by the involuntary elevation of the uvula and edge of the soft palate, I could plainly see the obstruction lying crossways in the throat and immediately behind the tonsils. I grasped the pin with a pair of bullet-forceps, and, forcing one end of it against the right side of the throat till I could see the end that had been fixed behind the left tonsil, it was a very short time till the child was free from its danger. The pin was brass, and presented no signs of corrosion. There were no indications of the least particle of pus, and the bleeding that followed the extraction was very slight. Up to the present time my little patient has progressed favorably."

THE TREATMENT OF SEPTIC DYSPEPSIA.

DR. H. F. GILLETTE, of Cuba, N. Y., writes: "I wish to call attention to the treatment of that form of dyspepsia characterized by acidity and fermentation—the condition known as septic dyspepsia. For over five years I have frequently prescribed the following in such cases:

℞. Salicylic acid........................gr. j.
Pepsin..........................gr. iij.
M. To be given at one dose, half-hour before eating.

"The combination acts as a disinfectant, and destroys those micro-organisms which act, like the yeast-plant, in starting the fermentative process in the food taken into the stomach. The action of the yellow oxide of mercury, recommended by Dr. Rose, is very similar, and the drug may be preferred in certain states of the system. I have found it convenient to give the prescription in form of tablets."

"LA ENCICLOPEDIA," a monthly journal published in Havana, appeared for the last time in December, 1887, at the end of its third year.

Progress of Medical Science.

PNEUMOPARESIS.—In a recent paper read before the Medical Society of London, Dr. B. W. Richardson proposes a new term for simple respiratory failure, viz., pneumoparesis. *The Lancet* says apropos of this subject: The question is whether a condition of disease of the lungs exists which warrants the name and calls for it. In support of the affirmative of this view Dr. Richardson's exposition runs as follows: Under the general expression "pneumonia" there occur instances in which there is no fever, no acute pain, no rusty expectoration, no preceding rigor—no indication, in short, of symptoms of febrile excitement. In place of these symptoms, however, there are certain other symptoms which of themselves are special and pathognomonic. The sufferers are persons possessing peculiar heredities. They are of phthisical tendency, they are of emotional nature, and are easily susceptible to what are called nervous shocks and exhaustions. Following upon such shocks or exhaustions, physical or mental, they suddenly become prostrate, with emotional or hysterical perturbation. They have cough, without either pain, difficulty of breathing, or much expectoration; and they exhibit strikingly, on the cutaneous surfaces of the neck and face, the red blush which the older writers called "erythema fugax." The pulse is variable and a little quickened, and the breathing is changed in a similar manner, but neither is remarkably modified. The mind, as a diagnostic surface, presents its own special features. Mingled with some emotional excitement there is a fixed belief in the mind of the patients that they shall not recover, but the belief, at the same time, is combined with the most perfect resignation to death. These are the general symptoms. The local, as soon as they are developed, are dry crepitation, strictly pneumonic in character, commencing at the base of the lung posteriorly, as a rule, extending quickly to the other lung, soon becoming moist, and steadily progressing through the pulmonary structures. In spite of all treatment the mischiefs indicated by the crepitation proceed until death takes place by asphyxia, the mind remaining clear until coma sets in, and the digestive and other functions remaining as little affected as the mind until the final catastrophe. Now that the class of symptoms have been defined, there is little difficulty in recognizing them. They are known, if not familiarly known, to all who have had a long acquaintance with the practical history of thoracic disease. They have no doubt been connected with other conditions of disease, but they possess, when once correctly pointed out, their own distinctive qualities; they are attended with failure of the respiratory power, and they constitute truly pneumoparesis, whatever may be their cause. But Dr. Richardson, after thus defining pneumoparesis, goes to its cause. He has seen in experiments the same physical symptoms produced synthetically in the lower animals, by an induced paresis of the nervous supply of the lungs. Hence he infers that the disease is of nervous origin. There are subjects in whom the nervous stimulus to the vascular systems of the lungs, nutritive and respiratory, is at all times defective. These, under the influence of depressing causes or of nervous shock, exposure to cold, privation, accident, fear, grief, or even extreme excitement, feel depression in, so to speak, the most defective part, and thereupon the vascular tone of this pneumonic area is reduced. On that the resistance of the minute circulation is lessened, and the physical changes leading to the confirmed organic lesions commence and progress as related above. It is a fine point whether the change commences in the nutritive vessels of the lung or in the respiratory, but on the whole the author of the theory thinks it begins in the nutritional circulatory channels, the respiratory circulation following in train and yielding the evidence from physical signs of the organic disturbance. This point is novel, and is as applicable to other forms of lung disease as to that under special notice. By a further extension of his theory, Dr. Richardson gives pneumoparesis another bearing. It is, he argues, the natural mode of death in the aged, the method of final sleep, the true euthanasia. In the course of the process of senile decay the nervous supply of the pulmonary vascular systems becomes gradually enfeebled. At last, under the influence of some depressing cause, the failure is complete, so-called congestion of the lungs or congestive bronchitis ensues, and under the withdrawal of the respiratory function the anæsthetic state is induced which ends in death. Those who die from pneumoparesis, therefore, in old age, have lived their allotted term; those who die from it in earlier life have been born to a premature death. To the interest attaching to this curious and practical topic there is, we regret to say, one painful part. For pneumoparesis there is, according to our present knowledge, no cure.

TREATMENT OF WINTER ECZEMA.—A correspondent from Brooklyn calls our attention to a lotion recommended by Dr. Squibb, in the *Ephemeris* for March, 1882, from the use of which he has found great relief. The following is the formula for this lotion: Tannic acid, 40 grains (2.6); glycerine and alcohol, of each 4 drachms (15.0); water, enough to make 4 ounces (120.0). This is to be applied to the itching surface by means of a small sponge or rag, morning and evening. The solution does not keep indefinitely, and should therefore be renewed occasionally. The writer also states that a friend of his has found the same lotion an excellent palliative in chronic eczema, keeping the irritation within the bounds of endurance. Another correspondent, from Conway, N. H., writes that he has had more real satisfaction and solid comfort from the use of an iron shoe-horn than from any other remedy which he has tried in winter eczema. His trouble is located chiefly at the angle of the scapula, and the iron "goes to the right spot."

A DOSIMETRIC PRESCRIPTION.—Dr. Semeleder, of Mexico, writes: "A man, aged forty-five years, suffering from pneumonia, was treated by the dosimetric method, the following being one of his prescriptions, the figures representing granules to be taken at a dose. Bromocamphor, 8; quinine hydrobromate, 4; arbutine, 1; strychnine hypophosphate, 1; aconitine, 1; veratrine, 1; digitaline, 1; sodium benzoate, 1; iodoform, 1; helenine, 1; musk, 1. These were to be taken once in every two hours, that is to say, a new medicine every ten minutes. In addition, two granules of quassine were given every time the patient took any nourishment. He took an average of three hundred granules a day, or three thousand in the course of ten days, when he died. The cost of medication for this period was $45.00."

GRAVITY AS AN EXPECTORANT.—It is claimed in *The Polyclinic* that in cases of pneumonia where there is great embarrassment of breathing from accumulation of secretion in the bronchial tubes, great benefit may often be derived by inverting the patient and having him cough violently while in this position. It is easily accomplished by a strong assistant standing on the patient's bed, seizing the sick man's ankles, turning him with his face downward, and then lifting his feet four or five feet above the level of the mattress. If the patient, with his face over the edge of the bed and his legs thus held aloft, will cough vigorously two or three times, he will get rid of much expectoration that exhaustive efforts at coughing failed to dislodge when not thus aided by gravity. Life has been saved by repeated performances of this manœuvre in pneumonia accompanied with great cyanosis, due to inundation of the bronchial tubes with mucous secretion.

DR. A. BERTHERAND, founder and editor-in-chief of the *Gazette Médicale de l'Algérie*, died in Paris in December of last year. He was born in Bazeilles, Ardennes, in 1815, and was therefore nearly seventy-three years of age at the time of his death.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, April 7, 1888.

DIPHTHERIA IN POULTRY, AND ITS RELATION TO THE DISEASE IN MAN.

IT has been noted by several writers that the diphtheritic process, as it occurs in the human subject, resembles in many respects that occurring in barn-yard fowls, and it has even been suggested that the human disease might be originated or spread through the agency of chickens or other poultry.

In the *Bulletin Médical* of January 22, 1888, Dr. Paulinis publishes an interesting report of an epidemic of diphtheria, occurring in one of the Grecian isles, which lends considerable weight to the arguments in support of this theory. The epidemic began in the summer of 1884, in Skiatos, a small island having a population of about four thousand souls. For over thirty years no case of diphtheria had been seen on the island, according to the testimony of a Dr. Bild, who had practised there during that time. In the early part of June Dr. Paulinis was called to see a child aged twelve years, suffering from sore throat, and found her tonsils and pharynx covered with false membrane. This child died, and seven other cases occurred in the immediate neighborhood, five of them terminating fatally. The epidemic soon spread through the entire community, over one hundred being attacked, and thirty-six dying during five months.

An examination was made to discover, if possible, the source of the disease, and it was found that a flock of turkeys had been received some three weeks before from Salonica. Two of the turkeys were sick on their arrival, and each of the others was attacked in succession. Dr. Paulinis found two of them still sick, and inspection showed patches of pseudo-membrane on the mucous membrane of the vault of the palate and of the pharynx. On detaching strips of the exudation by the forceps the mucous membrane beneath was seen to bleed slightly. The glands of the neck were swollen, and in one of the fowls the diphtheritic process had extended to the larynx, as was shown by the hoarseness of the cry and evident dyspnœa. One of the turkeys, which had recovered from the throat affection, suffered from paralysis of the legs, being unable to walk. The garden where the turkeys were was at the northern extremity of the town, and the first children attacked were in the immediate neighborhood. There had been no immediate contact between the fowls and the children, nor between the first child attacked and the others, but there was a north wind blowing the greater part of the time, and the author believed that it was in this way that the disease was spread. He concluded, from this experience, that the diphtheria of the ordinary barn-yard fowls was similar in its course and symptoms to the disease occurring in man, and that it could be carried from the one to the other, sometimes through the medium of the air.

The question of the intercommunicability of human and animal diseases is an interesting one from many points of view, and this account of an epidemic in a community hitherto exempt from diphtheria is an important contribution to the literature of the subject, although it must be confessed the recital of it is by no means entirely satisfactory, as far as the exclusion of various sources of error is concerned.

THE ACTION OF SPARTEINE.

ALTHOUGH sparteine has been known for many years, it is only within a comparatively recent period that its valuable properties as a true heart tonic have been recognized and carefully studied. Dr. J. Pawinski, of Warsaw, has recently made a somewhat extensive series of experiments with the drug (*Gazeta Lekarska*, Nos. 1 and 3, 1888), and comes to certain conclusions which are of interest, as they differ in some respects from those of other writers.

1. Sparteine acts without doubt on the heart and great vessels.

2. In small doses, of one-fourth to one-half grain, three times a day, it increases the strength of the heart's action, reduces the number of pulsations, and raises the blood-pressure. In large doses, one and a half to two grains, every two hours, it exerts a paralyzing influence on the heart, diminishing the frequency and force of the beats, as evidenced by a slow, feeble, and often intermittent pulse.

3. The best therapeutic effect is obtained with small doses.

4. Small doses stimulate, while large ones paralyze, the pneumo-gastric nerve.

5. The stimulant action of sparteine upon the heart cannot be regarded as very considerable, and in this respect digitalis is superior.

6. In small and medium doses sparteine seems to exert a stimulant effect upon the vaso-motor centre in the medulla, in consequence of which the vessels become contracted.

7. The action of sparteine is rapid, its effects being observed within half or three-quarters of an hour, and continuing for four or five hours.

8. The best effects of the drug are seen when it is administered to delicate, nervous, or anæmic individuals.

9. In addition to its action upon the heart and vessels, sparteine also exerts a soothing influence upon the nervous system, being sometimes distinctly, though slightly, hypnotic.

10. The diuretic action of sparteine is not important. It is uncertain, occurring usually, however, in persons possessing considerable nervous susceptibility, whose cardiac muscle is not degenerated in consequence of morbid changes in that organ or elsewhere. The diuretic action of the drug, such as it is, seems to be due to the vascular changes produced by its influence.

11. Sparteine does not exert any cumulative effects,

and may therefore be administered for a considerable length of time without fear of any sudden injurious consequences.

12. Sparteine does not produce any digestive disturbances, and does not affect the appetite.

THE CONDITIONS OF LONGEVITY.

Professor Humphreys presents, in the *British Medical Journal* for March 10th, the final report of the collective investigation regarding aged persons. This report is based on the study of the family histories of eight hundred and twenty-four persons between the ages of eighty and one hundred years. The results of the investigation, as Professor Humphreys says, do not reveal anything very novel or startling, or give rise to fresh theories of longevity. They tend rather to dissipate certain ideas which are more or less current, though founded upon too limited observation, and to show that the maxims and laws which common-sense and sound reason would dictate hold good, and that, as a general rule, those persons live the longest who might be expected to do so. Thus, he adds:

"1. The prime requisite is the faculty of age in the blood by inheritance; in other words, that the body has been wound up, as it were, and sent into the world with the initial force necessary to carry on the living processes through a long period, that this is the case with every organ, and that the several organs are so adjusted to one another as to form a well-balanced whole. The various functions will then be equably and harmoniously performed, and there will, consequently, throughout life, be little cognizance of imperfection or ailment of any kind.

"2. The body is usually well developed, and though there are many exceptions to this, rather exceeds the average standard of height. It is capable of much endurance and of quick and complete restoration after fatigue, this latter faculty giving the habit of, and probably the desire for, early rising; and with it also is associated a good power of recovery from the disturbances caused by accident or disease. The cerebral or intellectual powers accord with the general good quality, and the whole nervous system is active and energetic without being irritable.

"3. Owing to the inherent good quality of the nutritive processes, those degenerative changes which, in advancing years, always more or less diminish the elasticity of the arterial coats and of other parts, are slow to occur, so that the pulse retains, in great measure, its softness, and the thorax its vital capacity, while stiffness of limb and general feebleness are late in their manifestation. The decadence of the teeth, which in the animal world generally sounds a death-knell, inasmuch as it deprives the body of the means of obtaining its subsistence, does not seem to augur much in the case of civilized man, to whom the teeth are less directly needed for his maintenance, while another cuticular appendage, the hair, seems to share, to some extent, the enduring quality of the rest of the system."

To the foregoing must be added ordinary opportunities for living well, and under sanitary conditions. Temperance in eating and drinking are essential, but especially in meat-eating and alcohol-drinking.

Professor Humphreys thinks that, on the whole, old age is an enjoyable period of life, when the body remains sound and the circumstances of life are comfortable.

Some of the more interesting physiological data are as follows:

The average height was a little over five feet seven inches; average weight, a little over eleven stone (154 lbs.).

The sight was good in 224 out of 267 cases; the hearing good in 188 out of 329. Out of 320 over one-half took a little, or a moderate amount of alcohol.

The average duration of sleep was seven and two-third hours. The pulse averaged about 70 to 74; respiration, 20 to 21 per minute. The arcus senilis was present in 172 out of 266 cases. The heart was affected in 42 cases; the lungs in 62; the brain in 25; the urinary organs in 119 cases.

A VICTIM OF "SPIRITISM."

Much comment has been aroused during the past week by the revelations concerning a distinguished lawyer of this city, who, in his old age, has allowed himself to be deceived by a spiritualistic adventuress. The credulity which the gentleman has shown is so amazing that legitimate doubts are expressed as to his mental soundness. We must quite agree with those who have expressed the view that the victim's mental powers are seriously impaired. The argument put forward in his favor that a distinguished jurist many years ago also became a convert to spiritualism, while his mental vigor, so far as legal matters were concerned, was not affected, hardly applies to-day. At that time spiritualism was a new thing, and its so-called phenomena not entirely understood by anyone. A man who now gives himself up so completely to a transparent trickery can hardly be considered a safe counsellor in serious matters.

News of the Week.

Death of Dr. Benjamin F. Dawson.—Dr. Benjamin Frederick Dawson died on Tuesday at his residence, 8 East Fifteenth Street, New York, of diabetes, from which he had been a sufferer for many years. He was forty-four years of age, and a graduate of the College of Physicians and Surgeons in the Class of '66. While a student of medicine he served as acting Assistant Surgeon in the United States Army during 1865. After graduation he practised in New York, paying especial attention to surgery, gynecology, and the diseases of children. He founded the *American Journal of Obstetrics* in 1868, and for six years continued as its editor. He contributed largely to this and other similar publications for many years. About four years ago he gave up the practice of his profession on account of ill-health. He had been for a number of years Assistant Surgeon of the Woman's Hospital, Attending Physician of the New York Foundling Asylum, and Professor of Gynecology in the New York Post-graduate Medical School. He was also a member of the New York Obstetric Society, and many other medical associations. He leaves a widow and two little children, besides three sisters, all of whom are married. The funeral occurred on Friday, at Calvary Church.

Contributions to Homœopathy.—Within a year or two the homœopaths of this city have secured, it is said, considerably over one hundred thousand dollars for their college and hospital here. By a fair, which is now going on, it is expected that $100,000 will be realized.

THE COMMENCEMENT OF THE COLLEGE OF PHARMACY OF THE CITY OF NEW YORK took place at Steinway Hall, Wednesday evening, March 28, 1888.

DR. SKODA, medical referee for Bohemia, and brother of the great J. von Skoda, died recently at the age of eighty-eight years.

UREA CENTRE.—In the animal economy centralization is carried to its most extreme degree. It is certain, from Brown-Séquard's experiments, that there exists a centre of irritation which can suspend the chemistry of the body, making the blood in the veins flow red and reducing the temperature of the body. MM. Sée and Gley, experimenting on dogs with a view to producing glycosuria, caused azoturia by irritating the central end of the divided right vagus with a mixture of glycerine, water, and lycopodium injected into that part of the nerve after section. —*The Lancet.*

SMALL-POX has increased so rapidly in San Francisco as to occasion alarm.

HISTORIC STONES.—This is the name suggested by *The Lancet* for the renal calculi which killed both Emperor William and his vanquished antagonist, Napoleon III.

OUR GERMAN BRETHREN JEST.—At a banquet given to Professor Kussmaul on the occasion of his leaving Strasburg for Heidelberg, we are told that Dr. Freund, professor of gynecology, after referring in humorous strain to the accident that had made Kussmaul a physician, viz., an accident to his foot which induced temporary lameness, and with it an interval of sage reflection, "evoked peals of laughter from his audience by hinting that, their names being identical in meaning, the Oribasius of the fourth century was no other than the Kussmaul of the nineteenth, but that the clinical teacher of Strasburg had greatly improved on his *alter ego*, the body physician to the Emperor Julian the Apostate." This was a highly effective sally, "Oribasius" being an exact equivalent in Latin for the German "Kussmaul" (literally, "kiss-mouth").

THE BRITISH MEDICAL ASSOCIATION, though numbering over 12,000 members, has recently got a decided set-back from political authorities (*Hosp. Gazette*). The Association sent a communication to the Government giving the unanimous opinion of 1,200 army medical officers on the question of relative rank. To this the Government has said that the opinions appear to have been obtained in a manner altogether in contravention of military rules. Army medical officers, like others, had a proper channel through which to be heard, and it was not prepared to accept a civilian circular from any association on their behalf.

AN ELECTRO-THERAPEUTICAL SOCIETY has been organized in Baltimore. New York had a Society of Electrology and Neurology at one time, but it died a natural death. We wish a better fate for the Baltimore organization.

A COMMITTEE OF THE TRUSTEES of the Johns Hopkins Hospital, at Baltimore, visited Boston and New York this week and spent much time in inspecting the hospitals of those cities, from a managerial standpoint.

DR. BRAMANN, the surgeon who successfully performed tracheotomy on the present Emperor of Germany, is only thirty-five years of age. He has been gazetted in Berlin as the recipient of the Commander's Cross of the Hohenzollern House Order as a reward for his services.

THE FRENCH CONGRESS OF SURGERY.—The third annual congress of French surgeons was held during the week ending March 17th, at Paris. M. Verneuil presided, and in his opening address replied to the recent attack upon French surgery made by Billroth. M. Verneuil said that the tendency of French surgery was conservative, and it was certainly more enlightened than that which consisted in the daring ablation of every possible organ, and which placed operative interference in the first rank among therapeutic agents. While reserving the knife for necessary cases, French surgery attempts to utilize as far as possible all the help that can be obtained from hygiene and general therapeutics. "If," said M. Verneuil, in conclusion, "the fame of the surgeon who acts upon these principles is not trumpeted to the world, as would be the case were he to cut out a lung, or to tie the basilar artery, he may console himself by the thought of the number of cases in which he has secured health and saved life without making a fuss over it." The first communication was made by M. Ollier, of Lyons, upon two cases of resection of the wrist, with recovery of movement. The improvement advocated by M. Ollier consists in the conservation of the tendons of the muscles acting on the wrist-joint itself. Not only did the patients recover, with movement in the fingers, but also with a considerable degree of flexibility of the hand upon the arm, one of the patients, a young woman, even being able to play the piano. M. Demons related two cases in which he had practised partial extirpation of the larynx for cancer. In one case the disease recurred nine months later. The other patient, operated on ten months since, is still well. MM. Dupont and Mollière spoke upon the same question, the latter praising Trendelenburg's cannula. A long discussion took place upon the proper line of conduct in penetrating wounds of the visceral cavities. M. Chauvel said that the opinion of French surgeons was divided as regards the necessity for immediate laparotomy. There are the "abstentionists," comprising MM. Tillaux and Verneuil; the "moderate interventionists," such as MM. Reclus, Trélat, Bouilly, and Le Fort, who operate at the first signs of peritonitis or serous effusion; and, lastly, those who, following Hamilton and MacCormac, always perform laparotomy as an exploratory measure. M. Chauvel said that he belonged to this school, and considered that every wound of the abdomen by firearms required enlargement and exploration of the subjacent parts. Wounds of this kind are extremely serious, if not always mortal, when there is no surgical intervention; and, although he did not rely much upon the statistics he had collected, he thought they went to show that non-intervention was a mistake. In forty-one cases of laparotomy for gunshot wounds of the abdomen, the proportion of recoveries was twenty-nine per cent. The operation was the more successful the earlier it was practised. Within the first twelve hours there were forty per cent. of recoveries; within twenty-four hours thirty per cent. After twenty-four hours a fatal result had been constant.

Dry Mouth is the title of a paper recently read by Dr. W. B. Hadden before the London Clinical Society. The affection occurs in old people, and was benefited by jaborandi.

American Sanitaria.—The *Lancet* has an article upon this subject, dealing briefly with Colorado, California, Florida, and Minnesota. The *Therapeutic Gazette* recently published an article claiming especial merits for a new region in Colorado, viz., Glenwood Springs.

The Death of Dr. Emil Bessels is announced. Dr. Bessels graduated in medicine at Heidelberg, but he practised his profession for only a short time. He turned his attention to the natural sciences, and was prominently known as a member of the Polaris expedition. Dr. Bessels was only forty-one years old at the time of his death.

Brief Inhalations of Carbonic Acid Gas are said by Dr. E. Weil to relieve cough and dyspnœa.

The Action of Drugs at a Distance.—As might have been expected, the commission appointed to test the claims of M. Luys regarding the action of drugs at a distance upon hypnotized persons has reported that carefully conducted experiments fail entirely to produce the phenomena.

The Medical Society of the State of Pennsylvania holds its thirty-ninth annual meeting at Philadelphia on June 5th, 6th, and 7th. The following addresses will be given: Address on Practice of Medicine: Dr. E. R. Mayer, of Wilkesbarre; address on Surgery: Dr. James McCann, of Pittsburg; address on Obstetrics: Dr. Theophilus Parvin, of Philadelphia; address on Mental Disorders: Dr. Horatio C. Wood, of Philadelphia; address on Otology: Dr. B. A. Randall, of Philadelphia; address on Hygiene: Dr. Traill Green, of Easton.

Association of American Medical Editors.—The next meeting of the Association of American Medical Editors will be held in Cincinnati, Monday evening, May 7th. After the address of the President, Dr. William Porter, of St. Louis, the Association will consider a plan of organization reported by a committee, of which Dr. McMurtry, of Danville, Ky., is chairman. Officers for the ensuing year will be elected, and the Association will then discuss the following questions: 1. Is the multiplicity of medical journals an advantage to the profession? 2. How far do medical journals distributed by drug houses and manufacturers interfere with regular medical journalism?

Antipyrin, when given with ergot, is said by Professor Chouppe to produce painless uterine contractions, and therefore to be a most useful combination after parturition or in dysmenorrhœa.

Somniferin is the suggestive name given to a new morphine-ether which was first discovered by E. Bombelon, and is claimed by him to be superior to morphine. Smaller quantities can be used with similar results, headache never follows its use, constipation is seldom observed, and the heart is not affected. The drug is a transparent, colorless crystal, and is easily prepared. Bombelon has also discovered several new alkaloids, which he has produced from the same source. Morphine-eserine, which contracts the pupil without pain; also chinintropine and morphinotropine. According to Bombelon, a vast number of new bodies can be produced from the same source by means of various alkaloids; they retain both the chemical and physiological actions of both alkaloids, or, in some cases, contain new properties. Physiological experiments with these bodies are being actively carried on.—*Der Pharmaceut*, December, 1887.

Medical College Commencement.—The Louisville Medical College graduated a class of ninety-five at its recent annual commencement.

Politics and the Hospitals.—The *Chicago Medical Journal and Examiner* says that the value of the Cook County Hospital, as a means of clinical teaching, has been very much crippled in the past by the fact that men not qualified to teach have been able to buy positions on the staff. Our contemporary questions whether the "Reform Board" has brought about reforms in this respect, although it has placed some good men on the staff. It cannot be expected that public charities will attain their highest efficiency so long as they are managed by politicians. The deplorable state into which the charitable institutions of Indiana have fallen is the result of the "spoils system" in politics, and not until they are placed in the hands of non-partisan boards can it be expected that they will be managed honestly and efficiently.—*Indiana Med. Journal.*

The Microbe of Yellow Fever, as described and cultivated, attenuated and inoculated by Dr. Domingos Freire, of Rio Janeiro, has gone the way of many other specific germs. Dr. Gibier, who was sent from Paris to investigate the subject, denies utterly the existence of the germ claimed by Freire to be specific.

Another Medical Novelist.—Dr. Benjamin Ward Richardson has written a novel entitled "The Story of a Star: a Romance of the Second Century." The hero is Bar Cohab, the last of the great leaders of the Jewish people in the final struggle for national independence.

A Delayed Journal.—There are many excuses offered by overworked and underpaid medical editors for delay in the appearance of the journal. Sometimes the editor is sick, sometimes it is his baby; more often it is the calculated malignity of the printer and his imps. A Russian journal, *Medizinskoie Obosrenie*, offers a new excuse, viz., that three of its articles had been confiscated by the official censor. We had missed the *Obosrenie* greatly.

Italian Society of Hydrology and Climatology.—The Società Italiana d' Idrologia e Climatologia, which was founded last September at Pavia, when the Congress of the Italian Medical Association was in session, will hold its first meeting at Bologna next October.

Dr. J. Henry Fruitnight writes: "In the report of the discussion on Dr. Wood's paper before the Northwestern Society, I am quoted as saying the 'ingestion of nitrogenous,' whereas it should have been quoted 'ingestion of *non*-nitrogenous food'" (page 339).

Rochester Training School.—The sixth annual commencement of the Training School for Nurses, connected with the Rochester City Hospital, was held on the evening of Thursday, March 29, 1888. There were nine graduates.

Society Reports.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, March 2, 1888.

George F. Shrady, M.D., President, in the Chair.

Dr. Andrew H. Smith exhibited a new combination of cocaine with saccharine, to which he had given the name,

SACCHARINATE OF COCAINE.

It had occurred to him that these two substances might be combined so as to form a useful salt, since saccharine is chemically an acid. The resulting salt was in the form of brilliant canary-colored crystals, which were very hygroscopic, and should, therefore, be kept in tightly closed bottles. A five per cent. solution of the saccharinate was about equal in strength to a four per cent. solution of the muriate, since there was proportionately a smaller quantity of the alkaloid in a given amount of the former salt.

Dr. Samuel Sexton referred to the case of a man who suffered from very severe vertigo after taking four drops of a four per cent. solution in his mouth for the relief of a toothache. He had often seen quite alarming vertigo following the instillation of cocaine in the ear in cases in which the drum-membrane was perforated.

Dr. Beverley Robinson had seen several instances of unpleasant symptoms caused by the application of strong solutions to the throat. These symptoms were faintness, vertigo, excessive pallor, and slight dyspnœa.

Dr. V. P. Gibney had occasionally met with patients who seemed to be insusceptible to the anæsthetic action of cocaine.

Dr. Cleveland had seen a case in which most alarming syncope followed the injection of a few drops of a ten per cent. solution into the gum, preparatory to a tooth-extraction.

Dr. Kinnicutt had exceptionally observed that the after-pain of an operation was much more severe than when no cocaine had been used.

Dr. A. H. Smith had observed this in one instance. He had removed a small tumor from the breast under cocaine-anæsthesia, and the woman complained afterward of very severe pain.

Dr. F. P. Kinnicutt reported a case (see p. 282) of

ACUTE INTUSSUSCEPTION.

Dr. L. M. Yale had seen one case which was believed to be intussusception, and which recovered. He referred to another which he had seen in hospital practice, in which the child died, and at the autopsy it was found that the invagination began at the jejunum, this part having passed entirely through the intestines, and appearing at the anus in the shape of a protruding loop.

Dr. Robinson reported a case seen by him with Dr. Cleveland. The patient was a child, aged one year, in whom the affection began with bloody discharges from the rectum. These discharges were later suddenly arrested, and a tumor appeared low down in the left side of the abdomen. The child was held with its head down, and a large quantity of water was injected into the bowel. While this was being done, some of the water came through the mouth. Three or four normal stools followed, and the child recovered.

Dr. Roosevelt related the case of a child which was supposed to be suffering from intussusception. It was taken suddenly with vomiting, swelling of the abdomen, and some blood in the stools, but there was no pain. Laparotomy was performed, but no intussusception was found. The child died, and at the autopsy it was found that there had been a band of fibrin causing strangulation of the transverse colon. The obstruction was entirely in the large intestine, and had been relieved spontaneously.

Dr. Abbe had had a case in a child who presented symptoms of obstruction, and in whom a tumor could very easily be felt. Injection of water resulted in a complete reduction of the obstruction. The child recovered, but died some time afterward from another intussusception. He believed that spontaneous reduction, when it occurred, was often due to the reversed action of the intestines, which was manifested by the stercoraceous vomiting.

Dr. A. H. Smith said that his impression was that many cases had been recorded of water escaping from the mouth after its injection into the rectum. He asked what significance Dr. Kinnicutt attached to the diminished secretion of urine.

Dr. Robinson asked whether the diagnosis of intussusception could be made without the presence of a tumor. He related a case of a boy who was suddenly seized with abdominal pain. When he saw the child in the evening there was severe pain in the abdomen, the legs were drawn up, and there was an elevation of temperature. The next day the boy was as well as usual. The mother said that the child was very liable to similar attacks, and her physician in another city had told her always to send for medical assistance at such times. Dr. Robinson asked whether this was a case of intussusception.

Dr. Kinnicutt said that, in connection with other symptoms of intussusception, the sudden appearance of a tumor rendered such a diagnosis much more positive. In intestinal obstruction from other causes the presence of a recognizable tumor was much less common. In reply to Dr. Smith's question, he said that the symptom of anuria was probably one of the phenomena of shock, and was not of particular significance in the diagnosis of the present case.

Dr. Kinnicutt then reported a case (see p. 382) of

PYLORIC STENOSIS FROM AN ULCER.

Dr. Cleveland remembered having seen this patient long ago, and at that time the diagnosis was chronic gastritis. The patient had always been very imprudent as regarded his diet, and had been in the habit of eating enormous quantities of candy.

Dr. Robinson asked what importance the reader of the paper attributed to the presence of an excess of acid secretion in the differential diagnosis of carcinoma and ulcer of the stomach.

Dr. Roosevelt asked whether the hyperacid condition of the stomach, so often seen in anæmic women, should be considered as a sign of any value, or as lending weight to the exclusion of carcinoma.

Dr. A. H. Smith thought that there was some danger of confusion in using the term acidity, without any qualification. All acid thrown off from the stomach was not hydrochloric by any means. He asked how it was possible to determine that the acid was hydrochloric without subjecting it to chemical tests.

Dr. Kinnicutt said that it was only possible by means of chemical tests to determine positively the presence of free hydrochloric acid.

In order to demonstrate the existence of gastric hypersecretion and hyperacidity, it was necessary to examine the contents of the stomach at varying intervals after the ingestion of food. The term hypersecretion was employed to denote the existence of free hydrochloric acid, independent of the presence of food in the stomach; hyperacidity, to an excess of this acid during digestion. In the former case the contents of the stomach should be examined six or seven hours after the ingestion of food; in the latter, about four hours after. If hydrochloric acid was present in any amount after the former interval, hypersecretion probably existed.

Hyperacidity could only be demonstrated by an estimation of the percentage amount of hydrochloric acid. He believed very positively that the constant presence of free hydrochloric acid during digestion excluded the existence of cancer, no matter how suggestive the other symptoms might be. Its absence might occur in other pathological conditions.

Dr. Kinnicutt then reported a third case (see p. 382) of

PARALYSIS OF THE LARGE INTESTINE FROM TUBERCULAR ULCERATION, SIMULATING ACUTE GENERAL PERITONITIS.

Dr. William H. Draper reported a case of

INTESTINAL OBSTRUCTION FROM IMPACTED GALL-STONE — LAPAROTOMY—DEATH.

I am indebted to Dr. Leroy M. Yale for the following details of the history of this case up to the time I saw the patient in consultation with him.

Miss M——, a maiden lady, aged fifty-one, always enjoyed fair health. The only facts in her antecedent history bearing possibly upon her final illness were as follows: In September, 1887, while in the country, she had what she considered a severe attack of indigestion, accompanied by severe pain in epigastrium, for which she was under medical care for three or four days. The attack does not appear to have been followed by jaundice. In November Dr. Yale was summoned, on account of a febrile attack, with more or less discomfort, but without severe pain, in the region of the liver. The fever was the principal symptom and yielded promptly to quinine. There was slight tenderness in the region of the gall-bladder for four or five days. An anodyne was needed for pain only once. There was no subsequent jaundice. On the evening of February 23d she had pain in the epigastrium, which she attributed to an indigestible muffin. In the morning her bowels moved, and she felt well enough to attend to her household duties and to out-door errands. Later in the day, Friday (the 24th), the pain recurred, and she began to take, of her own accord, small doses of calomel (gr. $\frac{1}{12}$), with bismuth. After taking six powders she took, on Saturday, a dose of oil, which was promptly rejected, but the bowels were moved by injection. The pain continued through Saturday, but Dr. Yale was not sent for until Sunday morning, the 26th. When Dr. Yale saw her she was without fever, and the pulse, which varied with the paroxysms of pain, averaged about 100. The paroxysms of pain, which were severe, varied in location, but were chiefly referred to the left of the mesian line and the left lumbar region. During the attacks of pain there was some tenderness over painful regions, and nausea, both of which disappeared in the intervals of pain. There was slight meteorism, and that of the small intestines. During the attacks of pain there was some rigidity of abdominal muscles. No tumor could be felt, though once or twice Dr. Yale thought he could detect some illusive indications of a movable mass. In the intervals of pain the belly was soft, and rubbing gave relief and provoked eructations. No material change occurred in the symptoms during Sunday and Monday. The bowels had been moved by injection, and there had been occasional vomiting and frequent eructations of fluid matter, which was sour, but without any fecal odor. The pain had been controlled by morphia. When I saw the patient, at six o'clock Monday evening, her aspect was not that of serious distress. She had no fever, and her pulse was about 100 and of good quality. She had frequent small eructations of a decidedly fecal odor, and complained of their taste. The belly was soft and not very tumid. The large intestine was not distended, and what meteorism there was was evidently of the small intestines. There was no visible peristalsis. There was no marked tenderness, and the patient allowed free manipulation of the abdomen without complaint. I thought I could feel occasionally the illusive tumor, about the size of a small egg, which Dr. Yale had described, but I could not be sure of it. The urine was scanty, and a specimen which Dr. Yale had procured in the morning contained very numerous plates of cholesterine, and what had the appearance of fragments of undigested muscular fibre. These appearances indicated, what was afterward confirmed by the statement of the patient, the admixture of some fecal matter with the urine. My examination led me to the conviction that the case was one of obstruction of the small intestine, probably high up, and I ventured the opinion—from the history of the two attacks of what corresponded more nearly with those of biliary colic than with anything else, which occurred last autumn; from the presence of so much cholesterine in the fecal matters which were accidentally mixed with the urine; and from the gradual and somewhat subacute evolution of the symptoms of obstruction—that the case was probably one of impacted gall-stone.

I advised surgical counsel without delay, and Dr. Bull saw the patient the same evening at nine o'clock. I will ask Dr. Bull to relate the subsequent history of the case and the details of the laparotomy, which was unavoidably delayed for forty-eight hours.

Dr. Bull continued the case as follows: Monday evening, when I saw the patient with Dr. Yale, the condition was as already described by Dr. Draper; a small stool had been passed voluntarily just before my visit. The fecal matter was formed and of pasty consistence. I also saw about eight ounces of undoubted fluid fecal matter, which had been vomited; wind in small quantity had passed.

Tuesday, February 28th (the following day), was marked by fecal vomiting in the forenoon, and there were two thin movements of material like that vomited, mixed with beef-extract, which had been injected. General condition unchanged. At 3 P.M. Drs. Yale, Draper, and myself agreed that laparotomy was urgently indicated, and so expressed ourselves; but the family desired that so serious a measure should be delayed till further counsel was present. At 10.30 P.M. Dr. Octavius White and Dr. J. Blake White were added to the consultation. There had been no more vomiting, less frequent eructation, and one small liquid evacuation, the character of which was similar to those last passed—a mixture of fecal matter and nourishment. The general condition was unchanged; several nutrient enemata, with whiskey and opium, had been retained. The necessity for operation was still urged, but in deference to the wishes of the family a final decision was postponed till morning.

On the 29th, about 8 A.M., the patient suddenly vomited about half a pint of the same liquid fecal matter, but the nurse did not succeed in catching any in a vessel; no movement had occurred. The failure to demonstrate the character of the last vomiting, since it was not seen by any of the physicians, seemed sufficient reason to the family for further postponement of operative measures. The danger of delay was urged, and it was finally agreed that an operation should be performed in case vomiting occurred again. The pulse at this visit was 100, the temperature 99°, there was little or no pain, and no increase in the tympanites. The indefinite "feel" of a tumor could be appreciated half-way between the navel and the anterior superior spine of the ileum of the left side. The urine in twenty-four hours had increased in quantity. At 4 P.M. the vomiting recurred, and the time for operation was fixed at eight in the evening. The general condition was still good, though during the day the pulse had become more compressible and the patient rather languid, but not decidedly weaker.

It was nine o'clock before the operation was begun, and the general condition had in the five hours' interval changed for the worse. But this change was perceptible only in the appearance of the face. Ether was given at nine o'clock by Dr. Yale. On opening the abdomen by a median incision, four inches in length, the finger was passed through the moderately distended intestines to the cæcal and sigmoid regions. These parts of the colon were empty. I pulled out a loop of distended intestine which occupied the middle line, and at once perceived an empty loop. Traction on this brought to view a part in which a foreign body was firmly arrested. The gut above was fully two and a half inches in diameter, that below about half the size. The presenting intestine was moderately congested, but no fibrinous or fluid exudation was seen. I tried to push the foreign body upward—preferring to make the incision in a part of the gut not so recently subjected to pressure from within—but it was not possible to do so. An incision through the wall of the gut, one and a half inch in length, liberated the body. This incision was made directly opposite the mesenteric border; it was closed at once with fourteen Lembert sutures of carbolized silk. No blood escaped into the cavity. The loop containing the wound, and that first drawn out, were then returned to the abdomen, and the external wound closed. Thirty-two minutes were occupied in finding the body, removing it, and suturing the intestinal wound, and twenty-five in closing the abdominal wound, making the duration of the operation about one hour. Only three ounces of ether were used. There were signs of collapse just after the body was extracted, and these were increased and aggravated by the close of the operation. All possible means were resorted to to bring about reaction, but in vain; death occurred two hours later. The body extracted, which I now show, was a gall-stone, the size of a small horse-chestnut. It measures one and a half inch in its long, and one and three-eighths inch in its short, diameter. One side is flattened, the other rounded, and one extremity presents a circular depression that will accommodate the tip of the little finger.

The following notes were made by Dr. Frank Ferguson, who conducted the autopsy:

Inspection.—Body is fairly nourished. Rigor mortis is well marked. There is no œdema. There is an incised wound in the median line of the abdominal wall, four inches in length, extending from a point one inch above the umbilicus downward, and carefully adjusted by interrupted sutures.

Peritoneum.—The small intestines are distended with gas up to a point six feet from the pylorus, where there is an incised wound in the wall of the jejunum, opposite the mesentery. This wound is one and one-half inch in length, and parallel to the axis of the intestine, and edges carefully adjusted with black silk sutures. The intestine being distended with water, there is no oozing through this wound.

The diaphragm is on a level with the third rib, right side, and with the fourth rib, left side.

Thorax.—There are old adhesions at the apices of the lungs and over upper lobe of right lung in the axillary line.

Heart.—The pericardium is normal. The heart is normal in size. The muscular tissue is flabby and pale-brownish in color. The valves are competent.

Lungs.—The most dependent parts of both lungs, especially the lower lobes, are intensely hyperæmic. The lungs otherwise are normal.

Spleen.—The spleen is normal.

Stomach.—The stomach is normal in location. It is moderately distended with gas, and contains a small amount of fluid blood. Its mucosa is normal. The pylorus is larger than normal, admitting two fingers.

The duodenum and jejunum are very greatly distended with fluid and a small quantity of gas, to the site of incision in the wall of jejunum already alluded to.

The jejunum below the incision, and the ileum. are about the normal size. The cæcum and descending colon are distended with fæces and gas, and the transverse descending colon and rectum are comparatively empty.

As the peritoneal cavity is laid open the coil of small intestine in which the incision was made is free, and not in any way united with neighboring coils; but on either side the serous surfaces of the small intestines are united to each other by recent adhesions. There is no appreciable quantity of lymph, but the peritoneum is hyperæmic, and there is about one-half ounce of purulent fluid in the most dependent portion of the peritoneum on the right side.

The wall of the hepatic flexure of the colon is united firmly to the gall-bladder on the one side, and on the other side of the gall-bladder the duodenum, just below the pylorus, is firmly united.

These adhesions do not readily tear, and in the neighborhood there is no further evidence of inflammation, either old or recent.

On opening the duodenum the common duct is found pervious.

There is an opening in the wall of the duodenum through which a cylinder five-eighths of an inch in diameter passed into the gall-bladder. There is a loss of mucous membrane surrounding this opening in the wall of the duodenum to the extent of one-fourth of an inch in every direction from the edge of the hole, and the edges of this ulcer appear to be healing. The gall-bladder is empty, and its wall, especially the mucosa, is thickened.

Liver.—The liver is rather small, darker in color than normal, and contains a moderate amount of fat. The biliary ducts are not especially distended.

Kidneys.—Normal in size, capsules are adherent, cortices are slightly thinned, markings are normal.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 15, 1888.

Abraham Jacobi, M.D., President, in the Chair.

ON SOME QUESTIONS IN CONNECTION WITH SYPHILIS HEREDITARIA TARDA.

Dr. F. R. Sturgis read a brief paper on this subject, which was of interest, he said, not only to the syphilographer but also to the general practitioner, because it often entered into the question of diagnosis. It was not until within the last twenty-five years that many cases of disease had been assigned to their true place, that is, among those of hereditary syphilis. A most interesting question was whether hereditary syphilis may lie dormant in the system several years before symptoms declare themselves. It was a rule which had been pretty generally accepted among surgeons, that when a patient presented himself with the lesions of the advanced stage, called, erroneously he thought, the tertiary stage of syphilis, he must have had at some time earlier manifestations of syphilis, no matter how much he might deny it. They even went further, and said that the disease began with an initial lesion, although the surgeon had not seen, and perhaps could not find any trace of it. In the earlier days hereditary syphilis was supposed to show itself at birth, either in stillbirth, or in syphilitic manifestations on the skin, etc. It was observed, however, that some infants were apparently in perfect health and well nourished when born, yet in a little while they began to lose appetite, to grow thin, and after a time the eruption broke out which could be assigned to nothing else but syphilis. It was noticed that when the eruptions occurred after birth they took place in a large proportion of cases before the end of the third month. According to tabulated cases, hereditary syphilis gave symptoms of the disease before the third month in as many as three-fourths of all the cases. But it might be objected that some cases did not show any symptoms until later, and the question then arose, how much later?

In replying to this question, Dr. Sturgis turned his attention to cases reported as those of syphilis hereditaria tarda by different European authors, in some of which the first symptoms were said to have manifested themselves at the thirteenth, fifteenth, twenty-first, and twenty-seventh months after birth, and in three cases at the twelfth and fifteenth years. In the three last named the possibility of acquired syphilis had not been excluded. Before considering the other cases, he reviewed the course pursued by hereditary syphilis. The first symptoms might appear shortly after birth as a macular syphilide, the child having before been in good health. Associated with this there might be mucous patches of the mouth and tongue, which after a time disappeared. Then the child assumed the appearance of premature old age peculiar to syphilitic children. There might be a keratitis, and some trouble with sight and hearing. It then went on perhaps to puberty without apparent symptoms of syphilis, when enlargement of the bones, and other symptoms of the disease in the advanced stage developed, and the surgeon, being consulted for the first time, might conclude that this was the first outbreak, whereas the symptoms had existed previously, but had been overlooked. Dr. Sturgis thought that the cases which had been reported as those of late hereditary syphilis were probably either cases of acquired syphilis, those of mistaken diagnosis, or of syphilis in the advanced stage, the earlier symptoms having been overlooked. Often the first symptoms leave some signs of their existence, and often they do not. In the latter event the surgeon has to depend upon the history given by the parents. One of the difficulties in determining whether a case is or is not one of late hereditary syphilis is the possibility of its being the acquired form.

Dr. E. L. Keyes, in reply to the question whether his experience went to show that hereditary syphilis might first manifest itself in adult life, said that he had never seen a case of what could truly be called late hereditary syphilis, although he had seen cases in which it was alleged that the symptoms being treated, the patient being some years of age, were the first which had appeared. But in such cases he had always been able to find cicatrices in mucous membranes, or enlargements or deformities of the bones or joints, or some sign of past syphilitic manifestations. He had kept under observation people who he knew had hereditary syphilis, and had seen symptoms develop after they had reached adolescence and the disease had for a long period remained latent. But he could not recall any case in which a new symptom of hereditary syphilis had made its appearance after the twenty-fifth year of age.

Syphilis, he said, is a disease full of variety and very irregular in its course. To it could be applied only general rules. Syphilis, in his opinion, is largely a matter of soil. He did not believe there is any such thing as bad syphilis and good syphilis. Syphilis sown on varying soil sometimes develops abundant fruit and sometimes very little fruit. This was well illustrated in his early experience at the Hôpital Saint-Louis in two patients, man and woman, one infected by the other; the man had the most frightful syphilis imaginable, while in the woman the disease pursued a mild course. These remarks, he thought, had a general bearing upon the particular question under discussion.

Syphilis is essentially a serious disease in young people; the younger the patient the more serious the disease, for the soil is succulent and the disease develops qualities detrimental to function and destructive of organs. Syphilis of old age, on the contrary, is a very slight and feeble affair. It does not amount to much, as a rule. The later one acquires syphilis, according to his experience, the less serious is the disease. He believed that to be the rule, and consequently it was hard to suppose that a child which came into life with syphilis could escape manifestations of the disease until late in years. Therefore, when in after years congenital syphilis showed symptoms and it was stated they were the first to make their appearance, he believed earlier symptoms had been overlooked.

Dr. Keyes incidentally alluded to treatment of congenital syphilis, and related the case of a child which was born with a pemphigus on the soles and palms; it had the snuffles and most marked effects of the disease, but the general eruption was absent. He gave it a fiftieth of a grain of bichloride of mercury every two hours for two weeks, and afterward every four hours. The child had shown no signs of mercurialization, but had thrived wonderfully. It was then apparently in perfect health.

The statement of the parents could not be relied upon as proof that inherited syphilis had not manifested symptoms in early life.

Dr. P. A. Morrow thought the subject of the paper was a very interesting one, and all the more interesting because it had been comparatively neglected. He thought it was only in the last few years that we had begun to appreciate how far-reaching syphilis might be in its impress upon the organization. He believed, with the author of the paper, that a great many of the morbid conditions which were formerly attributed to scrofula and tuberculosis were undoubtedly the offspring of syphilis. In a great many of these cases, it was impossible to trace the history of the child from its birth up to the time when it was presented to the physician for treatment. He would be much inclined to doubt whether any patient manifesting late evidence of hereditary syphilis had entirely escaped the earlier symptoms.

The ordinary impression was that hereditary syphilis exhausted its force within the first two or three years of life, and that, while occasionally slight symptoms might manifest themselves at second dentition or puberty, yet, practically, the disease was not heard of again. He believed that Bumstead and Taylor, in the last edition of their work, declared that evidence of hereditary syphilis after the twelfth year was so exceedingly rare as to be practically eliminated. Dr. Morrow had examined that day a patient, aged eighteen, who had undoubtedly suffered from hereditary syphilis. The soft palate and palatine arches and portions of the laryngeal structures had been swept away, yet it was impossible to get from this patient a direct history of syphilitic symptoms in early life. The only proof consisted in the lesions left and the fact that the patient had not been exposed to acquired syphilis.

Dr. Morrow was surprised that the author of the paper had not referred to the researches of Fournier, who had been a pioneer in syphilitic pathology. In his recent work he gave the details of two hundred and fifty cases of hereditary syphilis, in a large number of which lesions occurred after the third year, and in some after the twenty-eighth and fiftieth years. Dr. Morrow thought there was nothing improbable in the supposition that hereditary syphilis might endure throughout life. We knew that patients might manifest syphilis five or fifty years after contracting the disease, and, hereditary syphilis being essentially the same disease, there was no reason why it might not also show symptoms late in life.

There were many important phases of this subject, but the author had limited his remarks chiefly to the question whether a child might escape early manifestations of hereditary syphilis and yet suffer later from unmistakable evidences of the disease. So far as his personal experience went, he had treated a great many cases of hereditary syphilis at different ages, and in many of them he had been unable to ascertain any history of early manifestations, but that was only negative evidence. He was inclined to think, from general knowledge of the course of syphilis, that these patients had not escaped early manifestations.

Regarding the administration of mercury to the infant suffering from hereditary syphilis, he had had an extreme case in which the nursing child got no mercury except as it was administered to the mother, yet it regained the appearance of a perfectly healthy child.

Dr. R. W. Taylor said that while he recognized hereditary syphilis as pursuing a more erratic course than the acquired variety, yet he was a firm believer in the view that it always had early manifestations. Such manifestations might be so ephemeral and so little destructive in action as to be overlooked and leave no trace of their existence.

We might expect later lesions of hereditary syphilis up to about the twentieth year. Without desiring to obtrude himself into this discussion, he would venture to say that he was the first in America to call attention to the bone-lesions of syphilis, and bring them out of the great slough of ignorance called scrofula, in the book on bone-syphilis, published in 1876 and based on observations begun about 1870. He had there shown that certain lesions might be looked for in hereditary syphilis up to the age of puberty, among others joint-lesions. In Bumstead and

Taylor's work he had written all of the chapter on hereditary syphilis, and had attempted carefully to bring out all the features of that form of the disease. He thought, however, that when the twenty-first year had been reached it was pretty difficult to show that a lesion was one of hereditary syphilis. He did not doubt that lesions of hereditary syphilis might take place after that date, but he had simply said that it usually occurred so and so, although it might occur thus and thus. He had written the chapter with a precaution in mind against what might have been expected, namely, a tendency afterward to attribute too many conditions to hereditary syphilis, especially should they occur at a late period when no definite history of the disease could be traced, or when the patient should have an object in concealing a history of acquired syphilis.

It was hardly germane to the question raised in the paper, but he would simply say that he had listened with amazement to the experience of Dr. Keyes with syphilis in old people. If ever there was a scourge upon the face of the earth to old people it was syphilis. If they had any lesion or functional disturbance it was apt to complicate and aggravate it.

Dr. L. B. Bangs wished the author had defined more definitely what he meant by syphilis hereditaria tarda, and also by hereditary syphilis. In his own experience with the late lesions of so-called hereditary syphilis, he had almost invariably, after careful inquiry, been able to find a history of some previous lesions. It was his belief that in all the cases there had been earlier symptoms, although the physician might not be able to trace them. He believed with Dr. Keyes that the course of the disease depended upon the soil on which it was sown, but in any case it was syphilis, and might manifest itself in the same way, whether hereditary or acquired.

Dr. H. D. Chapin had recently seen a child, four years of age, with periostitis of each tibia, which, although it looked very grave, responded readily to bichloride of mercury. The child had never had any skin-lesion, nor other symptoms of syphilis, so far as could be learned of its mother and grandmother, with whom it lived.

With regard to the influence of the soil in which the disease was planted, he would say that he had seen many cases of syphilis in children who seemed to thrive on it.

Regarding diathesis, and attributing lesions to syphilis which had formerly been considered scrofulous in origin, he had seen many cases in which to fall back upon syphilis as the cause left one in as great confusion as if the old term scrofula had been used. Anti-syphilitic treatment had had no effect, but the greatest benefit was derived from cod-liver oil and tonics.

Dr. A. S. Hunter cited the case of a lady, aged eighteen, whom he treated about three years ago, for extensive destruction of the nasal bones and soft palate. Her reputation was beyond question, and acquired syphilis could be excluded, yet those who had been with her from infancy denied that she had ever had any treatment pointing to syphilis, until the fifteenth year.

Dr. L. E. Holt had seen many cases of syphilitic lesions in children from five to ten years of age, who had given a history of only very few or no symptoms during infancy, but he had not felt warranted in concluding that there had been no early symptoms, for he believed they were in many cases overlooked. He called attention to one diagnostic mark of syphilis, which he thought was seldom absent, namely, enlargement of the epitrochlear glands.

Dr. D. H. Goodwillie had removed nearly the whole upper jaw in a child, five years of age, for what he took to be syphilitic necrosis, although the history of hereditary syphilis was not clear. The patient recovered so far as this lesion was concerned, but died not long afterward of syphilitic disease of the brain.

The President said he had had this subject brought before the Academy, because of its great interest to the general profession. If there was any disease which threw its shadow over the whole future life of the patient, it was syphilis.

Regarding the difficulty of diagnosis in the class of cases under discussion, he thought it was not always possible, even when syphilis showed itself at birth, to make the diagnosis. He alluded particularly to bone-lesions and lesions of the cartilages. It was often difficult to distinguish between syphilitic and rachitic lesions of the bones and cartilages, and it was because of their value as bearing on these questions in particular that Taylor's writings were frequently quoted in Europe and Fournier's in America. It was well to remember the offspring of syphilitic parents usually showed less and less marked symptoms of the affection as they receded from the time at which the parents had become infected, but it might break out later in such patients as rachitis, and it would be difficult to define the condition in these instances as hereditary syphilis. It was a peculiar fact that the cases in which hereditary syphilis was reported to have first manifested itself at an advanced age had been reported only by the older writers. In reading over the writings of recent observers, as Burke, Diday, and others, he had found none of them willing to commit themselves to the view that hereditary syphilis might first appear at a late age.

Another difficulty which he had found in investigating this subject was the fact that some years ago, thirty or fifty, it was extremely common to administer mercury whatever might be the occasion for it, and this, as was now known, would have been likely to obscure any history of early hereditary syphilis.

The President had seen one case in which known hereditary syphilis had caused caries of the hard palate and bones of the nose and destruction of soft parts after the fifteenth year.

Dr. Sturgis, in closing the discussion, said he had not given his own experience in the paper, preferring to wait and hear that of others, but he would now say that he did not believe cases of hereditary syphilis remained latent, to produce symptoms at puberty or a later period. In answer to Dr. Bangs' question, he said he understood hereditary syphilis to mean that which the child derived from its parents before birth. As to late lesions, if they occurred not until after the fifth year they would be regarded as cases of syphilis hereditaria tarda. His attention had been more especially called to the subject from the fact that he had recently seen a young man, seventeen years of age, with cold inflammation of the knee, which resisted all treatment until the anti-syphilitic was adopted. No history of syphilis could be obtained, until he found the remains of an old keratitis. He thought mild lesions of syphilis often occurred in children, which were overlooked and not treated, and it was in the untreated cases that late lesions were very apt to develop. The child might go along until about the fifth year, and then have some trouble with the joints, ears, or eyes. The longer the time after the tenth year at which symptoms of syphilis made their appearance, the more suspicious he became that the disease was acquired. With regard to the diagnosis between scrofula and syphilis, in syphilis the child was often apparently well nourished. In this disease cod-liver oil and tonics were useless beyond a certain point, whereas iodide of potassium would cause the lesions to heal after other measures had failed.

Dr. Sturgis said that in hereditary syphilis there were likely to be renewed manifestations of the disease about the fifth year, and again at the period of puberty. But if lesions occurred not until after that period it was very probable they were the result of acquired syphilis.

The Treatment of Furuncles.—Dr. F. W. Carmon, of this city, writes: "I notice in your last issue an article on the abortive treatment of furuncles, which leads me to say that I have many times used the extract of belladonna with sufficient glycerine to form a paste, for the same purpose, and have never known it to fail even if applied for eight or ten hours only."

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, March 26, 1888.

LAURENCE JOHNSON, M.D., PRESIDENT, IN THE CHAIR.

DR. L. E. HOLT read a paper (see p. 385) on

CEREBRAL SYMPTOMS OF PNEUMONIA IN CHILDREN.

DR. A. H. SMITH thought the cases of pneumonia with cerebral symptoms might be divided into three classes; namely, those in which the cerebral symptoms were brought about by the direct influence of the pneumonic poison, those which were the result of high temperature, and those which were the result of exhaustion.

He regarded lobular pneumonia as essentially an infectious disease, due to a specific poison, as truly as were the exanthemata. In young subjects initial cerebral symptoms, especially convulsions, took the place of the chill in older people. He thought it probable many cases of broncho-pneumonia were of a mixed type, and therefore possessed infectious characters. While he regarded early convulsions as being produced by the poison of the disease, those occurring late in the progress of the case were probably caused by exhaustion. Nearly all cases in which convulsions took place late in the disease proved fatal, for the reason that the convulsions were due to a degree of exhaustion which was of itself incompatible, as a rule, with prolongation of life.

He was inclined to ascribe most cases of delirium to high temperature. Usually the delirium ceased or diminished in proportion to the moderation of the temperature. Later in the case the delirium might result from exhaustion. At this period there might be cerebral symptoms of a typhoid type. There was one other factor whose exact influence in the production of cerebral symptoms it was difficult to determine, viz., kidney disturbance. In a large number of cases of pneumonia, no less in children than in adults, there was albuminuria and deranged renal function. It was quite possible this might contribute somewhat to the cerebral symptoms.

Gastro-intestinal disturbances also exerted an influence in the causation of cerebral symptoms. He would include vomiting among the cerebral symptoms, for the same reason that he so regarded it in the exanthemata.

Regarding treatment, he bore testimony to the value of antipyrine employed, not for the purpose of reducing the temperature, but to allay restlessness and induce sleep.

DR. JOSEPH E. WINTERS had expected less from the title of the paper than he had heard. For several years he had been unable to understand why it was stated in the text-books that there was special liability to cerebral symptoms in pneumonia of the apex in children. He agreed with Dr. Holt that cerebral symptoms were more common in extensive pneumonia.

Dr. Winters doubted whether a convulsion would be found to occur at the commencement of pneumonia in children without one of the following predisposing causes: (1) The occurrence of convulsions previously, establishing, as it were, the convulsive habit; (2) inherited neurotic habit; (3) some auditory trouble induced or aggravated by the cause of the pneumonia. He had yet to see a case which he could not trace to one of these three causes. He agreed with the author, that the occurrence of a convulsion at the onset of a pneumonia had no influence on the prognosis. As far as it concerned the convulsion, his treatment was directed to the predisposing cause.

He further coincided in the view that in central pneumonia an earlier diagnosis would more commonly be made if physicians were in the habit of carefully examining the chest in all doubtful cases. By raising the child's arms and listening to the sounds in the axillar spaces, central pneumonia could be detected early.

DR. AUGUST SEIBERT thought the paper of Dr. Holt was a very neat contribution to our definite knowledge of pneumonia in children. Dr. A. H. Smith had anticipated some of the remarks which he had intended to make. The statistics given went to prove, he thought, that convulsions due to fibrinous pneumonia occurred early in the disease, and were the result of the poison and of the high temperature. As to the influence of the high temperature, however, he believed it had little to do with causing the convulsion. The convulsions which had occurred in broncho-pneumonia had come on late in the disease, and were the result, he thought, of exhaustion, paralysis, or watery exudation in the brain. As to high temperature being the cause of the delirium or convulsions, this would seem not to be true, for in many other conditions the temperature rose higher, and continued high for a longer period, without causing either delirium or convulsions. This was true of a series of cases of gastritis in children which he published about two years ago.

DR. H. D. CHAPIN said that, in the cases of pneumonia accompanied by convulsions which had come under his observation, there had been high temperature. When the temperature fell the convulsions ceased. He believed with a previous speaker that the early convulsion in children corresponded to the chill in the adult. Whether it was due to a germ he could not say. As to the frequent occurrence of cerebral symptoms in pneumonia of the apex in children, he was not yet ready to discredit the statement of the text-books on that point. In all the cases of pneumonia of the apex which had come under his observation there had been cerebral symptoms, usually, however, of stupor rather than of convulsions.

As to treatment, he could fully indorse what Dr. Holt had said regarding the use of cold applications. After the temperature had fallen several degrees from applications of cold cloths to the chest (warmth being applied to the extremities), the child breathed slower, was made more comfortable, and was enabled to sleep. That being true, he thought antipyrine was not required for the purpose for which Dr. Holt administered it. It tended to weaken the heart, and in pneumonia in children heart failure was much to be feared. He had employed antipyrine in only two cases, and he had the impression it had hastened death.

DR. A. CAILLÉ remarked that many diseases, especially the acute infectious diseases, were ushered in occasionally by cerebral symptoms, and to this rule pneumonia in children was not an exception. From twenty-four to forty-eight hours were usually required to locate an inflammatory trouble in the lungs, and it was not rare before that time to have cerebral symptoms. It was interesting to learn why they should occur in some cases and not in others. He thought it probable that the intensity of the disease was a cause of the cerebral symptoms. The cerebral symptoms which occurred at the beginning, and those which occurred toward the close of a pneumonia, were due to entirely different causes; the former probably to hyperæmia, and the latter to inanition of the brain. In three or four cases of pneumonia, ushered in with cerebral symptoms, he had observed that both pupils were unusually large, but reacted to light. In other cases, not ushered in by cerebral symptoms, the pupils were not so large. He could not say whether this observation was at all significant. He believed in the cold pack.

DR. SARAH J. MCNUTT's experience had been like that of Dr. Holt, that cerebral symptoms had not been specially limited to cases of pneumonia in the apex. Her observations corresponded with those stated in Dr. Smith's book, that cerebral symptoms were just as apt to occur in well-developed children as in those who had inherited a nervous temperament. She had noticed that, in a number of cases attended by cerebral symptoms, there was constipation, catarrhal jaundice, or some gastric disturbance. She had seen an epidemic of lobar pneumonia break out in an institution after the introduction of a case from without.

Regarding treatment, she had used the cold pack very frequently, and had found it quite valuable, particularly in broncho-pneumonia. In the later stage, with tendency to heart failure, musk had been of great service.

Dr. J. A. Irwin said that in his experience the localization of the pneumonia had little to do with the cerebral symptoms, which were, as far as he knew, almost entirely reflex. In the obscure cases of central pneumonia reflex nervous symptoms were most marked, and in many of those cases the cerebral symptoms threatened life before the diagnosis could possibly be made from the physical signs. The diagnosis, he thought, was usually made in those cases from symptoms. He expressed disagreement with those physicians who attached extreme importance to exact diagnosis. Having determined the existence of pneumonia, that physician, he thought, would be most successful with his cases who based his treatment on symptoms, and avoided the dangers incurrred by frequent physical examinations of the chest and disturbances incident to conflicting opinions of consultants. Having made the diagnosis of pneumonia, and localized it more or less definitely, he gave his patient rest and treated symptoms as they arose.

He had observed that those children whose nervous systems were most sensitive to eccentric diseases often had the greatest reactionary power. Regarding cerebral symptoms in the pneumonia of children, he had observed them most frequently in obscure central pneumonia. In the catarrhal type, usually bronchitic in the beginning, late cerebral symptoms were the precursors of death.

Dr. David P. Austin had found in treatment much benefit from the oil of theobroma used as an inunction. It acted as a nutrient, and several hours after its use the temperature often fell two or three degrees, and the child was enabled to sleep.

The President could not harmonize the theory of the infectious nature of pneumonia with the prevalence of the disease almost as an epidemic in certain weather, as in January of this year; in other kinds of weather, such as that in February, when it was clear and cold, its prevalence was greatly diminished.

He had heard Dr. Seibert's paper on this subject some months ago, but while it had greatly interested him, he had not been convinced on all the points made.

Dr. Holt, in closing the discussion, said it was not his intention to speak of the pathology, but he would say that, while some cases of pneumonia in children had resembled very closely in their clinical aspect those of lobular pneumonia, yet, microscopically, they differed very little from disseminated pneumonia. Vomiting was associated in nearly all cases with cerebral symptoms, but it also occurred in a large number of cases in which there were no cerebral symptoms. He often found convulsions not associated with high temperature. He thought it was a pretty well established fact that, whatever might be the cause of a convulsion, the temperature was likely to rise; but might not the convulsion be the cause of the rise in temperature rather than the result? It was not at all uncommon to have a temperature in children of 105° F., long continued, without convulsions, or even much discomfort. Regarding the dangers of antipyrine, he had used it a great deal, and had never had any ill result. Regarding Dr. Caillé's remarks as to dilatation of the pupils in some cases of pneumonia ushered in with cerebral symptoms, he had in a few instances observed the same fact. When he spoke of repeated examinations of the chest, he meant only for diagnostic purposes. Cacao-butter was of great value in prolonged cases of pneumonia, in rendering the patient comfortable. As to its being the cause of a fall in temperature, that might result in the time given by Dr. Austin without any medication.

Adjourned.

Quack Advertisements and the Religious Press.—A correspondent calls our attention to the fact that *The Open Court*, of Chicago, has always refused to publish advertisements of quack remedies, and asks that it be added to the list of journals deserving of credit in this respect.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

ARMY MEDICAL OFFICERS AND THEIR GRIEVANCES—THE OPERATIVE TREATMENT OF UNREDUCED DISLOCATIONS—THE MILROY LECTURES—YELLOW FEVER NOT CONTAGIOUS—THE PRESIDENCY OF THE COLLEGE OF PHYSICIANS.

London, March 17, 1888.

One of the most important questions of the day is that of the efficiency of our naval and military establishments, as to which important debates have lately taken place in the House of Commons. The army medical department has received its fair meed of criticism, and the interests of army medical officers are somewhat at stake. The question of "rank" has not yet been settled in a manner satisfactory to those concerned. That of "pay" has been indirectly raised by the attack which has been made upon the expenses of the army medical department. A new step has just been taken which may affect army surgeons to no inconsiderable extent, viz., the issue of a royal warrant establishing a "reserve" of army medical officers. Enrolment in this corps is, it appears, to be voluntary, those joining it being drawn from the medical officers of the militia, yeomanry cavalry, and volunteers. Those joining will be liable to be called out for service at home in times of great national emergency, and may also have to undertake medical charge of troops quartered in their district in ordinary times of peace. It is feared that this may prove to be the prelude to a considerable diminution in numbers of the army medical officers on home service, which means, of course, that the proportion of their term of service which is spent abroad will be increased. Altogether, it looks as if harder times were in store for army doctors, and, taken in conjunction with the unsettled "rank" question and rumors of worse pay, this cannot but render the service less popular.

At the last meeting of the Clinical Society several cases were brought forward in which operative measures for the relief of unreduced dislocations had been successfully undertaken. Among these was one brought forward by Mr. Croft, of St. Thomas' Hospital. It was that of a workingman, aged thirty-nine, who was admitted into the hospital for symptoms of dislocation of the internal semilunar cartilage of the right knee-joint. The joint had been attacked by rheumatic inflammation eight years previously, but its movements had not thereby been permanently impaired. It had been rendered completely useless by the accident, which had occurred three weeks previous to the patient's admission. It was decided to perform Annandale's operation with antiseptic precautions. The cartilage was found attached at its anterior and posterior extremities, but to have been torn from its intermediate connections. Its remaining attachments were divided and the cartilage removed from the joint, which was then closed and drainage provided for. The man was discharged cured on the fortieth day after the operation, and when seen four months later was in full work. Mr. Annandale, who was present, said he had operated in five cases, and the result had been perfect in all. He used no drainage-tube, finding it unnecessary. He did not venture to move the joint till six weeks after the operation, and at first used passive movement only.

At the Medical and Chirurgical Society, Mr. Sheild, of Charing Cross Hospital, narrated the case of a man, aged forty-five, who was admitted into the hospital suffering from an unreduced subcoracoid dislocation of the left humerus of twelve weeks' standing. There were symptoms of pressure on the median and ulnar nerves, the hand being almost useless. The radial pulse was also lessened in force. It was found impossible to effect reduction under ether, so the head of the humerus was excised at the level of the anatomical neck. The use of the limb was rapidly regained, and twelve weeks after the operation the patient was able to follow his employment as a waiter. Remarking on the disastrous results of forcible manipulations of old dislocations of the shoulder, Mr. Sheild suggested that excision of the head of the bone was preferable in cases such as the one he had narrated, when pain was severe, the displaced bone fixed, and symptoms of nerve-pressure marked. Mr. Hulke congratulated Mr. Sheild on his case, but observed that the procedure was not novel, it having been advocated long ago by Von Langenbeck, and laid down as the standard practice by Hüter and others in German text-books. Mr. William Adams referred to some cases of his own, in which he had successfully operated. Mr. Howard Marsh related a case which ended less favorably. It was that of a similar unreduced dislocation, in which there was much wasting of the muscles and excruciating pain for a long time. The patient was admitted into St. Bartholomew's Hospital, and Mr. Morrant Baker broke down many close adhesions; but without relief. The case then came under his own care, and he endeavored to stretch the brachial plexus. This proved a very difficult operation, and also gave no relief. After that Mr. Savory removed the head of the humerus, but the pain remained about as bad as ever. Mr. Timothy Holmes said he had always maintained that in certain cases of unreduced dislocation excision was the best method of treatment. Subcutaneous section of the bone was, he thought, more dangerous than open excision, considering the number of important vessels and nerves in the axilla. Dislocation might cause much injury to vessels, as in a case which he had brought before the Clinical Society in which the artery was bruised and leaked. The patient would not submit to excision of the head of the bone, and death ultimately resulted.

In the Milroy Lectures, lately delivered at the College of Physicians, Inspector-General Lawson devoted most of his time to the consideration of yellow fever. After describing the course of different epidemics, the symptoms of the disease were detailed. The question of the contagiousness of the disease was then considered. In order to establish the fact of contagion in any given cases it was clearly necessary, said the lecturer, to exclude the possibility of the outbreak having arisen from local causes. In the great majority of cases said to have arisen from contagion, no such attempt to exclude local causes had been made, and, when legitimately interpreted, the evidence was quite insufficient to establish the conclusion based on it. As Inspector-General Lawson has had fifty-four years' professional experience, including many years' service as an army surgeon in all parts of the globe, some weight may justly be attached to the opinion thus expressed by him.

In spite of his recent illness I understand that Sir William Gull is by no means an impossible candidate for the presidency of the College of Physicians. I do not mean by this that he will announce himself as a candidate, for avowed candidature and open canvassing are alike not permissible. It is, however, by no means improbable that the majority of the Fellows may determine to elect him. At any rate, the choice seems now to lie between him and Sir Andrew Clark, for Sir Henry Pitman announces that he will decline the presidency even if elected to it.

DR. THOMAS' CASE OF "TUBAL PREGNANCY ADVANCING TO FULL TERM WITHOUT RUPTURE."

To the Editor of The Medical Record.

Sir: Will you allow me to suggest that the above case was one of the well-known variety where the primary rupture took place at the lower part of the tube and into the cavity of the broad ligament. Dezenneris named it the "sousperitoneo-pelvicum variety" and Berry Hart has completely elucidated its anatomy.

I deeply regret the fatal case of Lawson Tait's operation for ruptured perineum, related by Dr. Paul Mundé, and I agree with him; the result was probably aided by the very deep wound. He recommends that the septum be split not more than half an inch. I never make the split so deep as that, rarely more than a quarter of an inch.

I am, etc.,

Lawson Tait.

Birmingham, March 16.

SHALL A SURGICAL INSTRUMENT BE PATENTED?

To the Editor of The Medical Record.

Sir: In The Record of March 17th there is quoted the oath of Hippocrates, according to which it is dishonorable to cut for stone.

The clause in the Code of Ethics in relation to the patenting of instruments has the same relation to current civilization as the Hippocratic oath.

Patent-right and copy-right stand on the same basis, and one should be considered as honorable as the other.

It is often the case that the medical profession needs to be protected against the imposition of instruments made in a different manner from the original invention, but sold as true copies.

Nothing but a patent will protect the profession from this kind of imposition.

Very few instruments will pay the cost of patenting; but an inventor does not like to see the reputation of his instrument destroyed by imperfect copies which will disappoint those who buy them.

Incognito No. 2.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 31, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	17	6
Scarlet fever	168	25
Cerebro-spinal meningitis	2	1
Measles	47	2
Diphtheria	129	46
Small-pox	23	4
Yellow fever	0	0
Cholera	0	0

Skin Eruptions Following the Administration of Drugs.—Dr. Oscar A. Fliesburg, of Hudson, Wis., writes: "In your issue of March 3d you have an article with the caption 'Unusual Effects from Salol.' On several occasions I have found salol produce an herpetic eruption, but I have not been obliged to stop the administration on that account, as the eruption has proved itself to be of a very ephemeral character. But I am not sure that in this particular instance the salol was the cause, as I have, during the fall and winter, seen no less than five distinct cases of typhoid fever with the identical herpetic eruption, extending over the whole chest, and reaching sometimes as far back as the spine, and downward in two cases over the whole abdomen, into the 'fossæ iliacæ.' The eruption resembled a diffused miliaria, herpes iris, or, in one case, hydroa. It has appeared during the administration of quinine, acetanilide, and of salicylate of ammonium, together with hydrochloric acid and strychnia, alternately given. It was of a very transient duration, seldom lasting more than twenty-four to forty-eight hours. Considering that it has appeared under the administration of so many different drugs, I hardly believe that it has been caused by any of them, but that, instead, it is a symptom, under certain conditions, of the fever; and I believe that it was so in Dr. Church's case."

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 15 New York, April 14, 1888 **Whole No. 910**

Original Articles.

THE CARTWRIGHT LECTURES ON THE GENERAL PATHOLOGY OF FEVER.[1]

By WILLIAM H. WELCH, M.D.,

PROFESSOR OF PATHOLOGY IN JOHNS HOPKINS UNIVERSITY, BALTIMORE.

Lecture II.

The Effects of Increased Temperature of the Body.

In the last lecture I endeavored to bring before you the main facts which we possess bearing upon the explanation of febrile rise of temperature. After a review of our knowledge concerning heat production, heat dissipation, and heat regulation in fever, we were led to the conclusion that neither the changes hitherto observed in the production of heat, nor those in the loss of heat, suffice to explain febrile temperatures. Such an explanation seemed possible only upon the assumption that the fever-producing agents act either directly or indirectly upon the nervous mechanism, controlling the relations to each other of the production and the discharge of heat. We then turned our attention to the relations of the nervous system to these processes, and found that the investigations of recent years have enabled us to obtain a much clearer conception than was formerly possible of the manner in which the complicated heat relations in fever may be brought about by an action upon the nervous system. We found even substantial experimental basis in support of clinical facts which show that circumscribed lesions of certain parts of the central nervous system may induce directly febrile disturbances of animal heat.

To carry the subject further, to consider whether pyrogenic agents act primarily or only secondarily upon the processes concerned in heat production, or upon those concerned in heat dissipation, or upon the apparatus regulating the relations to each other of these two sets of processes; to discuss whether these agents act directly upon the central nervous system, and if so, upon what part, or upon the peripheral nerves or their terminations, or upon the tissues; to follow out more fully than we have done hitherto the themes here suggested, would lead us, with our present knowledge, into a sea of speculation. We should find only here and there a faint light of fact to guide us. Even upon foundations as insecure as this, speculations have their legitimate uses. A good hypothesis is a most valuable incentive to scientific work. It is not my purpose, however, to carry you with me further in this direction, although I realize that a single lecture has been far from sufficient for a satisfactory exposition of the subject.

After dismissing the considerations bearing upon the so-called theory of fever, there still remain a host of questions properly belonging to our subject. It is evidently impossible, even if it were desirable, that these lectures should include a discussion of all of these questions. I have, therefore, selected certain ones, partly because they seem to me of immediate interest, and partly because I have given some attention to their study.

In the present lecture I wish to present to you some observations concerning the relation of elevation of temperature to other disorders of fever, and as to the question how far increased temperature is a source of danger in fevers.

Here I may repeat that the word fever is used as a convenient name for a group of symptoms commonly associated together in febrile diseases. The association of these symptoms, however, is so loose that we regard only the dominant one, the increased temperature, as the essential criterion of the existence of fever. It saves circumlocution to adopt this somewhat vague and common signification of the term fever, although I think it would be an improvement to confine the term to abnormal elevation of temperature. The literature of fever is full of misapprehensions resulting from the various meanings attached to the word by different authors.

All of the bodily functions may be disordered in fevers. The various symptoms, or classes of symptoms, which are so commonly associated as to be regarded by many as belonging to the febrile process are, in addition to heightened temperature, increased frequency of the pulse and other circulatory disturbances, increased rapidity of respiration, muscular weakness, lessened secretions, disordered nutrition and digestion, and nervous symptoms.

What is the connection, if any, between these symptoms and the elevation of temperature? What degrees of elevated temperature are dangerous to life, and in what does the danger consist? This subject can at least claim the interest that attaches to the questions of the day. The various opinions which have been held by clinicians on these points are too well known to you to require an historical review. I need only remind you that until within a few years the views advocated with especial force for nearly thirty years by Liebermeister have prevailed, although not without considerable opposition. According to these views the chief source of danger in uncomplicated essential fevers is the elevation of temperature, and the main indication for treatment is the reduction of temperature. Above all it was urged, with apparently convincing arguments, that the weakness of the heart, which is undoubtedly one of the gravest dangers of fevers, is the direct effect of prolonged high temperature, and is manifested anatomically by parenchymatous or fatty degeneration of the cardiac muscle. Liebermeister sharply defined his position when he said, "A man whose temperature measures continuously 104° F. (40° C.), or more, surely dies in consequence of the elevation of temperature, one in a few days, another after a somewhat longer time, according to the resistance of the individual." "If his temperature reaches 108.5° F. (42.5° C.), or more, then he is irrecoverably lost."[1]

At the present moment there is a decided reaction against these views, a reaction which in some quarters goes to the extent, not only of denying that there is danger in febrile temperatures which do not exceed a very high point, but of asserting that the elevation of temperature is a beneficent provision, a most important *vis medicatrix naturæ*, which should not be checked by the interference of the physician. This reaction of opinion is plainly due in great part to the disappointment which has followed the high hopes raised by the discovery of a number of drugs which are admirable antithermic agents, and nevertheless do not exert over febrile diseases that controlling influence which had been anticipated.

These questions, you may say, are clinical ones and not much edification is to be expected from their discussion by a pathologist. So far as the propriety of the use of antipyretic agents, or of any other mode of treatment in fever is concerned, it is true that the decision must be reached at the bedside, and cannot and never should be controlled by the results of experimental pathology. But an appeal has properly been made to experimental pathology to shed light upon such questions as the effects of heat upon the functions of the whole body and of its various organs, and upon the causes of parenchymatous and fatty degenerations. The arguments advanced in support of the view that all of the characteristic symptoms of fever are directly dependent upon the increase of temperature, and that high temperature is the chief source of danger, are derived no less from experimental pathology than from clinical observations.

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[1] Delivered at the College of Physicians and Surgeons, New York, April 5, 1888.

[1] Liebermeister: Volkmann's Sammlung, No. 31, p. 240.

Three methods have been employed to determine the effects of increased temperature in fever: one is to study the effects of heat upon animals; the second is to examine in different fevers and in different cases of the same fever the relation of the temperature to the other symptoms and to the general condition of the patient; and the third is to note the influence of reduction of temperature upon these symptoms.

Each method has its limitations. The condition produced by exposure to external heat, even if it be called thermic fever, is something quite different from ordinary fevers, and we cannot transfer the results obtained by this method directly to the explanation of febrile phenomena. On the other hand, in the clinical study of fevers it is very difficult, and often an arbitrary matter, to separate the effects of increased temperature from those of other factors nearly always present. Hence we find no agreement of opinion among physicians as to what symptoms or lesions in fever are referable to the heightened temperature, and what are due to infectious or other conditions often present. Even the frequent or constant association of certain symptoms with elevated temperatures, and their subsidence or disappearance by reduction of temperature, do not justify us in inferring that the high temperature is the cause of the symptoms, for both may be co-ordinate effects of the same cause, and the so-called antipyretic treatment may influence other conditions as well as the temperature. As has been frequently said of late, the high temperature may be rather an index of the severity of the disease than a source of danger in itself.[1]

The most direct way of determining the influence of heat upon the body is to raise the internal temperature by external application of heat. Here we are not disturbed by the presence of other factors, such as infection, which render doubtful so many of the conclusions derived from clinical observations as to the effects of high temperatures For the solution of many problems it is evidently irrelevant whether the source of heat be within or without the body. These experiments, if properly conducted, are calculated to shed much light upon many questions relating to the effects of febrile temperatures.

According to the testimony of all experimenters, a mammalian animal artificially heated dies when its internal temperature reaches 111.2°–113° F. (44°–45° C.). Death is preceded by convulsions, and immediately or soon after death rigor mortis appears. At the moment of death the irritability of the heart and muscles ceases. Death seems to be due to heart paralysis, and the cause of this is usually set down as heat rigor; but this is not probable, as death generally occurs at a temperature several degrees below that at which rigor of the heart-muscle appears.

It is generally argued that temperatures several degrees below those which are fatal must exert toxic effects, and this conclusion seemed to be substantiated by the majority of experimenters who found that animals whose temperatures were artificially raised to 105°–107° F. (40.6°–41.7° C.), or even to a lower point, manifested signs of illness. These latter results, however, are opposed by those obtained by Rosenthal and especially by Naunyn,[1] who points out that the conditions in most previous experiments were not favorable, as the animals were generally placed in small, dark, poorly ventilated metallic boxes. Naunyn succeeded in keeping a rabbit alive for thirteen days with an average temperature of 106.7° F. (41.5°C.).

Following Naunyn's example, I have had constructed a wooden box three feet long, two feet high, and two feet broad, which fits closely within a double-walled galvanized iron box. The wooden box is provided with a perforated movable bottom, which allows the urine to escape. The space between the two walls of the iron box measures three inches across, and is filled with water, which, therefore, surrounds the inner box on all sides, except at the top, which is left open. The dimensions of this apparatus are somewhat larger than those of Naunyn's heating-box. A folded woollen blanket was drawn over each end of the box, so as to leave uncovered at least one-third, and generally more, of the top. A rose-burner placed underneath served to heat the box. At first a thermo-regulator was employed, but this was found unnecessary as the temperature of the room varied but little, and there was no difficulty in keeping a sufficiently constant temperature in the box. The experiments were made upon rabbits, and only a single one was placed in the box at a time. Corrected thermometers were used. The temperature of the box was taken a short distance above the bottom, and that of the rabbit at a depth of three to four inches in the rectum. This occasion does not seem an appropriate one to describe these experiments in detail with their protocols. I shall take another opportunity for that, and at present give only a general account of those results which relate to the subject before us.

In the box described, I have succeeded in keeping, for three weeks, two large black rabbits, the one with an average rectal temperature of 107.3° F. (41.8° C.), the other with an average temperature of 106.6° F. (41.4° C.). The rectal temperature fluctuated usually between 105.5° and 108° F. (40.8° and 42.2° C.), scarcely ever sinking below 105° F. (40.5° C.), but occasionally rising as high as 109.5° F. (43.1° C.). The temperature of the box varied between 96 and 106° F. (35.5° and 41.1° C.). The rabbits lay most of the time stretched out, breathing very rapidly. They took their food greedily and did not appear ill. At the end of the experiment the first animal was removed from the box, and appearing perfectly well for ten days afterward, it was used for another experiment; the second animal was killed at the end of the experiment and presented marked fatty degeneration of the heart, liver, and kidneys. Both animals lost weight while in the box.

In these and similar experiments the rabbits were given only moist, green fodder, and were allowed to drink plenty of water, which they took eagerly. It is important, for the success of the experiment, that the temperature should be gradually and not suddenly raised.

Different animals offer varying degrees of resistance to the effects of high external temperatures. It has seemed to me that black and gray rabbits surpass in this respect white rabbits. The same temperature of the box does not produce in all cases the same rectal temperature in different animals, or in the same animal at different times. No factor is of more importance in determining the effects of external heat than the animal's power of temperature regulation. Failure of this power is manifested by a sudden rise of internal temperature, which may quickly attain a point incompatible with life. This event may take place without any alteration in the box temperature. The degree of internal temperature at which this paralysis of heat regulation occurs varies in different animals. One may be able to hold his temperature from further rise at as high a point as 109.5° F. (43.1° C.); in another, after the temperature has reached 107.6° F. (41.5° C.) there may occur, without any change in the box temperature, a sudden and often fatal elevation of temperature. In general, temperatures between 108° and 109° F. (42.2° and 42.8° C.) may be regarded as critical temperatures for these animals. One is forcibly reminded by these sudden and dangerous elevations of temperature, of the occurrence of hyperpyrexia in certain fevers of human beings, and there is reason to believe that this, too, is caused by paralysis of heat regulation.

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[1] In hyperpyrexia and in many cases of insolation there can be no doubt that the high temperatures, as such, are the main elements of danger. But both of these conditions have important points of distinction from ordinary febrile processes. In hyperpyrexia there is probably almost complete paralysis of heat regulation, and we shall find that an analogous condition, with similar dangers, sometimes develops in animals artificially heated. The cases of insolation in which the high temperature is so dangerous are analogous to the condition which may be produced in animals by brusque elevation of the bodily temperature through exposure to heat, and which differs from that resulting from more gradual increase of temperature.

[1] Rosenthal: Zur Kenntniss d. Wärmeregulirung, u.s.w. Erlangen, 1872. Naunyn: Archiv f. exp. Path. u. Pharm., Bd. xviii.

It seemed to me of some practical interest to determine what effect upon the rabbit's power of resisting high temperatures is exerted by exhausting influences, particularly by anæmia. For this purpose rabbits which had been moderately bled, and others which had been used for some other experiments, were placed in the hot box. It was found that these animals are, although not without occasional exceptions, unmistakably less resistant to the effects of high temperatures than are robust animals. They succumb sooner and at lower box temperatures.

We may now consider what inferences may be drawn from these and similar experiments as to the effects of high temperatures. It seems clear that a considerable part of the current arguments based upon experiments concerning the injurious effects of high temperatures must be revised, in the light of Naunyn's experiments, and of those which I have briefly related. Because an animal may be killed by raising its temperature to 111°–113° F. (43.9°–45° C.), it does not follow that an increase of temperature of four or five degrees above the normal involves danger to life or even any serious disturbance of the functions of the body. Although experiments in hot-air chambers show that in man brusque elevations of the temperature by only a few degrees give rise to serious symptoms, Krishaber[1] found that by habituation his temperature could be raised to 106.5°–107.2° F. (41.4°–41.8° C.) without much discomfort. As small animals generally succumb more readily than large ones to artificial heating, it is not likely that the power of resistance in human beings is less than that found to exist in rabbits, and there is reason to believe that it is greater.

We cannot transfer directly to human beings the highest temperatures at which we found rabbits can exist without serious discomfort, save increased respiration. A rabbit's temperature is normally considerably higher than that of man, and apparently slight causes suffice to produce marked fluctuations. The normal rectal temperature of the rabbits used in my experiments was generally between 102° and 103° F. (38.9° and 39.4° C.). The highest average temperature at which a rabbit was kept for three weeks in the hot box exceeded, therefore, by four to five degrees F. the average normal temperature. Such an increase would not correspond to a high febrile temperature in man. We can, however, with equal, and probably greater propriety, compare this temperature with that at which death surely occurs in a condition bordering on heat rigor. This temperature (111°–113° F.) is probably about the same for man as for rabbits and other mammalians. From this point of view the inference may be drawn, although, of course, with much reserve, that human beings may tolerate temperatures of 107° F. (41.7° C.) or even higher, for a considerable time. This inference is supported by clinical observations, especially in cases of relapsing fever.

As already pointed out, the condition produced by artificial heating is not directly comparable with that in fever. In the former the loss of heat from the body is reduced to a minimum; the superficial temperature is three or more degrees higher than the internal, so that the average temperature of the whole body is higher than in fever with the same internal temperature. We cannot say, therefore, but that man may tolerate considerably higher internal temperatures when the elevation is brought about under conditions in which the discharge of heat is not checked than when the temperature is forced up by stopping heat dissipation. This would be proven if confidence could be placed in the enormous elevation of temperature reported by Teale and others. In these cases, however, even if authenticated, it is probable that heat is abnormally distributed in the body, and we cannot infer that the internal temperature is uniformly raised to such paradoxical heights.

It is of the utmost importance to bear in mind that, as my experiments have shown, not only do animals differ in their power of tolerating high temperatures of the body, but this resistance may be weakened by various depressing causes. Nothing would be more irrational than to conclude because one individual in a certain condition can tolerate very high temperature, another in a different condition possesses the same power. In fevers we have various factors, particularly infection, which we may well believe can lower the tolerance of high temperatures. That in some fevers, particularly relapsing fever, this does not appear, or only partially, does not disprove that in another fever, such as typhoid or pneumonia, the system may be placed by other factors of the disease in such a condition that even moderately high temperatures are injurious. It does not seem to me proper in these cases to lay, as some seem inclined to do, the sole stress upon the element of infection. This is, in all likelihood, the determining factor, but the practitioner cannot shut his eyes to the possibility that under its influence the high temperature, as such, is a source of danger to his patient.

With these restrictions I shall surely not be misunderstood when I assert that temperatures which are ranked as high febrile temperatures do not in themselves, independently of other factors, exert any such injurious influence as has been usually attributed to them.

Our attention up to this point has been directed to the effects of high temperatures upon the general condition of the body. It is of importance for the proper understanding of fever to determine the influence of heat upon the structure and functions of the various organs. To what extent can the febrile disorders of respiration, of circulation, of secretion, of nutrition, of innervation, be attributed directly to the elevated temperature? These are questions which can be answered better by experimental methods than by clinical observations, for the latter has to deal with the effects of heat, complicated by other circumstances whose influence cannot be accurately determined. The one method, however, should be made to control the other.

The most striking immediate effect of heat upon an animal is increased frequency of respiration. When a dog or a rabbit is placed in an atmosphere of 100° F. (37.8° C.), it at once begins to pant, and the respirations may run up to 150 or more. The causation of this increased respiration, to which the name heat-dyspnœa has been applied by Ackermann,[1] has been repeatedly investigated. Goldstein,[2] in Fick's laboratory, found that by applying to the carotid arteries tubes through which hot water is flowing, the respiration may be greatly increased in frequency. Goldstein's experiment is usually cited as the crucial one, showing that the increased breathing is due to the effect of the heated blood upon the respiratory centres in the medulla oblongata. Sihler,[3] working in the Biological Laboratory of the Johns Hopkins University, however, has demonstrated that the increased respiration of an animal exposed to heat is due to two causes, warmed blood and stimulation of the skin by the heat, and that probably skin stimulation is the more important factor. Some of Sihler's criticisms of Goldstein's experiments have been met by Gad and Von Mertschinsky,[1] who have made it evident that increased temperature of the blood stimulates the respiratory centres or increases their irritability. Section of the vagi does not check heat dyspnœa, so that this does not result primarily from the action of the increased temperature upon the terminal pulmonary expansion of these nerves. The removal of afferent impulses from the skin by section of the spinal cord does, however, exert so marked an influence that it cannot be doubted that heat stimulation of the skin is an important element in the causation. I have convinced myself of the correctness of Sihler's explanation by observing that in the hot box at temperatures of 90°–95° F. (32.0°–35° C.) rabbits often preserve their normal temperature and still their breathing is markedly increased, and that, on the other hand, upon taking them out of the box the respirations may sink before the internal temperature begins to fall. In one striking experiment the respirations fell immediately to about normal upon removing from the hot box a rabbit whose skull had been trephined on each side of the median line and the optic thalami punctured with a needle.

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[1] Krishaber: Gaz. Méd. de Paris, 1877.

[1] Ackermann: Deutsches Arch. f. Klin. Med., Bd. ii.

[2] Goldstein: Würzburger Verhandl., 1871.

[3] Sihler: Journal of Physiology, vol. ii., and Studies from the Biological Laboratory, Johns Hopkins University, Baltimore, vol. ii.

We cannot transfer directly to human beings the results of experiments on heat dyspnœa in animals, because in the latter respiration has a far more important function in temperature regulation than in the former. To keep cool, a dog pants under circumstances when a man sweats. As heat regulation is largely influenced by the cutaneous temperature, it is not improbable that in man heat stimulation of the skin is less prominent than the warmed blood acting upon the respiratory centres in increasing the frequency of respiration in fever.

Inasmuch as disturbances of the heart and of the circulation in general are among the most important symptoms of fever, it is natural that much attention should have been given to the study of the effects of heat upon the organs of circulation. The supposed injurious effects of prolonged high temperatures in fever have been usually attributed especially to some toxic action of heat upon the heart.

That the pulse-rate is quickened by artificially heating rabbits and dogs has long been known. The positive demonstration that this acceleration is due to the direct action of the heated blood upon the mammalian heart itself was first given by my colleague, Professor Martin.[2] By conducting through the dog's heart, isolated physiologically by the ingenious method which he devised, Martin proved that the heart "beats quicker when supplied with warm blood, and slower when cold blood is supplied to it; also, that the rate of beat depends much more upon the temperature of the blood in the coronary arteries than on its temperature in the right auricle or ventricle." These experiments make it unnecessary to recur to any action of the heated blood upon extrinsic cardiac nerves, or nerve-centres, in order to explain the quickened pulse of fever. Moreover, Fick[3] found that the nervous centres of the heart and blood-vessels are unaffected by heating the blood flowing through the carotid arteries in the manner adopted by Goldstein in his experiments on heat dyspnœa.

Professor Martin has kindly permitted me, in this connection, to mention certain unpublished results of experiments which he is now conducting upon the effects of heat and cold on the isolated heart. As these results are pertinent to our subject I gladly avail myself of this privilege. The table of an experiment which I have examined shows that the isolated cat's heart beats regularly, and more and more rapidly, as the temperature of the blood is gradually raised to 111.2° F. (44° C.). At this point the beats become irregular, but are restored to their normal rhythm by feeding the heart with cooler blood. The temperature of about 111° F. (43.9° C.) appears to be a critical one for the isolated heart. Above 111.2°–113° F. (44°–45° C.) the pulsations become slower instead of quicker as the temperature is raised. At 122° F. (50° C.) the heart's action ceased, but it was made to beat again by supplying it with cooler blood, showing that the cessation was not due to heat rigor. This interesting experiment teaches, among other things, that very high temperatures may produce results differing not only in degree, but also in kind, from those of temperatures only a degree or two lower.

We may consider it, then, established that increased frequency of the pulse in fever is referable to the direct action of the warmer blood on the nervo-muscular substance of the heart itself. Clinical observation of cases of fever makes it evident that there may be, and often are, present other circumstances which influence the rapidity of the heart's pulsations, circumstances which in themselves may slow or may quicken the pulse. Large series of statistics, therefore, are required to bring out the ratio between the pulse-rate and the temperature in fever, and even then for any given temperature the maximum and the minimum pulse-rates lie so far apart that the statement of the average increase in the frequency of the pulse for each degree of rise of temperature, such as has been computed by Liebermeister, has very little value.

Not only is the pulse-rate quickened in fever, but there are often other and more serious circulatory disturbances. In the fever produced in rabbits by injection of the swine plague bacillus, I find a reduction of the blood-pressure measured in the carotid artery, and others have obtained similar results in the artificial fevers of animals. The determination of the blood-pressure in fevers of human beings by means of Basch's sphygmomanometer has given in the hands of different experimenters such contradictory results that no conclusion can be drawn, unless it be the very probable one that the blood-pressure varies, being sometimes high, sometimes low, and sometimes normal in fever. That the arterial tension is often reduced is made evident by the marked dicrotism of the pulse-wave. This dicrotism, however, characterizes particularly septic and typhoid types of fever, and is absent during the chill of intermittent fever, and often in exanthematous and some other fevers, so that we cannot consider the blood-pressure and arterial tension as having any such definite relation to fever as does the pulse-rate.

It has been observed by Paschutin, Senator, and Mendelson[1] that the blood-pressure rises with increasing bodily temperature produced by exposure to heat. Mendelson found that the pressure begins to sink as the temperature approaches a point incompatible with life. In these experiments the animals were subjected to rapid elevations of temperature. I find that when a rabbit is gradually and cautiously heated in the hot box used in my experiments, the rise of temperature is less marked and may not surpass, even for temperatures of 107° F. (41.7° C.), the normal limits of variation which may be found in the blood-pressure of the same animal examined at different times. These measurements, however, are not very conclusive, for, as has been already remarked, rabbits which have been operated upon do not stand well artificial heating.

I have observed that the rhythmical contractions of the blood-vessels of the rabbit's ear are feeble or absent when the temperature is much elevated by artificial heating, whereas it will be remembered that in experimental septic fever these contractions are irregular and exaggerated.

Upon the whole, I think that we are justified in concluding that the variations of arterial tension in fever are much less dependent upon increased temperature than upon other factors, such as infection.

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[1] Gad and Von Mertschinsky: Virchow u. Hirsch's Jahresbericht, 1881, i., p. 197.

[2] Martin: The Direct Influence of Gradual Variations of Temperature upon the Rate of Beat of the Dog's Heart, Philosophical Transactions of the Royal Society, Part ii., 1883.

[3] Fick: Pflüger's Archiv, Bd. v.

[1] Paschutin: Ludwig's Arbeiten, 1873; Senator: Du Bois-Reymond's Archiv, 1883, Supplement Band; Mendelson: On the Renal Circulation during Fever, Am. Jour. of the Med. Sciences, October, 1883.

But the corner-stone of the doctrine which teaches that a chief source of danger in fever is the elevation of temperature is not the effect of increased temperature upon the pulse-rate or the arterial pressure, but is the belief that prolonged high temperature exerts a directly paralyzing influence upon the heart. The main support of this belief is not the admitted fact that extremely high temperatures paralyze the heart, for these critical temperatures lie far above the ordinary high temperatures of fever and in a region where all admit the dangers of the excessive internal heat. The stately superstructure has been built up chiefly on the basis of experiments showing that when the internal temperature of animals has been maintained for some time at a high point by exposure to external heat, parenchymatous or fatty degeneration of the heart-muscle ensues. It is true that all experiments are not in accord upon this point, and that, as a rule, pathological anatomists have not given adherence to the doctrine that parenchymatous degenerations are chiefly dependent upon high temperature; still, this doctrine has gained a wide acceptance among clinical men, and is advocated with especial force by Liebermeister. I have, therefore, thought it desirable in my experiments to give especial attention to this question.

Among previous experimenters on artificial heating of animals, Iwaschkewitsch, Wickham, Legg, and Litten may be mentioned as finding parenchymatous or fatty degeneration of the heart, liver, kidneys, and Walther, Obeynier, and Naunyn, as obtaining only negative results. It is not necessary here to enter into a criticism of these different experiments, which are of very unequal value. Litten's[1] experiments on the one side, and Naunyn's[2] on the other, appear to be the most carefully conducted. Litten, whose experiments are those usually cited, kept guinea-pigs in a double-walled metallic box which was at a constant temperature of 98.8° F. (37° C.) with dry air, or of 96.6° F. (36° C.) with moist air. He never failed to find fatty degeneration at the end of thirty-six to forty-eight hours. The liver was first affected, and then the heart and kidneys, which became fatty by the second or third day. The animals did not survive longer than five or six days, and by that time the fatty degenerations had reached an extreme degree. Von Recklinghausen[3] urges, with apparent justice, against these experiments, that the enforced inactivity of the muscles and the imperfect ventilation may have had as much to do in causing the degenerations as had the high temperature. These objections find support in the experiments of Naunyn, who, making use of a much larger and better ventilating heating-box than Litten, failed to find any parenchymatous or fatty degeneration in his rabbits after they had been exposed for two weeks to higher temperatures than Litten employed.

As my experiments confirmed in other respects Naunyn's results, I was quite unprepared to find that my rabbits, after a variable period of artificial heating, quite constantly presented fatty degeneration of the heart, liver, and kidneys, and sometimes of the diaphragmatic and intercostal muscles. I never found the degeneration at so early a period as did Litten. It was not until the rabbit had been kept for at least a week with an average rectal temperature of 106° F. (41.1° C.), that the degeneration was noticed, and then only in moderate degree. The higher and the less fluctuating the internal temperature, the more certain was the degeneration to appear. I could reckon upon obtaining rabbits with well-marked fatty degeneration of the heart by keeping them for ten days with a rectal temperature between 107° and 108.° F. (41.7° and 42.2° C.). I am not prepared to account for the discrepancy in this respect between Naunyn's and my experiments. The box used was larger than that employed by him, and every care was taken to keep it well ventilated by leaving at least one-third, and often one-half, of the top open.

I do not think that my experiments altogether do away with the force of Von Recklinghausen's criticisms. The fact that, in these experiments, the degeneration made its appearance at the end of a week or ten days, and in Litten's in forty-eight hours, to say nothing of Wickham Legg finding it at the end of twelve hours, would suggest that if the rabbits were heated in a still larger and better ventilated apartment the degeneration might not occur at all, or might be deferred to a much later period. In my opinion, however, even if full allowance be made for this line of argument, we must still admit that prolonged high temperature is an important factor in the causation of fatty degeneration.

That it is not the sole factor, no one can doubt. As is well known, fatty degeneration is produced by anæmia and by a variety of poisons, and even in fevers most pathologists are convinced that it bears a closer relation to the kind and the degree of infection than it does to the height of the temperature. It is more frequently absent than present in pneumonia, even where there have been symptoms of heart failure.

The kind of degeneration present in my rabbits was fatty, and not parenchymatous. Probably all who make many post-mortem examinations will agree with Von Recklinghausen that altogether too liberal use has been made of the diagnosis of parenchymatous degeneration, and not sufficient account has been taken of the anatomical changes of the parenchyma produced by post-mortem chemical changes, such as acid formation, etc.

In order to determine what influence is exerted by infection, combined with high temperature, I inoculated a rabbit, which had been in the hot box for four days, with the bacilli of swine plague. These bacilli, if not identical with, are closely allied to, those of rabbit septicæmia, and are extraordinarily virulent for rabbits. In thirty-six hours the animal, which had remained at a high temperature in the box, was dead, and the most extreme fatty degeneration of the heart and other organs was found. As in other experiments the degeneration had not made its appearance at this early date, there can be no doubt that the infection was an important element in the causation. That it received powerful support in the high temperature, however, is proven by the fact that little or no degeneration of the heart is observed, after infection with this organism, when the animal is kept at ordinary temperature.

Admitting, then, that the high temperature aids in the causation of fatty degeneration of the heart in fever, the question arises: What do we know of the effects of this degeneration upon the functions of the heart? I will say nothing of the growing tendency to transfer a large part of the classical symptomatology of Quain's fatty heart to other conditions, particularly to disease of the coronary arteries and chronic myocarditis; we are concerned at present only with the occurrence of this degeneration in fever. Have we not been somewhat hasty in assigning to degenerations of the heart-muscle so large a share in the production of heart-failure in fevers? One cannot look at a muscular fibre in which the striated substance is all replaced by fatty globules, and suppose that its functional activity was unimpaired; but into what serious errors should we fall if we attempted to deduce from the anatomical changes in the liver-cells, or the renal epithelium, the corresponding functional disturbances? Certain it is that symptoms which are usually considered those of heart failure are often enough present in fevers without finding at the autopsy any degeneration of the heart, and, on the other hand, such degeneration may be discovered without any history of these symptoms, although, of course, the two are often associated.

In the face of these doubts it seemed desirable to determine, if possible, experimentally, the damage inflicted upon the cardiac functions by the presence of fatty degeneration of the heart-muscle. That this degeneration may exist without apparent injury is rendered probable by the fact that a rabbit which has been kept for three weeks in the hot box, at a high temperature, and in which there is every reason to suppose that fatty degeneration has occurred, may present no symptoms of heart paralysis, and when removed from the box appear and remain perfectly normal. An instance has already been mentioned where one rabbit, at the end of three weeks, was killed and presented marked fatty degeneration of the heart, and another, which had possessed a higher average rectal temperature, was removed from the box at the end of the same period, and appeared for ten days perfectly normal, when it was used for another purpose. That this degeneration can be recovered from is, moreover, rendered probable by clinical experience, and is universally admitted.

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[1] Litten: Virchow's Archiv, Bd. lxx.

[2] Naunyn: Op. cit.

[3] Von Recklinghausen: Handb. d. Allg. Pathologie d. Kleislaufs u. d. Ernährung, p. 512. Stuttgart, 1883.

Once, in teasing out a bit of fatty-heart muscle from one of the rabbits, I made a curious observation. Near the edge of the cover-glass, where there was a slight current in the physiological salt-solution, rhythmical contraction was observed in a group of muscle-fibres. This interesting spectacle could be watched under the microscope for ten minutes. These contracting fibres were filled with fatty globules, and only here and there, and then indistinctly, could any trace of striation be detected. This observation teaches that a fatty degenerated muscular fibre is capable of contraction, but, of course, warrants no further conclusions.

Far more important than any inferences which can be drawn from such observations is the measurement of the actual blood-pressure in animals whose hearts have undergone fatty degeneration. This I have done in three instances. The rabbit was removed from the box at the end of ten days to two weeks, and the pressure in the carotid artery was measured by a mercury manometer attached to Ludwig's kymograph. In no instance was the blood-pressure found to be lower than that normally present in rabbits. In an experiment recently performed the average pressure was 125 mm. of mercury; the pulsations were regular; the heart responded to stimulation of the vagi in an entirely normal manner. After such stimulation the pressure in one case rose to 176 mm. of mercury. Immediately after the measurement of the blood-pressure the rabbit, as in the previous instances, was killed, and marked fatty degeneration of the muscular fibres was found. In many of the fibres the striation could not be made out, and only fatty globules were visible; in others, which also contained fatty granules, the striation was distinct. The degeneration involved the whole muscular structure of the heart. A similar appearance in a human heart would be considered to indicate well-marked fatty degeneration.

These experiments show that a rabbit's heart which has undergone marked fatty degeneration from exposure to heat may perform its functions, to all appearances and for the time being, in a perfectly normal manner. There is at least one consideration which should make us cautious in drawing far-reaching conclusions from these experiments. There are diseases of the heart—I need only refer to lesions of the coronary arteries—in which the functions of the organ are performed for a longer or shorter time, apparently in a perfectly normal way, and then heart-failure suddenly appears. It is probable that here, too, the blood-pressure would be found normal at a certain period of the disease, and still it would be an error to suppose that the lesion does not damage the heart. Whatever force there may be in this analogy, I still think that these experiments, as well as careful pathological and clinical observations, necessitate some revision of the current opinions concerning the significance of fatty degeneration of the heart in fever.

So much time has been devoted to a consideration of the effects of heat upon the respiration and the heart, that the limits of the present lecture will permit hardly more than a summary of the effects exerted by heat upon other functions and organs of the body. On account of the great clinical importance of the subject it seemed desirable to treat with especial fulness the influence of increased temperature on the heart.

What part has increased temperature in producing febrile consumption of tissue? In the first lecture mention was made of Pflüger's experiments, showing that animals with elevated temperature, produced by exposure to heat, absorb more oxygen and excrete more carbonic acid than at the normal temperature. This is in conformity with the general law that within certain limits cell activity is more energetic at high than at low temperatures. It was also shown in the first lecture that only a comparatively small part of the increased oxygen absorption, and carbonic-acid elimination, in fever, can be referred to the immediate effects of high temperature. It has not been demonstrated that the respiratory gases in human beings are increased by artificial elevation of temperature. Indeed Voit[1] was unable to find any such effect of increased temperature in human beings on the respiratory gases as both he and Pflüger observed in animals.

Inasmuch as increased disintegration of nitrogenous material is such a prominent disorder in fever, much attention has naturally been given to determining how far this can be explained by elevated temperature. That it cannot all be so explained is proven by the interesting observation of Sydney Ringer, that excessive elimination of urea antedates the rise of temperature in intermittent fever, and Naunyn has found the same to be true of the septic fever of dogs.

The experiments which have been made to determine the influence of artificial heating on the amount of urea excreted by man and by animals have yielded contradictory results. A number of these experiments are of little or no value, because no attention was given to establishing beforehand nitrogen equilibrium. Schleich's[2] experiments may be mentioned as perhaps the most accurate of those showing an increase in the urea excreted under the influence of exposure to heat. The more recent experiments of Simanowsky[3] were made in Voit's laboratory, with especial precautions as to the establishment of nitrogen equilibrium. He failed to find any increase in the excretion of urea, as the result of exposure to external heat. While, then, this question must be left at present *sub judice*, there can be no doubt that only a part, at least, of the excessive disintegration of nitrogenous substance in fever can be assigned to the influence of the increased temperature.

The loss of weight exhibited by animals kept for a long time in a hot atmosphere is usually explained by the excessive evaporation of water from the body. In many of my experiments the rabbits were freely supplied with food and water, and still the loss of weight was very noticeable. I am inclined, therefore, to attribute to the increased temperature under these conditions a decided influence upon the consumption of tissue.

Senator[4] found the urine of rabbits artificially heated to contain more albumen than is found occasionally in the urine of healthy rabbits. This observation I have not been able to confirm on the rabbits in my experiments, and probably this difference is to be explained by the more rapid and intense heating employed in Senator's experiments. Senator explains the heat albuminuria by the rise of arterial pressure on the renal vessels, but this is not in conformity with the interesting experiments of Mendelson,[5] who found, by means of Roy's oncometer, that both in thermic and in septic fevers of dogs the kidney is anæmic, while the general blood-pressure is elevated.

No satisfactory explanation has yet been offered of the diminution of perspiration which distinguishes fever so strikingly from the condition produced by exposure to high external temperatures. Luchsinger's assertion that this is the result of lessened irritability of the sweat-centres in the spinal cord remains to be proven, and at the best is not a satisfying explanation.

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[1] Voit: Zeitschrift fur Biologie, Bd. xiv.

[2] Schleich: Arch. f. exp. Path. u. Pharm., Bd. iv.

[3] Simanowsky: Zeitschrift f. Biologie, Bd. xxi.

[4] Senator: Du Bois-Reymond's Archiv, 1883, Supplement Band.

[5] Mendelson: Op. cit.

Bokai,[1] in a recent experimental research on intestinal peristalsis in thermic and septic fevers, comes to the conclusion that the constipation of fever is to be explained by the heated blood stimulating the nerves inhibiting intestinal peristalsis. If this should be confirmed, then it would be proven that at least three symptoms of fever, the quickened respiration and pulse, and the constipation, are direct effects of elevated temperature.

When we consider the important nutritive changes in the muscles accompanying increased thermogenesis we shall be inclined to attribute to these alterations and the associated abnormal innervation, rather than to increased temperature, the muscular pains and weakness which form such an early and frequent complaint in many fevers.

The investigations hitherto published of changes in the blood, produced by increased temperature within febrile limits, are not of sufficiently definite and satisfactory nature to warrant any consideration on the present occasion.

Nor am I acquainted with any positive experimental evidence (save Bokai's work already mentioned) that increased temperature is concerned in the production of the digestive disorders of fever. It has already been said that the rabbits with high internal temperatures in the hot box ate greedily, but these voracious animals cannot be considered favorable subjects to test this question.

Especial emphasis has been laid by Liebermeister, and those who accept his teachings, upon the dependence of the nervous symptoms of fever, particularly the so-called typhoid symptoms, on the elevation of temperature. There is, however, abundant clinical evidence to disprove this doctrine. Reference need be made only to relapsing fever, and especially to the aseptic fever described by Genzmer and Volkmann, in which there is entire absence of the whole group of so-called nervous symptoms. Moreover, Liebermeister's opinion in this respect is not supported by adequate experimental evidence. Unless the temperature of the brain or of the entire animal be brusquely raised to a high point by coarse methods, no disturbance of the cerebral functions is noticed until the temperature reaches a critical point, beyond which further increase is likely to prove rapidly fatal. At this critical point the animal, which before has lain quietly, becomes very uneasy, and if the temperature rises higher it has convulsions and coma, and dies.

I have endeavored to bring before you in this lecture the experimental evidence relating to the effects of increased temperature upon the general condition of the body and upon the functions of its various organs. I have given account, as briefly as possible, of some experiments which perhaps shed additional light upon this important subject. In the course of this lecture emphasis has repeatedly been laid upon the necessity of controlling the results of the experimental method by clinical observation, and here and there I have endeavored to institute this control. Further than this I shall not attempt to set before you the clinical evidence regarding the effects of increased temperature in fever. There are those here more competent than I to deal with this side of the question. We may feel assured that when all the facts are before us, and are properly interpreted, there can be no lack of harmony between the results of experimental and those of clinical investigations.

IN CHRONIC BRIGHT'S DISEASE the following pill will be found useful:

℞. Hydrarg. bichlorid. . . . . gr. $\frac{1}{20}$
Quinia sulph.,
Digitalis pulv., ... āā gr. j
Belladonna ext. . . . . gr. $\frac{1}{4}$.
M.—S. One three times a day.

PERNICIOUS ANÆMIA:

CERTAIN QUESTIONS SUGGESTED BY CASES AND AUTOPSIES.[1]

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FROM the study of certain cases of pernicious anæmia which came under my own treatment, or which I was enabled to observe through the courtesy of my colleagues at Roosevelt Hospital, and from reading various reported cases, I was led to the following conclusions: First, that in some cases of pernicious anæmia there is found a lesion of important organs not directly concerned in blood making, which possibly may have produced the blood disease. Second, that after these cases, together with those which seem to be caused by intestinal parasites and those which follow hemorrhage, have been excluded, there remain some in which the blood-lesion seems to be primary.

Let me first ask your attention to the following histories (in which, I regret to say, many important facts are wanting), and let me ask your opinion in regard to the truth of the above propositions.

CASE. I.—Catharine J——, aged twenty, single, domestic, Irish. Admitted February 24, 1887. Family history unknown. Parents both dead, cause unknown.

No history of venereal disease, rheumatism, serious cough, or hæmoptysis. Before the present illness she never had suffered from dyspnœa, vomiting, or œdema; was always temperate. She had measles and scarlatina when a child. She has frequently suffered from headache. Menstruation began at sixteen and was regular until one year ago. She has never eaten much meat, and has always had a fondness for pickles and tea, eating handfuls of the leaves of the latter. Her friends say that she has always had a pale yellowish complexion.

For the past year her menstruation has been irregular, appearing for the last time four months ago. She dates her illness from the time of the last period.

She suffered from headache, anorexia, and weakness. The headache was frontal, and the pain dull. It was not constant. She also suffered from vertigo and saw muscæ volitantes. She has vomited only twice. Two months ago she noticed that she was getting paler and more yellow in color, and since then has had occasional œdema of the feet. One month ago she had a sharp attack of localized pain in the right hypochondrium, followed by jaundice, and preceded by a chill. Pain lasted about fifteen minutes. Similar attack two weeks ago, and again one week ago. For a month has suffered from dyspnœa on exertion. She thinks her urine has been diminished during the last two months. Her color has become much worse of late. During her illness she has taken no proper food, but has lived on articles like charlotte russe, ham, tea-leaves, sarsaparilla, etc.

On Admission.—Fairly nourished. Pale and slightly jaundiced. Sclerotics yellow. Mucous membranes pale. Large cicatrix on right side of face, smaller one on left cheek, and others on neck and right breast, the results of a burn received when a child. Tongue very pale, clean, moist. Appetite poor. Constipated. Pulse fairly strong, regular, 104; respiration 26; temperature 99.4°. Urine amber, clear, neutral; specific gravity 1.016, no albumen; microscopic examination negative. Lungs normal. Anæmic murmur over heart. Venous hum in neck. Examination of blood shows 1,500,000 red disks to the c.mm.

March 7th.—Ophthalmoscope showed no hemorrhages in fundus.

March 10th.—Still jaundiced. Has severe headache.

March 18th.—Has had a better appetite, and has sat up during the last few days. Color no better. To-day red disks number about 1,100,000. The disks are of irregular size and shape. Some are large, about twelve to fourteen millimetres in diameter. Some are very small. Many are observed pear- and kidney-shaped. The white cells are relatively to the red, but not absolutely increased.

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[1] Bokai: Archiv f. exp. Path. u. Pharm., Bd. xxiii.

[1] Read before the Section on the Practice of Medicine of the Academy of Medicine of New York, March 20, 1888.

The patient improved in appetite, strength, and color for a time. Headache was no longer observed. No hemorrhages had yet appeared in the retinæ.

April 4th.—Red disks number 1,390,000.

April 16th.—Felt worse; appetite lost.

April 19th.—Red disks, 1,300,000.

April 26th.—Nausea is present. After this she was much troubled with headache, nausea, and vomiting, and became very weak. Grew sometimes a little better, but on the whole lost ground pretty steadily during the month of May.

June 8th.—Punctate and flame-shaped hemorrhages were observed in both retinæ.

June 9th.—Hæmoglobin twenty per cent. of the normal.

No further examination of the blood is recorded. The patient sank and died on June 28th, at 9.30 P.M.

During the illness her temperature ran between 99° and 100.6°. On June 3d it reached 102.4°, P.M., falling again the next day to the average. The pulse was pretty constantly about 100. It occasionally rose to 120. The respirations numbered from 24 to 30. The evening temperature was usually from ½° to 1° higher than the morning. Just before her death the temperature rose to 101.4°.

The treatment was with arsenic, oxygen, and iron, and various remedies to relieve the vomiting and constipation, as occasion required.

Autopsy, June 29, 1887, at 1.15 P.M., showed the body to be poorly nourished. Rigor mortis fairly marked. The skin and all the organs were slightly jaundiced. The blood was pale. The spleen measured 2 by 7 by 2½ inches, and was slightly waxy in appearance. The liver was rather firm. Three small facetted calculi, composed of inspissated bile, were found in the gall-bladder. Every organ examined, save those noted above, was absolutely normal but jaundiced. The brain was not examined. There were no enlarged lymphatics. It is to be regretted that no note was made of the condition of the marrow. The stomach was the only organ submitted to careful microscopical examination, and it was absolutely normal.

We have, in this case, a girl who had indulged in a bad diet, and who was at the age when simple anæmia is common. For a year she had had irregular menstruation, but dated the real beginning of her illness from the period at which menstruation ceased—four months before admission. It is common for women thus to date illness from the time of suppression of the menstruation. Two months before admission she observed that she was paler than before, and she had occasional œdema of the feet. She does not seem to have been really ill, however, until after the attack of jaundice, one month before she was first seen. Following this, and two similar attacks, we note the graver symptoms. Although she had temporary improvements, she finally died, having presented the usual symptoms of pernicious anæmia. From the autopsy, I think we may assume that the jaundice was the result of inflammation of the bile-ducts, produced by the calculi found in the gall-bladder. According to the patient's own statement, the disease terminated fatally about eight months after its onset (dating as she dated it, from the cessation of menstruation, four months before admission). As menstruation had been irregular for a year, it is probable that she suffered from anæmia at least as long as that before her admission. Taking into account the patient's age and her diet, it seems to the writer that it is possible that the disorder began as a simple anæmia, but that the attack of jaundice still further increased the anæmia. It is known that jaundice can produce pretty intense anæmia of itself. As a result of the jaundice, the blood-forming organs were taxed beyond their powers. The increasing anæmia still further crippled them, and the "vicious circle" thus established led to the patient's death. Jaundice has been noted in several cases.[1]

In Case II. we have a very different story. We find a history of chronic gastritis extending over six months at least. Emaciation is a prominent symptom. In spite of the emaciation the case resembled very closely pernicious anæmia. Her color was very peculiar and characteristic.

Nellie H. W——, aged fifty-four, single, Ireland. Bookbinder. Admitted May 24, 1887. Family history negative. No history of venereal disease or alcoholism. Never had rheumatism. Has had dyspnœa on exertion since she was twenty years of age. Her feet and legs have swollen at times during the past ten years. During the last three or four years has suffered from palpitation of the heart. First menstruated at fifteen. Save that the catamenia occurred about every three weeks, her menstrual life was normal and the menopause was reached, without special discomfort, at the age of forty-one.

In 1864 was troubled with bleeding piles and lost a great deal of blood. Under treatment at the New York Hospital was cured. During this same year she suffered from chilly feeling, followed by fever and sweating, the attacks occurring in the morning. Under treatment these attacks subsided, but they have recurred at intervals since.

During the last six months has suffered from weakness, loss of appetite, epigastric pain, and flatulence. She has vomited seldom, but says that a month ago she vomited some dark blood. Since the beginning of her illness she has grown yellowish-white in color.

Condition on Admission, May 24, 1887.—Much emaciated. Peculiar yellowish-white color of skin, looking very like that seen in the cancerous cachexia. Mucous membranes pale. Tongue pale, clean, and moist. Appetite poor. Constipated. Some pain in micturition. Pulse compressible, 100. Respiration, 32. Temperature, 99.2° (A.M.). Urine acid, pale, cloudy, specific gravity, 1.012. No albumen. Microscopic examination: Epithelium, leucocytes, bacteria, granular matter.

Physical examination at this time records normal chest. She suffered from vomiting and from sweating at night, and feeling chilly in the morning. Constipated.

June 6th.—Blowing systolic murmur heard, loudest at third space to the left of the sternum and transmitted up vessels of neck. Heart not enlarged.

There is some tenderness in the epigastric region. The belly is shrunken. No tumor felt. Blood-disks number 1,600,000 to the c.mm. Hæmoglobin, thirty per cent.

After this the patient seemed to remain for a long time in about the same condition. Punctate and flame-shaped hemorrhages were observed in the retinæ. The red cells were found to be of very varied size and shape. The temperature until July 16th ran between 99° and 100°. The pulse remained about 100. July 16th: A.M., pulse, 100, temperature, 99.8°; P.M., pulse, 100, temperature, 100.6°. July 17th: A.M., pulse, 100, temperature, 101.4°; P.M., pulse, 100, temperature, 101.6°. The patient during these days was sinking rapidly. There was no increase in the respiration, no cough. On July 18th, at 12.30 P.M., she died.

Autopsy, two hours after death. The body was emaciated and poorly nourished. Blood very watery. Brain not examined. Left lung normal, a few old pleural adhesions. Right completely adherent. Lower lobe in condition of gray hepatization. Heart small, very slight thickening of mitral valve, otherwise normal. Liver and spleen normal. Suprarenal bodies look congested. Kidneys: left normal size and normal in appearance, save that there were a few small cysts in it, and that there were some hemorrhagic streaks in the pyramids and the cortical markings were lost. In place of right kidney is a mass of fibrous tissue. Stomach much contracted. Mucous membrane pale and looks finely mammillated. Œsophagus normal. Large and small intestines diminished in calibre, otherwise normal. Uterus and ovaries atrophic.

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[1] See Quinke: Volkmann's Sammlung Klin. Vort., No. 100; also Bartels: Berlin. Klin. Wochenschrift, 1888, No. 3. The symptom is also noted by others.

The stomach, microscopically examined, showed everywhere the mucous membrane much thinned. Around the cardia the muscular layer was thickened. The muscularis mucosa was normal. There was atrophy of the gastric tubules everywhere. The interstitial connective tissue was increased in amount. The arteries were in many places thickened by endarteritis. The most marked lesion was infiltration of the stroma of the mucosa with round cells.

The kidneys showed areas in which the tubules and tufts were destroyed by new connective tissue. There was also pretty extensive cloudy swelling of the epithelium of the convoluted tubes. The vessels were not, as far as could be ascertained, diseased.

In this case we have the lesions of chronic gastritis; there is pneumonia. The state of the only remaining kidney is such as to leave us in doubt as to whether the lesions were only the natural increase of fibrous tissue found usually in patients of her age, to which have been added a parenchymatous degeneration due perhaps to the pneumonia, or whether the case is one of true chronic diffuse nephritis. The absence of change in the renal vessels is against the latter view. The stomach lesion is the same, after all, as that observed in many cases of chronic gastritis. There is an increase of intertubular tissue, and an infiltration of it with indifferent cells; there is an increase of the adenoid tissue normally found in the stomach, and atrophy and degeneration of the glandular epithelium, and there is endarteritis. Of the relation between the stomach lesion and the symptoms, this much alone can be said: Many patients live a good while, and pretty comfortably, with stomachs as bad as this one. When this patient became very ill, she presented symptoms rationally explicable by the blood state. It is possible that the blood state may have been secondary to the stomach lesion, or may have produced it; may simply have occurred as an accompaniment in no way connected with it, or the anæmia and the gastritis may have reacted badly upon one another. It hardly seems likely that the stomach lesion was really secondary to the blood change. Such a relationship would be hard to explain. On the other hand, anæmia of a fatal kind, secondary to gastritis alone, is perfectly conceivable; but it seems to me that we must admit, for the production of pernicious anæmia as the result of gastritis, the necessity either of independent disease of the blood-forming organs, or that, as a result of the stomach lesion, such a change takes place in the gastric ferments as to lead to the production of poisonous digestive products, instead of normal peptones. The cases recently reported, cured by washing the stomach, confirm the possibility of this digestive error. Granted the existence of gastritis and the blood lesion, and the bad effects of one lesion on the other are perfectly comprehensible. Evidence that the stomach and blood lesions were both the result of the same cause is, in my case, wanting. The exact relation of the kidney lesion to the case is of course uncertain. I doubt if the kidney is really to be considered as diseased.

It is interesting to note that in a number of cases symptoms of dyspepsia have preceded the anæmia. Nothnagel records a case with "cirrhotic contraction of the stomach."[1] Henry and Osler record one where, after long-continued symptoms of gastric disease, fatal anæmia occurred.[2] Kinnicutt describes two cases with stomach lesions.[3] Fenwick also mentions some, but his article is not very satisfactory.[4] Brabazon also records stomach lesions.[5] It is difficult to understand, from the printed descriptions, exactly in what the cases of Henry and Osler and of Kinnicutt differ from chronic gastritis, though these authors seem to see some difference. It is unfortunate that the autopsies in the latter's cases were made so long after death, as an entire absence of gastric tubules is to be regarded as among the possible post-mortem changes.

Case III.—James McF——, aged thirty-three; clerk. Admitted March 11, 1880.

Family history good. Frequent mild attacks of rheumatism. Syphilis two years before admission. Very hard drinker.

Three weeks before admission was in usual health. Then a painful swelling, which subsided in a day or two, appeared in his neck under the lower jaw. From this time he lost appetite, and suffered from vomiting, regurgitation of yellowish fluid, dull pain in abdomen, some dyspnœa and palpitation, and increasing weakness. During past two weeks has had frequent desire to micturate. Bleeding from the socket of a right molar tooth, and from a prolapsed rectum (which latter has existed a long time, but which has been neglected during illness) troubled the patient for the last two days. Patient has probably long been pale, since neither he nor his friends have noticed much change in his color of late. Mental condition unchanged until yesterday, when his friends think he was delirious for a while. During last two years has lost flesh. Headache has seldom occurred during his life.

On admission.—Yellowish skin, fetid urinous odor of breath; very weak. Stupid, but talks rationally. Expressionless face; brown, bloody tongue. Poor appetite; constipated now and since attack began. Pulse weak, 102; respiration, 20; temperature, 97.8°. Urine, acid, sp. gr. 1.015; albumen, five per cent. Heart and lungs seem normal. Oozing from gums and rectum.

For two weeks the patient continued very ill. He passed a good deal of urine of low specific gravity, containing a little albumen.

The bleeding continued. Gradually the symptoms subsided, his color became better and less yellow. He then had the ordinary symptoms of Bright's disease. He was removed from the hospital March 14, 1881, in a dying condition, suffering from uræmia. He died shortly afterward, and no autopsy was held. The apparent duration of his illness was about thirteen months.

The case occurred before examination of the blood by exact instruments was often practised. The resemblance of the symptoms to cases of pernicious anæmia was marked during the earlier part of his sickness. The record is meagre, and the absence of an autopsy is to be regretted.

In Case IV. the history is more detailed. The patient, a negro, aged twenty-two, entered Roosevelt Hospital November 7, 1887. Occupation, expressman. Probably had syphilis (sore on penis and enlarged, non-suppurating inguinal glands) two months before admission. Measles, when a child, is the only acute disease known to patient. Temperate.

For past two years has occasionally suffered from palpitation of the heart, headache, œdema of feet and legs, and vomiting, and has sometimes seen *muscæ volitantes.* These are the only symptoms of Bright's disease which had existed. Eight days before admission, while in usual health and at work, was seized with vomiting of thin greenish fluid, weakness, headache, and feverishness. Next day vomited same material, but also, after each attack of vomiting, spat up two or three mouthfuls of dark fluid blood; vomiting then ceased, but continued to spit blood at times. Yesterday, a chill, lasting about an hour, followed by fever, lasting about two hours. From the onset has had anorexia and diarrhœa. No palpitation nor dyspnœa since attack began.

On admission.—Well nourished; sluggish mental state. Tongue thin, white coat, moist. Mucous membranes pale. No glandular enlargements. Lungs normal. Liver dulness from in nipple line from fourth space to free border of ribs. Heart apex fifth space, one-half inch inside nipple. Systolic murmur audible over whole præcordium, transmitted to the left, from the apex and up the vessels of the neck from the base. Diastolic murmur heard at base, and down sternum. Pulse of fair strength, 84; respiration, 14; temperature normal. Urine pale, slightly cloudy, neutral. Sp. gr. 1.010. Considerable albumen. Epithelium, granular matter, and mucus, and a few leucocytes. There is a slight white discharge from penis. After his admission, the patient continued weak. Vomiting did not occur. He had some hypogastric pain and some rectal pain, due to fissure in ano. On the twenty-fifth day of his disease, moderate bleeding occurred from the rectum. On the twenty-seventh day, bleeding from the mouth. The cheeks were swollen, but there was no solution of continuity. On the twenty-ninth day, hæmoglobin, thirty per cent. Red disks, 2,364,000 to c.mm., white normal proportion to red. A few pear-shaped and elliptical red disks. On the thirtieth day, he had become semi-comatose and the bleeding increased somewhat. On the morning of the thirty-first day, at 12.30, he died.

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[1] Deutsch. Archiv, No. xxiv., p. 353.

[2] Am. Journ. of the Med. Sciences, April, 1886.

[3] Proc. of the Soc. of Amer. Phys., 1887.

[4] London Lancet, vol. ii., 1887.

[5] Archives Générales, January, 1884. Original not accessible to me.

Urine, frequently examined, was always about the same as on first examination. No casts were found. On and after the twenty-ninth day the urine was brown, and on the thirtieth day a few red cells and bacteria were observed in it. The temperature was normal.

Autopsy, fourteen and a half hours after death. Body well nourished. Blood watery. Liver and spleen somewhat enlarged, but otherwise normal. Stomach normal. Heart hypertrophy, with slight dilatation of left ventricle. Aortic valves a little thickened. Chordæ tendinæ of mitral shortened, valve thickened and somewhat insufficient; heart is not otherwise diseased. Kidneys normal size; capsule not adherent; surface nodular; cortex mottled red and gray.

(I am indebted to Dr. Delafield, under whose care the patient was, for the privilege of reporting it.)

It would seem that we have here a condition of "pernicious" anæmia complicating Bright's disease. The resemblance to the former case is striking. The former seemed to recover from his blood lesion, and die long afterward of his kidney disease; the latter died in thirty-one days from his blood lesion. He had nothing resembling uræmia. Of course, the occurrence of these symptoms during the course of Bright's is well known. The blood has not yet been sufficiently often examined, but the patients, in some cases of Bright's disease, seem to suffer from the same symptoms as those of pernicious anæmia, and in Case IV. the blood change was typical enough.

GENERAL DESCRIPTION.—It is needless to describe in detail the well-known symptoms. A short outline will suffice. The onset is usually gradual, sometimes acute, and pallor is frequently the first symptom noted. The pallor, when the disease is fairly advanced, is frequently rather characteristic. The face has not a dead-white hue, nor is there the fawn color so often seen in malignant disease. The sclerotics are not often bluish-white with the look like fine porcelain sometimes seen, especially in phthisis, simple anæmia, malignant disease, cirrhosis of the liver, and Bright's disease. There is seldom any puffy look. The skin, in many cases, has a yellowish, lustreless, white tint; the sclerotics look dirty yellowish-white. Dyspnœa and palpitation of the heart on exertion, syncope, increasing weakness, weariness, mental and physical headache, and sometimes other pains, as neuralgia and aching in the limbs and bones, loss of appetite, vomiting—these are the usual early symptoms. Sooner or later an irregular fever sets in; the power of sustained thought becomes weakened; there may be delirium; prostration is extreme. Perhaps some dropsy is developed. Emaciation is not common, patients usually retain their fat, or it may increase. Hemorrhages from various mucous membranes occur in some cases, and occasionally purpuric spots are seen in the skin. Hemorrhages into the choroid and retina are almost invariably present. Disturbances of vision are common. The red blood-disks and the hæmoglobin are below the normal. The reduction varies but may reach as low as one-sixth or one-seventh of the normal. The hæmoglobin may be reduced in the same ratio as the disks, or it may not reach such a low point. The white cells are nearly normal in number. The red cells show changes in size and shape, and it is said that nucleated disks sometimes appear.

The duration of the disease varies; some cases seem to terminate fatally within a few weeks or months, others may last for years. The course is not steady; temporary improvement followed by relapses is often seen. The prognosis is very grave, but, probably, some cases recover. The question of recovery is, of course, not to be considered if by "pernicious" we mean, as do some authors, a necessarily fatal disease.

Diagnosis.—The differential diagnosis of the pernicious from the simple form of anæmia is difficult, or, perhaps, impossible. There seems to be no symptom, nor group of symptoms, found in the grave disease which is not found in the milder type. Patients with simple anæmia may have the same blood lesion, the same fever, dyspnœa, palpitation, nausea, and vomiting, the same hemorrhages —in fact, all the symptoms of pernicious anæmia. Iron usually benefits or cures the simple form, and does not improve the pernicious one. The results of treatment may aid the diagnosis, but it is uncomfortable to think that we may let a patient with pernicious anæmia die while trying to find out whether the case is pernicious or not, by giving iron. Of course, if by the word "pernicious" we mean necessarily fatal anæmia, we may wait until recovery or death clears up the diagnosis. The age and sex of the patient should receive due weight in diagnosis, and a history of one of the known causes is of value. It seems to the writer that a diminution in the number of red disks much greater than the patient's symptoms would lead us to expect, or a much greater proportional diminution in the amount of hæmoglobin than in the number of disks are points in favor of simple anæmia. Diminution of hæmoglobin with a normal number of red disks is only seen in the simple form.

The resemblance of these cases to Addison's disease is quite marked, but in this disorder anæmia is not an essential symptom.

Whether or not the disorder is closely related to Hodgkin's disease and to leucocythæmia is not yet quite settled. Clinically, Hodgkin's disease is to be differentiated by the lymphatic, splenic, or hepatic enlargements, while the excess of white cells distinguishes leucocythæmia from the others.

Lesions.—The blood, as seen during life, is paler and thinner than normal. The red disks are much diminished in number. Perhaps fifteen or twenty per cent. of the usual number may be found. The disks are more or less altered in size and shape. Some are much smaller, some much larger, than the average in healthy blood. Many cells shaped like a pear, or tennis racquet, or kidney may be seen. Sometimes, it is said, nucleated red disks are seen. Although this latter statement is made by such good observers as to be indubitable, it must be remembered that an *appearance* resembling a nucleus is not rare in red disks, which seems to be the result of vacuolation or of some peculiar deposit of hæmoglobin near the edge of the disk, leaving a clear centre. The white cells, while often relatively, do not seem to be absolutely, increased in number. After death the blood presents the same appearance. It is said that the *quantity* of it is often reduced—a statement open to doubt. The hæmoglobin seems to escape soon after death, and stain the endocardium and vessels. Coagulation, both during life and after death, seems to take place slowly or not at all. Exact investigations of the plasma are wanting.

The marrow is sometimes diseased, sometimes normal. The spleen is generally normal. The liver is normal or occasionally fatty. Some enlargement of the lymphatics may occur. The thyroid gland has not been enlarged enough, so far as I can learn, to justify a statement as to its condition. The supra-renal capsules are unchanged. Doubtful lesions of these bodies have been described.[1]

The most common lesions seem to be fatty degeneration of the heart, liver, and kidneys. Similar degeneration of the great vessels is noted. The degeneration in the heart is either of the usual type, or, as described by Addison and others, zigzag lines of fatty degeneration are, in certain cases, observed. In a case observed by the writer, a seemingly typical pernicious anæmia was accompanied by general dilatation of the heart (case reported by Asta Burnegie in *New York Medical Journal*, vol. xlv., No. 1, 1887); no characteristic lesions of the brain or cord are found. Punctate hemorrhages in the former are mentioned by some observers. The semi-lunar ganglion of the sympathetic has been found seemingly diseased. Hemorrhagic extravasations into the retina and choroid are almost constantly found, together with some optic neuro-retinitis. Extravasations of blood elsewhere may occur. Inflammatory changes of any organ may occur as an incident of the disease. The serous cavities often contain an excess of fluid. Gastric lesions are seen in some cases. Chronic diffuse nephritis is observed in some. Lesions of the pancreas have been described. Certain intestinal parasites are sometimes seen. The body is usually fat. The muscles and all the organs are pale. The fat is often peculiarly yellow.

The *etiology* of the disorder is not clear. Bad food, foul air, overwork, and general bad hygienic conditions are found as possible factors in many cases; but if these causes in themselves were capable of producing the condition, it is likely that the disease would be very common, instead of rare. Pregnancy and the puerperal state, and especially repeated pregnancies, predispose to the affection. Güsserow records, among others, four cases in which the symptoms followed respectively a seventh, eighth, sixth, and tenth pregnancy. Pregnancy complicated by great anxiety and privation has preceded some cases. Prolonged lactation is sometimes noted. Disturbances of digestion existed for a long time before the onset in some. Rather chronic diarrhœa preceded others. In addition to these causes we have severe, or oft-repeated, or long-continued hemorrhages, or attacks of acute disease, antecedent to certain cases. Mental anguish and shock is suggested, by Wilks and others, as a possible occasional cause. Chronic bronchial catarrh, and various disorders with long-continued discharges of albuminous fluids, are noted.[2] Alcoholism seems to be a possible factor in the production of the condition. Syphilis is hardly to be mentioned as a cause. The occurrence of chronic nephritis, stomach lesions, and fatty liver has been recorded. Distinct history of recently true malarial infection has not been mentioned in the cases which I have studied. The general term, malaria, is too vague to be regarded. It covers too many diagnostic sins. The symptoms of the malarial cachexia differ in many respects from those met with in the disease under consideration.

Bacterial infection has yet to be shown to cause the disorder. In some cases certain parasites have been supposed to cause it. In regard to all of these, as, indeed, in regard to all the alleged causes, we must ask: Why are they so common and the disease so rare?

The case reported by Schapiro,[3] of cure of pernicious anæmia by the expulsion of a bothryocephalus latus, is interesting because, in addition to the worm, the boy suffered from constipation. The efforts to expel the worm incidentally relieved the constipation. When the bowels returned to a normal condition the patient recovered. It is hardly fair to blame the worm for all this. Surely the constipation played its part. The patient, it would seem, could not support both. Constipation can produce more or less anæmia, and perhaps it may have produced this case.[4]

As much time has been wasted by a misunderstanding of terms used by medical writers, I give the following definitions of certain terms used by me in this paper:

By the term "pernicious anæmia" I mean a *disorder having characteristic blood lesions, severe symptoms, and a marked tendency toward a fatal termination.* Although certain authors would exclude cases which recover, yet, for clinical reasons, with our present knowledge I think the above definition will suffice.

When speaking of cases of pernicious anæmia as "primary," I mean that in these cases, whatever be the cause, *the blood lesion is directly produced by the action of that cause, and not indirectly through disease of some organ not concerned in blood-making.* In "primary" cases we have this sequence: Cause, blood lesion. In "secondary" cases we have this: Cause producing lesion of some organ, lesion of this organ producing blood lesion.

I shall not discuss the question as to whether the blood change accounts for the symptoms. It is not worth while. Neither shall I consider the question whether the disorder results from diminished production or increased destruction of red disks, or both.

Looking at pernicious anæmia as I have defined it (making the definition broader than many will admit), may we not say, first:

That a condition with similar course and symptoms has been observed in cases with precedent grave stomach, kidney, and liver lesions.

Second: That in these cases, however, the condition is so rare as to make it difficult to suppose that, under ordinary conditions, the blood state could be the direct result of them.

Third: That, in all cases in which there has been any other tangible cause, it has hardly been sufficient of itself to produce the disorder.

(There is too much gastritis, too much Bright's disease, too much misery seen without any such effect, and the same is true of every other cause.)

Fourth: Let there be congenital or acquired weakness of blood-forming organs, and then, as various authors suggest, it is conceivable that by a "vicious circle" the condition may result.[1]

Fifth: That, after all known possible causes have been excluded, there remain certain cases for which no plausible explanation can be offered.

Finally, I would direct attention to the fact that in many cases, whatever be the supposed cause, there is a history of long-continued gastro-intestinal disturbance before the onset of the pernicious symptoms. In view of this, is it not possible that some of the cases are the result of poisoning by substances produced in the gastro-intestinal tract? If there be such a possibility, should not our efforts be directed toward cleaning out this tract in all primary cases?

I do not wish to say that my definitions are the best. I do not mean to imply that my conclusions are altogether justified by facts, nor do I say that they are original. I simply ask you to accept the former and discuss the latter. The time is short for discussion. What I want to ask I hope I have made clear. I beg that, if anyone think this paper worthy of discussion, he will not quarrel with these definitions, but will regard the questions suggested and any others bearing upon the disorder, as I have defined it. I give the definitions merely that all may understand what is meant. They are simply intended for present use, and I think they will serve their purpose.

To Relieve Chilblains.—Dissolve an ounce of ammonium chloride in half a pint of cider vinegar, and apply frequently. A half-pint of alcohol may be added to this lotion with good effect.

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[1] Musser: Phil. Med. and Surg. Reporter, 1885, vol. lii., p. 353.

[2] Pepper.

[3] Zeitschft. f klin. Med, vol xiii., No. 5, 1887.

[4] The St. Gothard cases, it must be noted, in which the symptoms were relieved by the expulsion of an intestinal parasite, were under bad hygienic surroundings, as well as suffering from the worms. Both the surroundings and the worms may have had their influence.

[1] It is a fact well known that the human body, unlike the "one-hoss shay," usually "breaks down and doesn't wear out." It is quite possible that the blood formation, being weak in some people, "breaks down" first.

WORMIAN BONES IN FONTANELLES AND THEIR EFFECT IN CHILDBIRTH.[1]

By GRACE PECKHAM, M.D.,

NEW YORK.

THE occurrence of Wormian bones in the anterior and posterior fontanelles, as well as along the lines of sutures, is not perhaps infrequent, but the relation which these bear to the moulding of the skull in childbirth, so far as I can ascertain, has never been discussed. My attention was called to the possibility that such bones, if of considerable size and occurring in the posterior fontanelle, might exert a detrimental if not fatal influence upon the child, by three cases which occurred while I was interne at the New York Hospital for Women and Children.

The histories of these three cases were almost identical. The mothers were all primiparæ, and there was nothing abnormal either in the measurements of the pelves of the mothers or of the heads of the infants. The presentations were all of them the usual left anterior occipito-iliac. The labors progressed slowly but normally through the first stage, but the second stage was very slow, lasting between two or three hours in each case. Instruments were not used in either instance, as there was a constant expectation that the labors would terminate naturally.

The irregularity of the fontanelle could be very easily detected. In the first two cases it gave rise to confusion in determining the position, but in the third and last case, having had the experience with the two others, there was no difficulty in discovering that the posterior fontanelle contained Wormian bones. Each child was stillborn. The skulls of two were preserved, one of which is now shown. The other was almost exactly like that shown in Fig. 1. The family would not permit an autopsy to be made upon the third child, but took it away for burial. It could, however, be easily felt that the condition was similar to that seen in this skull, and that the shape and number of the bones were the same.

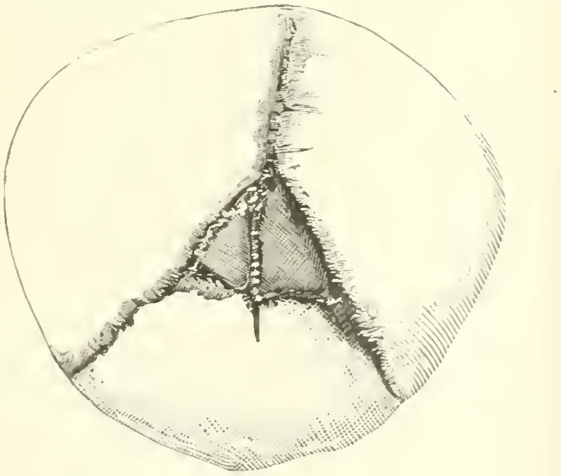

FIG. 1.

In regard to the formation of Wormian bones, Meckel states that often isolated osseous germs develop at the circumference of the occipital bone and unite themselves with it. Sometimes, though rarely, thicker ones develop about the articular regions; when there is an arrest of evolution of one or more of these inferior centres, Wormian bones are formed.[2] According to Broca[3] and Gosse[4] Wormian bones are an arrest of ossification; the latter attributes it to a rachitic or scrofulous condition, or the effects of violent pressure or hereditary transmission, and Topenjard[1] also speaks of them as an arrest of development.

Considerable ethnological interest has centred upon the occipital bone, and a number of learned and interesting papers have been written by distinguished anthropologists upon the subject. M. Bellamy in 1842 presented the mummy of a small child which had the interparietal bone. M. Rivero and M. Tschudy in the "Antiquités Péruviennes," published in 1851, gave drawings showing the bone which Anoutchune, after making studies of skulls in various museums, announced was to be found in twenty per cent. of the Peruvian skulls. The name "the bone of the Incas" was given to it. The question among the *savants* arose as to whether this was a mere anomaly or a reversal to a lower type, since the interparietal bone occurs in rodents, ruminants, dogs, and cats.

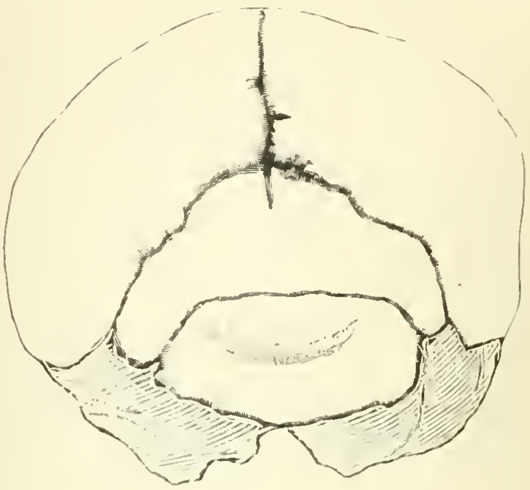

FIG. 2.—Interparietal bone, or bone of the Incas.

It is not out of place to refer to this matter of the interparietal bone in the matter under discussion, since it may be confounded with Wormian bones in the posterior fontanelle. The upper portion of the occipital bone is supposed to develop from four osseous centres which are separate in early fœtal life but gradually coalesce. The lateral union is accomplished first, and afterward the two segments above and below unite. When this latter fails to take place the interparietal bone is formed. The recent line of union shows very well in the skull of the new-born infant. Cuvier, Milne Edwards,[2] Geoffrey St. Hilaire,[3] and the other writers already mentioned insist that a distinction should be made between the interparietal bone and the large fragments occurring in the posterior fontanelles, which are true Wormian bones; the *os Èpactal* of some, the *os lambdoid* of others, so called because occurring more frequently in the posterior than the anterior fontanelle. These bones may be single or multiple, two, three, or four, and even as many as eight, according to one writer, quoted by Geoffrey St. Hilaire.

These cases are presented to the profession to call attention to the fact that large Wormian bones occurring in fontanelles may prove at the birth detrimental to the child. Especially if present in the posterior fontanelle they would prevent the overlapping at the sutures, and at the time the pressure would be greatest during labor, that is, during the second stage, cause an injury to the contents of cranium, and inflict such damage to the nerve-centres, probably those at the base of the brain, as to prove fatal. The practical question then arises, could this be avoided by the prompt and early use of instruments?

It is hoped that obstetricians will record cases of a like nature and report upon them with a view to determining the effect of these Wormian bones occurring in the fontanelles at childbirth, a point upon which obstetric literature up to this time has preserved silence.

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[1] Read before the Section of Obstetrics, New York Academy of Medicine, March 16, 1888.

[2] Jo. Complémentaire du Dict. Sc. Méd., t. ii., p. 226. Considérations anatomiques et physiologiques sur les pièces osseuses qui enveloppent les parties centrales du système nerveux et sur leurs annexes.

[3] Broca: Instruction craniologique, Bul. Soc. Anthrop., 1875, p. 138.

[4] Mém. de Soc. d'Anthrop., t. i., p. 173.

[1] Anthropologie Générale, par P. Topenjard, p. 789.

[2] Leçons sur la Physiol., t. x., p. 312.

[3] Philos. anatomique, t. ii., p. 51.

THE MADISON, 25 MADISON AVENUE,
March, 1888.

IDIOPATHIC MULTIPLE CRANIAL NEURITIS.

By L. B. GRADDY, M.D.,

OMAHA, NEB.

On June 4, 1886, I was consulted by Miss L——, a strong, healthy woman, twenty-four years of age, who stated that for several days she had been seeing double. The only illness that she had ever suffered from was an attack of typhoid fever a year before, from which she perfectly recovered. She has never suffered from headache nor neuralgic pains about the head or face. There is no history of injury, recent exposure to draught of air, or change of temperature. Syphilis is easily excluded. Skin, kidneys, and other organs perform their function properly. Menstruates normally.

Examination showed marked paresis of the inferior and internal recti muscles of the right eye, motility being restricted downward and inward only. Other muscles normal. Tn. Fundus normal, $V. = \frac{20}{20}-$. Left eye normal. I prescribed for the symptoms, treatment consisting of laxatives, tinct. ferri perchlor., tinct. nucis vom., and the faradic current daily.

There was no material change in them for several days, when the whole cone of ocular muscles began to participate in the paresis, and on the 14th ptosis was added to the symptoms. On the 15th and 16th motility was still further restricted, reaching greatest restriction on the 17th, when the eye, hidden by the upper lid, was practically stationary, there remaining only the slightest movement upward. From the 17th improvement began, and went steadily on to complete restoration of motility at the end of a month from the beginning of the attack, at which time the diplopia had disappeared. The contractor pupillæ and ciliary muscles were at no time affected.

On July 23d Miss L—— returned, complaining that vision in the right eye was reduced. At this time she was seen by my associate, Dr. H. Gifford. Motility of eye normal, pupil somewhat sluggish; accommodation unaffected. Outlines of disk slightly blurred and slight opacity of the retina, especially above and below. Tn. $V. = \frac{20}{100}$. Color-sense impaired. Left eye normal. Mercurial inunction, pot. iod., and Glauber's salts were ordered.

July 24th, neuritis more pronounced; temporal side of papilla slightly swollen; $V. = \frac{20}{200}$.

July 25th, fundus appears the same; $V. = \frac{3}{200}$.

July 28th, no change in fundus; $V. = \frac{5}{200}$.

From this date vision improved steadily and the neuritis gradually disappeared. The date is not noted, but when vision had reached nearly normal the inunction and pot. iod. were discontinued and strychnia administered hypodermatically.

September 10th, a little haziness left at inner side of the nerve; $V. = \frac{20}{20}-$.

November 5th.—Patient returned with well-developed paresis of the muscles of the left side of the face. Nasolabial fold obliterated; logophthalmus; eyes normal. The patient at this time was placed in charge of her brother, a general practitioner in the city, and received potassæ iodidum only. In the course of a few months the paresis nearly disappeared.

October, 1887, eleven months from last date, Miss L—— reported having had no further trouble of any kind. Eyes normal; reflexes good.

By request, Miss L—— reported again on February 15, 1888. She was perfectly well, and, aside from a slight stiffness of the muscles of the left side of the face, no trace of her former trouble remained.

To sum up briefly: We have here a healthy young person, attacked by successive paresis of the third, fourth, and sixth nerves of one side; after an interval of six weeks an optic neuritis of the same side; another interval (three months) and a paresis of both branches of the seventh nerve on the opposite side is developed.

Aside from the multiple neuritis of syphilis and alcoholism, cases like the foregoing are extremely rare. In the ophthalmological literature I find but two cases mentioned, neither of which can positively be classed with this one: The first by Schweigger (Zehruder's *Monatsblätter f. Augenheilk.*, xii., 21), in which an abducens paralysis of the left side was followed within a few weeks by a sudden and marked diminution of vision with normal fundus. This condition remained unchanged as long as the patient was under observation. The second is by Hutchinson ("Graefe-Saemisch," v., 816), in which sudden failure of sight occurred in one eye, with paralysis of the third nerve. Slight improvement occurred in the paralysis and the vision as well. Failure of sight in both these cases was attributed to retro-bulbar neuritis.

Unverricht (*Fortschritte de. Med.*, December 15, 1887) reports a case where all the cranial nerves were affected one after the other by minute sarcomatous metastases between the dura and the calvaria. He also mentions four other cases of multiple cranial neuritis, all of which were of syphilitic origin.

In considering the etiology of the paresis in the case here reported, we have to choose between emboli, multiple hemorrhage, and neuritis. Emboli and multiple hemorrhage can be practically excluded by the good health of the patient previous to the first and subsequent to the last attack; the gradual progression of the affection of the ocular muscles; and, finally, by the positive information furnished by the optic nerve lesion.

The peripheral nature of the lesions is indicated by the optic neuritis, and by the fact that both branches of the facial were involved; it having been long ago asserted by Trousseau that central lesions generally affect but one of the branches of the facial. This theory of Trousseau is strongly supported by the experiments of Mendel (*Berlin. klin. Wochenschrift*, 1887, 48), which indicate that the orbicular branch of the seventh has a separate origin, its nucleus being close to that of the oculo-motorius.

In referring to the treatment, it is scarcely necessary to say that the treatment adopted in the first attack points to the fact that the pathological condition was not recognized at the time, a very common error doubtless in ocular and facial paralyses. Recovery was nevertheless perfect. The optic neuritis furnished a clew to the pathological condition, but the full import of the clew was not appreciated, which explains why the patient received potassæ iodidum only for her facial paresis.

This case furnishes a valuable lesson in the parallel between restricted motility and reduced vision. This would indicate, taking a given case of idiopathic paresis of any of the ocular or facial muscles, that neuritis is present, and would warrant the adoption of that course of treatment known to possess the highest therapeutic value in neuritis, upon the supposition that neuritis is present.

GALL-STONES OR SOAP?—Dr. Thos. W. Street, Surgeon U. S. N., writes: "In reading the communication under the above title in THE MEDICAL RECORD, I was reminded of a case in point in my own practice which may help to answer the query. I gave two large doses of olive-oil in a case of hepatic colic, and left instructions to have the stool carefully preserved, washed, and strained. The next morning the apothecary informed me that the man had been passing dried apples. The residue from the stool, saved for my inspection, certainly did resemble, in form, color, and feel, macerated dried apples; but after it had been put in the sun and thoroughly dried, its true nature was revealed. The particles had shrunk to one-fourth or more of their former size; they were hard, and exhibited *facets*, thus proving them conclusively to be gall-stones."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, April 14, 1888.

THE APPEAL OF THE NEW YORK ACADEMY OF MEDICINE.

WE take great pleasure in calling the attention of our readers to the appeal of the New York Academy of Medicine for contributions to its building fund. The circular letter issued contains so many facts of interest about the Academy and its work that we incorporate a considerable part of it here.

The Academy is forty years old; it now has a membership of over 500. It supports a library which contains 37,000 volumes and 20,000 pamphlets, and a *free* reading-room, in which are nearly all the medical journals of the world. Both library and reading-room are free to the medical profession and the public.

The Academy has already accumulated some property. It owns its present building, free of debt, and through legacies and donations it has acquired $100,000.

Its present quarters are sadly inadequate to the needs of the Society, and the library is in constant danger of destruction by fire. A new fire-proof building is therefore urgently needed, and the sum of $250,000 is asked for, in order to buy the site and erect a building suitable to the work of the Society.

An appeal for this money is made to the public, as well as to the profession, on the following grounds:

"The Academy is not connected with any school or college. It is self-supporting, and carried on in the interest of the whole profession. There are no fees nor emoluments of a private or individual nature. It is not supported nor subsidized by the State or municipality. Its aim is the elevation of the profession to a higher scientific standard.

"On the knowledge, wisdom, and public spirit of the medical profession, the hygienic and sanitary safety of the country is dependent. If our great city and the republic will be better protected in future than heretofore against the inroads of cholera and other infectious diseases, that result will be due in great part to the efforts of the New York Academy of Medicine."

The appeal continues:

"Will not generous and patriotic New Yorkers feel a just pride in seeing our city possess another monument devoted to science; established on a firm and liberal foundation; a protection, an honor, and a credit to its citizens, emulating, if not surpassing, the great institutions of a like character in the old capitals of Europe?

"In this conviction we confidently hope that a fund will soon be raised sufficient to purchase a proper site and to erect upon it a building specially adapted to our Society, and which, for generations to come, will be sufficient for its purposes. This building once paid for, there will be no further occasion for us or our successors to call upon the liberality of our fellow-citizens.

"Contributions and correspondence may be addressed to members of the committee at their residences, or to the care of the New York Academy of Medicine, 12 West Thirty-first Street, New York. Committee: Dr. Abraham Jacobi, Chairman; Dr. Joseph E. Janvrin, Treasurer."

The committee embraces a large number of representative members of the profession, and it is indorsed by many public-spirited laymen.

We wish every success to the work.

CEREBRAL LOCALIZATION AND BROWN-SÉQUARD.

DR. BROWN-SÉQUARD has an ingenious and original mind, and an indefatigable industry in the study of scientific problems and the pursuit of his, often fantastic, theories. He has always with great consistency opposed the views of cerebral localizationists, or "cluster-localizers," as he calls them, and in *The Forum* for April he presents his matured opinions upon this subject. His article would attract no attention and deserve no notice if it appeared in a scientific periodical. For it contains nothing but assertions which are misleading, and arguments based on imperfectly made observations, or carried out with incoherent logic. The fact is that the doctrine of localization is one now so firmly established and so widely accepted that it is folly to argue with those who oppose it. Cerebral localization is a demonstrated fact, and nothing new is presented by Brown-Séquard in his latest attempt to controvert it.

CONCERNING APOTHECARIES WEIGHT.

IT is a pity that the world has not yet found a *Volapük* of weights, as Volapük is a language which can be universally and very quickly learned, because stripped of the perplexing irregularities of declensions and conjugations which make the pathway thorny to the striving student who is attempting to acquire a tongue other than that of his mother. So weights and measures should be reduced to a universal basis.

We are aware that this is no new plan we are advocating, that those who believe in the metric system have been strenuous in their efforts to have this prevail; but Dr. Oscar Oldberg[1] gives such cogent reasons for the setting aside of this system, which he previously upheld, that we cannot refrain from quoting them and saying, "How now?"

"Whilst still impressed with the admirable characteristics of the metric system which distinguish it from all others, the writer has been reluctantly obliged to surrender his former view, for reasons hitherto not patent to him, by which he has become convinced that the weights and measures of that system are not the best for use in practical medicine and pharmacy. One reason why a decimal system is inadequate for the peculiar requirements of medicine and pharmacy, is to be found in the fact that an easy, natural subdivision of doses, and a clear understanding of the active contents and the use of liquid remedies, require the employment of such units of weights and of volume as are not only parallel and commensurable, but at the same time capable of progressive subdivision by two, into lower units, without fractions. The introduction of parts by weight to the exclusion of fluid measures in the formulæ for liquid preparations in our Pharmacopœia is, therefore, in the writer's belief, to be regretted. Another grave objection to the use of the decimal system in medicine and pharmacy, is to be found in the fact, brought to our attention by fatal results, that the safety of human life ought not to be allowed to depend in any degree upon a decimal point, which may be misplaced, misunderstood, omitted, or illegible."

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[1] A Manual of Weights, Measures, and Specific Gravity, by Oscar Oldberg, Phar. D., Chicago.

IODOL AS A SUBSTITUTE FOR THE IODIDES AND IODOFORM.

Much has been said of late regarding the value of iodol. On the whole, it has not made as yet a great impression. But it is destined to do so, according to Dr. George Assaky, who, in the *Archives Roumaines* for November, 1887, contributes a second article, recording his experiences with the drug.

Iodol, or tetraiodopyrrol (C_4I_4NH), is a brownish-yellow powder, inodorous, almost insoluble in water, but soluble in alcohol, ether, and fats. It contains about eighty-eight per cent. of iodine, and is less rich in that element than iodoform. Taken into the system it is excreted as iodine in the urine. It is about one-third less poisonous than iodoform, but its toxic phenomena are the same. It can be given internally in doses ranging from gr. v. to gr. xv. "It is better borne than iodoform, and sometimes acts much better than iodide of potassium" (Pick).

The first therapeutic researches were made by Wolff, in 1885. In these it was simply shown that iodol was a good antiseptic. In the same year Mazzoni reported upon its use topically in venereal diseases. He particularly claimed that no erysipelas followed its use, as sometimes happened with iodoform. In 1886 Benno Schmidt, A. Trousseau, L. Suquet, G. Ferrand, F. J. Pick, and Mazzoni published communications. Marcus tested its toxic properties, while Pick used it internally. He never observed poisonous symptoms or iodism, and, like other observers, he found that iodol was much more slowly eliminated than the iodides.

Assaky, in his two communications last year, dwells especially upon the value of iodol in surgery, where he thinks it superior to iodoform; but he also places a high estimate upon the drug as an internal agent. It has, he says, "marvellous effects" in tertiary syphilis and scrofula, acting more quickly than the iodides.

THE EFFICACY OF LARGE DOSES OF ARSENIC IN CHOREA.

The curative property of arsenic in certain forms of chorea is well attested by numerous unimpeachable observations. It is equally certain, however, that arsenic does not always cure. Dr. James Sawyer, in an article published in *The Birmingham Medical Review*, maintains that when arsenic fails to manifest its ordinary therapeutic efficacy, it is because the drug is not administered in the right way. Properly exhibited, he regards its action as little less than specific. According to him, in order to get the best effects of arsenic in chorea, the remedy must be employed in large and increasing doses. The medicine may be safely "pushed" until irritative vomiting is excited. As with other drugs, some manifestation of physiological action coincides with the direct therapeutic effect of the remedy. It may be remarked in this connection, however, that irritative vomiting belongs rather to the pathological than the physiological effects of arsenic, a fact which Dr. Sawyer's enthusiasm for this remedy may have caused him to overlook.

The author describes a typical illustrative case as follows: "A little girl, aged ten years, weakly and neurotic, has subacute, general chorea. I give her five minims of Fowler's solution of arsenious acid, in an ounce of water, thrice daily. In three days, the dose is increased to ten minims; in three days more, to fifteen; in three days more, to twenty; and so on, until she is taking thirty-five minims of the solution, or a little more than a fourth of a grain of arsenious acid, thrice daily. From the commencement of the treatment, the choreic movements gradually subside in severity, in frequency, and in extent of distribution, and when the large dose of more than half a drachm of Fowler's solution is attained, the movements entirely cease, and a little vomiting and stomach-ache warn us that we have reached the earlier physiological manifestations of our remedy. We then withdraw the drug altogether for two days. Afterward, for a few days, we give a reduced dose, ten or fifteen minims of the solution; then the remedy is finally discontinued. The child remains well. After a fortnight's further observation, she is dismissed from our care, cured."

Perhaps the author claims too much for his favorite remedy. But it may be well, in suitable cases, where moderate doses of arsenic have failed, to test the therapeutic efficacy of the drug in the larger doses employed by Sawyer.

SUPPURATION AND SEPTIC DISEASES.

Dr. Watson Cheyne has recently completed a series of lectures in which he gives additional evidence, if any were needed, of the intimate relation between micro-organisms, suppuration, and septic diseases. But he also shows that, while this relation is certain, the beginning and end of wound-treatment is not by any means simply the problem of keeping out these germs. In the production of septic troubles, he says: "Much depends on other conditions, of which the chief probably are the dose or number of the organisms and their concentration, general and local depression of vitality, and the seat of inoculation. If the organisms enter in large numbers, sufficient to overcome the resistance of the body, they alone may cause the disease; frequently, however, they enter in smaller numbers, and then other conditions become necessary to enable them to act. Of these conditions the chief are depressed vitality, either local or general, combined with the possibility of their remaining in the weakened tissue. This depression of vitality may be brought about by conditions acting on the body generally, such as acute fevers; or by local conditions, more especially those which induce the early stage of inflammation, such as cold, injury, chemical substances, the products of the bacteria themselves, or the products of other kinds of bacteria which may happen to be growing along with them. Or, again, the favorable condition may be some peculiarity in the soil, as shown by variations in the character of the disease in accordance with the seat of inoculation and the anatomical arrangement of the part. The only factor, however, with which we can reckon with certainty is the cocci themselves." Outside of the body the pyogenic micro-organisms are not easily found under ordinary conditions. Very few exist in the air, but sometimes they have been detected in surgical wards. One of the most common seats of them is the human skin, especially the folds and moist parts. They occur also in the mouth and pharynx. Dr. Cheyne thinks that they most frequently get into wounds by developing between the skin and the dressings, and in consequence especial care should be taken thoroughly to disinfect these parts.

THE TREATMENT OF PAUPER AND INDIGENT CONSUMPTIVES.

No hospital or the dispensary physician in our large cities can fail to recognize the utter feebleness and inutility of the present methods of treating pauper or indigent consumptives. Dr. Seibert has averred that among poor Germans dispensary treatment not only fails to cure but even sensibly to relieve this class. Dr. Paul H. Kretzschmar confesses to an experience nearly similar.

In the hospitals the story is not quite so bad. Many patients in the first stage improve for a time, but the percentage of cures is extremely small, and most cases progress rapidly to the worse. In New York City there are some thirty thousand cases of consumption, with five thousand annual deaths. If society provided sufficient means of treatment, at least fifteen or twenty per cent. of them could be cured and restored to useful citizenship. While we are spending so much money to keep out cholera, or stop the ravages of acute infectious fevers which kill fewer than does phthisis, would it not be wise to spend some energy upon this last disease? Such is the plea made by Dr. Paul H. Kretzschmar in an article in the *New York Medical Journal* entitled "Dr. Dettweiler's Method of Treating Pulmonary Consumption."

The description given of Dr. Dettweiler's Sanitarium at Falkenstein shows how much can be done by systemized efforts to treat this disease. The statistics, which are most carefully and conscientiously prepared, show that in the first stage fifteen to nineteen per cent. can be cured; that, taking all cases, about thirteen per cent. can be cured, and eleven per cent. be "relatively cured." Dr. Dettweiler even claims that, under appropriate treatment, if the disease has not made too much progress, over one-half the cases of bacillary phthisis can be cured. Dr. Dettweiler's method of treatment involves no expensive apparatus, costly drugs, or elaborate appliances of any kind. It consists essentially in the use of fresh air, liberal food, and alcohol.

The cost to the patient at Falkenstein is about three dollars per day, and it is evident that such a sanitarium as Dr. Dettweiler conducts could not be supported as a public charity. But the essentials of his treatment might be applied. Instead of sending phthisical cases to the crowded wards of city hospitals, there might be country branches established for such cases; or the phthisical service of the city hospitals might be specialized in suitable pavilions.

The treatment of pauper and indigent consumptives is a measure that heartily deserves the consideration of the benevolent in all our large cities, as well as those concerned in the purely economical side of social questions.

DANGEROUS INFLAMMATION OF THE EAR—SENATOR CONKLING'S CASE.

THE case of Senator Conkling, which is now engaging so much of public attention, illustrates in a striking manner the grave results of extension of the inflammatory process from the middle ear to the brain. It is quite probable that the initiative attack was otitis media, which was attended with suppuration in the tympanic cavity and the adjoining cavity of the antrum. Nature failing to make an exit for the pus through the drumhead, the disease extended itself to the mastoid cells and the meninges. The usual severe symptoms manifested themselves, when Dr. Fordyce Barker was called to prescribe for what the patient supposed was a simple "boil in the ear." The grave aspect of the disease is explained by the broken-down condition of the patient at the time of the attack, it being well known that under such conditions the inflammatory process is virulent, and apt to extend into neighboring parts, involving not only the mastoid cells but the meninges of the brain and the periosteum overlying the mastoid.

The management of these cases is manifestly in the direction of prompt evacuation of pent-up secretions. At the earliest possible moment a free incision is to be made in the abscess, which in these cases is far up into the tympanum, and which is not generally reached by the ordinary puncture of the drumhead. When the disease has progressed further, Wilde's incision and perforation of the mastoid give relief, but, unfortunately, both operations are resorted to when too late to be of any benefit. It is to be hoped that in the case of the distinguished senator the rule regarding the operation may have its exception, and ultimate recovery take place; but, as purulent pachymeningitis has already declared itself, the chances are on the wrong side.

DEATHS FROM PYROGALLIC ACID.—The editor of the *Druggists' Circular* says that a druggist received a prescription from an eminent physician for a mixture containing pyrogallic acid in five-grain doses. The pharmacist hesitated about filling the prescription; he consulted the doctor, was told it was all right, and then prepared the medicine. The patient, a young man, died within twenty-four hours. The pharmacist was afterward asked to compound the same mixture for another patient, a young lady, for whom the same doctor had prescribed it. This time he positively declined to prepare it; the prescription was obtained from another pharmacy, and after taking three doses the patient died. This story, if true, is a most extraordinary one, and almost deserves a police investigation. Pyrogallic acid is derived from gallic acid by heating and driving off the CO_2. Its dose is not usually given in text-books.

News of the Week.

State Society Meetings in April.—The Alabama State Medical Society, at Montgomery, April 11th. Dr. E. H. Sholl, President; Dr. T. A. Means, Secretary.

The South Carolina State Medical Society, at Columbia, April 14th. Dr. T. Simons, President; Dr. J. L. Dawson, Secretary.

The California Medical Society, at San Francisco, April 15th. Dr. R. H. Plummer, President; Dr. W. A. Briggs, Secretary.

The Georgia Medical Society, at Rome, April 18th. Dr. A. G. Whitehead, President; Dr. A. B. Ashworth, Secretary.

The Mississippi State Medical Society, at Jackson, April 18th. Dr. N. L. Guia, President; Dr. W. E. Todd, Secretary.

The Texas State Medical Society, at Austin, April 18th. Dr. S. R. Burroughs, President; Dr. F. E. Daniel, Secretary.

The Louisiana State Medical Society, at Munroe, April 21st. Dr. J. Jones, President; Dr. P. B. McCutcheon, Secretary.

The Arkansas State Medical Society, at Fort Smith, April 25th. Dr. W. P. Hart, President; Dr. L. P. Gibson, Secretary.

Government and the Arkansas Hot Springs.—Dr. Keller, of Hot Springs, wishes the Government to exert actual, in place of nominal, control of the Springs, and drive out quacks.—*Medical Standard.*

A Hospital to Cost $100,000 is to be erected at Grand Rapids, Mich.

Compulsory Notification of Infectious Diseases by Physicians.—A bill has been introduced into the Legislature making it penal for physicians not to report births and deaths. It ought not to pass.

The Pros and Cons of Hypnotism.—Professor Voisin claims to have cured an inveterate liar of his evil habit by mesmerism. Professor Voisin is not wanted by dealers in patent medicines. A physician in Carlsruhe hypnotized a young man, who remained in the trance state for eighteen hours and then became maniacal.

The Governor of Minnesota some time ago appointed the following commission on Insane Hospitals: Drs. Perry H. Millard, of St. Paul; Henry W. Brazie, of Minneapolis; and A. H. Collins, of St. Peter. The former commission is abolished, and the following resignations were necessary: Drs. C. H. Boardman and G. W. Wood, of St. Paul, and W. H. Leonard, of Minneapolis. The conditions which hampered the old commission are removed, and increased powers given. Dr. Millard was made president, and Dr. Collins secretary. The commission recommends the employment of more medical assistants, including one lady, and a special pathologist in each State insane hospital.—*Medical Standard.*

Cholera *vs.* Medical College Commencements.—In his address as President of the Chicago Medico-Legal Society, Dr. E. J. Doering said: "I question which is the greater public calamity, an occasional epidemic of cholera, or the regular, recurring annual epidemic of some 4,000 doctors let loose on an innocent and unsuspecting public. . . . The action of our diploma-mills, in adding each year thousands of young men to the ranks of a profession already filled and overflowing, is rapidly producing an army of genteel paupers, too proud to beg, too honest to steal, but too poor to exist. . . . No reform can be expected from the colleges, for obvious reasons; for, managed as they are, as private enterprises for business purposes solely, they naturally resist anything calculated to impair the very object for which they exist. As in a free country like ours it is unfortunately impossible to cause the 'professors' to be imprisoned at hard labor and the colleges to be burned down, we have to seek elsewhere for relief."

Copies of the Medical and Surgical History of the War are getting scarce and expensive. A bill has been presented by Hon. W. J. Stone, of Kentucky, providing for printing additional copies.

A Medical "Trust."—A physician of Spencerville, O., writes to the *Medical Standard:* "The physicians of Spencerville and vicinity have combined for protection against delinquent debtors. The plan adopted is as follows: The physicians make out and exchange lists of patients who are delinquent debtors. All agree to refuse medical aid to such delinquents except for cash. The plan has worked like a charm, and many old debts are being paid. Let physicians elsewhere do likewise."

Druggists and the Prescription of Poisons.—The Indiana Legislature has passed a law declaring that "From and after the passage of this act, no pharmacist, druggist, apothecary, or other person, shall refill more than once prescriptions containing opium or morphine, or preparations of either in which the dose of opium shall exceed one-fourth grain or morphine one-twentieth grain, except with the verbal or written order of a physician." A violation of the law is declared a misdemeanor, punishable by a fine of not less than ten or more than twenty-five dollars.

Furrows on the Finger-nails.—Nearly twenty years ago Dr. Wilks directed attention to the fact that a transverse furrow appeared on the nails of the hand after a serious illness. Medical literature has since then contained a few references to the subject; he again brought the subject before the Pathological Society at its meeting on March 20th, and related a remarkable case. In that case the furrow was caused by three days' sea-sickness.

Erythrophlœin.—At a recent meeting of the Academy of Medicine, M. Panas communicated the results of experiments with erythrophlœin, which he had tried on human eyes, and on those of the lower animals. He states that this substance has a positive anæsthetic effect, which lasts longer than that of cocaine. He considers it objectionable, however, on account of the violent pain and inflammation which it causes. M. Panas prefers cocaine, and condemns erythrophlœin in ophthalmic surgery; he had used it in treating granulations and granular pannus, but the results were not satisfactory.—*British Medical Journal.*

Alcohol and Heart Disease.—Dr. George Harley ends his lectures on the effects of moderate drinking upon the human constitution with the following conclusions: 1.

That alcohol, when indulged in, even well within the limits of intemperance, has a most prejudicial effect on heart disease. 2. That sudden spurts of muscular exertion act most deleteriously on all forms of organic cardiac affections. 3. That mental excitement is a cause of rupture of atheromatous blood-vessels. 4. That a mere extra-distention of a stomach by wind may suffice to fatally arrest a diseased heart's action. The knowledge of these facts has for some years past led me to make it an invariable rule to impress upon all patients laboring under diseases of the circulatory system, who desire to minimize the effects of their complaints and ward off as long as is possible the inevitably fatal termination, to pay strict attention to what I call the following three golden rules: (1) Take exercise, without fatigue; (2) nutrition, without stimulation; and (3) amusement, without excitement.

In Conferring a Decoration upon Sir Morell Mackenzie, the Emperor Frederick said: "When you came the first time I confided in you, as you were recommended by my German physicians. I have since had occasion in my own experience to value your capability. I am glad to bestow upon you this order in thankful acknowledgment of your merits and in memory of my accession to the throne."

The Appointment of Dr. John M. Browne to be Surgeon-General of the Navy, to succeed Dr. Gunnell, whose term of office expired March 26th, has met very general and hearty approval in medical circles. Dr. Browne has been in the service for thirty-five years, and brings to his new position an unusual degree of executive skill, as well as of medical and scientific attainments.

The Irish and our Public Charities.—Mayor Hewitt shows, in a recent letter to the Board of Aldermen, that while the Irish constitute less than a sixth of the population of New York, they constitute more than a fourth of the Board of Aldermen, more than a fourth of the police, and more than a third of the sick, paupers, and criminals supported by the city.

Seventh Meeting of the International Ophthalmological Congress.—At the meeting of the Heidelberg Ophthalmological Society held last year, it was decided to celebrate the twenty-fifth anniversary of the society by inviting the ophthalmologists of all countries to attend its meeting to begin August 9, 1888, and by their presence to expand the meeting of the local ophthalmological society into an International Congress. A committee was intrusted with the preparations necessary for the carrying out of this plan. The committee consists of Drs. Otto Becker, William Hess, and J. Stilling.

The Medical Colleges of New York have nearly all closed their season's work, and it has been a laborious one. The College of Physicians and Surgeons is credited with about eight hundred students. Bellevue and the University have had about seven hundred each. The Woman's Medical College, whose requirements are the most exacting despite its limited financial resources, has about fifty students.

Oil of Peppermint, in vapor diluted even to 1 part in 100,000, kills cockroaches in an hour, they dying in convulsions. This is a fact of interest to doctors' wives, if not to doctors. As for bacilli, Babes says that one drop, placed under a bell-jar covering a cultivation of cholera bacilli, will kill both bacilli and spores in forty-eight hours. Mr. W. Leonard Braddon praises the oil also as among the best of surgical antiseptics, and as of value in phthisis and diphtheria.

Dr. Maurice N. Miller sends the following note: "An editorial in your last issue upon the present status of laboratory instruction in our medical colleges is, in the main, most excellent and seasonable; but I beg to ask correction of a statement or two, which, if allowed to stand, would materially injure the institution with which I have the honor to be connected. You may reasonably lament the very general want of endowment for the purpose of establishing free medical laboratory courses, but, as a matter of justice, it should be known and recorded that the laboratories of biology and pathology connected with the University Medical College have provided regular courses of instruction of eight months' duration for the past six years, *and that this amount of instruction has been given without charge.* Every student graduating from this institution within the period named has been furnished with the use of a microscope and the materials necessary for the mounting of objects. The course includes both normal and pathological histology, and is directed toward a preparation for the appreciation of the morbid processes in disease rather than to the technique of microscopy. Ample provision has been made for advanced work at a nominal cost. Over five thousand specimens have been mounted by these classes during each college session. Since the establishment of the Loomis Laboratories the courses in normal and pathological histology have been extended, they remain obligatory, and are continued without charge for instruction. It is true that, notwithstanding the most liberal foundation of these laboratories, a small tuition-fee is charged for work in advanced lines, and it is questionable whether endowment for special research would be profitable either to the medical or general public."

The Middleton Goldsmith Lecture for 1888 will be given by Dr. J. M. DaCosta, of Philadelphia, on Wednesday evening, April 18th, at eight o'clock, at the Academy of Medicine, 12 West Thirty-first Street, New York. Subject: "The Relation of the Kidney and Heart Affections." The profession is invited.

The Post-graduate Medical School held its third annual banquet, at the Hotel Brunswick, Monday evening, April 10, 1888. The President of the Faculty, Professor D. B. St. John Roosa, presided. Among the guests were Commissioners Porter, Simmons, and Brennan. The following gentlemen responded to toasts: Drs. Jacobi, Bryant, Dana, Simmons, Rev. Dr. Bridgman, and Mr. E. S. Fox. The Secretary, Dr. Rice, stated that the number of matriculants during the past season had nearly doubled, and that thus far two hundred and sixty-five had matriculated.

Dr. Nicholas Senn has been appointed Professor of the Principles of Surgery and Surgical Pathology in the Rush Medical College, Chicago.

Illness of Dr. C. R. Agnew.—We are pained to learn that our distinguished townsman is suffering from an attack of perityphlitis. No grave symptoms have as yet appeared, and his many friends will hope for his speedy recovery.

Reviews and Notices of Books.

Paralyses—Cerebral, Bulbar, and Spinal. A Manual of Diagnosis for Students and Practitioners. By H. Charlton Bastian, M.A., M.D., F.R.S. With numerous Illustrations. Pp. 671. New York: D. Appleton & Co. 1886.

Dr. Bastian has won for himself a deserved reputation as a student of biology and neurology; and a work from his hand is sure to have merit both scientific and literary. The present volume does not disappoint one. It takes the most striking, important, and often obscure of all nervous symptoms, viz., paralysis, and deals with it in so thorough a way that the reader can hardly fail to feel that he is getting all that is known upon the particular points he is investigating. Naturally the descriptions must take in some other things than paralysis, and the book is therefore in reality a tolerably complete contribution to neurological diagnosis.

Any work on a neurological subject must necessarily contain some imperfections, since the progress in this department of medicine is so rapid and continuous. This is especially true of local diagnosis, and the author is certainly behind the times already in his treatment of local diagnosis of cortical regions. The evidence, for example, with regard to the seat of vision has accumulated, until now we can speak of it with much greater certainty than is done by Dr. Bastian.

In his table of pathological causes of brain-paralyses we see no reference to polio-encephalitis, a condition which does undoubtedly sometimes exist. We would venture to criticise, also, the discussion of the focal lesions in the pons and medulla. It is a practical one, but we should have been glad to have had a clearer and more comprehensive discussion of the anatomy of those parts, without thoroughly understanding which the finer diagnosis certainly cannot be made. We would suggest, finally, that a book on paralyses needs, nowadays, to include paralyses from neuritis, and to have a fuller exposition of the methods of electrical examination than is here given. It is ungracious, however, to find fault with a work which, on the whole, is of so much value and interest.

Fever Nursing, Designed for the Use of Professional and other Nurses. By J. C. Wilson, M.D. Philadelphia: J. B. Lippincott Co. 1888.

This is one of the series of "Practical Lessons in Nursing," and consists of the lectures delivered by Dr. Wilson to the Nurse Class at the Philadelphia Hospital. The style is clear, concise, and comprehensive, and the work will prove valuable to physicians as well as to nurses, since it will assist them in issuing proper directions, as it brings to mind many practical details, and gives many useful suggestions which would help greatly in the careful management of a fever case.

Anatomy, Descriptive and Surgical. By Henry Gray, F.R.S. The new American, from the eleventh English edition, thoroughly revised and re-edited, with Additions, by William W. Keen, M.D., Professor of Surgery, Woman's Medical College, Pennsylvania. To which is added Landmarks, Medical and Surgical, by Luther Holden, F.R.S. 8vo, pp. 1064. Philadelphia: Lea Brothers & Co. 1887.

This well-known "Anatomy," in its eleventh American edition, comes to us with the title-page well filled with references to work done by the editors, who have supplemented the labors of the author. It has been the standard upon which many have built, and its ability to support the superstructure proves its intrinsic worth. Dr. Keen has done his part in editing with great judgment and ability. The additions in cuts and text are of great value, and will add to the practical usefulness of the work, and to the needs of students in every department of medicine and surgery. It is rare that an editor can run the risk of substituting any part of a classical work with a success that would challenge criticism, but in the section on Brain this has been done with marked advantage. The amplification of other topics, such as those bearing on cerebral circulation, cerebral localization, the sympathetic nerve, sectional studies of the different regions of the body, has been accomplished with a like gratifying result. One hundred and thirteen new engravings have been added, of which many are original. Many of the old as well as of the new cuts are colored, to show the anatomical relations of blood-vessels and nerves. Holden's "Landmarks" form the usual appendix. Dr. Keen has also to this part added much that is new and valuable.

A Practical Treatise on the Medical and Surgical Uses of Electricity. By Geo. M. Beard, A.M., M.D., and A. D. Rockwell, A.M., M.D. Sixth edition. Revised by A. D. Rockwell, M.D. New York: William Wood & Co. 1888.

The fact that this book has seen a sixth edition affords ample proof of its excellence were such evidence required. One of the joint authors, Dr. Beard, has already been dead several years, but his excellent work, particularly in the domain of functional nervous affections, remains with us as a perpetual reminder of his literary fecundity and scientific perspicuity. In the present work Dr. Beard's handiwork is largely visible. Since his death, however, advances have been made, notably in the application of the electric current to the treatment of the affections peculiar to women. Dr. Rockwell has been quick to seize upon these new advances, and all the essential points connected with the subject as embodied in the recent publications of Apostoli and others will be found in this edition. Besides these adaptations of the current to the uses of the gynecological clinic, Dr. Rockwell has added much practical advice concerning the uses of electricity in cases of extra-uterine pregnancy. As we have already had occasion to observe in a former review of this excellent book, there is much suggestive matter contained among its pages—matter which is far above the conventional padding of mere text-books. Finally, the book is carefully written, is amply illustrated, and devoid of that exaggerated technicality which befogs rather than enlightens.

The Throat and its Diseases, including Associated Affections of the Nose and Ear. With one hundred and twenty illustrations in color and two hundred engravings, designed and executed by the author, Lennox Browne, F.R.C.S.E., Senior Surgeon to the Central London Throat and Ear Hospital. Second edition. 8vo, pp. 614. Philadelphia: Lea Brothers & Co. 1887.

The second edition of this work is a marked improvement upon the first, not only in the way of elaboration of many practical details, but in the more systematic arrangements of some of its important points. The changes have been in more than one sense fundamental.

The aim of the author has been to infuse an individuality in his work which, considering his large experience and accurate methods of observation, gives it a peculiar and lasting value to the laryngologist. With the true instincts of a teacher he endeavors, and with great success, to lay the broad foundation for a thorough knowledge of the technique of nose and throat examinations, not only by lucid descriptions, but by plentiful and striking illustrations. In the present edition we notice that the author has in a measure departed from his original design, by discussing pathological conditions associated with local appearances. This necessarily gives a wider scope to the topics under consideration, and leads to a more intelligent and satisfactory study of the etiology and the reasons for special treatment. There is, indeed, too much of a tendency in works of this kind to ignore general principles of pathology, and treat lesions as mere local and independent conditions. We accordingly congratulate the author on this departure, and would fain encourage him to do more in that line. While we must admit that laryngology has done much for the proper treatment of throat affections, and made possible the cure of many diseases heretofore considered incurable, it can by no means ignore their dependency upon general constitutional disturbances, which invariably precede and accompany the long line of catarrhal troubles. Our author wisely treats both conditions, the local and general, and thus places himself upon the broad, solid basis of common-sense therapeutics.

As a matter of course, in the technique of every specialty each author has his own methods, and to refer to them in detail would be to lengthen a book notice beyond necessary limits. Suffice it to say, however, that, unlike many laryngologists and rhinologists, he does not develop a hobby, but rather, by the painstaking study of his cases, endeavors to base his conclusions upon simple and bare facts interpreted by sound reasoning and practical experience. From such a stand-point, his teachings adapt themselves to the wants of the general practitioner in a way which one would hardly expect on cursorily glancing at the book.

A feature which will specially commend the work is the number of fine chromo-lithographic representations of typical throat lesions, drawn by the author, who proves himself as apt with the brush and graver as with the pen and laryngoscope.

A MANUAL OF ORGANIC MATERIA MEDICA. By JOHN M. MAISCH, Phar. D. Third Edition. Philadelphia: Lea Brothers & Co. 1887.

THE third edition of this work contains a description of the new drugs which have proved a right to recognition since the publication of the last edition. In glancing through it, the reviewer is impressed with the immense amount of substances of the animal and vegetable kingdom which claims the attention of the druggist. It is a pity that in this, as in other works of the same kind, and, in fact, in lectures on Materia Medica, a wider distinction cannot be made between the drugs which are of frequent use and those seldom or never thought of. For instance, orange-flowers are copiously illustrated and described, while licorice has but a short paragraph. As much attention or more is devoted to the description of marigolds, which are officinal, though seldom if ever thought of except as floral decorations, as to the useful peppermint. This is probably due to the fact that all the drugs must be dealt with after a procrustean method, and made to fall within the most succinct description possible.

The cuts are fine, and the book is well gotten up.

DISEASES OF MAN: DATA OF THEIR NOMENCLATURE, CLASSIFICATION, AND GENESIS. By JOHN W. S. GOULEY, M.D., Surgeon to Bellevue Hospital. Pp. 412. New York: J. H. Vail & Co.; London: H. K. Lewis.

THE author of this treatise has put forth a plea for greater precision in medical nomenclature, and has indeed given us a masterpiece of logic, well calculated to carry him successfully through his self-imposed labors in this very inviting field. He has given us a fine example of the developmental method in a spicy, lucid style, admirable for its conciseness and directness of statement. So exhaustively has he treated his subject that criticism regarding shortcomings or omissions is dumb. He has likewise vindicated his claim for conscientious endeavor by many references to philosophical, biographical, and historical authorities which show a wide range of reading, supplemented by much critical acumen. In fact, he has given us a ready-reference book on many topics of interest—a veritable epitome of the drift of opinion and the status of knowledge, which will prove of immense value to the medical historian, who, we are constrained to admit, is yet to appear. He has also displayed much philological ability in the definition of terms, and has sternly set his face against many an absurdity traceable to a departure from the anatomical method of naming in the synopses of Sauvage, Cullen, Parr, Good, and Delorme, presenting them in a manner calculated to convert to his own views.

To rescue the science of medicine from the chaotic condition of its nomenclature is no mean labor. At present it is a Babel of tongues, spoken by individuals with different inflections, and full of tributes to personal vanity and ever-increasing coinages, conveying meanings to no two investigators alike. Claims to priority or contemporaneous discovery are sometimes awkwardly blended in names of different nationalities, and, on the whole, very little basis is allowed for future additions. Against these fatal tendencies to inexactitude our author contends most manfully, and with a rare candor gives his authorities the benefit of their own full statements, and thus he escapes the injustice of divorced contexts as well as garbled extracts. He lays down, among many others, the axiom that diseases should be grouped, "in accordance with the apparatuses of the body, into families, branches of families, classes, orders, genera, species, sub-species, varieties, and sub-varieties." The source of confusion is due to the unsatisfactory fashion of appropriating any name which may strike the fancy or contain the germ of a simile. Why, we ask, may not medicine have its reforms as well as chemistry, or its stable methods as well as astronomy? The changes need not be violent, for many have unconsciously contributed to the reform, the fault having been that the labors have been spasmodic and merely adapted to the emergency. Presumably, however, we may not attain to the precision of mathematics, but there is at least some exhilaration in our approaches to it.

The success of our author, who, among his many literary virtues, writes attractively in the third person, is well pronounced. He has ventured upon a comparatively new field, and with a rare ability has communicated his own enthusiasm to the reader. He deserves as much credit as those reformers who, after many long struggles, have rescued the "Saxon pure and undefiled" from the grip of the "ponderous Johnsonese." We bespeak for the new classic frequent references, unavoidable quotations, the adoption of its many suggestions, and the honor of many editions.

TRANSACTIONS OF THE AMERICAN SURGICAL ASSOCIATION. Vol. v. Edited by J. EWING MEARS. 8vo, pp. 386. Philadelphia: P. Blakiston & Son. 1887.

THIS is the best volume of the series, containing as it does surgical papers of rare merit. It contains twenty original articles, all of which deserve the careful study of every progressive surgeon.

A SHORT MANUAL OF SURGICAL OPERATIONS. By ARTHUR E. J. BARKER, F.R.C.S., Surgeon to University College Hospital, London. 12mo, pp. 415. London and New York: Longmans, Green & Co. 1887.

As its title indicates, this is a short manual of surgical operations. It has been the endeavor of the author, in a very limited space of four hundred pages, to condense and illustrate the practical operative surgery of the day. He has gone over the field very well, and has given his work a value which will be appreciated by younger surgeons who wish, in a compact form, a description of the more modern operations upon the brain, tongue, stomach, alimentary canal, and kidney. His descriptions are terse and intelligible, and prove him to be a practical surgeon, thoroughly alive to the details of his work.

TIGHT LACING LESSENS THE FLOW OF BILE, at least in rabbits. Such is the conclusion arrived at by Dr. W. J. Collins after a series of experiments. The unfettered action of the diaphragm is essential to the normal flow of bile.

Society Reports.

FRENCH SURGICAL CONGRESS.

Third Annual Session, held in Paris, March 12 to 17, 1888.

PROFESSOR VERNEUIL, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

MONDAY, MARCH 12TH—FIRST DAY.

THE opening session of the third French Surgical Congress was called to order by the President, on the afternoon of Monday, March 12, 1888. Delegates were present from Switzerland, Belgium, and Roumania, as well as from France.

M. **VERNEUIL** delivered the

PRESIDENT'S ADDRESS,

which was a defence of French surgery from the charges brought against it by critics of neighboring countries. In France, he maintained, there was just as much advance in the science and art of surgery as there was in other countries, only the progress was of a different sort. French surgeons were marching along none the less surely because slowly, and their route was along less dangerous paths. His colleagues did not make a daily practice of removing a larynx, or a pharynx, or an œsophagus, or a stomach; and it was not a very common thing for them to puncture the cavities of the heart. They were certainly less rash than the surgeons of Germany, England, or America, but perhaps their confiding patients were the gainers thereby. French surgery was eminently conservative, though it hardly deserved the appellation, which had been applied to it at the time of Lisfranc, of

POULTICE SURGERY.

But, for all their conservatism, French surgeons did not hesitate to use the knife freely, and to operate boldly when anything was to be gained by so doing. Their aim was, however, to do the most good to their patients, while exposing them to the least risk.

M. **OLLIER**, of Lyons, then presented a communication upon

RESECTION OF THE WRIST FOR ANCHYLOSIS.

He showed that there was formed over the ends of the bones an osteo-fibrous cushion, so that a new and very mobile articulation resulted. The movements of this new joint might imitate very perfectly those of the normal articulation. It was formerly thought to be absolutely necessary to sacrifice the extensor tendons of the hand, but it has been found practicable, by the exertion of a little care, to save these tendons, and consequently to preserve a more perfect motion of the fingers. The greatest difficulty in operating is met with in cases of rheumatic anchylosis in which the sheaths of the tendons are diseased.

MM. **DEMONS** and **MOURE**, of Bordeaux, reported two cases of

EXTIRPATION OF THE LARYNX.

The first case was one of epithelioma of the base of the tongue and of the upper portion of the larynx. Extirpation was performed, and the patient survived nine months without a return of the disease in the larnyx, though there was a return at the base of the tongue.

The second case was a man, aged fifty-seven, who had had a polyp removed from the left vocal cord one year before. One year after the operation an epithelial tumor appeared upon the right vocal cord. As the ganglia in the neighborhood were not involved, it was determined to operate. Partial laryngectomy was therefore performed. This was done six months ago, and the patient was still alive and free from the disease. The authors believed that the operation promised much in early cases in which there was no glandular involvement.

M. **DUPONT** had performed total extirpation of the larynx once. He had found difficulty in keeping Trendelenburg's tube in position and preferred suturing the trachea to the external wound, bending it so as to shut off the cavity of the larynx.

M. **MOLLIÈRE** had also performed the operation of partial excision once. He had found no trouble from the Trendelenburg cannula. The patient was able to talk by means of the one vocal cord which had been left and an opposing cicatricial band. For cancer of limited extent the speaker thought there should be no hesitation in removing the larynx, in whole or in part.

TUESDAY, MARCH 13TH—SECOND DAY.

The subject proposed for discussion at this session was

THE TREATMENT OF GUNSHOT WOUNDS OF THE VISCERAL CAVITIES.

M. **CHAUVEL** confined his remarks chiefly to wounds of the abdominal cavity. Every penetrating wound, inflicted by small projectiles, of the abdomen, in which there is a probability that some of the contained organs are injured, should, the speaker maintained, be enlarged and explored. The statistics of non-intervention in penetrating wounds of the abdomen show a mortality of eighty per cent. In forty-one cases of laparotomy performed since 1880 for gunshot wounds of the abdomen, there have been twelve recoveries, giving a mortality of about seventy per cent. The earlier the operation is done the more favorable are the chances. If the surgeon wait until peritonitis has begun it is too late, and an operation will be of no avail. There is an additional danger of hemorrhage from a small artery or vein if the surgeon neglect to explore the wound immediately after the receipt of the injury.

M. **DELORME** thought that, while immediate intervention might be advisable in civil practice in the larger cities, it was hardly practicable on the battle-field, or in an ambulance.

M. **PONCET** discussed the question of

CONTUSIONS OF THE ABDOMEN WITH INTESTINAL LESIONS,

caused by projectiles. He traced the various modifications of wounds of this nature depending upon the changes in the nature of the projectiles employed. In former times large round balls were used, which just touched the body, as it were, causing intra-peritoneal effusions of blood. For the past thirty years, however, the tendency had been to the more frequent employment of explosive balls. These caused, not effusions of blood, but intestinal lesions without rupture of the abdominal walls. In the future, he thought, non-penetrating wounds of the abdomen would be less common in military practice than they are now. The new shells, composed of steel, and exploded by melinite, scattered in every direction vast numbers of small ragged pieces with such velocity that they would almost certainly penetrate the abdominal wall, even when they were spent.

M. **RECLUS** regarded the English and American methods of treating these cases as too bold, and he declared himself to be a partisan of armed expectancy. He thought that every penetrating wound of the abdomen was accompanied by intestinal lesions, but he did not agree with the previous speakers who looked upon every such wound as almost certainly fatal. In his experiments upon dogs, he had found that these wounds were relatively of slight gravity. In the treatment of these injuries, he advised firm compression of the abdomen, opium in large doses, abstention from all food except small quantities of iced milk frequently repeated. If peritonitis ensued then, and not till then, he would perform laparotomy, an operation which he regarded as very serious in itself.

M. **LABBÉ** reported a case in which he had performed laparotomy on account of a pistol-ball wound of the abdomen. The patient died in the course of the following night.

M. Verchère read a paper upon

INTESTINO-PERITONEAL SEPTICÆMIA,

following wounds of the gut. It is commonly stated, he said, that death occurs in these cases either from hemorrhage or from peritonitis. The latter is not, however, always manifested by the classical signs of peritoneal inflammation, but may be masked. This form he called

ASTHENIC PERITONITIS.

The symptoms were an abdominal facies, tympanites, an almost imperceptible and rapid pulse, reaching 120 to 150 beats per minute, no elevation of temperature, and an absolute freedom from tenderness of the abdomen, which might even be kneaded without giving rise to the slightest expression of pain. The symptoms of this condition, indeed, are very similar to those of strangulation of the intestine. Moreover, the two conditions are not unlike in their nature, since there is a paralysis of the intestine in these cases which causes obstruction. The treatment should comprise lavage of the stomach, intestinal antisepsis, purgative enemata, and electricity.

M. Castex related four cases of

PENETRATING WOUNDS OF THE CRANIUM,

caused by pistol-balls. In one case there was escape of brain-substance. The wounds were dressed antiseptically, and all of the cases recovered.

M. Panas read a paper entitled

SPONTANEOUS HÆMATOMATA OF THE ORBIT.

He reported a case which was only the fourth instance of the affection on record. It occurred in a child four years of age. The little patient had been subject to epistaxis, but was otherwise healthy and of good antecedents. The other cases had been reported by Fischer, Wharton Jones, and Ziegler.

M. Thiriar, of Brussels, reported a case of

CHOLECYSTECTOMY,

performed upon a lady, aged thirty, who had suffered for six years from colic with jaundice. The operation afforded complete relief.

M. Lannelongue then read a paper on

DERMOID CYSTS IN THE REGION OF THE ANTERIOR FONTANELLE,

in which he endeavored to formulate rules for the diagnosis of these rare tumors. They are congenital, but are not noticed, on account of their small size, until several months or years after birth, when they begin to increase in size. They are fluctuating and usually translucent, are situated in the median line over the anterior fontanelle, and are irreducible. The only treatment is removal, care being taken to dissect away the wall of the cyst. It is better, however, not to operate until the child is about a year old.

M. Ollier had seen three cases of dermoid cysts in this region, one of which was in a man thirty-four years of age. He removed the tumor, leaving the lower wall, which in the course of a short time took on a growth of hair resembling in every respect that covering the rest of the scalp.

M. Polosson related a case of

MALIGNANT PUSTULE.

He removed the lesion with the thermo-cautery, and made multiple incisions in the surrounding œdematous parts. The patient recovered.

M. Leprevost related a case of

PSEUDARTHROSIS OF THE HUMERUS

ollowing a gunshot wound. There was also radial paralysis. As the proximal end of the nerve could not be found in the vicinity of the fracture, the author searched for the trunk in the axilla, and then followed it along until its extremity was seen. The nerve was sutured, but at the end of five months the motion was not restored. The pseudarthrosis was cured by freshening the ends of the bone and suturing them.

M. Berthomier read a paper on the

TREATMENT OF FRACTURE OF THE ELBOW

in children and adults, by immobilization of the forearm in extension and supination.

M. Bilhaut reported several cases of

LATERAL CURVATURE OF THE SPINE,

caused by an unequal growth of the two lower extremities.

M. Cerné read a paper upon the influence of

PHOSPHATURIA

in the production of surgical lesions similar to, but less grave than, those occurring in the course of glycosuria.

M. Verneuil had seen a case of carbuncle in a patient with

DIABETES MELLITUS,

in which, after the cure of the anthrax, the glycosuria gave place to phosphaturia.

Wednesday, March 14th—Third Day.

The order for discussion for this day was

THE RADICAL CURE OF HERNIA.

M. Socin presented a number of statistics, collected from his own practice, showing the results of this plan of treatment. Of 75 cases of reducible hernia, the operation resulted fatally twice; of 85 cases of strangulated hernia, in which the radical operation was performed, there were 11 deaths. Of 133 operations, in which he had been able to follow the patients, there had been 82 cases of definite cure, and 51 relapses.

M. Léonté, of Bucharest, described a new procedure for the

RADICAL TREATMENT OF INGUINAL HERNIA.

After reducing the epiploon with the intestine, he separated the peritoneum for a distance around the internal ring. This becomes wrinkled, and closes the internal opening of the canal. The sac is pulled upon by the left hand while the serous membrane is being dissected away. Then the internal ring is drawn together by a circular suture, the interior of the sac is scraped with a Volkmann's spoon, irritated with phenic acid and chloride of zinc, and then a silver wire or silk suture is passed through the integument and the sac. Of seven cases so treated there had been no relapse at the end of two years and a half.

M. Mollière was strongly in favor of the radical treatment of hernia, and believed that the dangers of the operation were greatly exaggerated. He insisted especially on the necessity of the

EXTIRPATION OF THE SAC.

Of 250 operations the mortality had not exceeded twelve per cent., and this included the deaths resulting from gangrene of the intestine.

M. Lucas-Championnière insisted upon early operation, the earlier the better and the safer, and did not believe in waiting until the strangulation had taken place. It was especially in congenital hernia that the operation gave promise of the best results.

M. Richelot insisted upon the entire safety of the operation in simple hernias of small size, occurring in adolescents and adults. In the case of a very large or a complicated hernia in an adult, the danger of the operation was very slight, but success was less certain than in the first class of cases. In the aged and those debilitated by disease, the benefits to be hoped for from a radical operation did not compensate for the risks.

M. Jules Bœckel related a case of

RADICAL TREATMENT OF UMBILICAL HERNIA.

The patient was a woman, forty-seven years of age, having an umbilical hernia measuring sixteen inches in its long diameter by twelve transversely. The operation was completely successful.

M. Lannelongue reported a case of

RESECTION OF THE LOWER BORDER OF THE THORAX

for the cure of an abscess in a child.

M. Guyon related two cases in which he had operated for

TUBERCULOSIS OF THE BLADDER.

He opened the bladder, scraped the diseased portions, applying also the thermo-cautery, using subsequently injections of iodoform. In both cases the bacilli disappeared from the urine, and in one the cystitis was cured also.

M. Demons read a paper on

CANCER OF UTERUS

treated by vaginal hysterectomy.

M. Terrier reported the results in eighteen cases of

VAGINAL HYSTERECTOMY

for uterine cancer. There were four deaths, three from hemorrhage and one from shock. Three cases were excluded for various causes. Of the remaining eighteen cases there was a speedy return of the disease in seven. The other four were alive and free from relapse at periods varying from over a year to two years and nine months after the operation.

M. Terrillon reported fifteen cases of

ABDOMINAL HYSTERECTOMY

performed for the removal of large fibroid tumors of the uterus. The operation was a grave one, and should be reserved for cases in which the tumor was of very large size and had given rise to alarming symptoms. Ablation of the tubes and ovaries was to be preferred in cases of small or medium-sized fibromata, threatening the life of the patient by repeated hemorrhage.

M. Monod reported a case of

CAVERNOUS LYMPHANGIOMA,

and read a paper on the history and nature of true lymphangiomata.

M. Monod also related a case of restoration of the flexor tendon of the thumb by means of the

TRANSPLANTATION OF A RABBIT'S TENDON.

M. Schwartz reported a case of erectile tumor of the face cured by

ELECTROLYSIS.

The patient was a young woman, one entire side of whose face was disfigured by an enormous erectile tumor. The treatment extended over a period of two years and a half, and had given a very successful result.

M. Redard reported several cases of

ANGIOMATA OF THE FACE,

treated successfully by the same method.

M. Redard also read a paper on the technique of

ORTHOPÆDIC CORSETS,

made of gutta-percha, plaster of Paris, felt, and silicate of potash.

M. Boudet read a paper on the technique of

MEDICAL ELECTROLYSIS,

with special reference to the treatment of erectile tumors.

M. Berrut presented a communication on the diagnosis of

RETROVERSION OF THE UTERUS.

Normally, he said, when the woman is in the standing position, the finger cannot be passed into the posterior cul-de-sac. If this can be done it is an evidence of retroversion.

(To be continued.)

NEW YORK ACADEMY OF MEDICINE.

SECTION ON PRACTICE OF MEDICINE.

Stated Meeting, March 20, 1888.

R. C. M. Page, M.D., Chairman.

Dr. Leonard Weber presented the specimen of aneurism of the thoracic aorta, a brief history of which he had given at the previous meeting, and made some remarks upon the pathology and etiology of the affection.

Dr. J. Weir Roosevelt read a paper (see p. 407) on

PERNICIOUS ANÆMIA.

Dr. Francis Delafield thought that, although during the past few years we had accumulated many more cases of pernicious anæmia, our knowledge of the disease had, instead of growing clearer, become more uncertain. The study of the blood in a variety of other conditions had also become more common, and in them we frequently enough found the condition of the blood which was once considered characteristic of pernicious anæmia. There was the same diminution of the red blood-cells, the same diminution in the quantity of the hæmoglobin—not only in simple anæmia, in Addison's disease, in pseudo-leucæmia, but in a great variety of other conditions. Many patients who had Bright's disease, many who had cancer, many who had phthisis, many whose general health was simply depreciated, but who could not be said to have simple anæmia, had a diminished number of red blood-cells and diminished quantity of hæmoglobin equal to that in the beginning of pernicious anæmia. Thus it had been shown that the lesion which we had regarded as characteristic of pernicious anæmia could no longer be so regarded; nor had we found any other lesion. He doubted whether we knew at all what was pernicious anæmia. He doubted whether we ought to call it a blood disease, or whether we knew what it should be called.

Dr. Kinnicutt said that unfortunately little unanimity of opinion prevailed as to what really constituted pernicious anæmia. On the one hand, it was regarded as a disease *sui generis*, due to some unknown cause, invariably tending to a fatal issue, and without demonstrable lesions aside from blood and marrow changes. On the other hand, it was believed to be a grave or pernicious form of anæmia due to the long-continued operation of causes capable of producing the simpler forms. Recent researches had demonstrated the fact that a group of symptoms, in no way to be distinguished from those present in pernicious anæmia, were due to the presence of an intestinal parasite. On the removal of the parasite recovery rapidly occurred. Again, a similar clinical picture was presented by certain cases, in which extensive destructive lesions of the secretory structures of the stomach were found. In the latter case the question had been raised whether the gastric lesion might not be secondary. From a very careful study of his own cases, which had recently been reported in detail, he was convinced that at least in them this lesion was primary.

Dr. Kinnicutt took exception to the statement that the blood-changes were identical in the simpler and the pernicious forms of anæmia.

The presence of microcytes, megalocytes, and poikilocytes was common to both, although these anatomical forms existed in a much more marked degree in pernicious anæmia. In the latter alone, however, the proportion of hæmoglobin was often *much greater than normal*, almost never less than normal. It had been observed by Laache and others to be double the normal amount. This distinguished it from all other forms of anæmia.

In many cases of chlorosis and simple anæmia it was well known that the percentage of red blood discs was normal, the percentage of hæmoglobin alone being reduced; in other cases the corpuscular richness of the blood was materially diminished, but *not* in proportion to the reduction in the hæmoglobin percentage.

Dr. Kinnicutt was unable to recognize the lesions of chronic gastritis, suggested by Dr. Roosevelt, in the cases of pernicious anæmia reported by him (Dr. Kinnicutt).

Dr. William H. Draper said it had often occurred to him, in studying the physiognomy of patients in hospitals, that a most striking feature was anæmia, and he had thought that if it were possible to discover the mysterious process by which the anæmia was brought about, we should be able to establish a system of therapeutics which would be much more successful than any yet devised. He thought a great deal of confusion had arisen from the fact that we still clung largely to the old classification of primary and secondary anæmia. We knew what secondary anæmia was; it might be, for instance, an anæmia which followed hemorrhage, or a febrile process. We spoke of primary anæmia, the cause of which we could not explain, but the so-called primary anæmia would be recognized as really secondary, could we but discover its cause.

Dr. Draper thought we had arrived at a period when we could adopt a more rational classification, one based upon blood-forming and blood-destructive conditions. For example, he would include all those cases depending upon impoverishment of the blood among anæmias due to blood-destroying processes. They included anæmia from hemorrhage, suppuration, fever—any acute or chronic disease which produced a more or less considerable and prolonged anæmic state. He would include under the anæmias which were produced through defects in the blood-forming function, chlorosis, leucæmias, the anæmia which occurred in chronic Bright's disease, cirrhosis, and the anæmia called pernicious.

Dr. Beverley Robinson had seen more than one case of anæmia in which he had to speculate for some time whether it was or was not one of pernicious anæmia. Time might determine whether it was a simple anæmia, and curable, or a necessarily fatal pernicious anæmia. He would like to have heard something about treatment, particularly by systematic use of oxygen, from which he thought he had derived benefit in anæmia.

Dr. W. R. James thought that if we took the blood changes alone as the basis for classifying pernicious anæmia as a separate disease, as had been done in the past, the classification no longer had firm ground to rest upon, for similar blood changes had been seen in other conditions. We might, perhaps, do better to consider pernicious anæmia only a symptom of a disease, or of a group of diseases, of which at present we knew but little. He had seen a well-marked case of chlorosis in which the percentage of hæmoglobin was sixty or seventy, while in another case, in which the symptoms were less well marked, there was eighteen per cent. of hæmoglobin. As to a classification on the basis of blood-forming and blood-destroying organs, he thought it was not at present practical, because of our ignorance of what were the blood-forming and blood-destroying organs.

Dr. William H. Thomson said he had come to the meeting expecting to have his previously formed ideas of pernicious anæmia made a little more distinct, but instead they had grown more indistinct. Two of the cases which Dr. Roosevelt had described as cases of pernicious anæmia did not, he thought, properly belong in that class of diseases. When Dr. Thomson spoke of pernicious anæmia he had in mind a distinct form of anæmia, characterized by the presence of fever, absence of emaciation relatively to what took place in other forms of anæmia, by the presence of vomiting as quite distinct from gastritis, and by the presence of rectal hæmorrhages, and occasionally, also, by hæmorrhages from other parts of the body. He would be disposed to exclude from among cases of pernicious anæmia one in which there was no elevation of temperature. In pernicious anæmia there was a peculiar lemon-yellow color of the skin and a bright appearance of the fat. He had been struck with the occasional appearance of very small, imperfectly spherical and brilliant red corpuscles, smaller than those of the red blood-cells in the blood. He had regarded them as apparently wandering bodies of pure hæmoglobin. He could not understand how extensive atrophy of the gastric tubules could occur, as had been reported in some cases of pernicious anæmia, without emaciation. Extreme anæmia might be present in Bright's disease, and could be accounted for by the influence of the poisonous elements upon the blood and the gastric changes which took place in this disease; but, although the case might go on to a fatal issue, he would not pronounce it one of pernicious anæmia.

Dr. Kinnicutt said, in reply to Dr. Thomson's question, that in both cases reported by him of pernicious anæmia, in which there was such extensive destruction of the gastric tubules there was both fever and mucous hæmorrhages.

Dr. Roosevelt, in closing the discussion, said he had attempted to state in the paper what had been made so clear by Dr. Delafield, that there was nothing which could be pointed out definitely as the cause of pernicious anæmia; but this much could be said, that the blood lesion was a necessary factor to explain many of the symptoms, and it was, perhaps, well to put a certain amount of faith in a lesion which would do that. He agreed with Dr. Kinnicutt to this extent, that it was possible to have in a simple anæmia, which would recover in a short time under administration of iron, and without any history pointing to pernicious anæmia, a reduction of the red discs to fifty per cent., the hæmoglobin remaining at seventy-five. He knew that in pernicious anæmia there was no necessary excess of hæmoglobin. In some well-studied cases it had been stated that the hæmoglobin was even a little less than the number of discs would indicate. Yet it was a fact pointing to simple anæmia, curable by iron, etc., when there was great reduction of hæmoglobin out of proportion to the reduction in the blood discs.

Regarding blood-forming and blood-destroying organs, he had been unable to learn what they were, and he thought we should not speak of lesions of organs, even the existence of which had not been absolutely proven.

Dr. Thomson had spoken of characteristic color in pernicious anæmia, but it might be absent even in fatal cases. Again, the same pallor might be present in simple anæmia. Then there were cases of pernicious anæmia, in which, as far as the record showed, no fever had been present from beginning to end. Then fever of an irregular type was quite frequent in simple anæmia. Hæmorrhages did not necessarily point to pernicious anæmia. Some observers claimed that hæmorrhage was rare. Then hæmorrhages into the retina occurred also in simple anæmia and other diseases. He could not, therefore, see how we were to distinguish from any one symptom, or group of symptoms, pernicious from simple anæmia, except the whole course of the disease, with its fatal issue, were taken into consideration.

SECTION ON OBSTETRICS AND GYNECOLOGY.

Stated Meeting, March 22, 1888.

J. E. Janvrin, M.D., Chairman.

Dr. Grace Peckham read a paper on

WORMIAN BONES IN THE FONTANELLES AND THEIR EFFECTS IN CHILDBIRTH.

Dr. Bullard said he could readily see how, in the specimen presented, the Wormian bone in the posterior fontanelle might prevent overlapping of the sutures.

Dr. Sharlau thought Dr. Peckham overestimated the influence of the Wormian bones. He had known infants to stand the pressure incident to labor for hours, and even two or three days, without destroying life. Long-continued pressure during labor had frequently occurred in German hospitals in women with contracted pelves, without a fatal result to the child. That being true, he could not understand how a little Wormian bone, which might prevent overlapping of the sutures during delivery, would destroy life. The author had said that in all three cases the children were stillborn and the women primiparæ; it was well known that stillbirth was more likely to take place in primiparæ.

Dr. Hall was unable, in a recent case of delivery in a woman with a small, if not absolutely contracted, pelvis, to map out the posterior fontanelle. She was unable to deliver with the forceps, and craniotomy had to be performed. She thought it probable that the posterior fontanelle was occupied by a Wormian bone, as in the case presented by Dr. Peckham.

Dr. Mabbott said that, as resident physician to the Nursery and Child's Hospital, he had not seen a similar case with Wormian bones, but he queried whether their influence would not be, in preventing moulding of the child's skull, to cause damage by increased pressure to the mother's soft parts, and for a similar length of time prove a protection to the child in preventing pressure on the cranial contents. In cases of suspected danger to the life of the child during the second stage of labor, especial attention should be given to the fœtal heart.

Dr. Boldt asked Dr. Peckham in what condition she had found the brain.

Dr. Agramonté, referring to Dr. Peckham's quotation from the old writers to the effect that the Wormian bones were an indication of arrest of development, said it seemed to him that, in the case presented, it showed a new point of ossification, increasing the extent of the whole bone-surface. The skull presented seemed also to be longer than usual in the antero-posterior diameter, which might account for the greater difficulty during the second stage of labor.

Dr. Mitchell asked whether it was always possible to determine the presence of the Wormian bones during labor.

Dr. Peckham closed the discussion, and said it was well known that the infant would stand, during labor, an incredible amount of pressure, but it was usually during the first stage. The physician usually terminated the labor before a long time had elapsed after the second stage. It was not interfered with in the cases related, because the pelvis was roomy, and it was expected momentarily to terminate naturally. The skull was not unusually long, the antero-posterior diameter being but four inches. The bi-parietal diameter was short. The damage from pressure was due, she thought, to its being transferred to the base of the skull where the vital centres lay. They had sought carefully for the cause of death, but the brain had not been examined, as they wished to preserve the skull complete. Regarding the difficulty of determining the presence of the Wormian bones during labor, it was not difficult when one's attention had been called to its occurrence. Whether the sudden pressure and quick delivery with the forceps would not also incur danger was a question.

Dr. W. E. Bullard then reported

A CASE OF PLACENTA PRÆVIA

which occurred in a girl sixteen and a half years of age. About the sixth month hemorrhage began, and the family physician was called, who wrote a prescription, probably for ergotine, and sent for Dr. Bullard. Dr. Bullard arrived about two and a half hours later, and found the patient almost exsanguinated. The mattress was filled with blood; the vagina contained blood-clots. The os was one and a half inch in diameter, dilatable; the head was presenting; the placenta was attached on the left side of the cervix. No pains had yet been felt. As long as the fingers were kept in the cervix the hemorrhage ceased, but recurred when the fingers were removed. Dr. Bullard placed the patient in Sims' position and tamponned with cotton containing alum and carbolized water. After about an hour he removed the tampon, distended the os with the Barnes dilator, introduced the hand, dissected the placenta from the left side of the internal os, and ruptured the membranes, when prolapse of the cord took place. The cord was returned, and, after the arrival of assistance, he applied the forceps to the fœtal head and brought it down upon the perineum, when the cord was again felt, this time pulseless. The child was stillborn and could not be resuscitated. The placenta was expelled at once. The mother made a tedious recovery.

His preference for the forceps in this case was due to the fact that the os was well dilated, the funis had presented, and fear of additional shock which version would cause a very weak patient.

In two other cases of placenta prævia, one being largely of central implantation, the methods employed differed considerably from that which was adopted in this one. In one the hemorrhage occurred near term, was not profuse, labor progressed naturally, the child was stillborn, the mother recovered. In the case of central implantation, hemorrhage took place at the sixth month; Dr. Hanks assisted; the cervix was somewhat rigid, the internal os was close, and dilatation was effected rapidly by egg-shaped rubber dilators; the hand was introduced; the placenta had to be stripped from the left side, a distance of one inch and a half, before the membranes could be reached; podalic version was employed, and two infants were delivered alive; they were kept in an incubator, but one died at the end of three weeks. There was but one placenta, and one common amniotic cavity. The mother suffered somewhat from sepsis.

Dr. H. J. Boldt preferred to employ version to the use of the forceps, as being less dangerous to the mother and fully as safe for the child.

The Chairman related a case similar to that of Dr. Bullard's. The patient had had several miscarriages, and given birth to one child at term, which weighed only about three pounds and a half. It was a breech-presentation, but no difficulty was experienced in delivery. She again became pregnant about two years ago. At about the eighth month she was taken with profuse bleeding. Dr. Janvrin arrived almost immediately afterward, and found the patient nearly blanched; the bed-clothing was saturated; the vagina was filled with clots. The os was dilated an inch and a half to two inches, and the placenta presented. On introducing the finger into the cervix and making pressure upon the child from without, the head could be felt. While the examination continued the hemorrhage ceased. The husband was sent for Dr. Lusk; thorough dilatation was effected by the introduction of the fist into the cervix, which also controlled hemorrhage. The placental attachment was distant from the external os about two and a half inches. The child was dead. Dr. Lusk pressed the child down from without. Dr. Janvrin then experienced little difficulty in applying the forceps to the head and delivering. The slight difficulty arose from a bony projection of the sacrum, perhaps, and exostosis, which had left a furrow on the right side of the child's head. The mother made a good recovery, and had since given birth to a child which weighed a few ounces more than three pounds.

Dr. Janvrin thought that if hemorrhage could be controlled by plugging the os with the hand, it was unnecessary to use any other tampon, and if the patient was not too much exhausted and the cervix could be rapidly dilated, the easiest method of delivery would be to apply the forceps. But even in such a case he knew of no objection to extracting the child by the feet.

Dr. Bullard said, in reply to a question by Dr. Mabbott as to whether in a case of central implantation he would pierce the placenta, that he had had no experience in the matter. In his own case, approaching to central implantation, he was able to pass his finger up, detach the placenta at its attachment to the os, and divide the membranes. He thought it would be difficult to pass the hand directly through the placenta.

Dr. R. A. Murray referred to a paper which he had read before the Section about two years ago, in which he gave the history of a case of absolute central implantation of the placenta. It had generally been stated that in placenta prævia some slight loss of blood was likely to take place, commencing about the fifth month, giving warning of the condition present. There were, Dr. Murray said, a considerable number of cases in which there was no dribbling of blood whatever until labor pains came on, and then the bleeding was likely to be exceedingly profuse. He gave the history of one case of central implantation in which the first hemorrhage took place at term, and the patient very nearly lost her life, so great was the amount of blood lost. He had had two other similar cases, and, in addition to these three, he had seen four other cases of central implantation of the placenta. In lateral implantation he ruptured the bag of waters, which always caused the uterus to contract and check the hemorrhage, giving the physician at least ten minutes to prepare his instruments. He was a firm believer in Barnes' method of delivery in the cases in which there was sufficient time. Most physicians were following the example of Hoffmeyer in proceeding to deliver or bring about abortion at once after discovery of placenta prævia, not attempting to tide the case along to the month of viability. The diagnosis was made in Hoffmeyer's cases after the occurrence of the first hemorrhage.

Adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE PRESIDENTIAL ELECTION AT THE COLLEGE OF PHYSICIANS—AN EXPEDIENT IN OPERATING FOR EXTROVERSION OF THE BLADDER—CLINICAL EVENING AT THE MEDICAL SOCIETY OF LONDON—DOCTORS AND THE BUDGET—MR. CROOKES' ADDRESS AT THE CHEMICAL SOCIETY—DISINFECTION OF LONDON SEWAGE—THE HABITUAL DRUNKARDS ACT AMENDMENT BILL.

LONDON, March 31, 1888.

IN accordance with ancient custom, the election at the College of Physicians took place on Monday last, being the Monday following Palm Sunday. About one hundred and fifty Fellows were present and took part in the voting (the members and licentiates of the college have no vote, nor any voice whatever in the management of their college). The method of election is rather peculiar. Canvassing beforehand is strictly forbidden, and even at the time of election candidates are not openly put forward. There is no formal proposing and seconding. The voting is by ballot, and each Fellow present gives his vote for whom he pleases. There may consequently be, as on the present occasion, several Fellows who achieve the unenviable distinction of obtaining a solitary vote apiece. If, as the result of the first ballot, no Fellow receives the suffrages of at least two-thirds present, a second one takes place. At the second ballot a simple majority suffices. On this occasion the issue at first seemed rather uncertain. The first ballot showed that ten Fellows had received votes, more or less numerous, Dr. Quain heading the list. The second one, however, placed Sir Andrew Clark at the head of the poll by a majority of eight (Clark, 79; Quain, 71), and he was forthwith inducted as president. In that capacity I have no doubt he will be as popular as in other positions which he has held. To use a popular phrase, he is a man whom everybody likes. This is no slight tribute for a physician in large practice to receive. Most men who have succeeded very well leave not a few enemies. In Sir Andrew Clark's case I should say they were very few, and he is considered to have the largest private practice of any general physician in this country. Rumor places his professional income at from twelve to fifteen thousand pounds a year. Certain it is that he works hard at his profession. Eight o'clock in the morning, winter and summer, finds him in his consulting-room beginning to see his morning patients. He is often thus occupied till nearly 3 P.M., and then only desists in order to drive round in his carriage to fulfil his numerous out-of-door engagements. With such an overwhelmingly large practice, Sir Andrew has decidedly no temptation to stoop to rob a general practitioner of his patients, as some physicians have been accused of doing. As regards the patients whom he visits at their own homes, I understand that he makes it almost a rule only to visit such patients as have already a medical man in attendance, and refuses to take sole charge of cases.

At the last meeting of the Medical and Chirurgical Society, Mr. G. H. Makins read a paper on a case of extroversion of the bladder on which he had operated. The patient was a boy of five, on whom an attempt to raise a flap by Thiersch's method had failed three years previously. The position of the unsuccessful flap was marked by a cicatrix on the left side of the bladder, which prevented any considerable shifting of the skin on that side. To obviate this difficulty, the sacro-iliac synchondroses were divided on both sides. This allowed approximation of the anterior superior spines to the extent of an inch, with, of course, a corresponding diminution of the gap existing in the situation of the symphysis. This gain was maintained by continuous extension and an attempt, two months later, to unite the opposite boundaries of the bladder. This failed, but at a subsequent operation the bladder was covered by means of a single lateral Thiersch's flap, the exposed surface having been reduced in size from $3\frac{1}{4} \times 3\frac{1}{4}$ to $1\frac{1}{2} \times 1\frac{1}{2}$ inches by the closure of the symphisial opening.

The last meeting of the Medical Society of London was a clinical one, the evening being devoted to the exhibition of cases. Among those shown was a man in whom obliterative arteritis had resulted from the pressure of a crutch. The latter had been used by the patient since the age of eight, but the arteritis was only recent. Mr. Morgan showed a woman, aged fifty-two, who presented a typical example of the disease named by Velpeau "carcinoma en cuirasse." Mr. Rose narrated the case of a man who had received a gunshot injury of the right knee. The joint was opened and cleansed by carbolic and sublimate solutions. A good result ensued.

Doctors are being much exercised in their minds over the proposed horse and wheel taxes in the new budget. It is, however, impossible to keep a cake and eat it as well, and as a remission of a penny in the pound in the income tax is promised at the same time, it is obvious that the Chancellor of the Exchequer was obliged to devise new taxes of some kind or another. The argument that those who use the roads should pay for them is logically unanswerable, and I am afraid that such of our country brethren as wish to avoid the new taxes must take to cycles, a class of vehicles which Mr. Goschen has not ventured to tax. Cycling already counts many votaries among members of our profession, and most English country roads (except in hilly districts) are adapted for it.

At the annual general meeting of the Chemical Society, held a few evenings ago, the president, Professor Crookes, F.R.S., put forward some interesting speculations in his address. It was experimentally proved, he said, that in matter which had responded to every test of an element there were minute shades of difference. The distinction between elements and compounds no longer kept pace with the developments of chemical science, but must be modified to include a vast array of intermediate bodies, meta-elements. If degrees of elementicity were admissible, it would be allowed that chlorine approximated much more closely to bromine than to oxygen, sodium, or sulphur. At the conclusion of his address Mr. Crookes sketched out a theory of chemical energy which, if accepted, completely controverts Sir William Thomson's theory of the final dissolution of the universe through the dissipation of its energy. He conjectured that the heat radiations propagated outward through the ether from the ponderable matter of the universe were transformed at the confines of the latter into the primary essential motions of chemical atoms. These gravitated inward the instant they were formed, and thus restored to the universe the energy which would otherwise be lost to it through radiant heat.

The Metropolitan Board of Works have determined to pursue their system of chemically disinfecting the sewage of London, and have appointed as their consulting chemist Sir Henry Roscoe, F.R.S. Should the Local Government Bill become law, however, the Board of Works will be snuffed out of existence. Not many regrets will probably be felt should such prove to be the case.

It is good news to learn that the Government have given their assent, with certain reservations, to the Habitual Drunkards Act Amendment Bill. Unless crowded out there is, therefore, some hope that the measure may become law during the present session of Parliament.

THE ORAL WHIFF.

To the Editor of The Medical Record.

Sir: If Dr. Otto will re-examine the "oral whiff" as it occurs in his own person, and then re-read Wintrich's and Guttmann's descriptions of "systolic vesicular breathing," I think he will perceive that they are not at all the same thing. The latter is heard by auscultation over "the borders of the lungs near the heart" (Guttmann). I never succeeded in hearing the "oral whiff" in the chest, but only at the open mouth, or along the trachea as far as the sternal notch, where it ceased abruptly. "Systolic vesicular breathing" I have heard in many persons who had no "oral whiff," and I have heard the whiff in persons who did not exhibit "systolic vesicular breathing." The one seems produced at the glottis, the other in the lungs. The one can be heard with the ear held some distance from the patient's mouth; the other is heard only by auscultating the chest. The one is, in my experience, a decidedly unusual, the latter a very common, physical sign.

So far from regarding the "oral whiff" as a pathological phenomenon (if Dr. Otto so understood me), I tried to express the opinion that, even when occurring during repose, it need not necessarily be considered a sign of disease, as Drummond would have us think. At the worst, it seems usually to indicate a nervous heart.

Very truly yours,
William S. Cheesman, M.D.

Auburn, N. Y., April 2, 1888.

"WINTER ITCH," BY A VICTIM OF NINE YEARS' STANDING.

To the Editor of The Medical Record.

Sir: Nine years ago, last December, I left my practice in Michigan and went to New York to study microscopy. In about two weeks after my arrival there I was attacked by intense itching of the skin over the extensor muscles of the legs and thighs. It was so annoying that I consulted the late Dr. Flint, who recommended zinc. sulph., ℈ij.; aqua, ℥ iv., to apply locally, and sol. Fowler, gtt. ij., after meals. In about four weeks it disappeared, and I thought myself cured. Fond delusion! for the next winter, in January, it attacked me with redoubled energy. Some remedies were applied, and in about six or seven weeks it disappeared. It continued, with more or less severity, every winter until 1883, when I again went to New York and for two months had a severe attack. I tried several remedies without apparent relief, and in the spring the "itch" disappeared as usual.

In 1884 I went to Europe, and while in Zürich, Switzerland, was attacked again in the usual manner. I finally went to Vienna, and while there consulted Auspritz and Benedict. Their diagnoses were neuresis. The remedies were Donovan's solution internally, and oleum cadini externally. They were applied for several weeks without relief, and when the warm weather began I got well. In two years I returned to New York, and consulted Dr. George H. Fox, who diagnosed eczema; he prescribed white precipitate locally, and to bathe with Packer's pine-tar soap. This treatment gave some relief. Finally I went to St. Louis, Mo., to live, and the first winter there I suffered more than any year previous. The "itch" began in January, and became so annoying that I could not sleep nights. I would, in fact, in my sleep, so scratch myself that I have frequently had the blood running to my heels. I finally went to Hot Springs, Ark., and took a course of baths for six weeks without relief. When warm weather began I recovered as usual. While in St. Louis and Hot Springs I consulted several dermatologists, who gave varying diagnoses.

This winter it began in December. I then consulted a well-known dermatologist, who said he wished *I knew* what would cure it, for his wife had suffered with it for the past three years. He also asked me if I ever found out a cure to let him know, for which he said he *would be very thankfulindeed.*

While I have been penning these lines a leading practitioner of this city was in my office, and he stated that his wife has the "itch" so badly that she can't sleep o' nights. The claim of one of the writers in The Medical Record of March 3d, that it is due to want of cleanliness, is not well taken. Here are two ladies in the higher walks of life who have had it, one for nine the other for three years. So far as my experience goes, I have never seen it in the lower strata of society.

While in Hot Springs I saw several victims, and they were all persons in the upper social circles.

I have examined it under the microscope, and find nothing but broken epithelial scales and dried blood-corpuscles.

Had I a sufficiently fertile imagination I might have found the bacillus or microbe of "winter itch," and have conferred lasting fame on Kansas City.

The surface has been well *scratched* over, at least in my case, for the last nine years; perhaps if some one should scratch deeper they may find the true cause of the distressing complaint. As it is, we know nothing of its pathology, and as little about its treatment. The writer in The Medical Record has been very fortunate if he has cured all his patients with chrysophanic acid. It had no effect on me, and several others of my acquaintance. I do not believe this disease is contagious. Neither of the gentlemen whose wives have had it have had any trouble.

The only relief I have experienced from remedies is a saturated solution of chloral hydrate applied with a brush. It cauterizes the skin. For the time being you have converted an "itch" into a burn.

Acid. carbol., ʒ j.; aqua, ℥ j., has given temporary relief. It is a milder cautery than the chloral. That there is here a grand field for some aspiring dermatologist no one who has ever had the "itch" will for a moment doubt.

Le Roy Dibble, M.D.

1100 Main Street, Kansas City, March 24, 1888.

An Appreciative Guest.—We have received a communication from Dr. A. Kallay, of Carlsbad, editor of the "Illustrirter Aerztlicher Almanach," in which he desires to express, not only his admiration for the many evidences which he saw here of culture and of medical and scientific progress, but also his thanks to all whom he met while in this country, for their uniform courtesy and kindness to him. He proposes to write an account of the physicians and medical teachers of the United States, as well as of what he saw, and was impressed with, in this country, as soon as his duties will afford him the necessary time. "But at the present," he says, "I only desire to express my thanks for the extraordinary hospitality I have enjoyed in so many instances, as it is a physical impossibility for me to thank individually each one for the kindness I have received at his hands. With the hope that in Carlsbad an opportunity may present itself to enable me to balance accounts of hospitality with my American friends, I wish them all farewell."

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from March 25 to April 7, 1888.

KIMBALL, J. P., Major and Surgeon. Granted leave of absence for two months, to take effect about April 10, 1888. S. O. 68, A. G. O., March 23, 1888.

CROSBY, W. D., First Lieutenant and Assistant Surgeon. Granted leave of absence for two weeks. S. O. 29, Department of Arizona, March 16, 1888.

AZFULL, Thomas F., Captain and Assistant Surgeon (retired). Died March 12, 1888, at Fort Lee, N. J.

BAXTER, Colonel JEDEDIAH H., Chief Medical Purveyor; Major CHARLES R. GREENLEAF, Surgeon; detailed as members of an Army Retiring Board appointed to meet at Washington, D. C., on Wednesday, April 4, 1888. S. O. 75, A. G. O., April 2, 1888.

ALDEN, CHARLES H., Major and Surgeon. Will repair to Washington, D. C., on public business, and on the completion thereof will return to his station (West Point, N. Y.). S. O. 75, A. G. O., April 2, 1888.

BIART, VICTOR, Captain and Assistant Surgeon. Having been found incapacitated for active service by an Army Retiring Board, sick leave of absence is still further extended until further orders on account of disability. S. O. 77, A. G. O., April 4, 1888.

GARDNER, EDWIN F., Captain and Assistant Surgeon. Leave of absence extended fourteen days. S. O. 77, A. G. O., April 4, 1888.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 7, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	9	2
Scarlet fever	145	21
Cerebro-spinal meningitis	7	7
Measles	57	4
Diphtheria	125	28
Small-pox	25	4
Yellow fever	0	0
Cholera	0	0

LAWSON TAIT'S METHOD IN PLASTIC OPERATIONS.—Dr. C. W. Oviatt, of Oshkosh, Wis., writes: "In the issue of THE MEDICAL RECORD of February 11th, appears a communication from Dr. T. Griswold Comstock, of St. Louis, under the above heading. While indorsing all that he says in favor of the method and of its superiority over older ones, I am surprised that he is unable to learn of anyone practising it in this country, excepting himself and a homœopathic professor. Professor A. Reeves Jackson has taught this method, and performed the operation at his clinics at the College of Physicians and Surgeons of Chicago, for the past four or five years. Instead of silk, Professor Jackson uses silkworm-gut sutures, the advantages of which can be readily seen. As stated by Dr. Comstock, the technique of the operation is difficult to comprehend from a written description, but becomes sufficiently easy when once witnessed, and I feel sure that many other former pupils of Professor Jackson besides myself are performing the operation successfully whenever cases of perineal laceration, requiring an operation, present themselves. The same principle is successfully employed in operations upon single hare-lip. The edges of the fissure being split, the mucous membrane is united by one row of sutures and the skin by another. No tissue is lost and a minimun cicatrix results."

ONE CURIOUS AND INSTRUCTIVE STORY OF DR. DARWIN, Charles Darwin's father, is worthy of reproduction. He was once called in consultation to see a serious case, which the regular attendant had pronounced hopeless; Dr. Darwin saw the case, gave some hope of recovery, and went his way. The patient died, and Dr. Darwin felt sure his reputation in that household was gone forever. Not long afterward, to his great surprise, he was again summoned to the same family, and found that gratitude, and not resentment, had been felt toward him for encouraging a hope which had nevertheless proved without solid foundation. He was accustomed thereafter to say that practitioners should be very slow to stifle hope, as such a course both paralyzes effort and brings, before its time, the bitterness of death.—*The Lancet.*

IRON IN PURPURA.—A chemical examination of the blood, bile, pleuritic effusion, brain, liver, spleen, marrow of the bones, kidneys, lungs, and lymphatic glands, in a case of purpura, has been made by Dr. Zaleski, and published in the *Russian Military Medical Gazette*, his object being to determine whether this disease, which is called by him "morbus maculosus Werlhofii," is associated with any increase in the quantity of iron in the body, as some results, obtained by Hindenlang and Kunkel, appear to indicate. Dr. Zaleski found that, so far from this being the case, the iron was diminished by something like a half. He found no inorganic iron compounds like those described by Kunkel, but most of it existed in the form of an albuminate; some, however, was found in the pigment spots in very stable compounds similar to hæmoglobin. More iron appeared to exist in the gray than in the white substance of the brain.—*The Lancet.*

TO REMOVE WATER FROM ALCOHOL.—If gelatine be suspended in ordinary alcohol it will absorb the water; but as it is insoluble in alcohol that substance will remain behind, and thus nearly absolute alcohol may be obtained without distillation.

FOR ORTHOPNŒA, due to defective heart action, free purgation, with the hourly administration of digitalis and nux vomica, are recommended.

PHYSIOLOGICAL VARIATIONS IN THE POSITION AND SHAPE OF THE LIVER.—At a recent meeting of the Medico-Chirurgical Society of Edinburgh, Dr. J. Lymington made some remarks on this subject. He said (*The Lancet*) that the ordinary text-book description of the liver was incorrect. This fault was due to the fact that the organ was usually described as if it were a flat organ. To get a proper idea of the shape of the liver *in situ*, they must build one up after the manner of His, whose model he showed. This model he believed to be fairly correct, and his conclusion had been drawn from the examination of a very large number of frozen sections. The Spigelian lobe and the depression for the vena cava inferior, which were usually described as on the under surface, were really situated anteriorly. It was best to consider the liver as possessed of superior, right, left, interior, anterior, and posterior surfaces. Within physiological limits he had found that the position of the liver varied greatly. Probably the most important factor in this alteration was the stomach, according as it was full or empty. This would be appreciated from the position of the viscus. He had found experimentally (that is, on the dead subject) that with increasing distention of the stomach the left edge of the stomach became depressed, and the longitudinal fissure moved to the right. The suspensory ligaments acted as a kind of check rein. When the stomach was empty it was folded back on itself, but when the stomach was full it was stretched, as its attachment to the longitudinal fissure moved to the right. He did not know how far the matter had been investigated clinically, but he had no doubt as to the results as obtained on the dead subject.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 16 NEW YORK, APRIL 21, 1888 **Whole No. 911**

Original Articles.

WASTED SUNBEAMS—UNUSED HOUSE-TOPS.

BY GOUVERNEUR M. SMITH, M.D.,

NEW YORK.

HUMAN habitations, though erected for the benign purposes of insuring comfort, affording protection, and promoting family privacy, are, unfortunately, often the causes of a number of the morbid ills from which mankind suffer. This fact is true, as relating to the residences both of the rich and of the poor. It is a difficult task to construct an absolutely sanitary dwelling. In nearly every home, however, there are more or less avoidable, insalutary conditions, which are undermining the health of each family circle.

Tent-life, in genial climes, affords to many a healthful mode of living; and tent-life, in the warm season of the temperate zone, has its fascinations and its beneficial results. To be tabernacled under canvas and engaged in open-air occupations is often healthful; but the camp must be well sited, or the proximity of unkind neighbors, as cesspools, fens, and polluted water, will as surely rob the camp-dweller of his vitality as the footpad will rob the unguarded of his treasures. Camp-life, salutary as it may often be, is not adapted, from climatic and other causes, to meet the necessities of universal home requirements.

History tells us that certain nomadic tribes, in the early ages, finding aggregation and permanency of residence desirable for business and other purposes, built solid structures, and, striking their tents, have thenceforth dwelt in substantial residences. From these primitive architectural styles of dwellings, we can learn certain lessons which, if adapted to suit our own civilization and our own climate, would promote the health and longevity of our race.

The nineteenth century will ever be memorable for the advancement it has given to medicine, surgery, and sanitary science; but the twentieth century, when reviewing and profiting by the achievements of its predecessor, will doubtless be amazed that the domiciles of mankind, especially in cities, were in some respects inferior to those built several thousands of years previously.

The writings of Virgil, Horace, and other classical writers can be read with interest and benefit, at the present day, as teaching the style and erudition of an ancient period. In Xenophon's "Memorabilia," after describing how homes should be pleasant and useful, cool in summer and warm in winter, it is added: "If it is well, therefore, that houses should thus be made, ought we not to build the parts toward the south, higher, that the sun in winter may not be shut out, and the parts toward the north, lower, that the cold winds may not fall violently on them?"

Sacred writers offer important lessons, also, concerning Eastern habits of thought and customs regarding habitations, which can be utilized in a most profitable manner in the present age. The early Oriental had no conception of the nature of air or sunlight, as now understood by modern science. Probably much of our present knowledge is but polished ignorance. Chemistry and physics have only recently become efficient handmaids in the precise examination of nature, but without these aids the Eastern mind drew certain broad and grand deductions from the investigation of natural phenomena. Some of these tenets are axioms in our own philosophy.

These ancient forefathers believed that fresh air was an important factor in maintaining physical vigor, and that exposure to the solar beams was salutary, and they lived according to their convictions. In constructing their homes their architects utilized their house-tops and gave them salubrious plateaus. The roofs, gently declining as water-sheds, were covered either with tiles, bricks, or cement, making them as durable as pavements. Beddings of turf, prettily distributed, made these artificial deserts to blossom as the rose.

The boundaries of each house were designated by walls, but it was possible to walk over an extended neighboring area. To prevent accidents, obedience was given to the scriptural injunction, "When thou buildest a new house, then thou shalt make a battlement for thy roof, that thou bring not blood upon thine house if any man fall from thence." It is not a matter of wonder that such house-tops proved favorite places of resort, for worship, conference, and repose, and that occasionally tents were spread upon them.

Is there anything either in our climate or state of civilization which prevents us from, in a measure, imitating such ancient, useful, and fashionable airiness? During the inclement season of the year, comparatively little use might be made of the house-tops. I will subsequently allude to how the upper stories of dwellings might be constructed to catch the genial sunbeam, while shutting out winter's rudeness. Our atmosphere is proverbially bright, and many of the severer days are sunshiny; the genial element is subject to capture and benign use, as we can pluck quinine from its barky surroundings.

In a great metropolis like this, there are thousands of children and invalids, to say nothing of those in mature years and engaged in the ordinary pursuits of life, who require more fresh air and sunning, than is now practicable. City yards are small, shut in by tall buildings and high fences; the parks may not be adjacent, and the streets afford ill-conditioned pleasure-grounds.

Cannot architectural ingenuity, coached by sanitary science, contrive some method of using the thousands of acres of house-tops on this island so that roofs, now so useful in affording in-door protection from cold, sleet, and rain, can be made additionally useful, at certain seasons, by affording out-door recreation and protection from invalidism? Cannot the same skill contrive new designs for the upper and most salutary stories of our dwellings; playing rooms and sunning rooms, especially adapted for the winter season, but so cleverly fashioned that too intense torrid beams can be excluded in summer?

The "solarium" of the New York Hospital, made attractive with its plants, birds, and aquaria, is a potent ally of therapeutics in restoring the convalescents, and at the Hospital for the Relief of the Ruptured and Crippled, the contagious sparkle of the sunbeam is found shining in the eyes and lives of the young patients.

Physicians not infrequently have occasion to observe the arrangements and conditions of the upper floors in our first-class private dwellings; for if a servant is sick, the family physician may be summoned to attend. The conditions may not be absolutely pernicious, but the space on these precious stories might be utilized in a much more healthful and attractive way. The heated and vitiated air from the lower part of the house rises to the top floor, with perhaps slight provision for its exit, and here are found servants' and storage rooms and also often a dark closet with precipitous ladder, leading to the scuttle, rarely entered and ascended, except by workmen to repair the roof. Apartments for domestics, have to be provided for, but quarters for trunks and unused articles, rather than occupying choice space, could be centralized in the building, be lighted from above, or relegated to some special annex in the yard.

In the ordinary and more spacious private dwellings the upper floors could be revolutionized: ventilating shafts introduced, new broad windows running the width of the house both front and rear, rearrangement of space, ready accessibility to the roof afforded, and at least a part of these floors made attractive to children and invalids as a bright, airy, and healthful resort. The limits of this article forbid giving details of such construction, and other collateral suggestions, making such changes practicable.

It is beyond the scope of this paper to point out all the evils attendant upon modern homes; one evil to which I am specially alluding is that of etiolation. Etiolation, while favorably regarded by farmers in rendering celery white, crisp, and tender, is not favorable in regard to bringing up human beings.

Not many years ago, for a time, it was widely customary here, to hang blue-tinted glass panes or sashes in windows, curtains were drawn back, and many a room, from which the winter's sun was ordinarily, for the most part, excluded, was now brightened. Invalids and others basked in the shiny genial, and apparently with benign effect. Was such effect attributable to the mere azure tint alone, or to a salutary and unaccustomed hyemal basking?

In many of the lofty and palatial apartment houses in New York, comparatively fireproof, wealth selects suites of rooms near the apices, the air being dryer, purer, brighter, and healthier than near the ground. It seems very clear that even private dwellings, occupied by single families, are not planned in the wisest manner.

Equally new attention should be paid to a utilization of the roof for a large part of the year. The city boy of today wishes to fly his kite. As a special privilege, parental consent is given to his going upon the house-top; but, with what injunctions! Precautions against falling off, that he take feline steps, or the paint will be scratched and the joints of the thin tin covering will be cracked and the roof made leaky, etc. As illustrating present inaccessibility to the roof: during the recent large fire at Forty-second Street and Lexington Avenue, a party of ladies in one of the fine houses on Murray Hill endeavored to go on the roof, to witness the adjacent conflagration. One of the ladies became wedged in the narrow passage. She survives, to grace her family, and to tell a humorous experience.

Roofing can be contrived suited to this climate, and enduring as pavement. A pleasure-resort might ornament each residence, its limits bounded by the area of the dwelling; neighborly consent could widen the range, turf and flowers brightening the plain. Iron-framed and glass-enclosed rooms, or cupolas, could be added, which would prove useful during all seasons, artificial heat tempering brumal inclemency.

If such adaptation of house-tops would be an advantage to the affluent, who can escape city life during the summer, how much greater advantage would be secured to the tenement-house districts. It would be more difficult to preserve roofs in the latter quarters in good order, but the public weal seems to demand that ingenuity should devise an adamantine roof-covering. The promiscuous mingling on house-tops of the residents of slums, freed from police restraint, might at times lead to mischief; but ordinarily, and over a large area, it is reasonable to believe that the innate proprieties of life would prove an all-sufficient constabulary influence. For the higher grade of tenement houses, such fresh-air facilities would probably be hailed with delight by the inmates. The proximity of open breathing places to their rooms would endear their humble homes. Summer moonlight evenings could have a new aspect; and, again, round a family lantern, groups might gather to read, sew, or engage in games, and thus a home-felt pleasure could quiet restless spirits, craving questionable or illicit amusements. More true enjoyment might be observed in such groups than on the piazzas of fashionable resorts. Landlords could arrange for the periodical sweeping of roofs, as well as the halls and stairways, and, among a very large class of the respectable poor, pride would stimulate to a tidy and decorative care of their home parks.

The confirmed vicious and degraded classes would neither appreciate nor properly use such improvements if offered them. In turning to higher grades of humanity, we find an aristocracy permeating even the lower million. In the same tenement house social distinctions may be observed among families, obstructing intimate domestic intercourse and cordial friendly co-operation; but a well-recognized common weal would doubtless link such diversities into a sufficiently harmonious and democratic unity of action.

I have thus pointed out what advantages to health might be secured by a rearrangement of the upper stories of private dwellings, making them the most salutary, in each residence. I have also shown how the house-tops of both the opulent and of the poor might be adapted for the private and public welfare of mankind, especially in cities.

Architects have merely to study ancient history and modern science to utilize the suggestions here made. Sunbeams and oxygen have been running to waste long enough. People must congregate into cities, and such crowding together must necessarily preclude, in a measure, some of the most salutary ways of living. The poet has said, "God made the country, and man made the town;" but the Divinity who so beautifully fashioned the country, brightens both His own handiwork and the town with the same sunlight, and aërates with the same atmosphere.

Cannot cities more generously use nature's benign gifts? Cannot the closing years of the nineteeth century witness a revolution in the construction of dwellings, a change in the habits of city life, and a most notable improvement in the health of the people?

THE SOLUBILITY OF MEAT.—Dr. N. Pavlovski, who has just published a number of experiments made in Professor Dobroslavin's laboratory, in St. Petersburg, on the solubility of meat in water, finds that by means of a temperature of 302° F.—under high pressure, of course—water will dissolve one and a half times as much of the albuminoid constituents of meat as when the meat is boiled in it under ordinary circumstances; also that the addition of a small quantity of hydrochloric acid increases the amount dissolved to a very marked degree, so that he succeeded in obtaining a solution containing as much as sixty-four per cent. of the meat. This was effected by boiling for eight hours in a digester, at a temperature of from 300–320° F., meat and water to which had been added some dilute hydrochloric acid containing ten per cent. of the gas, or nearly the same proportion as the B. P. preparation. Without the acid, only about sixteen per cent. of the meat albumen dissolved. Some further experiments were made—to ascertain the proportion of acid most favorable to the solution. One or two cubic centimetres, added to eighty cubic centimetres of water, were found to dissolve much more of the meat than a larger proportion of acid. Thus, with eight cubic centimetres of the acid, only fifty-three per cent. was dissolved, and with fifteen cubic centimetres, only forty-eight per cent. A similar effect is observed in gastric digestion, where too large a proportion of hydrochloric acid arrests digestion, and the process can only be made to recommence by the neutralization of part of the acid.

YELLOW HAIR.—This was esteemed a beauty in the time of the Plantagenets, when ladies used saffron to dye it. Queen Elizabeth made yellow hair fashionable. Her yellow hair was "fair atired with rich strings of golden wire. And gold wire was abouten all her genteel middle small."

UMBILICAL TUMOR IN AN INFANT FORMED BY PROLAPSE OF THE INTESTINAL MUCOUS MEMBRANE OF MECKEL'S DIVERTICULUM.[1]

By L. EMMETT HOLT, A.M., M.D.,

ATTENDING PHYSICIAN TO THE NEW YORK INFANT ASYLUM, NEW YORK.

A WELL-NOURISHED female infant, aged seven months, was referred to me for treatment by my friend, Dr. R. C. M. Page, for an umbilical tumor. On examination, there was found a bright red mass, one-fourth of an inch in diameter, and projecting nearly three-fourths of an inch from the bottom of the umbilical cicatrix. It was cylindrical, slightly rounded at its extremity, and pedunculated at its cutaneous attachment. Its surface resembled mucous membrane; it was perfectly smooth, shining, nowhere granular. At one point, where the epithelium had been rubbed off, there was a little capillary hemorrhage. The mass was solid, did not protrude more upon coughing or crying, and no opening could be found anywhere in it.

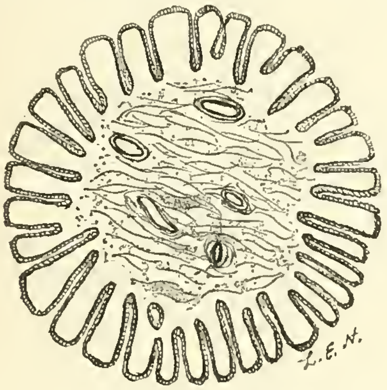

FIG. 1.—A schematic drawing of a cross section of the tumor, giving the relations of the parts and the general appearance under low power.

The following history was given by the mother: The cord fell at the sixth day, but the umbilicus did not heal completely for six weeks; once a hemorrhage took place sufficient to wet a place in a napkin, the size of one's hand. The tumor was first discovered about this time (sixth week). It was then quite small. Since that time it has slowly but steadily enlarged until its present size was attained; this in spite of various astringent and caustic applications, compresses, bandaging, etc. There had been a little watery discharge, tinged with blood at times, but nothing resembling fæcal masses, or with a fæcal odor, had been observed.

The tumor was drawn well forward with forceps and a silk ligature tightly applied about its base. It was then snipped off with scissors and the stump touched with the cautery. The ligature fell off in four or five days, and when the patient was last seen, about a month after the operation, no trace whatever of the tumor could be detected.

Dr. Ira Van Gieson, Assistant at the Pathological Laboratory of the College of Physicians and Surgeons, made the following report upon the specimen.

Microscopical examination.—"The nodule consists of two portions, an outer peripheral zone, and an inner central portion. The outer zone contains long follicles (Fig. 2, a), having a membrana propria, and a lumen lined by cylindrical epithelial cells, among which are a few scattered beaker-cells. The tissue between the follicles consists of smooth muscle-cells, and of small spindle-shaped and small spheroidal cells. The free border of this zone has a number of thin-walled vessels greatly distended with red blood-cells; in places the red blood-cells have escaped from the vessels and form degenerating, diffuse, pigmented, brownish-red masses. There are apparently commencing necrotic changes in this free border, for it stains badly, and its histological elements are indistinct and partly converted into amorphous areas.

"The central portion consists of scattered interlacing bands of smooth muscle-cells, which enclose areas of rather loose, moderately vascular, fibrillar connective tissue, containing here and there large blood-vessels. At the bases of the follicles the smooth muscle-fibres form, in places, a fairly distinct band, corresponding to the muscularis mucosæ (Fig. 2, b). Beneath this rather ill-defined muscularis mucosæ, are occasional isolated, circumscribed collections of small round cells—apparently the solitary follicles of the small intestine.

"It would seem, then, from its morphological characteristics, that the nodule consists of a portion of the mucosa and muscularis mucosæ of the small intestine, the latter being mixed with a moderate amount of new-formed connective tissue."

Scattered through medical literature for the last fifty years are the records of quite a number of cases of umbilical tumors in young infants, with clinical features much like the case reported. They are mentioned by Holmes[1] as "warty or nipple-like tumors," which seem due to some morbid condition left by the separation of the cord.

Holmes quotes Athol Johnson, who, he says, first described them in English as, "short nipple-shaped tumors or papillæ rising from the centre of the main umbilical depression, sometimes to the height and circumference of an inch. In some cases a minute canal extends a short distance into them, but no urine escapes. They are easily cured by ligature."

The microscopical character of these tumors was first accurately described by Küstner.[2] He gives a detailed description of two cases, with drawings of the appearances, which so closely resemble those of the case reported that they might have been made from the sections.

Küstner drew a sharp line of distinction between these cases and simple umbilical fungi. Examinations were made of seven cases of the latter variety; they were found to be made up of ordinary granulation-tissue. They differ further, as he pointed out, from the "nipple-like tumors," in that they are only seen during the first few weeks of life; that they develop quite rapidly; that they have no definite size or shape; that they are usually quite easily repressed by caustics, and but little hemorrhage follows their removal.

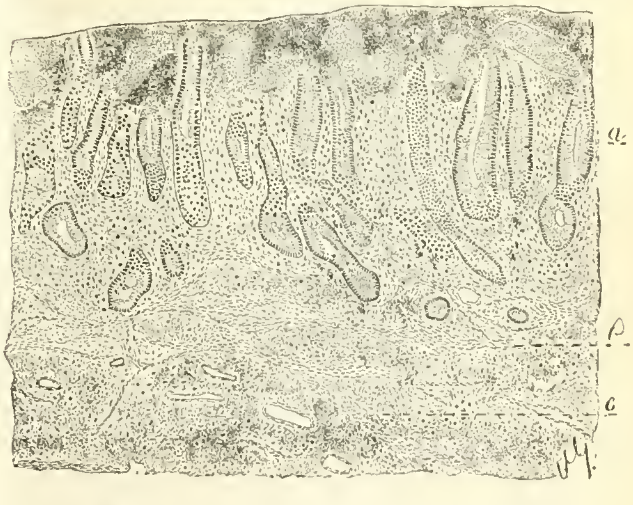

FIG. 2.—*a*, Mucosa with a partially degenerated free border containing masses of extravasated blood; *b*, muscularis mucosæ; *c*, areas of new connective tissue containing large blood-vessels and scattered bands of smooth muscle fibres. × 80

The other tumors develop very slowly, some scarcely changing in size for months; their shape is characteristic; they may be seen in children aged several months (seven months in the case reported); caustics have little or no effect; quite large hemorrhages are not uncommon after section. Küstner has given them the name *adenoma.* He admits that the surface of the tumor corresponds in all respects with the mucous membrane of the intestine. Having examined the umbilical cord in a number of cases, at different distances from the body, and finding no trace of any such tissue elements, he inclines to the view that the starting-point of the new-growth is an inclusion in the umbilical cicatrix of some epithelial cells, the remains of the omphalo-mesenteric duct, or Meckel's diverticulum.

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[1] Presented to the New York Pathological Society, December 14, 1887.

[1] Surgical Diseases of Children, p. 181, 1869.

[2] Virchow's Archiv, Bd. lxix., 286.

The name "adenoma" seems to me to be an unfortunate one, as being at the same time, both misleading and inexact. It seems more logical to regard the tumors as produced by an inversion or prolapse of the mucous membrane of an open diverticulum, since there are other umbilical tumors like these, in that they are covered with intestinal mucous membrane, which admit of no other satisfactory explanation. These have been very fully described by Barth,[1] and will be considered later.

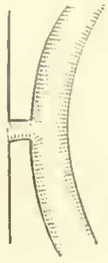
FIG. 3.

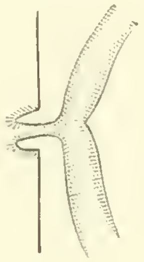
FIG. 4.

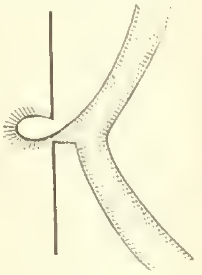
FIG. 5.

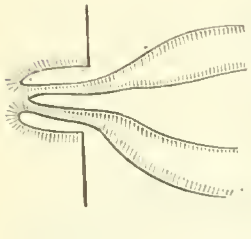
FIG. 6.

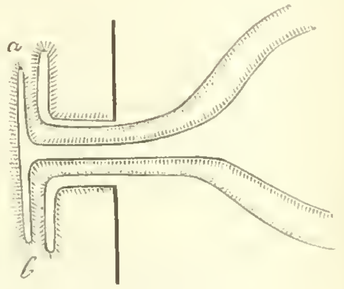

FIG. 7.

These drawings, except Fig. 5, are from Barth.

Meckel's diverticulum, according to Birch-Hirschfeld,[2] is to be regarded as an arrest in development of the bowel in one of its steps, where it is in connection with the umbilical vesicle. In the most marked degree there exists a fissure in the abdominal wall below the navel, through which the ileum opens. Through this opening the fæces pass, the bowel below being very narrow or rudimentary.

In the next grade, the ileum communicates directly with the abdominal opening at the umbilicus by means of the patent omphalo-mesenteric duct; the bowel below may be open and well developed.

In a third class, the ventral fissure is closed and a blind process of the ileum exists, attached to the umbilicus by a fibrous cord, the remains of the obliterated duct.

Lastly, in the slightest grade there remains from the duct only the free diverticulum of the ileum.

It is with the second variety that we are chiefly concerned.

Fig. 3 represents a simple open diverticulum, giving a fæcal fistula at the umbilicus. These cases are not so very rare. King[3] reports two such, in which autopsies were made, death having occurred from other causes. In both a diverticulum was found which communicated with the ileum from ten to twenty inches from the cæcum.

Several instances[4] are on record in which intestinal worms have been discharged through such fistulæ, one[5] in a child seven years of age, the opening dating from birth.

In the next class of cases there exists an umbilical tumor with a fistula at its summit. From the fistula, fæcal masses are discharged as in the former variety, and a probe passes into the abdomen some distance, presumably into the intestine.

These tumors are covered with mucous membrane which the microscope shows to be like that of the intestine. Barth represents their formation by Fig. 4, the relation of which to Fig. 3 will be apparent at a glance. He has collected six cases like this. I have been able to find two more.[1]

Closely resembling these cases is one reported by Pearce Gould[2] as a "Congenital Mucous Polypus of the Umbilicus." This tumor was in all respects like the preceding class, except that the central opening existed only to the depth of an eighth of an inch, or rather a probe passed no further. Having made the "microscopical examination and found the tubular glands upon the surface lined with columnar epithelium," he settles on the diagnosis of polypus, and compares the case to congenital rectal polypi, remarking that "it is probably a safe conjecture that it originally developed from embryonic tissues, the remains of the umbilical vesicle."

Deferring for the present the consideration of the relation of this and those preceding it, to the one reported at the beginning of this paper, we pass to the cases represented by Barth, by Figs. 6 and 7, where there is not only an inversion of the mucous membrane of the diverticulum, but prolapse of the intestine.

In cases represented by Fig. 6 there is a conical tumor with a single external opening, dividing into two at a little distance from the surface. In Fig. 7 there is a tumor, pedunculated at its base, but broadening out, terminates in two cornua, at both of which are fistulæ, which lead inward for a considerable distance, but which do not intercommunicate.

Barth has collected six cases belonging to the class represented by these two diagrams, and adds one of his own, making seven in all. Four presented the two-horned tumor. I have been able to find but two other cases on record to add to his list. Gibb[3] records a case which is remarkable. The tumor projected two inches from the truly body. The child was premature (seven months), and died on the ninth day. Meconium had escaped meanwhile from one of the fistulæ, but not from the other. The autopsy showed the colon to be reduced to the size of an ordinary round worm, but pervious. One of the fistulæ led into the intestine, the other admitted a probe only to the depth of three-fourths of an inch. No microscopical examination was made, but the tumor was considered an inverted colon, the pervious opening being regarded as the ileo-cæcal valve leading into the ileum, and the one patulous a short distance, as the vermiform appendix.[4] The other case is from Holmes (*loc. cit.*), and resembles in many features Gibb's case, though not so typical. This protruded inside the membranes, covering the navel, while Gibb's case projected alongside of it.

In all of the cases mentioned the tumor has been covered with mucous membrane. In every instance in which microscopical examination has been made this has been found to be intestinal mucous membrane in all its essential features. The pathology of all these tumors seems to me to be the same, whether they are accompanied by a fistula or not. This feature is one of secondary diagnostic value. Admitting that the cases represented by Fig. 7 are due to inversion and prolapse of the intestine through a diverticulum, and this point seems to be demonstrated, we must, I think, accept the same view of the tumors with no opening.

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[1] Deutsche Zeitschrift f. Chirurgie, Bd. iii., 1887.
[2] Pathologische Anatomie, p. 853.
[3] Guy's Hospital Reports, p. 470, 1843.
[4] Jahrb. f. Kinderh., Bd. ix., 429, and Bd. xii., 144.
[5] Dublin Medical Journal, August, 1875.

[1] Eves (Lancet, 1845, i., 101) describes a red, fungus-like tumor, the size of a raspberry, in a child one month of age. In the centre of it was a fistula from which fæces were discharged. A probe passed in two inches; cured by ligature. The second case, by Pratt (Lancet, December 27, 1884), is very similar.
[2] London Pathological Society Reports, xxxii., 204.
[3] Ibid., vii., 216.
[4] In the report is given a beautiful colored plate showing the tumor and its relations.

Two explanations may be offered for them. The case reported by Pearce Gould showed an opening for a short distance only; others have been recorded like it. Fusion of the two internal mucous surfaces appears to have taken place in the neck of the tumor (*vide* Fig. 4), but not at the orifice. In the solid, nipple-shaped tumors this process may have been complete, so that the central canal of mucous membrane is entirely obliterated.

The other hypothesis seems rather more plausible, *i.e.*, that at one margin the mucous membrane is inverted, while the attachments of the other margin to the abdominal wall prevent this inversion from taking place. I have drawn Fig. 5 to illustrate how this might occur. This would produce a conical or cylindrical tumor, covered with mucous membrane, without an opening, complete or partial.

The whole subject may be briefly summarized as follows: There occasionally exists an abdominal fistula at the umbilicus in connection with Meckel's diverticulum. When this opening is large, prolapse of the intestine may take place through it, forming a congenital tumor of considerable size. With these larger tumors are usually associated other malformations of the intestine, generally a rudimentary colon. The tumor may project into the funis or alongside of it. Of the nine cases on record one was not followed up, but all the other eight were fatal, whether operated on or not, mainly for anatomical reasons. The patients have died so early that there was no opportunity to observe whether there was any tendency of the tumor to increase in size.

The features of these cases are such that they can hardly be mistaken for anything else.

The small tumors are generally not seen till the cord has fallen off. A slow increase in size has been noticed in most of the cases long under observation. They are conical or cylindrical in shape, and rarely project more than an inch. They differ from the large tumors in that only the mucous membrane, with sometimes part of the submucous layer, is prolapsed.

Whether a fistula is present or not, makes no essential difference in pathology, prognosis, or treatment. They are not usually associated with other malformations, grow slowly when left to themselves, but are readily cured by ligature.

They are to be diagnosticated from simple fungous growths by their shape, their smooth mucous surface, their persistence, and, most of all, by their microscopical characters. Microscopically, these do not merely suggest intestinal mucous membrane, but they represent that structure in all essential features. Hence the terms adenoma, mucous polypus, etc., which have been applied to those without an opening, are not appropriate.

5 East Fifty-fourth Street, New York.

How Dr. Oliver Wendell Holmes Discovered the Secret of the Universe.—Some of our readers may not have read of Dr. Holmes' interesting description of how he one day solved the enigma of creation. Having observed that when unconsciousness is consciously approached, as during the inhalation of an anæsthetic—when the mind is on the confines of two worlds—there arise sublime and voluminous, but fugacious thoughts, and having satisfied himself that in these thoughts, if they could only be caught and transcribed, there lay enshrined the secret of the universe, he determined that by a supreme effort of the will he would catch and transcribe them; so, placing himself in his arm-chair, with pen, ink, and paper at hand, he inhaled the vapor of chloroform. As drowsiness stole over him, and just as unconsciousness was impending, those sublime and marvellous thoughts arose, and by a vigorous effort he seized his pen and wrote, he knew not what, for before he had finished he fell back unconscious. When he awoke, with trembling anxiety he turned to the sheet of paper, on which he could read, in scrawling characters but quite legible, the secret of the univers, written in the words: "A strong smell of turpentine pervades the whole."

AN ATYPICAL CASE OF THOMSEN'S DISEASE (MYOTONIA CONGENITA).[1]

By C. L. DANA, A.M., M.D.,

NEW YORK.

Thomsen's disease, or myotonia congenita, is defined by Erb as a disorder of hereditary or family type, beginning in childhood and more pronounced after adolescence, characterized by the occurrence after rest, and during voluntary movement, of a tonic contraction of the muscles, which lasts for a few moments and then gradually disappears. In connection with this is some muscular hypertrophy, accompanied by a *decrease* in muscular power. The muscles also show peculiar mechanical and electrical irritability. The disease is chronic and not fatal. It is, in fact, a primary defect rather than a morbid process.

Of the cases reported under the head of Thomsen's disease, Erb finds only twenty-eight that are perfectly typical.

The only typical case so far reported in this country is that described by Dr. George W. Jacoby, of this city. The case reported here closely resembles a typical one, and is of an interesting character in many respects. Although the disorder is rare, it may be that when wider attention is called to it, other cases may be recognized by physicians in this country.

T. C.——, male, single, United States, aged thirty-five, merchant. The patient was referred to me by Dr. Clarence C. Rice.

Family history.—The family is a healthy one, with no history of nervous or tubercular disease, alcoholism, or syphilis, except that one sister suffers from some "spinal trouble."

Personal history.—The patient was delicate as a child, but had no special disease or nervous symptoms during his youth. He never indulged in sexual or alcoholic excess, and never had any venereal disease.

When fourteen years of age he had talipes varus in the left limb. Tenotomy was performed, and he wore an iron splint for a year or two, when the affection was cured, leaving this leg a little smaller in circumference than the right.

Present disease.—The first symptoms were noticed when he was about twenty years of age. They came on without apparent cause. He observed a stiffness in his hands, and difficulty in opening them after they were closed or when he grasped anything. The two extremities were affected about equally, the right slightly more than the left. He noticed that there was some stiffness in his legs when he began to walk. Later a stiffness developed in the muscles of mastication, so that he had to move his jaws for some time before he got them into good chewing order. He had to be a little careful, also, in swallowing. There was no muscular atrophy, but of late he finds that he tires very easily, especially in the arms.

He had, until a few years ago, a small larynx and a peculiar, high-pitched voice. After treatment for catarrhal troubles by Dr. Rice the voice became changed and normal in tone and pitch.

The sexual function seemed somewhat imperfect. His memory became a little impaired, and his power of concentration of thought lessened. Occasionally he seemed to lose entirely the meaning of remarks addressed to him, experiencing an attack of sudden absent-mindedness, but with no loss of consciousness.

The bladder, he thinks, is a little weak. He suffered from aching pains in the lower limbs.

Status presens.—The patient is a man slightly below medium size, intelligent in appearance, and with nothing abnormal noticeable in his general physiognomy, except a slight drooping of the lids.

Neuro-muscular.—He shows no ataxia in gait, or on standing no tremor or fibrillary twitchings.

Muscular development is good, but not remarkable.

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[1] Paper read at a meeting of the New York Neurological Society, March 2, 1888.

except that his biceps and calf muscles are large and stand out conspicuously. Measurement around right relaxed biceps, ten inches; left biceps, ten inches. Muscular power in the arms is not in proportion to the apparent muscular development. Dynamometer, right hand, 40; left hand, 38 (normal, 45 to 50).

When he closes either hand, tonic contractions occur, and it requires a few seconds and some voluntary effort to open them. If the hand is tightly closed for several minutes, the spasm gradually relaxes and the hand can be opened readily. When the feet are forcibly and voluntarily extended, there is a slight tonic contraction in the calf muscles, but the phenomenon is but slightly marked. On examining the throat, tonic spasm of the pillars of the fauces was noticed by Dr. Rice. No other muscles of the body show this myotonic condition to tests. He describes it, however, as occurring in all the muscles of mastication and deglutition.

Mechanical irritability.—On striking the muscles of the arms, shoulders, and lower extremities, a welt of idiopathic muscular contraction always develops and remains for five to ten seconds. Striking the flexors or extensors of forearm causes a tonic contraction of the whole group. This is well shown on the extensors of the arm. With the elbow resting on the table, the extensors are struck with the percussion hammer; as a result, the hand is raised by a tonic contraction and then gradually falls. On striking the biceps a hard blow, not only is a welt produced, but a myoid tumor of brief duration also appears.

These myotonic phenomena are not observed in the trunk muscles or face.

The mechanical irritability of the nerves was not increased, but even seemed decreased.

Electrical reactions.—Electrical sensibility was, if anything, decreased to both currents.

Electrical irritability.—Faradic current: The muscular irritability was well marked, and perhaps increased. There was a decided after-contraction.

Nerve irritability was normal.

Galvanic current: With one pole on the back of the neck, and the other on the wrist or palm of the hand, and a current of ten to twenty milliampères, no wave-like contraction from anode to cathode, or *vice versa*, occurred (Erb's reaction). There was, however, an increased muscular electrical irritability shown; for tonic contractions occurred whenever the current was closed. These closure tonic contractions occurred with each pole, and lasted as long as the current passed. They were provoked by mild currents (5 to 10 milliampères). There was no opening contraction. The Ka CC was greater than An CC. The formula, therefore, was:

Ka CC > An CC.
Ka OC = O.
An OC = O.
Ka C Te.
An C Te.

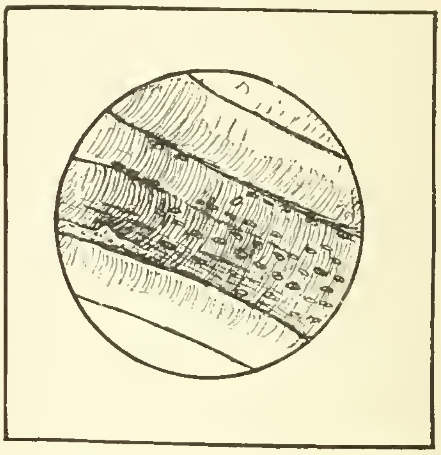
The faradic after-contraction and the closure tetanus occurring even with currents of 5 to 10 milliampères, were the most marked feature of the electrical reactions.

The phenomena occurred in the forearm and upper-arm muscles, and in the leg muscles, but not elsewhere. With one pole on the neck, and the other on the hand, the closure tetanus affected not only the flexors in the forearm, but, to a slight extent, the biceps—a kind of modified Erb's reaction.

Reflexes.—The patella tendon reflexes were lessened, but present. The triceps reflexes were normal. The skin reflexes were decreased.

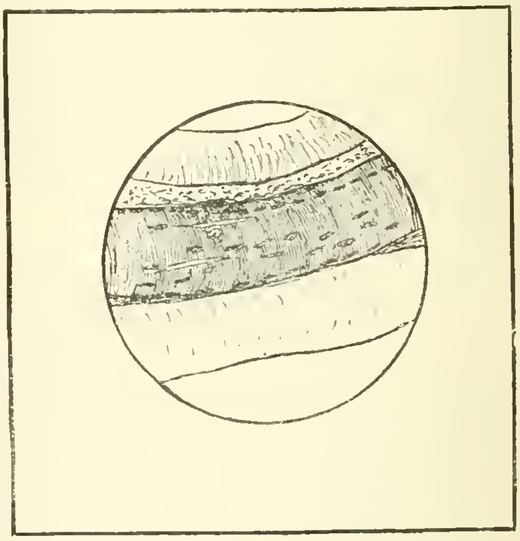
Organic Reflexes: The patient complained of some vesical weakness.

Sensations.—The patient seemed to have a slight bilateral ptosis. Vision was fair. I was informed by Drs. Roosa and Emerson, who had seen the patient, that last spring he suffered from a neuro-retinitis, and the eye still showed traces of it. Otherwise the fundus was normal. Smell and taste were, as the patient thought, dull, but tests showed nothing abnormal. Hearing was normal. General and cutaneous sensibility were normal. The patient showed a trace of muscular anæsthesia, as shown by tests for standing, walking, touching points on the body, but no loss of power to appreciate differences in weight. He described himself as having a tendency at times to festination, but he did not show it. Digestive functions good. Thoracic organs normal. Urine normal. There is apparent vaso-motor weakness. The hands are red; the feet and hands get cold easily. The patient complains bitterly at times of aching pains in the legs, particularly about the knees. His secretion of saliva is extremely profuse.



Microscopic examination of muscles.—I excised a piece of the right supinator longus, a muscle that showed myotonic reaction. I also harpooned a piece of this same muscle from my own arm. These specimens were hardened a little in alcohol and stained in picrocarmine and bismarck brown.

Dr. George W. Jacoby and Dr. Heitzmann were kind enough to examine the specimens and compare them with those from a typical case of Thomsen's disease described by the former gentleman. Their opinion seemed to be that the fibres presented some of the characteristic features of the muscle in myotonia congenita, viz., increase of muscle nuclei and a tendency to fissuring. I have studied them carefully, and compared them with normal fibres from the same muscle hardened and stained in a similar way. I present two somewhat crude drawings, which are accurate in their main features. It seems to me that there is an apparent increase of muscle nuclei, as indicated by counting a number of fields. Some fibres are quite large, but the average is not much above normal, being,



as measured by a stage micrometer, $\frac{1}{250}$ to $\frac{1}{350}$ of an inch in diameter. The fissuring is plainly present, both in torn and cut sections. While it may be mechanical, it is not present in the healthy nerve-fibres.

Conclusion.—The case here reported is certainly not a typical case, but it does present certain typical symptoms and typical electro-muscular reactions.

The history points to some central lesion of a hereditary degenerative character. In some respects the patient suggests a case of pseudo-hypertrophic paralysis, and in others hereditary ataxia.

Such a case is, I venture to think, highly instructive, as showing the kinship of the true myotonia congenita to other primary degenerative disorders.

It is hoped that the publication of the case may lead to the observation of others by American physicians, and that more light may thus be thrown upon a most curious and obscure malady.

The literature of this subject, since the publication of Erb's monograph in 1886, is as follows:

T. Buzzard: *Lancet*, vol. i., 1887, p. 972.

George W. Jacoby: *Journal of Nervous and Mental Diseases*, March, 1887.

M. Bernardt: *Centralblatt f. Nervenheilkunde*, November, 1887.

Besides Erb's work, which is in German, the literature of the subject was collected by Dr. P. Chapman, in *Brain*, April, 1883, and again by Dr. Hale White, in *Brain*, April, 1886.

THE CUMULATIVE ACTION OF THE GALVANIC CURRENT.[1]

By A. D. ROCKWELL, M.D.,

PROFESSOR OF ELECTRO-THERAPEUTICS IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL, N. Y.

I USE the term cumulative to express the increased efficiency of the galvanic current when it is applied along the course of a nerve without interruption. It occurred to me that the term storage might be suitable, for it is evident that when the galvanic current passes continuously for a long time its strength increases in a marked degree. Energy is undoubtedly stored, perhaps in the same sense, but certainly not in the same demonstrable way that chemical action is stored in the ordinary storage-batteries. By this method a secondary current is always at command, and can at will be transformed into heat movement or chemical action. In the continuous action of the galvanic current on living tissue we do, indeed, get heightened energy, but hardly an actual storage of chemical action, for it cannot be gathered and transmuted into other manifestations of force.

The phenomenon of the increased efficiency of the continuous action of the current, both in deflecting the needle of the galvanometer and in overcoming conditions of disease, is apparent; but, as it cannot be ascribed to an actual storage, a satisfactory explanation is still wanting, and the term cumulative may perhaps express better than any other its real meaning and significance. One factor that goes to make up this increase, as is well known, is the better conductibility of the tissues gradually taking place at the seat of the recomposition of the current, a result due to congestion of the skin and adjacent parts under the electrodes.

That this explanation, however, of the increasing strength of the current when continuously passed through living tissue is but partial, can be readily demonstrated. I apply the current from a given number of elements to the arm and forearm, and seven milliampères are immediately registered.

In two minutes there is an increase of one degree, in two minutes more an additional degree, and in eight minutes twelve milliampères are registered. That this extraordinary increase of strength is not caused by improved conduction *simply*, I soon satisfy myself, by applying vigorous friction to the other arm, and, when the congestion is as intense as that produced by the electricity, the electrodes are applied. Instead of seven the instrument does, indeed, immediately register ten milliampères, but it is not until four minutes more have elapsed that the additional two degrees are registered. Another phenomenon, even more interesting than this, is the increased strength observed upon a reversal of the direction of the current. A current from fifteen cells was applied to the thigh of a patient (small electrodes being used), and the poles kept in position until twelve milliampères were registered. The current was then suddenly reversed, when the milliampèremeter immediately registered fourteen. To analyze the molecular disturbances that evidently take place during the passage of the galvanic current is a labor of the greatest difficulty, and the phenomenon is one not yet thoroughly understood. Evidences, however, of the chemical action of electricity as it passes through the tissues are not wanting, and this sudden increase of strength is undoubtedly due to the electrolytic or polarizing action of the current, exciting a secondary current in the living body similar to what is observed in a reservoir or secondary pile.

In contrast to this thoroughly scientific and demonstrable doctrine of Matteuci, we have the more vague and confused teachings based on the theory of electrotonos, the laws of which, while of great value, do not by any means account for all the phenomena and therapeutical activities of the galvanic current. On the other hand, the statement "that a therapeutical system, built on the opposite anelectrotonic and katelectrotonic effects rests upon an imaginary basis," [1] seems to me altogether too sweeping.

To intelligently appreciate the force of those barbarous terms, anelectrotonos and catelectrotonos, we must keep in mind the purely physical effects of the current in the tissues. These effects are exceedingly complex, for the composition of all organic tissue is complexity itself. Combinations and decompositions take place which are yet of an entirely unknown character.

The analogue of the electrolysis of organized tissue—animal or vegetable—although less complex in its nature, is seen in the electrolysis of acidulated water.

Acids go to the positive and alkalies to the negative pole; now it is a fact of physiology that acids diminish the irritability of nerves, while alkalies increase it. Anelectrotonos and catelectrotonos may therefore be caused by acids at the positive, and alkalies at the negative pole. However this may be, it is as true now as when first demonstrated by Pflüger, that a nerve is *excited* by the appearance of catelectrotonos and the disappearance of anelectrotonos, but not by the appearance of anelectrotonos and the disappearance of catelectrotonos. In other words, irritability is increased near the negative pole, this condition of catelectrotonos increasing as the current runs up to a certain point.

On breaking the current the negative modification, or condition of diminished irritability, appears for a moment and then disappears. Near the positive pole, on the other hand, the irritability is diminished after closing the current. On breaking the current there is an increase of irritability or positive modification, which appears to be greater when the current has been allowed to run a lông time. But whatever theory we accept, the fact remains that it is not alone the increased conductibility of the tissues that enables the current to act with such increased vigor, but phenomena of a purely physiological or physico-chemical order. It is in the consideration of paralysis in its various forms, more especially, that these cumulative effects of electricity would seem to be of value, but experience points to other conditions where it is applicable. In paralysis of central origin, where there is increased irritability of the paralyzed nerve, any attempt to produce muscular contractions is uncalled for and may do harm. The continuous passage of a galvanic current, however, is useful and, provided no interruptions are allowed and the current is not reversed, a moderate modification of the excessive irritability may be quite confidently expected.

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[1] Read before the Section on Practice, New York Academy of Medicine, February 21, 1888.

[1] Conditions of the Unipolar Stimulation, etc. Brain, Part IX.

In cases of hemiplegia, where the irritability of the nerve is more or less impaired, the continuous passage of the current accomplishes more for the patient than the attempts at frequent muscular contractions that are so popular. The difference in the treatment of hemiplegia with increased nerve-irritability and hemiplegia with decreased nerve-irritability is simply this: In the former it would be as inadmissible to allow interruptions of the current, or a change in its direction, as it would be in a case of neuralgia.

In the latter, on the contrary, a few interruptions can, with good effect, be given at the close of an uninterrupted seance, and a reversal of the current adds to the efficacy of the treatment. My attention was called to the practical value of what I term the cumulative effects of electricity by observations more particularly in various forms of peripheral paralysis and in the essential paralysis of childhood. I have, of course, treated many cases of infantile paralysis, and, in common with others, have had both successes and failures, and up to within a few years all of these results, both good and indifferent, followed the rough and excessively stimulating method of current-interruptions. Before electricity had the slightest recognition as a constitutional tonic and sedative, and as such indicated in a wide variety of disorders, it was rather contemptuously assigned the position of a harsh stimulus, and of some value in "pricking up paralyzed muscles."

No statement of the damage inflicted by the practical application of this crude and primitive enunciation has ever been made, but I am confident that great and fatal mistakes have arisen therefrom.

Two cases of infantile paralysis have come under my observation where but the slightest suggestion of nerve-irritability existed, and when, after rough usage—in one instance by the faradic and in the other by the galvanic current—the slightest vestige of vitality in the paralyzed members became extinguished, and the cases hopeless. On the other hand, I have seen cases where the nerve-irritability was equally impaired pursue an entirely different course, under an entirely different method of treatment. Sudden galvanic shocks, whatever useful purpose they may occasionally serve, are often dangerous in the extreme. Their effects are, in the main, undue stimulation; and, in their relation to nutrition, destructive rather than reconstructive.

The continuous passage of the current, however, while in a certain sense stimulating in its effects, combines influences that are sedative and tonic, and pre-eminently reconstructive, and is alone equal to the task of resisting progressive degenerative changes in nerve and muscle. I could easily cite a number of cases of infantile paralysis as illustrative of the principles here enunciated, but, not to consume too much valuable time in this way, I will crave your indulgence only while I give, with some minuteness of detail, the history of a single case. It was in the observation of this case more especially that I became thoroughly alive, on the one hand, to the importance of the continuous action of the galvanic current, and, on the other, quite as positive as to irreparable damage to nutrition, in conditions both of increased and diminished nerve-irritability, by the injudicious use of the interrupted galvanic current.

In October, 1884, a little boy, aged five, was brought to my office suffering from complete paralysis of the right leg, and, in a less degree, of the left also. The muscles of the right thigh and leg had atrophied to such an extent that the bones seemed to be covered with little more than skin, and it is hardly necessary to say that to the faradic current there was not the slightest reaction. The galvanic current also seemed at first unable to elicit any evidence of nerve-irritability, but upon more careful electrical interrogation exceedingly slight contractions of some of the extensors of the foot were observed, but associated with decided qualitative changes.

In the left leg, which had atrophied to a considerable extent, I found quantitative changes, but no reaction indicating tissue-degeneration. About a year before, the child had been seriously reduced in flesh and strength by a prolonged diarrhœal attack, culminating in a series of severe convulsions, followed by fever and associated, probably, with acute polio-myelitis anterior. Paralysis of the legs followed, and for a few days the loss of voluntary motion was complete. Within a week, however, without special treatment the limbs gradually began to resume their function, until the patient could freely move them, the left one becoming sufficiently strong for him to bear his weight upon it.

Improvement seemed to stop at this point, and some time after the mother, although not a poor woman, sought advice at one of our college clinics. Here electricity was used, and, according to the statement of the mother, the foot became rapidly extended many times in rapid succession during the application. This process, evidently a strong interrupted galvanic current, was repeated quite a number of times at varying intervals, until finally the observant mother noticed that not only were the contractions less marked but the power of voluntary movement in both limbs was decreasing in a decided degree. She ceased her visits, abandoning all treatment; but the limbs steadily continued to decrease in strength and size until, when I saw the child, the left leg had, as already stated, reached an extreme condition of atrophy, with marked reaction of degeneration in the few muscles that still retained some slight evidences of electro-muscular contractility. The case seemed sufficiently hopeless, but, explaining to the mother, who dreaded any further trial of electricity, the entirely different method that would be adopted, and impressing on her mind the necessity of patience, I began the application of the uninterrupted galvanic current with a strength of only five milliampères, and a seance of five minutes in duration. The applications were for a time made daily, and at each sitting the duration was increased by one minute and the strength of the current by one milliampère, until, at the end of two weeks, the patient was receiving applications of fifteen minutes and a current-strength of fifteen milliampères.

During this time, although reversed currents were used every day, not a single galvanic interruption had occurred. Examining, now, the condition of electrical excitability, I was gratified to find not only increased vigor in the contractions of the extensor muscles, but slight yet appreciable contractions in muscles which had before failed to respond to the most searching electrical interrogation. The reactions were yet, however, those of degeneration. This patient continued under observation and treatment a long time, the limbs improving from month to month in nutrition, and necessarily in electrical reaction. At the end of eight months the patient could walk aided by a cane, although with considerable awkwardness, and the electrical reactions were normal with the exception of a slight quantitative defect in the left leg, which continued also quite deficient in size. The lessons to be learned from this case are undeniably important.

If the mother could be trusted in her statements, and she was an unusually intelligent and observant woman, the main points were these:

Following an attack of acute polio-myelitis anterior we have the characteristic paralysis of the lower limbs.

Spontaneous improvement, but only up to a certain point, soon appears. Shortly after, strong interrupted galvanic currents are most imprudently administered, resulting finally in almost entirely obliterating a condition of nerve-irritability that was already greatly impaired. The damage inflicted was almost irreparable. The muscles waste and the reaction of degeneration appears.

Finally, when the paralysis was practically complete, the aid of a mild continuous galvanic current was evoked, increased from time to time as prudence dictated. Nutrition is immediately and favorably influenced—the muscles increasing in size and strength, the electrical reactions becoming normal and, in the end, the disabled members are sufficiently restored to be of decided service. In various other forms of disease these principles are no less applicable than in paralysis, the difference being that, while in neuralgias and most nervous symptoms it is more universally understood that continuous currents are indicated, in paralysis it is too often taken for granted that the more prompt and vigorous the stimulation the greater the benefit.

The injury that may be inflicted upon paralyzed members by this method has already been emphasized, but it is to be observed that such injury does not as a rule follow occasional or accidental shocks, but only when administered with a good degree of vigor and as a supposed necessity of treatment.

In neuralgias, however, in the many forms of nervous disease characterized by excessive irritability, as chorea, epilepsy, hysteria, and even in exophthalmic goitre, interruptions of the current, although only accidental and occasional, may be followed by increased pain, by an aggravation of choreic symptoms, by an instantaneous epileptic attack, by severe hysteria, and, in exophthalmic goitre, by increased rapidity of the heart's action.

In all of these conditions we desire, not stimulation but sedation, and therefore interruptions of the current, or even large and rapid variations in its density, are to be avoided. Slow and slight variations in density, provided the current remains closed, I have not found to produce unpleasant stimulating effects.

One more practical observation. Exophthalmic goitre is a disease that can be treated with far greater success than is generally believed. I have myself reported fifteen cases, of which nine were either greatly benefited or approximately cured.[1] It is hardly necessary to say to anyone cognizant of the peculiar characteristics of the disease that uninterrupted and unvarying currents are called for. There are, however, exceptions to this rule. Certain cases seem to demand a stronger impression than can be produced by a constantly flowing galvanic current—if not at first, yet further along in the treatment. They would act badly under interrupted currents, but, by rapid and large variations in the closed circuit, a modified stimulation is obtained which in my own experience has proven of invaluable service in several difficult cases.

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[1] New York Neurological Society, April 7, 1885.

Women in Former Times.—Up to the fourteenth or fifteenth century women spent most of their time alone, and seldom went abroad. Francis I. was the first who allowed them to come to court. In the thirteenth and fourteenth centuries elegance had scarcely any existence, and even cleanliness was considered somewhat dangerous to health. The use of linen was not known, and even the most delicate of the fair sex wore woollen chemises. They had meat only three times a week. Wine was only to be had at the apothecaries, where it was sold as a cordial. And to ride in a two-wheeled cart along the dirty rugged street was considered so grand that Philip the Fair forbid all but the wives of the nobles to indulge in it. In the times of Henry VIII. the peers of England carried their wives on horseback behind them, to and from London and their country-seats, wrapped in mantles of cloth, with hoods of waxed linen to protect them from cold and wet.

Head-dresses.—Thomas Conecte, a Carmelite monk, was burnt at the stake in 1434. His principal offence was his vehement sermons against the enormous head-dresses of the period. They were so high and broad, with two flaps on each side, of such unaccountable size that it was impossible for a fashionable woman to pass through a door, except sideways.

MUSCULAR INSUFFICIENCY.

By RICHARD H. DERBY, M.D.,

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Strabismus, in its broadest sense, is a deviation of a visual axis, more strictly a concomitant deviation of a visual axis. This associated concomitant deviation of the one axis when the other is fixed is measured by a certain angle, and this angle remains always the same. The actual movement in concomitant squint is not diminished, for if the excursion made by the eye inward is relatively with that of the other eye smaller, the excursion outward is relatively greater; in other words, here "the arc of movement is simply turned in the direction of the affected muscle."[1]

Now, in close connection with what has been said concerning absolute strabismus is the question of dynamical strabismus, or muscular insufficiency.

Dynamical strabismus is that condition where the visual axis deviates, not when both eyes are open and the power to blend double images is present, but when one eye is closed. Binocular or stereoscopic vision is maintained but with an effort. In health the eyes, with the muscles that move them, are in a condition of balance; for near objects the visual axes are converged without effort, while for distant objects the parallelism of the axes is maintained. For all distances, in the normal condition, the muscles which move the eyes in a vertical plane act together and maintain vertical equilibrium. When this normal condition of equilibrium in either the horizontal or the vertical plane is disturbed, we have what has long been known as dynamical strabismus, or muscular insufficiency. Whether it be that the internal or external recti are weak, or one of the muscles concerned in moving the eye upward or downward is deficient in power, the complex of symptoms is, in the main, the same, and we may now with advantage study them.

Such a patient complains that his eyes become soon fatigued; in the evening especially, he cannot read or write for any length of time, for after a while the letters grow uncertain before his eyes; he can work but for a few minutes by reason of the pain which centres in his eyes and head. He can read for a page or so, and then the print becomes indistinct, blurred. He does not see the printed words as readily as before; he "does not catch on." For middle distances the trouble asserts itself; often he cannot look at a person close at hand without shutting one eye. Even in the act of fencing or sparring, the patient must occasionally stop and "fix" his eyes. He rests himself in reading by closing one eye. The last enumerated symptom is perhaps of all the most suggestive, and if the further statement is made that objects sometimes appear double to him, our attention is inevitably turned to the muscular system of the eyes. There is no evidence of strabismus; but let your patient now look at an object with one eye, and holding your hand as a screen before the other, watch its behavior while fixation is demanded of the first. While the first fixes, the covered eye turns slightly in; uncover it and he makes a movement outward to fix the object. The same thing occurs whichever eye is covered, and our diagnosis is at least in part established, and our patient has probably weak external recti. Again applying this same simple test in another case, the patient looks at an object with one eye, and you will see that the covered eye turns slightly out; uncover it and he makes a movement inward to fix the object. Here, then, is probably a case of insufficiency of the interni. The frequency of the latter affection is what we might expect when we reflect that there are few muscles more constantly called into play than the interni. Every object to be seen close at hand requires the convergence of the two eyes, that is, a greater or less contraction of these two muscles; the nearer the object is brought, the greater the work.

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[1] Von Graefe: Clinical Lectures.

Hence the weakness of these muscles shows itself especially in reading.

Another test, to be applied in the suspected case of muscular insufficiency, consists in placing before one eye a red glass, and directing the patient to fix with both eyes a candle-flame held at varying distances before him. Often, if insufficiency of the recti muscles of any considerable degree be present, he will instantly say that he sees a red light and a white one, either side by side or one above the other, according as a lateral- or vertical-working muscle is deficient in power; and that the two images are seen to fuse together as soon as the red glass is removed. The explanation of this is, that the capacity for fusion of the images seen by each eye being reduced, the colored glass reduces the instigation toward binocular single vision. This is one of the surest tests we have for muscular insufficiency.

We must not, however, be content with merely ascertaining the deviation of the eyes under the covering hand, or by weakening the natural disposition to binocular sight by the use of a colored glass, or by advancing an object toward the eyes until the weaker eye deviates; we must determine more carefully the degree of the affection. To this end we make use of the tests with which Von Graefe also supplied us more than twenty years ago. Later investigation has failed to give us any more accurate tests than that afforded by the use of the prism in inducing artificial diplopia. In the first place we examine the dynamical condition of the internal and external recti. To accomplish this we place a prism of more than ten degrees, with its base downward, before one of the patient's eyes. Ordinarily, by thus superimposing images their fusion is rendered impossible; so, when the patient abandons his eyes to the action of the lateral-working muscles there occurs homonymous or crossed diplopia, according as there is insufficiency of the external or internal recti. With such a prism thus held we examine the condition of the eyes, first for the distance and then for the reading distance. For the first it is convenient to use a candle-flame; for the second a black dot with a vertical straight line, or a dot without the line, or a short oblique black stroke placed on the centre of a sheet of paper. According to the distance at which the test-object is held, the patient will see two candle-flames or two dots, but not on the same vertical line. The right eye may see one of them to the left, and the left eye one of them to the right. This is crossed diplopia, and corresponds, as we know, to divergence of the eyes, or the diplopia may be homonymous, and this points, of course, to convergence of the eyes. Whichever the condition may be, we must now look for the prism, which, held vertically with its base in or its base out, brings the images on the one vertical line. The degree of the insufficiency is determined by the strength of this prism necessary to thus superimpose the images. Having thus measured the degree of the insufficiency, our examination is not complete. We must now ascertain the power of the internal and external recti in the interest of binocular vision; in other words, we must ascertain what degree of prism can, with its base in and with its base out, be overcome without provoking double sight. This is known as a measure of the power of abduction and of adduction. This, as we shall see later on, is a matter of the greatest importance where any operative procedure is deemed necessary for the relief of the dynamical difficulty.

Muscular asthenopia, as has been long well known, may also be due to an insufficiency of one of the muscles concerned in moving the eye upward or downward. Tests similar to those in use for a detection of dynamical divergence and convergence are here employed, except that here, of course, in our examination with the prism, lateral diplopia is first induced. Such a prism as cannot be overcome by abduction is placed before one eye, its base directed exactly inward; the patient is now asked to estimate the difference in height of the two images. If the image seen by the right eye appears higher than that seen by the left, we note that the right must stand lower, and that there is insufficiency of the right superior rectus.

The following cases, taken at random from my case-book, will illustrate the varieties of muscular asthenopia which we have been considering. The first is a case of insufficiency of the interni.

W. P——, aged sixteen, from San Francisco, came to me November 19, 1883; is a nervous, pale boy, who has left his school on account of asthenopic symptoms. He often rests himself in reading by closing one eye. Upon looking a person intently in the face he has to "stop and fix his eyes." Patient can, at will, produce diplopia. The images stand side by side, and are of equal height. Each eye is emmetropic, and vision is 1.

In the reading distance there is insufficiency of the interni of 12°; in 3M. this insufficiency amounts to 6°. Patient was told to wear prisms of 5° (bases in) before each eye, and the faradic current was used locally. On December 5th, had been wearing these prisms for several days; he reported that he no longer had double vision. This day, under ether, a careful tenotomy of the right external rectus was made. Directly after the operation there was 2° of divergence in the position of election (the light held 15° toward the side of the unoperated eye). On December 7th patient was no longer able to induce diplopia on the middle line. Later in the month he went to his home, greatly relieved of his asthenopic symptoms.

The next case is one of insufficiency of the externi.

Miss C——, aged twenty-one, came to me October 22, 1885. She complained that she could not see the print as readily as formerly. "I do not catch on." For a distance of 5M. there was insufficiency of the externi of 4°, but at the reading distance insufficiency could not be demonstrated by the ordinary tests. At 5M. adduction was 35°; abduction, 5°. There was H.25D. of each eye, and absolutely normal vision. The ophthalmoscope showed a total H. of at least 1D. Patient received a reading glass, o.u. +.75D., combined with prisms 2° (bases out).

December 1st, patient reported that she could read a page with ease, but that then the print became indistinct. Exercise with the stereoscope daily was enjoined.

January 4, 1886. Patient states that for distant vision she had no trouble, but that she could not look at a person close at hand without shutting one eye.

April 29, 1886. Under cocaine, a tenotomy of the right internal rectus was made, a small horizontal incision over the insertion of the muscle being made in the conjunctiva. Immediately after the operation in 3M. on the middle line there was dynamical divergence of 2°. To reduce the effect of the operation a suture, including four lines of the conjunctiva, was applied over the insertion of the divided muscle.

April 30th. In the position of election there is dynamical convergence of 3°–4°. The suture was removed, and the patient directed to wear her abduction glasses.

May 5th. Patient can wear o.u. prisms 7° (bases in) with comfort. In 4M. abduction is 19°; adduction, 45°; in reading distance abduction, 17°; adduction, 45°+.

May 15th. Patient now no longer finds the page grow gray in reading; can read for half an hour with ease, and can look a person steadily in the face.

The following two cases are of insufficiency of a superior rectus muscle; in the one case associated with weak interni, and in the other with weak externi.

Mrs. F. M—— is an artist; came to me November 25, 1872. Seven years before, while modelling a medallion, she was compelled to work much at night. She could not well see to do her work. Application caused pain about and back of her eyes. She could work one day and "the work would look all right, and the next day everything seemed crooked." In both eyes H. $\frac{1}{42}$ and

V. of each $\frac{20}{XX}$. In 15′ dynamical divergence of 2°, and so increasing up to 10″. Punctum proximum good. With a strong prism of adduction that could not be overcome, the right eye stood higher by 2°.

The second case, Mrs. W——, came to me first, June 3, 1875. Patient had always been near-sighted, and latterly the myopia had increased. The eyes examined separately showed M. $\frac{1}{5\frac{1}{2}}$, V.$=\frac{20}{XL}$. Patient complained of discomfort in reading by lamplight. In 3′ the red glass held before one eye produced homonymous diplopia, the left eye standing higher, binocular vision is ordinarily without difficulty maintained. Patient received for reading the following glasses: O. d. −4D.; o. s. −4D., combined with prism 3° (base down).

The next case to which I would refer is one of marked insufficiency of the right superior rectus.

Miss B——, aged twenty-seven, came to me June 27, 1873. Patient complained of frequent diplopia and marked asthenopic symptoms. On each eye E. and vision 1. The ordinary tests for reading distance revealed an insufficiency of the externi of 4°, and a variable amount of insufficiency of the right superior rectus, amounting at times to 9°. Patient was directed to use a prism of this degree before the right eye, with a view to developing the full amount of the vertical insufficiency. On January 1, 1874, with a prism of 12° (base up) in front of right eye, the measure of the insufficiency was found. Then the light being held at 10′ and 35° below the horizontal plane, the images remained for a time on the same level, and there was occasionally slight convergence, and at times slight divergence. On February 2d she could wear for a time, in the interest of single vision, a prism of 15° (base up) in front of the right eye.

May 3, 1874. A partial tenotomy of the left superior rectus was made, leaving $\frac{3}{4}'''$ of the innermost fibres still undivided; a suture seizing 2‴ of conjunctiva, closing the wound, was applied. Directly after the operation, the candle-flame, held 10′ away and 15° below the horizontal plane, the left eye stood lower 1°–2°. On the evening of May 6th the suture was removed. May 20th, at 10′ with prism 16° (base in) before right eye, the left eye stood higher by 1°. On May 22d there was in position of election dynamical equilibrium.

From the cases which have here been considered, briefly detailed as they have been, it is evident that in the treatment of muscular asthenopia we have, both in the use of prisms and in a tenotomy, an efficient means of relieving the ocular affection. We have seen that this class of cases differs essentially from real strabismus; the trouble is dynamical, and whether the muscle at fault is the rectus, internus, externus, superior, or inferior, the affection in each and every case is a limitation of the capacity for fusion in the interest of comfortable binocular vision. In another paper we have considered the influence of dynamical strabismus as an active factor in causing progressive myopia. Before leaving, however, this interesting subject a single word should, with justice to the illustrious Von Graefe, be said of the great service which he rendered to this hitherto but little understood chapter of ophthalmic medicine. As I said before, all the tests employed for the detection of these anomalies of the ocular muscles were introduced by him. I know of no better or more exhaustive work on this subject than that of Von Graefe, "On the Operation for Dynamical Divergent Squint," contained in *Zehender's klin. Monatsblätter* for August and September, 1869. If the reader has mastered the principles there so lucidly and so exhaustively laid down, this class of cases will present few difficulties to him. Under the names of exophoria, esophoria, and hyperphoria of recent writers, we find the affections described which we have been considering. It is a matter open to discussion whether the new names are better than the old, but this much is sure, that in every case of asthenopia the dynamical condition of the muscles of the eyes should receive our most careful attention.

Clinical Department.

TWO UNUSUAL AND FATAL CASES OF ABDOMINAL INJURY.

By M. SINGER, M.D.,

GALVESTON, TEX.

JAMES C——, twenty-seven years of age, was admitted to St. Mary's Infirmary, Galveston, on March 9, 1886, complaining of pain in the hypogastrium and inability to void his urine.

He stated that on the preceding night, while partially intoxicated, he had picked a quarrel with someone, and had received a blow on the eye and a kick in the abdomen. This occurred about midnight, yet he stayed out and kept on drinking until 2 A.M., when he returned to his boarding-house and went to bed. He sought admittance to the hospital on the same morning, at about 10 A.M., and said that he had not passed water since the previous night, although he had made frequent efforts to do so. When a catheter was passed, spasm of the neck of the bladder had to be overcome; then about a quart of bloody urine was evacuated. The patient had never had a stricture. At this first examination no external mark of violence was seen on the abdominal surface, and the pulse was full and strong and normal in beat. The history of the case and the presence of blood in the urine led us to suspect rupture of the bladder, yet, owing to the time that had elapsed since the occurrence of the accident (ten hours), and the medico-legal aspect of the case, the surgeon in charge of the wards did not deem it prudent to operate. At this time the patient was not suffering from shock; soon, however, unmistakable signs of peritonitis made their appearance. Catheterization was resorted to at regular and frequent intervals, and at one time as much as three quarts of bloody urine was drawn off. Despite the suffering caused by the peritoneal inflammation, the man preferred sitting up in his chair, or walking about in a "doubled up" manner, to remaining quiet in bed, and no amount of persuasion could keep him still. Collapse set in in due time, and death took place sixty-four hours after the receipt of the injury.

At the post-mortem examination, made eighteen hours after death, no sign of external injury, save an ecchymosis of the eye, was seen on the body, which was muscular and well developed. When the abdominal cavity was opened the intestines presented, offering the usual signs of well-established general peritonitis. The bladder was semi-collapsed, and in it, at its superior and posterior part, there was a rent three inches in length, extending in an antero-posterior direction. This tear established a free communication between the interior of the bladder and the peritoneal cavity. The recto vesical cul-de-sac below the rupture contained fluid similar in appearance to the urine obtained by catheterization from the man during life. The walls of the bladder were found normal, and the urethral canal showed no evidence of stricture.

The principal points of interest in this case are the non-evidence of any outward sign of violence, not even the slightest discoloration of the skin being apparent, and the complete absence of shock.

The following case illustrates by what terrible consequences an apparently trifling external injury may be followed:

John M——, thirty-six years of age, was admitted to St. Mary's Infirmary on May 25, 1886, at 2 A.M. He was then in a state of collapse, and could but imperfectly answer the questions propounded to him. All I could learn from him was that he was a railroad laborer, and on the preceding day had been occupied in discharging lumber from a car. While the train was moving at the rate of about seven miles an hour, the man was pushing the planks off the car in front of him. One of these planks touched the ground on its foremost end, while the other extremity, still raised in the air, struck him a severe blow in the lower part of the abdomen. By this accident, which took place one hundred and fifty miles from Galveston, the man was at once put in a helpless condition, and therefore was sent to the company's hospital in this city, without having received any medical attention meanwhile. On physical examination a dark ecchymotic spot was seen in the left inguinal space, at about an inch above the middle of Poupart's ligament. The abdominal muscles were firmly contracted, and the man complained of severe pain in the suprapubic and umbilical regions. After several attempts I succeeded at last in passing a catheter into his bladder, and withdrew some smoky-looking urine, which was found, on microscopical examination, to contain some blood-corpuscles. This led me to suspect rupture of the bladder. Prompt treatment directed to the relief of the collapse proved to be without avail, for the man died at 1 P.M. that day, twenty-three hours after the receipt of his injury.

At the post-mortem examination, held four hours after death, a great deal of fetid gas escaped as soon as the peritoneal cavity was opened. This aroused my suspicion as to possible rupture of the bowel, and I began at once a careful examination of the gut. In spite of the short period that had elapsed since the receipt of the injury, I could already detect well-marked signs of a general peritonitis, for an exudate of lymph had begun to unite the several coils of intestine. During the inspection a yellow, turbid fluid, having a distinct fecal odor, escaped from the abdominal cavity. A solution in the continuity of the gut was discovered at about the junction of the jejunum with the ileum. At this place it seemed as if the intestine had been cut through by some sharp instrument, and the two divided parts had become adherent to one another by the inflammatory exudate, which bound them side to side, giving them a resemblance to the two barrels of a shot-gun. A careful examination of the remainder of the small intestine and of the large one failed to disclose any other lesion, and there were no signs of injury of the kidneys or bladder. The spot on the integument where the blow had been received was also carefully investigated, and the lesion found to be only skin deep, without perforation even of the abdominal muscles. The patient, it should be added, was lean-bellied and sparsely built, and there is no doubt that the blow upon the gut, as the latter lay against the promontory of the sacrum, caused the intestine to break.

EIGHTY-ONE DAYS WITHOUT A NATURAL MOVEMENT FROM THE BOWELS—STRICTURE OF THE RECTUM.

By F. W. EDWARDS, M.D.,

WILMOT FLAT, N. H.

JANUARY 20, 1888, Susan B——, unmarried, nearly fifty years of age, came to my office to consult me, as she "was slightly constipated and could eat but little as it hurt her stomach." The history she gave me then was as follows: She had never enjoyed perfect health, but was always delicate, and had probably injured her health at her trade of dressmaking. Her bowels had always been regular and acted in the morning, the fæces coming away with a rush as though she had taken a cathartic, and she was able to restrain the movement for only a few seconds. She had for some years previously been troubled a little with a sore feeling at about the middle of the transverse colon. This looseness of the bowels continued until the first of last May, when her menopause began, and since then she has been very constipated, going, at times, ten days without an evacuation of the bowels. I gave her some mild cathartic, and recommended maltine with pepsin and pancreatin, as she told me at this visit she was only a little constipated. She began taking the maltine January 23d, and I did not hear from her again until February 4th, when she came to my office and said the medicine had done her no good. I asked her how long it was since her bowels had moved, when she replied "not very long." I then gave her aloin, one grain, and compound cathartic pills, two of each a day. February 7th, I was called to her, and found her suffering but little, but she had vomited quite freely the night before. She then told me that her bowels had not moved since two weeks before her first visit to me, and two weeks prior to that she had had but one small ball of fæces pass. In fact, from December 20, 1887, to February 4, 1888, a period of forty-nine days, her efforts at defecation had amounted to *nil!* The lady is of a retiring disposition, and did not wish me "to think her complaining." I began at once active catharsis, although I suspected a mechanical obstruction of the bowels. As I could get nothing to pass, I called a brother-physician in consultation. We continued the cathartics, adding croton-oil, etc., and I tried to force sufficient water into the rectum to overcome the obstruction, but to no avail. Of course, I added everything to the water (hot and cold) that could be thought of and obtained. I could get but three gills, at most, into the rectum, and when I tried to pass a rectal tube (one-half inch) up to the point of obstruction my efforts were in vain. My diagnosis was "stoppage of colon at the middle of transverse portion," but, when all my efforts could not make the tube pass the flexure, I felt almost certain that the obstruction was lower down than where I had placed it before. On February 15th I aspirated the bowels in two places, and gave exit to a quantity of sulphuretted hydrogen, but it did not reduce the bloated and tympanitic bowels to any extent. One symptom, or the absence of it, rather, surprised me, and that was *vomiting!* The patient vomited but twice after the first day I was called, and but very little came up at either attempt, although she strained and gagged for three or four hours each time. On February 22d I sent for Dr. C. P. Frost, of Hanover, and when he had examined the patient he concurred in the diagnosis, and, as she was now very weak, we decided to let her take her own choice as to whether she wanted an operation or not, and, after the condition of affairs was stated to her, she decided not to have an operation as she had but one chance in a hundred. Two days later she began to pick up and got quite strong, but her abdomen was very much bloated and the skin stretched so tight I could hardly get a fold of it up to give her a hypodermatic injection of morphia. I gave her two injections daily, and sometimes a third. At first I gave one-sixth of a grain, but was obliged to increase the dose to three-fourths of a grain each time. February 28th, she had quite a little movement from her bowels, and, two hours or so later, another smaller one. Both very loose, and each contained mucus and pus. Patient was highly elated and said she was going to get right up, but I was afraid her bowels had ulcerated and given way, so I told her family not to rejoice, and gave them my reasons for expecting death at any time. From this she gradually lost strength and sank away until, March 10th—eighty-one days from her last natural defecation—she calmly died.

Autopsy, twenty-nine hours after death. The abdomen was greatly distended and purple, the abdominal walls very thin, and the subject was terribly emaciated. After letting off gas, I found quite a little adhesion and inflammation at the cæcum and vermiform appendix, also at the gall-bladder and ductus communis choledochus, where the membranes were so thin and weak they would tear with handling. Every inch of the bowels seemed full and contained fæces. The cause of all the trouble was a cartilaginous band, about one and a half or two inches wide, which had gradually occluded the gut completely from seven and a half to nine inches above the anus. Below the band the channel was narrowed and filled with very thick pus, and at the upper part of the band it was ulcerated through, and there was a small opening the size of a lead pencil into the gut above, but it required some considerable force to get the finger through to the anus, after cutting the band off, on account of the small channel and the thick pus.

The liver was very much diseased, and it was a matter of astonishment why the patient did not suffer more from hepatic troubles and symptoms. Was this band malignant? There is scrofula in the family and some cancer, but I could not get a piece of band to examine with the microscope. Drs. Weymouth, Goodhue, and George Weymouth were present at the post-mortem, and my thanks are due to Dr. Goodhue for kindly assisting me at same.

CONGENITAL BALDNESS.

Dr. F. Semeleder, of Mexico, reports the following: "A girl of twelve years was brought to me; when she was born she had only a few long hairs; soon they fell out, and no hair has ever since grown on her head. The head has not the shiny appearance of that of a bald man, but the skin is dry and looks like shagreen-leather. The girl has no other deformity. She has brothers and sisters, none of whom is bald, nor are her parents."

Progress of Medical Science.

Intraperitoneal Rupture of the Bladder.—At a recent meeting of the Royal Medical and Chirurgical Society (*The Lancet*) Mr. W. J. Walsham brought forward a case of intraperitoneal rupture of the bladder, in which abdominal section was performed and the viscus sutured. The patient, C. H——, aged twenty-two, was admitted on March 1, 1887, into St. Bartholomew's Hospital. He had been drinking the night before, and in a fight was butted by his opponent in the abdomen, his bladder being full at the time. He passed a night of great agony, and was brought in a cab to the hospital the following morning; but he was then suffering very little shock, and walked into the surgery with the assistance of two friends. He complained of pain in the lower part of the abdomen, and of having been unable to pass any urine since the blow, although his bladder was uncomfortably full at the time. The perineum was natural, and there was no history of stricture. On passing a catheter no urine flowed, although the point was ascertained to be in the bladder by the finger in the rectum. On depressing the handle the catheter was felt to free itself with a jerk, and its point could be then felt more plainly than natural through the abdominal walls. Bloody urine now escaped, the flow varying with respiration. About twelve hours after the injury Mr. Walsham opened the abdomen, and, having discovered an intraperitoneal rent in the posterior wall of the bladder, sewed it up with nine Lembert sutures. The sutures were passed through the muscular and peritoneal coats only, and one was placed above and below the upper and lower angles of the wound, respectively. The bladder having been forcibly injected with eight ounces of boric-acid solution and found water-tight, the peritoneum was irrigated with about two gallons of warm boric-acid solution, and the abdominal wound closed as in ovariotomy. A catheter was left in the bladder for two hours, and the patient subsequently reminded to pass his urine every four hours. There was little shock, and the patient recovered. Daily notes were given at length. The author remarked that there had now been 17 cases in which abdominal section had been performed for rupture of the bladder, 3 extraperitoneal and 14 intraperitoneal. Of the 3 extraperitoneal cases 2 died and 1 recovered. In the successful case the wound in the bladder was secured to the abdominal wall, but not sutured. In the fatal cases death was due to shock. The rent in one was found securely sutured at the post-mortem examination; in the other the rupture had not been discovered on opening the abdomen. Of the 14 intraperitoneal ruptures, the rent in the bladder was sutured in 11, and in 3 a drainage-tube was placed in the wound, but no sutures employed. Of these 3, 1 recovered and 2 died, death being due to peritonitis and suppression of urine, respectively. Of the 11 cases where the rent in the bladder was secured by sutures, 5 recovered and 6 died, death being due in 3 cases to peritonitis, in 2 probably to shock, and in 1 to hemorrhage from a perineal incision employed for exploration. In the 3 cases of peritonitis the sutures had given way in 1, and a leakage had occurred in the lower part of the wound in the other 2. In the 5 successful cases Lembert sutures were employed and the peritoneum was washed out, and in only 1 was a drainage-tube used. The author discussed (1) the advisability of early operation; (2) the importance of using a suture which would not become softened too soon, and of ascertaining before closing the abdominal wound that there was no leakage from the bladder; (3) the cleansing of the peritoneal cavity; (4) the unadvisability of a preliminary incision in the perineum, or of a subsequent incision in that region for the purpose of drainage; and (5) the question of tying in a catheter after the operation, which he decided in the negative.

Creasote in Phthisis.—The treatment of phthisis by the internal administration of creasote has recently been employed in Professor Koshlakoff's clinic in St. Petersburg, the results obtained forming the subject of a paper by Dr. V. T. Bushuyeff. According to this author, the creasote treatment of phthisis was originated by MM. Bouchard and Gimbert, who in 1877 published ninety-three cases treated in this way, of which number fifty-four had been greatly benefited by it (*The Lancet*). Since then several physicians have published accounts of successful results. Among the more recent writers on the subject, Sommerbrodt, Fraentzel, and Lublinski are mentioned. Creasote has been prescribed in various forms—with wine, glycerine, fish oil, and in capsules and pills. The quantity given by Dr. Bushuyeff was usually about three drops of creasote during the twenty-four hours. The number of cases in which it was given was twenty, and the duration of the treatment from one to six months. Of these twenty cases, ten were in the first stage, six in the second, and four in the third. In all those in the first stage, the treatment was followed by a marked improvement. Four out of the six in the second stage were benefited, but none of those in the third stage. The improvement was shown by the diminution of the cough and of the expectoration, by the decrease or entire arrest of the fever and sweats, by the increase of the body-weight, and in two cases with laryngeal trouble by the cessation of pain and the diminution of the laryngeal swelling. In five of the cases in the first stage, it may almost be said that the creasote produced a cure, because the dulness and bronchial respiration, as well as the râles, ceased. The creasote never produced any undesirable effects, except in one instance, in which a patient in the last stage of the disease took by mistake six drops (instead of three) for three days. This was followed by a stoppage of the diarrhœa, general anasarca, and a large quantity of albumen in the urine with casts, and some red blood-corpuscles. With milk diet these morbid symptoms rapidly disappeared. Dr. Bushuyeff analyzed the constituents of the urine in some of the cases, and found that the nitrogeneous metabolism in phthisical patients, as indicated by the ratio of the nitrogen of the partially oxidized nitrogeneous constituents of the urine (urates, creatin, etc.) to the nitrogen of the urea, is less than in healthy persons, and that this ratio becomes still smaller when creasote is taken. The smallest ratio he found in his patients was 1 : 10.6 before taking creasote, and 1 : 7 while taking it. In healthy persons it is, according to Bartonovski, from 1 : 15 to 1 : 17.

Silk Stockings were first worn by the French King, in 1543; and in England by Queen Elizabeth, in 1561. Tobacco was first brought from Virginia in 1583.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, April 21, 1888.

THE TONGUE IN DISEASE.

DR. W. H. DICKENSON has recently delivered a series of lectures upon "The Tongue as an Indicator of Disease." His remarks are based upon a study of a very large number of hospital cases. In most instances the patients suffered from severe and fatal illnesses, and microscopical examinations of the tongue were made.

Dr. Dickenson's results are definite and valuable in certain limits, but they do not throw much light upon the many variations in the appearance of the tongue during minor and chronic ailments.

The lecturer makes a classification of tongues, based on the excess or absence of epithelial coat, its congestion, and its condition of moisture or dryness. The terms which he uses are for the most part such as are old and well known. The term furred, however, is used in a restricted sense, it being applied only when the papillæ are elongated and separated so as to give a shaggy appearance to the organ under examination. The term "plastered" tongue is also a somewhat new one, and is applied to those cases in which the covering is thickly laid on, as if with a trowel.

The following is the classification adopted:

1. Healthy. Moist.
2. Stippled. Dotted with white. (*a*) Moist, (*b*) dry.
3. Stippled and coated. Coat continuous in parts. (*a*) Moist, (*b*) dry.
4. Coated white. Coat continuous. (*a*) Moist, (*b*) dry.
5. Strawberry. Coated and injected, especially showing in fungiform papillæ.
6. White, plastered. Thick uniform coat, abrupt and striking.
7. Furred or shaggy. Greatly elongated papillæ. (*a*) Moist, (*b*) dry.
8. Incrusted, dry, brown. Thick felted dry coat over papillæ.
9. Furred or incrusted, becoming bare. Generally dry.
10. Denuded. Red. Absence of normal covering.
11. Red. Moist. Dry membranous covering.
12. Cyanosed.

In regard to the diseases which coat the tongue, it is seen at once that no hard and fast rule can be laid down. In some healthy persons, a coated tongue is normal; on the other hand, it sometimes happens that even in pneumonia, a disease which generally coats the tongue with unusual rapidity, this organ may remain clean.

As a general rule, it seems that the tongue is not affected by local, but only by constitutional disorders, of which latter pyrexia probably affects it most quickly.

The stippled or dotted tongue presents the first and slightest variation from health. It was rarely found present in fever, and rarely in acute disease. Heart disease was the most common disorder, but the dotted tongue was not found often in grave constitutional disorder.

The next step in the acquirement of coat is represented by the "dotted and coated tongue." This is also found chiefly in chronic disease, though a larger proportion of acute disorders, including acute rheumatism and typhoid fever, is found. The element of fever becomes now introduced.

The term "coated tongue" is the one most often and most indefinitely used by physicians in description of their cases. Dr. Dickenson applies it, in its restricted sense, to a tongue whose coat is simply an exaggeration of the dotted and coated. The "plastered tongue," "strawberry tongue," and "incrusted tongue," are further subdivisions of the ordinary coated tongue.

The "coated tongue," then, of Dr. Dickenson, shows an increased percentage of acute and febrile disease. Pneumonia and pleurisy were present in fifteen per cent. of cases, and typhoid almost as often. Saliva now begins to be secreted less abundantly, and the dry forms are more frequent.

The "strawberry tongue" was observed in typhoid, pneumonia, and perityphlitis, as well as in scarlatina.

The "plastered tongue" is believed by Dr. Dickenson to be a very well-marked and striking form of lingual disturbance. "Clinically," says our writer, "this tongue never fails to arrest attention; it is the ensign of recent acute febrile disease. The chronic coated tongue is distinguishable from the plastered by its dirtier color and the less vivid apposition of white and red. Of 32 cases of the plastered tongue, the table shows 8 of pneumonia; 3 of acute bronchitis; 3 of acute rheumatism; 6 of typhoid; and 4 of other acute febrile affections. Pyrexia was marked in 18 cases, while the general average of temperature was 101.6°, a higher level than has yet appeared, save with the strawberry tongue, a nearly allied condition. Prostration, mostly such as belongs to the febrile state, was recorded in 8; while the increased proportion of patients on liquid diet bears testimony to the same association. The saliva was noticeably deficient in a larger proportion of instances than with any tongue yet before us, save the small strawberry class."

In this connection an interesting table is given, showing the relation of body-heat to the development of the lingual epithelium.

Relations of Body-heat to Coating of Tongue.

Class of tongue.	Percentage with pyrexia.	Average temperature.
Stippled	4.9	98.5°
Stippled and coated	8.6	98.7°
Coated, moist	18.7	99.1°
Coated, dry	30.0	99.5°
Strawberry	57.1	102.0°
Plastered	53.1	101.6°

The "furred or shaggy tongue" is generally dry. In a few cases in which it was found moist, the patients were old and suffered from constipation. The dry, furred tongue often occurs when the coated or incrusted tongue begins to shed its excess of epithelium. It is largely the result of absence of friction and moisture. The class of diseases in which it is observed does not present any uniformity.

The "incrusted, dry, and brown tongue" is brown because of lack of moisture. This form only appears in serious asthenic states. It is often spoken of as the "typhoid" tongue, and it is seen in advanced stages of typhoid, as well as of pyæmia, pneumonia, and phthisis. But pyrexia is not necessary to its production. It occurs in comatose states and in cancer, pernicious anæmia, and Bright's disease.

The "bare, red, and dry tongue" is seen as the result of exhaustive discharges, especially of pus, and it is linked with the constitutional state described as hectic. It occurs in chronic diarrhœa and in dysentery, both acute and chronic. It occurs in chronic disorders oftener than in acute, and it may or may not be associated with pyrexia.

The "cyanotic tongue" was found in venous congestion from heart disease, in albuminuria, and in pyrexia.

THE HEALTH OF NEW YORK AND LONDON.

Dr. Roger S. Tracy, Registrar of Records of the City Board of Health, has prepared a report upon the relative mortality of London and New York. This report is based on the vital statistics of London for 1886, and of New York for 1887. The death-rate in the former city is 20 per 1,000; in New York, 26 per 1,000. Analysis of the figures shows that the chief causes of the excess of mortality in New York are diphtheria and croup, diarrhœal diseases, phthisis, and diseases of the kidneys.

The causes of death which are more common, proportionately, in London, are rheumatism and gout, heart disease and aneurism, cancer, convulsions, apoplexy, brain and nervous diseases, whooping-cough, and measles.

It will be seen that the diseases which cause excess of mortality in this city affect especially children. On the other hand, the excess of deaths from phthisis and kidney disease is due, in part, to the tendency to these diseases of our large Irish population. Foreigners, in general, who bring with them the generous drinking habits of their native lands, show a liability to develop renal and liver troubles.

The conclusions of Dr. Tracy are:

1. That the excess of mortality in New York, as compared with London, is due chiefly to diphtheria and croup, diarrhœal diseases, phthisis, and kidney diseases.

2. That if the death-rate from these diseases were the same in New York and London, the mortality from all other causes remaining as at present in both cities, the general death-rate in the two cities would be almost precisely the same.

3. That the overcrowding in New York (16.37 persons to a dwelling, in 1880, as compared with 7.8 in London), and the trying climatic conditions, render it very improbable that the death-rate of this city can ever be reduced as low as that of London.

With regard to the last conclusion, it must be said that, despite our crowded condition, diphtheria is the only zymotic disease which New York develops in great excess. In some years the mortality from scarlatina and small-pox has been greater, proportionately, in London than in New York.

News of the Week.

Medical College Commencements.—The Jefferson Medical College held its annual commencement on April 5th, and graduated a class of one hundred and eighty-eight.

The Southern Medical College on February 29th graduated a class of thirty-two.

The Memphis Hospital Medical College held its eighth annual commencement on March 1st, and conferred degrees on fifty-four graduates.

The Medical Department of the Arkansas Industrial University held its commencement on March 1, 1888, and graduated twenty men as physicians.

The Atlanta Medical College on March 1st graduated a class of fifty-four, out of fifty-six applicants.

The Medical College of Indiana graduated a class of twenty-five on March 1st, and The Central College of Physicians on February 28th conferred degrees on five graduates.

The St. Louis College of Physicians and Surgeons graduated a class of thirty-seven on March 3d.

The Missouri Medical College graduated sixty-six students at its forty-seventh annual commencement on March 6th.

The St. Louis Medical College graduated a class of sixteen on March 6th.

The Beaumont Medical College graduated thirty-three students at its commencement on March 15th.

The Detroit College of Medicine had thirty graduates at its commencement on March 20th.

The Western Pennsylvania Medical College held its annual commencement on March 24th, and graduated a class of thirty-four.

The commencement exercises of the Medical Department of Tulane University of Louisiana were held on March 28th. There were seventy-five graduates in medicine and pharmacy.

A New Medical College has been established in Detroit, to be known as the Michigan College of Medicine and Surgery. It is only a short time ago that the two medical colleges formerly in existence there were united. But the union seems to have been rather conjugal than platonic, for as a result of the amalgamation we now have a new institution. The best evidence of its prospective usefulness and success we see in the appointment of the brilliant editor of the *Medical Age* as Professor of Pathology and Practice of Medicine.

Another College Raising its Requirements.—We are glad to notice that the Medical Department of the Western Reserve University, beginning next fall, will require an attendance upon three years of graded course instruction as a condition for admission to the applicants for the degree of M.D.

To Stop Illegal Practising.—The Essex County Medical Society has begun a war upon the physicians practising in Newark, N. J., who have not proper diplomas to practise, and the Committee on Illicit Practice has been directed to secure the indictment by the Grand Jury of three persons who have, it is alleged, no legal status as physicians.

The late Dr. Andrew B. Van Horne.—Dr. Van Horne, recently of Colorado Springs, died on March 31, 1888, at Orange, N. J. The doctor was a graduate of Yale, and received his medical education at the College of Physicians and Surgeons, New York, graduating in 1880. He was house surgeon at Charity Hospital. Shortly after leaving the hospital symptoms of pulmonary phthisis showed themselves and he left his home, Jersey City, for Colorado Springs. He returned East last summer somewhat improved, but his health steadily declined until his death. Dr. Van Horne was always very popular on account of his sunny temperament and genial manner; as a student and hospital interne he is well remembered as industrious and painstaking.

The late William B. Goldsmith, M.D.—At a meeting of the New England Psychological Society, held on April 10th, the following resolutions were unanimously adopted: The New England Psychological Society, having learned the painful news of the death of a highly valued and beloved member, Dr. William B. Goldsmith, Superintendent of the Butler Asylum at Providence, R. I., recalls, with a deep sense of its great loss, his high character, exceptional ability, and refined and genuine nature.

Resolved, That such has been the influence of his opinions, based upon his solid attainments and great devotion to his work, that broader views of the treatment of the insane and deeper insight into mental disease have come to many of us, his fellow-workers.

Resolved, That by his death is lost a tried and considerate friend, a judicious and helpful counsellor, and a courteous and cultivated associate.

Resolved, That the Secretary be requested to communicate these resolutions to the family of our deceased friend, and to extend to them our profound sympathy in their sorrow. Walter Channing, M.D., *Secretary*.

Tennessee State Medical Association.—This Society met in annual session at the United States Custom House at Knoxville, April 10th, the President, Dr. P. D. Sims, of Chattanooga, in the chair; Dr. E. Nelson, of Knoxville, Secretary. Twenty-three new members were elected. The first paper read was by Dr. Richard Douglas, of Nashville, Tenn. His subject was "Laparotomy Practically Considered;" he also reported a number of cases. The operation was discussed by seven different gentlemen, and the operation advocated. "The Germ Theory of Diseases" was the title of a paper by Dr. H. P. Coile, of Knoxville. "The Antiseptic Treatment of Wounds" showed the ability of Dr. Duncan Eve, of Nashville, as an investigator, in an able paper. "Fissures and Ulcers of the Rectum," by T. J. Hoppel, of Knoxville. "Diphtheria," a paper by Dr. John M. Boyd, was so well appreciated that the author was given a special vote of thanks. In the evening a popular session was held at Straub's Theatre, at which the élite of Knoxville were present. Dr. John M. Boyd, of Knoxville, made the welcoming address to the visiting doctors. The President, Dr. P. D. Sims, of Chattanooga, after expressing appreciation of the hospitality shown them proceeded to his address on the subject, "Materialism in Disease." He said that medicine furnished two extremes of human thought. One looked for all causes of disease among agencies mysterious and mythical, the other rejected everything which does not admit of physical, tangible demonstration. It is natural to inquire for the cause of the phenomenon, and at present this is being done in an intelligent manner. Our ancestors sought in the planets and animals the causes of their afflictions. Disease is only the result of violation of immutable laws. It is for a moral purpose and used in the economy of nature. With the present means of scientific investigation, the time is coming when we can scrutinize every disease as a specific condition. All contagious diseases must be introduced from without, for no amount of filth will produce them unless some germ exists or is brought in. We can make man either strong or weak, but cannot make an organic unction any more than man can turn monkey. A disease is too often treated instead of the patient. It must be regarded as a condition in the sick and worked on accordingly. What is life but the productive power of creation, and that the work of God? The enlightened physician of to-day cannot believe in materialism and make a practical and thorough success of his profession. The doctor was honored with the closest attention throughout the hour of his address.

In the second day's session "The Philosophy of Fever" was the first paper, read by Dr. C. W. Beaumont, of Chattanooga. Dr. G. A. Baxter, of Chattanooga, read on "Infant Feeding;" Dr. G. F. Glenn, of Nashville, on "Syphilis and Marriage." "Treatment of the Insane" was dealt with by Dr. C. C. Fite, of Knoxville, Tenn.; "The Eye and its Abuse," by Dr. T. F. Smith, of Chattanooga; "Resection of the First Metatarsal Bone of the Foot for the Cure of Bunion," by S. T. Armstrong, M.D., of New York; "Some Observations and Thoughts on General Paralysis," by Dr. M. Campbell, of Knoxville; "Cholera in Tennessee," by Dr. J. B. Lindsay, of Nashville.

The Committee on Legislation reported a bill for presentation to the legislature for the suppression of quackery.

The election of officers resulted as follows: T. B. Hoppel, of Trenton, President; C. M. Drake, of Knoxville, First Vice-President; C. W. Beaumont, of Clarksville, Second Vice-President; Dr. E. Nelson, of Chattanooga, Secretary; and R. Cheatem, of Nashville, Treasurer.

A resolution from the W. C. T. U., requesting the Association to discontinue the use of alcohol in medicine, was rejected.

A reception was given in the evening by the citizens and local profession of Knoxville, in the rooms of the Chilhowee Club.

Remedy for Myalgia.—An old and well-known formula combined with lanoline had such a quick and favorable effect in myalgia of the scapular and brachial regions, that I feel safe in offering it to the profession. ℞. Hydrate chloral, gum camphor, āā ℥ ss. Mix well, until liquid, and add lanoline, ℥ j. M. S.—Rub well over painful parts. To show what lanoline can do, it fully relieved the pain in six hours, and had the constitutional effects of chloral as fully as if the person had taken gr. xx.–xxx. per mouth. Only two appplications were used, and only a limited portion of the salve.

The English Drank some $10,000,000 worth more alcohol in 1887 than in 1886, the increase being chiefly in beer.

The Publication of the Transactions of the recent Medical Congress at Washington is progressing, and it is probable that at least three volumes will be ready for delivery early in May next.

Food Inspection.—The United States Senate has passed the bill providing for the inspection of meats for export, and prohibiting the importation of adulterated or unwholesome foods, or of vinous, spirituous, or malt liquors adulterated or mixed with any poisonous or noxious chemical drug or other ingredients injurious to health. The bill further prohibits the importation of diseased or infected animals, or those exposed to disease or infection.

A Bill Incorporating an Institute for Teaching "Christian Science" has passed our learned legislative body at Albany.

A Righteous Judge.—We take pleasure in commending the just and sensible course taken by Judge Barrett in setting aside the verdict of the sheriff's jury in the case of Miss Coffin. The evidence plainly showed that the young woman was insane; but the defence had secured a legal expert at browbeating medical witnesses, and the result was a verdict of not insane. The judge sets this aside as contrary to the evidence.

The Italian Surgical Congress held a successful meeting on March 27th at Naples. The papers read included one by Professor Andrea Ceccarelli, of Parma, on "Tannin in the Treatment of Tuberculous Affections," in which he set forth the good effects resulting from its use, local as well as internal. Dr. Ambrosio, of Naples, read some interesting notes on the "Transplantation of Pieces of Aseptic Sponge in the Cure of Ulcers and Wounds;" and after him came Professor Lampiasi, of Trapani, on "Bacteriological Researches in Tetanus," who professed to have found and cultivated the micro-organism of tetanus, by which he has been able to produce genuine tetanoid symptoms in many animals. Dr. Ernesto Tricomi, of Rome, read a paper on "Septicæmia and Pyæmia in Man," contending for a variety of septicæmias all due to diverse bacteria. Dr. Neri, of Rome, read a paper on "Micro-organisms in the Surgical Wards of the Roman Hospital," in which he showed that the renewal of air in a hospital should be effected from floor to ceiling, and not, as is invariably done, from ceiling to floor. Professor D'Antona followed with a paper on "Transverse Fracture of the Patella, with Resection and Suture," which led to a long discussion; Bozzini and Vercelli favoring tenotomy; Paci, of Pisa, myotomy, to bring together the fractured margins of the patella; Postemski, the hooks of Malgaigne; while Ceci of Genoa's metallic suture was the method approved by D'Antona himself. Another interesting debate was that started by Caselli on the revival of the abandoned metallic sutures in osseous fractures, in which the leaders of the Congress all took part.

Thieving Medical Students.—Teachers of medical students have been compelled to notice a most extraordinary tendency to forget the distinctions between *meum* and *tuum* in the class of persons under them. Some time ago a large amount of drugs and appliances was stolen from Bellevue Hospital; and, quite recently, a student of the University Medical College stole some expensive apparatus from the Loomis Laboratory. A few lectures on the fundamental principles of ethics might be a profitable investment for medical, and perhaps other, colleges. For we fancy that the propensity to steal is due rather to irresponsible adolescence than to the special influences of medical study. We may remark in this connection that it is with a certain feeling of satisfaction that one chronicles the fact of the theft of apparatus valued at $1,000 from a medical college. There have been times and colleges when $1,000 would have purchased the whole plant of the institution. There may be such in this country now. If so, they at least need no lectures on property rights, and need not worry over possible $1,000 thefts. "*Cantabit vacuus latrone viator.*"

Dr. Martineau, the well-known gynecologist of Paris, died on March 13th in the fifty-third year of his age.

William Benjamin Goldsmith, Superintendent of the Butler Hospital for the Insane, at Providence, R. I., died on March 21st of acute pneumonia, aged thirty-four.

The State Medical Society of Alabama has practically adopted the new code of ethics. That is to say, by recent legislation, every person who passes the examination of its Board of Examiners becomes a member of the Society. A medical education qualifies a man to be legally a doctor and a member of the Society, be he homœopath or regular. If it is consistent, the American Medical Association cannot now refuse delegates from the New York State Society and accept those from Alabama. We await the action of the learned body in the matter with much interest.

The Late Mr. Matthew Arnold wrote a poem entitled "The Wish," in which he indicated the kind of death-bed he would desire to have. He makes the following somewhat unpleasant allusion to the medical profession and the clergy:

> "Nor bring, to see me cease to live,
> Some doctor full of phrase and fame,
> To shake his sapient head, and give
> The ill he cannot cure a name.
>
> "Nor fetch, to take the accustomed toll
> Of the poor sinner bound for death,
> His brother doctor of the soul,
> To canvass with official breath."

A Striking Feature of journalism just now is the rapid increase in the number of sanitary journals. For many years the esteemed *Sanitarian* held the field alone. Now we have *The Sanitary News*, *The Sanitary Era*, *The Journal of Health*, *The Annals of Hygiene*, and now comes another new journal, *The Prophylactic*, a monthly journal, published by M. B. Playter & Co., of this city.

Treatment of Epithelioma by Marsden's Paste.—Dr. A. R. Robinson treats epithelioma, where the disease has not progressed far enough to involve the glands, in the following manner, and promises a good result. Make a paste—"Marsden's paste." ℞. Ac. arseniosi, gum acaciæ, āā ʒ j. Sig.—Apply enough to cover diseased tissue by means of rubber adhesive plaster, and leave on for about sixteen hours. Then wash with warm water and apply a simple dressing, as ung't. zinc. ox., or vaseline, for about a week. If all the pathological tissue be not destroyed, make further applications in the same way.—*Canada Lancet.*

Medical College Changes and Appointments.—Dr. Joseph Taber Johnson has been made Professor of Gynecology in the Medical Department of Georgetown University; Dr. P. J. Murphy has been appointed Professor of Obstetrics. Dr. Nicholas Senn, of Milwaukee, Wis., has been appointed Professor of the Principles of Surgery and Surgical Pathology in the Rush Medical College; Frank T. Andrews, M.D., has been appointed Professor of Histology in the Chicago Medical College; and Henry F. Lyster, M.D., of Detroit, has recently been appointed to the Chair of Practical Medicine in the University of Michigan, made vacant by the death of Professor A. B. Palmer.

Death of a Medical Editor.—Dr. Robert Hippolite Brochin, the distinguished editor-in-chief of the *Gazette des Hôpitaux*, died on March 25th in the eightieth year of his age.

The Legislature of Maryland made an appropriation of $3,000 to the College of Physicians and Surgeons of Baltimore, and gave $1,500 a year for two years to the Good Samaritan Hospital.—*Maryland Medical Journal.*

A Law to Regulate the Practice of Medicine in Maryland.—The bill to regulate the practice of medicine in Maryland has passed both branches of the Legislature, and, as soon as it receives the Governor's signature, will become a law.

A New Large and Magnificently Appointed Hospital has recently been opened at Genoa. It is known as the Hospital of St. Andrew the Apostle.

Obituary.

CORNELIUS REA AGNEW, M.D.,

NEW YORK.

The medical profession of this city and country has met with an irreparable loss in the death of our esteemed friend Dr. Agnew. In the full tide of active professional work, he was stricken with perityphlitis, which rapidly led to perforation of the vermiform appendix, and consequent peritoneal abscess. The disease was at once recognized by Dr. Delafield, and Dr. Sands was called to operate. The operation resulted in the evacuation of pus, and for a time hope was revived in the hearts of his many friends; but, despite all their efforts, symptoms of general peritonitis manifested themselves, and death occurred on Wednesday afternoon. The illness extended scarcely over a week.

Dr. Agnew was born in this city, August 8, 1830, and was of Huguenot, Scotch, and North Irish extraction.

Prepared for college by William Forest, of this city, at the age of fifteen Dr. Agnew entered Columbia College, from which he was graduated in 1849. He then began the study of medicine under Dr. J. Kearney Rogers, who for many years had been attached as Surgeon to the New York Hospital and the New York Infirmary, and was also Professor of Anatomy in the old College of Physicians and Surgeons. In 1852 he received his diploma from the College of Physicians and Surgeons, and soon after was appointed House Surgeon to the New York Hospital, and then its Curator. Then he accepted the position of Surgeon to the Eye and Ear Infirmary, but made it a condition that he should first go to Europe to complete his studies. He accordingly went to Dublin, where he became a resident pupil of the Lying-in Asylum, and attended the clinics given by William Wilde at St. Mark's Eye and Ear Hospital. Then he went to London, where he attended the clinical lectures of William Ferguson, and walked the hospitals. From London Dr. Agnew went to Paris, where he studied the practice of Velpeau, Ricord, Sichel, and Demarres in diseases of the eye, and of Hardy in diseases of the skin.

Returning to New York in 1855 he started in practice for himself. The next year he married Mary, daughter of Lora Nash, a merchant in this city. In 1858 Governor E. D. Morgan appointed him Surgeon-General of the State of New York, and at the outbreak of the war the Governor appointed him Director of the State Volunteer Hospital, New York. When the United States Sanitary Commission was organized Dr. Agnew and Dr. Elisha Harris were unanimously elected to the Commission. About this time he resigned his position as Surgeon to the Eye and Ear Infirmary that he had been holding ever since his return from Europe. He was regarded as an authority in the United States Sanitary Commission, and although he had a large private practice he devoted all the rest of his time, at great personal sacrifice, to the succor of the soldier. The life-saving work of the Commission at Antietam, the battles of the Wilderness, and the relief to the wounded and sick soldiers who returned from Southern prisons were made so successful principally by the carefully arranged plans of Dr. Agnew, and which were superintended by him.

Dr. Agnew was one of the four gentlemen who founded the Union League Club in this city that gave so great material assistance to the Government during the war, and he became one of its Vice-Presidents.

In 1866, at the request of the Faculty of the College of Physicians and Surgeons, he established an ophthalmic clinic there, and in 1869 he was elected Clinical Professor of Diseases of the Eye and Ear. The following year he organized the Brooklyn Eye and Ear Hospital, and also the Manhattan Eye and Ear Hospital, the latter in this city. He had been appointed in 1865 one of the Managers of the New York State Hospital for the Insane, at Poughkeepsie, and was twice reappointed to that office.

As early as 1859 Dr. Agnew was elected a Trustee of Public Schools in this city, and was made President of the board. Several years later he was selected a Trustee to organize a School of Mines in Columbia College, and in 1874 he became a Trustee of that college. In 1872 he was chosen President of the Medical Society of the State of New York. He was Secretary of the first Sanitary Reform Association organized in this city, and one of the committee which made the first draft of the health laws of the city. He was for many years a member of the Century Club, and belonged to a number of medical and scientific societies, among which are the following: The Medico-Chirurgical Society of Edinburgh; New York Academy of Medicine, New York Pathological Society, Medical and Surgical Society of New York City, American Ophthalmological Society, of which he had served as President; American Otological Society, New York Ophthalmological Society, of which he was one of the founders; International Ophthalmological and Otological Societies, County Medical Society, and New York Academy of Sciences. He was a fluent lecturer, and was widely known as an authority on ophthalmology. He made valuable contributions to medical literature, among which were "A Contribution to the Surgery of Divergent Squint," "Trephining the Cornea to remove a Foreign Body," and "Canthoplasty as a Remedy in certain Diseases of the Eye."

Dr. Agnew was beloved by all who knew him, and his name was held in the highest esteem wherever it was known. He was of a modest and retiring disposition, yet he had charming social qualities. Few physicians in this country united so much learning with so many noble traits of character, and his death will be mourned by scientific men and by people in all walks of life.

Society Reports.

FRENCH SURGICAL CONGRESS.

Third Annual Session, held in Paris, March 12 *to* 17, 1888.

Professor Verneuil, President, in the Chair.

(Special Report for The Medical Record.)

(Continued from page 423.)

Thursday, March 15th—Fourth Day.

The members of the Congress passed the forenoon of this day in visiting the different hospitals and surgical clinics of Paris, witnessing the operations and inspecting the institutions. In the afternoon they visited the Pasteur Institute, the Morgue, the Museum of Hygiene, and Professor Cornil's histological and bacteriological laboratories.

In the evening a banquet was given at the Hôtel Continental, which was attended by most of the delegates.

Friday, March 16th—Fifth Day.

The subject proposed for discussion at this session was the

TREATMENT OF EMPYEMA.

M. **Le Fort** reported two cases at that time under treatment in his service at the Hôpital Necker. The first case was cured, but there remained a fistulous tract extending a distance of over twelve inches toward the upper part of the thorax. In the second case,

ESTLANDER'S OPERATION

had been twice performed without any definite result. He had been in the habit of measuring the progress of closure of the cavity by means of injections. On the last occasion on which this was done, after about three ounces had been injected, the patient suddenly lost consciousness. He was restored by means of electricity, but was found to have complete paralysis of the left arm and partial paralysis of the leg on the same side, with considerable mental disturbance.

M. **Thiriar** had performed

RESECTION OF THE RIBS

nineteen times on thirteen patients during the past four years. Of these cases eleven were cured, one died of acute pleuro-pneumonia, and one passed out of sight before the fistula had completely closed. He had performed the same operation in two cases of

INTERLOBULAR PLEURISY.

In this affection there is a purulent collection formed between two contiguous lobes of the lungs, and eventually the abscess opens into the lung, a purulent fetid suppuration being established. The patients become more and more emaciated, and finally die. In these cases Estlander's operation is of very great service as a preliminary to

PNEUMOTOMY.

The speaker related two cases of this nature in which he had resected the ribs, opened the abscess-cavity through the pulmonary tissue, washed it out, and drained it thoroughly. The patients made a good recovery. In performing this operation the surgeon should not be timid. It was far better to resect two ribs too many than to fall short by one.

M. **Jules Boeckel** had performed this operation twelve times, and had had nine recoveries and three deaths. In two of the cases regarded as cured, however, there still remained a small fistulous tract.

M. **Delorme** thought that the indications for

THE LETIÉVANT-ESTLANDER OPERATION

were far from being as well defined as it was desirable that they should be. The unfavorable results which had followed the operation in certain cases, where success had been looked for and promised, had brought it into more or less disrepute. The cause of this failure in many instances was the fact that the pleural cavity was too large to be closed by the falling in of the thoracic wall deprived of its bony support. A depression of three centimetres was the most that could be obtained by the operation. If, however, in addition to the resection of the ribs, the soft parts were divided throughout the entire length of the suppurating cavity, they could be folded in and thus be made to obliterate entirely the pleural space.

M. **Vieusse** said that the indications for

THORACOPLASTY

were to be found in the extent, age, and situation of the suppurating cavity, in the degree of retraction of the chest-wall, and in the general condition of the patient. Success might at least be hoped for if the suppuration had existed for six months or longer, if the cavity were not of very great extent, if there were no more retraction of the chest-wall going on, and if the patient were in a fair condition of general health.

M. **Berger** called attention to the

DANGERS OF RESECTION OF THE RIBS.

He had formerly regarded the operation as perfectly safe, even if not always curative, but he had recently had two cases of sudden death following it, and had in consequence become more cautious. In patients debilitated by age or long suppuration, or in whom the whole extent of the pleural cavity was involved, he advised that (1) the ninth and tenth ribs be left intact, in order to interfere as little as possible with the respiratory movements; and (2) that only a few ribs be resected at a time, thus obtaining a gradual closure of the suppurating cavity.

M. **Bouilly** had performed the operation thirteen times in patients ranging from twelve to thirty-one years of age. The best results had been obtained in individuals between the ages of eighteen and twenty-one years, in whom the chest-walls were more flexible and accommodated themselves more readily to their new position.

M. **Ollier** spoke of the modifications in the technique of the operation occasioned by the age of the patient. In the adult an extensive operation was demanded, but in the child a narrow section only of the bony wall should be removed. On account of the elasticity of the thoracic parietes this would allow of a sufficient sinking in, while the danger of an arrest of development of the ribs would thereby be reduced to a minimum. In certain cases the bone was reproduced so rapidly as to necessitate a second operation. In young and robust subjects in whom this was to be feared it was better to prevent it by destroying the periosteum for a certain distance.

MM. Kirmisson, Levrat, and Fauvel reported cases of this operation which were of interest on account of peculiar circumstances attending them.

M. **Poncet** read a paper on

RESECTION OF THE URETHRA

in the treatment of certain forms of stricture. He preferred external urethrotomy in most cases, but had occasionally resorted to urethrectomy, and had been well pleased with the results obtained.

M. **Bazy** reported two cases of

FOREIGN BODY IN THE BLADDER.

In the first, after crushing a calculus, he had found the nucleus to consist of a tangled piece of linen thread, about six yards in length. This patient was a woman, aged sixty-six. The second patient, a man, aged forty-five, had introduced a thin rod of pork, about five inches long, into his urethra, and, having slipped from his fingers, it passed into the bladder. This was followed by complete retention. When M. Bazy saw the man, a few days later, he passed a catheter and drew off a large quantity of horribly fetid urine, worse than any he had ever seen in cancer of the bladder. The foreign body was removed, the bladder was washed out, and in a few days the patient was passing perfectly limpid urine.

M. **Ehrmann** presented a communication on

PALATOPLASTY.

He reported twenty operations for cleft palate, in seventeen of which a successful result was obtained. He thought the most favorable age for the operation was between two and four years.

M. **Guyon** read a paper on

HYPOGASTRIC SECTION,

in which he recounted the recent modifications in the technique of the operation, which he had found to be decided improvements.

M. **Segond** read a communication on the surgical treatment of

HYDATID CYSTS OF THE LIVER.

The first thing to do, he said, in the case of a supposed hydatid cyst, was to aspirate the tumor. This was useful as a diagnostic measure, and might be curative. If there were a reaccumulation of fluid, it would be necessary to make at once a large incision into the cyst. The operative details differed according as the cysts were located at the antero-inferior, antero-superior, postero-inferior, or postero-superior part of the liver. The rules for incision in the first three classes of cases were pretty well established, but for reaching the subdiaphragmatic tumors, two routes had been recommended, viz., the abdominal and the thoracic. The speaker had performed the latter operation twice with success, and thought that it was the better method.

M. **Maunoury** related two cases of

SUBDIAPHRAGMATIC HYDATID CYSTS

treated by a posterior pleural incision. In the first case' the operation was followed by an acute suppurative pleurisy, but in the second case, the two pleural surfaces were united by suture before the puncture was made, and the wound healed without accident of any sort.

M. **Accolas** reported a case of

ABSCESS OF THE LIVER.

treated successfully by Little's method of direct incision.

M. **Pozzi** reported a case of extirpation of a hydatid cyst, and described the method of

ABDOMINAL SUTURE

which he employed after laparotomy. He united first the peritoneum, and then the aponeurosis, separately, with catgut sutures cut off and left permanently in the tissues, and after this approximated the integument and subcutaneous tissues by means of silk or coarse catgut.

M. **Horteloup** related a case of

ENTERORRHAPHY

for the cure of an intestinal fistula involving the cæcum, following a perityphlitic abscess. After two unsuccessful attempts to close the artificial anus thus resulting, the speaker dissected away the gut, drew it outside, and closed the opening by nine interrupted sutures. The result was all that could be desired.

M. **Labbé** recounted a case of

FOREIGN BODY IN THE LARYNX.

An attempt to remove it by means of a median section of the thyroid cartilage induced asphyxia, and the child's life was saved only by an immediate tracheotomy. The foreign body, a metallic star with sharp points, was then extracted, and the patient made a rapid recovery.

M. **Tillaux** then read a paper on the

TREATMENT OF PSEUDARTHROSIS.

This accident, when occurring in the femur or humerus, is due almost always, he believed, to the interposition of muscular tissue between the ends of the bone. His treatment consisted in the excision of the muscular tissue, freshening of the ends of the bone, and immobilization. Osseous suture he condemned as not only useless but harmful.

M. **Picqué** related a case of

ANEURISM OF THE FEMORAL ARTERY

appearing rather suddenly in a woman, aged fifty-nine, who had had for some time an intermittent limp with lancinating pains in the lower extremity. A cure was obtained by ligature of the external iliac artery.

M. **Vincent** presented a communication on the relation between

HEMORRHAGE AND CHRONIC HEPATIC DISORDERS.

The occasion of his remarks was the death from secondary hemorrhage of a child upon whom he had performed a cholecystotomy. He thought that hemorrhage was always to be feared in operations upon subjects of chronic disease of the liver, and this even in cases in which there was no lesion of the larger vessels. This was in accord with the observations of M. Verneuil upon the casual relation between disease of the liver and epistaxis.

M. **Jalaguier** reported two cases of

HERNIA OF THE CÆCUM

in which a cure was obtained by the radical operation.

Saturday, March 17th—Sixth Day.

The subject for discussion at this session was that of the

RETURN OF CARCINOMA AFTER OPERATION,

the cause thereof, and the best means of prevention.

M. **Cazin** presented the statistics of the cases of cancer of the breast occurring in his own practice during the past twenty-five years. There were 102 operations for scirrhus, in 60 of which there was glandular enlargement. Of these patients, 3 died, 2 were lost sight of, 48 suffered a relapse, and 7 were definitely cured. Of 48 cases in which there was no glandular involvement, 1 died, 5 had disappeared, 8 were cured, and in 28 the disease returned. Of 120 cases of encephaloid carcinoma, the ganglia were involved in 80. Of these, 4 died, 4 were lost sight of, 5 were cured, and 67 relapsed. Of the 40 cases without glandular enlargement, 1 died, 5 could not be traced, 8 were cured, and 26 relapsed. In the cases in which the disease returned, this occurred from three months to seven years after operation. In all his operations he removed the axillary glands, whether they appeared to be involved or not, and also the lymphatics connecting them with the mammary tumor.

M. **Verneuil** maintained that

CANCER IS A CONSTITUTIONAL DISEASE,

and that the most that an operation can do is to secure for the patient a respite of greater or less duration. In support of this view he instanced the case of a lady who suffered a return of the disease in the cicatrix thirty years after amputation of the breast, and another case of epithelioma of the tongue, in which the disease recurred six and a half years after removal. As a preventive he advised a vegetable diet and the daily exhibition, for at least six months after operation, of arsenic and magnesia.

M. **Poncet**, basing his conclusions upon the results of his own cases, believed that

PRIMARY EPITHELIOMATA OF THE SCALP

were much more malignant than similar growths arising from transformation of sebaceous cysts. Of seven cases of the former upon which he had operated, all died within three years of a return of the disease, while in two cases of the latter a definite cure had been obtained in both. The following were his conclusions: 1, In cases in which there is an hereditary history of cancer, a return of the disease is certain; 2, involvement of the neighboring glands increases the tendency to relapse; 3, the best prophylaxis is an early and extensive operation; 4, in certain unfavorable cases an operation only hastens the fatal issue.

M. Boeckel presented the

STATISTICS OF ONE HUNDRED AND THREE CASES OF CANCER,

in various situations, removed by operation. Of these, 14 died, 77 had a recurrence of the disease within five years, and 12 were cured.

M. Polosson read a paper upon

DIFFUSE MYXO-SARCOMATA OF THE EXTREMITIES.

His conclusions were that, in the case of tumors of limited extent, an attempt at extirpation might be made, but in case of a very large growth, or of relapse after removal of a smaller tumor, the only hope for the patient lay in amputation of the member.

M. Labbé spoke more especially on the question of the

RECURRENCE OF BENIGN TUMORS.

In adenoma of the breast it was very common to see a return of the growth after simple enucleation. It was necessary in these cases to remove some of the tissue extending beyond the capsule, and when the tumor was of very large size the entire breast should be excised, and all the outlying islets of gland-tissue should be carefully sought for and cut out.

M. Richelot read a paper upon

CARCINOMA UTERI,

in which he related the statistics from his own practice. He had performed vaginal hysterectomy thirteen times, but in two of these cases an extension of the disease to the broad ligaments was discovered during the operation. Of the remaining eleven operations, five were followed by a recurrence of the disease, and six were successful.

M. Sabatier was opposed to any attempt to secure primary union after amputation of the breast for cancer. He believed that, if suppuration took place, some cancerous germs might be washed away which would otherwise be retained in the wound.

M. Mollière said that one of the principal factors in the recurrence of new-growths after removal was the age of the patient. In children the disease returned almost immediately; in adults it returned usually, though not so quickly; while in those over seventy years of age, one could generally count on a definite cure.

M. Galezowski read a communication on

EPITHELIOMATA AND MELANO-SARCOMATA OF THE EYE.

Malignant tumors of this organ occur with greatest frequency in the anterior portion, where the circulation is more active. The tumors remain for a long time single, but they may be propagated by direct contact to the overlying portion of the eyelid. It is possible, more often than is commonly supposed, to extirpate these tumors without sacrificing the eye.

M. Poncet read a paper on

INGROWING TOE-NAIL,

in which he maintained that this affection arose in consequence of an inequality in growth between the great toe and its nail.

M. Le Fort related four cases in which he had successfully employed

ELECTROLYSIS IN THE TREATMENT OF PSEUDARTHROSIS.

M. Petit then read a paper on

GASEOUS TUMORS OF THE NECK.

He had collected the reports of twenty-five cases of these cysts. These tumors may arise, he said, from a hernia of the mucous membrane of the larynx or trachea, occurring after puncture or incomplete rupture of the wall of the tube, or there may be an infiltration of air into the tissues following complete rupture of some portion of the air-tubes. He thought some of them were susceptible of cure, and suggested that an operation similar to the radical operation for hernia might be performed with benefit in certain cases.

M. Jeannel read a paper on

LONGITUDINAL OSTEOTOMY,

which he had performed several times, straightening thereby very marked curves and lengthening the bones.

M. Bories reported a case of

ERECTILE TUMOR

successfully treated by electrolysis.

M. Abadie presented a communication on the prevention of

SUPPURATION OF THE EYE FOLLOWING TRAUMATISM.

He advised the use of a subpalpebral douche after the receipt of any traumatism whatever, whether from injury or operation. The liquid used should be unirritating and aseptic, though it need not necessarily be antiseptic. If suppuration occurred in spite of this douche, he was in the habit of touching the centre of the suppurating portion with the very fine point of the galvano-cautery. If this were done every twelve hours, it would often save the cornea from otherwise certain destruction.

M. Fontan related a case of

TEMPORARY RESECTION OF THE UPPER JAW,

to facilitate the removal of a large naso-pharyngeal polypus. Within less than three weeks after the operation, the patient was able to eat solid food, and in seven weeks could crack nuts with his teeth.

M. Kirmisson reported two cases in which he had performed

RESECTION OF THE BONE,

in order to shorten the limb and compensate for loss of substance in the soft parts.

M. Reynier reported a case of

GUNSHOT WOUND OF THE STOMACH,

in which the patient recovered without operative interference.

After the presentation of a number of instruments, the result of

THE ELECTION OF OFFICERS

was announced. M. Larrey was elected President; M. Guyon, Vice-President; and M. Pozzi, Secretary.

The Congress then adjourned to meet on the first Monday in October, 1889.

Eucalyptol and Iodoform in Phthisis.—M. Edmond Habert has found subcutaneous injections of eucalyptol and iodoform useful in ordinary phthisis accompanied by bronchial catarrh, and also in emphysema and chronic bronchitis. Cough and expectoration are diminished; the general condition is improved; sleep and appetite are restored. There is, however, no diminution in the number of bacilli in the sputa. The following solutions are employed: ℞. Absolute eucalyptol, 5 grammes; oil of vaseline, 20 grammes. ℞. Absolute eucalyptol, 5 grammes; iodoform, 0.25 gramme; oil of vaseline, 20 grammes. Each Pravaz syringe contains 0.20 gramme of eucalyptol for the first solution, and 0.1 more of iodoform for the second. The doses, which gradually increase, vary from 2 to 5 centigrammes in twenty-four hours. The solution must be absolutely pure, and the syringe must be properly disinfected. The quantity of liquid injected should not exceed thirty or forty drops. The needle should be introduced a good way beneath the skin.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 5, 1888.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

DR. W. W. KEEN, of Philadelphia, and Dr. Charles C. Godfrey, of Bridgeport, were invited to seats on the platform.

The Council recommended such alterations in the constitution as would permit of extension of the territorial limits to membership in the Academy. Action will be taken at a future meeting.

DRS. E. C. SEGUIN and R. F. WEIR presented

A CONTRIBUTION TO THE DIAGNOSIS AND SURGERY OF CEREBRAL TUMORS.

The first part of the contribution was devoted to the relation of a successful case. The patient was a man aged thirty-nine, a German by birth, a resident of Bridgeport, under the care of his family physician, Dr. C. C. Godfrey. The man was brought to Dr. Seguin's office during his absence, August 12, 1887, but was seen by Dr. Booth. There was no history of gonorrhœa nor of chancre. It was learned later that his mother died of scirrhus of the liver. There was no history of epilepsy during childhood. He was perfectly healthy until the autumn of 1882, when he had malarial fever. During this illness he had a good deal of pain in the head, and one day, feeling strangely, he arose to go to the window, when his wife observed a spasm over his right cheek and neck. It was a twitching, and did not involve the arm. Consciousness was not lost. A similar attack occurred the next year, and again one the third year, this time taking place at night. The wife was certain that no spasmodic movement took place in the hand or arm before 1885.

The first spasm, as the first indication of cerebral disease, was particularly interesting. It was the only symptom in this case for three years. It was confined to the right cheek, and perhaps the side of the neck. Two years ago the symptoms became more marked. On one day he became unconscious, fell, and bit his tongue, having probably a convulsion. He had had similar attacks at long intervals since. These epileptic attacks were preceded by an aura. Then there took place twitching and jerking in the right side of the face, right hand and arm, and loss of consciousness. They occurred at all hours. No exciting cause had been observed. The speech had become thick. The general health was good.

Dr. Seguin first saw the patient on August 26th. He stated that the attacks always began in the right facial muscle; the spasms in the hand were always secondary to those in the face. He was awkward in the use of the right hand. He felt a numb sensation in the right arm. The speech was thick. The eyes were normal in every respect. He stood equally well on either foot. The patellar reflex was greater on the right side. There was slight diminution of tactile sensation over the right cheek. Intermittent fever had reappeared. The diagnosis was that of a tumor in the left motor zone involving the facial centre. He saw the patient again, September 21st. He had had only one severe epileptiform attack since August 21st. The speech had become worse, being slow and somewhat interrupted. The patient could not always think of the right word either in speaking or writing. The movement in writing was also interfered with. The tongue was tremulous, but projected nearly straight. The paresis of the right arm was more pronounced. The muscular sense was normal. The other symptoms remained about as before. The desirability and feasibility of an operation were discussed. Whether the tumor was cortical or subcortical was a question of doubt. There was at this time no local pain in the head, which was characteristic of a tumor in many cases.

The patient was examined again on October 19th. He had had a convulsion on the 15th without loss of consciousness, the attack lasting eight minutes, or twice as long as usual. At this visit the mouth deviated to the left in whistling, the tongue protruded slightly to the right, the saliva escaped from the right buccal angle. With the eyes closed a silk handkerchief dropped from the right hand, because of diminished muscular sense. There was decided tenderness on percussion over the motor zone of the left hemisphere. An exploratory operation was advised. Iodide of potassium had been thoroughly tried, but without effect. Between this date and that of the operation, November 17th, the patient had several partial attacks; he suffered much from headache, localized principally on the left side in the motor region. The motor symptoms due to the cerebral lesion increased.

The patient entered the New York Hospital as a private patient of Dr. Weir, and was operated upon November 17, 1887. Twice before the operation the temperature was carefully tested at different points over the scalp, but the result was practically negative. While the symptoms were suggestive of a cortical lesion, there were certain facts in the history of the case which prepared them to find a subcortical tumor.

DR. WEIR described the details of the operation, which was carried out under antiseptic conditions, no spray, however, being used. The head was shaved the previous day. A minute perforation was first made through the scalp at the point previously indicated by Dr. Seguin, corresponding to near the centre for the face. Through this perforation a mark was made on the skull with a sharp pencil to indicate the place to be centred by the trephine. An oval flap, including the periosteum, three inches broad, was raised and turned back toward the forehead. Many bleeding points were secured. Two openings were made with the trephine, and they were then joined, making the cranial opening three inches by two. The dura mater bulged only slightly and presented a normal appearance. One vessel of the pia was wounded, and ligated with some difficulty. Nothing abnormal was seen on the surface of the brain. The finger recognized no tumor until firm pressure was made posteriorly, when it encountered deep resistance from a mass of small size underneath the previously suspected convolution. It was not incapsulated, and was readily lifted out by the Volkmann spoon previously blunted for the purpose. A piece of brain-matter about the size of a pea was removed. The finger could be passed in about an inch and a half to the bottom of the cavity from which the mass had been removed. No hemorrhage took place from the brain itself.

A rubber drainage-tube was carried to the bottom of the cavity and out through the posterior margin of the wound. The dura was stitched together except over the small area where the tube emerged. A final washing of the wound with a solution of corrosive sublimate, 1 to 5,000, was made. The disks of bone were replaced, having been kept warm and guarded antiseptically.

At the termination of the operation the pulse was 125; the general condition was good. The tumor, which was of the size of an almond, was pronounced by Dr. Peabody to be an infiltrating sarcoma. It lay a little more than an inch below the surface of the brain, and its anterior edge about touched the anterior edge of the precentral lobe.

Three or four hours after the operation, when the patient had come from under the influence of the ether, he could move his right leg and arm apparently as well as before the operation; his facial paralysis was somewhat more marked. He was slightly aphasic. The temperature reached 102° F., but subsided, and the patient was allowed to return home a month after the operation.

DR. SEGUIN gave the further history of the case. He had grave doubts whether the tumor was purely medullary. It was possible the deep sulcus between the second and third frontal gyri was involved in the growth. On December 8th the patient was again examined carefully. There had been no convulsions since the operation. Most of the symptoms which were present before the operation were elicited. There was, however, no escape of saliva. A new symptom was that the left pupil was a little larger than the right. There was no tremor of the upper extremities, and the grasp of the right hand was fully as strong as before the operation. The knee-jerk was equal on both sides. Pricking was more acutely felt on the left fingers than on the right. The speech was slightly thick, and the patient hesitated occasionally for a word. December 10th, the patient had a convulsion which began in the right face, extended over the right side, and then became general. He had another on the 16th. On the 17th he was allowed to return to his home in Bridgeport. The symptoms due to the cerebral difficulty were aggravated during the winter by recurrence of intermittent fever with jaundice. The strength of the muscles of the right arm was two-thirds that of the left. Dr. Seguin thought the convulsive attacks would have been relatively infrequent had it not been for the fever. There was apparently no greater loss of sensibility on the right side than formerly. In April the grasp of the right hand was estimated to be about half as strong as that of the left. The patient said he no longer felt numbness in the right hand. The muscular sense was practically perfect. His wife declared that the muscular twitching in the right face had ceased.

Dr. Seguin thought the results, four and a half months after the operation, showed that life had been prolonged. It was not improbable the patient would ere this have died of coma, if not a sudden death, had the operation not been done, for the symptoms had been rapidly progressing the last month prior to removal of the tumor.

He would be unwilling to estimate the damage done to the speech-centre and the effect upon other portions of the brain since the operation, until after the malarial fever from which the patient had been suffering had entirely subsided. The mental condition showed that there was no increased intra-cranial pressure. So far there was no evidence of further growth of the disease.

This case was of great interest in connection with recent progress in the physiology of the brain, and the application of such physiological knowledge to surgical interference.

The symptoms pointing to the development of a tumor in the brain could now be recognized by any physician with a fair degree of ease. Having made the diagnosis of a tumor, it would be further necessary to decide as to the propriety of operating. This would depend upon several conditions; for instance, the location of the tumor, whether it was or was not single, and what was its nature. Dr. Seguin here gave the topography of the brain as based on its physiology, determined by physiological experimentation and clinically acquired knowledge. The symptoms produced by tumors in the motor and sensory zones, and according to whether they were cortical or subcortical, were given as far as our present knowledge enabled us to recognize them. The early limited spasm or paresis he had long looked upon as an important guide to correct localization. He proposed to call it the "signal symptom" of cerebral tumor.

A tumor situated in the sensory zone for sight, for half vision, either upon its external aspect, or the mesial, or inner aspect of the occipital lobe, or within the occipital lobe, was one of the most easy to diagnosticate.

Regarding the significance of headache and the scalp-temperature in distinguishing between cortical and subcortical tumors, Dr. Seguin's conclusion was negative. The surgeon would be influenced in his decision regarding the propriety of operating, by the probability of the tumor being multiple, also by its probable character. It seemed to him undesirable to operate in cases in which tuberculosis was evident, or in which there was a cancerous tumor in some other part of the body besides the brain. As to diagnosis of strictly primary tumor of the brain, whether tubercular, sarcomatous, gliomatous, etc., it was always extremely problematical, and based upon guess rather than symptoms.

Dr. Weir then read a part of his paper giving the surgical history of tumors of the brain. He began with the case of Bennett and Godlee, reported in the *Lancet* of 1884, and continued with those of Victor (Hostley?), Bennett, Keen, and the early one of Torenta. He then gave place to

Dr. Keen, of Philadelphia, who gave a condensed report of a case of tumor of the brain operated upon by him, December 15, 1887. The patient, at the age of three years, fell from a window, and struck the head upon a brick. No symptoms developed until twenty years after the wound had been inflicted. He then began to have epileptic attacks. There was no history of a signal symptom alluded to by Dr. Seguin. There developed paralysis of the right leg, arm, and face, and aphasia, all of which pointed to tumor of the left side of the brain. There was also certain trouble in the right retina, which was attributed after the operation, rather than before, to ear disease, and basilar meningitis, the result of the ear disease. There was also deviation of the head to the right. Recovery from paralysis of the right leg, face, and arm, and from the aphasia was complete. The symptoms left him in much doubt as to the nature of the trouble, and as to the size of the tumor, if tumor it was. The operation was much like that performed by Dr. Weir. The opening in the skull was nearly three inches by two. There was much hemorrhage, which was controlled partly by hot water, partly by pressure, and partly by ligature. The vessels were very brittle. The tumor displaced two ounces and a half of water, and was situated in the motor centres for the right face, arm, and leg.

The next day pressure symptoms were very marked, causing paralysis of the right arm, face, and leg. These symptoms increased for two days, when he removed the dressing and found a clot of not less than four ounces. The patient had recently recovered from cerebral hernia. Dr. Keen said he expected soon to report the case in full.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, March 5, 1888.

C. L. Dana, M.D., President, in the Chair.

Dr. Dana presented the report of a case (see p. 433) of

THOMSEN'S DISEASE.

Dr. G. W. Jacoby had examined the specimens and compared them with the specimens from his own case. He did not consider this the typical case which Erb's monograph had described. Erb had excluded all of the published cases but eight. Erb's typical case showed no disease of the central nervous system. In Dr. Dana's case there was at least a suspicion of such disease. The reactions of the muscles, too, were incomplete or failed to comply with the requirements as given by Erb. The speaker did not, however, believe in Erb's lines. He thought they were too close. While this case did not come under the heading as limited by Erb, it did come under the name as understood by others. Erb's theory was that of a disorder of the muscles themselves, a congenital malformation of the muscular system. If the fissuring of the muscles and the increase of nuclei in the case under discussion were dependent upon a central affection, this alone was an interesting fact. It would demonstrate that, microscopically alone, a diagnosis of myomotonia congenita could not be made. Our knowledge of primary muscle affections was not yet on a solid basis. It was possible that there was first trouble in the central nervous system, from which the other proceeds.

Dr. Heitzman had examined the specimens with a low power, and had been impressed with the belief that this was not a genuine case of Thomsen's disease. In the typical case the nuclei of the muscles were augmented. The reader of the paper had made Erb's mistake when he spoke of the nuclei of the sarcolemma. The sarcolemma was a structureless membrane. There was also augmentation of the sarcoplasts or muscular corpuscles. There was too much muscle-substance from the earliest period. Hence the name myomotonia congenita. Dr. Dana's case, on the contrary, could not be called congenital, as the disease had not developed until the twentieth year. Second, the muscle-fibres were not distinctly augmented in size. If compared with those in Dr. Jacoby's case, the difference was marked. Third, the fissuring was not prominent. For these three reasons he was loath to accept the diagnosis. He was, on the other hand, unable to tell what else the condition could be.

Dr. Emerson had examined the eyes. There was no insufficiency of the muscles, and the pupils had reacted all right.

Dr. Starr realized that we could not yet lay down any positive deductions in regard to electrical reactions. In degeneration we got the pure reaction of degeneration, an intermediate reaction of degeneration, and the normal muscle-reaction. Erb had given the reactions for three cases only. Other cases might not substantiate their results. He considered Dr. Dana's case valuable and one to be put on record. For reliable data, a large number of cases were required. Even Dr. Heitzman's objection of muscular anomalies was not fatal to the theory of its being a case of Thomsen's disease.

Dr. Dana explained that he had not called the case one of myomotonia congenita, but an atypical case of Thomsen's disease. It remained to be proved whether myomotonia was always congenital. He had recently seen a case which commenced at the eighth or tenth year. Since Erb's book, four additional cases had been reported besides his. He agreed with Dr. Heitzman, that the enlargement of the fibres was not positive. He had, with a stage micrometer, measured the fibres in the specimen from Dr. Jacoby's case, in that from the case under discussion, and in that from his own arm. He had found the fibres in the first, $\frac{1}{400}$ to $\frac{1}{300}$ of an inch broad ; in the second, $\frac{1}{250}$ to $\frac{1}{400}$; and in his own, $\frac{1}{450}$ inch. Thus, in the case under discussion, some of the fibres were larger and some smaller than the normal. The increase of the nuclei, however, was in some of the specimens shown typically, as in Erb's plate. He thought that the fissuring might have been produced artificially by tearing. Electrically there was greatly increased irritability of the muscles both to galvanism and faradism. The contractions were tonic, with closure tetanus. There was normal excitability of the nerves. Clinically the patient presented the phenomena of Thomsen's disease. It remained to be proved whether the phenomena of Thomsen's disease could be produced by disorders in which the central nervous system was involved.

Dr. Starr presented a specimen of

TUMOR OF THE BRAIN.

The patient was a woman, at the time of death fifty-six years of age, who for two years had presented the general symptoms of tumor of the brain, vertigo, projectile vomiting, dulness of the mental faculties, and optic neuritis. During the last five months she had been carefully examined, but without obtaining any evidence which would locate the tumor, if one occasion were excepted, when, during an attack of vertigo, she fell forward and to the right. This was not a permanent symptom, and was the only evidence pointing to cerebellar disease. The tumor was of the size of a hen's egg. It was found on the under surface of the tentorium, simply resting upon and compressing one lobe of the cerebellum. There were no adhesions, and it was unfortunate that no symptoms had pointed to its location, as it might have been easily removed. In 1878 Nothnagel had remarked that tumors of the lateral lobes of the cerebellum did not give rise to the symptoms of inco-ordination common to other cerebellar tumors.

Dr. J. West Roosevelt presented the report of a case of

BASEDOW'S DISEASE, WITH AUTOPSY.

The case was one of negative interest. The patient had been admitted to the wards of Roosevelt Hospital, May 25, 1887. The patient was a female, widowed, forty-seven years of age, a house-keeper. Both the personal and family history was good. Two years before admission the patient had commenced to complain of palpitation, dyspnœa upon exertion, and swelling of the throat, which was largest upon the right side. The patient could not lie upon the right side. In the course of a year the eyes commenced to protrude, and at the time of entering the hospital she had a profuse watery diarrhœa.

The pupils were found to be equal, the reaction to light and accommodation good. The lids did not follow the eyeballs. The neck measured thirteen inches around the lower thyroid region, and ten and one-half inches around the upper thyroid region. There was no dysphagia to solid food. The pulse was 100 to 120, and the respiration 38. The apex-beat was found in the fifth space, mammary line. There was epigastric pulsation, and the area of dulness was slightly increased. There was a short systolic murmur at the apex. There was a systolic thrill over the jugulars, and a continuous venous hum. The pulmonary resonance was exaggerated. The veins of the retina pulsated ; the arteries did not. There was no tremor. The patient lived until May 31st. She suffered from watery diarrhœa and restlessness, but was not otherwise sick. In walking to the bath-room one evening she fell dead on the floor. Autopsy showed the thyroid reduced in size, but still moderately enlarged, and of a pink color. The kidneys showed a trace of fibrous tissue, but otherwise the organs were normal. There was apparently nothing abnormal in the medulla, nor in the sympathetic or vagus nerves. Microscopic examination of these parts also showed nothing.

Dr. W. O. Moore had seen twelve cases, all females, average age forty years—the youngest thirty-one and the oldest forty-five years. Ophthalmic examination had showed simply enlargement and tortuosity of the blood-vessels. Great relaxation of the bowels had been present in one of the cases, having as many as ten evacuations in the day, which it was impossible to control. Electricity had been of no avail in these cases. All had presented the three characteristic symptoms—exophthalmos, thyroid enlargement, and rapid heart-action. All had the symptom to which Von Graefe first called attention, namely, a disturbance of the usual co-ordination of the movements of the eyeball and the upper lid, so that when the patient looks downward below the horizontal meridian the lid no longer follows the eyeball in its motion, but halts in its course. This fault in the action of the lid was supposed to be due to some defect in the orbicularis, and was not present in cases having prominent eyes from other causes. Occasionally the prominence was so great as to cause the eye to be exposed at all times, both when waking and asleep. In one case in his expeience suppuration had occurred and the eye had been lost. A history of the case was given.

Had it been seen earlier the writer would have united the upper and lower lids, thus covering the eyeball. At the end of a few weeks the lids would have been reopened, when, as a rule, the exophthalmos would be found improved and the corneal trouble removed. For constitutional treatment the patient should receive digitalis, ergot, and tonics. This case was remarkable from the fact that an eye was lost by suppuration, and that this loss was associated with phthisis in the other eye. The loss of an eye from exposure was so rare that the writer knew of but ten reported cases in this country, while Wells reports only one case.

Dr. Starr had been interested in the report of Dr. Roosevelt's case. The fact that no lesion had been found in the sympathetic in this case did not, of course, prove anything conclusive. Ross had reported eight cases in which such lesion had been found out of twelve cases as far back as 1832. The pathology, however, was not clear. It was difficult to understand how any one lesion could produce all of the phenomena of this disease. The hypothesis accepted by Gowers was that of lesion of the vagus nucleus in the medulla. The rapid pulse would be accounted for by the loss of the inhibitory power of the vagus. It was known, too, that vaso-motor disturbances were produced by irritation of the medulla in this region. The speaker had, some time ago, collected twenty-one cases of lesion of the medulla, in eight of which the lesion was in its upper part, in the region of the nucleus of the tenth nerve. In all of these cases there were subjective flushings and objective increase of perspiration; while in the thirteen in which the lesion was in the lower part of the medulla there were no vaso-motor symptoms whatever, thus substantiating the hypothesis of the physiologists that there is a vaso-motor centre in the medulla, and that this centre is in the neighborhood of the nucleus of the tenth nerve.

The speaker had personally observed seven cases, five in the female and two in the male. In all but one palpitation of the heart had been the first symptom. This disproved the theory that the goitre was primary, and that the other symptoms were due to the pressure of the tumor upon the pneumogastric nerve. The pulse had ranged between 90 and 155. In all but one the eyes had been prominent. In six there had been nerve-symptoms; in four, tremors; in four, Von Graefe's symptoms; in six, flushes. Mental disturbance had been present in one case, in which there had been delirium every night for several months, and subacute mania for several weeks. The first symptom in this case had been insomnia, which resisted treatment. The reader supposed it to have had its origin in a condition of the vessels of the brain, similar to that in the back of the eye and the thyroid gland. Digitalis had done no good in his experience. Ergot and bromide had quieted the tremor, but no drug which he had tried had reduced the heart. He had used electricity, according to Benedict's recommendation, but without result. He had never been able to obtain any retardation of the pulse.

Dr. Rockwell had met about thirty cases of this disease, and in nine cases he had obtained an approximate cure. He had employed diet, galvanism, and very full doses of digitalis, bromide of zinc, ergot, and iron. He had authentic records of his results. He believed that the cases not benefited by treatment were organic, and that those benefited were functional in origin. Those having all of the cardinal symptoms were more often responsive to treatment than those in which the symptoms were more incomplete. He recalled a case in which there was a pulse of 110 reduced to 30. There was puffiness of the eyelids in this case. In the galvanic application one pole had been placed over the eyelid, and the other behind the sterno-cleido-mastoid muscle at its upper third. In another case, presenting the three symptoms for several years, the pulse had ranged from 130 to 150. There was dilatation of both pupils, and a pulsating swelling over the solar plexus. This patient was placed upon a milk diet, and persistently treated for many months, when the pulse had fallen to below 100, and the swelling of the thyroid and the exophthalmos had become less.

Dr. Starr asked whether Dr. Rockwell had obtained reduction of the number of the heart-beats while the current was being used; also whether he had ever obtained paling of the face and dilatation of the pupils—phenomena which follow galvanization of the sympathetic when needles are used.

Dr. Rockwell replied that he had not made his observations during the application, but that subsequently such slowing had been demonstrated. Lowering of the pulse was also a very common result of general faradization.

Dr. George W. Jacoby considered exophthalmic goitre a rare disease. For eight or nine years he had seen in his dispensary from six hundred to seven hundred neurological cases a year. Not more than a dozen of these had been cases of exophthalmic goitre. The patients had been regular in attendance, and treatment had been persistent, but he had tried every means heralded without result. Subaural galvanizations had been without effect upon the color or the pulse. He considered the disease a hopeless condition. Bodily and mental rest furnished about all which could be done. He had tried faradism, according to the recommendation of Vigouroux, but also without result.

He thought the exophthalmos the least constant symptom. Where goitre was present one side of the neck was usually larger than the other. Some said that the right was always the larger. This he could contradict, as in a case which he had recently seen with Dr. Birdsall the enlargement had been equal upon both sides. Von Graefe's symptom was not always present. Tremor was often the first symptom. In one case in his experience tremor had existed for a year before the development of the other symptoms. At the end of the second year these had become well developed and bronzing of the skin also was present.

ELECTRICAL RESISTANCE.

Vigouroux had stated that the electrical resistance was diminished in all cases, and even in the commencement of the disease. This, if true, would be an important diagnostic point. In twenty cases published by Wolfenden this lowered electrical resistance was present. Two of these cases are published in full. In one of the latter the resistance was only 300 ohms. It was mentioned that there was profuse sweating in this case. In the second the resistance was 200 ohms. Of this case it was said that there was clamminess of the surface and sweating. In the other eighteen cases the resistance was from 500 to 1,300 ohms. The speaker said that the standard of resistance, however, varied according to the method used. It had been given as high as 300,000 to 400,000 ohms, by Jolly. Gärtner gave it as 30,000 to 40,000 and here we estimated it at one-third or one-fourth that. He had recently tested the resistance in three cases, his method having been to place the body in the circuit, the electrodes being equal in size, and wet. When the galvanometer ceased being deflected the body was taken out of the circuit, and the resistance coil inserted until the deflection of the needle was again brought to the same point. The amount required equalled the resistance of the body. Comparative observations were at the same time taken upon himself. The first case was that of a female, twenty-eight years of age, with exophthalmos, palpitation, and sweats. The resistances obtained were as follows:

Through the palms, patient	6,000 ohms.
Self	8,000 "
Through the goitre, patient	1,200 "
Self	2,400 "
Through the posterior part of the neck, patient	1,400 "
Self	2,400 "

The second case, a patient of Dr. Birdsall, presented goitre, with palpitations and exophthalmos, and the comparative observations were taken upon Dr. Birdsall and himself. The resistances obtained were as follows:

Patient, through the hands	5,000 ohms.
" " goitre	800 "
" " the posterior part of the neck	1,000 "

The measurements in his own case were respectively 5,500, 2,400, and 2,000 ohms; and in Dr. Birdsall's case, 8,000, 1,000, and 1,000 ohms.

The third case:

Patient, through hand	5,000 ohms.
" " goitre	1,000 "
" " neck, antero-post.	1,500 "

Control subjects (two):

Hands	11,000	and	10,000
Thyroid	4,000	"	3,000
Neck	3,000	"	3,000

The reduction was thus scarcely one-fourth, certainly not one-half, and not more than would be accounted for by the maceration of the skin, due to the abundant perspiration in these cases, or, as in the goitre, to the fluxion of blood. The speaker failed to see how any importance could be attached to the test as a symptom.

Dr. Dana was surprised to hear that there was any dispute in regard to the possibility of lowering the pulse by galvanism. In a recent case of Basedow's disease, in Bellevue Hospital, a pulse of 140 had been found regularly lowered fifteen or twenty beats after the current had been applied. The fact was admitted in Gower's recent work. The sedative effect of galvanism was generally admitted, though we could not say whether it was produced through the pneumogastric or the sympathetic nerve. Dr. Gower's theory of the disease he thought hardly satisfactory. Lesion of the nucleus of the pneumogastric should give the same symptoms as division of its trunk, and this never gave rise to the phenomena of Basedow's disease. It might, perhaps, be said that this disease was due to lesion of the nucleus of the pneumogastric and neighboring parts. The speaker had tested the electrical resistance in two cases; in one it was diminished slightly, being about 1,200 ohms. In testing he placed one electrode in the region of the seventh vertebra, and the other on the sternum. His method was to determine the electro-motive force of the cells, then to estimate the resistance by the ohm formula. He had made a number of examinations of patients. He had found electrical resistance lessened in tachycardia.

Dr. Roosevelt had had the same experiments as Drs. Starr and Jacoby. He had used both strong currents and weak currents without any influence on the sympathetic nerve. He was surprised to hear digitalis recommended. He believed that digitalis was without value for heart failure, except from organic disease. He had had five cases of exophthalmic goitre under observation. Two of these had improved, but both were cases of young anæmic girls. The measurement of electric resistance he thought a difficult problem because the factors varied.

A New Method of Testing the Refraction of the Eye.—Mr. A. Legge Roe describes (*The Lancet*) the following simple method of testing refraction: A trial frame is applied in the usual way, one eye excluded with a diaphragm, and the patient instructed to look steadily at a distant object. A blackened disk, perforated in the centre with a hole two millimetres in diameter, is rapidly passed across the eye to be tested in a horizontal direction by the surgeon. The patient is questioned as to the direction taken by the object; if the motion is in the same direction as that of the disk, myopia is present; if in the opposite direction, hypermetropia; if there is no apparent motion, emmetropia. The vertical meridian is then tested in the same way. If the motion is in opposite directions in the vertical and horizontal meridians, mixed astigmatism is at once diagnosed. An error of refraction having been detected, suitable lenses are gradually added and the disk used as before, until there is no apparent motion of the object. The defect will then be corrected. There is a tendency to overestimate myopia about .5 D., and to underestimate hypermetropia .75 D. A good test-object is a small picture-frame, using the vertical sides for testing the horizontal meridian, and *vice versa*. The explanation of the above phenomena will be found in Scheiner's test, of which this is apparently a modification applied to refraction.

Chins.—A long chin declareth a man to be peaceable, yet a babbler. They that have little chins are much to be avoided and taken heed of, for they are full of impiety and wickedness, and are spies like unto serpents. If the end of the chin be round, it is a sign of nice manners. But the chin of a real man should be square.

Correspondence.

SHALL A SURGICAL INVENTION BE PATENTED?

To the Editor of The Medical Record.

Sir: The Code of the American Medical Association says: "Equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument."

The Code of the Medical Society of the State of New York says: "It is equally derogatory to professional character, and opposed to the interests of the profession, for a physician to hold a patent for any surgical instrument." Both codes are at fault. It is not derogatory to professional character, nor opposed to the interests of the profession, for a physician to hold a patent for a surgical instrument. But it is derogatory to the *character of the profession*, and opposed to the advancement of science, and to the interests of society at large, for these statements to exist in these codes.

Professional character means the unity and exemplification of all those excellent qualities, or principles, which, controlling the uniform life of a physician, tend to promote the highest physical and moral good of his fellowmen. These qualities are: Benevolence, beneficence, liberality, honor, truth, justice, equity, industry, temperance, self-denial, self-respect. The lustre of none of these qualities is dimmed in a physician by his holding a patent for a surgical instrument; but each one of them is exalted thereby, in direct proportion to the value of the instrument to mankind.

The *character of the profession* is pre-eminently in the keeping of those organizations which undertake to lay down rules for the conduct of individual physicians. The chief elements or principles which go to make up the character of the profession are: Justice, equity, truth, and wisdom. Not one of these qualities but suffers loss by the existence of these kindred statements in our medical codes.

It remains to be seen which of the two organizations, the American Medical Association or the Medical Society of the State of New York, will be the first to see and rectify this mistake.

T. H. Squire, M.D.

Elmira, April 5, 1888.

THE FLESH-BRUSH A REMEDY FOR "WINTER ITCH."

To the Editor of The Medical Record.

Sir: The writers on "Winter Itch," whose letters of appeal in The Medical Record have been read by me, may be glad to know that, although I am not a dermatologist, I have met the disorder referred to, and have conquered it with a hair brush. I have thought that the trouble arose from the temperature-changes experienced in removal of clothing, cooling down after walking, etc., producing an irregular contraction of the various elements composing the skin's structure, and thus disturbing the regular distribution of the circulation. In the case above mentioned a thorough, hard scrubbing of the itching surfaces with a dry hair brush of moderate stiffness of bristle, every morning and evening, gave immediate relief to the itching, prevented excoriations, and the annoyance gradually disappeared. Internal and external medication, baths, etc., did no good whatever.

J. M. W. Kitchen, M.D.

168 West Fifty-eighth Street.

The Marriage Vow.—Three centuries ago the woman also promised, "to be buxom to thee till death us depart or separate."

New Instruments.

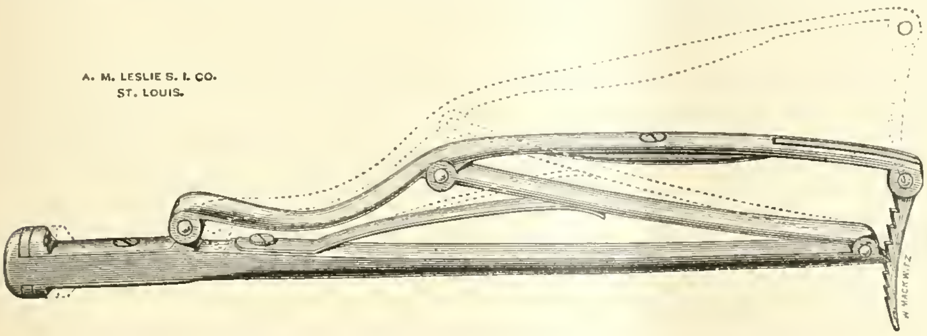
A NEW NEEDLE-HOLDER (POCKET-CASE) FOR FLAT NEEDLES.

By A. H. MEISENBACH, M.D.,

CONSULTING SURGEON TO THE CITY HOSPITAL, ST. LOUIS, MO.

It has been sought to supply in this needle-holder an instrument with which the flat needles of Hagadorn can be effectually used, and which is at the same time small enough to carry in the pocket-case. The Hagadorn needle-holder now in use is too bulky to carry, except in the operating bag, and, therefore, the flat needles have not been a feature of the pocket-case.

The superiority of the flat needle over the ordinary surgical needle is in its sharp cutting point, which facilitates the rapidity of penetration, and makes an incision at right angles to the wound, so that when traction is made on the suture the needle-wound closes, while with the ordinary surgical needle the incision made by the needle is parallel with the wound, and when traction is made on the suture the needle-wound gapes. Another very important feature of the flat needle is its large eye, which adapts it to the use of catgut for suturing, which with the ordinary surgical needle is very difficult or impossible.



Cut, Full Size.

The mechanism of the needle-holder is readily seen in the accompanying illustration. It is five inches long, and when closed (as shown in cut) is less than three-fourths of an inch wide. All of its parts are very strong, and its range of adaptability is such that it will hold firmly the largest, as well as the smallest, flat needles. It will also hold round needles very effectually.

The general form of the needle-holder is such that it is very easy to manipulate. The jaws are copper-lined, and so arranged as to grasp the needle on three sides, the advantage of which readily suggests itself to the operator.

Strychnine as a Hypnotic.—Dr. Lauder Brunton has employed strychnine in insomnia from "over-tiredness" with very happy effects. He says that it occurred to him that as strychnine is one of the most powerful stimulants, if not the most powerful nervous stimulant, that we possess, a small dose of it might have the effect of bringing the depressed nervous system up from the condition of over-fatigue to that of simple fatigue, and thus inducing sleep. He found that it acted exactly in the manner that he had expected, and induced comfortable, healthy sleep without any disagreeable effects next day. The way in which he has used it has generally been either in the form of the tincture of nux vomica in doses of five to ten minims, or in the form of granules, containing $\frac{1}{200}$ of a grain of sulphate of strychnine in each. One, two, or more of these granules were given at bed-time, and the dose was repeated if the patient happened to awake within one or two hours afterward. Dr. Brunton thinks it very doubtful whether strychnine would answer in other cases of sleeplessness than those arising from overwork or worry, and more especially from overwork.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from April 8 to April 14, 1888.

Bushnell, George E., Captain and Assistant Surgeon, from Fort Preble, Me., to Camp Pilot Butte, Wyo. S. O. 79, A. G. O., April 6, 1888.

Stephenson, William, First Lieutenant and Assistant Surgeon, from Camp Pilot Butte, Wyo., to Fort Verde, Ariz. S. O. 79, A. G. O., April 6, 1888.

Mearns, E. A., First Lieutenant and Assistant Surgeon, from Fort Verde, Ariz., to Fort Snelling, Minn. S. O. 79, A. G. O., April 6, 1888.

Knudler, William L., First Lieutenant and Assistant Surgeon, from Fort Snelling, Minn., to West Point, N. Y. S. O. 79, A. G. O., April 6, 1888.

Borden, W. C., First Lieutenant and Assistant Surgeon, from Fort Douglas, U. T., to San Antonio, Tex. S. O. 79, A. G. O., April 6, 1888.

Edie, G. L., First Lieutenant and Assistant Surgeon, from San Antonio, Tex., to Fort Douglas, U. T. S. O. 79, A. G. O., April 6, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending April 14, 1888.

Percy, Henry T., Passed Assistant Surgeon, from Naval Academy, and to Hospital, Washington, D. C.

Crawford, M. H., Passed Assistant Surgeon, from Hospital, Washington, D. C., and wait orders.

Flint, J. M., Surgeon, from Fish Commission duty, and special duty at Smithsonian Institution.

Parsons, R. C., Surgeon, to duty in charge of Army and Navy Hospital, Hot Springs, Ark.

Stone, E. P., Assistant Surgeon, from further treatment, and to duty, Hospital, New York.

Kindleberger, David, Medical Director, from Hospital, Washington, D. C., and wait orders.

Hoehling, A. H., Medical Inspector, to Naval Hospital, Washington, D. C.

Harmon, G. E. H., Passed Assistant Surgeon, to duty, Naval Academy, Annapolis, Md.

Solvine.—Solvine is a whitish, opalescent substance prepared by the action of sulphuric acid upon oil of almonds or castor-oil. It acquires its peculiar name because it has a remarkable solvent power upon a number of comparatively insoluble substances, such as iodoform, naphthalin, naphthol, salicylic acid, cantharidin, santonin, aloin, etc. It is miscible in all proportions with glycerine, and with substances dissolved in glycerine. It forms clear mixtures with ether, chloroform, benzole, turpentine, and essential oils; and these mixtures are themselves soluble in water, if there be no great excess of any one ingredient. These facts have led to a recommendation that solvine shall be used as an excipient for a variety of medicaments intended for endermic use, instead of lard, vaseline, lanolin, and so on. According to the *Medical and Surgical Reporter*, there is theoretically some danger of toxic action from its ready absorption by the skin.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 14, 1888:

	Cases.	Deaths.
Typhus fever	2	0
Typhoid fever	6	5
Scarlet fever	153	30
Cerebro-spinal meningitis	5	5
Measles	29	4
Diphtheria	158	31
Small-pox	21	3
Yellow fever	0	0
Cholera	0	0

THE PHYSIOLOGY OF MEMORY.—To those who have the time and the taste for recondite studies, the investigation of that wonderful faculty which enables us to recall past events, and project them once again on to the field of consciousness, possesses a peculiar interest of its own. It is not given to everybody to be able to analyze their own sensations, much less those of other people, and the ability to trace the links of the mysterious and delicate mechanism can only be acquired by long practice of close and constant observation. The first step is to clearly understand that we are dealing with a mechanico-vital process precisely of the kind which we recognize in other and more accessible organs. All we know of these processes at present is that function means molecular change, and hence every thought that passes through the mind, every sensation we experience, every act we do, produces some definite change in our bodily structure. The change, moreover, is permanent, and leaves its trace just as every variation of facial expression leaves its imperceptible but cumulative impress on the features. A proper understanding, so far as our knowledge will permit, of the mechanism of the memory, is not a vain scholastic pursuit, since from it we can derive valuable information bearing on the use and training of that very important faculty, the want of which hampers education and leads to a waste of intellectual energy. We find on reflection that the mental processes are capable of the same training and derive the same advantage from it as muscles do. Just as there are certain movements which are performed with difficulty for the first time, but become easier by repetition, so certain mental efforts can only be satisfactorily accomplished after practice. The trained sense is capable of apprehending what to the untrained sense is imperceptible, owing to the greater aptitude of the sense organ through training. The effects of training become part of us, and influence our will to a degree which many would *à priori* be disinclined to allow. A man cannot at will change his gait, his handwriting, his voice, nor even his modes of thought, simply because the parts concerned have developed in the direction in which they have been exercised, and cannot readily act otherwise. As life is one long training, so its influence becomes more marked as age advances, and as he gets older a man becomes less and less able to strike out new lines of thought and conduct. According to Mr. Kay, whatever parts are concerned in the production of a sensation or in effecting a movement, are necessary to a full and complete recollection of it. Thus the senses are not only necessary for the receiving of impressions, but are, also concerned in the recollection of them. Physiologists assert that the brain alone is the seat of the memory, but, as Professor Bain says, "the organ of the mind is not the brain by itself; it is the brain, nerves, muscles, organs of sense, and viscera." The importance of this doctrine is that it enables us to explain how the mind can communicate with the organs of sense or the muscles in recalling past sensations. If we close our eyes and think intently on a certain color, the retina becomes exhausted for the reception of that color exactly as if we had been actually gazing upon it and in about the same space of time. As Mr. Kay says, the artist who can recall to mind a scene he has once looked upon so vividly that he can paint it from memory, as if it were actually before his eyes, must be supposed to have the power of again projecting on the retina the impression previously made on it. There is an essential difference between sensation and perception. In the former an impression is conveyed to the brain and awakens consciousness, and in the latter the conscious brain examines and reports on the sensation and localizes it. The bearing of these arguments is that, since memory is not the brain alone, but also the organ of sense, the proper training of the senses is an essential factor in the cultivation of memory. They must be trained, first to observe, and secondly to reproduce—two sets of faculties which are quite distinct from each other, one depending on attention, the other on association. Attention is the power of concentrating the mind upon a given subject; association consists in bringing together the ideas that most resemble each other and which we wish to reproduce together. Although every thought and act leaves its physical impress on our tissues which is never obliterated, they may never come up consciously before the mind, though their presence gives a color or bias to all our after-thoughts and feelings. It is the permanence of what we may call the receptive faculty which justifies the hope that, by the employment of a better method of perceiving and associating impressions, the reproductive powers of memory may be trained to a far higher standard of usefulness than is usually attained.—*The Medical Press.*

EPITHELIOMA TREATED BY CHLORATE OF POTASH.—Dr. Hyvernaud has treated 63 cases of epithelioma by local applications of chlorate of potash; of these, 32 were cured, 15 were benefited, and 16 cases were unrelieved. In the successful cases the disease was situated on the skin of the face, nose, eyelids, cheeks, neck, in the lumbar region, on the back of the hand, and on the inner surface of the leg. Chlorate of potash fails, as a rule, when the mucous membrane is the seat of disease, although two cases of epithelioma of the lips and nostril were cured by it. It is especially useful when the affection is slow in its progress. A six per cent. solution slightly heated, or a fine powder of chlorate of potash, is applied to the wound, after it has been freed from scabs. The dressing is renewed once a day or oftener. The effect of the solution is chiefly to heal the wound, while the powder slightly cauterizes it. The surface of the tumor or ulcer is thus destroyed, small eschars come away, and cicatrization ensues. In most cases several weeks, or even months, are required to obtain complete cicatrization.

HINTS BEARING ON FEES.—Always make a charge for each service. This gives it a business value in the eyes of the patient.

The charge should always be just and reasonable; then no deduction is necessary.

Insist always upon full payment, based, if necessary, upon itemized accounts.

When the patient asks for a reduction of his bill, recall the sacrifice of sleep, of meals, and of comfort in rendering him prompt service. Think of your preferences then and of his now.

Never allow sentiment to interfere with business. The "thank you" is best emphasized by the silvery accent of chinking coin.

The loss of money by sickness only affects one side, in every other business. Why should it be different when the doctor is to be paid?

Always charge a fixed fee, and never trust to his generosity or embarrass him by guessing an amount that would be satisfactory to you. It is very much like firing with a kicking gun at a black cat in the dark.

Render bills at short intervals, and be in earnest when you commence to collect them.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 17 NEW YORK, APRIL 28, 1888 Whole No. 912

Original Articles.

THE CARTWRIGHT LECTURES ON THE GENERAL PATHOLOGY OF FEVER.[1]

By WILLIAM H. WELCH, M.D.,

PROFESSOR OF PATHOLOGY IN JOHNS HOPKINS UNIVERSITY, BALTIMORE.

LECTURE III.

THE ETIOLOGY OF FEVER.

WE considered in the last lecture the experimental evidence concerning the effects of increased bodily temperature. An advantage of the experimental over the clinical method of investigating this subject is that it enables us to study the effects of heat upon the whole body and its various functions without the intervention of disturbing factors, such as infection, which complicate the clinical analysis of febrile phenomena with reference to this question.

We found that animals may be kept at high febrile temperatures for at least three weeks without manifesting any serious symptoms. The only functional disturbances which could be attributed directly to the influence of the elevated temperature were increased frequency of respiration and quickened pulse. The rapid respiration was found to be due partly to stimulation of the skin by external heat and by the warmed blood, and partly to the action of the warmed blood on the respiratory centres. The quickened pulse could be positively referred to the effect of the warmer blood upon the heart itself. No definite relation could be established between the variations of arterial tension which occur in fever and the height of the temperature.

Although the experiments narrated showed that prolonged high temperature is an element in the causation of fatty degeneration of the heart, they also indicated that other factors, such as infection, are concerned in the production of this lesion. Moreover, experimental evidence was found in support of clinical facts showing that this alteration may exist without serious interference with the functions of the heart, so that the conclusion seems justified that failure of the heart's power in fever is less an effect of high temperature than of other concomitant conditions.

Of the other disturbances in fever we learned that the increased consumption of tissue can be explained only in relatively small part by the elevation of temperature. The lessened perspiration, the renal disorders, and the digestive disturbances (with the possible exception of constipation) are referable also chiefly to other causes than the increased temperature. Both experimental and clinical observations strongly support the view now widely accepted, that the disturbances of the sensorium, which constitute so prominent a part of the group of so-called typhoid symptoms, are dependent in far higher degree upon infection or intoxication than upon the heightened temperature.

Although no attempt was made to analyze in detail the clinical evidence relating to the effects of high temperature, attention was called to the fact that the absence of all serious symptoms in many cases of relapsing fever, and in the so-called aseptic fevers, in spite of prolonged high temperatures, strongly support the conclusions derived from the experimental study of the effects of heat upon man and animals. Even in fevers, such as typhoid fever and pneumonia, where the height of the temperature is undoubtedly a most important index of the severity of the disease, there exists no such parallelism between the temperature and the nature and the severity of the other symptoms as we should expect if these symptoms were caused by the increased heat of the body.

It was emphasized that the results of experimental investigations should not be permitted to control the treatment of fevers, more particularly the use of so-called antipyretic agents. These agents, whether hydrotherapeutic or medicinal, influence, as is well known, many functions besides reducing the temperature. I need only refer to the powerful influence of cold baths upon the circulation and the nervous system, and to the action of antipyrine and other antithermic drugs upon the nervous system.

Reasons were given for assigning to hyperpyrexia and insolation a position separate from other febrile conditions in the discussion as to the effects of elevated temperature.

Before leaving this subject of the effects of increased temperature I wish to call attention to one consideration which should perhaps influence our opinion on this much disputed question. Is it a matter of indifference, so far as the effects of febrile temperatures are concerned, in what manner the increase of temperature is brought about? We have seen that heat regulation, heat production, and heat loss are disturbed in fever; but, as experience shows, not always in the same manner or the same degree. In one case the inco-ordination of the regulating mechanism may be most apparent, the temperature fluctuating strangely up and down; in another case the heat-producing processes are excited to the utmost; and in another the circulatory changes in the skin—the vaso-motor disturbances—are the most prominent phenomena. Now this varying interplay of the factors which cause febrile rise of temperature doubtless corresponds to varying conditions of innervation, of structure, and of function of certain tissues of the body. May we not reasonably suppose that these varying conditions of the tissues directly associated with the rise of temperature may influence their tolerance of increased body-heat? We have not the experimental or the clinical data which would enable us to give a definite answer to the question here propounded, and it would lead me too far from the theme of the present lecture to attempt to sift the equivocal evidence which might be gathered. I suggest this question, however, as one worthy of more attention than it has hitherto received.

I wish now to invite your attention to some considerations concerning the etiology of fever. In this era when etiological studies occupy the foremost rank in medical science, it will naturally be expected that a discussion of the general pathology of fever, even though it does not aim at completeness, will not leave wholly untouched the etiological aspect of the subject.

The general etiology of fever relates mainly to a consideration of the agents producing fever, the so-called pyrogenic substances. It is, moreover, only certain general characters of those agents which can be properly considered here. Most of the questions which at present engage so prominently the attention of physicians concerning the specific causes of individual fevers belong, of course, to the special etiology of fevers, and therefore do not lie within the limits of our subject. But even with these limitations we cannot, in treating of the general etiology of fever, consider the febrile process so much in the abstract as we have done hitherto. We must come into closer contact with the individual forms of fever.

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[1] Delivered at the College of Physicians and Surgeons, New York, April 12, 1888.

At the start it should be said that probably in no instance are we acquainted with the actual substance or substances upon which the febrile disorder of animal heat immediately and directly depends. We deal here, as elsewhere in medicine, not with direct but with remote causes. But in no department of etiology have we advanced nearer the proximate causes than in many of the infectious fevers. To be convinced of the immense progress which has been brought about by the etiological study of fevers, let one pick up some of the older books on fevers, such as Percy's[1] or Selle's,[2] with their endless divisions into symptomatic genera and species, and their barren speculations. Percy, for instance, describes no less than one hundred and fifteen different kinds of fevers.

In all ages it has been customary to divide fevers into two great groups, viz., those which are secondary to some local cause—usually an inflammation—and those which cannot be explained by the presence of any local lesion. The explanation of the symptomatic seemed so much clearer than that of the essential fevers that attempts have repeatedly been made to place all fevers in the symptomatic group. It is a curious fact that the two methods which have been of the greatest service in the study of fever, each, when first introduced, led to an entire misconception of the nature of fever. Boerhaave, who was the first to make any extensive use of the thermometer at the bedside, supposed that this instrument indicated a reduction of the bodily temperature during the febrile chill. He therefore taught that increased frequency of the pulse, and not the elevation of temperature, is the constant and essential symptom of fever. If we except De Haen's correction, which never became widely known, it was not until the middle of the present century that Boerhaave's error was overthrown. A no less serious misconception sprang from the study of the pathological anatomy of fevers in France during the early part of the present century. The exaggerated ideas of the immediate followers of Bichat, as to what can be accomplished by pathological anatomy, led them to the belief, for a long time widely accepted, that there is no such thing as an essential fever—that all fevers are symptomatic of some local disease. This error of Broussais, one of the most influential and eloquent medical teachers of this century, is plainly traceable partly to the fact that his autopsies were chiefly of typhoid fever, and partly to the belief that the lesions found at the autopsy suffice to explain all of the manifestations of the disease during life. But we need not stop to trace the fate of the various attempts to overthrow the doctrine of essential fevers. I have mentioned one attempt, chiefly on account of the suggestive lessons it conveys rather than from a desire to enter into historical details, which I have hitherto purposely avoided.

The division of fevers into symptomatic and essential fevers is one of undoubted practical utility, and is not likely to be abandoned. But it cannot truthfully be said that this popular classification has been of much assistance in advancing our knowledge. Close inspection shows that the boundary lines between the two groups of fevers are vague and shadowy. Probably no one any longer believes that traumatic fever, the principal type of the symptomatic group, is due to increased production of heat in the seat of inflammation, which, acting like a furnace, was once thought to warm the whole organism, or to the irritation of nerves connected with the inflamed region. The opinion of Billroth and of Weber is now generally accepted, that traumatic fevers are caused by the absorption of pyrogenic substances from the inflamed district. Symptomatic fevers, as well as essential fevers, therefore, are dependent upon the presence within the blood of fever-producing agents. Many essential fevers, moreover, resemble the symptomatic ones in the existence of inflammation or necrosis at the portal where there is reason to believe that the pyrogenic agents gain access to the general circulation. A distinction in these cases cannot be based on the ground that in symptomatic fevers only chemical substances, although possibly the products of bacteria, enter the circulation, and in essential fevers micro-organisms invade the blood, for such a distinction would place cholera, and possibly tetanus and typhoid fever, among the symptomatic fevers. These considerations show how vague and unsatisfactory are the distinctions between symptomatic and essential fevers. Still similar criticisms can be made of many of our artificial classifications which nature is under no compact to observe, and we should undoubtedly be put to great inconvenience if we attempted to dispense with the epithets symptomatic and essential as applicable to different forms of fever. There are, however, other points of view which seem to me more fruitful in the study of the etiology of fever than those embodied in these distinctions. I refer to the differences in the nature of fever producing agents, concerning which our knowledge, although still very imperfect, has been materially increased within recent years. And here again we are greatly indebted to the results of experiments upon animals.

Much light has been shed upon the causes of a certain class of fevers by a series of experiments which received their impulse from the important studies of Alexander Schmidt and his pupils upon the physiology of the blood. A particular direction was given to these experiments by the often-repeated observation that fever and other injurious effects may follow the transfusion of blood, especially when the blood of one species of animal is transfused into an animal of another species. In order to test the supposition that these bad symptoms are due to an excess of fibrin ferment, Köhler[1] injected into the vessels of animals blood made rich in fibrin ferment and fibrinoplastic substance, and found that this blood, when injected in large amount into the jugular vein, causes sudden death by rapid coagulation of the blood in the right heart and pulmonary arteries; but when injected in smaller amount, or in a different manner, produces a typical febrile attack bearing a close resemblance to that following the injection of putrid fluids. Angerer[2] then found that a similar fever, although less intense and more gradual in its development, may be produced by the injection of blood into the peritoneal cavity or the subcutaneous tissue, or even by an extravasation of blood. Although in these experiments it was believed that fibrin ferment is the pyrogenic agent, Edelberg[3] was the first to produce fever and other symptoms of intoxication by the injection of this ferment isolated according to Schmidt's method.

In the light of these experiments it was to be expected that other ferments would be examined with reference to their pyrogenic power. Schmiedeberg[4] discovered that injections of histozyme into the blood of dogs produce high fever associated with general illness, and particularly with diarrhœa. The ferment to which Schmiedeberg has given the name histozyme, he believes to be present normally in small amount in the body, and to be concerned in the dissociation of the nitrogeneous constituents of the tissues. He concludes, from his experiments, that an excessive accumulation in the body of this normal ferment gives rise to fever, with increased metamorphosis of nitrogeneous material. Schmiedeberg thinks it probable that the fibrin-ferment solutions employed by Edelberg in his experiments contained also histozyme, and that the pyrexia was due to the latter substance.

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[1] Percy: Die Gesammte Fieberlehre. Pesth, 1820. The original is in French.

[2] Selle: Rudimenta Pyretologiæ Methodicæ. Berolini, 1773.

[1] Köhler: Ueber Thrombose und Transfusion, u.s.w. Inaug. Diss. Dorpat, 1877.

[2] Angerer: Klin. u. Exp. Untersuch. ueb. d. Resorption v. Blutextravasaten. Diss. Dorpat, 1879.

[3] Edelberg: Arch. f. Exp Path. u. Pharm., Bd. xii.

[4] Schmiedeberg: Ibid., Bd. xiv.

Following these observations concerning the pyrogenic power of fibrin ferment and histozyme, comes the discovery, by Von Bergmann and Angerer,[1] that injections of pepsin and of trypsin into the blood of dogs causes a well-marked fever, with characters like those of the other ferment intoxications described. A valuable calorimetrical study of pepsin and trypsin fevers has been made by Wood, Reichert, and Hare.[2] These authors, as well as Ott,[3] have demonstrated that it is not the pepsin and the trypsin ferments themselves which constitute the pyrogenic agents, but some contaminating substance which seems to be a peptone. That peptones artificially prepared contain poisonous principles has been known for some time, and Brieger[4] has succeeded in isolating a crystallizable poisonous ptomaïne, called pepte-toxin, from commercial peptone and from that formed by the artificial digestion of fibrin. This ptomaïne, however, is not identical with the pyrogenic agent found by Ott and by Wood and his colleagues in commercial pepsin. To this list of pyrogenic substances obtained from impure ferments may be added leucin, and, according to Ott, papayotin and neurin, which produce marked fever when injected into the blood in small quantity. The substance sold under the name of papoid possesses marked pyrogenic power when its filtered aqueous solution is injected into the blood. This substance contains principles belonging to the peptone or albumose group. Dr. Mall, Fellow in Pathology at the Johns Hopkins University, has isolated from commercial papoid a bacillus, which in pure culture exerts a powerful peptonizing action on fibrin and on connective and elastic tissues. The bacillus itself is not pathogenic, but an albumose or some similar substance produced by its activity has pyrogenic power when injected into the blood.

It does not appear that anyone has actually isolated the pyrexial agent from the various ferments employed in these experiments. Certainly no such agent has been obtained in a crystalline form, which is the test of its purity, if we except Brieger's pepto-toxin, the pyrogenic capacity of which has not been established. It has been alleged that the fever-producing agent is the same in all of these ferment intoxications, but this has not been proven nor does it seem probable.

On better grounds, it has been urged by Von Bergmann and Angerer that all of the substances in the group of pyrexial agents now under consideration cause fever by producing the same change in the blood. These authors claim that this change is the formation in the circulating blood of an excessive amount of fibrin ferment, which leads either to coagulation or to stasis in the capillaries, particularly those of the lungs and of the intestines. One of the main arguments for this view is the fall of blood-pressure which Von Bergmann and Angerer observed after injections of pepsin and of pancreatin, but this fall can be explained in other ways than by supposing that the pulmonary capillaries are occluded, and, moreover, Wood, Reichert, and Hare find that the blood-pressure often rises in the course of pepsin fever. It does not seem to me that we are any more able to explain in exactly what manner the pyrogenic substances act in this class of fevers than in other fevers. The idea, however, that the liberation of the fibrin ferment in abnormal quantity is capable of causing fever finds support not only in experiments which have been mentioned, but also in the fact that injections of hæmoglobin solutions and of large quantities of water into the blood produce fever.

But you perhaps by this time have asked yourselves what bearing all of these experiments with various pyrogenic substances has upon the etiology of human fevers. They have in my judgment an important bearing on this subject. However obscure may be the explanation of the mode of action of these substances, however doubtful may be their exact chemical composition, they have certain common characteristics which are calculated to shed light upon the causation of some obscure febrile disorders of human beings. In the first place, the members of this group of pyrogenic substances, if not identical with certain physiological ferments, are readily produced by them, quite independently of the action of bacteria or other micro-organisms. In the second place, some of these substances are present normally in small amount in the body, and if their elimination is impeded or their formation is excessive there is reason to believe that they become efficient causes of fever. In the third place, these pyrogenic substances may be produced, again without the action of bacteria, in extravasated blood or by the abnormal disintegration of tissues, and if they are absorbed from these sources in such a condition or in so large an amount that nature cannot render them harmless they are capable of producing fever. It is customary to call the morbid condition produced by the absorption of these substances ferment intoxication, in analogy with the term putrid intoxication applied to the diseases caused by the absorption of the products of putrefactive bacteria. The term ferment intoxication seems to me to imply more than our knowledge warrants, but it is not of much use to contend against names which have gained currency. It is probable that some of the pyrogenic agents in this group belong to the class of leucomaïnes, but our present information regarding these bodies does not justify any positive statements on this point.

Although the etiology of individual fevers does not belong to our subject, I cannot forbear calling your attention to certain febrile conditions which seem to be produced by the accumulation of substances that are either normal constituents of the body or are the result of chemical processes differing but little from physiological ones

To this category probably belongs the so-called aseptic fever first described by Genzmer and Volkmann.[1] These surgeons have established the fact that there are traumatic fevers not caused by the absorption of septic material and that severe injuries and wounds which pursue an entirely aseptic course are not infrequently associated with considerable elevation of temperature. This aseptic fever is usually to be observed with extensive wounds or injuries in which there is much lacerated tissue or extravasated blood to be disintegrated and absorbed. It occurs not only with wounds correctly treated by antiseptic methods, but also with subcutaneous injuries, particularly fractures of the large bones, where there can be no suspicion of the action of bacteria. Aseptic traumatic fever differs by such marked characteristics from septic fever, that there can be no doubt that the two types of fever are etiologically distinct. Aseptic fever has no prognostic significance; its only symptoms are the elevation of the temperature, which may mount to 104° F. (40° C.), or even 105.8° F. (41° C.), and the increased frequency of the pulse. The entire absence of all of the intoxication symptoms of septic and infectious fevers, such as the benumbed sensorium, the dry tongue and skin, the lessened secretion of urine, I have already referred to in confirmation of the belief that these symptoms are not dependent upon the rise of temperature. Genzmer and Volkmann assign as the cause of aseptic traumatic fever the absorption of substances resulting from the disintegration of the wounded tissues and of the extravasated blood, and state that these substances probably do not differ markedly from those produced by physiological tissue-metamorphoses. This explanation certainly has received decided support by the experiments which I have described in this lecture, a large part of which have been performed since the publication of Genzmer and Volkmann's article. It has been suggested that aseptic traumatic fever is a reflex neurosis and this suggestion cannot be absolutely rejected as a possible explanation, but for various reasons, which cannot here receive further consideration, the usually accepted explanation is the more probable one.

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[1] Von Bergmann u. Angerer: D. Verhältniss d. Fermentintoxication. Festschrift Würzburger Universität, 1882, i., 135.

[2] Wood, Reichert, and Hare: Therapeutic Gazette, 1886.

[3] Ott: Journal of Physiology, vol. viii.

[4] Brieger: Ueber Ptomaine. Berlin, 1885.

[1] Genzmer u. Volkmann: Volkmann's Sammlung, No. 121.

An instructive case of ferment intoxication has been reported by Cramer.[1] There existed in a young woman a cyst the size of a goose's egg between the fibres of the semitendinosus muscle. The cyst was developed from a cavernous angioma and was filled with dark fluid blood. The patient had had fever for almost two years up to the day of the operation. The cause of the fever could not be discovered. Immediately after the removal of the cyst the fever stopped and did not return. In this case the cavernous structure of the cyst-wall accounts for the ease with which we must suppose a considerable quantity of the pyrogenic substance was continuously absorbed from the bloody contents of the cyst. The results of Angerer's experiments already mentioned enable us to explain the source of the fever in this case.

Another instance may be cited, in which fever is probably to be explained by the accumulation within the body of products of normal metabolism. More or less fever appears to be a constant accompaniment of the agonizing method of treatment known as the Schroth cure. In this treatment the patient is kept for a number of successive days on dry food with scarcely any fluids. Both Bartels and Jürgensen,[2] who have investigated the nutritive changes of individuals under this treatment, believe that the body becomes so poor in water that some of the products of regressive metamorphosis cannot be carried out of the system. This certainly seems very probable, and, if true, it affords, in the light of recent experiments, an explanation of the accompanying fever.

I believe that good reasons can be adduced in support of the opinion that the febrile conditions sometimes associated with leucocythemia, profound anæmias, and chlorosis belong to the group of fevers we are now considering. It is possible that some of the obscure ephemeral fevers are also to be included here. But to consider these febrile disorders in detail would lead us into the domain of special etiology, upon which we have already perhaps encroached too far. My purpose has been to bring before your attention only a few clinical examples in illustration of the experimental results.

I think that you will agree with me in the conclusion that experimental and clinical evidence justify us in recognizing as a distinct group of pyrogenic agents substances which have no necessary connection with micro-organisms and which are either not foreign to the healthy organism or are readily formed by unorganized ferments from normal or abnormal constituents of the body. These substances may be described as homologous, in distinction from the heterologous agents concerned in the production of septic and infectious fevers.

A class of pyrogenic agents of far greater clinical importance than those previously considered is formed by the products of micro-organisms which in themselves are not pathogenic. A considerable number of bacteria, which, when inoculated in pure culture into the body, are not capable of further invasion or of multiplication, produce in culture fluids and in dead animal or vegetable material poisonous substances often of great virulence. Exception may be taken to the description of these organisms as non-pathogenic, inasmuch as the products of their activity are poisonous, but the epithet pathogenic is usually assigned by bacteriologists only to such micro-organisms as are capable of multiplication within the body. If we called all of the micro-organisms pathogenic which produce poisonous ptomaïnes we should have to include in this category a far larger number of the known species of bacteria than has hitherto been customary.

The best known and most important of the fevers produced by chemical products of saprophytic bacteria are those grouped under the name putrid intoxication. Until the introduction of the latest era in bacteriology by Koch nearly all of the experimental work on the etiology of fevers related to the causation of the septic and putrid fevers. It is instructive, with our present knowledge, to follow the experiments on this subject from the period of Gaspard, Magendie, and Sedillot up to recent times. What light has been shed upon the mass of contradictory and perplexing results of experiments with putrid fluids by the recent chemical and biological studies of putrefactive processes! Some of the putrid substances experimented with undoubtedly contained parasitic micro-organisms, and others contained only obligatory saprophytes; some were rich in poisonous ptomaïnes, and others were nearly devoid of them. The whole doctrine of the parasitic nature of infectious fevers seems to have hinged in the minds of some upon the determination of the question whether septic and putrid fevers are produced by the absorption of chemical substances or by the invasion of pathogenic bacteria. The ideas concerning putrid intoxication dominated at one time the whole field of fever etiology, and were applied not only to septicæmia but to typhoid fever, typhus fever, yellow fever; in fact, to nearly all infectious fevers. Nor have the echoes of this period even now entirely died out.

Panum was the first to isolate from putrid materials some chemical substance or substances in tolerable purity, certainly free from bacteria. This substance, when injected into animals, produced symptoms of putrid intoxication. Susequently, Von Bergmann and Schmiedeberg isolated from putrefying yeast a poisonous crystalline substance, their celebrated sepsin. For a time the opinion prevailed that this sepsin is the source of all putrid intoxications. Thanks to the investigations of Nencki and others, and particularly of Brieger, we now know that many alkaloidal substances can be separated from putrefying materials. Some of these so-called cadaveric alkaloids or ptomaïnes are poisonous and fever-producing, others are harmless. There is no reason to suppose that the list of the ptomaïnes of putrefaction has been exhausted, nor is it necessary to believe that all of the poisonous constituents of putrefying materials are of an alkaloidal nature.

Most of the bacteria concerned in ordinary putrefactive processes are purely saprophytic. They are incapable of multiplication in the living animal tissues. In a mixture of putrefactive bacteria it is not, however, uncommon to find genuine pathogenic or parasitic bacteria. It was from such sources that the bacilli of mouse septicæmia and of rabbit septicæmia (Koch) were obtained. The bacillus of malignant œdema is also often found in the early stages of post-mortem decomposition.

There is of course no doubt that the absorption of the chemical products of putrefaction may produce fever with septic symptoms quite independently of the penetration and multiplication within living tissues of bacteria.

Here belong certain cases usually described as septic, in which fever and other bad symptoms subside upon the thorough cleansing and disinfection of a foul wound or of a puerperal uterus. The majority of cases of septicæmia are not to be included here, for they depend upon the invasion of pathogenic bacteria. But, excluding the cases of genuine septicæmia, there remain the putrid intoxications which result from the absorption of poisonous substances produced in necrotic or disintegrating tissues or exudations or extravasated blood by the action of purely saprophytic bacteria. The ideas which I have expressed on this subject are now so generally admitted that they require no further elucidation.

It is probable that fever with symptoms of intoxication, although generally of a much milder nature than in the class of cases just considered, may be produced by abnormal fermentations and putrefactions caused by saprophytic bacteria in the alimentary canal. But here the essential morbid conditions seem to be abnormalities in the gastric and intestinal contents, due partly to the character of the ingesta, but chiefly to alterations of the digestive juices.

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[1] Cramer: Verhandl. d. Deutschen Gesellschaft f. Chirurgie, 13tes Congress, 1884.

[2] Jürgensen: Deutsches Arch. f. klin. Med., Bd. i.

Fermentative and putrefactive bacteria are normally present in the intestinal canal, and have abundant opportunities to gain access to this situation. The number, however, which can multiply and thrive there is quite limited, for under normal conditions, according to Escherich, only such bacteria can multiply to any extent in the intestinal canal as are capable of growing with little or no oxygen, and of deriving their nourishment from the anaerobic fermentation of the food supplied to them in this situation.

Of a far more serious nature are the putrid or ptomaïne intoxications which result from the ingestion of substances which have undergone, outside of the body, putrefaction or changes which lead to the formation of poisonous ptomaïnes. To this group of cases belong at least many of the instances of poisoning which have been caused by eating certain kinds of meat, sausage, fish, cheese, etc. In some of these instances poisonous ptomaïnes have been isolated from the suspected substances, but we know scarcely anything of the micro-organisms which are concerned in their production.

It is important to bear in mind that it is not stinking putrefaction alone which gives rise to poisonous products. Brieger has found that such products may be absent in very advanced decomposition, and that in general the most virulent products are formed in the early stages of putrefaction. We know, furthermore, that putrefactions and fermentations differ in the character of their products. There are differences according to the kind of bacteria present, according to the substances decomposed, and according to various other conditions, such as the presence of oxygen, the temperature, etc. This is not the proper occasion to discuss these details.

Enough has been said to prove that we are justified in recognizing as a second class of pyrogenic agents substances which are the products of bacteria in themselves not pathogenic. These pyrogenic agents may be formed on or within the body, or they may be produced outside of the body. I would not by any means have you infer that it has been proven, in all of the special examples which I have mentioned, that the bacteria involved are not pathogenic or capable of multiplication within the living tissues. We have not sufficient knowledge to assert or to deny this in every instance, but I do not think that it is likely exception will be taken to the classification which I have adopted for most of these cases. As has repeatedly been mentioned, our purpose here is not an analysis of individual cases of fever, but an attempt to classify systematically the various pyrogenic substances.

We come now to the third and most important group of fever-producing agents—the pathogenic micro-organisms. So overshadowing is their importance that it has been claimed that they are the sole causes of fever. In contrast with former times, it is no longer the symptomatic fevers whose etiology is clearest. We have much more definite ideas as to the mode of production of some of the essential fevers which were once the most obscure, than we have of symptomatic fevers. It does not seem to me worth while to go over the chain of evidence which establishes the doctrine that the infectious fevers are caused by micro-organisms. There is probably no one who has thoroughly investigated the subject, and is competent to form an opinion on it, who does not to-day admit that a number of infectious diseases have been proven to depend upon specific micro-organisms, and that it is a logical inference that all infectious diseases are caused by parasitic organisms.

It is not germane to our subject to enter into a morphological or biological description of the different species of pathogenic organisms which are causes of febrile diseases. The only question which concerns us in this consideration of the general etiology of fever, is how the micro-organisms produce fever. Are they themselves the pyrogenic agents, or do they produce chemical substances which are pyrogenic? A number of other possibilities might be mentioned. These and similar questions have suggested themselves to investigators since the beginning of any knowledge of parasitic micro-organisms. Our information is far from sufficient to enable us to answer these questions in a positive manner, and still we are not left wholly to vague surmises in attempting to form some sort of an opinion.

That bacteria can produce mechanical effects by plugging up capillaries and in other ways is certain; but the wide differences presented by the various infectious diseases cannot be reconciled with the idea that pathogenic bacteria act chiefly by mere mechanical interference with the fluid and the solid constituents of the body. Notwithstanding the fact that Stricker and Albert succeeded in producing fever by the injection of starch granules into the blood, probably no one will be inclined to attribute the pyrogenic activity of bacteria in any considerable extent to occlusion of blood-vessels.

In a certain number of infectious diseases, particularly of animals, bacteria are present in such enormous number in the blood and tissues that some are inclined to refer the disastrous effects of the organisms to the withdrawal of oxygen and other nutritive pabulum from the cells of the body. So far as the appropriation of oxygen is concerned, this idea is not supported by the results of most of the examinations of the blood in cases of anthrax. This explanation was more popular in the early days of bacteriology than it is at present, and at the best its value is limited, for it cannot be applied to a large number of infectious diseases, such as cholera or typhoid fever, where the circulating blood is not largely invaded by the parasites. Furthermore, it is not clear how the appropriation by bacteria of nutriment intended for the tissues would help us to explain the production of fever.

It has been suggested that the increased temperature in infectious fevers may be explained by the heat produced by oxidation or other chemical changes in the micro-organisms themselves. But this is not at all a satisfactory explanation. Not only is the quantity of heat which can come from this source in all probability very small compared with that constantly produced in the body, but such an explanation of febrile rise of temperature is not in harmony with what we know concerning the mode of production of fever (see Lecture I.).

The failure to explain the pathogenic power of bacteria in these and similar ways, led to the supposition that the morbid activity of pathogenic bacteria is exerted chiefly by means of injurious chemical products. The demonstration of such products leaves no room for doubt as to the correctness of this supposition for some infectious diseases. This explanation is probable for most such diseases, but experience has shown that it is particularly dangerous to indulge in hasty generalizations in this department of medical science.

Sterilized and filtered cultures, particularly old cultures, of various pathogenic bacteria are capable of producing fever and other symptoms when injected into the blood or tissues. This, of course, makes it evident that the bacteria in question give rise to poisonous substances. It is necessary to distinguish between the intoxication produced by the injurious products of bacteria and the infection caused by the multiplication of the micro-organisms within the body. That this distinction may be readily overlooked, is shown by the recent experiments with the inoculation into animals of pure cultures of the typhoid bacillus. Small quantities of these cultures may be inoculated without any apparent effect; if, however, larger quantities are injected into the veins or the peritoneal cavity of a rabbit, the animal dies in a short time, and the characteristic bacilli are found in the blood, spleen, and elsewhere. It was supposed by Fraenkel and Simmonds,[1] to whom we owe this latter observation, that actual infection took place, but it has been demonstrated by Sirotinin and by Beumer and Peiper[2] that under these circumstances no multiplication of the injected bacilli occurs, and that the same results may be obtained by the injection of sterilized typhoid cultures.

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[1] Fraenkel and Simmonds: Die Aetiologische Bedeutung des Typhus-bacillus. Hamburg und Leipzig, 1886.

[2] Sirotinin: Zeitschrift f. Hygienc. Bd. i., p. 465; Beumer u. Peiper: Ibid., p. 489.

The isolation in a chemically pure state of the poisonous products of pathogenic bacteria encounters great difficulties, and we owe to Brieger[1] nearly all that has been accomplished in this direction. Two substances which he has obtained from cultures of pathogenic bacteria are of great interest. Brieger isolated from pure cultures of the typhoid bacillus a very poisonous ptomaine, or toxin as he prefers to call this group of substances. He has given to it the name typho-toxin. It may be somewhat significant that he failed to find typho-toxin in a culture which had stood for twenty-four hours at a temperature of 102.2° F. (39° C.). The injection of typho-toxin into guinea-pigs produced great muscular weakness, diarrhœa, increased frequency of pulse and of respiration, and death. Nothing is said as to the effect upon the temperature of the animal.

A toxin has been isolated by Brieger in a crystalline form from an impure culture of the tetanus bacillus. This substance, called tetanin, produces when injected into animals the characteristic symptoms of tetanus.

It is evident that these important discoveries render far more definite than was formerly possible the belief that bacteria produce fever by means of their chemical products.

A dangerous influence exerted by poisonous ptomaines is that under their agency the power of the body of resisting the invasion of various micro-organisms may be impaired or overcome. Thus, Wyssokowitsch has shown that the immunity of some animals against certain species of bacteria may be destroyed by ptomaine-poisoning.

In order to observe the effects upon the temperature I have injected into rabbits sterilized cultures of the typhoid bacillus. Injections of very small quantities of these cultures produce no effects, somewhat larger amounts cause a rise of temperature without other marked symptoms, still larger quantities produce increased temperature, diarrhœa, weakness, and other manifest symptoms of severe illness, but the animal may recover; relatively large amounts are followed by fall of temperature, grave illness, and death. I have also obtained results similar to those of Sirotinin, who inoculated two rabbits with the same amount of a typhoid culture. In one rabbit fever developed and the animal recovered; in the other the temperature fell after the injection and the animal died. This certainly does not indicate that the rise of temperature in itself is an unwelcome attendant of intoxication with the poisonous products of bacteria. My experiments certainly showed that the animals were more likely to die after injection of typhoid cultures when the temperature fell than when it rose, independently of the quantity of material injected. One is reminded here of the very malignant cases of typhoid fever reported by Fraentzel and others, in which the temperature throughout a great part of the disease was subfebrile, or even at times subnormal.

In no disease is the dependence of the febrile paroxysm upon the presence of bacteria so apparent as in relapsing fever, where, according to the statements of most, although not of all, observers, the spirilla appear in the blood at the beginning of a paroxysm and disappear at the end. Whether or not here and in malaria the pyrogenic agent is a chemical product of the micro-organisms, causing the disease, we do not know.

I must content myself with having brought before you evidence showing that, at least in some of the infectious fevers, the specific bacteria produce pyrogenic substances. We have no right to say that this is the only way in which pathogenic bacteria can cause fever.

We have considered now three groups of agents concerned in the production of fever, viz., first, unorganized ferments and other relatively homologous substances; second, ptomaines and other chemical products of saprophytic micro-organisms; third, pathogenic micro-organisms and their chemical products.

It is not to be understood that these groups correspond to sharply defined classes of fever-producing agents. The same substance may be produced by the action of unorganized ferments as well as by saprophytic bacteria, or by parasitic bacteria; hence we may find the same fever-producing agent in each of the three groups. As has already been mentioned, our knowedge does not justify us in regarding these various substances as the immediate and direct pyrogenic agents. The epithet pyrogenic is applied to them only by a certain latitude of signification. It is possible that these various substances which we are in the habit of describing as pyrogenic may produce in the body some common change which gives rise to the real fever-producing agent. This is the view of Von Bergmann and Angerer, who believe this common change is a liberation of fibrin ferment by destruction of leucocytes. While we cannot consider this view as more than an hypothesis, it is, nevertheless, well to remember that apparently heterogeneous substances which are usually designated as pyrogenic may produce similar changes, which are to be regarded as the real source of the febrile disorder of animal heat. But, notwithstanding these limitations and these elements of uncertainty, it seems to me that some such classification as that suggested of the agents producing fever is more useful than that usually employed in the discussions of the etiology of symptomatic and of essential fevers.

There is one point which must be impressed upon every one who makes many experiments with pyrexial agents. This is that once in a while a substance of undoubted pyrogenic power causes a fall instead of a rise of temperature. This occurs frequently when the substance is injected in large quantity, and under these circumstances there is usually produced a condition of collapse. But in exceptional cases the same dose which will cause in one animal a rise of temperature may give rise in another animal of the same species to a distinct reduction of temperature. In these latter cases there must be some idiosyncrasy on the part of the animal. Aronsohn[1] refers this unusual phenomenon to some peculiarity of the heat-centres in the brain, and he draws an interesting parallel between this contrary effect of pyrogenic substances and the exceptional cases in which antipyretic drugs give rise to elevation instead of lowering of temperature.

The causes of fever which we have thus far discussed have been substances which exert a pyrogenic effect when introduced into the circulation. We suppose that these substances act in some way upon the nervous system, but whether or not this action is a primary one it is impossible to say. Even if we assume, as is often done, that these substances incite directly in the blood and tissues chemical changes which lead to increased production of heat, we must still have recourse to some action upon the nervous system, as has already been sufficiently set forth in the previous lectures.

It cannot be doubted that fever may be caused by other agencies than pyrogenic substances present in the blood or tissues. The effects of exposure to external heat have already been considered. We found experimental evidence in support of the view ably advocated by N. C. Wood, that in typical cases of thermic fever, or sunstroke, the strain placed upon the heat-regulating centres by exposure to excessive heat results in paralysis of these centres, with rapid elevation of the external temperature.

The cause of the elevation of temperature in tetanus is not altogether clear. In this disease the temperature may vary but little from the normal, but it is not uncommon to find excessive elevations of temperature toward the termination. Temperatures of 113° F. (45° C.) or more have been recorded. The idea would naturally suggest itself that the rise of temperature is due to the tetanic muscular spasms, which we know to be accompanied by production of heat. Leyden was led to adopt this explanation by the results of experiments made upon animals. He succeeded by producing violent tetanic contractions of the muscles of a dog in raising the internal temperature in the course of one hour and a half from 103.3° F. (39.6° C.) to 112.6° F. (44.8° C.). Clinical observations, however, do not support the supposition that the hyperpyretic temperatures of tetanus are dependent upon the muscular contractions. In spite of violent and prolonged tetanic spasms, the internal temperature may remain normal or be but slightly elevated. There is a decided similarity between the hyperpyrexia of tetanus and that which occurs in rheumatism and some other diseases, particularly in affections of the central nervous system, and it certainly seems probable that in all of these cases there is a profound disturbance of the heat-regulating centres. As the elimination of urea in tetanus is not excessive, we find additional reason to separate tetanic hyperpyrexia from ordinary febrile conditions. Recent investigations of the etiology of tetanus have rendered it certain that at least some forms of this disease are caused by infection with a special micro-organism. This has been demonstrated not only in the tetanus of animals but also in that of human beings. The tetanus bacillus has been found wide-spread in the ground in Germany, and I find it abundant also in the ground in Baltimore and its neighborhood. In experimental tetanus the specific bacillus, which has not yet been obtained in perfectly pure culture, develops chiefly in the tissues near the seat of inoculation, and does not invade other parts of the body and the blood to any great extent. This indicates that the symptoms are referable chiefly to poisoning by some chemical products of the specific micro-organism. As has already been mentioned, this view is sustained by Brieger's discovery in cultures containing the tetanus bacillus of a peculiar ptomaine which he has called tetanin, and which produces tonic spasms of the muscles. It is therefore reasonable to believe that the hyperpyrexia of tetanus is caused by the action of poisonous products of the tetanus bacillus on the nervous centres concerned in temperature-regulation. Our present knowledge, however, does not warrant us in asserting that all forms of tetanus in human beings are of an infectious nature.

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[1] Brieger: Untersuchungen uber Ptomaïne. Berlin, 1886.

[1] Aronsohn: Deutsche Med. Wochenschrift, 1888.

In the first lecture of this course evidence was presented to show that pyrexia may be caused by affections of the nervous system without the agency of any pyrogenic substance. It may jar upon the sensibilities of some to call this form of pyrexia fever; but this hesitation can be due only to the idea that symptoms which are referable to infection or intoxication are essential to the conception of fever. In my judgment, we shall be led into confusion if we attempt to incorporate into our definition of fever more than properly belongs to the febrile disorder of animal heat, and from this point of view there can be no impropriety in designating as fever the pyrexia dependent directly upon affections of the nervous system.

It is not necessary to repeat here the conclusive experimental evidence for the existence in the nervous system of centres or regions which control the dissipation of heat, and the chemical processes concerned in the production of heat. Those who are not much impressed by experiments upon animals can hardly fail to be convinced by the clinical evidence, which demonstrates that lesions of the nervous system may cause elevation of temperature which cannot be referred to the action of any pyrogenic substance. Such evidence must of course be collected from cases where the fever cannot be explained by inflammation, bed-sores, or other lesions which can give rise to absorption fever.

W. Hale White,[1] in the interesting article already referred to, has collected a number of cases of tumor, hemorrhage, softening, sclerosis, injury, and functional disturbance of the spinal cord and brain, in which the pyrexia or hyperpyrexia is to be explained only by the lesion of the nervous system. The number of such cases might be considerably increased. These cases show that lesions of the cervical part of the cord, of the pons, of the corpus striatum, and of the neighboring white matter are most likely to be associated with high temperature; but the cases hitherto reported hardly justify positive statements as to the exact situation in man of thermically active nerves or regions in the brain and spinal cord. As might be expected, not only focal lesions, but also diffuse diseases, such as occur in general paralysis of the insane, locomotor ataxia, multiple sclerosis, may give rise to pyrexia which sometimes assumes the form of temperature crises. It is in harmony with what we know of other disorders of the nervous system to find that, not only demonstrable anatomical lesions, but also functional disturbances, may produce nervous pyrexia. Such functional disturbance furnishes the most probable explanation of the singular and erratic elevations of temperature which have been occasionally observed in hysteria.

A question which merits more consideration than it is possible to give to it on the present occasion relates to the possibility of the occurrence of fever as a reflex neurosis. The advance in our knowledge of the etiology of traumatic and inflammatory fevers has pushed aside almost wholly the old doctrine of irritative fever. There are, however, cases of fever where still the simplest and apparently most rational explanation of the causation is peripheral nerve irritation. As examples may be mentioned the fever resulting from teething in children, that sometimes accompanying the passage of gall-stones or urinary calculi, and that occasionally following the insertion of a catheter into the urethra. It must be admitted that the evidence on this point is not conclusive. Especially is there lack of satisfactory experimental evidence. Electrical irritation of the exposed sciatic nerve is, under ordinary circumstances, followed by a moderate fall of temperature, although Ott[1] finds that in atropinized cats such irritation is followed by a decided rise of temperature. But these experiments cannot be held to weigh for or against the doctrine of irritative fever. Observations on human beings indicate that peripheral nerve irritation, if ever a cause of fever, is so only in certain situations, and under certain forms of stimulation, and in certain individuals. In infants temperature regulation is more labile than in adults, so that it may be that nerve irritation can more readily disturb the temperature in the former than in the latter. The chief controversy as to the question now before us has been as to the explanation of certain forms of urethral or catheter fever. It cannot be doubted that a large number, probably most, of the cases of so-called urethral fever are instances of genuine absorption fever. Even if we exclude all cases with diseased kidneys, or with cystitis, or other inflammatory disease of the urinary passages, there remains a certain number of cases in which the gentle insertion of a disinfected catheter is followed by distinct febrile reaction. It seems unwarrantable to assume that in all of these cases the catheter has caused a laceration of the urethra through which pyrogenic substances are absorbed. What is the nature and whence the source of these substances? In the cases now under consideration they can be sought only in the normal urine, and of their existence there no proof has been afforded. In these cases it is certainly very difficult to understand how the fever can be interpreted as due to the absorption of some pyrogenic agent, and, failing this explanation, the idea that the fever is dependent upon nerve-irritation is most plausible.

I have now presented to you an imperfect survey of the general etiology of fever. The attempt has been made to classify the leading causes of fever, but it cannot be claimed that every variety of fever can be assigned to one of these groups of causes. Our knowledge of the etiology of special fevers is still too imperfect to warrant any such generalization. This is an attractive field for much patient investigation. I need only remind you of the uncertainty which still pertains to the causation of many of the fevers of warm countries. There is reason to believe that there remain yet to be differentiated etiologically specific types of fever which occur among us, and particularly in our Southern States. It may be that increasing knowledge will necessitate the recognition of varieties of pyrogenic agents entirely distinct from any with which we are now familiar. It is certain that future investigations will add clearness and precision to our ideas of the nature and mode of action of causes of fever, which at the best we can now understand only imperfectly.

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[1] W. Hale White: The Theory of a Heat-centre from a Clinical Point of View. Guy's Hospital Reports, vol. xlii., 1884.

[1] Ott: Therapeutic Gazette, August, 1887.

I cannot conclude this course of lectures without saying a word on a subject which must engage the attention of everyone who gives much thought to the nature of fever. What is the significance of fever, is a question which thrusts itself upon us no less than it has upon physicians in all ages. Unfortunately, we cannot to-day, any more than could our predecessors, give other than a speculative answer to this question. There have been in all ages enlightened physicians who have held the opinion that fever is a process which aids in the elimination, or destruction, of injurious substances which gain access to the body. Under the influence of ideas which sought in increased temperature the origin of the grave symptoms of fever, we have, in recent times, in great part lost sight of the doctrine once prevalent, that there may be in fever a conservative element. There is much which speaks in favor of this doctrine. The real enemy in most fevers is the noxious substance which invades the body, and there is nothing to prevent us from believing that fever is a weapon employed by nature to combat the assaults of this enemy. The doctrine of evolution indicates that a process which characterizes the reaction of all warm-blooded animals against the invasion of a host of harmful substances has not been developed to such an extent, and is not retained with such pertinacity, without subserving some useful purpose. This is a point of view from which many pathological processes can be regarded with advantage. Even suppuration, which one does not generally look upon as a beneficent provision, is a most important instrument of nature in forming a barrier against general infection of the body with certain micro-organisms. It is impossible, with our present knowledge, to say in exactly what way fever accomplishes a useful purpose. There are facts which suggest that in some cases of fever the increased temperature, as such, may impair the vitality, or check the virulence, of pathogenic micro organisms; but there are many circumstances which make it difficult to suppose that this is the agency by which fever usually exerts a favorable action. The supposition seems to me more probable that the increased oxidation of fever aids in the destruction of injurious substances. According to this view, the fever-producing agents light the fire which consumes them. It is not incompatible with this conception of fever to suppose that the fire may prove injurious also to the patient, and may require the controlling hand of the physician. Time will not permit me to elaborate further the ideas here suggested. In the course of these lectures, some facts have been presented, and others might be drawn from clinical and experimental observations, which favor the hypothesis that fever is, in a certain sense, a conservative process. Unproven and intangible as the hypothesis may seem to some, no apology is needed for bringing to your attention a conception of fever in favor of which much can be adduced, and which, if true, is of fundamental importance, both theoretically and practically.

EARS.—According to Aristotle large ears are indicative of imbecility; but happy is the man who has square ears, for they are a sure indication of sublimity of soul and purity of life. Flat ears denote a coarse and brutal man; small ones announce bad temper and madness, while those of fairest promise are firm and of middling size.

IS VISION EVER PERMANENTLY AFFECTED BY SUNSTROKE?[1]

By JAMES A. SPALDING, M.D.,
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DURING the last five years I have examined a large number of persons claiming pensions for various diseases of the eye, and I had prepared for publication a paper based upon the entire list of cases. But since such a paper would open up too many subjects, I have abstracted a few cases illustrative of the assertion that sunstroke in the army in 1862 to 1865 caused blindness ten or more years later, and have appended a brief summary of the accessible cases of insolation with subsequent defective vision.

It is hoped that some members may be able to recall their experience in this respect, and thus enable pension examiners to obtain some foundation for proper judgment in regard to the question which is so frequently asked, yet still remains unanswered, whether sunstroke is ever followed by permanent blindness or great loss of sight.

I use the word permanent advisedly, because the mind is so often disturbed after any sudden cerebral disorder, that the sufferer's assertions are not trustworthy. Thus, after fainting, it is quite common to hear the patient speak of being suddenly "struck blind," or of "mist coming over the eyes." Now a soldier might remember that at the time of his sunstroke he lost his sight temporarily, and yet many years after when more or less weak of sight from entirely different causes, and hearing of other soldiers obtaining pensions for no visible disease, he would renew this recollection, and make it the basis for a fraudulent claim.

What I would desire, therefore, and it is certainly a question of public interest, is a discussion of the permanent results of sunstroke upon vision, so that we may learn whether we are justified in recommending any pension for any degree of blindness following insolation many years before. The question may at first sight appear frivolous, yet it is so often raised, and as often unanswered, and so long as experts are employed to detect swindling pension claimants, it is well for them to be supported by more accurate knowledge upon this interesting subject than they can now find in any text-books.

The first claimant alleges that he was sunstruck in 1863, and soon after discharged for general debility and an affection of the eyes, the precise nature of which could not be discovered owing to the absence of documents. Careful examination reveals total loss of sight from cataract in each eye. But we must seek further than this for the loss of sight, because an eye otherwise healthy but simply cataractous from senility can easily distinguish the light of a lamp at several feet, while it also possesses a perfect visual field. But here a bright flame can be discerned only at one foot in one eye, and at even less distance in the other, while by repeated tests we find that the field of vision is contracted. We have, therefore, the right to assume that the claimant's blindness depends rather upon a retinal or optic nerve affection than upon simple senile opacification of the lens.

The second case is that of a soldier who had long been suffering from malarial fever. Soon after returning to duty he was violently sunstruck. He remembered losing his sight while swooning from the effect of the heat, but he was equally sure that when he recovered his senses his sight was as good as ever. He soon resumed active duty, and served more than a year, when he was again stricken with malarial fever. Later still, he suffered from asthma and pneumonia, till he was reduced to a shadow. Within a few months after his discharge in 1865 for total debility, the sight of one eye began to fail and then that of the other, till in 1868, after being treated by numerous general practitioners, he came under the care of an ophthalmic surgeon who diagnosticated white optic atrophy. My examination shows total blindness in each eye due to optic atrophy.

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[1] This paper was read at the last annual meeting of the American Ophthalmological Society, but no member then present had ever heard of the sight being affected by insolation. I now publish it, in the hope that those surgeons who served during the war, saw soldiers sunstruck, and who followed those cases afterward, may give us information on this point, and thus increase our knowledge of a subject which is important in more points than one.

This claimant, though sunstruck, did not even pretend that this had anything to do with his blindness, for he volunteered the remark that for two if not three years thereafter he could read the finest type with each eye alone.

The third case, and a curiously typical one, is that of a soldier who testifies that he was sunstruck while on picket duty in 1864. and, though not discharged till four months later, did no active duty after that. While in the hospital recovering from the insolation, his hearing and sight began to be affected. Year after year this double trouble "increased," until, according to his story, he is now extremely deaf in the left ear, and blind in the left eye.

We soon find that the pretended loss of sight is simply a high degree of hypermetropia, for with suitable glasses he is made to acknowledge 20–30 in one eye, and 20–50 in the "blind" eye. And further still, the finest type can be read perfectly with either eye with the proper presbyopic glasses superadded to the degree of hypermetropia.

The fourth claimant wants a pension for total blindness, because he was sunstruck in 1864, came home the next year with weak eyes, and worked as well as any other farmer till 1880, except that his eyelids were red and his eyes "weak." In that year he lost the sight of the right eye, and two years later that of the other eye. He is now totally blind, and the ophthalmoscope shows optic atrophy.

Here now are four cases of loss of sight following insolation, yet the asserted symptoms vary widely. One urges total blindness in both eyes dependent on insolation, and the defects in the visual field seem to justify us in the belief that there may be some connection between the two affections. The second is severely affected by sunstroke, is unconscious for hours, yet recovers without any eye disease, and serves actively for a long time, his final blindness, though total, being referred to exhaustion and spinal irritation. The third claims that sunstroke made him almost blind in one eye and deaf in one ear, and then, at a later date, affected the other eye and ear. Nevertheless, the tests show that the sight is good in both eyes, and that the deafness is slight, and, on the whole, may rather be referred to catarrh than to insolation. The fourth patient had a sunstroke during the war, but has no trouble except "weakness of the eyes" till 1880, when he loses his sight in one eye, and then in the other, from optic atrophy.

Verily, the results of insolation upon the sight are manifold when we listen to pension claimants' complaints!

How can we decide in such perplexing circumstances? If we search ophthalmological literature we find but few cases bearing on this point. And to be precise, has there ever been published more than one genuine case in which a patient became totally and irredeemably blind within any reasonable time after a genuine attack of sunstroke?

Among the doubtful cases we may first quote that recorded by Hamilton:

A young man who had been drinking heavily on an extremely hot day, was apparently sunstruck, grew dizzy. fell unconscious, and on recovering his senses found that his sight was greatly impaired. Ten days later (though no mention of his drinking is made) he was again affected in the same way, with renewed and increased loss of sight. From the time of the last attack his head ached constantly, and his former habitual epistaxis ceased. After years of fruitless treatment he could barely decipher Jaeger 20; optic papillæ chiefly swollen and hyperæmic, but partially pale and atrophic. Repeated bloodletting soon relieved the headache, and greatly improved the sight.

Galezowsky reports the case of a boy, five years of age, with convulsions and loss of consciousness on a very hot day; total blindness and vomiting; four weeks later infiltration about the papillæ; flying blisters and potassic iodide restored the sight in a few weeks.

The same authority cites three cases of atrophy of the optic nerve dependent on insolation among 168 cases of optic atrophy from every cause, yet Schoeler, among 188 cases of the same disease, and Peltesohn, among 496, were not able to find a single one in which there was any history of exposure to the sun.

Hutchinson mentions, with an interrogation mark, a case of double optic neuritis and partial atrophy in which the patient had been exposed to excessive heat. But in his list of 248 cases of optic atrophy he speaks of but three in which there could possibly have been a sunstroke, for they alone were exposed to the sun in the tropics (evidence of but slight weight when we recall the innumerable causes of atrophy), but after all there was no direct history of insolation.

Brough saw a young girl with vision of less than 20–200, subsequent to a sunstroke, and remaining in this condition for over two years while under his observation. (There is nothing to show that this case may not have been one of hysterical amblyopia.)

Mooren has seen double optic neuritis after (how long after?) insolation, but I do not understand that he refers this condition to the sunstroke, nor does he inform us of the result.

Thus, after carefully examining every accessible case of disturbance of vision which might in any conceivable manner be referred to insolation, I can truly say that the only trustworthy ones are those reported by Hotz and Hulke.

Hotz examined six persons ophthalmoscopically, soon after exposure to the intense heat of a summer sun, and found the following conditions:

CASE I.—A man, aged twenty-eight, imperfect paralysis of the left arm; fingers counted accurately at six feet; loss of entire right visual field, nasal half of each optic papilla swollen.

CASE II.—A woman, aged forty-one, optic neuritis, right eye.

CASE III.—A man with the same condition in the right eye.

CASE IV.—A man, aged forty-eight, optic neuritis in each eye. Vision of right eye, 20–50, of left eye, 20–200.

CASE V.—A man, aged thirty-two, left optic neuritis, fingers counted at ten feet.

CASE VI.—A woman, aged twenty-four, vision of right eye normal, excessive hyperæmia of the fundus of the left eye, with only bare perception of light, optic neuritis in the left eye.

I have not been able to refer to the original paper, but Burnett, who reviewed it in Knapp's *Archives*, says that a good recovery was made in each case.

Finally, and unique in its history of a permanent effect upon the sight, is Hulke's case of a perfectly healthy woman, aged twenty-four, who was sunstruck. Loss of consciousness was followed by left hemiplegia, convergent strabismus, diplopia, and loss of sight. A fortnight later the pupils were fully dilated and immovable; total blindness in each eye. Optic neuritis. Six months later, no sight in either eye, white optic atrophy.

All accessible literature leads us to doubt if any soldier is entitled to a pension when he asserts that he lost his eyesight from insolation. The probabilities are that, when one is sunstruck, the loss of sight referred to as the cause of the subsequent weakness of the eyes, or of the blindness, is simply the result of incipient loss of consciousness, or, according to Hotz's observation, of a neuritis from which recovery is sure; and, further, when anyone claims that his eyes were "weak" from sunstroke, and that he only became more or less blind years afterward. the probabilities are that he is a common swindler.

Nevertheless, we must not forget that at the London Congress, in 1881, Sir Joseph Fayrer spoke of partial or complete blindness as one of the *usual* results of insolation.

From the reports of that meeting, however, it is plain that recent blindness after sunstroke is meant, not that occurring many years later.

After duly considering these facts, and bearing in mind the impaired field of vision in the first case, I could see no reason why the man should have a pension for sunstroke-blindness, but many why he should have one for optic atrophy, due to exposure. Further still, he was discharged for debility and defective vision, so that a full pension was due for blindness, independent of the cataractous loss of sight.

In Case II., a pension was recommended, not for blindness due to insolation, for the claimant repeatedly declared that after sunstroke he could see as well as ever, but for spinal atrophy.

The third claimant was too plainly a fraud; he could read newspaper type by the hour, and had competed successfully for years in a factory with men who did not pretend to be blind even of one eye.

The fourth claimant was also a swindler, as his story proves, for no one ever heard of "weak" eyes, *i.e.*, blepharitis and conjunctivitis changing into optic atrophy, fifteen years after a slight insolation. Nevertheless, the man obtained a full pension for total blindness, because he was a "deserving" man. And yet it was notorious that no one in the town used so much tobacco. How much more probable that overuse of tobacco made him blind?

I do not know whether this advice has been followed by the department. The expert may have the best inclination to help the soldier, but it is his duty to judge cases from the standpoint of scientific truth, not from that of the false and fashionable policy of catching practice or fees from the pensioners or their friends. Nevertheless, as my experience goes, it is almost useless to give any but a favorable opinion in every case; if not done, the department is besieged till success is attained.

It is my opinion that insolation rarely affects the sight permanently, and if so, that the results in the form of optic atrophy ensue within a few months, never, as the innumerable pension claimants assert, at any interval extending from four to nineteen years later.

Hebra's Water-Bed.—At the meeting of the Surgical Section of the Suffolk District Medical Society, on March 7th, Dr. Otis K. Newell read a paper on "The Surgical Use of Hebra's Continual Bath or Water-bed," of which he had had personal observation. In addition to its use in the treatment of eczema and other cutaneous diseases, the continual bath has been used with success in the treatment of gangrene, bedsores, etc., and more especially severe burns, where its beneficial effects are particularly noticeable. Patients are sometimes kept in the water for a very long time. One patient was in the bath 385 days. They are removed only for evacuation of the bowels and bladder, and they take their meals and sleep when in the water. The danger of drowning is much less than seems apparent at first thought. If a patient is very weak the precaution may be taken to support him by a bandage passing around the body under the arms, which is secured at the head of the bath to prevent his slipping down the inclined portion that raises the head out of water. Only the palms and soles suffer, and these only during the first few days. They become shrivelled and folded like a washerwoman's hands, and the condition is much alleviated by applications of substances of a greasy nature. A papular eruption occurs on the parts which are both in and out of the water, as the arms and thorax. This, however, heals spontaneously. Hebra's beds contain 675 litres of water. When a patient first enters the bath the temperature of the water is 30° C. (86° F.), which seems warm to him. The heat is gradually raised to 35° or 37° C. (95° or 98.6° F.), which is kept constant by a simple arrangement by means of a kerosene lamp.

The Eastern Dispensary which charges for prescriptions, and pays its medical staff, is prospering.

HYSTERICAL FEVER.

By FRANK C. BRESSLER, M.D.,
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I desire to call attention, in the following paper, to an affection which, as far as I am aware, is not described by authors generally, but of which I have encountered several cases. I have ventured to describe the affection under the name of hysterical fever.

By hysterical fever I mean a perverted condition of the nervous system occurring in a neurotic individual, attended by elevated temperature which may last from a few hours to several days, and associated throughout its duration by more or less symptoms of an hysterical character.

Every physician, in his practice among the female sex, has undoubtedly noticed that some trivial cause has thrown his patient into a febrile condition which has lasted for two or three hours, or longer. He mentally calls such attacks, perhaps, neurotic fever, and then forgets the occurrence until the same condition occurs again in some other patient.

No doubt exists in my mind, whenever I hear of a physician who has attended a large number of typhoid fever cases and has never lost any, that he has had some cases of hysterical fever among them, and has called them typhoid fever with hysterical symptoms predominating.

This fact has some little bearing on statistics, and on the various results obtained by the different methods of treatment. I, of course, do not mean to be understood that all cases of typhoid are erroneously diagnosed, but if only a few cases occur, the result makes a difference.

With these few explanatory words, we will speak of the various phases of hysterical fever, as far as observed.

As to the anatomical changes, we know nothing. It probably depends on the same changes that occur in hysteria, with an additional influence, which so operates on the thermic centre as to destroy its inhibitory influence, thus giving rise to elevated temperature.

The clinical history is as variable as the various manifestations of hysteria. It generally begins with symptoms simulating mild intermittent fever—chilliness, susceptibility to atmospheric changes, loss of appetite. The bowels tend to be sluggish; in one case, however, diarrhœa was present for two days. Tongue coated, headache variable in severity, general malaise, temperature elevated, face generally flushed, or there is a circumscribed flush limited to the cheeks. Lips tend to scale and crack early; the eyes are clear and brilliant; the mind is bright, comprehension quickened, so that a dull mind may become comparatively bright and keen. General hyperæsthesia, both to muscular and cutaneous impressions. The special senses of hearing, tasting, smelling, etc., are rendered more acute. No true delirium is present (at least there was none in my cases), no matter how severe the attack seems to be. Patients are quite irritable, so that trivial noises may annoy them considerably, and this is followed often by tremors and marked rise of temperature.

The appetite is often perverted, the patients asking for those things which are generally contra-indicated in febrile conditions. The most annoying thing the physician has to contend with is the great irritability of the stomach. Things most easily digested often cause considerable gastric uneasiness, this, of course, depending much upon the whims of the patient. One of the most important things, however, is the vomiting, which is often so persistent that ice-water or anything introduced into the oral cavity may provoke it. This symptom was present in all of my cases, and, in spite of every means I adopted for its arrest, ran its own course. Owing to this fact, the patients persistently refuse to take food, pleading the fear of vomiting being excited. Oftentimes several days have gone by without one ounce of food passing their lips, though, of course, water or ice is craved and taken.

The abdomen is extremely sensitive to pressure, so that it can barely support the weight of the bedclothing. Borborygmi are often present. This sensitiveness may lead to an erroneous diagnosis of peritonitis unless caution be observed. It is differentiated from the latter by the fluctuating character of the pains, absence of tympanitis, absence of an exciting cause, variability of temperature, etc. Added to these, the hysterical symptoms and the ovarian pain on pressure make its exclusion comparatively easy.

Cramps, or neuralgia of the bowels, were pronounced symptoms in two cases; the same were characterized by the persistence of the pain and its obstinacy in responding to medication, heroic doses of morphine failing often to give relief.

Insomnia proved to be a troublesome thing in one case; oftentimes this patient lay from thirty-six to forty-eight hours obtaining barely one hour's sleep.

No marked changes were observed in the respiratory organs, beyond temporary increase of the respiratory acts, depending upon functional disturbances. Hysterical asthma was present to a mild degree in one case.

The pulse varied, being generally increased in frequency, often reaching 120 per minute, and rarely falling below 85. This condition likewise depended upon the surroundings of the patient.

The temperature is peculiar. It varies from 101 to 105° or more, and usually attains a high degree early in the disease. In my cases, the temperature reached a high point on the second day. This elevated temperature may last from a few days up to weeks, when it suddenly drops to nearly normal again, perhaps to rise as rapidly as it fell. It is highest in the evening, coming down 1–4° by the morning, or the reverse may be the case. It may be 99° one hour, and two hours later jump to 105°. One of my cases had an evening temperature of 103°, with a morning remission of 1–5 for three days, and from this fact typhoid fever was diagnosed and concurred in by another physician. This supposed typhoid temperature occurred, however, in the third week of her illness; two days later it dropped down to 99.4°, and was followed on the succeeding day by a jump to 105°, owing to the patient having been angered. This illustrates the variability of the temperature in this condition; any exertion, whether mental or muscular, may cause a most marked change in the temperature.

With this elevated temperature, one thing was very noticeable, namely, that little wasting of the body took place as compared with that which occurs in other diseases of a like duration and temperature, with this one more point, that the patients regain flesh rapidly after the disease has come to a close.

Menstruation may be interfered with, and in one case suppression existed for two periods.

Marked ovarian sensitiveness was observed in all my cases, so that pressure upon the ovaries elicited the characteristic pains observed in the hysterical condition.

No plain symptoms referable to the urinary apparatus were observed. The urine, however, was not examined.

With the above-mentioned symptoms a great many other ones were noticed, but being of no important moment, they were not recorded.

As to the duration, that depends on the circumstances and surroundings of the patient. It may last but a few hours or several weeks; oftentimes they have an intermission of days, from which we may pronounce our patient well, only to be disappointed by a return of the former febrile condition.

The prognosis, no doubt, is the same as that of hysteria—namely, good.

The treatment is also the same as that for hysteria, with the addition of some febrifuge, the one giving most satisfaction being antifibrine rubbed up with a little gum acacia. Persist in making your patient take food, in small quantities, however, and treat all symptoms on general principles as they arise.

In the description I have given of hysterical fever I am not able to say positively that all cases of it will run the same course as mine did; neither can I say that I have pointed out any symptoms that are pathognomonic of it, thereby placing hysterical fever on a proper footing. I hope, however, that I have pointed out the fact that such a condition as hysterical fever exists. Finally, in support of my opinion, I find, on looking over various journals, an article entitled "Hysterical Fever," by De Bove, described in the *Therapeutic Gazette* for May 15, 1885.

1711 Bank Street.

THE MORTALITY OF EPILEPSY.

By WILLIAM L. WORCESTER, M.D.,

ASSISTANT PHYSICIAN TO THE MICHIGAN ASYLUM FOR THE INSANE AT KALAMAZOO.

So far as my reading has extended, writers on the subject of epilepsy, with few exceptions, either say nothing of the possibility of a fatal termination of the disease, or speak of such an event as of rare occurrence. I have never seen any attempt to estimate the frequency with which it proves fatal. My own observation, during my connection with this institution, has led me, on the contrary, to consider epilepsy, in its severer forms at least, as a very deadly disease, and as this impression is fully borne out by the records of this and the reports of other similar institutions, it has seemed to me that a publication of the statistics which I have collected might aid in correcting what seems to me a prevalent error on this subject.

The Michigan Asylum for the Insane has been in operation for twenty-eight years. Up to October 1, 1887, 4,525 admissions had been recorded. Excluding readmissions, 4,084 patients had been treated, of whom 234 were epileptics. I have carefully examined the histories of these cases, and excluded all in which there seemed to me to be a reasonable doubt in regard to diagnosis.

The following table shows the number of epileptics of each sex treated up to the above date, with the number of discharges and of deaths occurring while under treatment.

TABLE I.—*Showing Results in 234 Cases of Epilepsy treated up to October 1, 1887.*

	Males.	Females.	Total.
Discharged	58	52	110
Died	37	25	62
Remain	40	22	62
Total treated	135	99	234

It will be seen that 62, or 26.5 per cent. of the whole number treated, died. This is a much larger percentage of deaths than has occurred in the general population of the Asylum. Out of the 4,084 patients treated, 735, or eighteen per cent., have died.

This disproportionate mortality has not been due to an increased liability to other fatal diseases, as will appear from the following table, showing the causes of death in the cases which died.

TABLE II.—*Showing Causes of Death in 62 Epileptics.*

	Males.	Females.	Total.
Epileptic convulsions	12	7	19
Status epilepticus	10	7	17
Œdema of lungs, following convulsion	1	1	2
Exhaustion from epilepsy	4	3	7
Phthisis pulmonalis	2	4	6
Diphtheria	1	.	1
Traumatic	..	1	1
Endocarditis, ulcerative	1	.	1
Gangrene, senile	1	..	1
Dysentery	1	..	1
Diarrhœa	2	1	3
Cancer of stomach	1	..	1
Suicide	1	.	1
Obscure	.	1	1
	37	25	62

Under the head of epileptic convulsions I have classed cases in which death resulted as the immediate effect of a single convulsion, or a small number separated by considerable intervals; under that of status epilepticus those in which it followed a series of convulsions with little or no interval between them. In two cases acute œdema of the lungs supervened immediately upon a convulsion, and proved fatal within a few hours. These three categories embrace 38 cases, or more than three-fifths of the whole number of deaths. In addition to these, there is a class of cases, of which I have seen several examples, in which, with profound dementia, there is a gradual physical failure without evidence of any distinct disease other than epilepsy. This condition proved fatal in 7 cases, which should, in my opinion, be considered deaths from epilepsy, bringing the number up to 45, or nearly three-fourths of the whole. The remaining 17 deaths from other diseases would give a death-rate, on the whole number of epileptics treated, of only 7.27 per cent. The mortality from epilepsy is 19.23 per cent., a greater proportionate number of deaths from epilepsy than occurs in the general population of the Asylum—including as it does large numbers of patients suffering from general paresis and other forms of organic cerebral disease—from all causes combined.

Further confirmation of the tendency of epilepsy to shorten life is found in the ages attained by epileptic patients while under treatment, as shown in the following table:

TABLE III.—*Showing Ages attained by 234 Epileptics while in the Asylum.*

	ischarged.		Died.		Remain.		Totals.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under ten years	..	1		1		.	..	2
Ten to fifteen years	4	5	2		..		6	5
Fifteen to twenty years	6	7	2	4	1	2	9	13
Twenty to twenty-five years	13	10	3	2	6		22	12
Twenty-five to thirty years	7	9	2	5	7	3	16	17
Thirty to thirty-five years	7	11	10	4	10	5	27	20
Thirty-five to forty years	9	2	5	1	5	5	19	8
Forty to forty-five years	3	5	5	1	6	2	14	8
Forty-five to fifty years	4	..	3	3	2	3	9	6
Fifty to sixty years	4	2	3	3	2	1	9	6
Sixty to seventy years	..	..	1	1	1	.	2	1
Seventy years and over	..	..	1	..	.	1	1	1
Unknown	1	..	..	..		.	1	..
Total	58	52	37	25	40	22	135	99

Only 36, or 15.4 per cent. of the whole number of epileptics treated, attained the age of forty-five years, during their residence in the Asylum. Of the 62 who died, fifteen, or not quite twenty-five per cent., had reached that age; while of 100 consecutive deaths of non-epileptic patients, 69 were of persons more than forty-five years of age.

A considerable number of the epileptics, included in the above tables as discharged, are known to have died elsewhere from the effects of their disease.

In the Eastern Michigan Asylum, at Pontiac, there had been, up to the date of publication of the last report, in October, 1886, 117 admissions of epileptics, of whom 34 had died. Of these deaths 16 were from epileptic convulsions, and 6 from status epilepticus. The total number of admissions up to the above date was 1,884, and the total number of deaths 280. While 14.9 per cent. of all patients admitted died from all causes, 18.8 per cent. of the epileptics admitted died of epilepsy.

In order to determine whether the experience of the Michigan asylums is singular in this respect, I have examined the reports for 1886 of fifty-four asylums for the insane in the United States and Canada, being all which have thus far been received here, the statistics of which are given in such form as to be available for the purposes of this inquiry. Of these, fifteen give statistics for their entire periods of operation. The following table shows the general mortality and the mortality from epilepsy in these institutions:

TABLE IV.—*Showing Number of Patients treated, and dying from all Causes, and Number of Epileptics treated, and of Deaths from Epilepsy in Fifteen Asylums for the Insane.*

Institution.	Total number of patients.	Total number of deaths.	Total number of epileptics.	Deaths from epilepsy.
Connecticut Hospital, Middletown	3,765	706	162	29
Willard, N. Y., Asylum	3,964	1,307	357	113
Asylum for Insane Criminals, Auburn, N. Y.	851	87	13	4
Warren, Pa., State Hospital	1,365	236	70	18
Danville, Pa., State Hospital	2,508	357	137	35
Central Asylum, Richmond, Va	1,691	433	100	28
Eastern Asylum, Williamsburg, Va.	1,499	491	107	46
Cleveland, O., Asylum	6,281	658	72	16
Dayton, O., Asylum	5,972	897	133	50
Longview Asylum, Carthage, O	5,518	1,226	259	86
Mendota, Wis., State Hospital	4,364	594	87	38
St. Louis, Mo., Asylum	3,197	369	152	17
Minnesota Hospital	4,129	693	206	80
Second Minnesota Hospital, Rochester	1,202	165	79	24
Provincial Hospital, St. John, N. B.	1,531	346	95	27
Totals	47,819	8,565	2,029	611

The mortality from epilepsy shown by these tables is much larger than in the Michigan asylums. The deaths from all causes are 17.91 per cent. of the total number of admissions, and the deaths from epilepsy are 30.11 per cent. of the number of epileptics admitted. The actual death-rate is doubtless somewhat larger, as a considerable number of patients have been admitted and counted several times. On the other hand, it is likely that a careful analysis would show that some cases of general paresis, cerebral tumor, and other organic cerebral diseases have contributed to swell the death-rate attributed to epilepsy.

The remaining thirty-seven institutions furnish, with the exception of a few biennial reports, available statistics for only a single year. They report, during that time, a total of 11,515 admissions, and 1,992 deaths. Of the admissions, 525 are classified as epileptics, and epilepsy is stated to have been the cause of death in 143 cases. Only four of the thirty-seven institutions fail to report deaths from epilepsy. The similarity between these figures and those obtained from the other set of reports is striking; the percentage of deaths to admissions being 17.3, and that of deaths from epilepsy to admissions of epileptics, 27.2.

It would not be difficult to collect additional statistics from similar sources; but, in view of the great uniformity of those given above, it hardly seems probable that they would materially modify the conclusions to be drawn. Making all due allowance for errors of diagnosis, it is evident that, in asylums for the insane, epileptic patients are more likely to die from epilepsy than from all other causes put together. Of course, the figures here given do not represent the real mortality. Of those discharged, or remaining under treatment at the time the statistics were made out, many, doubtless, ultimately succumb to the disease, and of those dying from other causes a large proportion would doubtless share the same fate if not prematurely cut off by some intercurrent disorder.

The question remains, To what extent conclusions drawn from the population of asylums for the insane are applicable to those who are not inmates of such institutions? Is there anything either in the character of the cases or their surroundings that would affect unfavorably their chances for life as compared with other sufferers from the same disease?

It is probably true that, as a class, the subjects of my tables were cases of more than average severity, although, so far as they have come under my personal observation, this has been by no means invariably the case. On the other hand, the epileptic inmates of such institutions are probably, on the whole, more favorably situated, so far as medical treatment and security against accidents are concerned, than those who are inmates of poor-houses, or the majority of those who are living at large. Such patients, if left to themselves, are very generally unwilling to follow out a consistent and thorough course of medical treatment. If benefited, they become impatient of the necessary restrictions; if, as is apt to be the case, the treatment is not very successful, they become discouraged, and either give up all effort to combat their disease, or, more commonly, become the prey of quacks. On the whole, it seems to me probable that the above figures represent pretty fairly the facts in regard to cases of considerable severity. When convulsions occur at long intervals, and but little disturbance of the cerebral functions results, the danger of a fatal issue is doubtless much less.

If several hundred cases of epilepsy, as they occur in the community, could be followed up, and the ultimate result of each one determined, such statistics would be much more valuable than any drawn from the inmates of public institutions. Their collection would, for obvious reasons, be a work of great difficulty.

It is not the purpose of this article to describe the mode of death from epilepsy. Leszinsky ("Epilepsy Considered as a Cause of Death," *New York Medical Journal*, vol. xli., p. 321) has given full reports of a series of cases which may be considered fairly representative. It may not be amiss to mention that in this institution chloral hydrate in full doses, administered by the rectum, if the patient is unable to swallow, has proved very efficacious in arresting convulsions in the status epilepticus, and in allied conditions, in cases of general paresis and of gross organic disease of the brain, and in not a few instances, has seemed to be the means of saving or prolonging life.

THE HEALTH OF LAS VEGAS, N. M.

By FRANCIS H. ATKINS, M.D.,

LAS VEGAS, N. M.

THE peculiar character of the death-record of the town of Las Vegas, in Northern New Mexico, as exhibited in the past year, is sufficiently striking to be worthy of publication and discussion.

The town lies at an altitude of 6,400 feet, and is placed snugly against the foot-hills of the Rocky Mountains and facing the mesa or great elevated plain extending eastward. It is on the main line of the Atchison, Topeka & Santa Fé Railroad, and is probably the most prosperous and promising town in the Territory. The underlying rocks are red and yellow sandstone and blue limestone.

The town contains about 6,000 people, fairly divided between 3,000 Mexicans and 3,000 Americans, for the most part living in separate portions; the former using adobe houses, and living—except as to a few better-class families—with utter disregard to all sanitary laws; the latter occupying mostly frame houses, and being a mixture of people from all parts of the United States, most of them having come here since the railroad was built in 1879.

As large numbers of consumptives come to New Mexico seeking health, deaths from phthisis frequently occur, but all deaths of this non-resident class I will omit, and also all deaths occurring among the Mexicans, as my wish is to study the effect of the climate upon the health of resident Americans.

The number of deaths was very small in the first four months of 1887, but I began my scrutiny, on which these notes are based, May 1, 1887.

Among the 3,000 Americans the following deaths were observed:

In May one man was hung by process of law, and he a non-resident.

In June a feeble infant, aged four months, died of scarlet fever, which its family, emigrants from Texas, brought to town with them in their wagon one week before.

In July a youth died after an operation for strangulated hernia; an infant, aged twelve days, died of marasmus; an infant, aged twenty months, died of cholera infantum.

In August an infant, aged two months, died of inherited syphilis; an infant, aged eleven months, died of cholera infantum (the family new-comers).

In September an infant, aged eighteen months, died of cholera infantum, having been brought here from Kansas City a week before, ill with the same disease.

In October a lady, aged twenty-six, a stranger visiting here for pulmonary disease, died of typhoid fever, of which a few cases then existed in town, hers being the only fatal case that year; an old and decrepit drunkard lay out all one stormy night and was found dead next morning; a syphilitic strumpet found dead in her room, body decomposed, was last seen after a furious fight with another woman in which she was badly used; a tramp, strictly non-resident, riding into town on the trucks under a passenger car fell under the wheels.

Between October 25, 1887, and January 24, 1888, a period of ninety days, no death occurred in Las Vegas, and then an old man, said to be broken by drink, poor and friendless, varied the agreeable monotony by dying. The preponderance of the newly come or non-resident element in this list is striking; also the small number of deaths from disease innocently acquired. It is perhaps only what might have been expected, that most of them occurred among obscure families in humble circumstances. When it is remembered that many of our families came here originally on account of the depressed health of one or more members, among whom, as not being very robust, deaths would be often expected if they lived at the East, I think this showing speaks remarkably strongly for the climate of Las Vegas.

That the death-rate is as low as this every year is not true, but it is probable that there are few if any places east of the great plains where it ever falls as low.

In 1886 the rate was considerably higher, 12 per 1,000 for the permanent American population, the chief though not only factor in that year's increase being typhoid fever, a disease that occurs occasionally in New Mexico, but has no frequency here above other countries.

In the same year the Mexican death-rate was $20\frac{2}{3}$, one-third of the dead being under two years, and one-third were over fifty years. The Mexicans are fatalists, and take little or no care to avoid disease. I have seen a dozen or more adults sitting on the floor about the edge of a room in the centre of which lay, on the floor also, a man in the last hours of fatal small-pox, while in the next room, the door between being open, were six or eight unvaccinated children playing. Even the Mescolero Indians at the neighboring agency had more sense, and both sought vaccination and avoided exposure to small-pox.

The most noteworthy fact about our American death-rate in 1886 is that no person, as far as could be learned, died of any pulmonary affection.

The climate of Las Vegas is much of the mountain-type, though less so than that of Santa Fé, and, because it is farther from the main range, less so, I believe, than that of Colorado Springs. I do not see that our climate can claim to be equable, nor do I know any part of the United States (and I have been in many parts) that can claim equability, unless parts of Florida and Southern California, and these lose by their dampness more than they gain by evenness.

The air here is very dry throughout nine months of the year, and by its rarity is tonic and stimulating; it does not differ, in fact, from that of Colorado, which is so much better known at the East, except in being milder, as it is farther south. Eastern people, even intelligent physicians, seem to associate the word "Mexico" in our Territory's name with heat, and sometimes refer to our climate as hot and debilitating, while the fact is that our various altitudes and latitudes give us a great variety of climates as to temperature and atmospheric tenuity, but all are alike in dryness.

Those who have wintered in Las Vegas will not readily believe that the mean temperature for winter in this part of New Mexico is about that of New York Harbor, St. Louis, and Salt Lake City, while the fact that records for several years show the summer mean to be about that of Detroit and Chicago will scarcely be appreciated by those who have spent a summer here, for our summer appears vastly cooler than that of Chicago, and sunstrokes are entirely unknown. The thermometer in this town rarely reaches 90° F.; but once last summer for an hour in July.

The winters are much milder than the mean for New York would suggest, the air being dry, the sun bright, children playing in the open air on most days without wraps, and mechanics working in their shirt-sleeves. On the other hand, strangers wintering here are surprised to find the mercury falling to zero or below. The winter of 1885–86 was unusually severe all over the United States, and New Mexico felt it with the East and South, though it had not been so cold here for over twenty years. In that January there was one week in which the mercury was below zero each morning, the lowest being 16° below; in 1886–87 the lowest I observed, with a standard thermometer, was 9° below; and the same during the past winter, with but a single other day when it reached zero. When the altitude and moderate proximity to snow-clad ranges 12,000 feet above sea-level are considered, these temperatures do not seem extraordinary. They are isolated, and serve to throw in stronger light the many weeks of mild dry days that each winter offers. At lower altitudes all over the Territory warmer winter weather can be found, but, except the most debilitated cases of consumption, there is rarely any invalid here who needs to seek other climate than that of Las Vegas.

In this region, in a total annual rainfall of 20 inches, fifty per cent. falls in July and August, and only eight per cent., or about $1\frac{3}{4}$ inch, in winter—all as snow, which rarely lies more than a few days—while the larger part of the remaining percentage occurs in September, with a stray storm in April. The skies are habitually clear and the sunshine fine; about two hundred and eighty days each year are observed as clear and fair. August is the most cloudy month. In some observations made near here, covering about three hundred days in two consecutive years, taken at random, and embracing the cooler months, November to March inclusive, only 48 days were noted as cloudy, on no day did any rain fall, on 13 days there was snow, yielding $7\frac{1}{4}$ inches of water. Similar observations for the same months and years, at St. Louis, Mo., gave 171 cloudy days, rain on 45 days, snow on 19 days, with a total precipitation of 32 inches of water!

The only unpleasant feature of the New Mexico climate it shares with Colorado and other Rocky Mountain regions; I refer to the high winds. These are usually limited to the first four months of the year, and in some years are almost entirely absent, as, for instance, from May, 1884, to November, 1885. These winds are not cold, rarely occur when the mercury marks the freezing point of water, and are very dry. It is a rare thing to hear visiting invalids complain of the winds, their attention being favorably bent upon the accompanying sunshine and dryness, and the contrast with the rain, slowly melting snow, and penetrating cold they have left at their eastern homes.

An outline of my professional duties during the December and January just past, may serve to show the nature of a physician's work in Las Vegas, and partly answer the frequent and embarrassing question, "What are your prevailing diseases?" Each title indicates the number of persons attended. Lithæmia, 2; chronic cystitis (Mex.), 1; phthisis (non-residents), 13; phthisis (resident), 1; pleurisy, 2 (both contracted at the East); anæmia and constipation, 2; menstrual disorder, 2 (1 non-resident); boil, 1; contusion, 1; vaccinations, 8; sore throats, 8 (mostly in children during high winds late in December, mild pharyngitis; all very slight, and generally calling for but a single visit); bronchitis, 5, all of the mildest catarrhal type, and rarely calling for a second visit; operation about knee (Mex.), 1; precautionary prescriptions for a pregnant woman about to go a journey, 1; life insurance examinations, 2; rötheln, 1; eczema, 1; colic, 2; erysipelas, 1; felon, 1; venereal, 2; conjunctivitis, 1; lacerated wound, 1; chilblains, 1; examination of chest in a healthy man by request, 1; stone in bladder, 1; thoracic aneurism, 1; lesion of aortic valves and of brain, 1; hysteria, 1. Of these, the only cases other than those of phthisis exciting any degree of professional anxiety, as endangering life, were the four last named in this list, all being non-residents.

Having already referred to the rarity of pulmonary diseases, I will also state that, in eight years' residence in New Mexico, I have seen no cases of degeneration of the kidneys, as shown by albuminuria, dropsy, etc., except in scarlet fever, and I have seen no acute rheumatism. In other words, Bright's disease and acute articular rheumatism are practically unknown, and I should suppose this climate to be as valuable for cases of incipient renal disease as it is for early lung degeneration.

Pleurisy must be an exceedingly rare disease in this Territory, for I have seen but two cases of it, and both of these were brought from the Eastern States. I have never seen a case of catarrhal pneumonia. Bronchitis is usually very light, of a mild catarrhal type; I never saw a severe case. Asthma does not originate here, and cases visiting us secure prompt relief. Debilitated children brought here speedily improve, and incipient consumption disappears.

I recall but three cases of consumption developing among residents under my notice. One was a Mexican woman who had been everybody's temporary wife; one was a young and very delicate girl, I believe of bad family history, but a year or two here, who succumbed to acute phthisis induced by scanty food; and a woman from New York State, of a highly consumptive family, who came here twenty years ago, and developed phthisis, after a pneumonia, ten years ago, but she still leads a very active life and works hard. Two of these, it will be seen, brought the seeds of the malady with them.

It is a common remark among Americans who have lived here fifteen or twenty years, that they never heard of a case of consumption among the Mexicans; but closer professional scrutiny shows that very rarely a case does occur.

Our towns and ranches are full of people who have secured a suspension of the destructive processes in phthisical lungs, and are filling the ordinary duties of life. Such cases occasionally sustain a relapse, but it is wonderful to observe how quickly the fever is broken and the restorative processes reinstated by the aid of a little medical treatment.

It is generally useless to send to New Mexico cases of phthisis that are far advanced in lung destruction; Florida or San Diego will insure them a more certain euthanasia. Such cases find that the rare air increases their dyspnœa and general weakness and distress. But where the extent of lung involved is small, and the patients are still able to follow a rather active out-door life, this country will save them if anything can. Still, on the other hand, we occasionally see the disease arrested in cases where much lung space is involved, and the patient apparently hastening to death, but not enough of such to justify us in urging them to come, as we do the class with less disease.

It may be remarked that children's diseases are quite rare among Americans in these higher altitudes, and that the few deaths from cholera infantum mentioned above would be a very large number for any year in Las Vegas.

The substance of these notes was presented to the New Mexico Medical Society, at a recent meeting, and, at the request of the Society, have been elaborated and forwarded for publication.

Fashions for the Dead.—James Hodge continues to sell burying-crapes ready made; and his wife's niece dresses dead corpses at as cheap a rate as was formerly done by her aunt, having not only been educated by her, but perfected in Edinburgh, from whence she is lately arrived, with all the newest and best fashions for the dead. —*Glasgow paper.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, April 28, 1888.

THE SIGNIFICANCE OF HYDROCHLORIC ACID IN THE DIAGNOSIS OF GASTRIC DISORDERS.

OF late years great changes, we were about to say advances, have taken place in the methods employed in the diagnoses of diseases of the stomach. Much less importance, relatively, is attached to the results of palpation and percussion, and to the subjective symptoms of the patient, and more reliance is placed upon the chemical tests of the gastric secretions. Many clinicians have come to regard the presence or absence of free hydrochloric acid as a symptom of very great importance, especially in the diagnosis of carcinoma, yet it is by no means certain that this sign is as reliable as some would have us believe.

The Paris Academy of Medicine devoted the greater part of two meetings, those of January 17th and 24th, to the discussion of this subject. M. Germain Sée read a paper in which he described a new test for hydrochloric acid, recently proposed by Dr. Günzburg, of Frankfort. Two grams of phloroglucine and one gram of vanilline are dissolved in thirty grams of absolute alcohol, forming a solution of a brownish-yellow color. One drop of this solution, in the presence of a very minute quantity of a concentrated mineral acid, assumes a bright-red color and deposits beautiful red crystals, but no change takes place with the organic acids, such as lactic or acetic, or even with the chlorides mixed with these acids. No visible reaction occurs with dilute mineral acids, but, upon evaporating such a mixture in a porcelain dish, the last few drops assume the red color. In testing the gastric secretions, a few drops of the filtered liquid are mixed with an equal quantity of the solution of phloroglucine-vanilline, and evaporated carefully. A reddish residue, containing the characteristic crystals, is left in the dish. This test is sufficiently delicate to show the presence of hydrochloric acid even in the minute proportion of 1 part in 10,000. When the gastric fluid contains a quantity of albuminates or peptones the crystals are not formed, but the red color persists.

M. Sée then discussed the question of the diagnosis of gastric disorders based upon the presence in excess or the absence of free hydrochloric acid. In cancer the absence of this acid was regarded by many as pathognomonic, but though this was the almost invariable rule it was not without its exceptions. Carcinoma is not, however, the only affection in which the most careful tests fail to reveal the presence of hydrochloric acid. In the later stages of catarrhal gastritis, the speaker said, after atrophy of the glands and other interstitial changes have taken place, it becomes impossible to demonstrate the presence of this acid. In dyspepsia occurring in tuberculous and uræmic subjects there is also often a persistent absence of hydrochloric acid.

Hyperacidity of the gastric secretions, he stated, is of very frequent occurrence, an excess of hydrochloric acid having been found by Boas in 120 out of 200 cases of dyspepsia examined by him. The exact conditions in which this hyperacidity exists have not yet been determined, although it is known that it is present very frequently in gastric ulcer.

M. Dujardin-Beaumetz thought that too much importance had been attached to changes in the gastric secretion as a diagnostic sign in diseases of the stomach, especially by the German school. Ewald and others had been led to assert that the absence of free hydrochloric acid in the stomach was pathognomonic of cancer, but such an opinion could no longer be entertained, since it had been proven that the acid might be absent in a number of other affections. In many cases of dilatation and of dyspepsia occurring in tuberculosis and other cachectic conditions the most careful tests, frequently repeated, had failed to detect the presence of this acid at any time. And, on the other hand, free hydrochloric acid had been found constantly present, even up to death, in cases which were shown at the autopsy to be carcinoma. The speaker thought that the examination of the gastric secretions should always be made, when possible, and he believed that, taken in connection with the other symptoms, the results of such an examination might afford valuable evidence of the nature of the lesions present, but they should never be relied upon to the exclusion of other equally valuable diagnostic indications.

THE ACTION OF DRUGS AT A DISTANCE.

THE study of hypnotism and the conditions allied thereto has become so far advanced in France that all eyes have been turned in that direction to see what the possible outcome of the craze will be. Fortunately the phlegmatic German is also taking some interest in this subject, and whatever result he may reach it will certainly be exact, and free from all unnecessary enthusiasm.

One part of this latest fad is the action of drugs at a distance, and the zeal with which M. Luys has pursued this subject is worthy of that of a monomaniac.

In 1887 M. Luys, in repeating the experiments of MM. Burot and Bourru (of Rochefort) confirmed them. He then attempted to show that drugs placed at a distance, or in contact with subjects in a state of hypnotism, would provoke certain symptoms, and in particular emotional symptoms, varying with the drug used. In closing his communication on this subject he called attention to the consequences which could result from such experiments. They opened, in his opinion, a new way to therapeutics, and, from a medico-legal point of view, these experiments could be of interest as modifying or reversing the action of certain drugs, and causing death without leaving a trace. This statement produced such a profound impression that a commission was charged with the task of investigating this further. M. Dujardin-Beaumetz and four others constituted this commission, whose first duty was to fix the limits of its work and research. It let alone all questions of hypnotism except the one in question, and undertook the following programme :

In the first séance M. Luys was to reproduce his experiments as he usually did, and then in the remaining experiments he was to renew these experiments in an especial way, which the commission arranged. Then, in these experiments, to avoid error, it was important that neither the subject in use, the experimenter, nor the members of the commission should know what substance was used. The preparation of the substance was to be left to a stranger to the commission and experimenter, and a proper and reliable man, a pharmacist, was selected. He followed Luys' plan of using sealed glass tubes. He took the commission sixteen tubes, ten of which were closed, and, like those of M. Luys, contained a solution. One was exactly like the other, so that the sharpest examination could detect no difference. Six other tubes contained substances in powder, which was in a paper inside of the bottle, and, to hide the contents, each bottle was numbered so that at a glance its contents could be made known. An empty tube was also used.

M. Luys selected a subject which, in his opinion, was best fitted for this experiment, and placed her in a proper condition ; then one of the commission took any one of the tubes, without selecting it, and noted with great care the symptoms called forth by the tube. M. Luys claimed that he obtained with the same drugs essentially similar results. In order to make the test more complete, the commission decided that the numbers on the tubes should be changed. In the first séance M. Luys took a young girl and put her through the three different phases of hypnotism ; the lethargic, the cataleptic, and the somnambulistic stages. He then took the subject in the lethargic stage, in which there was the appearance of a neuro-muscular hyperexcitability, especially in certain regions, as in the anterior brachial region, where simply blowing on the skin caused contractions. In this period he used the drug, and by holding these sealed tubes containing drugs behind, at the side, or in front of the head, he produced certain well-marked symptoms characteristic of the drugs themselves when taken. There was a period of exaltation, a period of rest, and a period of decline, and this was repeated in the reverse order. In all his experiments the tubes bore labels. These tubes were presented to the one side and the other, to the organs of sense and those behind the neck. Among the drugs used were the sulphate of sparteine, essence of thyme, ipecac., haschisch, pilocarpine, etc. The commission then repeated the experiment, using their tubes and also the empty tube, and, after careful study, they came to the conclusion that the whole thing was destitute of scientific basis, although they believed that M. Luys had good intentions. The effect seemed to depend more on the caprice, fancy, and memory of the subject, than on the substance in the tube. The commission was decidedly of the opinion that the effect was in no way like the normal effect of those drugs, and that the result was in no way of interest to therapeutics. This decision by the Academy should have a quenching effect on this subject ; but anyone who has seen M. Luys work will feel certain that he will not so easily be convinced of his wrong. The search for proper subjects will be limited to a few of the weaker sex.

A NEW METHOD OF DISPOSING OF THE DEAD.

A STARTLING proposition comes from a Pittsburg chemist as to the disposal of the dead. It bears intrinsic evidence as coming from a man of an economical turn of mind, who is profoundly impressed with the doctrine of the conservation of energy. The prime idea is to pulverize the body with the aid of machinery. The bones are first to be broken into pieces of the size of an egg ; then into smaller fragments, and so on, and the mass thus produced is to be passed through a mincing machine. "At this stage," says the originator of the plan, "we have a homogeneous mixture of the entire body in the form of a pulpous mass of raw meat and raw bones." We do not desire to shock the sensibilities of our readers, but we give the facts just as they are.

This "cheese," as the cider-makers would call it, should be thoroughly dried by superheated steam and subjected to pressure—thus disinfecting and condensing it. It can then be used for fertilizing purposes.

A second plan proposed is by boiling in close vessels, with the removal of the fatty products. The remaining mass can then be heated as before.

But the third method is the most startling and original. The bodies are to be placed in gas-retorts and converted into illuminating gas, water, ammonia, tar, and animal charcoal. Subsequent distillation will yield aniline colors, carbolic acid, and ammonia sulphate. It may be suggested that a new antipyretic alkaloid is among the possibilities.

Such proposals excite only derision, and may be condemned by many as a jest on a solemn subject. Yet they show the tendency of the times to turn from the merely sentimental to the practical and sanitary view of the disposal of the dead. Cremation as now practised is on the gain. It may soon become adopted by the city instead of the present burial in the "Potter's Field," which is rapidly filling up. It is already used, with perfectly satisfactory results, in one of the medical colleges here to dispose of the refuse material from the dissecting room.

THE LESSON OF A LIFE.

THERE have been few physicians whose death has caused so wide-spread and sincere grief as has that of Dr. Agnew. This was due, we take it, largely not so much to his professional eminence as to the exceptional purity and elevation of his character. Dr. Agnew was a Christian gentleman in the best sense of the word ; devout without bigotry, sincere and earnest without pretence or intolerance. He impressed those whom he met as singularly free from pettiness of spirit, jealousy, or ignoble prejudices. Generous and liberal toward those with whom he disagreed, no personal attacks ever seemed to crown his anger or call out vindictiveness. He lived in a region quite above the smaller passions that consume so many.

His was the kind of spirit which we should be glad to see more widely diffused, not only in our profession, but everywhere. The liberality of mind, the wide and generous interest in everything that would help his fellow-man, were distinguishing traits in the character of the late Dr. Agnew. We can only hope that they will be remembered and imitated.

News of the Week.

A COMPLIMENTARY DINNER TO THE SURGEONS-GENERAL OF THE ARMY AND NAVY.—On Saturday evening last the Practitioners' Society of New York tendered a complimentary dinner to the Surgeons-General of the Army and Navy at the University Club, in this city.

The occasion was one which afforded opportunities for the cultivation of those professional and social relations which tend to the ultimate good of all concerned. Besides the members of the Society and the distinguished gentlemen in honor of whom the dinner was given, there were several invited guests, consisting of the members of the Medical Corps of the Army and Navy on duty in this city. The President of the Society, Dr. Shrady, welcomed the guests in the name of the Society and on behalf of the profession of this city.

Surgeon-General John Moore responded for the Army, giving an interesting and comprehensive survey of the past and present working capacities of the corps, and concluding with a touching tribute to the bravery and devotion to duty of the surgeon on the battle-field. Surgeon-General John M. Browne, of the Navy, followed with some telling personal experiences in the different grades of his medical service, and alluded in eloquent terms to many of his old comrades. He concluded by asking the members to suggest some means by which the vacancies in the Navy Medical Department might be more speedily filled. Both addresses were received with warm applause.

After a few humorous remarks by Mr. St. Clair McKelway, of Brooklyn, the remainder of the evening was spent in an informal and conversational manner, much to the enjoyment of all. Among those present were: Drs. Samuel Sexton, James B. Hunter, A. H. Smith, R. F. Weir, W. T. Bull, C. Cleveland, C. L. Dana, A. A. Smith, V. P. Gibney, F. P. Kinnicutt, J. W. Roosevelt, J. E. Pilcher, U.S.A., and the following gentlemen of the Navy: Drs. Delavan Bloodgood, N. L. Bates, J. R. Tryon, George Peck, and E. I. Bogert.

THE CHRISTIAN SCIENTIST'S THEORY OF CONSUMPTION.—A lady mind-curer, in a lecture before the Nineteenth Century Club, recently said: "Consumption—so far as I have been able to trace it—has its basis in homesickness—longing for the home-ties. It repeats itself through fear of and belief in it. *Fear always indicates a vacuum.* The correspondence between the form of disease and the thought is so well established that, tell me an individual's diseases and, in nine cases out of ten, I will approximate closely to his thought-experiences." In explaining why the "mind-cure" does not prevent poisoning by strychnia, she said: "We recognize the fact that no man stands alone. You are a part of me. Until your thought reaches a point at one with my thought I am bound by you. As long as you hold to the belief that strychnia is poison, how am I going to be strong enough to overcome it?" All this goes to show what arrant nonsense is talked when the mind-curer tries to theorize.

SIR MORELL MACKENZIE AND MR. HOVELL have brought an action for libel against the Cologne *Gazette* and the *Kreuz Zeitung* for publishing an account of an alleged incident in connection with the Emperor's illness on the 11th inst. These papers published sensational items of news stating that the Emperor was almost throttled owing to the clumsy treatment of Drs. Mackenzie and Hovell in placing the rectangular cannula in his throat, and that Dr. Mackenzie had to send for Dr. Bergmann, who was only just in time.

MOUNT SINAI HOSPITAL, NEW YORK.—A vacancy exists in the Department of Internal Diseases (out-door staff) of this hospital. Applications for the position can be forwarded to De Witt J. Seligman, Honorary Secretary.

OUR PHILADELPHIA BRETHREN are certainly losing their reputation for brotherly love, for even at the banquet recently tendered to Dr. D. Hayes Agnew there seems to have been some lack of harmony. One esteemed contemporary prints in full an ode to Professor D. Hayes Agnew, by Dr. Thomas Wistar. This we have read with pleasure, for it shows poetic feeling and much literary skill. Another contemporary, however, prints only a poem by Dr. Weir Mitchell, and quite ignores the ode, which we must candidly confess to be the better literary work of the two. Between the readings of the two poems, according to the *Medical Register*, a motion to adjourn was made; from which we infer that the banquet was conducted under parliamentary rules.

BAD MORTALITY-RATES AT MATERNITY HOSPITALS.—The City of London Lying-in Hospital has a mortality-rate of 22.1 per 1,000. Such a percentage in a lying-in hospital should always call for an investigation.

A CASE OF ANTHRAX.—A workman in a leather-establishment in this city has recently died of malignant œdema, or anthrax. He contracted the disease undoubtedly from handling hides. The patient was treated in Chambers Street Hospital, and the anthrax bacilli were found in the blood.

THE URETHRA A RIFLED PASSAGE.—Mr. W. W. Wagstaffe has found by experiment that the normal urethra is rifled somewhat after the manner of a gun-barrel. The spiral runs from left to right in about the upper three-fourths of its extent, but then usually becomes reversed. The twist is sufficient to turn a bougie half-way around, *i.e.*, about 180°. It is suggested that the spiral arrangement is to secure, as in the gun, greater precision in the direction of aim! Truly, modern science is constantly revealing fresh wonders of creation.

HAMMER-TOE is being the subject of much controversy by English surgeons. Some consider it due to badly fitting boots, others think heredity an important factor. All agree that it is easily cured by division of ligaments.

FAME.—Professor Martin, of Johns Hopkins University, is a widely known physiologist and author. Yet we find the following in a Philadelphia contemporary: "They have a Dr. H. N. Martin at Johns Hopkins University. Bet he can't prescribe equal to ours."

MORTALITY FROM LARYNGECTOMY.—Some days ago Herr Kayser, member of the Social Democratic section of the Reichstag, died immediately after a partial extirpation of the larynx for cancer, which was performed by Professor von Bergmann, our leading surgeon. A like result followed the last two operations of the same kind done by Dr. E. Hahn, who is well known in England for having operated on Mr. Montagu Williams. It is also said, but I cannot vouch for the truth of the statement, that all the eleven other patients on whom Professor von Bergmann has performed laryngectomy have died.—*Berlin Cor. Brit. Med. Journal.*

THE MEDICAL INVESTIGATOR is the title of a new journal devoted to medicine and temperance, edited by Dr. S. F. Smith, and published by him at Louisville, Ky. Dr. Smith will editorially affirm: "1. That alcohol is a poison. 2. That it is a morbific agent. 3. That inebriety is a disease. 4. That State and National governments should prohibit the retail liquor traffic as a sanitary measure." The editor states that he wants one hundred thousand subscribers, and we trust he will get them.

THE NURSING RECORD is the title of a new weekly journal published in London in the interest of nurses and nursing.

GOLD FOR ANÆMIA.—The blond races of Northern Europe, when suffering from anæmia, are helped more by the salts of gold than by those of iron, according to M. J. Roussel.

CONIUM IN RECTAL PAINS.—The succus conii, made up as an ointment, gives great relief in rectal neuralgias, pruritus, and painful fissures, etc., according to Dr. W. Whitle, in *The Practitioner.*

CANCER TREATED BY INOCULATION OF ERYSIPELAS.—Drs. Busch and Fehleisen some time ago deliberately exposed cancerous patients to erysipelas, in order to get a supposed curative action from the erysipelatous inflammation. They showed that a peculiar streptococcus was pathogenic of erysipelas. Recently Dr. Axel Holst, of Christiana, inoculated a patient suffering from mammary cancer with erysipelas-virus. The resulting inflammation checked the cancerous growth for a few months, but it is doubted if it much prolonged the life of the patient.

THE LATE DR. C. R. AGNEW.—At a meeting of the New York Academy of Medicine, held April 19, 1888, the following preamble and resolutions were unanimously adopted, and, as a further mark of respect to the memory of Dr. Agnew, the Academy thereupon adjourned:

The New York Academy of Medicine has been informed of the death, on Wednesday, April 18, 1888, of Dr. Cornelius Rea Agnew, who, both as an officer and a member of the Academy, has been most assiduous and successful in his efforts for its welfare.

The Academy hereby records its appreciation of his untiring zeal, of his eminent ability, of his executive capacity, and of his fidelity; of the largeness of his views for its development, of his generosity, both in his gifts and in personal labors for its good.

He was alert to make the best of its methods of work, as well as to improve their efficiency. He sought to develop its scientific discussions and proceedings by judicious classification of subjects; he was warmly interested in the enlargement of the library; he was exacting in attention to economy in the expenditure of its funds; he was deeply earnest in the plan for procuring a new building. In his loss the Academy has sustained a heavy blow, and the removal of his friendly and energetic personality is a great bereavement, while we shall miss his wise counsels, his discriminating judgment, his courtesy and vigor in debate, and his promptness in forwarding every scheme for the scientific and practical advantage of the Academy. We have lost a true friend and an efficient worker.

Beyond what he has done for the Academy we are proud of his achievements in what makes the medical profession an honor and a power for good. He founded two eye and ear hospitals and placed them on a successful basis.

He aided in the organization, and was, for many years, one of the managers of an asylum for the insane. He was active in many medical societies. While practising a specialty, his outlook and concern were for the whole profession.

He had no professional narrowness and his judgments were always inclined to be charitable to those who differed with him. His services as a patriot are part of the history of our country, he was zealous for the civic weal, and a leader in movements for reform. Sanitary and social improvements were among the causes to which he earnestly devoted himself. He took an active part in helping on education, both in its popular cultivation and in its higher and technical developments.

Probity, uprightness, unselfishness, and courage were typified in him, while his character was imbued and moved by deep religious conviction.

His life is to us a glory and a stimulus.

Resolved, That we respectfully tender to his family the assurances of our deep sympathy, and with the tribute of our affection our high admiration for the many noble qualities which were embodied in Dr. Agnew.

ALFRED L. LOOMIS, M.D.,
WILLIAM H. DRAPER, M.D.,
HENRY D. NOYES, M.D.,
Committee.

A. JACOBI, M.D., *President.*
A. M. JACOBUS, M.D., *Recording Secretary.*

At the Stated Meeting of the Medical Society of the County of New York, held April 23, 1888, the death of Dr. C. R. Agnew having been announced by the President, on motion the regular business of the meeting was set aside until suitable action should be taken. Eulogistic remarks upon the deceased member were then made by Dr. D. B. St. John Roosa, who also offered the following resolutions:

Resolved, That the Medical Society of the County of New York, in the death of C. R. Agnew, M.D., LL.D., mourns the loss of one of its most distinguished members, who had by his professional achievements brought honor to his native city and country in every land where medical and surgical science are cultivated.

Resolved, That we bear our testimony to the justness and integrity of a life devoted to his fellows, and to the qualities which made him under the most trying circumstances that occur in the history of a medical organization one of our most trusted and wise counsellors.

Resolved, That the memory of his professional career will ever be to us an incentive in our endeavor to elevate and maintain the high standard of professional life and character, and that we mourn his loss as that of one of the leaders in uprightness and progress of medical affairs.

The resolutions were adopted unanimously.

At a meeting of the Board of Directors of the Manhattan Eye and Ear Hospital, held on April 19, 1888, the following resolutions were adopted and ordered to be placed upon the minutes of the board:

Resolved, That the death of Cornelius Rea Agnew, M.D., the Secretary of this board, a surgeon to this hospital, and one of its founders, is deplored by us as a great calamity to this charity, one that deprives us of a man possessed of remarkable medical and surgical knowledge and skill, combined with a rare kindliness of spirit and devotion to duty.

Resolved, That we mourn the loss of one distinguished in many arenas for executive ability and wisdom, which were here especially called into action in the successful establishment and maintenance of our hospital.

Resolved, That we shall ever cherish the memory of Doctor Agnew, as an incentive to the performance of our duties in the care of this institution, so largely a monument to his Christian philanthropy and professional achievements.

John Sinclair, M.D., *President.*
D. B. St. John Roosa, M.D., *Secretary pro tem.*

At a special meeting of the junior members of the medical staff of the Manhattan Eye and Ear Hospital, held on Friday, April 20, 1888, the following resolutions were adopted:

Whereas, It has pleased an all-wise Providence to remove from our midst, and the scene of his earthly labors, our friend and colleague Dr. Cornelius Rea Agnew;

Resolved, That each member of the junior staff of the Hospital feels the sad bereavement as a personal loss.

Resolved, That it may be safely said he was to each and every member, on all occasions, as an elder brother, as well as a counsellor and guide. His suavity of manner, and his kindly and lovable disposition, endeared him to each of his colleagues, as well as to all who were fortunate enough to be brought in contact with him.

Resolved, That his was a high type of manhood, true and noble in its every expression, and brimful of the warmest and tenderest sympathies for his poor and suffering fellow-man. He was a man of prodigious industry, and always on the alert to do. This Hospital is an outcome of that industry, and was called into existence largely by his indomitable pluck and energy. It will remain a lasting monument to him, the last but not the least of his life-work.

Resolved, That we tender to his wife and children our deepest and most heartfelt sympathies in this time of general sorrow, expressing at the same time the hope that He who "tempers the wind to the shorn lamb" may mitigate, to some extent at least, the poignancy of their grief.

Resolved, That a copy of these resolutions be engrossed and presented to his family.

George F. Carey, M.D.,
Charles G. Johnston, M.D.,
J. Oscroft Tansley, M.D.,
Committee.

Obituary.

EDWARD GREELY LORING, M.D.,

NEW YORK.

Dr. Edward G. Loring, the distinguished ophthalmologist of this city, died suddenly, April 23d. The deceased left his home on the afternoon of Monday, April 23d, in apparently the best of health, after telling Mrs. Loring that he was going to look at his pleasure-boat, which was moored in the East River somewhere in the neighborhood of Seventy-fourth Street. At six o'clock a policeman belonging to the Twenty-fifth Precinct noticed a gentleman fall on the sidewalk at the corner of Seventy-fourth Street and Park Avenue. The officer rushed to the assistance of the prostrate man, but he saw at once that life was extinct. The body was conveyed in an ambulance to the Sixty-seventh Street Station-house, and later in the evening, after having been identified as that of Dr. Loring, it was removed to the Madison Avenue residence.

For a day or two he had complained of a slight pain in the chest, but neither he nor his friends had attached any significance to it. On the day of his death, however, he was feeling perfectly well, and told his wife that he should be back to dinner soon after six o'clock. He was evidently hurrying home when he fell dead. Mrs. Loring grew anxious as the time passed and her husband did not return, and when a policeman from the station-house, who was sent to inform her of Dr. Loring's sudden death, reached the house, she was standing at the window watching for his coming. She was nearly prostrated by the shock of the bad news.

Dr. Edward Greely Loring was born in Boston in 1837. He was a son of Judge Edward Greely Loring, of the Court of Claims. At an early age he was sent abroad, and studied medicine in Italy, from whence he returned to the United States, and graduated in 1864 from the Harvard Medical School. Dr. Loring then started to practise medicine in Baltimore, where he remained for only one year, subsequently coming to New York, where he became a partner of the late Dr. Agnew. This association lasted six years. Subsequently to this he established an independent practice, which he actively and lucratively maintained up to his death. He had no professorship and had obtained his position and fame simply by private and personal work, and he had been spoken of as a fit successor of Dr. Agnew at the College of Physicians and Surgeons. He was one of the founders of the Manhattan Eye and Ear Hospital, and for many years was ophthalmic surgeon to the New York Eye and Ear Infirmary.

Dr. Loring was a profound scholar in his specialty, and was an authority even among his peers concerning the more abstruse and problematical questions connected with optics. His contributions to ophthalmology were of singular value, and it is a matter of sad regret that his intention of embodying the results of his life-study is so summarily frustrated, after the appearance last year of the first volume of his treatise on ophthalmoscopy.

Dr. Loring was a modest, studious, and untiring worker, was retired in his manners, earnest in his friendship, and was loved and respected by his many admirers and friends.

He was a member of the New York County Medical Society, as also of the Academy of Medicine, the New York Ophthalmic Society, the American Ophthalmic Society, and the Practitioners' Society of New York.

Dr. Loring married twice, his first wife being Miss Jarvis, of Florence, Italy. His widow's maiden name was Miss Swift, a niece of the late Judge Rapallo.

A Cure for Red Noses is given by a correspondent of the *British Medical Journal*, who was himself a sufferer. It consists in free scarification, at first twice a week, then less often.

Society Reports.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, April 23, 1888.

Dr. Laurence Johnson, President, in the Chair.

The death of Dr. C. R. Agnew was announced and suitable resolutions offered (*vide* p. 474).

Dr. William C. Jarvis then read a paper on

THE INDICATIONS FOR THE SURGICAL TREATMENT OF THE DEFLECTED NASAL SEPTUM, WITH AN ANALYSIS OF ONE HUNDRED CASES.

There were, he said, definite symptoms and pathological complications which were easily recognized and explained as being more or less continuously associated with this disease, and which afforded excellent guides for its successful treatment.

He excluded from his one hundred cases those which occurred in public practice, and certain ones in private practice as of doubtful value, because of the omission of certain details.

Of the 100 cases of deflected nasal septum, 30 were deflected to the right and were cartilaginous in character; 40 purely cartilaginous deflections were to the left; 8 were bilateral deflections; 12 were osseo-cartilaginous deflected to the right; 5 to the left; only 3 were purely osseous deflections, 2 of which were bilateral.

Regarding the principal indications for surgical treatment, the first was nasal stenosis. This it was that usually brought the patient to the doctor for treatment. There was complete stenosis of the right nostril in 29 cases; of the left nostril in 20 cases; in 18 there was incomplete stenosis of the right nostril; of the left, in 14. Thus 81 of the cases had stenosis.

Among the most important complications which called for operation was turbinated hypertrophy. In 24 of the cases there was hypertrophy of the deflected septum thrown to the right; 8 of these cases required especial operation for removal of redundant tissue; in 20 deflected to the left, 4 required special operative procedure for removal of redundant tissue, the snare being employed for that purpose. Of posterior hypertrophies there were 6 occupying the right nostril, 2 of which demanded operative interference; 8 occupied the left nostril, 4 of which required an operation for their removal. He did not include slight redundancies which were seen in every case of deflected septum.

Of the 100 cases, in 29 there were marked ear symptoms. Eye complications were marked in 11 cases. There was well-marked catarrhal headache in 15; hay fever in 8; bronchitis in 7; polypi in 4. In 94 there was hypertrophic rhinitis; atrophic rhinitis in 2; fetid atrophic rhinitis in 4.

Nasal stenosis might be absolute or variable in character. When variable and causing snoring, it might reduce the health of the patient by causing him frequently to awake, and by causing irritation and inflammation of the lower air-passages.

Regarding the possibility of making errors in diagnosis, Dr. Jarvis expressed the opinion that in many cases the turbinated bones had been removed when the patient was suffering only from temporary congestion not associated with true stenosis. An erroneous diagnosis could be avoided by comparative observation, the use of cocaine, the use of the rhinometer, and the lapse of time.

In a large percentage of the cases the deflection acted like a dam, causing the secretions to accumulate within the nasal cavities. Here an operation should be made to restore the nasal gutter.

Cases in which an operation was not called for were as follows: Instances of extra-nasal deflection, occupying the vestibule, and not the cavity, of the nostril proper; cases in which the deviation of the septum was so far forward that the projecting cartilage only just met the anterior border of the turbinated tissues, the turbinated tissues having room to rise and fall without striking the septum; cases of deflected, non-obstructive septa; non-obstructive deviations in the nostril exhibiting a pale or normal hue of the pituitary membrane; cases of slight localized, non-obstructive bending of the vomer placed above the nasal gutter in the most spacious portion of the nostril; cases of deflected, non-obstructive septa having smooth and regular conformations and a gradual lateral incline.

In conclusion he said he was mindful of the fact that his cases did not include all the conditions growing out of deflection of the septum demanding an operation. He could not, on this occasion, discuss methods of operating and general treatment.

The paper was discussed by Drs. Bucklin, Rice, Phillips, Tansley, and Robinson.

Dr. Bucklin referred to a question once raised by Dr. Jacobi, as to how much space was required to permit of free breathing through the nostril, and said there should be sufficient room for free play of the mucous membrane covering the turbinated bones. This varied with changes of temperature, and in different individuals, and with the state of health. He thought it was more detrimental to the patient to be making efforts at breathing through nostrils which were alternately open and obstructed, than to have complete nasal stenosis. A young man had night-sweats, and active symptoms of phthisis; removal of nasal obstruction was followed by a gain of one pound in flesh weekly for several weeks.

Dr. Tansley said that while many cases of deflected septum might be accompanied by ear trouble, there were hundreds who had ear trouble who had no nasal stenosis. During the year he had seen but about five bent septa among his cases of aural difficulty. A number of patients had come to him with acute aural trouble following an operation upon the nose.

Dr. Jarvis advised the dry and open method of treating the wound after an operation on the nose. The wound healed more kindly, and there was less likely to be aural complication.

Dr. Charles H. Avery, Assistant Secretary, was elected Secretary to fill the unexpired term of Dr. Carpenter, deceased.

Thyroidic Leucocythæmia.—M. Hayem has related the case of a woman, aged sixty-two, in good health until the present illness began (*The Lancet*). Fourteen years ago, after her last confinement, a swelling of the right lobe of the thyroid gland was observed, which, however, remained stationary till last October, when it began rapidly to augment, until it became voluminous, displacing the œsophagus and trachea to the left, and causing difficulty in swallowing and attacks of impending suffocation. The carotid artery lay in front of the tumor, whose consistence was hard, and did not present a murmur. The cachectic aspect led to the blood-corpuscles being counted, and the discovery was made that, besides chronic anæmia, there existed a considerable augmentation—70,000 per cubic millimetre—of white blood-corpuscles. The liver was not enlarged, neither was the spleen nor any of the lymphatic glands. M. Hayem makes the inquiry whether this increase in the number of white blood-corpuscles should justify the employment of the term "thyroidic leucocythæmia." A certain degree of leucocytosis usually accompanies the growth of some malignant tumors, no matter what their situation, and the same kind of increase in white blood-corpuscles is observed in phthisis, empyema, and other inflammatory diseases, irrespectively of site; but the degree of leucocytosis in Hayem's case is much above the level usually found in such cases of leucocytosis.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 14, 1888.

W. P. Northrup, M.D., President, in the Chair.

Dr. Frank Ferguson presented a specimen of

ANEURISM OF THE ARCH OF THE AORTA,

which had ruptured through the pulmonary artery into the right ventricle. The person from whom the specimen was taken was past middle life, and had died soon after admission to St. Luke's Hospital. The only history obtainable was that of the patient having been troubled with shortness of breath for some time before his admission to the hospital. A peculiarity of the case was that one of the cusps of the pulmonary valve was found to be glued tightly to the wall of the pulmonary artery for a distance of about an inch.

Dr. Ferguson also showed an immense

COLLOID CARCINOMA OF THE PERITONEUM,

removed from the body of a man fifty-one years of age, who had been admitted to the New York Hospital during the service of Dr. Peabody, on July 30, 1887. For the past four years he had had repeated attacks of muscular rheumatism. He had never had malaria, syphilis, nor symptoms of any renal trouble except swelling of the feet, from which he had suffered continuously for a year. Three years before admission his abdomen began to swell, and he had a burning pain about his waist. He also experienced difficulty in urination, the urine being passed at first in a small stream, but finally, the bladder becoming over-distended, incontinence ensued. During this time the patient lost flesh and strength. Examination of the abdomen showed the presence of a large, firm, unyielding mass, tender on pressure, and also of a number of smaller tumors, situated apparently just beneath the abdominal wall. There was no unusual prominence of the superficial abdominal veins. The abdomen measured 105 ctm. in circumference at the level of the lowest ribs.

EXPLORATORY LAPAROTOMY

was performed on August 6th. The parietal peritoneum being divided, the omental tumor was seen presenting, and fluid and colloid material issued from the wound. The patient died two days later.

Autopsy, seven hours after death. The abdomen was enormously distended, tense, and hard on palpation. The entire peritoneum, both visceral and parietal, was infiltrated with nodular tumors of a pale, translucent material. The coils of small intestine were bound together, partly by adhesions of inflammatory origin, and partly by the union of contiguous masses of tumor in the peritoneum. The omentum was infiltrated and greatly thickened, covering the small intestines like the back of a turtle. The omental tumor measured 25 ctm. from above downward, 45 ctm. from side to side, and was 7 ctm. thick. It weighed 4.1 kilograms. The spleen was enlarged, but appeared to be normal in structure. It was surrounded by a mass continuous with the omentum, measuring 6 ctm. in thickness. The wall of the stomach was infiltrated with tumor masses. Its mucous surface was pale aud slightly pigmented in places, but there were no ulcers or abrasions. The orifices of the stomach were normal. The small intestine and mesentery were so matted together that the former could not be opened. The mesentery, in places, was as much as 10 ctm. thick.

Microscopically, the tumor was found to consist of a fibrous stroma, containing large alveoli lined with epithelial cells undergoing colloidal degeneration. It was only in the more recent growths, however, that this structure could be made out, as the sections in general showed simply fibrous material without any definite arrangement.

Dr. Ferguson then presented a heart showing lesions of

ACUTE PERICARDITIS.

The specimen was removed from the body of a man aged eighteen years, who had been admitted to the New York Hospital on January 31, 1888. About two years ago he had had an attack of "rheumatic fever," since which time he had been in apparent good health, except that he was short of breath on exertion, and had had occasionally palpitation of the heart. Six days before admission he had another attack of rheumatism following exposure. Examination showed an enlarged superficial cardiac area to the left, the apex being in the mammary line in the sixth intercostal space. A systolic murmur, not transmitted, was heard at the apex. Over the aortic area was heard a double murmur, the diastolic being the louder of the two. This murmur was transmitted upward into the vessels of the neck. A week later no murmur was audible over the aortic area, but there was a loud bruit in the vessels of the neck. A loud blowing murmur also was now heard at the apex and transmitted toward the axilla. The patient died on February 14th.

Autopsy, seven hours after death. The heart appeared to be very large, it being uncovered by the lungs throughout almost its entire extent. It weighed 430 grams. The pericardium contained 500 c.c. of turbid serum and pus. The pericardium throughout was covered by recent lymph. The ventricles were dilated and the ventricular walls hypertrophied. The cusps of the aortic valve were thickened and retracted. There was

ATROPHY OF THE TENDINOUS CORDS

of the mitral valve, and one of them had ruptured through ulceration, presenting two club-shaped extremities. There was fat in the muscular tissue of the walls of both ventricles and in the fleshy columns.

The spleen was large, hard, and dark in color. The liver presented the appearances so common in this organ in cardiac disease. The kidneys were large and congested, and the cortices swollen and opaque.

Dr. Van Santvoord said that he had a heart which he had been intending to present to the Society for some time, in which there were lesions of the chordæ tendineæ very similar to these. During life a loud and musical murmur had been heard. The patient had died in Randall's Island hospital, but unfortunately no previous history had been obtainable. He attributed the musical character of the murmur to the evenness of the lesions.

The President referred to the heart presented at the last meeting by Dr. Biggs, in which a systolic musical murmur, heard at the apex, was produced by a chorda tendinea running through the ventricle.

Dr. Ira Van Gieson presented some microscopical specimens illustrating

FAT-NECROSIS IN THE PANCREAS.

The specimens were taken from a woman aged eighty. In the superior border of the pancreas, about midway between the head and tail, was a soft, yellowish-white nodule, about five mm. in diameter, having a degenerated pasty centre. In the tail of the organ was a similar superficial nodule the size of a pin's head. A portion of the soft centre of the larger nodule examined microscopically in the fresh condition, consisted of larger and smaller, rather opaque globules, some of which stained with osmic acid. In sections through the nodules, amorphous masses were seen in places partially filling up the fat-spaces; in other places the degenerated fat-cells had coalesced, forming irregularly shaped necrotic masses, which stained brightly with eosin. The lesion seemed to be produced by the coalescence of necrotic fat-cells. Some of the acini of the pancreas contained hyaline cast-like bodies surrounded by the compressed cells of the acinus. Fat-necrosis has been studied by Ponfick (*Virchow's Archiv*, 56, p. 541), Chiari (*Prag. Wochenschrift*, 1883, 30-31), and Balser (*Virchow's Archiv*, 90, p. 520). The latter author found the lesion present in the pancreas in five instances in twenty-five autopsies, and recorded a case in which the lesion occurred in the omental fat, and extensively in the pancreas, which was the seat of fatal hemorrhage. Balser is disposed to think in this case that the fat-necrosis, by producing the pancreatic hemorrhage, was the indirect cause of death.

Dr. Ferguson said that he had made it a practice to examine the pancreas at his autopsies for some time past, and he had come to the conclusion that fatty necrosis of this organ was nearly always present. The fat might be found in the cells, evenly distributed throughout the pancreas. This occurred usually, though not always, associated with parenchymatous degeneration of other organs. Then again, the pancreatic cells might be unaffected, while large masses of what seemed to be fat was found in the interior of the lobules, the pancreatic tissue being destroyed. These masses were of a brownish color, and were frequently of sufficient size to be seen by the unaided eye. More striking, however, on gross inspection was the accumulation of fat along the planes of fibrous tissue, which might be so great as to cause destruction of the lobules by pressure.

When the masses within the lobules were treated with a weak caustic alkali, they sometimes disappeared. At times the brownish amorphous material on the outside disappeared on the application of weak acids, and bodies having the appearance of fat remained. These were, however, only in part soluble in ether, and what remained seemed to be leucin. He did not think that fat necrosis of the pancreas was the cause of hemorrhage in the organ, as he had never seen any evidence of this in his autopsies. He did not know why the fat was generally brownish in color, unless it was a result of the action of the secretion of the gland.

Dr. Van Gieson said that he was not inclined to believe that there was any causal relation between fat-necrosis and hemorrhage. These areas of fat-necrosis were observed as small, soft, circumscribed masses, but were not at all the same as lipomatous growths. Fat-necrosis was not always confined to the pancreas, and the speaker believed that it had also been observed in the form of little nodules in the peritoneum.

The President asked whether there were any gross appearances in the pancreas which would lead one to suspect the existence of fat-necrosis.

Dr. Van Gieson replied that, when extensive, it could be recognized by the presence of the brownish nodules, but in many cases these nodules were microscopical in size.

The Society then went into executive session.

Long Life without Exercise.—The Rev. William Davies, of Hereford, died in 1790, aged one hundred and five years. During the last thirty-five years of his life he never used any other exercise than that of just slipping his feet, one before the other. from room to room. He never lifted his feet or went down stairs. His breakfast was hearty, consisting of hot rolls, well buttered, with a plentiful supply of tea or coffee. His dinner was substantial and varied. At supper he ate hot roast meat, and always drank moderately of wine. He had never had gout, stone, paralysis, or rheumatism, but was blind for a number of years.

Kings' Expenses.—Edward the First paid 3 shillings sterling on the day of the queen's churching, " in oblations to mass." To the brethren at the Hospital at Rhuddlan, 1 shilling and 1 penny; for the carriage of figs and raisins to Aberconway, 1 penny. Charles the Second, for grinding cocoa-nuts, £5 8 shillings. To Mr. Pears, for dissecting a body before the king, £5 1 shilling. To Mr. Knight, for bleeding the king, £10 10 shillings. For a receipt for chocolate, £227. For weighing the king, £1. To a bone-setter, for attending the Duchess of Monmouth, £10. For 3,685 ribbons distributed with the royal touch, to cure King's evil, £107.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN SURGERY.

Adjourned Meeting, held March 21, 1888.

Robert Abbe, M.D., in the Chair.

Dr. Charles A. Powers presented a case of

FRACTURE AT THE INNER END OF EACH CLAVICLE,

which occurred in a man aged twenty, who presented himself at the Chambers Street Hospital March 3d, with a history of having slipped on a car track about half an hour previously, falling on the left shoulder. He was found to have a fracture of the left collar-bone just within the junction of the inner third with the outer two-thirds. The inner fragment was markedly drawn up and directed slightly forward, the outer fragment being displaced downward and the shoulder dropping in.

Some eight weeks previously the patient had sustained a fracture of the opposite clavicle one inch from the sterno-clavicular articulation, the inner end of the outer fragment being displaced backward to a very marked degree, causing considerable dyspnœa and dysphagia, as he had been told by the patient and the hospital surgeon who treated him at that time. At present there was union on the right side and the functions were excellent, but there was marked deformity, one being able to lay the thumb into a deep sulcus at the outer end of the inner fragment.

Dr. Powers called attention to the rarity of fracture at the inner third of the clavicle, and said that of four hundred and ninety-eight fractures of that bone treated at the Chambers Street Hospital during the past ten years, only fourteen, or less than three per cent., were located at the inner third. This was about the proportion given by Hamilton, who said that of one hundred and seven cases in only four was the fracture at the inner third. He also spoke of the singularity of dysphagia in the right fracture, while the œsophagus curved to the left at the root of the neck. The patient said the dysphagia lasted about a week.

It was said that this fracture occurred almost invariably from direct violence, but, according to the patient's story, it was the result in both instances, in the case presented, of indirect violence.

The Chairman thought there would have been no objection, in the first accident, to replacing and wiring the fragments together. He agreed with Dr. Powers, that the injury was located too far outward, in both instances, to suggest separation of the epiphysis instead of fracture of the bone.

Dr. G. L. Huntington then read a paper on

THE OPERATIVE TREATMENT OF OLD INJURIES OF THE ELBOW-JOINT,

which will be published in The Medical Record.

Dr. F. W. Murray said he had seen a considerable number of cases of fracture at the elbow, but none in which he had done partial resection, as suggested by the author, although he would not hesitate to adopt the procedure in a suitable case.

Dr. Powers had hoped to show two or three cases of fracture of the neck of the radius accompanied by posterior displacement of the ulna, treated by him at the Chambers Street Hospital, in which the functional results were only fair, with failure to obtain complete extension and complete flexion.

Dr. F. W. Murray read a paper entitled

A RARE FORM OF ANEURISM OF THE INTERNAL PUDIC ARTERY,

which will be published in The Medical Record.

The Chairman said he had had the pleasure of assisting Dr. Murray with the operation. There was some doubt as to the origin of the profuse hemorrhage which took place, his feeling being that it arose from the sciatic artery, while Dr. Murray thought it was from the internal pudic. Dr. Murray's diagnosis was verified at the autopsy. The management of the case proved most satisfactory. He saw no other way of treating such a case with equal freedom from danger.

NEPHRO-LITHOTOMY.

Dr. Andrew J. McCosh read a paper with this title, in which he also gave the history of a successful case. Ten years ago it would have been considered foolhardy to have cut into a comparatively healthy kidney in order to remove a stone. The surgeon would have waited until the affected kidney had become destroyed by a suppurative process; or, if he had been forced to interfere, he would have removed the entire organ. Apart from the conservative advantage which nephro-lithotomy possessed, it had the additional claim of being much less dangerous than either nephrectomy or nephrotomy for calculous pyelitis.

His case was that of an unmarried female, aged twenty-eight, who had complained since childhood of pain in the right loin. During the past few years it had become much more severe, and during the past eighteen months she had been unable to do any work, on account of exacerbations caused by any exertion or sudden movement. The pain was of a gnawing and throbbing nature, felt principally in the right lumbar region, extending across the abdomen to the linea alba. There was marked tenderness on pressure toward the kidney. There had been no vesical disturbance. The attitude was peculiar; the right loin was bent inward, and the upper part of the body was projected forward and toward the right. Various diagnoses had been made by different physicians.

Dr. McCosh first saw the patient eighteen months ago, and felt confident there was stone in the kidney, although nothing was found in the urine to confirm the diagnosis until some time afterward, when pus and some blood-corpuscles were discovered. Nephro-lithotomy was performed January 9, 1888. A vertical incision was made along the outer edge of the erector spinæ muscle from the last rib to the crest of the ilium. Instead of the kidney being in the upper part of the wound, its superior extremity was found two and a half inches below the last rib, and his index-finger thrust down over the crest of the ilium barely reached its lower end. A loop of small intestine was seen, but the colon was not visible during the operation. A hard body, evidently a stone, was felt in the pelvis of the kidney. Finding it difficult to lift the kidney and bring its pelvis into view, he made a transverse incision, three inches long, running outward along the iliac crest. The kidney was held up and its pelvis exposed in the wound, and a rough mulberry calculus, weighing 120 grains, was extracted. The kidney was apparently healthy. A drainage-tube was fastened into the opening in the renal pelvis by a thin catgut suture passed through the perirenal fat. The upper half of the vertical and the anterior half of the transverse incision were closed, the rest of the wound was left open, and a drain was passed down alongside the kidney. His principal reason for not closing the wound was that the opening in the kidney was situated inside the pelvis, and he feared infiltration of urine within the iliac crest. The drainage-tube in the pelvis of the kidney was removed on the third day, and the other tube was removed two days later. No infiltration of urine took place, and the patient rapidly recovered. No urine escaped by the wound in the loin after the twelfth day. She was discharged cured at the end of the fourth week.

The chief difficulty in making a diagnosis in this case was the absence for so long a time of any renal signs. Regarding the misplacement of the right kidney in this case, he stated that Morris had collected 8,842 cases in which the location of the kidneys had been noted at autopsy, and in ten of these one or the other kidney was misplaced. Leaving out the horse-shoe kidney, the most common displacement was that in which the kidney was situated over the sacro-iliac synchondrosis, as in his own case. When found in this position the arteries arose, as a rule, from either the bifurcation of the aorta or common iliac. The left kidney was much more commonly displaced than the right.

Gross, in December, 1886, published a collection of thirty-four cases of nephro-lithotomy with three deaths. Since then Dr. McCosh had collected reports of eighteen cases with three deaths. Compare with this death-rate of 11.52 per cent. out of fifty-two cases, the death-rate of nephrotomy for calculous pyelitis, reckoned by Gross as being thirty-three per cent., and that of lumbar nephrectomy, given by the same writer as 36.93 per cent.

Gross had collected twenty-nine cases in which an exploratory incision had been made for suspected renal calculus, none, however, being found, and all the patients recovered. Dr. McCosh had collected five additional cases, with two deaths, but in the two fatal cases the autopsy revealed renal calculus, although none had been found at the operation.

Dr. Magnin said, with regard to the method of operating, that he had seen Terrier make his transperitoneal operation, consisting in cutting down along the outer border of the rectus muscle, going through the anterior and posterior layers of the peritoneum, and uniting the peritoneal surfaces. This operation did away with the necessity for a small incision, and with the possibility of infiltration of urine in the pelvis. He did not employ drainage.

Correspondence.

OUR PARIS LETTER.

(From our Own Correspondent.)

SIMULTANEOUS CONTRAST OF COLORS—ANTI-RABIC INOCULATIONS—SKIN-GRAFTING—ACTION OF ACIDS ON THE FUNCTION OF THE STOMACH.

Paris, April 6, 1888.

A tribunal court in Germany lately made a curious application of the laws of M. Chevreul, the venerable French centenarian and chemist, on the simultaneous contrast of colors. A blacksmith, striking on an anvil, let go his hammer, which struck his assistant near the left eye. The wounded man, after having received the necessary care, was pronounced absolutely cured by the medical man after a few days. The victim of this accident, however, persisted in complaining of severe pains in the eye struck by the hammer, and pretended to have lost the sight in that eye. Ophthalmologists were consulted, and they all unanimously declared that the allegation of the man was without foundation. In consequence of this decision, the master interested in the affair refused all indemnity, and a lawsuit was the result. All the old, known ruses employed to detect false myopes, false presbytes, and one eyed persons were adopted in this case, when one of the experts, recalling the principle of one of the laws of Chevreul, tried the following experiment: On a black hand-screen he traced a few words in green. On the nose of the pretended one-eyed man he placed a pair of spectacles, with a red glass for the right eye, a white glass for the left. Then handing the screen to the man, he asked him to read what he had written. Without the least distrust, the man read out the words. The expert then asked him, "Is it really with the right eye that you have read?" "Certainly," replied the man, "as I cannot see with the left eye." "Well!" exclaimed the expert, "this is not possible; you could not read with the right eye green characters on a black surface, because the red glass color, complementary of green, effaces them for this eye, and confounds them with the black of the screen. It is with the left eye alone and through the white glass that you have been able to read them. Therefore you are not blind of one eye." The tribunal considered the experiment as decisive, and rejected the suit of the complainant. The French papers have been full of this affair, as they consider it a conquest for them.

A soldier by the name of Alphonse Marinot, of Paris, aged twenty-three, was bitten on the right forearm on February 15th last at ten o'clock in the morning, by a mad dog which he was trying to kill. He immediately went to the hospital of Val-de-Grace, where the wound was cauterized, and at eleven o'clock he was taken to Pasteur's Institute, where he underwent the first inoculation. From February 15th to March 5th Marinot followed the Pasteur treatment with the greatest regularity, and on the day of his discharge from the hospital, one of the professors of Val-de-Grace, considering that the man was perfectly safe, actually delivered a lecture on the advantages of the anti-rabic inoculations. On Thursday evening, March 29th, Marinot was seized with pains in the right arm, and on the evening following he felt himself obliged to return to the hospital of Val-de-Grace, where symptoms of rabies declared themselves, and he died on Sunday, April 1st, at six in the morning. The man, who was aware of the gravity of his case, buoyed himself with the hope that, as scarcely an hour had elapsed between the time that he was bitten and the first application of the anti-rabic treatment, he would escape the effects of the dire disease.

Grafting has been practised not only with the human skin but with that of animals, and with some degree of success. The skin of frogs has also been tried. Dr. Rodard, in a communication to the Société de Biologie, spoke in praise of the grafting he had practised with the skin of the common domestic fowl, which was attended, in many cases, with results much more rapid than with the skin of the frog, particularly in a case of severe burning of nearly the whole of the scalp of eight months' standing, in a young child of two years. The reparative process of the parts burnt was *nil* during this period; suppuration during all that time was very abundant, which so much enfeebled the patient as to threaten his life. The grafting with the skin of the frog not having given rapid results, Dr. Rodard practised grafting with the skin of the fowl, and in two months he obtained a regeneration of the skin of seven centimetres in the antero-posterior direction of the skull, by eight centimetres in the transversal direction. The author remarks that the skin of the fowl is supple, fine, and vascular. It stretches out and adheres well on the surfaces without being resorbed, thus producing important epidermic islets, which, in developing and extending, form new tissues, supple and different from the ordinary tissues of cicatrices. The skin should be taken from under the wing of young fowls; it should not be deprived of cellular tissue and should not contain fat. The transparent fragments should measure from a half to one centimetre. Sutures are unnecessary, as the skin becomes easily adherent and does not get displaced. The wound should be aseptic and the dressing performed with scrupulous care; that with iodoformed gauze, with a layer of cotton wadding slightly compressed, appeared to the author to be the most suitable.

In an article published in the "Bulletin de Thérapeutique," on the action of acids on the functions of the stomach, Dr. Jawroski, after having experimented with acids in seventy subjects, found that the stomach bore acids much better than is generally believed. A little time after the administration of a solution of hydrochloric acid, one finds on microscopic examination fragments of cellular nuclei, which had not been remarked before. In cases of hypersecretion (of acid gastritis) it is found that acidulated drinks diminish the secretion of hydrochloric acid. The author concludes: 1. The secretion of pepsin depends on the secretion of hydrochloric acid. 2. The administration of acids with a therapeutic object furnishes in the first place the acid, and then provokes the secretion of pepsin. 3. The employment of acids is the best means for augmenting the secretion of pepsin. 4. Acids provoke an emigration of the leucocytes of the vessels of the mucous membrane of the stomach. This is why one finds, in the cases of hypersecretion of hydrochloric acid in an empty stomach, débris of cellular nuclei. 5. The acids contained in the stomach arrive in the duodenum, where they provoke anti-peristaltic contractions, and the food, mixed with bile, returns into the stomach. 6. These phenomena explain the biliary coloring of the contents of the stomach in the case of acid dyspepsia (hypersecretio acida continua), and how in this affection digestion is so slow. Water strongly charged with carbonic acid, introduced into an empty stomach, provokes a more abundant secretion of gastric juice than would a corresponding quantity of distilled water. A certain quantity of water charged with carbonic acid disappears much more quickly from the stomach than a corresponding quantity of distilled water.

At a recent meeting of the Société Médicale des Hôpitaux, Dr. Blachez exhibited some pathological specimens taken from an old woman, who was admitted into his ward with all the symptoms of advanced cachexia. At the autopsy, a voluminous cancer was found in the stomach, but which did not affect the orifices. The author remarked that this woman had never presented any phenomena of dyspepsia or of vomiting.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE PATHOLOGICAL SOCIETY—SOME UNUSUAL EXAMPLES OF MALIGNANT DISEASE OF THE LARYNX—RARE FORMS OF RENAL CYSTS—THE NATIONAL PENSION FUND FOR NURSES—NURSES AND THEIR EARNINGS—THE LATE DR. NICHOLAS PARKER.

London, April 10, 1888.

Some interesting specimens and cases were brought forward at the last meeting of the Pathological Society. Mr. W. S. Colman related three cases of diphtheria, on which subject a brief discussion took place. Dr. Norman Moore showed some specimens illustrating some anatomical relations of chronic joint-disease. Dr. W. B. Hadden brought forward a case of cyst of the heart, and Dr. G. N. Pitt referred to a specimen he was showing of a cardiac cyst. Dr. Semon and Mr. Shattock read notes of some cases of malignant disease of the larynx which presented some unusual features. One was a case which was only diagnosed during life by the general symptoms and a process of exclusion, as the patient would not permit any laryngoscopic examination. Nor would he submit to tracheotomy, which was advised. The patient was eighty-one years of age, and death shortly occurred. An intra-laryngeal growth was found occupying the greater part of the larynx below the cords. On microscopic examination it proved to be an alveolar sarcoma. No case of laryngeal sarcoma had been previously recorded in which the patient was so advanced in life. The second case was one of epithelioma, occupying the right half of the larynx, for which partial excision of the organ was practised, but death ensued on the third day from pneumonia. At the operation a small isolated growth was found on the lower half of the left vocal cord. Such a growth might be interpreted as evidence of direct cancerous inoculation. Professor Bergmann had lately shown to the Berlin Medical Society a case of carcinoma affecting two exactly opposite similar spots of the upper and lower lips. The third case was one in which carcinoma within the trachea was continuous with carcinoma of the thyroid. Death ensued from hæmoptysis. Post-mortem examination of the growth showed it to be a cylinder-celled carcinoma. The right recurrent laryngeal nerve was involved in the growth. Double pneumonia of the lower lobes was found.

Dr. H. W. G. Mackenzie showed a kidney containing cysts in which were calculi. The specimen was obtained from a woman, aged sixty-nine, who had died from cerebral hemorrhage. Cysts were present in both kidneys, but only those in the right kidney contained calculi. There was no calculus in the ureter, pelvis, or bladder, and no communication between the pelvis and the cysts. Dr. Mackenzie remarked that no such case had previously been brought before the society, but a somewhat similar specimen was referred to by Dr. Dickinson in his work on "Kidney Diseases." The presence of cysts without calculi in one kidney showed that the cysts were not due to the calculi. It was not probable that they were due to obstruction by small concretions. Assuming them to be due to obstruction of tubules, the obstruction must have been incomplete, or else the cysts must have communicated with non-obstructed tubules so as to permit some flow of urine through the cysts.

The National Pension Fund for Nurses bids fair to become a great success. Four city merchants have each contributed the munificent sum of £5,000, and the total amount thus raised ($100,000) has been deposited in Chancery as security for the annuitants and policy-holders. It will be invested in such securities as are authorized by the Court of Chancery, and the dividends will be paid to the bonus fund until the accumulated premiums amount to £40,000. The nucleus of a bonus fund has already been formed. Subscriptions and donations to the amount of £6,000 are already announced, among the donations being one of £5,000 from Mr. Junius Morgan, one of the four gentlemen who had already given a like amount to found the pension fund. Subscriptions will be sought from persons interested in nurses or concerned in their training. The number of subscribing members will doubtless be very large. Nurses in general are not, as a class, given to saving up anything against a rainy day, but many will doubtless enroll their names as contributing members to the fund when they learn the advantages offered. A nurse, aged twenty-five, who pays to the fund £2 10*s.* a year ($12) will insure a minimum pension of £15 a year, after sixty years of age, for the rest of her life. A further payment of 15*s.* a year will insure an allowance of 10*s.* a week during the time she may be permanently disabled by sickness or accident.

One great cause of the general improvidence of nurses is the uncertainty and irregularity of employment among those who work for themselves. Hence the eagerness of many to join some nursing institution. Many such are carried on by the proprietors as a business, and a very paying one too. For instance, I have been told of nurses for whom 42*s.* a week was paid by their patients, but who only received 25*s.* out of this, the remainder being retained by the institution. In some of the so-called "nursing sisterhoods" the pay actually received by the nurses is still less.

A death of some note is that of Dr. Nicholas Parker. He practised for some years as a physician in London, and was for some time on the staff of the London Hospital. As a teacher he was a great favorite. When at the zenith of his fame, however, he suddenly announced his intention of retiring, to the great disappointment of those who expected great things from him. Being possessed of an ample fortune he carried out his intention, and resided for some years chiefly in Paris. During the last quarter of a century, therefore, he but seldom entered medical circles, but devoted himself to social and musical pursuits.

THE QUESTION OF RESPONSIBILITY—AN INTERESTING LEGAL CASE.

To the Editor of The Medical Record.

Sir: On May 15th, while driving along the highway, a surgeon (R.) was hailed and asked to go into a house to see a woman who had injured her leg by falling from a table. On hearing that there was another medical man (S.) already with her, R. hesitated to accept the invitation, when the husband (F.) came out and requested R. to go in and help the doctor, who, by the way, had been summoned from his office by special messenger some little time before. R. then went into the house, and found S. examining the woman's leg. She lay on the floor, complaining of great pain. R. asked S. what he found to be the matter; S. replied that he did not know. She was a very stout lady, weighing about two hundred pounds. R. suggested that in order to make a careful examination, it would be best to put her under the influence of ether. S. agreed to this; wrote out an order for some, and, on its arrival, administered it. R. stood by until she was under the influence of the anæsthetic. They then examined the leg together, with care. All that they found was a ruptured ligamentum patellæ; no crepitus, no shortening, no displacement of the foot or leg; one leg was exactly the same as the other in length and position, except that the patella was drawn up by the extensor muscle of the thigh. S. told R. he had no splints, and R. lent him one of his. It was a long, straight splint, which extended from the head of the thigh-bone down to the foot, with a foot-piece attached. S. padded the splint well, and R. assisted him in applying it. It was first placed in position by several straps, about two inches wide, of rubber adhesive plaster encircling the limb and splint, and then a bandage was applied. The splint and the leg (almost up to the head of the tibia) were first enclosed in a bandage, and then another bandage was applied above the knee up to the head of the thigh, also enclosing both leg and splint. Then the cap of the knee was brought down and kept in position by straps of rubber adhesive plaster long enough to go around the limb and the splint, and half again. A bed was prepared in an adjoining room, and R. assisted S. and several others in lifting the patient into the bed. R. then told the people of the house that, as far as he (R.) was concerned in the case, he had nothing further to do, and that they might as well settle with him at once for his trouble in assisting S. That S. was the first (by thirty minutes) to be in attendance, and the case was his; for S. had been especially summoned to it, while he (R.) was merely a casual assistant. R. asked $10 as his fee. F. said that he had no money just then, but would pay the fee, which he subsequently did. R. left the house; S. remained there after R.'s departure; F. came out to the sidewalk with R., and asked him if he deemed S. a competent man. R. replied, "He is a legally qualified physician, and I should think he was all right." R. then got into his buggy and drove off. R. never saw the case again, nor was any request ever again made to him to see it, either by the family or by S. R. left S. in the house with his patient, whom S. visited again that night, and day after day for three months. He alone removed the splint that had been put on, and returned it to R.'s house nine days after the accident, *i.e.*, May 24th, with his compliments, adding that he was much obliged. It appears from the sworn evidence of S., subsequently, that when he removed this wooden splint he found the leg in perfect position, and was careful to keep it so while he applied a plaster-of-Paris splint on the leg. This last he left on for six weeks, *i.e.* till July 5th. But when he removed the plaster-of-Paris splint he says that he found there had been a fracture of the femur, and that the bones overlapped two inches and a half. Meanwhile R.'s fee of $10 was paid; $5 on June 5th, and the other moiety on October 1st. But on neither occasion was any reference made to any deformity; in fact, R. hears not a word about such a thing, either directly or indirectly, till fifteen months *after* the last payment, when, without any previous warning, legal notice is served on him, in January, of an action for malpractice, entered by F. against R. *alone;* who then and there receives his first intimation of the fact, alleged by S. to have been known to him (S.) in the July after the accident. But it should be mentioned, as it appeared in evidence later on, that, in the meantime, *i.e.* in December, seventeen months posterior to the accident, a third doctor (W.) had been called in by F., and this suit against R. then determined upon. A little more than a year elapsed, when, February last, the case came to trial. The judge gave a general instruction to the jury, who, to everyone's surprise, awarded the plaintiff $2,000 damages. Notice of appeal was promptly given by R.'s counsel. It was duly argued March 3d. The judge takes a week to deliberate, and then states—March 10th—that he had looked carefully into the case, and as no evidence had been adduced to show that R. was completely responsible, this alone would justify him in granting the appeal for a new trial.

COMMENT.—The case so fully reported above is one that will not only be anxiously watched in its future stages, if any, through the courts, but is, even now, full of suggestiveness to the profession. And whether further proceedings should give evidence of *bona fides* on the part of the plaintiff (F.), or should develop proofs of conspiracy, either for the purpose of shielding S. or of levying blackmail upon the practitioner deemed best able to pay, the medical community owe much to their confrère for his determination to fight the case to a finish, and thus to establish a precedent that may be instrumental in making such actions well-nigh impossible in the future.

At the very outset the question naturally arises, "When does legal responsibility in a case of emergency cease?" It would be well if medical men could agree on this point: and it is satisfactory to know that the Medico-legal Society of Chicago is already discussing the subject, on which a paper has been prepared by one of its prominent members. In this particular case there seems not to be room for questioning the conclusion that the responsibility of R. ceased with the termination of his first, last, and only visit. Indeed this would appear to be fully conceded by F., when he agreed, at the time, to pay R.'s fee, as assistant; which agreement he carried out without cavil, or hint of suspicion that it might be necessary for him thereafter to go behind this concession. And yet every circumstance upon which an action for damages could be based was known three months before the final payment of R.'s fee was made; nor, apparently, was any action thought of till another interval of over a year had passed by. Part II., Art. v., Sect. 4, of the "Code of Ethics of the American Medical Association" says: "In case of accident or sudden emergency, one or more physicians are often sent for by alarmed friends. Courtesy should assign the patient to the first of these that arrives, and he should select from those present such additional assistance as he may deem necessary." This is just what happened in the case. And S., not simply by accepting the services of R., as his assistant, but by his every subsequent act, showed clearly his sense of his own responsibility as *the* attending physician, and thereby absolved R. —who, by the way, had never visited any member of the household before—from all professional or legal responsibility in the matter, as far as it was in his power to do so. For instance, he removed the wooden splint in nine days. R. is not consulted as to this step; fortunately S. is able to swear that he found everything going on well at this stage. And even supposing, for the sake of argument, that there could have been *joint* responsibility up to this point, surely the fact that S. saw fit to change the treatment, which had been jointly agreed upon, without consulting R., in his absence, and without even acquainting him of the change, must relieve R. of his share, if any, of accountability.

We cannot do better than cite the learned judge's reasoning when he granted a new trial. When two persons are called to do a duty jointly, it is essential to have it well settled, in a case for damages, whether *one* was completely responsible, or *both*. If both made a mistake in their diagnosis, or failed to exercise due care, then their responsibility would be equal. But all the evidence points the other way. If the bone was broken when both had their opportunity, but did not make the discovery, it is hardly fair to throw the whole charge upon one, and that one he who had, by joint consent, stepped out, leaving the other his full swing. It does not appear that the defendant (R.) had, at the time when a re-examination of the injured limb was possible, a chance. The main idea of S. is to exculpate himself and throw responsibility upon R., which is curious, in view of the fact that S. alone removed the wooden splint, and substituted one of plaster-of-Paris. The judge proceeded to state that a new trial and fresh evidence were necessary to prove that, if R. had any responsibility at all, it must be jointly with S. At this point the plaintiff's attorney naively suggested that his honor might reduce the damages one-half; a tacit admission, it would seem, that he did not expect a second time to be fortunate enough to secure a snatch verdict. The judge promptly rejected the overture by saying: "The question has to come down to one of joint responsibility." A casual review of this case discloses the great risk to which even the most experienced men in the profession are constantly being exposed; indeed the more eminent their position, and therefore, as a rule, the more lucrative their practice, the greater their liability to loss at the hands of an ignorant jury. The valuable gratuitous services rendered by medical men to the needy and suffering poor are too well known, and in most cases appreciated, to be more than mentioned; and yet it is in this very stratum of society that danger lurks. Here is a graduate of a medical college whose standard is a high one, a practitioner of twenty-three years' standing, whose surgical skill has been tested in the naval and military service of his country, as well as by long and successful civic practice, called upon by men who cannot know anything of the ethics of professional life, and who could not understand them if they did, to sell his honor for $2,000, or defend it at the maximum of expense to himself, but the minimum to those who may be expecting to make a good thing out of it. We would venture to throw out these suggestions to medical societies as worthy of consideration, in view of the opportunity for blackmail which is opened by the admittedly low standard of examination for admission to a few of our colleges: 1. That they should discuss, and thoroughly, the degree of responsibility incurred by the expert called in at cases of emergency. 2. That they should endeavor to secure legal provision for the furnishing of security for costs in all suits demanding damages for alleged malpractice.

This last, in particular, would estop many an action brought by the impecunious against the well-to-do practitioner, in hopes of making the latter pay for injuries made permanent, either by the patient's own gross carelessness, arrant folly, wilful inattention, or perverse disregard of the attending physician's plainest instructions.

SUBSCRIBER.

SOME OF THE REASONS WHY QUARANTINE IS NOT A SUCCESS.

To THE EDITOR OF THE MEDICAL RECORD.

SIR: To all persons, and especially physicians, living at sea-ports that enjoy considerable commercial prosperity, and are accordingly exposed to all the contagious and infectious diseases that may exist in the ports with which they have communications, the agitation of the question of National Quarantine, which is but a forerunner of a larger question, International Quarantine, is very interesting and of vital importance. It is of importance alike to the physician, merchant, and statesman, and must be viewed from all sides. In this place I can only express my views, and call attention to certain facts as a physician.

All preach, whether they practise, that a thing that is worth doing at all is worth doing well; if there is any benefit in quarantine, it is worth doing it well and thoroughly, and the only way for it to be done thoroughly is by placing it under national control, where uniformity can be obtained and the expense borne by all. The quarantine system at New Orleans is of incalculable benefit to the city and State, but it also benefits all the Southern States in regard to yellow fever, and the entire country in regard to cholera; and it is but just that all assist in the expense. These facts have all been stated before, and need no comments.

I would like to call attention to one condition, which must be remedied before the full benefit of quarantine as a preventive measure can be of any great avail, *i.e.*, the unreliability and insufficiency of consular health reports.

The two principal purposes of a quarantine system should be to prevent the introduction of contagious or infectious diseases from a foreign port, and to make it possible for trade between two ports to be as uninterrupted as possible, consistent with the safety of each. This last is often overlooked by physicians when they meet to consider this question, and accounts for the fact that consular health reports have had but very little attention paid to them.

Undeniably, a port that is free from all infectious and contagious diseases should not be subjected to the same rigid quarantine restrictions that it is right to impose on an infected port. Every detention is prejudicial to both the port of departure and of entrance.

The only way, at present, in which it can be determined whether a port is infected or not, is by means of consular health reports. Most physicians who have had any experience in quarantine work will admit, I think, that they pay but little attention to such reports, as they are utterly unreliable; they are issued by men who know nothing of disease, and do not know when such diseases are in the port, and are liable to be affected by idle rumors. As an instance of their unreliability, I will state that I had in my possession three bills of health from the same port, issued within two days; one, from the United States consul, certifies that there is one case of small-pox in the hospital; one, from the English consul, is "clean," stating that there is no such disease in the port; and one from the secretary of the Board of Health, dated the same as the one issued by the English consul, states that there are seven cases in the hospital, three having been admitted that day. In another case the bill of health was "clean," but private instructions from a physician stated that small-pox was in the port; he had informed the consul to that effect, but he refused to accept his statement. In still another case the consul issued a "foul" bill of health, when the physician wrote me that he had examined the cases and that they were not small-pox.

The result of this uncertainty is, that at certain times of the year quarantine officers have to put under quarantine vessels from certain ports, when, in nine cases out of ten, if reliable information could be obtained, intercourse could be uninterrupted; and among the majority, quarantine laws and regulations are looked upon, and to a certain extent are, a nuisance instead of a benefit; due not to the system *per se*, but to the methods employed. This is but one of the faults that must be corrected before quarantine can be a success in all particulars.

Yours respectfully,
W. F. THORNTON, M.D.
BLUEFIELDS, M. R., NICARAGUA, C. A.

THE TREATMENT OF CANCER BY THE "SUCTION OF TOADS."—In a letter to *The Lancet*, Dr. W. Curran refers to a passage in Junius in which that writer says that "nothing keeps her [the then Princess of Wales] alive but the horrible suction of toads. Such an instance of divine vengeance would [he thinks] convert an Atheist." Professor Newton, of Cambridge, gives the following explanation of the passage: "During a certain period of last century live toads were applied as a supposed cure or as a relief to cancerous breasts. In the third volume of Pennant's 'Zoology,' page 389, edition of 1776, a letter is published, bearing date, 'Exon, August 29, 1768,' in which the process is described to Dr. Lyttleton, the then Bishop of Carlisle, by Mr. Patfield, a medical eye-witness. The toad was put into a linen bag, all but its head, and that was held to the sore, which the animal sucked greedily. A woman supposed to have been cured in this way was said to have had toads on her day and night for five weeks without intermission. Numerous other details are [he adds] mentioned in the letter, which is worth reading."

EARLY RISING is one of the characteristics of persons who live long lives. It is more important than total abstinence.

New Instruments.

AN EFFECTIVE NASAL SYRINGE.

By J. M. W. KITCHEN, M.D.,
NEW YORK.

IT is taken for granted that most practitioners have felt with the writer the need of an instrument suitable for cleansing the nasal and post-nasal cavities, that should be thoroughly effective, but not liable to get out of order, or be injurious in use, and yet be of moderate cost. The only effective instruments hitherto sold for this purpose, have been the costly complex atomizers, which are not easily managed or kept in order by the average patient. In use, they also have the disadvantage, in many cases, of over-stimulating the mucous membrane.

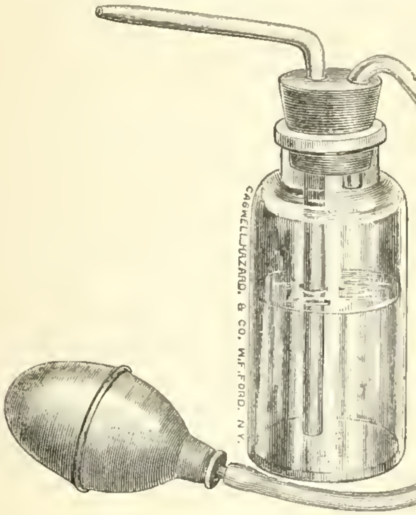

FIG 1.

Except in atrophic conditions, the process of cleansing should be attended with as little stimulation as possible. In most cases the object to be attained is simply to bring the fluids used in contact with the retained secretions, for the purpose of dissolving and diluting them. Then, if sufficient fluid is used, the secretions can be removed by the natural method of nose-blowing or gentle "hawking."

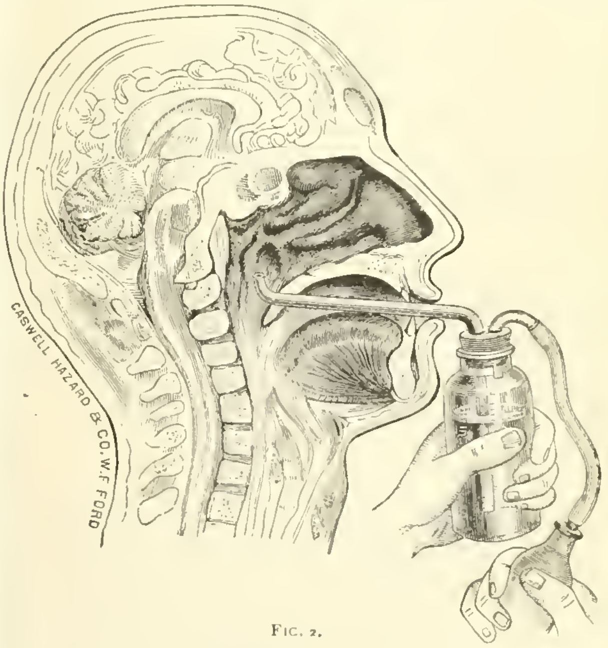

FIG. 2.

The nasal syringe shown in Fig. 1 will be found a most useful instrument for this purpose. It was suggested to the writer by, and is merely a modification of, the ordinary laboratory wash-bottle; but it is so exceedingly satisfactory in use that it is a wonder that it has not been long since adopted for this purpose.

It is inexpensive, cleanly, does not get out of order, is remarkably effective, and cannot do harm in use. As made by Mr. Ford, of Messrs. Caswell, Hazard & Co., it consists of a bottle of convenient shape for grasping, two rubber corks with glass antero- and post-nasal nozzles, and a single valveless rubber bulb and tube. The nozzles are of sufficiently heavy glass to avoid breakage, and are slightly drawn out at the orifices. The bottle can be partly filled by holding it horizontally with the nozzle in the cleansing fluid; repeated pressure on the bulb produces a partial vacuum in the bottle, and the fluid rushes in to take the place of the expelled air. When held perpendicularly, pressure on the bulb expels the fluid from the nozzle with a degree of force proportionate to the pressure exerted by the hand—in no case an excessive pressure.

A word as to the method of making post-nasal applications with this syringe. The syringe nozzle should be carried directly to, and held gently against, the posterior wall of the pharynx (see Fig. 2), and the lips closed tightly around the nozzle tube. Then, while the breath is drawn gently through the nose, at which time the soft palate is of course relaxed, the fluid can be readily propelled into the post-nasal space. This gentle method the writer has used for some years, and recommends it as being infinitely preferable to the forcible methods usually adopted.

In using this syringe, the patient should hold the head over a receptacle to catch any outflowing fluid, more of which is used in this syringe than in atomizers. If cleansing fluids were expensive, this generous use might be objectionable, but powdered borax and soda are cheap, and it is hardly to be supposed that 4 oz. complicated prescriptions will be recommended to patients with chronic catarrhal troubles.

Moderately alkaline water is all that is needed for this purpose. Deodorizers are not usually desirable. If any stench is present, it is a sign that the offending matter needs *removal*, not covering. Hence sufficient fluid should be used to effect this requirement.

168 West Fifty-eighth Street.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 21, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	6	5
Scarlet fever	189	30
Cerebro-spinal meningitis	4	6
Measles	66	7
Diphtheria	120	44
Small-pox	10	7
Yellow fever	0	0
Cholera	0	0

Are the Tertiary Products of Syphilis Infectious or not?—According to Zeissl, the question of the infectiousness and transmissibility of the products of tertiary syphilis can be summed up in the following conclusions: 1. The offspring of those having tertiary syphilis are, as a rule, healthy. 2. The secretion from broken-down primary sores and the products of the papular stage of syphilis brings forth a syphilitic reinfection in those affected with gummy nodes. 3. Inoculations with the secretion of gummy nodes have never succeeded. In opposition to these three arguments of those who do not believe in the infectiousness of tertiary syphilis, the following points can be raised: 1. By many authors it has been shown that tertiary syphilis is transmissible, even if in extremely rare cases. This probably depends upon the length of time since the existence of the primary lesion of the parent. On the other hand, it is not imperative that syphilitic parents should beget syphilitic children, as it is well known that even parents in the secondary stage have had healthy children. 2. Up to the present time there are but few cases of syphilitic reinfection in those with tertiary syphilis, and even these few are doubtful, since, in these cases, the course of the second infection was quite unusual. 3. Inoculation with the secretion of the products of tertiary syphilis are as yet only few in number, and negative results are never convincing. It is often seen that inoculation with the secretions of the primary and secondary lesions frequently fail. Besides the above, the following points favor the infectious nature of tertiary manifestations. Gummy nodes have a similar histological structure to that of the papule and primary lesion. In the same class of tumors belong, according to their microscopical appearance, the products of tuberculosis, lupus, lepra, and glanders. These are all granulomata, and the diseases are, as a whole, infectious, as is also shown by the demonstration of specific micro-organisms in them.—*Journal of Cutaneous and Venereal Diseases.*

A Good Showing for Hysterectomy for Fibroids.—Professor Carl Braun has published an account of thirty-eight cases of hysterectomy for fibroid, performed in the Vienna General Hospital, with only six deaths; that is to say, a mortality percentage of 15.5. The results which he had thus obtained were two per cent. behind those of Hegar, Kaltenbach, Bantock, and Keith, and about sixteen per cent. better than the results obtained by the Berlin gynecologists. Professor Braun is strongly in favor of the extra-peritoneal treatment of the stump, as both the cases in which it was treated intra-peritoneally ended fatally. According to him, the following are the indications for hysteromyomotomy: 1. Attacks of pain during menstruation, or in the intervals between the periods, which recur frequently, and render the patient unfit for work of any kind. 2. Functional disturbances from pressure on the neighboring organs, involving risk to life. 3. Severe metrorrhagia, in which a cure cannot be obtained by any less radical procedure. Instead of the aseptic sponges, he in most of his cases uses mull gauze which has been, for twenty-four hours before the operation, boiled in a one per cent. solution of sublimate, and which is afterward washed in clear water. Immediately before and during the operation the gauze is wrung out of a hot solution of thymol (1 in 1,000), and used for stopping the bleeding from the peritoneal surfaces after ligature of the blood-vessels. A solution of sublimate or carbolic acid is never brought into contact with the peritoneum. After the tumor has been brought forward the abdominal wound is temporarily closed by means of hooked forceps. The peritoneum of the abdominal wound is sutured above and below the stump, and the latter is fixed to the peritoneum of the abdominal wound by means of a mattress suture. Both the Fallopian tubes and the ovaries are separately ligatured with silk threads. Only after the closure of the abdominal wound by means of silk button sutures the tumor is removed, the stump being touched with the actual cautery and covered with benzoate of sodium. The extra-peritoneal treatment of the stump in cases of hysteromyomotomy is specially advantageous when the myomata are situated in the wall of the body and the fundus of the uterus, but less so in those myomata which are situated between the walls of the cervix, the lips of the os, and the broad ligaments.—*Wiener Medizinische Wochenschrift.*

The Mouth.—A mouth great and wide betokeneth wrath, boldness, and gluttony. A wide mouth, without measure, as though it were cut or stretched out, signifies a hard and cruel heart. A mouth that hath but little closing and a little opening signifieth a fearful, quiet, yet unfaithful man. A mouth that is very apparent and round, with thick lips, pointeth to uncleanness, folly, and cruelty. A big mouth, with little shutting and smiling eyes, signifieth a carnal man, a lover of songs and dances, and withal a great liar.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 18 NEW YORK, MAY 5, 1888 **Whole No. 913**

Original Articles.

ON THE RELATION OF THE DISEASES OF THE KIDNEY, ESPECIALLY THE BRIGHT'S DISEASES, TO THE DISEASES OF THE HEART.[1]

By J. M. DA COSTA, M.D., LL.D.,

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LECTURE I.

WHEN, by your kind thought, I was asked to deliver the Middleton Goldsmith lecture before your learned body, several subjects occurred to me which, from their great pathological interest, seemed worthy of the occasion, and which I believe the generous founder of these lectures would have approved of, could his cheery presence be here to animate us. From among these I choose, partly because it has been with me one alike of pathological and clinical investigation, the relation of diseases of the kidney, especially the Bright's diseases, to diseases of the heart. Much has been done of late years to examine this subject; but it is far from being clear or complete, and I must claim your indulgence if, in the endeavor to add a little to our knowledge of it, I allude to some facts which to you must be trite.

We all know that there is a close connection between diseases of the kidneys and diseases of the heart. But how intimate is this connection, and what determines it? Is there anything in an affection of the heart which would lead to a kidney affection? Or is the kidney disorder the starting-point of the undoubted combination observed? Again, are the lesions, when found together, both due to a common cause which determines them, and not the direct consequence of each other?

Allow me to detain you with a brief discussion of these weighty questions, before I call your attention to some of the finer points of pathological research which I shall attempt to demonstrate to you.

One of the first questions to solve is, Whether disease of the heart, in itself, leads to disease of the kidneys? The general impression is that it often, indeed generally, does. But on analyzing a large number of cases I find that this belief is incorrect. I will here give some of the results of my investigations into the matter, and will take the records of the Pennsylvania Hospital for a period of ten years, extending from the beginning of 1877 to the beginning of 1887, and similar records from the Clinical Department of the Jefferson Medical College for a period from June, 1875, to January 1, 1888, selecting merely the cases of which it was reasonably certain that the cardiac affection was the primary lesion.

At the Pennsylvania Hospital were noted of such cases of *valvular heart affections*, 76; at the Jefferson Medical College Clinic, of valvular heart affections, 51. Of these 127 cases, in all of which the urine was examined, for the most part repeatedly and at different times, and in many of which, especially in the cases at the Pennsylvania Hospital, autopsies are recorded, there were in 92, it is specifically stated, no evidence of any kidney affection, as shown by the absence of casts, of albumen, and, in a number of instances, by the notes of the post-mortem changes. The 76 valvular heart cases at the Pennsylvania Hospital furnished 28 cases in which some concurrent kidney affection was observed; the 51 cases at the Jefferson Medical College Clinic showed but 7. Of these 7, in 1 (Case III. of series), happening in a child with a mitral regurgitation, there had been scarlet fever three years, and an attack of rheumatism two years prior to the record of the case; there was hypertrophy with dilatation in connection with the valvular disease, and chronic parenchymatous nephritis. In another case (Case XIII.), that of a man fifty-two years of age, the mitral lesion, following rheumatism, was associated with urine one-fourth albuminous, and of character usual in parenchymatous nephritis. The dropsy began in the abdomen, the swelling there preceding that of the feet and legs for nearly a year. In the third case (Case XXV.), a presystolic mitral murmur was found with hypertrophy of moderate degree, but with considerable dilatation. The heart's action was irregular, the urine was full of albumen, and attacks of cardiac asthma and occasional uræmic convulsions occurred. In the fourth case (Case XX.), a married woman, twenty years of age, there was some abdominal dropsy and a puffy face. The valvular lesion consisted in aortic regurgitation with a slight mitral regurgitation; considerable hypertrophy of the heart existed. The pulse was 128. The urine was free from sugar, of specific gravity 1.018, and contained small amounts of albumen. The kidney was considered to be in a state of parenchymatous inflammation.

Of these 4 cases, in all of which, probably, the kidneys were in a state of chronic parenchymatous nephritis, the first ought really to be excluded, since the kidney affection much more likely had its origin in scarlet fever, leaving thus only 3 undoubted cases.

In 3 more of the series albumen is mentioned as occurring in very small quantities. In one (Case XVI.), it was present without tube casts; in another (Case XXXI.), where a mitral presystolic murmur as well as an adherent pericardium existed, a few hyaline tube casts were discerned in a feebly acid urine, free from bile and sugar, but containing a small amount of albumen and crystals of oxalate of lime. In a third, in which mitral regurgitation with considerable hypertrophy and dilatation was noted, albumen in small and varying amounts was detected, but nothing else. In all three instances it was due to congestion of the kidneys, and not an evidence of Bright's disease. We have then but 3 cases in 51 in which a kidney affection really existed.

I will now examine the 28 cases out of the 76 recorded at the Pennsylvania Hospital, in which the urine examinations indicated coexisting disorder of the kidneys. In 16 of the 28 the record speaks specifically of but small amounts or of traces of albumen and of the absence of casts. In one of these (Case I.), the autopsy tells of kidneys showing no marked alteration of structure except that, weighing respectively six and seven ounces, the capsules were thickened, and the right kidney contained two small cysts. The highest amount of albumen recorded in these 16 cases is one-sixth of the test-tube, sometimes one-tenth, and often the merest trace.

In 6 cases (Cases II., XVI., LV., LXIII., LXIX., LXXVI.), tube casts are described in addition to the albumen. They were hyaline or slightly granular casts. In 2 of these 6 cases we have autopsies; and this is a summary of the record. In one (Case LXIII.), the hypertrophied heart weighed thirty-six ounces, there was marked insufficiency from contraction of the aortic leaflets, slight thickening of the mitral; the kidneys were congested. cyanotic, otherwise normal. In the other (Case LXIX.), the heart weighed fifteen ounces; the mitral and aortic valves were both thickened. The kidneys were congested, but not altered in structure.

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[1] The Middleton Goldsmith Lectures. Delivered before the New York Pathological Society, April 18, 1888.

In 6 cases the clinical record is that of much more serious disease. But one of these (Case LXV.) we must at once exclude, as the albumen, the pus, the epithelium, which existed in connection with the mitral disease was clearly of vesical origin, and any renal implication was most doubtful. Five cases of marked renal affection, with highly albuminous urine, we still have to account for. Of these, in one (Case LXI.), there were also pus cells and bladder epithelium; but distinct renal casts were detected, and the case was looked upon as one of parenchymatous nephritis complicating mitral insufficiency. In two (Cases XLII. and LIV.), the same view was taken of the renal complications, associated in Case XLII. with mitral narrowing; in Case LIV. with both mitral and aortic insufficiency. But in this case, in which highly granular and hyaline casts abounded, and in which the albumen was in bulk two-thirds of the test-tube, the conclusion is vitiated by the patient having been a great drunkard, and all his tissues having been profoundly altered. Case XLVII. is very instructive on account of its clear history. It happened in a man who had rheumatism thirteen years prior to admission into the hospital, but in whom dropsy and puffiness of the face only appeared two months before. The urine contained albumen, granules, and fatty casts. The greatly enlarged heart weighed, with clots, thirty-six ounces; without clots, thirty-two ounces. The mitral orifice readily admitted four fingers, so did the tricuspid orifice; the aorta was fully twice as thick as normal, but the aortic valves were competent. The walls of the right auricle were double the natural thickness; the left ventricle, its cavity enlarged about one-half, had walls measuring near the base one inch. The kidneys were engorged, and appeared in the early stages of parenchymatous nephritis. The left kidney, weighing twenty-four ounces, contained a few cysts on the surface; its blood-vessels were prominent, but not thickened. The right kidney was about the same in size and structure.

In Case LXX. we also have an autopsy. The aortic and mitral leaflets were thickened and contracted. The kidneys were large, firm, harder than normal, and evidently diseased, but showed no adherent capsules or signs of contraction.

Summing up the whole inquiry, we find in 127 cases of valvular disease of the heart but 8 in which any true affection of the kidney existed—anything more than mere congestion. And among these 8, there is not one instance of the contracted or cirrhotic kidney. In truth, the kidney disorder that results from a valvular disease of the heart is simply a congested kidney of full size, redder, a little more glistening, and in elderly people, or where the congestion has been of long standing, firmer than normal, showing even slight increase of fibroid texture, and, perhaps, a rather more adherent capsule. Persistent engorgement of the renal veins gives the well-known livid, cyanotic appearance to the somewhat indurated organ. The epithelium of the tubes is swollen, and finally undergoes granular degeneration.

I have, by the analysis of the cases, endeavored to give you a proof how rarely valvular disease of the heart leads to chronic disease of the kidneys, other than congestion. When it does, the form of affection is that of a chronic congestion, which, in its turn, passes into a parenchymatous nephritis. The granular contracted kidney does not, I believe, result from the process of congestion just alluded to; though, as I have already said, occasionally, especially in elderly people, the kidneys from long-standing congestion may appear hard, and exhibit a slight amount of fibroid change. These statements seem at variance with those of one of the most eminent of your members, Dr. Delafield,[1] who, in 137 cases of death from heart disease, reports 27 large white kidneys, 29 atrophied kidneys, and 28 of chronic nephritis which could not be classed as either large white, or atrophied organs. Perhaps the apparent discrepancy is to be explained by the cases being heart disease of which it was not specifically known whether it preceded the renal affection or followed it.

During life it may be very difficult in individual cases to determine whether we have, as the result of the heart malady, simply a congestive condition of the kidneys, or real Bright's disease; in truth, as in both states dropsy is a prominent symptom, we obtain but little aid from the general symptoms, having to base our opinion largely on an accurate cardiac investigation. It may be thought that the urine would afford us much assistance; but this it does not always do. A good many of my observations, in purely cardiac cases, speak of urine of low specific gravity, scanty, containing traces of albumen, and here and there casts. The character of these casts is, for the most part, epithelial and not highly granular, though this, too, must not be taken as an absolute rule. On the whole, the most important diagnostic sign, with reference to the urine, is found in the slight and varying amounts of albumen and in the infrequency of the casts. Moreover, though it has been stated that the urine, in even these heart cases with renal complication which is not Bright's disease, may have a low specific gravity—in one of my cases it was only 1.006—as a rule, the specific gravity of the scanty urine is high, ranging from 1.020 to 1.024; in one instance of mitral disease my record speaks of 1.030. Sugar was examined for, but found only once (Case XXII. of the Jefferson Medical College series); here there was aortic regurgitation. Urates, my notes say, are often abundant; biliary coloring matter is not infrequent.

The character of the pulse, the absence of marked arterial tension, and the precise physical signs of the cardiac disease, give us more valuable diagnostic evidence, taken as a whole, than the state of the urine. We may also lay stress on the want of uræmic symptoms, and avail ourselves of the ophthalmoscope as a means of diagnosis. It has, in fact, happened to me several times to determine, by finding albuminuric retinitis, the true meaning of the renal change and the secondary nature of the valvular affection. In one of these instances, indeed, albumen was at several examinations absent, tube casts were but few, the specific gravity was, as a rule, low; but the whole progress of the case, the uræmic symptoms which arose, the absence of dropsy, showed, irrespective of the eye appearances, that the renal malady was the preponderating and original affection.

Before proceeding, it may not be without interest to point out that the most common form of valvular disease, associated with renal disorder of the kinds we have found to exist, is mitral narrowing. In 8 of the cases at the Pennsylvania Hospital it is noted only in 2 that the urine is free from albumen. In the cases in which a real structural affection, a parenchymatous nephritis, is developed, mitral stenosis has a preponderating influence. Next stands—for tricuspid disease is so rare that I have not data sufficient to judge by—mitral regurgitation. In uncomplicated aortic disease albumen and casts are very seldom detected in the urine; so seldom, that it is always a question whether a mitral complication is present when kidney engorgement is found.

Pure *hypertrophy* and pure *dilatation*, instances, therefore, of enlargement without valve affection, give us the same form of kidney derangement we have been studying. But with reference to hypertrophy, unless the cavities are at the same time decidedly stretched we do not find albuminous urine. Thus this existed in only 1 out of 10 cases noted at the Jefferson Clinic. In pure dilatation, urine albuminous in traces, indicative of congestion of the kidney, is more common. Still, it does not exist in the majority of cases; and I have known it not to appear until the last week of life, even though that life had been a burden for months, owing to the enormous dropsical swelling and the turgid lungs.

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[1] System of Medicine by American Authors, vol. iv.

We have been studying diseases of the heart and the kind of kidney affections they induce, selecting for analysis cases where, from the history, or the post-mortem results, or from both, the record of the antecedent malady was clear. We now turn to diseases of the kidney and their combination with diseases of the heart. It is well known that this combination is a frequent one. We find diseases of the kidney associated with valvular disease of the heart, with hypertrophy, with dilatation, and with pericardial affections. In studying the subject I mean to draw conclusions only from instances in which, from the history as well as from the concomitant features of the case, we may fairly judge that the kidneys were the first, or, at least, simultaneously, diseased.

Let us examine the valvular diseases of the heart as they are found associated with affections of the kidney. I find, looking at the records of the Pennsylvania Hospital for ten years, from the beginning of 1877 to the beginning of 1887, that in 101 cases of renal disease in which the state of the heart is particularly mentioned, 41 cases have a concurrent valvular heart affection, and in 60 there is no such lesion. Of the total 101 cases, 57 are acute Bright's disease and 44 chronic. Of the 41 renal cases with valvular lesion of the heart, 29 are Bright's cases of the chronic type, and 12 are of the acute type. Of the 29 cases of chronic Bright's disease with associated valvular heart lesion, it is noticed that 13 have a preceding history of rheumatism. In 5 there is a positive statement of no preceding rheumatic history. In the other 11 cases nothing is remarked about rheumatism.

Of the 12 acute cases with concurrent valvular lesion, 3 cases have the record that rheumatism did not precede. In the other 9 cases nothing is said with reference to a rheumatic history.

Out of 29 cases of chronic Bright's disease with valvular disease, the age of the youngest was thirty-three years; 14 of the 29 were beyond the age of forty-five years; the oldest was sixty-five years of age.

Of the 44 chronic renal cases, 8 were examples of the large, white kidney. The ages of these 8 were from forty-eight to sixty years. One case had double mitral and aortic murmurs, and was preceded by several attacks of acute rheumatism. Of the other 7, nothing is stated about either the heart or a rheumatic history.

Of the 57 acute renal cases, in none are mentioned signs of cardiac hypertrophy without a valvular affection, nor, indeed, do the notes show that even with this complication was the heart enlarged.

In the notes of the Clinic of the Jefferson Medical College, in 21 acute cases of Bright's disease, 20 of which had marked dropsical symptoms, the heart was found to be normal in all but 4, 2 of which had had a previous history of acute rheumatism. In these 4 cases there were evidences of valvular disease without hypertrophy.

From an analysis of these observations it becomes evident that the character of the kidney affection, in combination with the valvular lesion in the heart, is, in the vast majority of instances, the contracted kidney. Next stands acute Bright's disease, where, also, we find valvular affections, but here without the hypertrophy so common in the first group. In the acute, the strong influence rheumatism exerts is very evident; nor is that influence lost in the chronic, where an unusually large proportion are associated with rheumatism—too large a proportion for us to assume that it is a mere coincidence.

Let us inquire what the state of the valve lesion is. It is chiefly an affection of the mitral valve, consisting in a thickening of the mitral, with here and there rough deposits. Next in frequency, but with similar pathological changes, we observe a lesion of the aortic valves, occasioning either aortic narrowing or aortic regurgitation. A further cause of the valve affection is seen in some of these cases to be due, I believe, to the hypertrophy of the heart forming part of the Bright's disease preceding some general thickening of the valve, though even this may be wanting. A stretching of the valve subsequently takes place, but insufficient to close the orifice in the enlarging heart. Thus the hypertrophy and the dilated condition of the cavities give rise to the valvular imperfection, rather than this to the enlargement of the heart. It is in this way that I explain some very striking and interesting cases of hypertrophy occurring in advance of the valvular lesion, which I have observed, and in which the autopsies showed simply this imperfect closure of the orifice with a slightly thickened mitral valve, and at times with shortened and more rigid papillary muscles.

I have known, but far less often, a similar state at the aortic orifice. The aortic disease that existed was due to the stretching of the valve, which, having reached a certain point, could go no further. This stretching, with the simultaneous thickening, produced an opening through which the blood flowed back. It is thus that we may have a valvular disease following hypertrophy with dilatation, rather as the result of this process, than the hypertrophy and dilatation as the result of it. If you ask me whether this is a common cause of valvular lesion in Bright's disease, I say it is distinctly not; it is very much less common than marked valvular thickening with degenerative change.

You see, then, that the valvular disease of the heart which occurs in diseases of the kidney may be of varying origin; chronic thickening, deposits, degenerative changes, coexisting rheumatic alterations, which have led to these changes, and, lastly, mere hypertrophy and dilatation, which, associated, perhaps, with slight valve thickening, or with rigid papillary muscles, in its turn leads to valvular imperfection. Omitting the last-named group, the ordinary valvular affections in the Bright's diseases are the result of the altered tissue nutrition of the valves and the degenerative changes which take place there, as they take place in both the large and small vessels of the body. They are favored to a greater or less degree by the morbid products which, from want of proper elimination on the part of the kidneys, circulate in the blood. It may also be a question whether, in part at least, the altered nutrition of the valve may not be due to affection of their nervous supply. The changes, the degenerative ones certainly, are favored by age. Yet we cannot assume that age is the important factor it appears at first sight; for the acute Bright's affections show also, as has been proved, a strong tendency to the implication of the valvular apparatus, and the acute affections are much more common in the young, or, at least, in younger people, than are the chronic affections. Let me further notice, once more, a point brought out in the analysis of the cases submitted to you, namely, the frequent existence of rheumatism. This may well produce the valve injuries at the same time that it leads to other changes in the body; and thus be a general cause, both for the valvular affection and for the disease of the kidney and of other textures.

Before ceasing to examine the aspect of the subject, I will call your attention to some purely clinical facts which must make us receive with caution many of the statements of coexisting valvular disease of the heart and of Bright's disease. It is often recorded that there was present a soft murmur, variously heard; in some instances at the apex, in others at the right base. Now these murmurs in Bright's disease are not the result of valvular affection. They come from the state of the blood; or they are simply murmurs from temporary perversion of valve action—what we might call functional murmurs. They are inconstant, they are soft, and they are not signs of valvular disease of the heart. You will easily see that the error is all the more readily committed because we have hypertrophy, with or without dilatation, as such a common attendant upon Bright's malady. Thus, the mere hearing of a murmur in the heart is not a sign of valve affection in Bright's disease, not even when there is coexisting hypertrophy. We have to take into account its persistence, its character, generally rough, the state of the second sound of the heart, and the fact that it may be heard in the axilla, and posteriorly near the angle of the scapula, to make clear that it is of organic type, and not of the temporary character just referred to. Bearing this in mind, we shall have to reject a great many of the cases of so-called valvular disease of the heart, often loosely reported, in which the only evidence of the valvular affection is based upon a murmur, the particular character of which is not stated; or its softness or temporary nature is alluded to, but an erroneous conclusion is drawn from its existence.

The difficulty does not exist with reference to diastolic murmurs, which, in my experience, are always organic. But it is not lessened by a study of the pulse, which is in itself altered by the arterial lesions of the Bright's malady and by the thickened left ventricle; nor can we place, for similar reasons, much dependence on sphygmographic tracings.

I think, then, that the number of cases of valvular disease of the heart, existing as a complication of Bright's disease, is more often overstated than understated. Indeed, with the greatest care, unless the case has been for a long time under observation, it may be almost impossible to detect the true relation between the maladies. Much of the difficulty will be, however, solved, if we accustom ourselves to look upon them as not dependent upon each other, but due to a common cause, working almost simultaneously, or even at different periods—mischief in kidney, heart, and other textures. To the frequent starting of this common cause in rheumatism, attention has been called.

Let us pass to an examination of the *hypertrophy of the heart* which exists in combination with Bright's disease of the kidneys; I mean where the hypertrophy, with or without some dilatation, is a pure process, and not complicated with valvular disease. With reference to the acute cases of Bright's disease, I have already mentioned that we do not find hypertrophy. In the 22 cases of this character at the Jefferson Clinic, and in the 57 cases at the Pennsylvania Hospital—therefore in 79 cases—in most of which there was marked dropsy, in not one were the signs those of hypertrophy, not even in the instances with valvular lesion. A few doubtful exceptions are observed in the notes where strength of impulse is mentioned; but in these it is probable that the valvular affection which coexisted had its origin in a previous attack of rheumatism.

Thus, then, we may assume as positive that hypertrophy of the heart does not occur in acute Bright's disease. This is vastly different in the chronic form of the malady. Here, as is well known, hypertrophy is the rule. This subject is a matter of such common observation that it scarcely needs re-enforcement by figures; but I will quote, since they are based solely upon post-mortem records on a most extensive scale, the recent researches of Goodhart in "Guy's Hospital Reports" for 1886.

In the ten years from 1873 to 1882, inclusive, there were autopsies of 344 cases of granular kidney, and of 196 of chronic parenchymatous nephritis. The weight of the heart in the cases in which the kidneys were described as granular was in only 103 under twelve ounces, which was, therefore, within the limits of average weight. In 226 it was above this weight. Making allowance for all possible exceptions, as old age and wasting disease, and adding 36, which were hypertrophied hearts, though of average weight, there are 262 cases of marked hypertrophy in 329 undoubtedly granular kidneys.

After making all deductions for the cases of chronic parenchymatous nephritis, there were in 25 only a heart of average weight; in 119 there were hypertrophy of the left ventricle, a proportion of over one to four. In lardaceous disease of the kidney, hypertrophic changes in the heart and arteries were not observed, which agrees well with the general observation on the subject.

Dilatation of the heart becomes associated in a more or less marked degree with the growing muscle. It affects pre-eminently the left side of the heart. In Goodhart's paper, just quoted, I find 51 cases of notable dilatation of the left ventricle associated with hypertrophy in the 344 cases of granular kidney, and 33 cases in the 196 cases of chronic parenchymatous nephritis. It would therefore appear that the dilatation predominates in chronic parenchymatous nephritis, while pure hypertrophy does so in granular kidney.

In cases of hypertrophy, such as I have described, the heart attains very great size; the muscles are firm; for the most part it is a pure hypertrophy, only here and there there takes place some increase of the fibrous texture, as well as of the muscular. The muscular fibres are a little more opaque, and sometimes more granular than normal. As the disease advances, secondary degeneration, granular and fatty, may occur; but they do not happen unless there be decided coexisting disease of the vessels.

The state of the vessels in these instances of hypertrophy is very interesting to note. They show the same condition which has been found in the kidneys, in the brain, in the spinal marrow, in the lungs, and in many other parts of the body.

The inner coat is thickened, the muscular coat hypertrophied, the outer coat in a state of fibroid change, and the whole lumen of the vessel greatly lessened by these encroaching lesions. This lessening of the calibre is the same, as are the changes the same that we find in the renal vessels, and it may take place to a very great degree. My colleague at the Pennsylvania Hospital, Dr. Arthur V. Meigs, has recently shown me a section of a heart, obtained from a man under his care who died of granular kidney, with aortic valve disease, and left ventricle from three-fourths of an inch to an inch thick, exhibiting besides increased muscle beginning interstitial change. Microscopically examined, the first ascending branch of the left coronary artery was so much thickened, chiefly by the increase of the intima, that the lumen of the vessel was a mere chink, the thickening being irregular, about four times more on one side than the other.

You will readily see how such a state of things might lead to secondary degeneration by cutting off the blood supply from the hypertrophied muscle; and it is most likely that these degenerations which we have in the hypertrophied hearts of Bright's disease, which, however, I believe, are not the rule, come on as an after-result of the altered vascular supply.

As a few minutes ago I called your attention to some points of diagnosis with reference to valvular disease in Bright's affection, I may now call your attention to some points with reference to hypertrophy. It is not always easy to make this out clinically. We have to consider not only the size of the percussion dulness, but the extent of the impulse, as well as its force and position; the lowered apex-beat, which is often felt on a line with or beyond the nipple; and the heavy character of the first sound. Nor must we fail to take into account the character of the second sound, its accentuation at the base, which commonly happens in these hypertrophies in connection with renal change. Strong, extended impulse, displaced apex, altered sounds, and increased percussion dulness are the phenomena by which we judge; but not by any one of these alone, certainly not by the impulse, which may be temporarily increased by other causes than cardiac hypertrophy. On the whole, I lay most stress on the altered character of the sounds of the heart, both at the apex and the base, and the changed position of the impulse.

The enlargement of the heart which takes place in Bright's disease of the kidney may be made use of in prognosis. We are often greatly at a loss to form an opinion as to the probable length of the case and to the way in which it is progressing. Up to a certain point the occurrence of dropsy and of eye changes will assist us, as well as the evidences of marked arterial tension. But dropsy, while common in chronic parenchymatous nephritis, is very generally absent, or but slight, in cirrhotic kidney.

The urinary examination does not always afford us much light, for some of the worst cases are those in which—I allude especially to the cirrhotic kidney—the amount of albumen is small, or often temporarily absent, and in which the tube-casts are few; nor can we lay too much stress on the character of these casts. It is under these circumstances that I think the heart condition becomes an especially valuable means of prognosis. Where the heart is but slightly affected there will be reason to believe that the case will continue for some time, provided we do not observe signs of uræmic poisoning. Where, on the other hand, the hypertrophy is marked, there is ground for the fear that the disease is more general, is advancing, and that the case will not belong to those long cases of the affection which we sometimes encounter. Thus the study of the heart may be made use of as a means of estimating the amount of general change and the likelihood of shorter or longer life.

Let me reiterate the view that, according to my experience, the hypertrophy in the majority of instances is a pure hypertrophy, unconnected with degenerative changes. It is certainly so in the earlier stages of the affection. In instances of long-standing disease and in elderly people these degenerative changes may be found in the progress of the case; but my observations do not at all agree with those of Buhl, who has stated that fibrous and chronic interstitial myocarditis is very frequently found in connection with the hypertrophy. To its occasional occurrence I have already alluded.

Dilatation of the heart, unconnected with hypertrophy, or at least predominating over the increase of the muscular walls, is extremely rare. When it happens, it is the latter kind of cases, namely, beginning as hypertrophy, but the rate of increase of the muscular structure not remaining in proportion to the dilatation of the cavities that is met with. Among the cases at the Jefferson Clinic I have collected some instances of what might be fairly called dilatation unaccompanied by hypertrophy, or attended only by a slight degree of hypertrophy; and I have seen a small number in private practice. Goodhart points out that in the young the risk of dilatation of the heart is much greater than in older persons.

Another lesion of the heart which we observe in connection with Bright's disease, both acute and chronic, is *pericarditis*. But inflammation of the outer membrane of the heart forms only part of that general tendency to serous inflammation which we find in Bright's disease. It is probably due to the contaminated state of the blood, and neither its occurrence nor its explanation need here detain us.

Of all the heart affections passed in review, hypertrophy is the most common. Let us look at its cause. I leave out of consideration those cases where clearly existing valvular disease may have led to the hypertrophy; though even here it is always questionable whether some of the increased growth be not due to other causes than the valvular affection, and may not have preceded it. I will take the pure instances of hypertrophy and ask, How are we to explain them? It will serve our purpose best if, in considering this much mooted and most intricate subject, we give a short summary of the different views held as to the cause of the hypertrophy, rather than attempt an historical review of how and by whom these views have been brought forward.

One of the main views entertained is, that the hypertrophy of the heart is due to the blood contaminated by renal excrementitious matter, exerting a stimulating effect upon the action of the heart, thus leading to hypertrophy of the ventricle; and, further, that the impure blood requires greater force of ventricular contraction to propel it through the unwilling vessels. This view has the great authority of Bright, and is to this day advocated by some eminent teachers.

A second view, while taking note of the influence of the impure blood, holds that the altered blood tension produced by the disease of the kidney, and the difficulty of the blood circulating through it, give rise not only to the well-known feature of heightened arterial tension, but to increased size of the heart to overcome the resistance of the renal organs. This is largely the view of Traube and some of the German investigators, and has been recently reaffirmed by Cornil.[1]

A third view is that the left ventrical beats with augmented force because the arterioles refuse to receive the altered blood, and in consequence of the resistance these vessels hypertrophy, especially in the arterial coat. To overcome this muscular resistance, the heart has to act with greater force, and its muscles increase. This is, in the main, the view of George Johnson, and is largely based on that change in the muscular coat of the arteries which he has so well described.

A fourth view is that a fibroid degeneration, a fibroid overgrowth of the outer coats of the arteries, takes place over a large portion of the vascular system. In consequence of this, the heart has to struggle to overcome the resistance of the permanently narrowed vessels, narrowed by these hyaline, fibroid changes; and the enhanced blood-pressure shows not only in the raised arterial tension, but the increased resistance leads also to cardiac hypertrophy. This is mainly the view of arterio-capillary changes, of a vascular fibrosis as the cause of hypertrophy of the heart, which has been strongly and ably advocated by Gull and Sutton.

The last two views have much in common, at least as regards the production of the hypertrophy in consequence of the altered condition of the vessels.

I will mention a fifth view, which for the present I shall simply indicate, namely, that the hypertrophy, as well as to a great extent the vascular changes, are the result of a common process which takes its origin in the ganglionic nervous system. This is the view which in its main features flows out of some researches made by Dr. Longstreth and myself, and which here I simply state, intending presently to call your attention to the particular facts bearing on it.

Now, analyzing these different views, let us first take notice of the assumed influence of impure blood, and it is for practical purposes possible at the same time to examine into the supposed alteration of the blood-pressure due to the resisting kidneys. These views which I thus group together seem to me untenable. If true, why should we not have hypertrophy of the heart, and especially the form of hypertrophy far the most common, of the left ventricle, in other diseases of the kidneys than Bright's disease? Why should not, too, in the acute form of this malady, the heart be increased? It might be objected to this argument that, in the acute affection, the disease does not last long enough to produce muscular increase; but the objection will not hold good with reference to the other diseases of the kidney, in which serious, we might even say destructive, kidney lesions take place, in which uræmic symptoms happen, yet in which there is no cardiac hypertrophy. I will take the instances, a number of which have come under my observation, of persons dying from extensive cystic degeneration of the kidneys, in whom the heart was found absolutely normal.

Here is one. In a gentleman whom I attended, with a very large tumor in the abdomen, and who passed bloody and albuminous urine, there were for three weeks before death most marked uræmic symptoms. At the autopsy both kidneys were enormously enlarged, measured each about fourteen inches in length, were filled with cysts, and no trace of renal structure could be detected. It was, indeed, difficult to understand how life could have lasted so long with such extreme disorganization; yet the heart was absolutely healthy.

In a second case, the kidneys measured six inches in length, nearly four in width, and three and a half in thickness. The tissue was almost wholly converted into cysts, from the size of an egg to that of a pin's head. There was no disease of the heart. This specimen is now in the Museum of the Pennsylvania Hospital.

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[1] Compte-Rendu du Congrês International, tome i. Copenhagen, 1886.

In a third case the two kidneys were greatly enlarged, irregular in outline, the capsule was roughened by shreds of inflammatory adhesions; the organs, measuring each about seven inches in length and four in width, were filled with cysts. The thoracic viscera were in an absolutely normal condition. The liver was found to be highly fatty. The kidneys are also in the Museum of the Pennsylvania Hospital.

I shall cite two more cases, partly to sustain my view, and partly on account of the evident uræmia which preceded death. A man, under forty years of age, by profession a gambler, was admitted into the Pennsylvania Hospital in a comatose condition. He had been struck at by a companion, while drinking in a saloon, but was not hit. Immediately afterward, to the astonishment of those around him, he fell to the ground unconscious, and remained in this condition until death, a day or two later. No history of his previous state of health was obtainable, further than that he had seemed well, and was nightly occupied at his business as a dealer in gambling games. The urine was found to contain some albumen, and a large amount of sediment, mostly of a cellular character. Death occurred in the hospital with all the signs of marked uræmia. The urinary secretion was extremely scanty, and the unconsciousness profound.

The circumstances connected with the death led to the arrest of the companion who aimed the blow; but the investigation of the coroner showed that death was due to natural causes, and not to violence. At the autopsy, the kidneys were found to be in an advanced state of cystic degeneration. They were greatly enlarged in all directions, and the tissue was almost entirely converted into cysts. The disease had evidently been of long duration. The lungs were normal, so was the heart.

Yet another case. A young servant-woman, who had been in good health so far as known, fell on the floor while engaged at the wash-tub, and was found lying in an unconscious condition. She partly regained consciousness, but, on her admission into the hospital, could give no satisfactory history. She died a few days later in a comatose state, with every evidence of uræmia. The kidneys showed advanced cystic degeneration. The heart was normal, and no lesions were presented in the other organs, save congestion of the lungs.

I have thus presented to you five cases leading to death with the most advanced cystic degeneration of the kidneys existing, with the blood evidently impure, and, finally, occasioning, in the majority, marked uræmic symptoms, yet with actually normal condition of the heart.

I might go further in this line of argument, and call your attention to the enormous kidneys with calculi embedded in them, kidneys which produce abdominal tumors large enough to be mistaken for gastric and omental cancers, also leading to death, and in which no disease of the heart was found; so, too, in instances of cancer of the organ; though, in this condition certainly, and even in cystic degeneration at times, the argument is somewhat vitiated by the fact that, while one kidney undergoes extreme change and disorganization, the other may remain normal, or, at least, be still capable of performing its function fairly well.

The next views, those of arterial changes, whether in the muscular coat producing muscular hypertrophy, or from fibroid growth in the outer coats, I shall not discuss, further than to say that I believe the anatomical researches on which they are founded to be correct, having often seen the conditions referred to. Nor is it necessary to go into the question which is the most common of these changes; for I think that both may be found in different cases, and even in the same case at different stages. While thus concurring in the correctness of these observations, I will point out how insufficient they are to interpret the cardiac hypertrophy; how impossible it is to prove that blood is resisted by the altered vessels on account of its character; how difficult it is to explain the enlarged heart simply as the result of vascular changes, when we have striking alterations in the vessels, both large and small, in old age, and from syphilis, and in and beyond aneurisms, where we do not find cardiac hypertrophy happening as rapidly, or to anything like the extent that it does in Bright's disease, if, indeed, it happen at all.

Let me now, before taking up the fifth view, which I told you had grown out of observations by Dr. Longstreth and myself on the nervous ganglia, call your attention briefly to these observations, and supplement them by some which have not hitherto been published. Let me add, and here acknowledge, that in the researches about to be brought forward, which were most difficult and laborious to carry out, it is to the care and attention of Dr. Longstreth that they owe their merit, rather than to anything I have myself been able to do. Let me also recall that in the investigations we made on Bright's disease[1] we found marked changes in the renal ganglia, of a character showing increased fibrous tissue and atrophy of the ganglion cells. These were associated with decided alterations in the renal vessels, as exhibited to you in these micro-photographs, which will make the matter clearer to you than I can from description. This condition in the renal ganglia has been confirmed by Saundby,[2] who, however he differs with our conclusions, has seen exactly the same pathological lesions.

I shall proceed to present to you the statement based upon 11 cases accurately observed, in which the cervical ganglia from which the cardiac nerves arise were minutely examined; and 5 of these cases, which tell the tale of all, I will give you in some detail. The records relate particularly to the inferior cervical ganglia, giving off mainly the inferior cardiac nerve. All of the cases were interstitial nephritis; 9 were chronic contracting kidneys, and 2 contracting kidneys of more acute form.

CASE I.—Emma H——, aged sixty-five, admitted into the Pennsylvania Hospital May 18, 1885; died May 18, 1885; admitted for cerebral hemorrhage; had vomited; was unconscious, and completely relaxed or paralyzed; had a few irregular convulsive movements; two quarts of highly albuminous urine were drawn by catheter; she died in three hours. Post-mortem examination showed an extravasation of blood in the external part of the left hemisphere, but it had not extended to the ventricles. Death resulted in this case apparently from uræmia, rather than from the cerebral clot directly. The kidneys were very much reduced in size, with thickened capsules and granular surfaces, dotted with small cysts. The left ventricular wall was much thickened, measuring over one inch. The minute structures of the inferior cervical ganglion showed many marked changes; the ganglion cells were deeply pigmented, appeared shrivelled or compressed; equally to be noticed was the tissue around the ganglion cells, composed of a delicate fibrillar tissue in which appeared very numerous round and spindle nuclei. Some of these nuclei were doubtless those of the nerve structures, but the majority were a new growth of connective and fibrillar elements; in places they were so numerous as to obscure the ganglion cells. In the greater part the vesicular nucleus of the ganglion cells could be seen, but the nucleus was generally visible, faintly stained with carmine. A very striking feature was the appearance of the vascular structures; in the first place, the capillaries seemed in some parts to pervade nearly the whole area, some with a narrow calibre carrying but a single red blood-corpuscle, and from this width upward to those with six corpuscles abreast, and many of these vascular tubes presented ampullar dilatations; some of this condition can be accounted for by the mode of death, but the most was due to permanent changes. The walls of the arterioles showed the thickening so often found and described in the arterial walls in these cases of renal disease.

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[1] American Journal of the Medical Sciences, July, 1880.

[2] British Medical Journal, January 13, 1883.

CASE II.—Hannah G——, aged seventy, admitted September 4, 1884. No. 920. Died November 13, 1884. Had been gradually failing in health, and lately had chest symptoms and œdema; the secretion of urine had slowly diminished. On admission there was orthopnœa, the lungs were full of coarse râles, and were emphysematous, rendering any accurate determination of the size and condition of the heart impossible. The apex of the heart was far to the left of the normal. There was ascites, and also diarrhœa.

The heart showed hypertrophy of the left ventricle, its tissue was undergoing fatty changes and atrophy; the kidneys, although much altered, did not exhibit the marked changes of the other cases. The minute structure of the inferior cervical ganglion cells indicated atrophic conditions; the cells were pale, with less than the normal amount of pigment (as usually seen in the ganglia of adults dying of disease), the nucleus was plainly visible, but the nucleolus stained with carmine very faintly. Between the ganglion cells the tissue was of firmer character than normal, and appeared to encircle these cells with stiff fibres. There were no round nuclei, but only flattened spindles in this space. The capillaries were not conspicuous, but the walls of the arterioles were altered, though to a less marked degree.

CASE III.—Mary McG——, aged fifty-two, admitted November 3, 1884. No. 1,288. Died January 30, 1885. Her history tells of a severe cold, followed by swelling of the legs; urine of dark color and much reduced in amount; later, nausea and vomiting. On admission, the urine was smoky and contained fifty per cent. of albumen; the microscope showed blood, hyaline, and granular casts, and also some epithelial casts. Only twelve ounces of urine were passed in twenty-four hours. Dyspnœa and diarrhœa existed. Later came uræmic convulsions and strongly urinous odor of the breath and body. Post-mortem examination: Heart weighed sixteen ounces; right distended, left contracted and much hypertrophied. Liver small, pale, and granular. Kidneys reduced in size, firm, capsule adherent, and the surface granular. The case was an acute attack of nephritis in a contracting kidney.

The microscopic examination of sections of the kidney of this case was very interesting, showing the majority of the Malpighian bodies converted into firm fibrous nodules, and only in a few places were the convoluted tubes to be seen. Here and there a Malpighian body presented somewhat of a normal aspect, with a few tubes around it, in which the epithelium could be distinguished. The chief feature was the fresh outpouring of small indifferent cells, as seen in acute interstitial nephritis. The ganglion cells were in an advanced state of degeneration, full of granules, shrivelled, and the nucleus and nucleolus scarcely to be distinguished. Between these cells the tissue presented a fibrous aspect.

CASE IV.—Rose B——, aged thirty-seven, admitted December 13, 1884. No. 1517. Died January 12, 1885. The attack followed gradually after pregnancy, with greatly diminished urine secretion—one-half teacupful in twenty-four hours. Diarrhœa and swelling of abdomen were noted. The lungs were full of râles, and the pleural cavities contained effusion. The heart-action was rapid, the pulse "corded," the artery hard. The urine was albuminous and contained granular casts. Post-mortem examination: Pleural and abdominal effusions; old pericarditis; hypertrophy of the left ventricle, the wall measuring one and a half inch; liver showed cicatrices, possibly syphilitic; kidneys very small, the capsule thickened, the surface highly granular, the cortex had almost disappeared, while the cones were much distorted.

The inferior cervical ganglion presented even more highly altered conditions than in the previous case. In not a few instances the cells seemed to have nearly vanished, or a few grains of pigment evidenced their site. Other cells, while showing some pigment, looked blurred, shrivelled, and irregular in outline. The nucleus was misshapen, and the nucleolus was like a fragment of poorly stained matter, pushed over to one side of the nucleus and attached to its wall. Around the cells the fibrous tissue formed circles, closely resembling the thickening of Bowman's capsules in a contracting kidney. Even the spindle nuclei in the tissue between the cells had lost their distinctness, and the fibres looked less firm and rigid, but coarser.

CASE V.—Mary H——, aged thirty-four, admitted January 4, 1885. No. 1647. Died January 8, 1885. For four months had had œdema, and for two days orthopnœa. The urine contained one-sixth albumen, and hyaline and granular casts. Death was sudden. Post-mortem examination showed old pericardial thickenings; weight, twenty ounces; the left ventricle measured one and one-half inch. The kidneys weighed each one and one-half ounce, capsule thickened, and tightly adherent; the surface was very granular. On section, the cortex had almost disappeared, and the pyramids were much distorted.

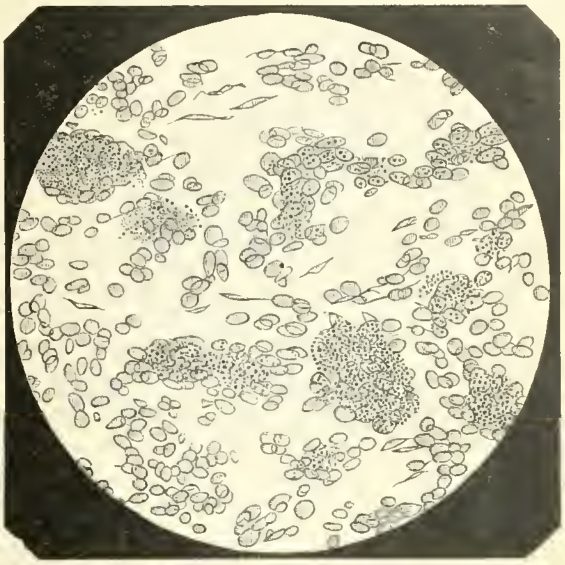

FIG. 1.

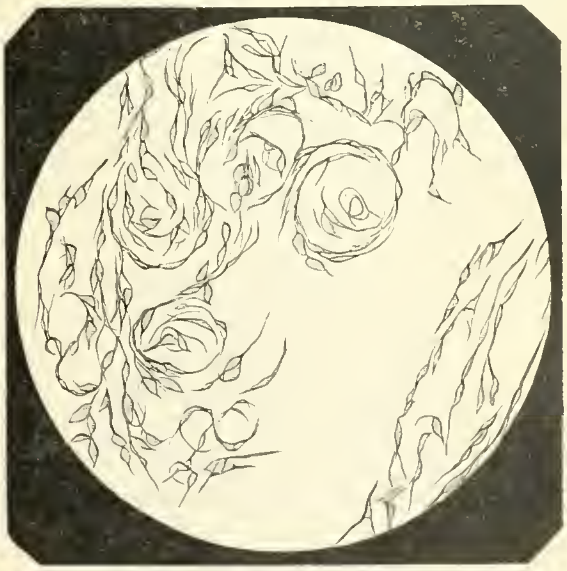

FIG. 2.

This specimen was less well prepared for examination than the others, owing to the delay in obtaining the autopsy; but however much the ganglion cells changed through the delay, this factor cannot account for the alterations of the tissue of the cardiac ganglion. The general conditions were the same, very nearly, as in the previous specimen.

I will not present to you any more details of cases, but will rather exhibit to you some microscopical drawings, taken directly from sections. Fig. 1 shows the ganglion cells treated with the ordinary carmine staining, highly granular and pigmented; their outlines indistinct; the nucleated nucleus scarcely visible. The texture between the ganglion cells is crowded with small, rounded, or spindle-shaped nuclei. These nuclei are specially numerous around and overlying the ganglion cells. The specimen is from a case in a moderately advanced stage of degeneration. Fig. 2 shows the lesion in a later stage. The whole tissue is firm and hard looking. The ganglion cells are surrounded by rings of coarse fibres, in which are a few remaining spindle nuclei. The ganglion cell itself has greatly shrivelled; the nucleus is pressed to one side, the nucleolus showing indistinctly. In some places the ganglion cells have wholly disappeared.

These, then, are the pathological minute lesions in Bright's disease in the ganglia regulating the heart movements. Before entering into the question of the bearing of the abnormal appearances, it may be well to answer the question: How does death come in the hypertrophied heart of Bright's disease? It comes with contraction of the left ventricle and dilatation of the right; in other words, it is a death of apnœa rather than one of asthenia. The diseased ganglia do not produce paralysis of the heart. As an instance of how even acute destruction of the ganglia will cause death, similar, as regards the heart, to that in Bright's disease, I cite the following case of injury and of hemorrhage into the cervical ganglia, the autopsy of which was most carefully made by Dr. Longstreth.

Thomas McC——, aged fifty, admitted into the Pennsylvania Hospital, February 1, 1882. The patient fell on shipboard, fractured the third, fourth, and fifth cervical vertebræ, and became immediately paralyzed, both as to motion and sensation, from the level of the second rib and deltoids downward; breathing was diaphragmatic; the pupils were contracted. There was priapism and retention of urine; the heart's action was frequent and feeble. Post-mortem examination showed large clots pressing on the cervical ganglia; at the third vertebra the cord was compressed and softened. The lungs were congested; the right heart was distended, the left ventricle firmly contracted. The microscopic examination of the ganglia, especially the inferior cervical ganglion, exhibited in many places the presence of extravasated blood around the ganglion cells; some of these cells showed already changes, especially pigmentation, although but a few hours had elapsed between the accident and death; in other respects the cells and tissue of the ganglion appeared normal. The kidneys were normal.

But to return to the examination of hypertrophy of the heart in Bright's disease. I have, I trust, made clear to you that there exist, associated with the enlarged heart, marked changes in the ganglia of the sympathetic nerve, from which the cardiac nerves are derived. Is it going too far to assume that these changes are an integral part of the disease; that they may determine the hypertrophy? How, I cannot explain to you exactly. It would not be difficult to bring forward a theory of loss of controlling influence on the heart, produced by the altered condition of the nervous apparatus; but our knowledge of the physiology of the nerve supply of the heart is not accurate enough to admit of absolute reasoning from cause to effect. Still, that disturbed nerve-power produces changes in structure by affecting its nutrition, we know, in every tissue of the body. Why should not the same be true for the heart? Again, if we adopt this view of the derangement of nerve condition and of the vaso-motor influence being the starting-point, we can readily explain the well-known lesions in the vessels, both large and small. Indeed, when we look at the wide-spread changes which occur in them in Bright's disease, especially in its chronic form; when we see everywhere accumulating the evidence that these changes happen in all the vessels of the body—in those of the spinal cord, the brain, the lungs, the liver, in veins as well as arteries—we are driven to the conclusion that there must be some general cause at work which determines so great, so universal an alteration. That general cause, from the nature of things, can only be in the blood, in the vascular system itself, or come from the nervous offices which give life to the vascular system. The change is too extensive to be a mere self-determined local growth of the coats of the vessels. We cannot, indeed, ignore the agency of the waste-laden blood in its full development. But what starts the change? What is the cause of the degeneration? Is it not fair to look, beside the blood, to a cause so predominant as the nervous influence, which is everywhere?

I would thus locate as most likely the original starting-point of the alteration, alike of the vessels and of the heart muscle, in the nervous ganglia and in the parts of the nervous system controlling the nutrition of these textures. What the ultimate cause of the lesion is cannot be stated, nor need we assume that one cause alone will determine it. It may be gout, it may be lithæmia, it may be rheumatism, it may be alcohol, it may be lead, it may be mere purely perverted nervous function from worry, from strain, from anxiety. Any one of these causes may start that alteration in the ganglionic nervous system which leads to degeneration and to the formation of increased fibrous tissue and subsequent atrophy to, and with it also the heart, and it is that change in the vascular textures supplied by the derangement of the heart and affected ganglia and nerve-filaments.

These are, of course, not matters that can be at once proved or adopted. You must take them as lines of thought which have come naturally from the investigations pursued, and which promise as rich a return as any that we have had from following out views hitherto brought forward. Whether the suggestions based on these researches prove to be correct or not, I think that the observations themselves furnish one more proof of the general character of what we call Bright's disease, especially in the cirrhotic form. They show us that the primary changes are to be looked for away from the kidneys, not in them, and that there is a general disease, based on a general wide-spread cause, underlying the vascular changes, heart atrophy, and kidney disease.

But to return from these reflections to the state of the heart in Bright's disease. Looking now at the result of all the observations and the process of reasoning by which I have endeavored to collate them; looking at the general pathological facts which have been cited, I draw this conclusion: That the cardiac hypertrophy which is found in Bright's disease is not in any sense the consequence of that disease. It is an integral part of the same general morbid process, of which the kidney lesion is only the most obvious expression. You may believe, with me, that it is in the nervous system that we are to look for the ultimate, or, it may be more correct to say, the original source of the malady. You may hold that this is not proven, that the changes there are only part of the general changes described, and are not the first; that they are result, not a cause. But I trust you will see how disseminated an alteration they indicate; how everything points to a general rather than to a local malady, and not think me too venturesome in stating that chronic Bright's disease ought not to be looked upon as an affection of the kidney at all, though it is there that, to the naked eye, its most pronounced changes occur. In adopting this conclusion, the cases that die of apoplexy from disease of the vessels of the brain before the kidney disease shows any signs; the cases with general vascular tension in which there is as yet no albumen or other signs of renal malady; the cases with marked, the cases without as marked, cardiac lesion, receive their ready explanation. They cease to be objects of wonder. The mischief wrought by the general malady has been wrought more elsewhere than in the kidneys. It may exist to a greater, it may exist to a less degree in any structure; it may be diversified in a very varying degree, and be present in parts in very alterable proportions.

These conclusions I draw more particularly from a study of the pathology of the contracted kidney. Perhaps it would be better to limit them to this condition, and to call this general malady Bright's disease of the kidney only until someone with a genius for names gives it one we can all adopt. There may, in fact, be some of the forms of the so-called Bright's disease which are really affections of the kidney; there may be deposits or degenerative processes in the kidney simply superadded to the textural changes in the contracted organ. These intricate questions cannot be here discussed; they are, indeed, with present knowledge, beyond our solution. But, examined in the light of the view which we have inquired into to-night; with each group of cases looked at by itself; with the structural alterations in other organs and parts than the kidneys, minutely inspected; with the condition of the blood-vessels everywhere, and of the nervous ganglia, noted; with the antecedent changes as far as possible considered, it may be then that other groups will stand forth separately as showing diverse general states as their basis.

No pathological research in these days of keen induction stands long by itself. No view can be even approximately proved, that we do not at once begin to search how, as practical physicians, we can make it available for the prevention or cure of disease. That the treatment of Bright's disease, and of what are regarded as its complications, is not what we wish for, is everywhere felt. If lines of investigation and of thought should lead to the recognition of the malady being a general rather than a local one, and discern its starting-point, lines of practice which are in accordance will be pursued, and it is by following these lines that helpful and hopeful results will, I believe, come. As yet, even with the wish to work in that direction, we may not have the exact agents for the purpose. But science now is too resolute to halt helplessly before obstacles when once the path beyond is clearly recognized.

PAPILLOMATOUS TUMOR OF THE BLADDER, DEMONSTRATED BY MEANS OF LISTER'S ELECTRO-CYSTOSCOPE.

Diagnosis confirmed Sby ubsequent Inspection through Suprapubic Opening of the Bladder—Successful Removal.

By F. N. OTIS, M.D.,

CLINICAL PROFESSOR, COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

A. G——, aged twenty-three, United States; single; barber. Gonorrhœa at fifteen, followed by a gleet, which lasted nine months. After this, was entirely free from genito-urinary trouble for six years. He then became the subject of attacks of frequent and painful micturition, these coming on without apparent cause, lasting for a week or more, and gradually passing off until free from apparent trouble, perhaps for several weeks, when a similar attack would occur. There was no urethral discharge, but the urine was occasionally tinged with blood. The patient states that in October, 1887, he became a patient in one of our city hospitals, where he obtained prompt relief, from the use of naphthaline capsules and deep injections of nitrate of silver, and after fifteen days was discharged cured. His former symptoms soon returned, however, and he re-entered the hospital December 15th, where he remained until March 10, 1888, without marked benefit. During this period the bladder was explored by sound for stone by four competent surgeons, on four different occasions, with negative results. No abnormal condition was recognized during either examination. Both the frequency and pain of urination were increased, and also the hæmaturia. Occasional passage of small clots of blood. Microscopical examination of these, and of the urine, failed to reveal any evidences of morbid growth.

The young man was referred to me by his former medical attendant, March 16, 1888. His urine was found to be slightly but distinctly tinged with blood, and contained some small clots as well as some pus and mucus. He complained of exquisite pain on urination, increased at the close, recurring every half-hour. Through examination per rectum (*a posteriori*) unusual tenderness was found. Distinct increase in the density and thickness of the right inferior section of the bladder was recognized by the bimanual touch; a catheter was introduced, and three ounces of bloody urine removed. The bladder was then irrigated gently with a saturated solution of boric acid until the fluid returned clear. The catheter was then withdrawn, leaving about four ounces of the solution, of a temperature of 80°, in the bladder, as a preparation for its examination by the electro-cystoscope, of Lister. The required current was furnished by the small six-cell battery of the Galvano-Faradic Co. The cystoscope was then introduced into the bladder, and the current turned on. The illumination was complete. Through the slightly rosy medium the small blood-vessels in the bladder mucous membrane were distinctly seen. On the right side a deep-red, granular-looking mass, with a wavy outline, was then distinctly observed, covering about one-fourth of the cystoscopic field. This appearance was verified by Drs. Abbe, Bangs, and W. K. Otis—the unanimous opinion being that it represented a papillomatous growth, to some extent covered by coagulated blood. Two days later a similar examination was made, under the influence of an anæsthetic, which corroborated the previous observations in every particular. (See Illustration.)

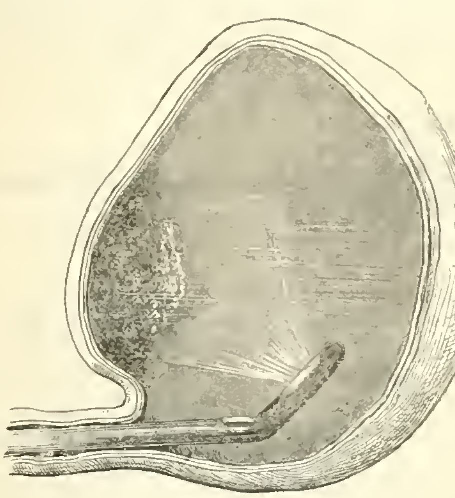

Fig. 1.—Diagram of Bladder, showing Location of Tumor and Position of Cystoscope.

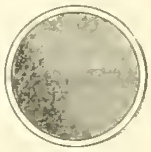

Fig. 2.—Appearance of Tumor through the Cystoscope. Apparent Size.

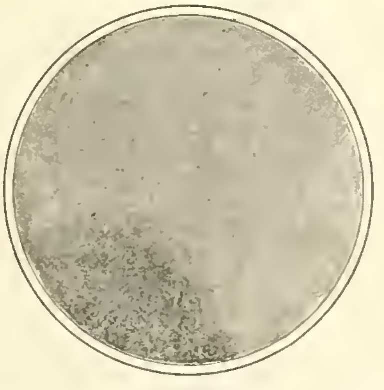

Fig. 3.—Real Size of Field Covered. Reproduced by photo-gravure process from the author's sketch.

Some small filaments were subsequently removed with the lithotrite, but on microscopical examination nothing of diagnostic importance was discovered. From lack of the capacity of the bladder, the field was necessarily limited; nevertheless, a very excellent view of the tumor could be obtained. This is shown in the illustration, from a sketch made at the time of the first examination—the smaller (Fig. 2) field representing that which was seen through the cystoscope, the larger (Fig. 3) representing the area of bladder-wall actually covered. Fig. 1 represents the position of the tumor and cystoscope when the best view of it was obtained.

On the following Monday the patient entered St. Luke's Hospital, and was operated upon by my associate, Dr. L. B. Bangs, Dr. Charles McBurney assisting. The high operation was performed, and the bladder being examined by means of an electric light, introduced through the suprapubic incision, the diagnosis made by the cystoscope was verified in every particular. The growth was then removed, as far as possible, with the scissors, and the surface cauterized with the Paquelin cautery. At the present writing the patient is going on toward a satisfactory recovery. The pathological examination made by Dr. Frank Ferguson, pathologist of St. Luke's Hospital, showed the neoplasm to be a simple papilloma.

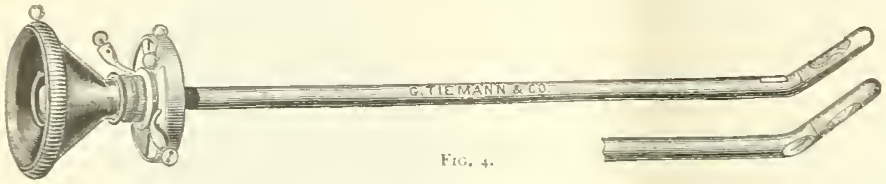

Fig. 4.

This case is deserving of especial interest as being the first tumor of the bladder diagnosticated in this country by means of the cystoscope, and verified by subsequent operation, and adds one more to the list of sixteen cases so made out by foreign observers, and two by Dr. Fenwick, of England. In this instance the instrument deserves particular credit, as other methods had completely failed in the practice of competent observers.

This consists of a metal tube (Fig. 4), about seven inches long, of a calibre of 22 French, having at the proximal end a funnel-shaped ocular opening; at the distal, a short beak, similar to that of the catheter coudé. A window of rock crystal is set in the end of this beak, behind which a small electric lamp, controlled by a switch at the ocular end, is placed. A rectangular prism, the hypothenuse plane of which is silvered, is placed in the end of the straight portion of the tube, its superior face being seen just anterior to the angle formed by the beak. The distended bladder is illuminated; by the electric lamp, the rays reflected from its wall falling on the prism experience total reflection, an inverted image being formed within the tube. The size of the field thus obtained is greatly increased by means of a telescope introduced into the tube. The image seen through the cystoscope is an inverted image, but right and left are not transposed.

There can be no question as to the great prospective value of the electro-cystoscope in diagnosis of many difficulties to which the bladder is subject. A variety of foreign bodies have already been reported as made out by use of this instrument. The locality, size, and color of vesical calculi have been demonstrated in my own experience. In one instance two stones were seen where only one had been previously found; but this, of course, might with care have been effected by means of the lithotrite. But it is in the diagnosis of the tumors, and encysted or impacted calculi, that the most essential service may be anticipated from the use of the cystoscope. The orifices of the ureters are quite readily brought into the cystoscopic field, and it is more than probable that (perhaps through the introduction of some clear fluid with which blood does not readily mingle—glycerine, for instance) the true source of a previously doubtful hæmaturia will be demonstrated.

5 West Fiftieth Street, April 30, 1888.

Dysmenorrhea in the most violent forms has been relieved by Meniere, by giving an enema consisting of bromide of potassium and chloral, thirty grains of each; one-half of this amount to young girls.—*Am. Practitioner.*

ON DIVERS SPECIES OF ITCH.

By GEORGE HENRY FOX, A.M., M.D.,

NEW YORK.

An editorial in The Medical Record of January 14th, calling attention to the subject of "winter itch," has elicited several interesting letters. In a recent number (April 14th) Dr. Leroy Dibble relates, in a graphic manner, his personal experience of this affection and the sufferings it has entailed. He incidentally mentions, with perhaps more freedom than delicacy, the names of several gentlemen whom he consulted, the opinions or prescriptions which they gave, and the lack of benefit derived therefrom. Lest the reader of his letter might erroneously infer that my treatment of winter itch consists of white precipitate and tar soap, I yield to the temptation of saying a word in regard to the doctor's case, and expressing some views upon divers species of itch.

Reference to my notes of cases shows that Dr. Dibble consulted me nearly four years ago in regard to some patches upon the scalp, and bearded portion of the face, which I pronounced to be eczema. For dry eczema in this locality, a good result will usually follow the use of tar soap and a daily inunction of the ammoniated mercury ointment, pure or diluted. I should not think, however, of recommending the ointment to be applied over a large extent of skin in winter itch, or any other affection, as I have repeatedly known salivation to result from its free use in cases of general eruption. I certainly did not prescribe it for winter itch in the doctor's case, and for the "relief" which he mentions I can therefore claim no credit.

As to the nature and treatment of so-called winter itch, much confusion appears to exist. I cannot, however, quite agree with your correspondent, who says, "We know nothing of its pathology, and as little about its treatment." In my opinion, the affection is a cutaneous pruritus, mainly of internal origin, although the action of extreme cold and variation of temperature upon the skin is prone to serve as an exciting cause. An unsuitable diet is a very frequent etiological factor, and I heartily indorse the opinion of the late Tilbury Fox, of London, as quoted in The Medical Record editorial, that pruritus results from a deficiency in the excretion of nitrogeneous matters and bile products. Imperfect oxidation of the food, resulting from overfeeding or lack of exercise, or from both, occasions the affection in a large proportion of cases, if not in all cases where no disease of internal organs is present.

Since the etiology of pruritus depends far more upon dietetic than upon meteorological causes, the use of the name pruritus hiemalis, as indicating a distinct affection, has always seemed to me to be unsound and uncalled for. In England, a summer pruritus has been described, and in certain localities conditions might readily be imagined to exist which would necessitate the addition to our nomenclature of spring and fall pruritus. A large proportion of skin diseases are much less frequent in summer than in winter, owing to an increased activity of the cutaneous glands, which tends to lessen the surface congestion. Psoriasis, for example, frequently disappears in hot weather, and is usually most pronounced from October to May. We might as well claim that cold is a cause of this affection, and add to our already burdened nomenclature a psoriasis hiemalis.

The reason that itching of the skin is apt to be more common in winter is due to several causes, of which improper diet is one of the most active, and cold one of the least important. Confinement in overheated and poorly ventilated rooms, and hugging a "glowing coal stove," especially after a hearty meal, is probably quite as conducive to pruritus as exposure to a blizzard.

The affection under consideration should not be attributed to uncleanliness or lack of bathing in any case. Nor can it be regarded as peculiar to any one stratum of society. It affects both rich and poor, and shows no preference for such as bathe daily, or for those whose ablutions are few and far between.

These views being accepted, the treatment of the affection is placed upon a rational basis, and my experience has taught me that, in the treatment of pruritus occurring in winter, far more can be accomplished by a modification of the diet than by all the remedies, internal and external, of the whole pharmacopœia. A man who suffers from an itching skin will often notice that the trouble is aggravated whenever he takes a little cold, or eats, drinks, or smokes more than usual, and, as a direct consequence, suffers from indigestion, or becomes constipated. I regret that his physician sometimes fails to appreciate these significant facts, and in his perplexity concludes to increase the dose of arsenic or to try a new ointment.

From my point of view, the indications for treatment are the following, and I would that all cases of cutaneous disease would yield as readily as do most cases of persistent pruritus when these measures are adopted: In the first place, see that the *primæ viæ* are open. Next cut off temporarily the supply of nitrogeneous food and increase the amount of water taken daily. Then stop alcohol, tea, coffee, and tobacco, the latter two being prolific sources of pruritus and capable of nullifying the good effects of almost any plan of treatment. Finally, if it is necessary, see that the patient gets an increased supply of oxygen by frequent exercise in the open air.

As for palliative measures, there are local applications which can be advantageously used to allay the nightly agony until the cause of the trouble is removed. A chrysarobin ointment, such as is mentioned in the letter of Dr. J. W. Foster, will always afford relief, unless it happens to occasion a dermatitis which may prove worse than the pruritus. An ointment containing twenty per cent. of resorcin is quite as efficacious, and far more satisfactory to the patient. A weak carbolic-acid lotion is usually disappointing, but two drachms of the pure acid to an ounce of glycerine and water, applied at night, will tend to anæsthetize the skin and grant to the patient a few hours at least of comfortable sleep.

In fact, any "mild cautery," like the saturated solution of chloral hydrate, mentioned by Dr. Dibble, will afford temporary relief, but it cannot be expected to have a curative effect.

What is prairie itch? Is it contagious? What causes it? What will cure it? These questions are frequently asked, and variously answered by those who know all about it and by some who evidently do not.

Of late years there seems to have been an epidemic of pruriginous eruptions throughout certain of our Western and Southern States, or, if the cases have not multiplied, the attention of physicians has been excited to such a degree as to cause much discussion and the firm belief on the part of many that a new form of skin disease is prevalent. I regret that I have not had the opportunity of studying this alleged new disease on its native heath, but, from all that I have read and heard, and from a careful study of the cases which have drifted East and come under my observation, I have arrived at a very decided if not a correct opinion as to its nature.

In the city of New York and its vicinity we have a number of pruriginous eruptions to deal with, and often the diagnosis in a given case is by no means easy to make. Those which seem to bear a resemblance to the so-called prairie itch may be classed as follows:

1. Scabies.
2. Pediculosis.
3. Pruritus cutaneus.
4. Urticaria.
5. Eczema.

I am strongly of the opinion that nearly every case of prairie itch belongs rightfully in one of the above classes. In this opinion I find myself in accord with Dr. Hyde, of Chicago, as expressed in the last edition of his excellent work on skin diseases. If in a given case there is distinct evidence of contagion, the disease is either scabies or pediculosis (or possibly contagious impetigo). If the eruption is manifestly non-contagious, it is probably pruritus (whether occurring in the winter or summer), or urticaria, or the papular form of eczema.

Scabies is a disease which is not always readily recognized by an examination of the patient's skin. In certain cases, where the hands are washed frequently with soap and water, the characteristic lesions upon the web of the fingers are absent, and the mistake is frequently made of declaring that a patient cannot have "the itch" because the hands are free from any eruption. In such cases the nature of the disease is usually suggested by the peculiar localization of the scratch-marks upon the forearms, lower portion of the abdomen, and inner aspect of the thighs. In women the excoriations are usually abundant upon the breasts. When a few red and excoriated nodules are found upon the glans penis, prepuce, or scrotum, we have a pathognomonic lesion and one which is almost as positive a proof of scabies as is the cuniculus or burrow of the insect. Having based a diagnosis upon the localization of the scratch-marks, this can usually be verified by the fact that several members of a family are simultaneously affected, and especially those who have been sleeping together. The acarus is noctambulistic in its habits, and rarely do we find a patient with scabies who has not slept with someone similarly affected, or in a bed which he or she has occupied. The cases of winter itch mentioned by one of your correspondents were doubtless, in large part, cases of scabies. This I infer from his remark that the eruption occurred upon the thighs, forearms, abdomen, and scrotum, and was conveyed from one bedfellow to another.

In Dr. Neely's paper in the *Mississippi Valley Medical Monthly*, the features of cutaneous pruritus are clearly presented, and the writer remarks that he has never seen a case directly traceable to contact or exposure to another case even though occupying the same bed.

Dr. J. E. Clark, in the *Medical Age*, has described a new skin disease characterized by a papulo-vesicular eruption and intolerable itching. The description given suggests scabies, and particularly the remark that it is contagious "unless the precaution of separate beds is observed." He differentiates it from scabies on the ground of the absence of the acarus. Now, in few cases of scabies is it an easy matter to discover the acarus, and frequently, when the patient has been scratching for several weeks, no unmistakable trace of the insect can be found.

Dr. H. J. Warmuth in the *Nashville Medical News* has described a contagious eczema as occurring not only in the West and South, but also in the Eastern States. He claims that the serum contained in the vesicles undergoes a change which favors the formation of parasites, and remarks that his patients traced their affliction to friends with whom they slept, or whose clothes they wore.

Dr. J. E. Engstad has attributed prairie itch to a vegetable organism found chiefly in the corium.

I have seen several patients from the West who brought with them a diagnosis of "prairie itch," and examination has shown that they were suffering from simple, unmodified scabies. There was nothing peculiar about the eruption, and it yielded as readily to sulphur-ointment as do the cases which develop beneath the seventy-fifth meridian.

Pediculosis is a disease which is especially apt to pass unrecognized when occurring in a mild form, and, as sometimes happens, in the person of an aristocratic patient, in private practice. A hungry pediculus may be readily picked up in travelling, and the unconscious host is very prone to attribute the itching of the skin which speedily ensues, to buckwheat-cakes, or woollen underwear, or a cold snap, or to anything but the true cause. The physician consulted in regard to the pruritus may not suspect the cause, or dare to reveal his suspicion by asking an offensive question or rigidly examining his patient's clothing; and so the diagnosis is made of winter itch, Rocky Mountain mange, or whatever name he may prefer. Two years ago a medical friend called and told me that he had just come from the meeting of the American Medical Association at St. Louis, where he had caught the prairie itch. I was delighted at this opportunity of studying a case of a possibly unfamiliar skin disease, and requested him to strip. There were numerous excoriations upon the trunk and extremities, but the wrists, abdomen, and genitals were free. The intense itching, he informed me, had developed suddenly after a night in a sleeping-car. I was quite puzzled, at first, to account for the pruritus, but, from the character of the excoriations, decided that it was a case of pediculosis. My friend scouted the idea, as he had already examined his clothing, with a negative result, but in a few days he wrote me as follows: "Your diagnosis has been confirmed. I went on another tour of inspection after I reached home, and found *six*. They were secreted in the folds of the underclothing in the very localities where the itching was most intense. I had a bright light and two pairs of glasses, and the flat, colorless cusses nearly escaped my vision even then." In a postscript, he added: "Another case of prairie itch explained!"

Chronic urticaria is also a disease in which it is not always an easy matter to arrive at a correct diagnosis, inasmuch as the wheals are ephemeral in character, and when the patient is examined by the physician there is usually nothing but excoriations to be seen. Indeed, the diagnosis in most cases of chronic urticaria cannot be based upon the eruption present at the time of examination, but must necessarily depend upon the history given by the patient or upon the peculiar irritability of the skin which permits the artificial production of wheals. When there exists in the mind of the physician a firm belief that some peculiar pruriginous eruption is epidemic in his section of country, it is not strange that both urticaria and the papular form of eczema should be associated with scabies, pediculosis, and idiopathic pruritus, and all of the doubtful cases considered to belong to a new and undescribed disease.

It is extremely questionable, in my opinion, whether any form of pruriginous eruption prevails in the West which we do not meet with along the Atlantic coast. Until clinical facts are forthcoming which will prove the contrary, I shall continue in the belief that the so-called prairie itch is a myth, and that its name is merely a euphemistic expression which has been found convenient to cover an uncertainty in diagnosis.

18 East Thirty-first Street.

OVARIOTOMY IN A PATIENT EIGHTY-TWO YEARS AND FOUR MONTHS OF AGE—RECOVERY.[1]

By JOHN HOMANS, M.D.,

BOSTON, MASS.

A LADY of the age above mentioned was referred to me through the kindness of Dr. Charles A. Dewey, of Rochester, N. Y. The patient was a widow, and had been the mother of five children, the youngest being forty-three years of age. On examination I found a tumor of the left ovary, apparently without adhesions, in an active, healthy woman. The presence of the tumor had been known for about two years, and it had grown rapidly during the last six months. The lady said that if the tumor was likely to render the remainder of her days uncomfortable, she would like to have it removed.

On January 28, 1888, I removed the cyst, which proved to be one of the left ovary, somewhat multilocular and papillomatous. The fluid weighed thirteen pounds, and the solid portions one and three-quarters pound.

On the sixth day the temperature rose to 100.5° F., but subsided the next day, and the patient went home on March 2d. The oldest women on whom I had previously operated were each seventy-three years of age—one on November 19, 1881, and the other on December 26, 1883. Both of these ladies are now living in good health. Sir Spencer Wells' oldest case was seventy-one, and Dr. Keith's seventy-three. Mr. E. Matthews Owens, of Australia, has just operated successfully on a patient seventy-nine years and ten months of age. I could find no case as old as eighty years, but, to make assurance doubly sure, I communicated with Dr. J. S. Billings, at Washington, and at his request Dr. Lorini made a thorough search without finding any case recorded older than seventy-eight years of age.

"WASHINGTON, March 16, 1888.

"DEAR DOCTOR: Some days since, Dr. J. S. Billings handed me a letter, with the request to look up the subject of ovariotomy in women of eighty years and over. Through the kindness of Dr. Robert Fletcher I have been enabled to see the cards of the unpublished catalogues, numbering several thousand. I have looked up all the statistical tables obtainable, and consulted all the works on the subject in all languages, including Russian, Swedish, Hungarian, etc.—in a word, I have been over the subject most carefully and have failed to find a single case recorded in any journal, pamphlet, or book.

I found quite a number of cases where the operation was done in women of seventy years and over; the oldest cases being two, reported in Italy, in women seventy-five years of age, and one in Russia, seventy-eight years of age. The result is a disappointing one to the seeker, but it will probably be satisfactory to the gentleman who ordered the work done. I enclose bill for services.

"Yours very truly,
(Signed) "R. LORINI."

It will be seen from the above that not a single case of ovariotomy in a woman eighty years of age, or older, has ever been reported, if Dr. Lorini's search has been exhaustive, and I think we may consider it so.

A BIOGRAPHICAL SKETCH OF THE LATE MIDDLETON GOLDSMITH, M.D., LL.D.[1]

By JOHN C. PETERS, M.D.,

NEW YORK.

DR. GOLDSMITH only lived in New York from 1837 to 1845, but during that time he became one of the founders of this Society. Most of the rest of his life was spent in Vermont. Few of our members had ever seen him, and still fewer have any clear conception of the man. Yet his life was a very picturesque one, crowded with good works, and crowned with great successes. His professional renown commenced very early, for he was a good anatomist and almost a great surgeon while yet in his teens. He commenced to dissect when some of his boyish companions were still whittling sticks. His father, Dr. Alban Goldsmith, was Professor of Surgery in the Louisville, Ky., Medical School, and Middleton had served as his prosector and clinical and surgical assistant, and performed at least one amputation of the thigh before he was eighteen years old. He always seemed to have anatomy and surgery at his fingers' ends.

In 1837, when he was nineteen years old, his father was appointed Lecturer on Surgery in the New York College of Physicians and Surgeons, then in Crosby Street, and Middleton, of course, continued to assist him. This college was then the only medical school in New York, and in 1837, when I first sat upon its benches, it had less than seventy medical students. Philadelphia then had four times as many medical colleges, and more than ten times as many matriculants. Now the disparity is not so great. Middleton graduated from the College of Physicians and Surgeons in 1840, aged twenty-two, and almost immediately sailed to India and China, as a ship's surgeon.

On his return he established, with the aid of Drs. Markoe, Sayre, La Conte, and others, the first Alumni Association of the College of Physicians and Surgeons, and contributed largely to the first volume of its Transactions.

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[1] Believed to be the oldest case on record.

[1] Read before the New York Pathological Society, April 18, 1888.

The Goldsmiths, father and son, were great naturalists, and very fond of rare and handsome birds; hence Middleton was soon found assisting the great Audubon in the dissection and classification of some of "the Birds of America." They had many artistic and æsthetic tastes, and their beautiful rooms in Park Place were filled with handsome illustrated books, fine engravings and paintings, splendid cameos and musical instruments, besides being loaded down with brilliant surgical apparatus. There were then no stores in Park Place, or on Broadway, near by. These wide streets were filled with stylish private residences, and the great Park on the east, and the lovely Columbia College grounds on the west, made the whole neighborhood delightful.

But the Goldsmiths came, on one side, from "a race half aristocratic and half bucolic; as simple as shepherds and as proud as kings;" hence Middleton was often found at Bull's Head in search of tape-worms, hydatids, liver flukes, and other curious pests of animals. He also made many minute dissections of the eyes of men and animals for a prominent oculist, and even taught him how to operate. He was a great favorite with the genial but eccentric Dr. John W. Francis, some of whose peculiarities he may have imbibed. Dr. Francis always spoke of him as the last lineal descendant of the great Oliver, and as a poor medical orphan, who had no uncles in the New York or Bellevue Hospitals to help him on. In return Middleton poked great fun at the triplex and complex pills, and the big and little worms, gall-stones, and bilious disorders which Dr. Francis believed they cured.

He visited the dead-house in the Park every day to make autopsies for the coroner, and, when there were no other subjects, he and I cut up the bodies of the paupers, which were merely sent there for burial in Potter's Field, which used to be in Washington Square. I well remember his long and swift, but skilful, way of cutting; the quick hari-kari-like, or "happy-dispatch" way with which he went through a cadaver, without any rough mangling or jumbling of things. All was orderly and rather artistic.

At this time he was a remarkably tall man, considerably over six feet high, muscular, but not gross, and exceedingly well-proportioned. He was quick, but easy and even graceful in most of his gestures and movements. He had reddish hair, a fair complexion, a handsome and pleasant face, and was very neat and even showy in his dress. He was a reasonably good Greek and Latin scholar, but especially a perfect master of the English language, which he always spoke and wrote with great purity and conciseness. He was very fond of Burns and Shakespeare, and that grand old pagan, Hesiod, whose "Works and Days" and "Theogony; or, Creation of the World and Gods," he delighted in all the days of his life. He sometimes made verses, which he called poetry; always sang a good song, and sometimes a better psalm tune; he could play on the guitar and banjo; was a good talker, a capital story-teller, and quick at repartee. He soon became a great favorite in medical, social, and religious circles, and often shone in the best assemblages of the brightest men and nicest women. He was looked upon as a sort of modern Apollo and Admirable Crichton, and the most rising young surgeon in New York. But he blazed in his greatest glory when he paraded as Brigade Surgeon on Major General Sandford's showy militia staff. He was always gallantly mounted, for he was born in Maryland, reared in Virginia, and trained in Kentucky, and knew what a good horse was. Dr. Sayre and I often gazed at him with admiring, but also envious, eyes. How different was his composed and stately bearing from the grotesque performances of Regimental Surgeon Paine, who always appeared on "Training Day," crowned with an old revolutionary cocked hat, with a big red feather in it; armed with an ancient cutlass buckled over his every-day frock-coat; and mounted on a vicious little Vermont pony, which pranced, and kicked, and buck-jumped in such outrageous fashion that Martyn sometimes seemed seated on his horse's ears and sometimes nearer the ground.

Middleton occasionally mounted a metaphysical high horse, and used involved language, so tumid as to be scarcely intelligible, but which immensely tickled Dr. Sayre, and would have greatly pleased a High Dutch Professor of Transcendental Philosophy. He also always had a great deal of what Hughlings Jackson calls "mental diplopia," *i.e.*, he could look equally earnestly and impartially on both sides of a question, and could not only defend each view with the greatest ingenuity, but with the most perfect good faith and honesty.

In those times French pathology was in the ascendant, and the Goldsmiths and many other New York physicians were worthy disciples of Cruveilhier, Andral, Louis, Civiale, etc. I had been educated, in part, in Germany, and was filled with enthusiasm for Rokitansky and the Vienna school of pathology. Dr. Goldsmith and I often talked over pathological matters in the dead-house and elsewhere. He wished me to send to Vienna for barrelfuls of specimens, and to found a pathological society, of which none then existed in the world. Dr. Sayre also wanted to establish a pathological society, and soon I was invited to attend a preliminary meeting for this purpose at Dr. Sayre's office, and am said to have made my appearance with two pailfuls of specimens, collected by Dr. Goldsmith and myself. Middleton preferred the plan of the Boston Society for Medical Improvement, which was partly clinical and partly pathological. Dr. Sayre had a plan for a purely pathological society, and he and Dr. Goldsmith persuaded those ripe pathologists, Dr. John A. Swett, John A. Forry, Thomas M. Markoe, Gustavus A. Sabine, Robert Watts, William C. Roberts, and others to join them; and soon Willard Parker, Alonzo Clark, John T. Metcalfe, William H. Van Beuren, and others of like stamp were added to the number and quickly overshadowed the three original suggestors and founders of this society, which undoubtedly were Drs. Goldsmith, Sayre, and J. C. Peters.

The first meeting took place on June 14, 1844, and in less than six months Dr. Goldsmith was called to the Chair of Surgery in the Castleton, (Vt.) Medical College. He never returned permanently to New York, but never forgot the New York Pathological Society, which he regarded as a bantling of his own, and finally made a generous bequest to it to increase its honor and usefulness.

In Castleton Dr. Goldsmith lectured and operated for ten years, making a great reputation and gaining many friends, most of whom clung to him during the rest of his life. Dr. Sayre won a prosectorship, and fell heir to the Brigade Surgeoncy and to the magnificent uniform, which he had to let out over the chest and elsewhere; for although he was not too large for his own trousers, he was for Goldsmith's.

In 1851 Middleton was chosen President of the Vermont Medical Society, after only six years' residence in the State, and made a capital report to it on fractures.

In 1856 he was called to Louisville, Ky., to the chair of surgery which his father had filled before him, and soon became Dean of the Faculty. He was summoned occasionally to New Orleans, St. Louis, and other distant places in consultation and to operate. Sometimes he got a barrelful or less of rare old whiskey, as well as thousand dollar or smaller fees from G. P.'s, or grateful patients; but he always preferred hard cash to hard liquor. He often had to treat what Shakespeare called "the rotten diseases of the south, such as gripes, ruptures, fistulas, gravel in the back, stone in the bladder, big livers, and aching bones;" but he was specially noted for his skill in operating on the eye, and for successfully crushing stones in the bladder.

When the civil war broke out he promptly offered his services to the Union, and commenced as Brigade Surgeon in the Army of the Cumberland in 1861. Soon he was Medical Director in General Buell's army at Shiloh;

next, Inspector of Hospitals in General Grant's army at Corinth; and, finally, Surgeon-in-Chief of all the military hospitals in Kentucky and the Army of the Ohio. It is hard to overestimate the good work which he did in these honorable and important positions. In addition, he discovered the virtues of bromine in hospital gangrene and kindred diseases. He must be regarded as one of the great pioneers of disinfection, as Lister did not commence his experiments till 1866, and little was known about carbolic acid before 1870. When his sick and wounded were dying for want of warm clothing, he disinfected condemned blankets and overcoats, which had been used by small-pox patients, with bromine, and succeeded so well that he not only used these clothes himself, but permitted his whole family to do so also.

He now broke down completely under a severe and prolonged attack of camp diarrhœa, but persisted enthusiastically in working up his views on bromine. His attractive daughters had many suitors, whom he quickly pressed into the dreary task of copying papers on gangrene, pyæmia, etc. As none of them were medical men they naturally thought they had fallen on hard lines indeed.

At the close of the war he endeavored to resume his practice in Louisville, but his outspoken Union sentiments rendered him so unpopular that he was forced to return to Vermont, where he remained, in Rutland, for the last twenty-five years of his life. He did not again enter into general practice, but played a large rôle in surgery, as a consulting physician in obscure and difficult cases, and as an expert witness in medico-legal trials. He soon again became a power in Vermont. He established the Rutland Free Dispensary, and was ever ready with his purse and services. There is no part of his history which is more clear and creditable to him than his devotion to the poor. He not only treated those who came to him, but sought out many who could not easily get other medical or surgical aid; and generally also paid their board bills. He was often crusty and abrupt to the rich, and is said never to have yielded to the whims of his patients unless they were very poor, or very old, or in some way peculiarly unfortunate. On alternate Sundays he would drive far out to the marble quarries and prescribe for all the women and children of the Irish laborers. On other Sabbaths he would go to the wood-choppers' camp for the same purpose. He never exacted fees for these services unless the men were careless or brutal to their families. Then he not only charged high, but made an effective use of language. Some of the laborers would slip their silver dollars into the big pockets of his huge shooting-jacket, where they would often be found long afterward, mixed up with cartridges, prize potatoes, and packages of fish-hooks. He had as much influence with this class of people as their priests and clergymen; and was a great friend and chum of good Catholic priests, kindly Congregationalists, jolly, shouting Methodists, quaint hard-shell Baptists, and gentlemanly low church Episcopalians; but he looked askew at canters and ranters and bitter Calvinists, and had rather a disrespect for his Satanic Majesty, and for his brimstone and the place where he is said to burn it. As the New England Sabbath always ended on Sunday afternoon, he generally had a gun and fishing-rod quietly stowed away in his wagon.

He delighted in assisting young doctors by good counsel, by speaking a kind word for them where it would tell, by helping them in their operations, and by lending them medical books and surgical instruments, many of which he never got back again. Still, he always had the largest medical library in Vermont, and the greatest collection of surgical instruments, besides several big galvanic batteries and unusually fine microscopes; all of which he knew how to use.

Although very fond of his professional work, he steadily began to delight more and more in out-door pursuits and pleasures, in fine horses, cattle, sheep, dogs, guns, farming and gardening, or as the old geographies put it, in "hunting, fishing, and war." He became a sportsman and naturalist in the best sense of those terms, for there was not a plant or flower, or seed or grain, or bird or fish or animal that he did not know all about.

He always had great respect for

> That germ, but faintly understood,
> Whose growth is hid in motherhood,

and hence engaged in breeding fine horses, cattle, sheep, dogs and even fish, and helped to make Vermont a great cattle and sheep-raising State. Next he had model farms and raised choice grain, fruit, flowers, and potatoes. He even tried hard to make Vermont cider as attractive as sour Rhine wine. In short there was scarcely any branch of useful domestic knowledge with which he was not familiar. He never failed to master any subject in a comparatively short time, and whatever he studied soon yielded good practical results to some one. He required ready outflows for his surplus energy and always selected agreeable or beneficent ones. His surgical work was like second nature to him, as he had been operating largely for thirty years or more. In short he had long reached that highest and best development of his faculties when they had become, as Schiller says, almost automatic without ceasing to be either accurate or earnest. As his bucolic side predominated more and more over his aristocratic tendencies, so did he shed his conventional and professional clothes and dress more and more like a prosperous farmer and woodsman. He could not and said he would not always look like a first-class undertaker or immaculate head waiter. His broad-brimmed stiff hat, which was both sunshade and umbrella, could be seen from far off, and there was no other in Vermont like it; his boots were apt to be high and waterproof, for he never knew when he would wade for trout, or plod for partridges, and his coats were often like large shooting jackets, or a collection of game bags. On week days he often had a long bamboo fishing-pole sticking out behind his wagon, but he drove fleet horses and was rarely dusted on the road.

He was generally provided with a medicine chest and case of surgical instruments, was always ready for any emergency, and came into the sick room like a wholesome and cheery breeze of wind on a sultry day. He had no favorite operations, but was always called upon when unusual skill was required, and is credited with the usual prodigious number of big tumors, aneurisms, amputations, and of operating on all sorts of strangely visited people, the despair of other surgeons. It is even said that he would not even leave a mole, or mother's mark, or hare lip, or ugly scar to disfigure fair women, or pleasant children.

As an expert witness he was without a rival; a terror to opposing lawyers, whose cross-examinations he always turned against themselves, and is said never to have been defeated. His commanding presence was so impressive and his testimony was so clear, concise, and positive that the jury always believed that only they and he understood the case rightly, and if necessary would have over-ruled the judge and the laws; but he always obtained the approbation of Chief Justices Peck and Shaw, Judges Phelps and Barrett, Governor Stewart and other great and honest lawyers.

As a philanthropist and hygienist, he was a great thorn in the sides of ignorant or lazy health officers. He found the Vermont State Asylum crowded with over five-hundred inmates when there was only room for one-hundred and fifty. Besides, the State was only allowing $1.40 a week for board which cost nearly $3, and was not even paying that poor pittance, as it was $30,000 in arrears. We can easily imagine him saying to the Governor and Legislators: "If your excellencies will not merely put your venerated noses in these overcrowded rooms at midnight, but will endeavor to sleep the rest of the night in them, you will find out all about foul air, and what we doctors call lack of ventilation. If you will ask your thrifty wives to feed and clothe these poor patients on the scanty State allowance they will soon give you lessons in domestic economy that you will never forget, or else I have strangely underrated the generosity and justice of Vermont women."

He drew up the game laws of Vermont, which have been the models for those of several other states, making sportsmen and hunters the wise and generous protectors of game in the breeding season. Then poachers and pothunters had no rights which any decent man was bound to respect. When fish and birds and wild animals were mature, swift, cunning and strong, he could whip a stream, snare birds, and shoot beasts with the best of them; then he almost rivalled the poachers, especially when he wanted delicate food for poor patients. His game laws were of course attacked, but it is shrewedly suspected that the most astute and bitter criticisms came from his own pen anonymously, and that he greatly enjoyed his own apparent discomfiture.

Need we be surprised that when such a man died there was a great outburst of overwhelming sorrow from his neighbors, and that his distant friends were almost astounded at the tremendous praise which was heaped upon his memory. But when we find that even his mother-in-law, and his brothers-in-law, and sons-in-law, joined heartily in this praise, we must believe it well bestowed.

We can never forget him. Several years ago he gave this society a large sum of money to found a lectureship; for many months he had been endeavoring to give us his large and valuable medical library, estimated to contain 6,000 volumes. Then his dear wife, whom he did not expect to outlive, was suddenly carried away to a better world, and he was stricken down with deadly grief, helpless and unconscious from which he only aroused sufficiently to complete his generous gifts to us and to the Academy of Medicine.

Oliver Goldsmith wrote: "Innocently to amuse the imagination in this dream of life, is wisdom." Middleton Goldsmith acted as if he might have said: "To usefully and generously train our brains and our hands and our hearts in this royal game of life is still greater wisdom."

Clinical Department.

ACUTE ŒDEMA GLOTTIDIS—INTUBATION—RECOVERY.

By G. C. H. MEIER, M.D.,

NEW YORK.

The case here reported being the first one, as far as I can ascertain, of intubation in the adult for œdema of the glottis, will, I hope, be of some interest to the profession, and help to more firmly establish the practice of intubation in preference to tracheotomy in suitable cases.

G. S——, aged thirty-six, brewer. Patient enlisted my services on March 13th, for a little hoarseness, with slight dyspnœa and some pain in swallowing in the region of the larynx. He complained also of a slight bronchial cough. Temperature normal, pulse good; ordered medicated inhalations, and a mixture of muriate of ammonia.

March 14th.—Respiration easier, some hoarseness still present, no pain or cough. Feels pretty well.

March 15th.—Patient, contrary to my orders, got up and stood before the door of the restaurant where he boarded, then lay down on his bed to sleep, and in a short time was taken with severe dyspnœa. I found him laboring intensely for breath; he was enveloped in a cloud of steam from his body, and the perspiration was literally pouring down his forehead and neck. He was unable to lie down or even sit, but was continually moving about. Retraction at lower border of sternum was very marked, and auscultation revealed nearly entire absence of respiratory murmur. Inspiration was accompanied by a stridulous sound, while expiration was also audible, but not so marked. Face anxious, puffy, and cyanosed; lips bluish. A hypodermic injection of morphine and atropine was at once administered, an emetic prescribed, and hot inhalations ordered. Hot moist cloths were also bandaged around the neck. The emetic failing to act after ten minutes and the respiration not becoming freer, six leeches were applied externally over and below the larynx. In about half an hour the severe distress of breathing diminished somewhat, and the patient ceased to perspire, and was able to compose himself and to sit on the side of his bed. A powder of calomel, jalap, and rhubarb was administered. Professor Ripley was then called in consultation, as I did not wish to leave my patient for the night without further advice. Dr. Ripley concurred in the diagnosis, but did not think that the patient was then in any immediate danger; he suggested turpentine to be added to the hot water for inhalation, and a flaxseed poultice around the throat. This was continued during the night. Patient still had labored breathing when we left him; this continued till toward morning, having become somewhat worse again about midnight. Toward morning the patient got a little sleep, and when I saw him he was breathing comparatively freely. The breathing, however, was by no means noiseless. Urine was now examined and some albumen found. There was no other indication of nephritis at any time, and the albumen may have been only temporary and due to congestion of all the viscera, produced by the extreme dyspnœa.

March 16th.—At about 5 P.M. the patient had another sudden accession of dyspnœa. I did not feel at liberty to further temporize with internal medication, and asked Dr. Dillon Brown to intubate, which he very skilfully did, using a hard rubber tube and relieving the patient almost instantly. Dr. O'Dwyer very kindly came to see the patient soon after, and when he arrived the tube was *in situ* and the patient was breathing perfectly freely—indeed better than at any time during my attendance.

March 17th.—The patient passed a very good night, and when urged to go to the hospital for further treatment, did not think it necessary, as he felt all right. He was, however, prevailed on to be moved to Bellevue later on in the day.

Again, on March 19th, I saw the patient with Dr. Brown at the hospital. He wanted to go home, as he considered himself perfectly well. He coughed up the tube about an hour before we saw him, and was none the worse for its absence. He said that the tube was loose for some hours, and that he kept it in place by swallowing it down whenever he could feel it slipping up. When it was expelled, a slight cough brought it up into his mouth. A further examination of his urine will be made to determine whether the œdema was due to Bright's disease, or whether it was due simply to a localized laryngeal congestion.

A Grim Jest-book might be compiled from the prescriptions filed away in the shops of druggists, many of them reposing in austere loneliness under a disguise of execrable hand-writing. The following has been rescued from an obscure pigeon-hole by a Chicago paper, and is a relic of the pioneer doctors of fifty years ago: "A Recipe for Armilda Purdy's Lung Complaint.—Take of the bark of wild Cherry, Sassafras, Sycamore, yellow poplar, Dogwood and black oak, a Double handfull of each; take of Sasaparila Root and Spignard one handfull of each; to which add three Gallons of water. Boil it Down to one; strain it and add one quart of Good french Brandy and one quart of Honey, of which take about one Gill three times a day. This was tryed by Jonathon Douglas when he Could not Set up and has Cured Several others. N.B.—If She Canot take agreeable to Directions Take what She Can."

Progress of Medical Science.

The Clinical Significance of Albuminuria.—The following editorial comments on the subject are made by *The Lancet:* "Albuminuria may seem of late to have lost a good deal of its significance as a clinical symptom. On the one hand, it has been shown that serious degeneration of the renal organs may have occurred, and even advanced to a fatal termination, without albumen having made its appearance in the urine; on the other, we have increasing evidence to show that albumen frequently appears in the urine under conditions that differ but little, if at all, from the normal. Under these circumstances there is a danger lest the routine examination of the urine for albumen be neglected, or, even if regularly practised, the importance of its detection insufficiently appreciated, since its presence thus seems to have but slight determining influence. Already there is a tendency on the part of patients, when the verdict of albuminuria associated with renal changes has been pronounced, to appeal to others, whom they hope may be likely to prophesy smooth things; and where such opinions are sought in merely casual consultations, too favorable verdicts are likely to be given in cases where the definite character of the renal changes is not otherwise well marked—a point which Dr. George Johnson particularly emphasized in a recent communication to *The Lancet.* Thus too great assurance often results from the non-detection of albumen in cases where, from the polyuria, the tense pulse, and the heaving left ventricle, the medical attendant has been led to suspect the existence of renal disease. Mistakes in this direction, however, are now less excusable than before the researches of the late Dr. Mahomed into the pre-albuminuric stage and its association with increased arterial tension, who before his death had collected abundant evidence establishing the fact that the kidneys examined post mortem in many patients dying at Guy's Hospital, whose urine, though repeatedly examined in the wards, had never been in the slightest degree albuminous, exhibited considerable degenerative changes. Professor Dieulafoy has made similar observations, and has even gone so far as to describe the progression of the symptoms observable in the pre-albuminuric state. This important fact, which is really the outcome of the exhaustive and elaborate researches of Gull and Sutton, is not only of immense importance to the physician, who, by the early detection of the disease during the pre-albuminuric stage, is enabled to arrest, or rather control, it by hygienic and therapeutic treatment, but also to the surgeon, who would decline an operation if the warning symptoms were present, notwithstanding the absence of albumen from the urine."

At the present moment, however, the attention of urinary pathologists is directed more toward the clinical significance of albuminuria occurring in persons apparently healthy, or, perhaps, to speak more correctly, not presumably suffering from organic disease. For many years physicians have been aware that albumen intermittently makes its appearance in the urine, but, owing to the infrequency with which, in days gone by, routine examinations of the urine were made, little attention seems to have been drawn to the fact. With the advent of a stricter clinical examination of the urine, the frequency with which "intermittent albuminuria" occurred was noted, and immediately explanations were forthcoming to account for the phenomenon. Dr. Pavy, noticing the tendency to the periodic recurrence of the albuminuria, especially during the morning hours, the time when the alkaline tide is also at its highest, regarded it as connected with a physiological cyclic change occurring at that period of the twenty-four hours. Dr. Pavy's views have been criticised, and at the time he brought forward his theory we pointed out that this cyclic appearance of albumen may be anticipated or postponed by making the patient rise from bed earlier or later. Indeed, as Dr. Stirling in a recent paper in *The Lancet* remarks, the condition is probably due to a temporary state of paresis, owing to the sudden filling of the renal vessels caused by the patient rising from the horizontal position in the act of getting out of bed. The frequent occurrence of an intermittent albuminuria in young persons has led to the term "adolescent albuminuria," a term permissible only so long as we remain unacquainted with the conditions that produce it. Many explanations have been offered, but no one is completely satisfactory. It is probably due to a weakened state of the renal vasomotor centres, which are easily thrown off their balance by exaggerated physiological conditions, such as over-exercise or indigestible food; by over-stimulation of the generative apparatus—masturbation in the male, and disorders of menstruation in the female. With respect to the latter, we should bear in mind Dr. Matthews Duncan's observation of the frequent connection of albuminuria with parametritis. Over-study or anxiety also seems a frequent cause. Most hospital physicians are consulted by some of the students of their respective schools every year, with respect to the temporary appearance of albumen in their urine, especially prior to the examinations, and hear nothing more about it when these crises are over. Sir Andrew Clark, at Dublin, was able to give very interesting information on this point with regard to the effect the civil service examination has in the causation of albuminuria in urine of many of the candidates. As distinct from cyclic and adolescent albuminuria, Dr. Ralfe (*The Lancet,* October 25, 1886) has described a "paroxysmal albuminuria" very closely resembling hæmoglobinuria in many of its clinical characters, the blood-coloring matter being alone absent. In these cases an increase of urea and the presence of urobilin is usually noted, whence that observer infers that the albuminuria is caused by an increased hæmolytic action of the liver on the corpuscles. This examination of the other constituents of the urine at the same time that the presence of albumen is determined, and the comparison of them with samples passed when the urine is non-albuminous, seem to us most likely to yield definite information regarding the causation of the albuminuria in many of the anomalous forms. But the inquiry should not stop at the determination of the urea and urobilin, indican, etc., but be extended to the character of the albumen itself. As Dr. Saundby very rightly observes, if the albumen in the paroxysmal form of albuminuria is derived from the blood-corpuscles, a large proportion ought to consist of paraglobulin. With regard to the question of the existence of the two forms of albumen in the urine—paraglobulin and serum-albumen—in some forms of albuminuria, we cannot pass over Dr. Herman's interesting observations, recently communicated to the Obstetrical Society, of the condition of the urine in puerperal eclampsia, in which he confirms the statements of Maguire and Ralfe that the paraglobulin is in excess of the serum-albumen, and this he found to be especially so with cases of the congestive and *foudroyant* type. These observations are especially interesting as pointing to the conclusion that the changes in the kidneys are brought about by changes in the blood rather than, as has been generally taught, by mechanical pressure, either direct or indirect. We might extend this article almost indefinitely, but we have said enough to show that albumen has not lost its interest or importance as a clinical symptom, but that every individual case of albuminuria requires close and attentive study; above all, we would insist that too hopeful views should not be taken, certainly as far as treatment and enforcement of hygienic regulations are concerned; for we are ready to endorse Dr. Johnson's opinion, that often intermittent albuminuria is a prelude to the more persistent and fatal form, while we know that artificial induction of albuminuria in animals is, after a short time, always followed by changes in the glomeruli and tubules. On the other hand, if care and attention be paid to dietetic and hygienic considerations, the patient's life may be considerably prolonged, and the advent of the more grave form of disease postponed for many years.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, May 5, 1888.

HIGH LICENSE AND THE PROFESSION.

WE shall not be accused, we trust, of a professional bias in expressing the opinion that the high-license bill is the most important measure which our legislators have this season considered. This may be honestly stated on purely humanitarian grounds, without any partisan reference. The far-reaching effects of drunkenness bring the matter to the personal attention of every medical man.

That too much liquor is drunk by all classes in the community no one will deny. Its effects are transmitted from one generation to another. Very few authorities now believe that the distinct craving for alcohol is transmitted from father to child, but all recognize the peculiarly unfavorable environment of the child of a drinking father. This latter circumstance is made much of by philanthropists, who excuse what a moralist would condemn. It is made much of by intemperate men who, excuse their own shortcomings by the statement that their grandfathers drank.

The religious element of the community is apt to consider drunkenness in a different light. With them it is not a disease or inherited tendency. It is a positive sin, which they place in the same category (quoting Scripture) with "adultery, hatred, murders, and such like." Admitting the truth of this view, it is yet evident that measures are called for that shall remove temptation from those liable to fall, and this we believe can be best done in the present state of public opinion by the operation of a high-license statute.

The medical view of the matter is a middle one between the two above stated. Many of the diseases from which mankind and womankind suffer come from direct violation of physical laws, though they may not be so terrible in their application as is alcoholic excess. They do not so directly lead to crime and others' misery. We are hardly prepared to go so far as do some who have made the subject of inebriety a special study. The conclusions which they state seem altogether too radical as a basis for practical procedure. We think that the doctrine that the inebriety of any person is in itself evidence of more or less mental unsoundness is a dangerous one to admit without qualification.

But, in any event, it is evident that the present sale of liquor must be greatly restricted, and, as we have said, high license seems more likely to bring about this result than any other plan. As moral sentiment advances, the law can approximate in stringency to absolute prohibition. The tendency is to make the question one of party politics. A political side it certainly has, for advance can be made only through political agencies, but it has also a social aspect which we, as guardians of the public health, are bound to consider. It has never been the practice of our profession to assume sides with any party, and it need not do so now. Still less need it act through any of its own societies or associations. But, as a citizen, each one can bring his personal influence to bear in favor of high license, and help to relieve modern society of its greatest curse.

THE LOMB PRIZE ESSAYS.

IT is well known that Mr. Henry Lomb, of Rochester, has offered in time past, through the American Public Health Association, cash prizes for the best essays on sanitary topics. This offer has led to the publication of some very noteworthy monographs on the assigned subjects. This year the offer is repeated. There are to be two prizes, the first for five hundred dollars, and the second for two hundred. The topic selected is in every way a most admirable one, viz., "Practical Sanitary and Economic Cooking, adapted to Persons of Moderate and Small Means." Pursuing the prospectus still further, we find that the essays are to cover, in the broadest and most specific manner, methods of cooking as well as carefully prepared receipts for three classes: (1) Those of moderate means; (2) those of small means; (3) those who may be called poor. For each of these classes receipts for three meals a day, for several days in succession, should be given, each meal to meet the requirements of the body, and to vary as much as possible from day to day. Formulas for at least twelve dinners, to be carried to the place of work and mostly eaten cold, should be given. The combined considerations should be healthfulness, practical arrangement, low cost, and palatableness.

We are glad to note the extremely practical character of the topic. Its application to the daily life of our poorer classes may still be a long way off, but a beginning must be made at some time and in some way. The cost of food is not at the present time exorbitant. The price of any article may be raised occasionally by the manipulations of "trusts," but the rise is only temporary. Competition among the circles of food-producers is so keen that prices are, on the whole, low. But it is very evident to anyone who sees much of the poor that the great trouble lies, in the main, not in their inability to procure proper amounts of food, but in their ignorance as to how to utilize what they already have. We use the word "utilize" in the sense of making nutritious and palatable.

Many will doubtless recollect the series of letters on "Prisoners of Poverty" which were published in the Sunday *Tribune*, awhile ago, by Mrs. Helen F. Campbell. These communications were based on personal observation of the poor in their homes, and brought out with painful clearness the fact that the great mass of the tenement-house population have a very faint idea as to how properly to prepare the plainest and cheapest kinds of food. Tea is the universal drink, and frying the general mode of cooking.

There is no field of philanthropy calling more loudly for help than this. All physicians who see any dispensary practice know how completely the effect of treatment is nullified among the poor by dietetic vices. These latter arise, we again affirm, not so much from the lack and poor quality of food as from improper modes of preparation. The admirable lectures of Miss Juliet Corson and others before the various cooking schools have shown how much may be done in this direction. When the reform has set in and gathered some headway, we may be able to see some results from the treatment of dyspepsia and chronic rheumatism even in dispensary patients. We make the matter of diet of cardinal importance in the treatment of those maladies among the well-to-do; why not attach to it an equal importance with those who live under greater unfavorable sanitary conditions?

The public and formal discussion of the subject in the prize essays will ably supplement what has already been done, and we commend the choice of those who have selected this topic.

EMPEROR FREDERICK'S CONDITION.

It is quite difficult to reconcile the conflicting reports concerning the present condition of the Emperor of Germany. The official bulletins are purposely evasive, and it is only by a careful study of the salient points in the case that any reasonable conjecture can be offered. Strange as it may seem in view of the multitude of counsellors, no positive and satisfactory diagnosis of the disease has been made. The medical staff has disagreed to such an extent that the issue appears to be more a political than a scientific one. There never was a case of supposed cancer which has been hemmed in by so many difficulties. The German specialists are firm in their convictions as to the existence of malignant disease, while Dr. Mackenzie and his immediate associates are prudently non-committal. The latter thus far appear to have the better side of the argument against carcinoma, for it must be recollected that as yet the microscope has failed to settle the dispute. The clinical history, also, is not a classical one of ordinary cancer of the larynx. Cancer, as a rule, is not attended with sloughing, nor with persistent and acute inflammatory processes. The latter are usually explained by other specific conditions, amenable not only to local but constitutional treatment. The persistence of the local lesions can be explained only on two suppositions: Either the disease is an unusual form of cancer progressing to its end, or it is a non-malignant disease, curable under ordinary circumstances, but which has left behind it the results of sloughing—irregular cicatricial constrictions and other local changes, which are equally ominous in their ultimate results. Certain it is that the tracheotomy tube is still worn and, in itself, is causing much irritation and suppuration. In either event the outlook is a very bad one. The worst symptom is the continuance of fever, indicating the probable existence of blood-poisoning, either directly from the suppurative processes in and around the site of the tracheotomy tube, or indirectly through infection of the lung-tissue by downward leakage of the poisonous discharges through the trachea and bronchial tubes.

DOCTORS AS STORY-TELLERS.

Dr. W. P. Northrup, of this city, the worthy President of the New York Pathological Society, can see as much through a sea-glass as through a microscopic lens. In the current issue of *Scribner* he describes a cruise on a pilot-boat, which must be read with interest by everyone. The sketch is a model of its kind, and proves him to be a wide-awake observer and an entertaining story-teller. His descriptions of the rough and ready sea-life of the hardy pilot are specimens of high art in composition, and justly entitle him to the warm congratulations of his many friends. But even better than reading it is to hear him tell it. Try it again, doctor.

PETERS AND GOLDSMITH.

The sketch of Middleton Goldsmith in our present issue is one which will be read with pleasure. It was eminently fitting in Dr. John C. Peters, his old friend, to read, on the occasion of delivery of the Goldsmith Lecture for this year, an account of its founder. We envy Dr. Peters not only the pleasure of knowing such a man, but the ability to draw such lovely and telling word-pictures of the good old man. Dr. Peters is eminently felicitous in life-sketches, and we should all be willing that he should outlive us, and have his heart as warm and his head as clear as they are now. We never knew Goldsmith, because he was before our time, but we have learned to love and admire him after reading the sketch. It is a clear and bright life-view, with the sunset crowning the mountain.

News of the Week.

American Medical Association.—The next annual session will be held in Cincinnati, commencing Tuesday next. A full report will be published in our next issue, which will be necessarily delayed.

Yellow Fever Inoculations.—Dr. Domingo Freire's yellow fever inoculations were reported, by the French expert sent to investigate them, to be worthless. Now Dr. Sternberg, the United States Commissioner, returns and reports: "The question of etiology of yellow fever still remains unsettled; the claims of Freire, of Brazil, and Carmona, of Mexico, with regard to the discovery of the yellow fever germ are without foundation; their statements and statistics of protective inoculation for this disease have no scientific value." Says the *Boston Medical and Surgical Journal*: "The technique of both Freire and Carmona was found to be very defective, both microscopical and bacteriological, proper staining and cultures not having been performed, nor were proper precautions taken to protect the specimens of blood, etc., from contamination with ordinary bacterial forms. In fact, the organism that Freire considers pathogenic and specific, Sternberg declares to be an ordinary form, probably staphylococcus albus. The organism found by Lacerda, confirmed by Babes, was a diplococcus Sternberg found in the kidneys and other organs in two out of nine cases, or in just about the proportion that the former observer had reported; as this organism is not constant, and was absent in some cases exhibiting otherwise well-marked characteristics of yellow fever, its causative action cannot as yet be accepted. Dr. Sternberg found, in one instance, a peculiar short bacillus in the glomeruli of the kidney, but as he had not succeeded in meeting with it again, he hesitated before assigning to it any special rôle in causing the disease. The statistics of yellow fever inoculation, upon examination, were also found not to bear criticism, and, in fact, were generally discredited by the other physicians, members of the Academy of Medicine in Rio."

The Iowa Medical Law.—Attempts are being made by irregulars and quacks to amend and destroy the efficacy of the State Medical Law.—*Iowa Medical Reporter.*

The Latest Reports of Pasteur's Antirabic Inoculations.—In 1887 there were 306 persons living in the Department of the Seine who presented themselves for treatment at the Institute. Among them only two died. Among 44 persons bitten by mad dogs, and not treated by inoculation, 7 died.

"Mistura contra Neurastheniam."—An up-town druggist of this city writes that he frequently has received prescriptions written: "℞. Mist. contra neurasth. O j. Sig.— ℥ ss., dose." He asked the doctor what it was, but the gentleman in question did not know, and referred him to another druggist. Perhaps some of our readers know what the mixture is.

The Late Dr. Agnew's Will.—Dr. Agnew leaves all of his property to his wife. His will contains the following clause: "I wish particularly to express my regard for my associate, David Webster, a physician residing in New York, and for that purpose I request my executrixes and executor to give him, after my decease, such token of my regard for him as may to them seem proper."

Professor John C. Dalton.—We learn with pleasure that Dr. Dalton has nearly recovered from his recent attack of illness.

New Dispensary in Washington.—A new dispensary, called the Eastern Dispensary, has recently been opened in Washington, D. C., for the treatment of the poor of the eastern sections of the city.

The American Surgical Association has issued the preliminary programme of its meeting in Washington next September. The list of papers is as follows: Excision in Articular Disease, by Dr. John Ashhurst, Jr., of Philadelphia, Professor of Clinical Surgery in the University of Pennsylvania; Micro-organisms: Their Relation to Surgical Disease, by Dr. Nicholas Senn, of Milwaukee; Cerebral Localization: The Relation to Operative Surgery, by Dr. Stephen Smith, of New York; Case of Intercranial Tumor Removed (patient to be presented), by Dr. W. W. Keen; Experimental Researches on Gastric Fistula, and the Bearing on Gastrostomy, by Dr. J. Collins Warren, of Boston; Forty Years of Chloroform and Ether, by Dr. D. W. Yandell; The Surgical Management of Typhlitis and Perityphlitis, by Dr. W. T. Bull; The Choice of Operation for Vesical Calculus, by Dr. Hunter McGuire, of Richmond, Va.; Hernia: Its Treatment, etc., by Dr. C. H. Mastin, of Mobile, Ala.; The Radical Cure of Hernia, by Dr. George W. Gay; Certain Indications for Trephining, and their Comparative Value, by Dr. J. W. White, of Philadelphia; Nerve Stretching, by Dr. N. P. Dandridge; Nephrectomy for Gunshot Wound of the Kidney, by Dr. DeForest Willard.

The Louisville Training-school for Nurses.—Under date of April 20, 1888, we are informed that the Louisville Training-school for Nurses has just graduated its first class, and that the school is prepared to furnish good nurses for Kentucky or other doctors.

An Appropriation for the College of Physicians and Surgeons at Baltimore.—A bill has passed the House of Delegates of Maryland appropriating $10,000 for the use of the College of Physicians and Surgeons of that city, to be used in the erection of a building adjoining the City Hospital on Calvert Street. The bill provides that the College shall support one free bed for each County in the State.—*Maryland Medical Journal.*

Dr. Charles McBurney has been appointed Visiting Surgeon to Roosevelt Hospital in place of Dr. Sands, who has resigned. Dr. Frank Hartley and Dr. Richard J. Hall are appointed his assistants.

Bellevue Hospital.—Dr. R. J. Hall has been appointed Attending Surgeon in place of Dr. McBurney, resigned. Dr. George L. Peabody has been appointed Attending Physician in place of Dr. Bull, resigned.

International Congress of Anthropology.—An International Congress of Anthropology will be held under the auspices of the New York Academy of Anthropology, at Columbia College, New York City, June 4, 5, 6 and 7, 1888. Sessions from 10 to 12 A.M., and from 2 to 5. P.M.

Wasted Sunbeams.—Dr. Gouverneur M. Smith's article upon this subject in a recent issue of The Medical Record has justly excited much approving comment. The *Evening Post* suggests that some one will have to set the fashion. But, meanwhile, it commends Dr. Smith's account of skyward summer-resorts for each house as rational and pleasing, while his picture of what might be done for the tenement-house population surely is almost pathetic.

The American Association of Obstetricians and Gynecologists is the name of a new organization which seems to be a rival of the American Gynecological Society. It was organized in Buffalo, on April 19th. It will send a delegation to the Congress at Washington, this fall. The officers are as follows: President, W. H. Taylor, M.D., of Cincinnati; Vice-Presidents, Drs. E. E. Montgomery, of Philadelphia, and J. H. Carstens, of Detroit; Secretary, W. W. Potter, M.D., of Buffalo; Treasurer, X. O. Werder, M.D., of Pittsburg; Executive Council, Drs. Thomas Opie, of Baltimore; J. H. Etheridge, of Chicago; C. Cushing, of San Francisco; Melancthon Storrs, of Hartford, and Byron Stanton, of Cincinnati; Delegate to the Congress of Physicians and Surgeons, James P. Boyd, M.D., of Albany.

The Supreme Court of Texas has decided that a doctor is entitled to extra fee for testifying as an expert when summoned by the court to do so.

Mr. Thomas Bryant has retired from his post of Surgeon to Guy's Hospital. He had held this position for thirty-one years.

Proposed Law with Regard to the Embalming of Dead Bodies.—A bill has been introduced into our State Legislature which provides that "it shall not be lawful for any person or persons to introduce into or upon any dead body of any person or human being, any poisonous substance, organic or inorganic, for the preservation of the same, or any so-called embalming fluids or materials of any kind, which will, in any manner whatsoever, interfere with chemical tests which may subsequently be applied or made use of by chemists in medico-legal investigations."

Why the Crown Prince of Germany has One Arm Shorter than the Other.—An esteemed correspondent, who is personally acquainted with the Crown Prince, sends us the following interesting item: "In your issue of March 24th you reprint the statements of the London correspondent of the *New York Times* regarding the health of the Hohenzollern family. According to this writer, scrofula is perfectly at home among the members of this family, who, up to the beginning of the present Emperor's throat-trouble, were conspicuously known for their extraordinary health and vitality. It would take too much time to follow up all of the assertions made in the article referred to, but one of them, regarding the present Crown Prince, Wilhelm, I would particularly point out as entirely wrong. The *Times*' correspondent writes: 'In the Hohenzollern case not only is the Emperor suffering from this hereditary taint, but his son William is hereditarily deaf, and was born with a mere shapeless ball of flesh where the right hand ought to be.' The real facts regarding the physical condition of this prince are as follows: Wilhelm's mental faculties are conspicuously bright. He attended the gymnasium at Cassel for years, and graduated in the middle of his class. Had he been deaf at all, he could never have been educated in that way. The 'mere shapeless ball of flesh where the right hand ought to be,' only exists in the imagination of the *Times*' man, for in reality the prince has a perfect hand, but a shortened humerus. When his birth was anticipated, the good Queen of England sent two London physicians to attend to her daughter in confinement. When the time arrived these gentlemen found it necessary to make version. Their attempts at this operation, however, were unsuccessful. Professor Martin (the older) was then called, but refused to come, stating that, as he had not been considered competent enough to attend to the Crown Princess at the start, he preferred to not consult with the imported physicians. It required a direct command of the King to compel Martin to see the case. He at last went, made version, delivered the princess of a living boy, handed the child to the other attendants, and left the room as he had come, without ever taking notice of the other doctors. Some three or four days later the London physicians found the child's arm broken just below the shoulder. Whether the unsuccessful attempts of the English practitioners or the successful one of Martin had resulted in the fracture, could not be ascertained; but the prince, at least, is of the opinion that he would have been better off if his grandmother and her doctors had not interfered with him."

The Late Dr. E. G. Loring left $30,000 to his widow, his sole surviving heir.

The Preliminary Programme of the American Association of Genito-urinary Surgeons, which meets at Washington, September 18, 19, and 20, 1888, has been sent us by the secretary, Dr. R. W. Taylor. It embraces thirty-two papers, covering a large range of subjects and including nearly all the well-known genito-urinary surgeons of the country. If other associations secure as full and as representative a number of papers, the Congress will prove a brilliant success. The following is the list of papers:

1. Clinical Observations on Diseases of the Testicle. By Dr. L. B. Bangs, of New York City, N. Y. 2. Clinical Observations on Chronic Gonorrhœa; and, 3, Two Cases of Cancer of the Seminal Vesicles, with Pathological Specimens. By Dr. J. P. Bryson, of St. Louis, Mo. 4. Operative Treatment of Hypertrophy of the Prostate; and, 5, Case of Bowel ending in the Urethra of a Child Four Weeks Old—Relief by Operation. By Dr. A. T. Cabot, of Boston, Mass. 6. On the Effects of Rapid Changes of Altitude in an Advanced Case of Interstitial Nephritis. By Dr. George Chismore, of San Francisco, Cal. 7. Connection between Masturbation and Stricture. By Dr. S. W. Gross, of Philadelphia, Pa. 8. Operations on the Kidney. By Dr. W. H. Hingston, of Montreal, Canada. 9. Syphiloma of the Vulva. By Dr. J. N. Hyde, of Chicago, Ill. 10. The Curability of Urethral Stricture by Electricity: an Investigation; and, 11, The Comparative Value of Suprapubic and Perineal Drainage in Curable and Incurable Bladder Disease. By Dr. E. L. Keyes, of New York City, N. Y. 12. The Filaria Sanguinis Hominis in the United States, especially in its Relationship to Chylocele of the Tunica Vaginalis Testis. By Dr. W. M. Mastin, of Mobile, Ala. 13. A Case of Perineal Section for Traumatic Retention—Unusual Condition of the Bladder. By Dr. J. E. Michael, of Baltimore, Md. 14. The Prophylaxis of Syphilis. By Dr. P. A. Morrow, of New York City, N. Y. 15. Unusual Case of Urethral Calculus. By Dr. H. G. Mudd, of St. Louis, Mo. 16. On the Radical Cure of Stricture by Dilating Urethrotomy; and, 17, Demonstration of a Perfected Evacuator, and an Improvement in the Method of Removal of Débris from the Bladder. By Dr. F. N. Otis, of New York City, N. Y. 18. Pyæmia as a Direct Sequel of Gonorrhœa. By Dr. R. Park, of Buffalo, N. Y. 19. Retrojections in Gonorrhœa. By Dr. E. R. Palmer, of Louisville, Ky. 20. Prostatotomy for Enlarged Prostate at the Age of Forty-two. By Dr. Abner Post, of Boston, Mass. 21. A Case of Removal of both Testicles for Recurrent Carcinoma; and, 22, A Case of Nephro-lithiasis, complicated with Hydro-nephrosis, in which Lumbar Nephrotomy was Performed. By Dr. F. W. Rockwell, of Brooklyn, N. Y. 23. Some Points on the Differential Diagnosis of Bladder and Kidney Affections, with Demonstrations of the Cystoscope and other Instruments; and, 24, On the Physiology of the Bladder. By Dr. Alexander W. Stein, of New York City, N. Y. 25. Local Treatment of Chronic Urethral Discharges. By Dr. F. R. Sturgis, of New York City, N. Y. 26. Some Points on the Etiology of Stricture of the Urethra. By Dr. R. W. Taylor, of New York City, N. Y. 27. Operative Treatment of Hypertrophy of the Prostate. 28. Spontaneous Fracture of Stone in the Bladder. By Dr. F. S. Watson, of Boston, Mass. 29. The Relation of the Prostate to Chronic Urethral Discharges, and The Value of the Tolerance of the Iodides as a Diagnostic of Syphilis; and, 30, Urethral Stricture and Enlarged Prostate in their Relation to Vesical Calculus and Calculus Pyelitis, with Cases. By Dr. J. William White, of Philadelphia, Pa.—By Invited Guests. 31. The Prognosis of Stricture, based on Thirty Years' Death-record of Stricture at the London Hospital and the Practice at St. Peter's Hospital. By Dr. E. Hurry Fenwick, of London, England. 32. The Congenital Anomalies of the External Urethral Orifice. By Dr. C. Kaufmann, Zurich, Switzerland. R. W. Taylor,

Secretary.

Society Reports.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

Ninetieth Annual Convention, held at the Hall of the Faculty, Baltimore, Md., April 24, 25, *and* 26, 1888.

Dr. I. F. Atkinson, President, in the Chair.

Drs. G. L. Taneyhill and Robert T. Wilson, Secretaries.

Tuesday, April 24th—First Day.

THE PRESIDENT'S ADDRESS.

He began by speaking of the evil effects of indiscriminate alms-giving and poor relief, and its tendency to pauperize the recipients. Much of such charity does a small fraction of good, but intensifies the very evils it is intended to arrest. Fortunately, there are many with wealth, kindliness of heart, clearness of brain, and energy of hand who realize that the bestowal of alms is not always true charity, that assistance to the unworthy may prove unjust to the deserving and meretricious to the recipient. A large class also does good by distributing the bounty of others. The outcome of all such united efforts at systematic charity resulted in the formation in several cities of

CHARITY ORGANIZATION SOCIETIES.

They have done incalculable good to the deserving poor. It may be profitable to consider the administration of medical charity, a subject worthy of attention and not trite. Generally, those who stand most in need of assistance are those whose misfortunes are the more or less immediate results of their own actions. Two classes receive charitable relief: 1, Those who from disease, age, or infirmity are made to work for a livelihood; and 2, those, who, suffering from neither of these disabling causes mentioned, live in idleness. All in the first class need help, and not all in the second class should be excluded. Able-bodied paupers exist since the days of strikes. The well and healthy laborer may find as a result of his toil enough compensation to supply his daily wants, but when sickness appears he appeals to charity for support. In 1872, London, with four million inhabitants, treated gratuitously at the various hospitals and dispensaries about 1,100,000 sick; 58,382 as in-patients and 1,083,674 as out-patients, and in that year £994,388 was contributed to this object; that is, about three persons in every ten in London received medical charity in 1872. The stress of work on the medical attendants in these dispensaries is so great that in one hospital (St. Bartholomew's) dispensary 120 patients were seen and dismissed one day in 70 minutes; that is, 35 seconds for each patient.

Pauperism often begins in this way. Patients able to pay are daily seen in our dispensaries and hospitals. The competition of medical schools for clinical material, and the desire of medical men for clinical experience, encourage pauperism. Persons receive medical charity who would scorn it if charity offered in other ways. The "Provident Dispensary Plan" started by Smith, of Southam, England, in 1837, has not been the success it should be. In 1874 there were only eleven such dispensaries in London. The Baltimore & Ohio Railroad Relief Association is a good example of an excellent organization for medical relief. In all such institutions membership must be compulsory. The American laborer and poor man is less willing to go to hospital than is his fellow-laborer in England. Our hospital arrangements are defective and their equipment and management inadequate. In New York City there are 3,502 public free beds and 1,418 private beds; while in Baltimore there are only 868 free beds, of which 365 are in the almshouse. Organized charity would soon weed out the undeserving cases, and the saving would more than compensate for the expense of investigation by paid officers of this society. "District Nursing" would largely increase the amount of good which the medical man does. Even the Johns Hopkins Hospital, with 120 free beds, cannot fulfil all the requirements of this community. We should work toward the perfection of our medical charities and strive for improvement in the future. At the conclusion a vote of thanks for the address was adopted.

SECTION IN SURGERY.

Dr. Christopher Johnston, Sr., Chairman.

The Chairman made the following report on the subject of

TETANUS AND ERYSIPELAS.

Surgeons boldly invade all great cavities of the body for the cure and for diagnosis of diseases. Surgery has been of great assistance to gynecology. Pathology, diagnosis, and the means of relief march hand in hand. In brain surgery, physiology and pathology work together. There exist traumatic tetanus and traumatic erysipelas, and also idiopathic tetanus and erysipelas. These diseases cannot originate *de novo*. Cold, damp, and bodily fatigue were supposed to be the great causes, but the microbe, although not recognized by some, is undoubtedly the cause in all cases. The two sides of this question are argued by the Dualists and Unicists, each having their followers. Verneuil is a Unicist; Nicolaier and Flügge believe strongly in the bacteriological origin of the disease in every form. Certain localities and soils seem to possess the power of causing tetanus. There is a tetanic district near Baltimore, and one in Long Island. Many investigators have looked for the bacillus of tetanus, with varying results. The inoculations were not always free from objection. Human tetanus is an infective disease, transmissible from man to rabbit. Many veterinary surgeons have had a succession of cases of tetanus after castration, evidently due to infected instruments. Verneuil thinks that operators may convey tetanus to man or animal with infected instruments, even if used after long intervals. Horses seem to have much to do with conveying tetanus to man. Brieger eliminated several different *toxics* from cultivation of tetanus bacillus.

The microbe of erysipelas has been isolated, cultivated, and inoculated. It seems necessary in operations to isolate patients as an element to success. The evidences of the contagiousness of erysipelas are now admitted to be abundant and satisfactory.

To summarize: The microbe of tetanus is a possibility, as also its contagiousness. The equine origin of the disease cannot be accepted. Erysipelas is propagated by a special microbe, that of Fehleisen. It has been isolated, cultivated, and inoculated. Suppurative symptoms are probably produced by the streptococcus aureus.

As a supplementary report, Dr. Robert W. Johnson read a paper on

TREATMENT OF THE SAC IN INGUINAL HERNIA.

After dwelling on the dangers of hernia and the importance of the subject, as characterized by the attention paid to it by the British Medical Association in the past year, he freely reviewed some of the early writers on this subject, and its treatment, the manner of operation, and the numerous peculiar remedies employed in different parts of the world during the different ages. He dwelt on the manner in which a patient was castrated when operated on for hernia. Banks was of the opinion that no person who could comfortably wear a truss should be subjected to an operation. There are three classes of cases: Those perfectly under the easy control of the truss, those not so, and those cases about whose contents there is any doubt or uncertainty. In all cases an operation may be justifiable, even if the hernia be non-strangulated. It may, and often does, happen that a truss is broken and the patient suffers untold agony because unable to procure another, as in the case of a sailor at sea. The sac should be removed and the wound closed with catgut sutures, as silver sutures cut the tissues.

DISCUSSION.

Dr. J. Edwin Michael spoke of the importance of making an operation for strangulated hernia radical, also for operating in cases not strangulated. There is undoubtedly some danger in the operation, but the patient is so much discomforted that with precaution an operation may be justifiable. Patient should be instructed before the operation. He explained his idea of the mechanical action of a silver suture, and thought it did not cut the tissue.

Dr. J. W. Chambers said it was no longer a question what should be done with the sac. There was little danger. He had done recently three cases with no deaths, and very little rise of temperature. He prefers catgut to silver wire.

Wednesday, April 25th—Second Day.

THE ANNUAL ORATION

was delivered by **Dr. Richard Gundry**, Superintendent of the Maryland Hospital for the Insane. He announced as his subject

SOME PROBLEMS IN MENTAL ACTION.

In a scholarly and chaste address he traced the various causes of insanity. There are three causes to which it is referable: Inheritance, environment, and personality. Each of these influences was considered at some length. As methods of prophylaxis and treatment, Dr. Gundry urged the importance of manual training as a means of mental diversion and training. Those predisposed to insanity, he asserted, should early be taught the lesson of self-control. The inhibitory power of physical exercise may be seen in various ways. "A noisy, blasphemous boy was quiet all the week, while at work, but noisy on Sunday. When set to work on Sunday he became quiet." The inebriate, the vicious, can all be reclaimed by methods of substitution, provided they themselves seize the idea and do not let it slip away. Character may be largely formed by circumstances, but our own desires have much to do with shaping these circumstances.

SECTION ON PRACTICE OF MEDICINE.

Dr. P. C. Williams, Chairman.

Dr. Williams made the following report:

He called the attention of the Faculty to several important points:

1. We should recognize the meeting of the International Medical Congress, held at Washington last year, as an era in the medical history of the world and of our country.

2. Several clinical points are of great interest:

a. The peculiar epidemic of measles in Baltimore this year. It was wide-spread, and patients had unusual nervous symptoms and unusually high temperature at a late period of the disease, with no inflammatory trouble in the lungs, and with few cases of secondary pneumonia. Extensive mortality and gradual increase of cases of measles in this city during the past winter. From October to March, included, there were 149 deaths from measles, beginning with 3 in October and ending with 49 in March—a serious showing for a disease usually considered trivial.

b. Prevalence and mortality of pneumonia in Baltimore: From October to March, included, there were 485 deaths from pneumonia in Baltimore, beginning with 33 in October and ending with 133 in March. There were many cases among the young. Before forty-five, simple pneumonia is not usually considered dangerous. The question is whether it is an inflammatory or contagious disease.

c. There has been a great prevalence of serous diarrhœa, apparently due to climatic changes, and not to bad water.

d. Fifteen years ago he had read a paper before the Society on the use of the yellow jasmine in supraorbital neuralgia. He believes it is almost a specific, and next to ergot good in cerebral congestion. The tincture is used, and a stronger tincture than usual. He stops it when ptosis appears.

Dr. George J. Preston then made a supplementary report on the subject of

PERICÆCAL INFLAMMATION.

After speaking of the ease of opening the peritoneal cavity without danger, he said that the terms paratyphlitis, perityphlitis, and appendicitis were cumbersome terms, and probably not correct, as it was doubtful if one occurred alone in man. The best division is into: 1, Typhlitis stercoralis; 2, perityphlitis; 3, appendicitis.

After reviewing the anatomy, he said that appendicitis was not easily recognized during life. He enumerated the number of objects found in the cæcum. The symptomatology is quite distinct. It is not easy to speak of its duration. Occasionally the sac ruptured, and again it sometimes takes on a chronic form. After speaking of the etiology, he said that cases of perityphlitis and typhoid fever were not seldom confused. The prognosis of simple perityphlitis is good if all obstruction be removed. Sulphate of magnesia is dangerous with inflammation. An operation should be avoided, but pus should be evacuated, and the evacuating needle as an aid to diagnosis is not so dangerous as was supposed. He cited two cases from his own practice, in one of which an operation was performed with good result.

DISCUSSION.

Dr. William B. Canfield, in referring to Dr. Williams' remarks, spoke of the part which intemperance played in the large mortality from pneumonia among the younger adults, and also of the contagious element of the disease, as well as its inflammatory nature.

Dr. Joseph T. Smith spoke of bad and unfiltered water as causing diarrhœa.

Dr. P. C. Williams replied that intemperance increased the mortality of all diseases. About seventy per cent. in hospital die of diseases in which intemperance played an important part. In the first quarter of 1887, there were 199 deaths from pneumonia in Baltimore, and in the first quarter of 1888, 335 deaths. He believed in the inflammatory theory.

Dr. William Rickert approved of recognizing the International Medical Congress. He thought that climate had much to do with the causation of measles, pneumonia, diarrhœa, and dysentery. He thought that supraorbital neuralgia was a symptom and not a disease.

Dr. Richard Gundry recalled treatment by bleeding. He thinks little of treatment, but prefers small doses frequently repeated. He fully believes that diarrhœa and dysentery are due to climatic change.

SECTION ON OBSTETRICS AND GYNECOLOGY.

Dr. L. E. Neal read a paper comparing

CÆSAREAN SECTION AND CRANIOTOMY ON THE LIVING CHILD.

After reciting two cases he proceeded to mention the best possible treatment of contracted pelvis, by: 1, Removal of the uterine appendages before conception; 2, induction of premature labor at a period of extra-uterine fœtal viability.

After speaking of delivery by version, forceps, and other means in contracted pelvis, he said the last resort was Cæsarean section or craniotomy. Craniotomy destroys one-half of the human lives at stake, while Sanger's operation, as now performed, saves almost all mothers and children. He does not believe that pelvimetry on the living subject at term is always sufficiently accurate to be a guide, for we have no means of measuring the head of the unborn child. It does not seem as if—the natural passages being two and one-half inches conjugate—the line of natural delivery should be drawn there. Craniotomy does not seem right when death is certain for the child, while Cæsarean section gives them both a chance, and it had no effect on the mortality of the child.

DISCUSSION.

Dr. J. H. Branham thought that too little was said about the mortality of the child. The operation should be done at the time of election, and this is not at full term.

Dr. George W. Miltenberger replied that a week or two before full term was an equally favorable time. The uterus was just as fully capable of contracting then as later.

Dr. J. H. Branham thought that a week or two earlier made a great difference in the viability of the child; he also thought that we could judge of the arrival of full term by the cervix.

Dr. George W. Miltenberger did not agree with Dr. Branham at all. In a large proportion of primiparæ children are delivered one or two weeks before the time, with no harm to mother or child. It was not possible to make such hair-splitting distinctions in the condition of the cervix.

Dr. Wilmer Brinton thought that more stress should have been laid on pelvimetry, and the result will decide as to craniotomy or Cæsarean section. He did not think that foreign statistics of operations could apply to this country.

Dr. L. E. Neal, in conclusion, said that he operated as near term as it was possible to find. He does practise pelvimetry, but it does not always seem such a safe guide and free from difficulties.

SECTION ON SANITARY SCIENCE.

Dr. George H. Rohé, Chairman.

Thursday, April 26th—Third Day.

The Chairman read a paper on

THE RESTRICTION OF CONTAGIOUS AND INFECTIOUS DISEASES.

Forty-three and two-tenths per cent. of the deaths in Baltimore during the past five years were due to infectious diseases, in which are included pneumonia, consumption, and diarrhœa. Many of these diseases may be prevented by sanitary measures. Diseases are imported and domestic. There are many defects in quarantine in Baltimore. There are three ways of preventing disease: 1, By compulsory notification of contagious diseases; 2, by isolation; 3, by prompt disinfection.

1. The physician should report such diseases and should be paid for it by the government.
2. Isolation is very important, whether in hospital or in private houses.
3. Disinfection may be effectually carried out by mercuric chloride (1–500), chloride of lime, six ounces to one gallon of water, and a solution of sodium hypochlorate. Soluble phenyl is also excellent.

As a supplementary report,

Dr. John Morris read a paper on

UNSANITARY AGENTS IN COMMON USE.

This included trees, ice-boxes, refrigerators, and filters. He pointed out the dangers of too many trees about a country house, and enumerated the healthy and dangerous trees and their soils. He spoke of the danger of preserving foods, etc., in ice-boxes, and the advantages of using refrigerators through which there passed a current of cool dry air laden with the vapor of chloride of sodium and permanganate of potash. He referred to impure drinking-water and to the fallacies in many filters.

DISCUSSION.

Dr. John S. Conrad, in referring to Dr. Rohé's paper, thought that quarantine should be under the control of the government as a part of the United States Marine Service. Different degrees of strictness at different ports did harm to commerce. Crowding in quarantine sometimes spreads disease. He felt doubtful about the decided germ-destroying power of all the remedies mentioned by Dr. Rohé.

Dr. John Morris referred to three recent cases of small-pox, and the efficiency of the City Board of Health in preventing the spread of this disease. He did not think physicians should think of taking pay for such noble work.

Dr. William B. Canfield said he had arrived at the port of Baltimore, from Europe, in 1886, and although there was a case of small-pox on board, there was a delay of about fifteen minutes only at quarantine, and all landed. A few weeks later small-pox broke out in a Western town, and it was traced to this steamer.

Dr. George H. Rohé could bring evidence of the efficacy of the disinfectants mentioned by him. He thought householders objected to reporting cases of infectious diseases on account of the inconvenience and expense of disinfecting. The government should do this.

SECTION ON ANATOMY, PHYSIOLOGY, AND PATHOLOGY.

Dr. Thomas S. Latimer read a paper on

REFLEXES,

in which he referred to the fact that reflexes were rarely absent in health, and often absent or exaggerated in certain diseases. He thought their study had grown in importance since the elaborate work of Lombard.

SECTION ON PSYCHOLOGY AND MEDICAL JURISPRUDENCE.

Dr. John S. Conrad read a paper entitled

HALLUCINATION AND ITS ALLIED STATES,

in which he ably discussed hallucinations, delusions, and illusions in the sane and insane.

SECTION ON MICROSCOPY, MICRO-CHEMISTRY, AND SPECTRAL ANALYSIS.

Dr. William B. Canfield presented a paper on

THE MICROSCOPICAL EXAMINATION OF URINARY SEDIMENT,

in which he dwelt more particularly upon blood, pus, epithelium, and casts in all their varieties, not omitting the details of the technique of searching for sediment, etc.

SECTION ON OPHTHALMOLOGY, OTOLOGY, AND LARYNGOLOGY.

Dr. Samuel Theobald, Chairman.

The Chairman read a paper on

THE INFLUENCE WHICH THE DISCOVERY OF COCAINE HAS EXERTED UPON OPHTHALMIC SURGERY,

in which he referred to its advantage in cataract, squint, and other operations on the eye, and as rendering more bearable applications of strong astringents on granular lids.

Dr. W. R. Monroe then presented a volunteer paper on

OXYGEN AS A THERAPEUTIC AGENT.

He reviewed the advantage of the use of oxygen in different diseases, and advocated its more general use by the regular profession.

(To be continued.)

NEW YORK NEUROLOGICAL SOCIETY.

Meeting held Tuesday Evening, April 3, 1888.

THE PRESIDENT, DR. C. L. DANA, IN THE CHAIR.

DR. A. D. ROCKWELL presented two cases of

BASEDOW'S DISEASE,

illustrating results which could not infrequently be obtained by treatment. The first case was that of a young lady who for a year and a half had presented the three symptoms—protrusion of the eyes, swelling of the neck, and increased frequency of the pulse. The neck had measured fourteen inches, and the pulse had varied between 140 and 160, or above. Respiration had been 35, as a rule. After four months of treatment, consisting of dietetic regulation, internal medication, and electricity to the neck, the size of the goitre had been reduced one inch, the exophthalmos had diminished, and the pulse had diminished 60 beats. The patient's whole physical condition also had been changed, so that she could engage in the occupations and the enjoyments of life. At the end of treatment the pulse was 75 or 80. It had intermitted from the first, and it still retained this characteristic. Five years had elapsed since the discontinuance of treatment, and there had been no relapse.

The second case was that of a gentleman still under treatment. Out of thirty cases in the speaker's experience this was but the second in which he had encountered the disease in the male. The case was of an incomplete type. Great improvement had followed treatment.

DR. W. M. LESZYNSKY presented a case of

ACUTE IDIOPATHIC NEURITIS OF THE BRACHIAL PLEXUS,

and read a paper embracing the history of the case, with carefully recorded electrical tests.

The patient was a man who had had an attack several years before, causing a painful and wasting paralysis of the right shoulder. This was followed recently by a second attack, involving the left shoulder. The areas of anæsthesia, local tenderness, and electrical reactions showed that nearly all the branches of the brachial plexus were involved. Syphilis, lead, and trauma were excluded.

DR. BIRDSALL, while acknowledging the difficulty of following the details of a written history, had the impression that the case presented was one of periarthritis, with neural involvement starting from the joint-disease. Dr. Jacoby had reported a number of similar cases.

DR. JACOBY was inclined to the same view; yet he had understood that there had been no antecedent-joint trouble either in the shoulder or the wrist.

DR. BIRDSALL added that in some cases the pain, the joint-involvement, and the paralysis appeared together. Especially in the case of the shoulder there was often no antecedent history of joint-involvement.

DR. DANA referred to Dr. Jacoby's article and asked whether the degeneration reaction had not been absent in his cases of arthritic paralysis.

DR. JACOBY replied that it had.

DR. BIRDSALL added that while this had also been the experience of Erb, in some of his own cases the degeneration reaction had been obtained.

DR. PUTNAM JACOBI asked how the electric resistance had been measured.

DR. LESZYNSKY replied that one electrode had been placed upon the hand, and the other upon the back of the neck. In reply to the objections, he stated that there had been no antecedent history of joint-trouble. At the time of the paralysis of the deltoid the patient could move the joint without pain. The suffering occurred in paroxysms, and with each paroxysm fresh paralyses developed. The circumflex was first affected, the paralysis of the deltoid occurring on the twelfth day, the supra-spinatus and infra-spinatus on the twenty-fourth day, and the triceps on the twenty-sixth day, after a very severe attack of pain which required a large dose of morphia and chloral for its relief. Later, the subscapularis and teres major had been affected, and last the biceps, upon the forty-fifth day of the disease. Repeated examinations of the condition of the joints had been made, and the possibility of joint-affection had been excluded.

DR. GIBNEY had had the case under observation, and had been unable to arrive at any decision in regard to it.

DR. M. ALLEN STARR presented a paper upon

SYRINGOMYELIA, ITS PATHOLOGY AND CLINICAL FEATURES, WITH EXHIBITION OF SPECIMENS, A STUDY OF A CASE, AND REMARKS UPON ITS DIAGNOSIS.

Syringomyelia is a condition of the spinal cord in which abnormal cavities are present within the organ. The cavities are of two kinds: First, a dilatation of the central canal—hydromyelia. Of this two specimens were shown, in each of which the cavity was easily seen by the naked eye and the complete epithelial lining was visible under the microscope. The tissue around the dilated canal was normal. Secondly, a destruction of elements of the spinal cord—syringomyelia. The first stage of its pathology is the infiltration of the spinal cord near the central canal with round cells, connective-tissue nuclei, or gliomatous cells. A specimen showing this condition was exhibited. The next stage is the production of a felt-like connective tissue with numerous nuclei through the spinal cord, but especially near the central gray substance, pushing aside or destroying the spinal elements. This gliomatous mass has a tendency to break down in its centre, leaving a fissure or cavity whose walls are formed by the felt-like connective-tissue mass. The formation of such a cavity is the third stage of the pathological process. Specimens were shown illustrating these three stages, the specimens being from Schultze's cases and obtained partly from Schultze and partly from his pupil, Dr. Van Giesen. In some specimens the cavity was wholly independent of the central canal, which was pushed forward. In another the new cavity opened into the central canal, which appeared to have been dilated. In still others, no trace of the central canal was to be seen. The gliomatous infiltration about the cavity was evident in all the specimens. The size of the cavity varied greatly, from a small fissure to a large cavity around which only a thin rim of spinal tissue remained. The cavity in some cases extended only through a few segments of the cord. In other cases it reached through its entire length. A diagram was shown representing its extent in a horizontal section of the spinal cord, the cord being divided into squares, and forty-eight cases being tabulated. The number of each case being placed in every square affected in the case, the greater number of squares numbered about the central area of the cord indicated the frequency with which this area was involved. The lower cervical and upper dorsal regions of the cord were the parts most frequently affected. The contents of the cavity is usually serous fluid, but may be bloody or thick and hyaline.

The clinical features of the disease were presented by means of a collection of typical cases accompanied by autopsies. They were found to be, first, progressive muscular atrophy with paralysis affecting some or all of the muscles of one limb, and usually extending to the opposite limb and to the trunk, sometimes attended by reaction of degeneration in the paretic muscles; secondly, vasomotor and trophic disturbances in the affected limb, consisting of cyanosis, coldness, bullous eruptions, ulceration, and abscess, and even atrophy and fragility of the bones and a diminution in the excretion of sweat; thirdly, peculiar sensory disturbances, consisting of a loss of the sensations of pain and temperature in the atrophied part, while the senses of touch, pressure, and location were preserved.

The distribution of these symptoms in accordance with the situation of the lesion in the cord was then fully discussed. In half the cases cited the anterior horns were involved and paralysis with atrophy was present. In two thirds of the cases the posterior horns were involved, and the peculiar sensory disturbances were observed.

A case was then related in which the characteristic symptoms were present and in which the diagnosis of syringomyelia had been reached by exclusion, all other forms of spinal disease having been shown to be impossible. The differential diagnosis from amyotrophic lateral sclerosis, tabes, anterior polio-myelitis, meningitis, intraspinal tumor, and neuritis was considered in connection with this case. The paper closed with a reference to the etiology and treatment of the affection, regarding which little seems to be known.

Dr. Shaw said that about five weeks previously he had been consulted by a man, a German stevedore, who by his occupation was much exposed to the cold. The patient's complaint had been that he was unable to feel and protect himself from anything hot. The anæsthesia was especially marked in the right hand, but was present to some extent in the other also. As in Dr. Starr's case, there had been a burn on the right arm near the wrist, for which the patient could not account. There was no ataxia, no atrophy. There were no pupillary symptoms, and the optic nerve was normal. It seemed to him that this might have been a case of cavity of the cord similar to those of the cases described. He inquired, however, whether the origin of the condition was invariable. Might we not, for instance, have a cavity in the cord from malacia secondary to caries of the spine?

Dr. Sachs had been interested in the subject for several years. He had looked up the literature in connection with that of tumors of the cord, and he had also seen a number of living cases diagnosed by Schultze in Heidelberg. The clinical phenomena in Dr. Starr's case resembled those in Schultze's cases without doubt. He inquired, however, whether diagnosis between syringomyelia and intramedullary tumor was not difficult, especially at an early date. The duration of the condition would give a decisive indication at a later stage, as intramedullary tumors seldom lasted as long as two or three years. The difficulty of diagnosis was further increased by the fact that the symptoms so much resembled those of progressive muscular atrophy that the sensory manifestations might easily be neglected in favor of this diagnosis.

Dr. Birdsall recalled, from his own experience, three cases presenting motor symptoms of the atrophic type, vaso-motor and some sensory symptoms, which he thought might be due to cavity in the cervical portion of the cord; he had not yet arrived at an exact conclusion in the matter. There had been in these cases, too, cessation in the advancement of the disease. More careful observations would, he thought, lead to less frequent diagnoses of the typical or system diseases. There would be found many combinations of symptoms which did not correspond to these types. The system diseases, too, probably required to be divided up.

Dr. Booth recalled a case of marked atrophy of the arm and hand with anæsthesia, so that burns were not felt.

Dr. Putnam-Jacobi referred to the fact that in the cases cited a gliomatous tumor had served for the inception of the condition. She asked whether all cases of syringomyelia were referred to this origin. She also referred to the existence of vacuoles in the cord in pseudo-hypertrophic paralysis, in the medulla in tetanus, and in the condition of porencephalia in the brain. In five cases of pseudo-muscular hypertrophy there had been found dilatation of the central cavity or cavities in the posterior horns, although the correlation of the lesion with the paralysis had not been established.

Dr. Peterson referred to a case at the Manhattan Hospital where, in 1878, Dr. Seguin had diagnosed cavity of the cervical enlargement of the cord. The patient had presented atrophy of the left hand and arm with anæsthesia of the left arm, thorax, and leg.

Dr. Dana suggested that many cases diagnosed cervical pachymeningitis should probably have been classed as cases of this disease, as in Wichman's case. Dr. Starr had assumed that all cases of syringomyelia were gliomatous in origin. Might we not have cavity-building from some other cause: He showed a specimen in which similar cavities had resulted from a central myelitis. There had been two cavities in this case, one one and a half inch long and the other not so large.

Dr. Starr closed the discussion. The stationary condition in his case could be explained by the fact of the glioma having broken down and advancement having ceased. The process had been arrested. It was not possible to diagnose between intramedullary tumors and syringomyelia except as had been suggested by the duration of the case. The lesion had been discovered accidentally in all of the cases cited. The same had been true of multiple sclerosis in its first recognition. Then it had been diagnosed by exclusion, all cases not presenting typical symptoms being referred to it. Now syringomyelia received consideration also in the diagnosis of the anomalous cases. It might be of assistance to bear in mind that 24 out of the 56 cases had presented cavity in the anterior, and 32 out of the 56 cavity in the posterior part of the cord. The chances were therefore in favor of the symptoms of progressive muscular atrophy or accidental analgesic areas. In the examination it was necessary to distinguish between analgesia without loss of the temperature-sense and general anæsthesia. Intermissions were not uncommon in other conditions. He had seen the ataxia disappear, and return after several months. The reaction of degeneration did not appear to be an important diagnostic point. The majority of the cases had been diagnosed as progressive muscular atrophy, a condition in which this reaction was not found. The condition of porencephalia referred to was a condition of childhood and fœtal life; he did not think that it was ever found in the adult. The age of the patients with syringomyelia had been twenty-five to forty years. In all of the cases observed the previous state had been that of infiltration with gliomatous cells. Destruction did not occur during this stage; the elements of the cord were simply displaced.

Creolin in Cystitis.—In a very persistent case of cystitis occurring in a middle-aged woman, where the pain was so constant that the patient was generally obliged to keep her bed, and where the urine was offensive, brownish, and thick, depositing a third of its volume of pus, blood, and phosphates, after a large number of different kinds of treatment had been employed by various medical men without much result, the best application appearing to be injections of corrosive sublimate in very weak solutions, Dr. Jefsner washed out the bladder with a one-half per cent. solution of creolin. This caused a burning sensation for a few minutes, after which it passed off. The next day the patient felt and looked quite a different woman, the pain in the bladder had been less than for a long period previously, and the urine, when drawn with the catheter, was scarcely offensive at all, and appeared quite clear, depositing after a time only a small quantity of phosphate without any admixture of pus- or blood-corpuscles. The washing out of the bladder was repeated daily, and by this means the improvement was maintained. It would appear therefore that in creolin we have a deodorizer and a hæmostatic, as well as a means of improving the character of the secretion from the surface of mucous membranes. —*The Lancet.*

Hume and Diarrhœa.—David Hume wrote to the Countess of Boufflers, just before his death, and this note is supposed to be the last ever written by the great historian: "My distemper is a diarrhœa, or disorder in my bowels, which has gradually been undermining me for two years; but within these six months it has been visibly hastening me to my end. I see death approach without any anxiety or regret. I salute you for the last time. —David Hume."

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE ARMY MEDICAL DEPARTMENT AND ITS GRIEVANCES—MEDDLING AND MUDDLING AT HEADQUARTERS—REORGANIZATION OF THE MEDICAL STAFF CORPS—A REMARKABLE CASE OF RENAL CALCULUS—NEPHRECTOMY AND ITS DISADVANTAGES—FEMALE CANDIDATES AT THE SOCIETY OF APOTHECARIES.

London, April 14, 1888.

Considerable discontent is still being felt in the Army Medical Department, and, I may add, expressed as openly as the official regulations will allow. There does not seem the slightest probability of confidence and satisfaction being restored until some acceptable settlement of the question of rank has been made. Army medical officers feel much more strongly on the point than medical civilians can possibly do. From all I can learn I believe a very large proportion of army surgeons are in favor of some approximation to the system in force in the United States Army. No little apprehension has been excited among the Medical Staff by the issue of the warrant establishing an Army Medical Reserve. It is feared that this may gradually lead to an extension of the period of foreign service, which already averages about half the total period of service in the case of medical officers.

The meddling and muddling at headquarters appears to have now extended into the department of the Army Hospital Corps, or, as it is now termed, the Medical Staff Corps. In future, men will only be allowed to enlist for a period of twelve years, of which period, moreover, only four (in many cases only three) will be spent in actual service. The remainder of the time will be spent in the reserve. The effect of this regulation will be to largely augment the numbers of reserve men by increasing the number of men passing through active service in a given time. Presumably, it is supposed by the authorities that the larger reserve thus available will be of great service should we have the misfortune to become engaged in war. I leave it to your readers to imagine whether even well-trained and skilful nurses will be of much assistance if recalled to hospital duty after having left the wards for years, and been engaged in earning their living as carters, ploughmen, etc., as I have known many of them do. The short-service system has not answered so well for the combatants that it is desirable to extend it. At any rate, in the Egyptian campaign Lord Wolseley took good care to send only picked men. The number of reserve men receiving pensions is also largely increased, and thus to some extent the gibe at "Lord Wolseley's cheap soldiers" is justified. Bandsmen are specially exempted in the recent general order restricting the term of service, from which we may conclude that the authorities recognize the value of a trained musician if not that of a trained nurse.

A somewhat remarkable case of double nephro-lithotomy was narrated at length by Mr. Herbert Page, Surgeon to St. Mary's Hospital, at the last meeting of the Medical and Chirurgical Society. The patient was a man, twenty-two years of age, who had suffered for ten years from left renal pain, with occasional attacks of renal colic. For four years he had suffered from irritability of the bladder and had passed gravel. A year before admission a small calculus was removed from the bladder by lateral lithotomy. Pain in the left loin, however, recurred, and the urine contained pus and sometimes blood. His general health was much impaired at the time of his admission (in November, 1886). Mr. Page diagnosed vesical calculus and left calculous pyelo-nephritis. The vesical calculus was removed by median lithotomy, and eleven days later the left kidney was exposed in the loin and two small calculi removed from a suppurating cyst. No sensible diminution of the amount of pus passed took place, and some weeks later right renal pain was complained of. It was suspected that the pus came from the right kidney. Two or three weeks later severe right renal pain was complained of. Rigors and vomiting occurred, and the temperature rose. The pus almost entirely disappeared from the urine, and the amount of the latter fell from forty-two to twenty ounces daily. It was believed that this smaller quantity of urine was furnished by the left kidney only. The symptoms underwent aggravation and there was fulness in the right loin. A further operation was accordingly determined on, and the right kidney was exposed. It was found to be much enlarged and was surrounded by fetid pus. There was an opening in the pelvis from which Mr. Page thought it probable that an abscess had burst into the perinephral tissue. No calculi were found. The patient did well after the operation. The urine gradually increased in amount, while the pus steadily diminished. The patient lost all pain. He left the hospital three months after the last operation, and within a few days passed four small stones *per urethram.* He then steadily progressed to complete recovery.

Mr. Page remarked that the case was of interest from its bearing on the question of sympathy between the kidneys. He suggested that the right kidney had contained calculi for some considerable time, and that its condition was only revealed by the operation on its fellow. As time proved, nephrectomy would have been a very wrong thing, but had an abdominal exploration been made, it would probably have led to the performance of nephrectomy, for he would have found an apparently useless left kidney, and a right kidney so enlarged as to be presumably fit for future needs, and its calculi, being small, would most likely have escaped detection. Had a nephrectomy been performed, the position of the patient at the time when the functions of the right kidney were presumably in abeyance would have been infinitely more grave.

Mr. Godlee concurred in the opinion expressed by Mr. Page as to the advisability of not performing nephrectomy. He thought it wise at the time of excision of a stone to leave the kidney from which it was taken, for it might heal, or, at any rate, would contract, and thus be more easily removed, should its removal be afterward found necessary. In a case cited by Mr. Page where renal calculus followed hysterectomy, it was a question whether the operation of hysterectomy really led to the formation of a stone or only set up inflammation around a stone already existing, and thus caused its presence to be revealed. He thought the first hypothesis very probable, considering how frequently stones appeared to result from accidental injuries, such as being run over by a cart-wheel, etc.

Another portal has been provided for women who wish to enter the medical profession, for the Apothecaries' Society of London has determined to admit them to examination in future. One lady has just been admitted to examination. In 1865 Mrs. Garrett Anderson (now M.D., Paris) was allowed to present herself for examination, and received the diploma of L.S.A., but since then no others of her sex have been allowed to present themselves for examination until now. A new departure is, therefore, being taken by the Society.

FOR THE CURE OF WINTER ITCH.

To the Editor of The Medical Record.

Sir: I have been treating so-called "winter itch" for twenty-five years. The first epidemic I saw was in Sherman's army, in 1864–65. It is the king of pruritus, and should be designated in nosology as prurigo major. The only eruption that is characteristic of it is papular; the eczema and others are accidental. I have always regarded it as a neurosis. The worst case I have ever seen occurred in June. It is the attendant of a dry atmosphere, commencing early in the high lands, and extending to the valleys as winter advances. Great numbers of the early cases get well in December and January, even if not treated.

The base of successful treatment is in atropine dissolved in glycerine, which should be rubbed into the skin until itching ceases. This should be done with the palm or some smooth rubber. The less scratching with the fingernails the better. I use fluid extract of belladonna, ʒ ij., to glycerine, ℥ j. This frequently fails, but I can cultivate its successful use in many of the so-called failures, when opportunity affords to school the patient, and the apt ones have very few failures. It may be necessary to repeat nightly, or indefinitely; but a patient who has some experience with the disease will be very tractable when he finds the persistent rubbing will allay the itching. Frequently there is no return of it for the night, after once subduing it.

A variety of combinations to suit cases which are obstinate, such as aconite, carbolic acid, or chloral and camphor may be added, or hyoscyamus substituted; or to suit those cases with eczema or scabies; or to kill acarus or pediculi. But this is the province of the "busy practitioner," other than the simple mention of which, in a brief paper like this, would be superfluous.

Joseph A. Stilwell, M.D.

Brownstown, Ind., April 20, 1888.

New Instruments.

A PHOROMETER.

By GEORGE T. STEVENS, M.D.,

NEW YORK.

This instrument is designed to assist in the determination of the relations of the visual lines to each other.

Experience long since led me to observe that the method of determining the relative tendencies of the visual lines in respect to the horizontal plane by means of prisms held in the hand, or fixed in the ordinary trial frames, is an extremely imperfect one, adapted only to the rudest measurements. Two years ago I had constructed spectacle-frames in which were placed oblong quadrilateral prisms for the determination of hyperphoria. The form of these hyperphoria trial spectacles, by their rectilinear outline, enabled the examiner to determine their approximate relation to the horizontal plane.[1]

Further experience showed that the difficulty of adjusting the head of the patient was, in a considerable number of cases, attended with difficulty, and, at the best, the adjustment of both head and glasses was, to a certain extent, inexact. This led to the introduction of the spirit-level as an indicator of the position of the prisms. It was found that the attachment of the level to the spectacle-frames presented little advantage, owing to the difficulty of maintaining a perfectly erect position of the head. I observed that if the prisms were placed upon an independent support and removed a few inches from the face, it mattered little if the head is not held with perfect accuracy, and that in most cases it might be carried far over to one or other side without altering the relations of the double images to each other or to the horizontal plane. The result of these observations was the phorometer which is here figured.

The instrument consists of the standard A, supported by a tripod. The standard is freely extensible, permitting a ready adjustment for differences in stature of patients. The arm B is grooved, and allows the carriers C and D to rest securely, to slide freely from end to end of the arm, or to be removed at will. At E a spirit-level is attached to the arm, by means of which the horizontal position of the arm can be determined. The semicircular piece at the head of the arm is spirally toothed and is acted upon by the endless screw at F, which imparts to the arm an upward and downward elbow movement. The semicircle is graduated in degrees, and a fine pointer indicates the extent of motion imparted by the screw. By means of the lever G, the screw can be unlocked, allowing the arm to fall to the side of the standard. Of the two prism-carriers one carries two prisms placed horizontally, with their bases in, and of sufficient strength to induce homonymous diplopia. The prism D is placed with its base down and is used for determining lateral tendencies. The rod H carries a tablet I, on one side of which is a small cross and on the other side another cross somewhat larger. The tablet is reversible, and the crosses are used as objects in determining the tendencies in accommodation. The tablet is, when brought into position, one-half metre in front of the prism; but by means of a fixation-screw it can be brought nearer if desired.

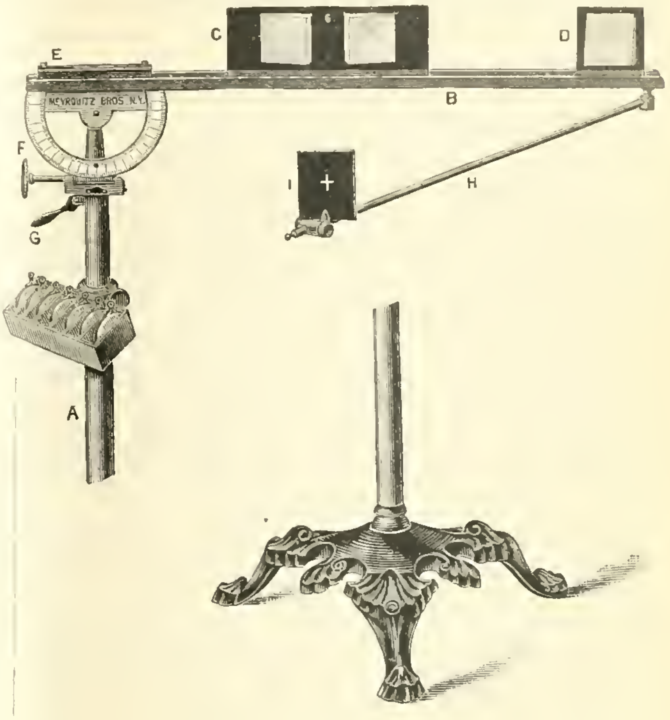

Fig. 1.

When not in use the rod is parallel with the arm. As has been intimated above, in the determination of the tendencies of the visual lines much freedom may be given to the position of the head without material effect upon the position of the images, provided the prisms are independent of the head and somewhat removed from the eyes. This does not hold good in every case, but the exceptions are somewhat rare, and the presence of the exceptional condition can be quickly ascertained.

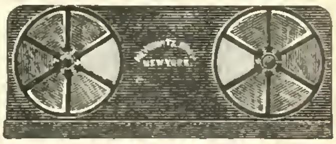

Fig. 2.

Fig. 2 represents a pair of revolving disks in a carrier adapted to the phorometer; each disk consisting of six prisms with the bases in. The two openings permit the two eyes to see from behind. By pressing upon the milled edge of either disk, prisms of different strength can be brought before the openings. The numerals in the figure show the strength of the various prisms. This little device I find very convenient and time-saving in the determination of the power of abduction. A series of prisms for adduction is similarly constructed.

I have now used the phorometer during several months past, and find that it not only insures greater accuracy in the examination of the relations of the ocular muscles than is easily obtained by other methods, but it enables the examiner to perform his work with much greater expedition than when it is done by the usual methods.

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[1] Notwithstanding the fact that these trial spectacles were described in several medical journals and that they had been manufactured by several instrument-makers from the pattern furnished by me, they were recently figured in this journal as the device of another.

The instrument is manufactured by Messrs. Meyrowitz Brothers.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from April 15 *to April* 28, 1888.

STERNBERG, GEORGE M., Major and Surgeon. Having been instructed by the President to proceed to the Island of Cuba, for the purpose of continuing his investigations of the methods of preventing the spread of epidemic diseases, will, in connection with his present duties, report to the Secretary of the Treasury for further instructions. S. O. 89, A. G. O., April 18, 1888.

EWEN, CLARENCE, Captain and Assistant Surgeon. Granted leave of absence for six months, with permission to go beyond sea. S. O. 85, A. G. O., April 13, 1888.

ARTHUR, WILLIAM H., Captain and Assistant Surgeon. Ordered from Fort Niagara, N. Y., to Fort Bowie, Ariz., to take effect on the expiration of his present leave of absence. S. O. 86, A. G. O., April 14, 1888.

BLACK, CHARLES S., First Lieutenant and Assistant Surgeon. Ordered from Fort Davis, Tex., to Fort Sidney, Neb. S. O. 86, A. G. O., April 14, 1888.

The operation of Par. 17, S. O. 79, c. s., A. G. O. (so much thereof as relates to Captain GEORGE E. BUSHNELL, Assistant Surgeon, U. S. Army), is suspended until May 1, 1888. S. O. 90, A. G. O., April 19, 1888.

CROSBY, WILLIAM D., First Lieutenant and Assistant Surgeon. Ordered for duty at Jefferson Barracks, Mo., after being relieved by Assistant Surgeon William H. Arthur, and upon the expiration of the leave of absence granted him in S. O. 60, A. G. O., March 14, 1888. S. O. 86, A. G. O., April 14, 1888.

RAFFERTY, OGDEN, to be Assistant Surgeon, with rank of First Lieutenant, March 26, 1888.

GIRARD, JOSEPH B., Captain and Assistant Surgeon. To be Surgeon, with the rank of Major, March 22, 1888.

BAILY, JOSEPH C., Lieutenant-Colonel and Assistant Medical Purveyor. Granted leave of absence for twenty days on Surgeon's certificate of disability, with permission to apply for an extension. S. O. 92, A. G. O., April 21, 1888.

BAILY, J. C., Lieutenant-Colonel and Assistant Medical Purveyor. Will transfer the public funds for which he is responsible, and the charge of the medical purveying depot in New York City, temporarily, to Captain Henry Johnson, Medical Storekeeper. S. O. 92, A. G. O., April 21, 1888.

Par. 13, S. O. 89, A. G. O., April 18th, is revoked by Par. 1, S. O. 93, A. G. O., April 23d, and Major GEORGE M. STERNBERG, Surgeon, U. S. Army, is directed to proceed to the Island of Cuba, for the purpose named in the letter of the President, addressed to the Secretary of War, on the 17th inst. Upon the completion of this duty, will return to his proper station, and submit his report to the President on or before June 25, 1888.

VICKERY, R. S., Major and Surgeon. Granted leave of absence for four months, with permission to apply for an extension of two months, and to go beyond sea. S. O. 95, A. G. O., April 25, 1888.

By direction of the President, Surgeon Remus C. Persons, U. S. Navy, is assigned, temporarily, to the charge of the Army and Navy General Hospital, Hot Springs, Ark., during the absence, on leave, of Major Richard S. Vickery, Surgeon, U. S. Army, Surgeon-in-Charge. S. O. 96, A. G. O., April 26, 1888.

WOOD, LEONARD, First Lieutenant and Assistant Surgeon. Granted one month's leave of absence, with permission to apply for an extension of two months. S. O. 41, Dp. Ariz., April 18, 1888.

ANDERSON, CHARLES L. G., First Lieutenant and Assistant Surgeon. Granted one month's leave of absence from June 1, 1888. Resignation accepted by the President, to take effect July 1, 1888. S. O. 92, A. G. O., April 21, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending April 28, 1888.

RHOADES, A. C., Medical Inspector. Detached from special duty, New York, and waiting orders.

HENNEBERGER, L. G., Passed Assistant Surgeon. Detached from Naval Hospital, New York, and to special duty attending officers and families, New York.

OBERLY A. S., Medical Inspector. Granted six months' leave, with permission to visit Europe.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 28, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	9	2
Scarlet fever	221	35
Cerebro-spinal meningitis	4	3
Measles	88	9
Diphtheria	172	43
Small-pox	14	5
Yellow fever	0	0
Cholera	0	0

THE WORK OF THE BLOOD-CORPUSCLES IN THE ANIMAL ECONOMY.—In the course of a recent address on "The Struggle for Life," Dr. Ray Lankester said (*The Hospital Gazette*) that the corpuscles could be educated to deal with the bacteria, and the future of preventive medicine would be the education of the white blood-corpuscles. The fact that one man, by constant use, could without injury take a dose of arsenic that would kill six ordinary men, was due to the fact that he had by weakened doses been educating and training the white corpuscles. They could be taught to eat and flourish under conditions which, if not commenced gradually, would be destructive to them, and that was the principle underlying protective inoculation. As a preventive of many fatal diseases in sheep and oxen, inoculation had been remarkably successful. The corpuscles first received a weakened breed of disease by inoculation, and thus when a violent attack came they were ready to receive and dispose of it. This education of the corpuscles, it seemed to him, was the explanation of the success of vaccination. They received a weak dose of the poison from the vaccine, and were in that way prepared for a stronger dose in the way of small-pox. He believed the white corpuscles could be trained to receive the most virulent poisons, and he hoped this training would be carried on so as to deal with a great number of diseases.

A CONGRESS OF HYGIENE was held in January last, in Lima. Delegates attended from Peru, Bolivia, Ecuador, and Chili.

THE CORONER of Baltimore is to be congratulated upon an increase of fifty per cent. in his salary. He now receives $900 per annum.

THE *Hartford Courant* devotes a column a week to medical items of popular interest.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 19 NEW YORK, MAY 12, 1888 Whole No. 914

Original Articles.

EXPERIMENTAL OBSERVATIONS ON LITHOLYSIS.[1]

By HERMAN GOLDENBERG, M.D.,

NEW YORK.

EVER since anything has been known concerning urinary calculi, attempts have been made at dissolving them by means of internal medication: Teas, medicaments, and mineral waters. Most of these were the outgrowth simply of empiricism, a rational basis being first obtained after a knowledge of the chemical constituents of urinary calculi was arrived at, and the proper agents for dissolving them, theoretically, at least, were known.

Attempts to tabulate the solubilities of uric acid and uric-acid stones are of old date. They were originally made by showing the effect of mineral waters and medicaments on the calculi in the test-tube. The results thus obtained did not correspond with those of clinical observation. There arose, in consequence, among practitioners, a pessimistic view in regard to the use of internal remedies on already formed calculi. Owing to this, and also to the progress of surgical treatment of stone, in course of time only a proper hygiene and diet, as well as internal medication for the prophylaxis thereof, were resorted to.

In order to arrive at a clear therapeutic notion in regard to the agents used for this purpose, it will be of value to establish in what manner each remedy acts, the relation of one remedy to another, and, furthermore, which one is suited to the individual case. As I mentioned before, many experiments have been made to determine the effect of mineral waters on uric acid. Jahns, of Göttingen, together with Ebstein, not long since made such investigations. They have not, however, a great practical value, as Ebstein himself points out in his book on calculi, because we are not justified in drawing conclusions from the effects in the test-tube to what may occur in the human body. As, for example, lithium carbonate when brought in direct contact with uric acid dissolves it readily, whereas, on being introduced into the body the greater part of it becomes changed in the stomach by the gastric juice into a chloride, and appears as such in the urine, displaying scarcely any power in dissolving uric acid. In order to produce an effect it would have to appear in the urine in the form in which it was introduced.

Emil Pfeiffer was the first to formulate the matter properly, by investigating the influence of the urine obtained after the employment of mineral waters and internal medicines upon uric acid. At the Fifth German Congress for Internal Medicine, at Wiesbaden, this question was broached by him. He presented the results of his investigations, which were limited to representatives of three groups of mineral waters, viz., the alkaline sulphate waters of Carlsbad, the sodium chloride of Wiesbaden, and the pure alkaline of Fachingen. The investigations concerning the Carlsbad spring showed that during its use the urine exhibited a considerable solvent action on uric acid, and that not only did this action cease on stopping the use of the waters, but even the opposite effect was produced. The same is to be said of the Wiesbaden springs, whose solvent power is even less than that of Carlsbad. The Fachingen waters showed themselves the most powerful solvents. The urine during the use of these waters (Fachingen) causes, according to this writer, "the rapid solution of uric-acid calculi, and the after-effect, as compared to that of the other springs, is more lasting." The great practical importance of these results led me, in conjunction with Dr. Posner, of Berlin, in the laboratory of Lassar to pursue somewhat similar investigations.

Our investigations embraced also other springs and internal medicaments. We did not confine ourselves to experimenting with the effect upon chemically pure uric acid alone, as Pfeiffer had done; but endeavored, in order to more closely approximate physiological and pathological conditions, to extend our observations so as to include powdered calculi, gravel, fragments, and fully formed stones. For a similar reason, urine kept at the temperature of the body was employed. The urine employed was obtained from subjects in Lassar's Clinic for Skin Diseases, who were not suffering from any constitutional affection, and from the writer, after using the mineral waters and medicaments whose effects were to be studied. The usual manner of living and diet were not changed during this period.

A known quantity of dried uric acid, or uric-acid concretions, was placed upon a filter whose weight had been determined after drying. Two hundred cubic centimetres of the urine in question, carefully filtered, were poured upon this; the filter was then washed with distilled water, and its weight again determined after drying. The difference in weight would show, of course, the amount of uric acid dissolved.

As a control, similar experiments were made with normal urine, *i.e.*, urine obtained from individuals who had not been taking any of the medicaments whose action was to be investigated. We found that not only did this urine have no solvent effect on the uric acid in the filter; but, on the contrary, uric acid was deposited from it on the filter, and, indeed, the higher its specific gravity the greater was the quantity of uric acid thus deposited.

As a detailed description of our experiments appeared in the thirteenth volume of the *Zeitschrift für klinische Medicin*, I will confine myself to a brief statement of our results, and the deductions to be made from them.

The "Désirée" Spring of Vals, which is much used in France for gout, uric-acid diathesis, etc., proved the most efficacious; 100 c.c. of urine obtained after the daily administration of one bottle of Désirée was found capable of dissolving about one decigramme of uric acid.

The "Grand Grille" of Vichy possesses nearly the same power. Then follow Fachingen, the Helenenquelle of Wildungen, and, finally, Obersalzbrunn Kronenquelle. The latter, for example, has only one-fifth the solvent power of the Désirée.

Pfeiffer assumed the existence of a relationship between the solvent power of the mineral waters and their percentage of sodium carbonate, which fact we confirmed in our experiments. Vals, the most efficacious, contains six parts per thousand; Vichy, five; Fachingen, four; etc. Concretions of uric acid were less powerfully acted upon by the urine obtained after the use of these waters than the pure uric acid.

Powdered uric-acid concretions and gravel were acted upon somewhat; to only a slight degree, the semispherical fragments of a uric-acid calculus of the size of a cherry-stone. The effect on solid calculi was somewhat limited. A calculus wrapped about with mull gauze put into a beaker glass filled with filtered Fachingen *water* was, after twenty-four hours, reduced to a soft, friable mass. The effect of the *urine* obtained after the use of Fachingen was quite different; a loss of weight was found, however. For example, a stone weighing 97 milligr., after six days' treatment with such a urine, which was renewed daily, showed a loss in weight of 5 milligr.; a change in structure was not apparent, the stone remaining as hard as before; only slight erosions were to be noticed on using a lens.

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[1] Read before the Medico-chirurgical Society of German Physicians of New York, March 5, 1888.

Pfeiffer's statement, that urine obtained after the use of Fachingen water dissolves uric-acid calculi very rapidly, is to be regarded as too sanguine, it being true only of the smallest concretions, or, rather, gravel.

Urine obtained after using Vals was most effective. After a two days' use of a bottle daily of Désirée (Vals) water, the urine rendered previously hard stone fragments soft and friable.

Since there could be no doubt that the solvent effect of the mineral waters must be ascribed partly to chemical action upon the urine (which point I will refer to later), it seemed of importance to study the individual constituents of the various springs.

After we found that the effect of the waters is due chiefly to the sodium carbonate contained in them, we gave it in quantities corresponding to those contained in the more powerful mineral waters. In doses of 5 gm. daily, dissolved in a suitable quantity of water, so as to imitate more closely the giving of the waters themselves, the result approximated that following the use of Fachingen. Such doses produced disagreeable effects upon intestinal peristalsis, and, through strongly alkalinizing the urine, brought about a precipitation of phosphates, causing vesical irritation.

Similar effects were produced by Cantani's powder, composed of lithium bicarb. 1, sodium bicarb. 2, potassium citrate 4. Also, to somewhat less degree, by magnesium boro-citrate, which, however, is well borne in long-continued doses. A patient suffering from renal colic used the latter systematically, during several weeks, with excellent results. The least effectual of the remedies employed by us was borax, a drug which became celebrated through the classical instance of the case of Virchow, who was cured by its use of gouty kidney.

Lithium carbonate is a remedy now much in vogue. Of late years much opposition has arisen against it on account of the toxic action on the heart, and also because, according to Ebstein, the greater part of it appears in the urine in the form of a chloride which does not dissolve uric acid. Without going into the question more closely, I would state that this salt was found by us to possess a decided solvent action. In daily doses of 6 dcgr. of lith. carb. the effect of the urine upon uric acid is almost equal to that after the use of Fachingen. It has, however, the disadvantage of being entirely excreted from the urine within twenty-four hours. In consequence, there is no after-effect produced.

Before drawing my conclusions from the above-mentioned experiments as to the treatment in practice of these diseases, I may be permitted to add a few words as to the nature and etiology of uric-acid calculi, and the action of the remedies to be employed, in order to find a rational basis for treatment.

It was formerly thought that calculi are formed simply by crystallization from concentrated solutions, the individual crystals becoming apposed to each other. In other words, the process is analogous to the deposit of uric-acid crystals in concentrated urines after evacuation from the bladder. Later investigations, especially the elaborate studies of Ebstein, have shown that the pathological process in the formation of calculi is strictly analogous to the normal process in the development of the osseous system. In both cases we have an organic basis, within and about which sedimentation goes on (lime salts in the case of bone, uric acid, etc., in the case of calculi). The organic, non-crystalline structure of all concretions, even of the smallest gravel, can readily be demonstrated. In the formation of calculi we find, besides the organic basis, which is composed of albuminous material, originating in the kidneys or in the urinary tract, an abnormal condition of the urine, the expression of a disordered metabolism. These two factors stand in a causal relation to each other, in so far as an abnormal composition of the urine—whether due to an excessive amount of acid in general, or to an excess of uric acid in particular—acts as an irritant upon the mucous membrane of the uro-genital tract, which, continued a long time, is apt to cause an epithelial desquamation, thus favoring the formation of an organic structure for the calculus.

We see that the formation of stone depends on both local and general causes; a third factor is found in a mechanical cause—an obstruction in the urinary apparatus. These three factors are essential; the uric-acid diathesis is only subsidiary. Too much weight is usually attached to the importance of this diathesis in the formation of stone. If the other elements do not accompany the uric-acid diathesis, calculi will not be produced, but only crystals of uric acid.

In the treatment we must take into account the above-mentioned etiological factors. It must be prophylactic or curative, general or local, internal or surgical.

I cannot here discuss local and surgical measures, my province being limited to the action and value of those internal remedies which answer the indications in the majority of cases.

If any of the above-mentioned mineral waters or medicaments are introduced into the body, their effect upon the urine finds manifold expression. The urine undergoes a chemical change, the excessive formation of acids is checked, its quantity is increased, and, in consequence, the specific gravity is diminished. The increased diuresis is not only of use mechanically, the uric-acid concretions being washed away by the greater amount of water, but the chemical action in these waters is better utilized. It is certainly not a matter of indifference whether, within a given time, a solution of only a few hundred cubic centimetres pours over the pathological products, or one of two litres, or more. The dilution resulting from increased diuresis favors greatly the chemical processes.

All these favorable influences are possessed in the highest degree by mineral waters. They exert a relatively intense chemical influence, and act most favorably in increasing and diluting the urine. They are our best resource in contending against catarrhs of mucous membranes, fulfilling the indications of which I have already spoken. Because of the chloride of sodium and carbonic-acid gas which they contain they are well borne by the stomach, and, in general, exert no deleterious action on the body.

In deciding, in a given case, upon the remedy to be preferred, the choice will depend upon what we wish to accomplish in that case. In an acute case we would employ the strongest remedies, particularly those waters containing the largest amount of sodium carbonate, viz., Vals and Vichy, and perhaps, also, Fachingen. Should there be an objection to using these on account of their relatively high cost, we may substitute the simple remedies, especially bicarbonate of sodium, in doses of 3–5 gm. daily, largely diluted, if possible, in carbonated waters. Lithium carbonate might also be employed in these cases, were it not that the long-continued use of this remedy is not free from danger, and that as soon as it is discontinued its action ceases. I would here warn against the long-continued use of the more powerful medicaments and mineral waters. If they are given for too long a period we are driven from Scylla to Charybdis—in place of the concretions of uric acid, phosphatic concretions will be apt to occur, or around a nucleus of uric acid the phosphates will be deposited.

In chronic cases, therefore, we should not employ the stronger remedies. We employ in these cases milder remedies, especially the Fachingen water, or the milder acid waters, namely, Kronenquelle, Bilin, Geilnau, etc. Of internal medicaments magnesium boro-citrate is to be preferred, since its use can be continued without danger for a long time. The prolonged use of Cantani's powder is, on account of the potash and lithium, not without danger.

No fixed rules can be laid down as to dosage. We have a guide in the condition of the urine in the given case. As soon as an alkaline reaction is found, we must discontinue the stronger medicaments, or rather avoid altogether its occurrence. In our experiments we obtained the greatest effect in those cases in which the reaction of the urine was slightly acid or neutral. As soon as the urine became distinctly alkaline, the solvent action began to diminish and ceased altogether when there was present an excess of phosphates. From this we may safely conclude a similar effect in the action within the body. In this respect the mineral waters present an advantage, because the carbonic-acid gas they contain favors the production of an acid reaction of the urine.

When Fachingen is to be given for a time, we may pause in its use for a day or two after having given it about four days. On using it for several weeks, we can without harm intermit in its use for a week at a time.

In determining the daily quantity to be taken we must consider the fact that the effect does not increase in proportion to the amount of the alkaline carbonates—twice the effect not being produced by giving a whole bottle instead of a half. The absolute effect depends particularly upon the degree of concentration. The daily quantity influences relatively by increasing the amount of urine. I would, therefore, recommend the use of a considerable quantity of ordinary water in addition to the mineral water.

I believe I have sufficiently demonstrated the solvent action of the medicaments mentioned upon uric acid. The question of how far we can act upon stones already developed is more difficult. That an effect upon them is not beyond the range of possibility, the experiments on gravel abundantly prove. We can confidently expect a solution of smaller calculi after giving the remedies for a sufficiently long time. On the other hand, as regards larger stones, I am inclined not to be too sanguine. Pfeiffer seems to have gone too far in his conclusions in declaring that Fachingen water dissolves calculi very rapidly. In one case, as before mentioned, after a two days' use of Vals Désirée water, the urine had such an effect upon gravel and stone fragments that they not only lost considerable weight, but also were rendered soft and friable. I would, therefore, call attention once more to the superiority of this spring, but I would not go so far as to conclude that this treatment would have any considerable effect upon fully developed stones of the bladder. We should not lose too much time with such attempts in a given case. The surgeon and physician should here work hand in hand. In a case of lithotripsy the Vals water might render great service in rapidly dissolving fragments which might be left behind.

Ebstein, in his concluding remarks in his book "On the Nature and Treatment of Calculi," speaking of the internal treatment and of the possibility of dissolving them, says that we can with certainty expect from the careful use of the alkaline waters a mechanical effect, and probably also a favorable influence upon the affected urinary organs. He admits the possibility of chemical solution, but rejects its induction altogether on account of the danger to the system of an alkaline *régime*. Far be it from me to underestimate the dangers of the introduction of an excessive amount of an alkali into the body; though convinced that there can be an abuse of the now much-used alkaline waters, yet I believe that their field of usefulness, as shown by experiment, is wider than we have a right to expect from what Ebstein says. The waters and some of the medicaments experimented with by us showed a decided effect in daily doses, such as are well borne in long-continued use. Used in a systematic manner, and with due regard to the limits set to the internal treatment of concretions, they will also in this connection preserve their high standing in the treatment of an excess of acid in gravel and calculous disorders.

107 East Fifty-ninth Street.

THE USE OF PROPRIETARY MEDICINES BY THE LAITY AND THE PROFESSION.[1]

By FREDERICK A. CASTLE, M.D.,

NEW YORK.

The invitation to address you on the subject of the relations of the profession and the public to the nostrums of the day, is capable of elaborate treatment or otherwise, according to the views of the writer and the time at his disposal. There can be no doubt that the subject is one which is well worthy of consideration; but my own feeling with regard to it is that, so far as the relations of the profession are concerned, the less physicians have to do with remedies about which they know little or nothing, the better it will be for their reputation and for the welfare of their patients. So far as relates to their use by the general public, the time has arrived when the influence of the profession, in the direction of repression, amounts practically to nothing.

Some time ago members of the medical profession were much too charitable in lending their aid in giving character to the few nostrums which then existed, and helped, in a great measure, to establish the foothold which this class of preparations long since gained in this and other countries. Like the snow-ball on a mountain's side, those who helped to start it on its course soon lost all control of it, and can only stand, as calmly as they may, and witness the avalanche which it has caused and the destruction which marks its track. Any opinion generally expressed by physicians of the present day, with regard to the harmful character of these articles, is pretty sure to be attributed by the public to a feeling of jealousy; and the more positive the opinion, the more convinced will the layman be that there must be some virtue in the thing after all has been said, or the doctors would not pitch into it so heartily.

There is such general misunderstanding of what constitutes a nostrum, that it appears to me to be desirable, before proceeding further, to explain in some detail the true nature of this class of commodities. As its name implies, a nostrum is something which is the exclusive property of some particular person or corporation. As applied to medicines, it practically embraces, in the United States, three classes of articles: Those made by a formula which is patented; those which bear a label, the specific design of which is registered in the Patent Office; and those sold under a trade-mark, which generally consists of a fanciful title, and which is similarly registered in the Patent Office, and held as the exclusive property of the person who causes it to be so registered. Formerly the number of patented formulas was relatively much larger than at present, but in course of time it was found more expedient to take advantage of the law providing for registering trade-marks. This was for a variety of reasons. In the first place, patenting a formula rendered it necessary to publish its ingredients, their proportions to each other, and often the process by which they were combined. This permitted any person who could improve upon the formula or process, as patented, to do so without peril; it being only requisite that some ingredient be substituted by another, or that some change be made in the method of composition, to evade the text of the patent. The original maker, however, was not so favorably situated, since it became essential that any change that he might desire to make must be similarly protected by patent right. Another reason was the fact, that the publicity necessarily given by the act of patenting a formula enabled many people to know its composition and judge of its merits, entirely irrespective of statements regarding its efficiency as a remedy by those who were interested in its sale. As soon, therefore, as the Government instituted the system of registering trade-marks, by which the person entitled to its exclusive use was protected from its use on the part of other persons, without regard to the exact nature of the article to which it might be applied, we had the conditions established which have favored the development of an enormous business in this class of articles. How extensive this business now is can best be understood from the following statements, made before the Committee on General Laws of the Assembly of the New York State Legislature, now in session. The authorities for this statement are manufacturers of proprietary medicines, who were heard by the Committee as opponents of a bill now before the Assembly, which, if enacted, would require all packages of proprietary medicines to be labelled with the exact nature of the contents, and would, moreover, prohibit the sale of such remedies in this State as had not been approved by the State Board of Health.

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[1] Read before the Section on Laryngology of the New York Academy of Medicine, March 27, 1888.

According to this showing, in the State of New York there are one hundred and eight manufactories of patent medicines, employing capital amounting to $3,512,430, and putting out, annually, medicines valued at $4,339,178. In the whole United States there are five hundred and sixty-three manufactories of these goods, with a capital of $10,620,880, and an annual production valued at $14,682,492. This estimate is, I believe, rather short of the actual facts.

During the year 1886 the number of patents issued (including designs) was 22,392, of which only about two dozen were for medical compounds; 1,027 trade-marks were registered, 191 of them being for medicinal articles; 378 labels were also registered, 202 of them being intended for articles of a medicinal character.

As an indication of the proportion which articles nominally intended for treatment of conditions of the throat and nose bore to the others, it may be said that none of the patented formulas were of this character, and but twelve of the trade-marks and two of the labels. It may also be of interest to such of you as have had no occasion for studying the Official Gazette of the Patent Office, to listen to the short statements given in that work of the ingredients entering into some of the patented nostrums. Here are a half-dozen or so, taken rather hap-hazard, which will fairly illustrate the majority of them:

"333,746. Medical Compound. Rufus G. Gish, Redfield, Kans. Filed May 2, 1885. (No specimens.) *Claim*—The herein-described medicine for the treatment of consumption, etc., consisting of blood-root, dandelion, black cohosh, burdock-root, spikenard, comfrey, bittersweet, sassafras, water, sweet yeast, loaf sugar, and spirits, about in the quantities given.

"343,660. Remedy for Dyspepsia. Bernard Farley, San Francisco, Cal. Filed March 4, 1886. (No specimens.) *Claim*—The herein-described composition of matter used for dyspepsia, consisting of senna, manna, Epsom salts, aloes, molasses, cream tartar, ginger, licorice, and red pepper, in the proportions specified.

"347,759. Medical Compound. Silas W. Fleming, Steubenville, O. Filed April 23, 1885. (No specimens.) *Claim*—The herein-described composition or mixture of ingredients to form a medicine for diseases of the liver and lungs, consisting of the following ingredients: Spikenard-root, rattleweed-root, elecampane-root, ginseng-root, snake-root, sweet-anise root, spice-bush root, yellow parilla, catnip-tops, hoarhound-tops, mandrake-root, liverwort-tops, wild-cherry bark, yellow-poplar bark, white-oak bark, dog-wood bark, slippery-elm bark, boneset-tops, spearmint-tops, and balm-of-gilead tops, in the proportions specified.

"348,854. Remedy for Kidney Diseases. Nathan C. McCutcheon and Alexander T. McCutcheon, Springfield, O. Filed January 12, 1886. (No specimens.) *Claim*—The herein-described composition of matter to be used for the treatment of diseases of the kidneys in general, consisting of Scotch ale, scoparius, taraxacum, and celery, in the proportions specified.

"349,591. Medicated Lozenge. Alvah W. Holway, Boston, Mass. Filed August 25, 1885. (No specimens.) *Claim*—1. A tablet or lozenge consisting of sugar, cream of tartar, and acid calcium lactate, substantially as set forth. 2. A tablet or lozenge in which sugar and acid calcium lactate constitute a base, substantially as expressed.

"350,867. Remedy for Kidney Diseases. Frank E. Chadwick, Rochester, N. Y., assignor to the F. E. C. Medicine Company, same place. Filed April 22, 1886. (No specimens.) *Claim*—The herein-described remedy for kidney diseases, consisting of motherwort, barberry-leaf, couch-grass, winter-green, water, and gin, prepared in the proportions and manner specified."

We might be inclined to laugh at the polypharmacal character of some of these heterogeneous mixtures, were it not that the compounders were simply following the customs of our ancestors in the medical profession, who seemed to think that the more drugs they could crowd into a dose the more virtue it would possess as a remedy; or had we not in mind one of the medical colleges of this city, whose pupils take from the school a formula which, by its incongruity, serves to establish their *alma mater* about as effectually as the ear-mark designates the ownership of a stray cow on a Western cattle-ranch.

Of course, the greater part of the largest proportion of nostrums are used by the general public without regard to professional advice. and will continue to be so used, as I have before intimated, despite any efforts that may be made to prevent it. Indeed, there is very good reason for believing that the practice is increasing rapidly, and that many of us will see the consumption of them more than doubled. Whenever the discovery of remedies like chloral, salicin, cocaine, or antipyrin is announced in medical journals, there shortly appear in the lists of trade-marks registered in the United States Patent Office, the titles of nostrums containing one or another of these new agents as ingredients, and, coincidently, the columns of secular and religious papers, agricultural magazines, and board-fences take on a new coat of gorgeous colors, rhetorical and otherwise, proclaiming the virtues of these remedies for the various conditions which have been reported in medical journals as capable of being relieved by them. Indeed, few physicians read the current medical journals with closer attention to business possibilities than do some of the leading nostrum makers. This aspect of the question is, unfortunately, without remedy, since medical literature must be as available for one as for another, and physicians will continue to publish the results of their experience without regard to the possible uses to which it may be put. There is no reason, however, why the aid derived from the profession should extend further, nor that physicians should aid by patronage and recommendation to create a market for these wares, in place of articles equally or more desirable, and which can be manufactured and sold by any person who has the capital and skill that may be requisite.

Owing to a very general lack of knowledge among physicians of matters relating especially to pharmacy, it has been the aim of many manufacturing pharmacists to create a false impression of the amount of skill which is required to produce even the articles in so common use as those enumerated in the Pharmacopœia; and recognizing the fact that, in the case of our older and most used remedies, it will be impossible for them to control their sale by the adoption of a proprietary trade-mark, they spare no opportunity for impressing medical men with statements of their unusual facilities for manufacturing, the uniform and high character of their wares, and extremely unreliable character of other manufacturers, and especially of the retailing pharmacist. If one were to believe all that is said and hinted, it would appear that the manufacturers on a large scale monopolize the wisdom and honesty of the pharmaceutical profession, and that little is left for the retailing druggist. The physician is urged to insist upon having Brown's sugar-coated pills and Brown's only, and to distrust any effort on the part of the retailing pharmacist to convince him that his own, or Jones', or Robinson's, are just as good. And just so far as physicians are influenced in their practice by these sataements, do they contribute to aiding the sale and consumption of nostrums. It may be the case that, in some exceptional instances, certain pharmaceutical products are, for some reasons, preferable to others known by the same general name but manufactured by other persons; but it will be found that the differences upon which these excellences depend are not owing so much to superior skill as to the possession of patented processes or appliances, or processes which are kept as trade-secrets.

I would like, in the way of illustration, to speak of several instances which have come to my knowledge, in which otherwise reputable dealers and producers have attempted to control the sale of valuable medicinal substances, when the titles by which these articles are known have been common property. Two will suffice. A recent instance is that of an Eastern firm, who recognized the money to be made out of *lanoline*, provided they could induce physicians to prescribe it by another name, for which they hold a trade-mark. They therefore adopted the name *agnine*, and as such advertise it extensively in professional journals. If they were to advertise it as *lanoline*, they would be advertising the business of every other drug-jobbing house in the world, and the more they attracted the attention of doctors to the remedial virtues of this substance, the more they would help their business competitors, because there is, so far as I am aware, no patent or trade-mark right connected with *lanoline* as a title or as a substance. Therefore, it became necessary at the outset, to insure that they should get the benefit of their own advertising, that they should own some other name, and induce physicians to prescribe it by *that* name and not as *lanoline*; hence we have *angine*.

Some years since an enterprising firm of Western druggists, who devoted a great deal of attention to pushing newly discovered remedies, found, with the aid of an agent on the other side of the Rocky Mountains, an article which had a reputation in the locality where it grew as an efficient cathartic. With a keen sense of business possibilities, they were careful to suppress all reference to the true botanical name of the drug, and, so far as possible, allowed only such preparations of it to come into the market as would give no clew to its source. The remedy proved to be unusually valuable, and the ingenuity of physicians and pharmacists was enlisted in solving the problem as to its true nature. So matters went on for a time—the name by which it was known, like most common names of plants, giving little or no clew to its origin, since the same name is often applied to very different plants and to a very considerable number of them—until one day someone, interested in the subject, got hold of enough of the original plant to serve for its identification by a botanist, and then, in poker parlance, the game was called, and there was a row. The botanist was abused like a candidate for the Presidency, and his relatives had to take their share of the mud that flew from the neighborhood of the firm whose secret was divulged; but not for long, since the latter soon discovered that they were only making fun for outsiders, and gaining no credit for themselves. Since then other men have got their own supplies of the crude drug, and have no difficulty in supplying the market with products quite as satisfactory as the original.

To come more particularly to the subject of the use of proprietary articles by physicians themselves, it is difficult to understand the disposition shown by many men of repute in the profession, to make use of things of unknown or uncertain composition. In the case of antipyrin, the process for the manufacture of which, although patented, is well known, it is somewhat different. Like antipyrin, there are now a number of articles, used as medicine, of great value, and to be deprived of them would be a great misfortune; but in every case the accurate composition of these substances is not a secret, and any chemist who chooses to do so can make them as curiosities, but not for sale or use. Our pharmacopœias give directions for establishing their purity, and none of them possess the objectionable features characteristic of the articles usually protected by trade-mark registration, since the latter rarely have any definite chemical or microscopical composition by which they may be identified, and can only be judged of by their crude appearances; usually the character of the label on the package containing them, slight as it may be, is the only guarantee of the nature of the contents. Therefore, I repeat, it is difficult to understand how it is that physicians are willing to use such things or encourage their use by others. That many physicians do so must be the conviction of those who know anything of the daily experiences of a drug-store. It is only a few days since a pharmacist, without mentioning names, told me of a professor in one of the medical colleges of this city, who writes prescriptions for "Green's August Flower," instead of prescribing the officinal mixture of rhubarb and soda, which is practically the same thing, with this difference, that the latter can be made by any apothecary, while no one but the owner of the right to use the name "Green's August Flower" can make and sell the compound to which this name is attached. Again, the formula of the officinal mixture being published and well known, can be varied by the prescriber to suit the indications of the particular case. Nor is this all. When a physician writes a prescription for a Mixture of Rhubarb and Soda, the apothecary who dispenses under this name a mixture which does not meet the pharmacopœial requirements, does so at his peril; for the laws of this, and of all other States which have laws prohibiting the adulteration of foods and drugs, impose a penalty upon the pharmacist who tampers in any appreciable degree with the composition of remedies for which the Pharmacopœia of the United States of America furnishes a title and standard, while there is nothing but the maker's own sense of expediency which regulates the composition of a trade-mark article. The owner of the name "Green's August Flower" may thus make it of rhubarb, potash, and aloes to-day, and of senna and soda, and without the aloes, to-morrow, and so on, according to whatever drug may be cheapest or most available, or as his ideas of expediency may vary.

It is often argued that there are some old stand-bys, as they are called, or certain nostrums made by particular persons, which have been so long in use, or the makers of which are in such good repute, that there is little if any objection to their being approved or used by physicians; but I can appreciate no distinction, and, so far as professional recognition is concerned, there can be none. No physician can have any guarantee that the trade-mark article which he indorses to-day and which, perhaps, acquires a commercial value for its *title* largely through the indorsement which he and other doctors have given it, will continue indefinitely to justify in its nature the good opinion he had of it at the time his approval was expressed, and no man who appreciates his duty to himself, his profession, or to the public, will give a certificate of the value of something over which he has no control, and which in time may come to be vended on the strength of such certificate, without regard to the nature of the article itself. John Doe, to whom the certificate is given to-day, may be an honest man and worthy of confidence, but if to-morrow he should die, or should fail in business, the certificate becomes a part of his estate and falls into the possession of Richard Roe, who has quite a different character, and less scrupulous regard for the use to be made of this piece of property.

I wish that time permitted me to point a moral by a recital of a few instances in which professional indorsement, given in good faith, has discredited those who allowed their names to be so used, but I will only refer you to the history of Perkin's Tractors, and Swaim's Panacea of former times, or so-called Hungarian Wines, and hospitals for the cure of chronic diseases of our own day. Surely, if physicians appreciated the ways in which they exchange their birthright for a mess of pottage in lending their aid to making reputations for proprietary articles, there might be some fewer nostrums, and their skill as physicians would be greatly enhanced.

Do not be deceived by ingenious advertisements in medical journals, the statements accompanying physicians' samples, or that class of advertising circular so commonly announced as intended "for the Medical Profession only." It is true that references to the articles referred to are sometimes—indeed, too often—seen in monographs and journal articles, and that their labels or wrappers often profess to give formulas for their composition. You may be sure that the men who furnish the indorsements are either ignorant or indolent, and that the formulas are frauds.

The maker of nostrums, for all essential purposes, has no more skill and possesses no greater resources than the open manufacturer, and, much as he may boast of his regard for the good opinion of the profession, it is only the old story of the use the monkey made of the cat's paw to get his chestnuts safely out of the fire.

MEDICO-LEGAL NOTES.

By HENRY A. RILEY, Esq.,

NEW YORK.

Quite an interesting case in regard to undertakers has recently been tried in the city of Camden, N. J. In this case a person living next door to the undertaker endeavored to obtain an injunction against the further prosecution of the business, on the two grounds that it was so conducted as to be a nuisance, and in addition that the business was a nuisance *per se*, and should be abated, no matter how it was carried on. The case, therefore, presents many points of interest to every one living in a crowded city.

The facts showed that the defendant buried from one hundred to one hundred and fifty persons a year, and that the vehicles he used were driven to and fro from his residence about four times in each case, so that the complainant had the opportunity, if he paid attention to the matter, to be reminded from five hundred to six hundred times a year that a death had occurred, that some one was a corpse, and that preparations were being made for the funeral. In every such case the defendant used a large box, in which the corpse was preserved, as far as possible, from decomposition by use of ice in another box made of tin, which was placed directly over the corpse.

The boxes containing the corpse were taken, after they were used, into the defendant's backyard, and after being washed and dried were taken into the house again. The boxes remained out an hour or longer, and occasionally all night. The business seemed to be carried on as unobtrusively as possible, but these circumstances were relied on to secure an injunction. It is evident that if the court had held that the business was a nuisance, it would be difficult to carry it on anywhere in a crowded city, and probably more inconvenience would arise than could ever occur from having the signs of funereal woe frequently brought to a person's sight and attention. The decision of the court was against the plaintiff on both points involved, and in regard to the question whether the business was a nuisance *per se*, it said: "Must the undertaker retire from the inhabited parts of our villages, towns, and cities? Is an occupation, which is absolutely essential to the welfare of society, to be condemned by the courts, to be classified with nuisances, and to be expelled from localities where all other innocent and innoxious trades may be carried on? In other words, is this business so detestable in itself as unreasonably to interfere with the civil or property rights of those who dwell within ordinary limits, and who can and do without effort see and hear what is being done? The inquiry is not whether it is obnoxious to this or that individual or not; but, whether or not it is of such a character as to be obnoxious to mankind generally, similarly situated. There are certain obscure or offensive sights, certain poisonous or destroying gases or odors, certain disturbing sounds or noises, which affect most persons alike; can the business of an undertaker be classed with any of these? Is the business of an undertaker of this class? Before the court can condemn a trade or calling, it must appear that it cannot be carried on without working injury or hurt to another; and as I have said, that injury or hurt must be such as would affect all reasonable persons alike similarly situated. The law does not contemplate rules for the protection of every individual wish, or desire, or taste.

"It is not within the judicial scheme to make things pleasant or agreeable for all the citizens of the State."

The New York Legislature has before it a measure requiring the manufacturers of patent medicines to print on the labels a statement of the various ingredients used. This bill has aroused the wrath of the manufacturers, and they have argued before the Committee that the passage of the bill would utterly destroy a large and important business. The extent of the business has been shown by statistics, which prove that a large part of the population must be consumers of patent medicines. There are in New York State 108 manufactories, with a capital of $3,512,430, and a yearly output of $4,339,178. In the whole United States there are 563 manufactories, employing $10,620,880 capital, and sending out each year medicines of the value of $14,682,492.

Dr. R. V. Pierce, of Buffalo, one of the largest manufacturers, was the principal spokesman before the Committee against the bill. He said that it had been argued that proprietary medicines were harmful, but he had never heard a complaint, and he challenged anyone to show that these medicines had ever killed or harmed anyone. He said it would be preposterous to print the names of the drugs used on the labels of the bottles, and that it would be unprecedented to give into the hands of the State Boards of Health the right to require this to be done. If a board of health consisted of allopaths, they would say that homœopathic medicines were useless, and prevent their being sold. In Dr. Pierce's opinion the bill, instead of being intended merely to protect the public by preventing harmful drugs being used in medicines, was only an effort to absolutely destroy the whole business. He urged the Committee not to strike such a blow, and render valueless an immense amount of capital. The further progress of the bill will be observed with interest.

In a recent Ohio case the strict liability of apothecaries for mistakes in putting up prescriptions was again declared. In this instance it appeared that an Italian, quite ignorant of English, asked the druggist for oil of sweet almonds, a drug desired by his wife in her confinement, and frequently used by her previously. In place of the oil of sweet almonds, the druggist's clerk put up, by mistake, in the bottle the oil of bitter almonds, and did not indicate in any way that it contained a poison. The patient swallowed the contents of the bottle and almost immediately died. In a suit for damages the druggist denied his liability for his clerk's mistakes, and the case was very vigorously defended. The jury brought in a verdict against him for $1,000—a very small amount under the circumstances—and this decision has now been affirmed on appeal. One of the points claimed by the defendant was that he could not be held liable unless it was shown that the Italian was the agent of his wife in purchasing the drug. This sophistical objection was brushed away by the Court, which said: "It is not a sound proposition to say that a dealer in drugs, having in his stock and for sale deadly poisons, owes no duty to persons who do not deal directly with him in relation to them. The public safety and security against the fatal consequences of negligence in keeping, handling, and disposing of such dangerous drugs is a consideration to which no dealer can safely close his eyes. An imperative social duty requires of him that he use such precautions as are likely to prevent death or serious injury to those who may in the ordinary course of events be exposed to the dangers incident to the traffic in poisonous drugs. The jury found that Foster, the agent of the defendant, sold a deadly poison to a customer without knowing it was a poison, and without ascertaining for what use or for whom it was purchased.

The Electrical Execution bill has just passed the Assembly in this State by a vote of 87 to 8, which is practically unanimous. This is the natural result of the recommendation made by the Commission appointed to consider the whole question of capital punishment. The Senate is expected to be as favorable to the proposed method as the Assembly has been. It is noticeable that civilized countries use widely different forms of the death penalty. Out of 37 European states, including the 19 cantons of Switzerland, 10 make use of the guillotine; 19 the sword; 3 the gallows; 2 the gun; 1 the garrote; and 1 beheads with the axe. If the Legislature should, in addition to the proposed law, pass another requiring executions to be less public than they are, it would be a considerable gain for public order. The last execution in this city was public enough to allow of a shameful exhibition of newspaper enterprise. Comparatively few persons were admitted to the Tombs yard, but the position of the gallows could be seen from neighboring buildings, and one of the principal newspapers in the city had its reporters placed so that by waving a handkerchief at the precise moment the drop fell, the motion was seen at the window in the newspaper office, and the fact of the execution was instantly printed. Hundreds of "extras" were in a few moments being shouted through the streets, and the proprietors were enabled in heavy head-lines and with the consciousness of a great feat accomplished, to announce that they were five minutes ahead of every rival.

The battle over oleomargarine still goes on. The Massachusetts Health Board has recently decided that the compound is a healthful one, and the public should be permitted to have it. This, however, is largely the position of persons in other States, only they wish the public to have it under its own proper name and not as genuine butter. The dealers in the article evince a most decided objection to this proposal, and evidently are able to find few purchasers when the article is labelled oleomargarine. In Pennsylvania the Supreme Court has recently declared constitutional a law prohibiting the sale of the compound. In this State comparatively little seems to be offered for sale under its own proper title, and the supervision is so effective that not very much is sold as genuine butter.

The effort to prevent persons from practising medicine in this city, until the requirements of the law have been carried out, is progressing vigorously, and one of the most recent instances is that of Dr. John Frederick Augustus Clausnitzer Adams, *alias* John Frederick Augustus Adams Clausnitzer, who was charged with practising as a physician under different names.

The Albuminates in Medicine.—The albuminates are a class of medicine which is coming into extended use. and one of the most highly spoken of, in therapeutical value, of the preparations of iron, is that which falls into this category. In Germany albuminate of iron has already been successfully introduced into medical practice. and will doubtless sooner or later be put upon its trial in this country also. The following formula at present is found to be the most suitable. Of dried egg-albumen 2.5 parts are dissolved in 30 parts (all, including the following, by weight), of cinnamon-water, forming solution No 1. Then 12 parts of liquor ferri perchloridi are diluted with 40 of water and 12 of spirit, forming solution No 2. These two are then mixed together, shaken, and half a part each of liquor ammonia and liquor soda immediately added. The whole is thoroughly agitated until completely mixed. The product is a reddish-brown, somewhat oleaginous-looking liquid, with a sweet taste and a slight alkaline reaction. It is miscible with all proportions of water, and with milk, or other albumen-rich fluids, without precipitation. The former liquid forms a suitable vehicle for its administration, and the dose is from one to four teaspoonfuls several times a day. Prolonged boiling will not separate the albumen of the preparation.—*Lon. Cor. Journal Amer. Med. Assn.*

Clinical Department.

THE PASSAGE OF A HAIR INTO STENO'S DUCT, CAUSING AN EXTERNAL ABSCESS AND FISTULA—OBSERVATIONS OF THE PAROTID SECRETION.

By S. W. Overall, M.D.,

Memphis, Tenn.

On December 6, 1887, while at dinner, and eating a piece of barbecued pig, I discovered a stiff hair, about an inch long, in my mouth, which I supposed was either from my mustache or a pig's hair.

On attempting to push it out with my tongue, it became engaged in the right side of my mouth. Further efforts to dislodge it with my tongue evidenced the fact, by its becoming shorter, that it was entering my jaw. It then occurred to me that it was being forced into Steno's duct. I tried immediately to extract it with my fingers, when it disappeared. I arose from the table and went into Dr. J. L. Minor's office, and related the above facts to him. He made a careful inspection, but could see no signs of the hair, and advised me to await developments, which I considered the best course.

I experienced but little trouble for three or four days thereafter, except a general soreness on the right side of my face. At the expiration of two weeks, a small tumor began to form at about the middle of the duct and in the muscles. It continued to develop slowly, externally, for three weeks, with but little tenderness and no sign of suppurating. To favor suppuration I began kneading it, when the inflammation extended to the parotid gland, which became very painful. On the subsidence of the inflammation I detected pus in the tumor, and had Dr. Minor cut down upon it, when about a drachm of pus escaped; but, although he probed and seached for the hair for some time, he could not find it. A tampon was inserted to keep the wound patulous, and favor suppuration and exit of the hair. Not until then did my annoyance begin. At my first meal after the operation saliva forced the tampon out, and began running down over my face, and so freely at times that it would saturate a large handkerchief.

For six weeks the wound remained patulous, discharging only a few drops of pus daily, with no signs of the hair nor indications of healing.

During this entire time saliva flowed freely through the fistula, although I made several unsuccessful efforts to prevent it with tampons and compresses.

Members of the profession with whom I consulted at different times advised waiting, saying that if there was a hair there it would come out through the opening. I began to fear permanent fistula, or serious results to the parotid gland should the hair pass into the gland, so on February 14th last, Drs. J. E. Block and F. A. Moody operated by making an incision, an inch long and as deep into the muscles as practicable, using cocaine as an anæsthetic. I urged them to continue their search for the hair, which they did for three-quarters of an hour, but could not find it. A tampon was left in the wound, as in the first operation, to favor suppuration, etc. I was very much discouraged, although about the third or fourth day after the operation the wound seemed more inclined to heal than it had at any time previously, though the saliva continued to pass through it. On the morning of the 22d (seven days after the operation), while dressing the wound, I discovered something sticking out of it, and, on slight pressure, out came the hair doubled upon itself. The hair was an inch long, and very much disorganized and fragile. The wound closed in a few days, and I have had no further trouble with it. It left a considerable scar.

As I once occupied the Chair of Physiology in a medical college for five years, I was very much interested at first in studying the effects of different stimulants to the parotid glands. My observations were briefly as follows:

Movements of the lower maxillary had no appreciable effect upon the gland. Acids, introduced into the mouth without movements of the jaw, would invariably cause a free flow of saliva. Mastication, with acid ingestion, would cause the greatest flow. I do not believe the movements of the jaw alone had any effect in exciting the flow of saliva, but the process of mastication diffused the acid in the mouth over a greater surface. Citric and acetic acids were most active. Food free from acids would produce very slight flow.

A CASE OF RECURRENT MACULAR SYPHILIDE.

By T. H. ROCKWELL, M.D.,
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On account of the extreme regularity with which the early symptoms of syphilis present themselves, it is interesting to the profession to note any deviations from the usual order of events. Perhaps the most constant symptom after the initial lesion is the development, in from four to eight weeks, of the syphilitic roseola. The course, duration, and time of appearance of this eruption is not the same in all cases, for it may be influenced by the food, drink, moral habits, and physical condition of the patient, and when treatment is early begun it may greatly modify the character of the eruption; but never, according to the commonly accepted theory, does it entirely prevent its occurrence, although the erythema may be so slight as to be barely perceptible, especially by the patient. The roseola ordinarily appears but once in the history of the case, although relapses may occur, but in this event the eruption usually coexists with a papular or vesicular syphilide, and there generally remain some traces of the previous erythema.

Cases in which a macular syphilide occurs several months after a previous similar eruption are very rare, and their existence has even been denied by some authors. The following case, therefore, possesses considerable interest:

M. K——, aged thirty-three, was admitted to Charity Hospital in May, 1887, and had at that time a venereal sore, which had nearly healed, on the upper part of the right labium majūs. This sore was first developed about the middle of April, and had previously been treated as a chancroid, but there was a slight amount of induration about it when she entered the hospital. There was also a vulvo-vaginal abscess of the right labium, which was opened, and a small quantity of pus was evacuated. The abscess was dressed with iodoform, and healed kindly.

During the second week in May there appeared a well-marked macular eruption, bright red in color, the spots being from one-fourth to one-half an inch in diameter, extending over the entire body, commencing first on the abdomen and thorax, and extending thence to the extremities.

Coexisting with the roseola was an intense iritis of both eyes, also marked alopecia, inguinal, epitrochlear, and cervical glandular enlargement. There were rheumatic pains about the joints, and mucous patches were discovered in the mouth. There was but slight laryngitis.

The pill of the protoiodide of mercury, two-fifths of a grain, was given three times daily, and a solution of atropine instilled into each eye.

Soon after commencing this treatment she improved rapidly, and finally the symptoms disappeared, except the glandular enlargement, which, although reduced in size, could still be felt. The eruption faded, leaving slightly pigmented spots in the skin. As all visible manifestations of the disease were gone, the patient left the hospital in the latter part of June.

On March 3, 1888, after a debauch of three days, nearly ten months after the roseola first appeared, she noticed a well-marked eruption on her body. While absent from the hospital she had taken no medicine at all, except an occasional dose of Epsom salts, nor had she become overheated, and the undergarments were of old white flannel, not irritating to the skin. As soon as the eruption was discovered she came at once to the hospital, where an extensive macular syphilide was found over the entire body except the face. The spots were of a pale red color, level with the surrounding surface, disappearing on pressure, and accompanied by no pruritus. The skin had shown no papules, squamæ, or vesicles, the well-marked macular eruption being the only local manifestation. Soon after the appearance of the eruption, the alopecia, which had at one time nearly ceased, began to be quite marked, and rheumatic pains in the joints were developed. Her general condition was good, there being no constitutional disturbance at the time the eruption was developed. She was put upon a mixed treatment of the biniodide of mercury and potassium iodide, which caused the eruption to fade away, so that three weeks later there remained only a coppery stain on the surface of the skin. With the exception of these two macular eruptions, the patient has never had any cutaneous manifestations of syphilis, although the time for the papular eruption to commonly appear had long passed before the second macular syphilide was developed; nor was she at that time receiving any treatment which would retard the production of the papular eruption.

A recent writer has made the statement that "the phenomena of syphilis are most regular in their occurrence." Ordinarily they are, but the above illustration shows an exception to the rule, and proves, moreover, that it is possible to have an early lesion appear much later in the disease than is usually the case.

LOCAL APPLICATIONS OF CARBOLIC ACID IN CARBUNCLES.

Dr. James McManus, of Brooklyn, writes: "Apropos of the letter of Dr. Carleton, of Lawrence, Mass., in The Medical Record, of March 17th, I would like to mention the following circumstance: While assistant physician at the Hospital for Incurables (Insane Asylum), Flatbush, L. I., in the winter of 1882–83, I was called by one of the nurses to see a patient in the female wards. I found her with a large carbuncle on her left thigh. The patient had probably been suffering with it for several days before my attention was drawn to it; and, when examined, the carbuncle had a very unhealthy appearance, and the patient was to all appearances very sick—so sick that I fully expected her death. I had been preparing carbolic-acid solutions in the drug-room that morning, and scarcely knowing what to do—believing, as I did, that nothing I could do was of any use—I sent what I thought was a five per cent. solution of carbolic acid to be used as a wash. On visiting her again in the evening I was surprised to find my insane patient very much better in appearance, and was still more so to see that the carbuncular swelling had decreased to one-third its former size, and in place of the almost gangrenous appearance of the morning, had assumed a vastly more healthy appearance. I had given ten-minim doses of tr. ferri chlor., but as she had only taken two doses of that, I could not attribute the changed appearance to the action of the drug. On examining the wash I found that, by mistake, I had given a fifty per cent. solution of carbolic acid, which the nurse had faithfully applied by wetting a cloth in it and placing it over the carbuncular swelling. I kept the fifty per cent. solution on the patient that night, but substituted a weaker one the next day. In a few days the patient was entirely well. I have always believed that that mistake of mine saved that miserable, incurably insane patient's life."

German Drug Stores are apparently rather less trustworthy than American or English, if one may judge from recent revelations. A Berlin Society sent out a long series of bogus prescriptions, containing, for example, "tuber cinereum," "urticaria rubra," "pempuygus foliaceus." These things were dispensed and paid for in over sixty Berlin drug stores.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, May 12, 1888.

THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

THE meeting of the American Medical Association, a telegraphic report of which we publish in our present issue, may be considered to be a success from several points of view. The attendance was reasonably large, the subjects discussed were of an interesting and practical nature, and the addresses were in keeping with the dignity of the occasion.

The worthy President, in a direct and forcible manner, referred to the present defects in our methods of education, and the necessities for increasing the standard of requirements and of reducing the number of medical schools. Everything he said is absolutely true and cannot be told too often. If there is any important missionary work that the American Medical Association can do, it is certainly in the direction suggested by the clear-headed and conscientiously outspoken orator.

It is still a question, in view of the interested opposition of the medical schools, whether or not any good can be accomplished in the direction suggested. THE MEDICAL RECORD for many years has advocated reform, but the schools as yet have had things their own way. No argument worthy of consideration has been offered against independent State examining boards. Every time the question comes up before a State legislature, the Medical Colleges are on hand to oppose it by every influence in their power. The reason is apparent. These schools cannot afford, as purely business enterprises, to run the risk of such an impartial supervision of their work as would necessarily curtail their licensing privileges.

To sit in judgment upon the methods of many of these schools would mean ruin to the stockholders and self-constituted professors. But the end must come, sooner or later, and to the courageous criticism of the worthy President every medical man who is not specially interested in the pecuniary prosperity of some college will heartily say "Amen." We say, in the name of the profession at large, let us call a halt along the line. Slacken the speed of the mills and give us a better opportunity for examining and sorting the grist. The profession is now crowded to overflowing. There is a glut in the market which is appalling, and yet "the cry is still they come."

The addresses delivered during the session were listened to with deserved attention, and were models of their sort. The reports made were also well digested and to the point. At the risk of invidious comparison, the one on dietetics was of great importance, and set forth in a very clear and common-sense way the true philosophy of the art of feeding. No better rules have ever been formulated regarding this question than those bearing on infant diet, and it is a matter for congratulation that the associated press of the country has so widely disseminated the sound doctrine, and placed it within the reach of every mother in the land. It is such reports as these that tend to place legitimate medicine on its properly dignified basis before the world.

The meeting, besides, was a harmonious one. No differences of opinion on ethical questions were ventilated, and a spirit of more than ordinary liberality and charitableness prevailed. This was as it should be, and is a proper beginning of an end which all good men earnestly hope for.

THE FUNCTION OF THE THYROID GLAND.

MUCH interest has been excited on the subject of the function of the thyroid gland, especially since it has been shown that serious constitutional changes follow its removal. These changes, as our readers know, have been observed in monkeys in which the gland was removed experimentally, and in man when the gland was destroyed by disease. Animals or men deprived of the thyroid gland develop an apathetic mental state, ending, finally, in almost complete imbecility. They suffer from tremors, sometimes from convulsions, and often have a subnormal temperature. A peculiar infiltration of the subcutaneous tissue with a myxomatous material takes place. The condition has been described by surgeons as cachexia struma priva, and it closely resembles the disease known as myxœdema, in which the thyroid appears to be atrophied.

At a meeting of the Munich Medical Society, on January 11th, an interesting debate took place regarding the function of the thyroid gland, and, in particular, as to its relation to the nerve-nutrition of the nervous system.

Professor Ruedinger held that it was impossible to attribute the peculiar effect of thyroid extirpation to any mechanical action which that gland might have upon the intracranial circulation. The fact that the brain may be normally nourished, even where both carotids and one vertebral have been obliterated, seems almost conclusive evidence in this direction. It is held, therefore, that we must fall back upon a chemical theory to explain the consequences of its removal. The view that the thyroid, like certain other blood-glands, elaborates a material necessary for the proper composition of the blood, is the one that must be usually adopted. Horsley found seven per cent. more white blood-cells in the venous blood of the thyroid than in the arterial. Most of the speakers, in the discussion referred to, inclined to this chemical view of the question. Professor Bollinger, however, doubted if so small an organ could have so important a function, and Professor von Liemssen reported a case in which this gland had been totally destroyed by sarcomatous disease without any resulting influence upon the nervous system.

We must, for our part, express a very decided adherence to the chemical or glandular theory of the function of the thyroid. It is a gland somewhat of the order of the suprarenals, *i.e.*, it has as its function, no doubt, the destruction or further elaboration of nitrogeneous metabolites.

When destroyed or removed these partially disintegrated products enter the general system and poison it; as with the supra-renals, this condition may not always follow its disease, since other blood-glands may assume its function. But that it is a powerful auxiliary in retrograde metamorphosis there seems, in the light of present knowledge, but little doubt.

THE STUDY OF ANATOMY.

THE last edition of "Gray's Anatomy" (the eleventh) has been before the medical public for some months. The journalistic notices it has received have been uniformly favorable and in some cases extravagant. The American edition, under the able supervision of Dr. Keen, is in some respects better than the English. In this country, "Gray's Anatomy" is generally the first book purchased by the medical student, and it speedily becomes the bane of his existence.

In looking over the kindly criticisms alluded to above, we are struck with the appearance of an idea rather new to book-notices. In some journals the new idea stands boldly forth; in others it has hardly dared to lift its head. But it is there all the same, and may be characterized as a tendency to break loose from the old ideas concerning the proper methods of teaching and learning anatomy.

This foundation study of medical science is to its votaries very much what geography is to the pupils of the common schools. Until very recently the method of studying the latter branch has been purely a mnemonic one, entirely devoid of any appeal to the higher intellectual faculties of the scholar. Description has been entirely divided from analysis, and the rising generation has crammed its head full of the names of rivers, counties, and towns, with a very indefinite idea of their mutual situations and relations.

But prominent educators finally saw that this was beginning at the wrong end, and they conceived the plan of map-drawing and map-constructing. The project was from the first successful, and from that time the study of geography has been pursued with relish, even by young children.

A criticism in the same line may be made on the current methods of studying and teaching anatomy. It is a fault common to all books and all schools. Of the new Gray, one critic says that it is sadly deficient in this, "that the student is not given an introduction as to the relations of the science of anatomy to other sciences, especially to morphology and biology. . . . It is an undeniable fact that the genetic method of explaining anatomical facts illuminates the process of teaching and learning, and thus not only the memory, but the reasoning powers of the student are exercised. The time has come when the old mnemonic method of learning anatomy can no longer be tolerated. 'To teach means to develop.' Therefore, there can be no doubt that the genetic method should always work hand in hand with the descriptive.

"It seems to us, that at the present time a physician should be more than merely a practitioner of medicine. He should be instructed in the scientific foundations of the disciplines which he needs in the practice of his profession. Lacking these, he is little better than an artisan, and will never be able to reach the noblest aims of his profession."

This criticism contains in general terms the new idea. The division of anatomical study into bones, ligaments, muscles. etc., while well enough in its way, makes the study a too disjointed one to arouse any enthusiasm among students. The satisfaction of dissecting-room work comes largely from the fact that the relation of parts is apparent at a glance. The lectures on regional anatomy are always the most popular ones of the year, and for a similar reason. Furthermore, the proper methods of study being thus taught at the commencement of a medical course, the effect is manifest in the acquirements of succeeding years. We can well imagine many a man has felt discouraged as he has tried to remember all the foramina-angles and corners of some of the bones of the skull; and when, in after years, he has come to realize the practical worthlessness of much of this kind of knowledge, his feeling is one of disgust at the recollection of so much wasted energy.

To teach anatomy as it should be taught will relegate much of the didactic teaching of the present day into the background. Greater laboratory facilities will be required, and more systematic work in dissection. But it is the foundation study of medicine and surgery. The more thoroughly it is studied, the better the superstructure that can be placed upon it.

POSTURE AND RECTAL DISORDERS.

THE study of the posture of the human body in its relation to the needs of daily life has received a new impetus from Minneapolis. A physician of that city contributes to the *Northwestern Lancet* an article demonstrating that the squatting posture is the natural and proper one in defecation, and that the adoption of it tends to relieve constipation, heal hemorrhoids, and prevent uterine displacements. This physiological squat, it is believed, places the body in a position adapted to secure the greatest pressure on the abdominal walls and rectum. Besides this, it is so uncomfortable that the operator has to attend strictly to the business of the moment. He cannot dally with the morning paper while exposing the gluteal regions to subterranean draughts, and thus laying the foundation for fissures, piles, and prolapsus.

The squatting position is naturally assumed, says Dr. Abbott, by monkeys, apes, and man. In savagery and on the frontiers of civilization this posture is the ordinary one. But man seems to be a luxurious animal, and our writer must admit that, on the very first opportunity, he abandoned the ape position for any appliance that will support the thighs, from the edge of a board to the elegant ease of artistically perforated and polished mahogany.

Dr. Abbott apparently makes a strong point for the squatting posture when he says it is the one recognized by Holy Writ. While this may be the case, there is some reason, on the other hand, to believe that the squat is the natural position of the devil. At least we are told in "Paradise Lost," that

> "Him there they found,
> Squat like a toad close at the ear of Eve."

Hence it will not strengthen the case to bring in the religious factor. But Dr. Abbott puts the case most strongly when he pictures the indolence which the American temperament exhibits in the water-closet—the only place where he is not in a hurry.

"How far from nature," he says, "is the woman, who, perhaps intensely interested in the question of blue or green for her bonnet, will sit in deep contemplation for ten minutes, straining, between thoughts, as if in childbirth, finally concludes she was mistaken and goes back to the bonnet, to return to the closet again only after three or four days of constipation have given her a splitting sick-headache. Man abuses his blessed privileges in the same way, figuring perhaps on a real-estate deal instead of a bonnet, or perhaps with magazine in hand making increment above, but failing in excrement below."

If the primeval posture suggested will make men and women distribute the time devoted to their emunctories more judiciously, it may be a wise measure to adopt, although we fear that it is not destined to have a fair trial in any but strictly rural districts.

News of the Week.

Hudson River State Hospital, Poughkeepsie, N. Y.—Governor Hill has appointed Dr. George F. Shrady manager of this hospital in place of Dr. C. R. Agnew, deceased.

Commencement of the College of Physicians and Surgeons.—The annual commencement exercises of the College of Physicians and Surgeons were held last evening in the lecture-room of the College, Fifty-ninth Street and Tenth Avenue. Dr. Dalton, the President of the College, delivered an address on the progress of surgery, and Dr. Curtis then awarded the prizes offered by Dr. Harsen. The clinical prizes of $150 and $75 were won by H. L. Shively and H. W. Cardwell. The ten honor men were R. A. Sands, G. L. Nicholas, L. O. Wiggins, H. L. Shively, G. R. Hill, W. K. Draper, G. B. Cowell, A. Lambert, S. L. Weber, and G. B. McAuliffe. The honor prizes, which can only be competed for by the honor men, were awarded as follows: R. A. Sands, $500; Alexander Lambert, $300; L. O. Wiggins, $200.

Mr. Matthew Arnold had disease of both mitral and aortic valves. The affection was apparently hereditary. His father, Dr. Arnold, and two of Matthew Arnold's sons, succumbed to chronic heart disease.

The Female Physicians of Russia recently celebrated the tenth anniversary of their professional existence, by a banquet.

The Fifth Annual Meeting of the Conference of State Boards of Health was held at the Grand Hotel, Cincinnati, on Friday, May 4th, preceding the Annual Meeting of the American Medical Association.

The Medical Profession of Switzerland is urging the enforcement of the law withholding a license from any but graduates of the Swiss medical colleges.

Dr. Joseph Holt having resigned his position as president of the Louisiana State Board of Health, and removed from the State, Dr. C. P. Wilkinson, a graduate of the Washington-Lee University and of the Louisiana Medical University, has been elected in his stead.

A Young Medical Student of this city has been arrested on suspicion of having been concerned in the murder of Lilla Hoyle, of Webster, Mass.

Phenacetine.—Dr. Robert Bell calls attention, in the *British Medical Journal*, to a new antipyretic and antineuralgic agent, called "phenacetine," though, correctly speaking, it bears the chemical name of para-acetphenetidin, the formula of which is $C_6H_4 \left\{ \begin{matrix} O.C_2H_5 \\ NH(CO-CH_3). \end{matrix} \right.$ It can be given with perfect safety in doses of from eight to twelve grains every four hours. Phenacetine is a febrifuge which compares favorably with any of the modern antipyretics in the certainty of its effects and freedom from evil consequences. In fevers its administration is followed by relief of the symptoms; and in sciatica, "its utility cannot be overrated." Phenacetine is a white, crystalline powder, soluble with difficulty in water, but easily so in hot alcohol.

Total Removal of the Bladder.—It is highly probable that the bladder is the next viscus which will be successfully extirpated by the surgeon. The bladder is an organ of convenience rather than necessity, and it is better to be without it than to have it with a cancer developed upon its walls. The operation of total removal has been experimentally attempted upon dogs, but with the conclusion that such total removal, with proper diverting of the ureters, is very difficult, if not entirely impossible. Messrs. Ballance and Edmunds, however, have devised an operation ("St. Thomas' Hospital Reports," vol. xvi.) which it is believed will prove efficient.

Reciprocity in Medical Practice.—In the House of Parliament, on April 9, 1888, the following discussion occurred:

"Mr. Arnold Morley asked whether registered medical practitioners in the United Kingdom were afforded privileges of practising in the United States of America, and whether any steps have been taken or were in contemplation by the Privy Council, under section 17 of 'The Medical Act, 1886,' in the direction of similar privileges being given to legally qualified American practitioners who might be desirous of practising medicine in the United Kingdom."

"Sir W. Hart-Dyke replied that no statement had been received from the Government of the United States showing the privileges afforded in America to registered medical practitioners of the United Kingdom, nor did he find that any request had been made by the United States Government for the extension of privileges to American medical men in this country."

Dr. William B. Meany, of Chicago, who is at present in London, has written to an official representative of the United States in reference to the above point, as follows:

"I beg, sir, to state that registered medical practitioners of the United Kingdom are afforded all rights and privileges of practising medicine in the United States, on equal footing with graduates of medical schools in the United States of America.

"The same courtesy is shown members of the learned profession holding certificates of their qualifications from the United Kingdom, that is shown to residents of Sister States of America, under the same circumstances.

"We beg, sir, most respectfully to ask your aid and consideration for the purpose of having granted to legally qualified practitioners of medicine in the United States, the same privileges for those who may desire to practise medicine in the United Kingdom."

Society Reports.

American Medical Association.

THIRTY-NINTH ANNUAL MEETING,

Held in Cincinnati, O., May 8, 9, 10, and 11, 1888.

[By Telegraph to The Medical Record.]

Tuesday, May 8th—First Day—General Session.

The meeting was called to order by Dr. W. W. Dawson, Chairman of the Committee of Arrangements, in the spacious Music Hall on Elm Street.

THE PRAYER

was delivered by the Rev. R. A. Gibson, Rector of Christ's Episcopal Church.

THE VICE-PRESIDENTS,

Drs. Duncan Eve, Darwin Colvin, C. J. O'Hagan, and A. Stedman, were invited to seats on the stage.

AN ADDRESS OF WELCOME

was then made by the Mayor, the Hon. Amos Smith. Upon him, as chief magistrate of the city, devolved the pleasant duty of extending to the members of the American Medical Association a most cordial welcome from the citizens of Cincinnati; and he believed that this welcome would be of such a practical nature that any words of his were superfluous. No member should be allowed to leave the city feeling that he was a stranger. Since entering the hall he had been told of an order of a former mayor of Cincinnati, when the city was before honored by the meeting of this Association, twenty-five years ago. The police had been notified at that time that, should they hear laughter or noise on the streets at an unusual hour of the night, they might be conveniently deaf, for they would know that it was caused by some of those

ROLLICKING DOCTORS

on their way home. The speaker did not feel called upon to repeat his predecessor's order, yet he desired to offer the entire freedom of the city to his hearers, and if some of the younger members should happen to stay out a little late some night, the members of the Association might be assured that they would have no cause to complain of the treatment which these joyous young men would receive.

The power of acquiring scientific knowledge will be limited only by the last second of recorded time, and as surely as the rising sun foretells the glory of the coming day, so this meeting foretells great good to humanity. The Association,

BORN ON THE EASTERN BORDER,

now tempers socially and intellectually, with its offspring, all the population of the land.

In closing, the speaker said that this was the

CENTENNIAL YEAR

of the settlement of the Ohio Valley, and on July 4th would be opened the exhibition to commemorate this event. He hoped that his hearers would pardon him for calling their attention to this secular event, but he did so in order to extend to the members present an invitation to come again two months hence, and he assured them of another welcome as hearty as that which he now extended to them.

Dr. C. G. Comegys then delivered the

WELCOMING ADDRESS

on the part of the medical profession of the city. This was the third time that the Association had held its meetings in Cincinnati, the previous occasions having been in 1850 and 1867, and the physicians of the city, as well as all the citizens, appreciated to the full the honor which had been thus three times conferred upon them. It was sad to feel that a majority of those who, on former times, had constituted the members of the Association were now no more, yet their spirit still lived in their successors.

As this was the year in which the citizens of the Ohio Valley were to recall the first settlement of the region one hundred years ago, it might be profitable to review the events of the

PIONEER AGE.

It was an heroic age and a glorious race, whose achievements were now to be commemorated, and those of the present day were celebrating the occurrences of a century ago with the aim, not only to recall with gratitude the deeds of those gone before, but to seek in the remembrance of them an incentive to emulate the courage, the toil, and the public virtue of those early pioneers.

The colony that descended the Ohio River in flatboats and planted in this spot the beginnings of a new civilization was small in numbers, but strong in virtue and in courage. The men were of no common mould, and they succeeded, after many vicissitudes, in establishing an outpost of civilization in the distant wilds. With the establishment of quiet, came the desire of perpetuating, for the benefit of posterity, the culture which those hardy pioneers had brought with them from the East. What was wanted for the accomplishment of this end was

AN INSTITUTION OF LEARNING,

and for the establishment of this was needed a master mind. Fortunately, the young colony had not long to wait, for at this time, in the wilds of Kentucky, was growing to manhood one who was to accomplish great things for Cincinnati. This man was

DANIEL DRAKE.

After studying medicine for a while in this city he journeyed to Philadelphia, where he had the privilege of receiving instruction from Rush, Physic, and Wistar. After his graduation he was associated with Dudley, Caldwell, and Richardson in establishing the

FIRST MEDICAL SCHOOL IN THE WEST,

at Lexington, Ky. But he loved the city of his adoption, and, after delivering two courses of lectures at Lexington, he returned to Cincinnati, where he soon obtained charters for the Cincinnati College, the Medical College of Ohio, and the Cincinnati Hospital. The crowning work of his life was, however, the systematic treatise on

THE DISEASES OF THE INTERIOR VALLEY OF NORTH AMERICA,

to the preparation of which he devoted twenty years of study and of travel throughout the vast valley of the Mississippi. This work will always remain a monument to the fame of Daniel Drake.

All the great works of Drake still live. The Cincinnati College is the largest law school in the Ohio Valley, and the Medical College of Ohio is flourishing and of vigorous growth.

A SPIRIT OF ORIGINAL RESEARCH

has always animated the profession in this city, and it is largely to the labors of this great man, performed in the early part of this century, that is to be attributed the existence of this spirit.

Dr. Comegys then referred to the peculiar

GEOLOGICAL FORMATION

of the soil upon which Cincinnati is built. If one ascends the hills surrounding the city he will see that they are made up of stratified sedimentary masses belonging to the lower

SILURIAN EPOCH.

Between the layers are to be found large quantities of marine shells, showing that all the country about was once the bottom of a great body of salt-water.

The programme of the proceedings for the entire session was then announced, after which DR. A. Y. P. GARNETT, of Washington, D. C., delivered the

PRESIDENT'S ADDRESS.

In casting about for a subject concrete in its nature and directly useful in its application, he had determined, he said, to submit for consideration a few practical reflections upon the

MISSION OF THE AMERICAN MEDICAL ASSOCIATION.

The paternal relation of this association to the medical profession of this country placed it under the gravest responsibilities. But a retrospect of the almost half-century of its existence showed no reason for discouragement, and, in fact, many reasons for congratulation. The members should not, however, consider that they had accomplished their mission until they had brought about a radical and thorough reform in the present system of medical education in the United States. They should make every endeavor to elevate the system of medical education in this country to a standard equal in dignity and attainment to that which obtains in Europe. The annual meetings of the Association must not be held solely for the purpose of scientific consideration supplemented by the pleasures of social intercourse.

Rapid progress has been made in this country, in some departments of medicine, during the last decade, yet we are still confronted by the fact that

OUR MEDICAL SCHOOLS REMAIN VERY NEARLY THE SAME.

True, this subject has been constantly discussed, but the question still remains: What can this Association do to further raise and promote a higher standard of medical education in the United States, to curtail the number of medical schools, and thereby gradually to restrict to a conservative limit the annual host of graduates turned loose upon the public? An explanation of the fact of the failure of this Association to effect an improvement in medical institutions may be found in the fact that a large proportion of those who now attend the meetings are directly or indirectly connected with medical institutions and are influenced thereby. While they have done much for this Association, they have not wielded the power which they possess to further the advance in medical education. We have medical colleges in this country unsurpassed by those in Europe in their essential appointments and facilities for education, yet we fall far behind the latter in the systems of study which we pursue. There is also a radical difference in the education of the mass of students of this country and of Europe. The European medical student is confronted at the very threshold by the rigid requirements of a fixed collegiate standard. He must have some educational capital or mental training to build upon before he can hope to master the complex and difficult work before him.

In this country the multitude of medical schools offering to the educated and the uneducated, by low fees and short terms of study, inducements to become doctors, together with the almost universal

DESIRE AMONG LABORERS TO BECOME DOCTORS,

has worked incalculable mischief. We have waited almost a half-century for the desired reform to be effected, but our expectations have not been realized. Many excuses have been brought forward, but there is no excuse which will free the medical schools of this country from the responsibility of the odious defects of our system of medical education. The ratio of professional men in the United States to the population exceeds that of any other country in the civilized world.

THE RATIO OF PRACTITIONERS OF MEDICINE TO THE POPULATION

of the United States at present is about one to every 580, and there is little danger that this ratio will be lessened. The supply will always equal the demand, in despite of all difficulties. Over a hundred years ago, when medical education was much more difficult to obtain than at present, Addison, in his *Spectator*, said: "If, in the third place, we look into the profession of physic, we shall find a most formidable body of men; the sight of them is enough to make a man serious, for we may lay it down as a maxim, that when a nation abounds in physicians it grows thin in people. This body of men in our own time may be described like the British army in Cæsar's time—some of them slay in chariots, and some on foot."

To facilitate the attainment of a

HIGHER MEDICAL EDUCATION,

the speaker offered the following propositions:

I. That a standing committee, to be called a

COMMITTEE ON LEGISLATION,

be appointed for each State, Territory, and the District of Columbia, to consist of five members of the medical profession in good standing, three of whom shall have no official connection with any medical school, whose duty it shall be to carry out, as far as possible, the following instructions:

First: That said committees, or a majority thereof, shall attend the sessions of their respective legislatures, or as often as their duties may require it, for the purpose of using all honorable means looking to the

REDUCTION OF THE NUMBER OF MEDICAL SCHOOLS

in the United States, and a consequent diminution in the number of medical graduates. As a practical measure to this end, they urge the passage of a law requiring that, in the future, charters for creating medical schools shall contain a clause requiring that a full term of four years' study be required before the granting of a diploma to any student, and that no student shall be matriculated who has not passed an oral and written examination in the ordinary branches of academic study. Further, that any college failing to show a greater number than fifty matriculates annually, for three consecutive years, shall forfeit its charter and be abolished.

Second: That these committees use all diligent effort to secure an ordinance creating a

BOARD OF MEDICAL EXAMINERS

in each State and Territory, which shall have no connection with any medical school, and which shall be required to examine all applicants for license to practise medicine in their respective States. Any person practising any branch of the healing art, without license granted by said board, shall be subject to the penalties as the law may provide. This committee should also be authorized by statute to nominate, to the governors of the State and Territory, competent and learned members of the medical profession to constitute said board of examiners.

Third: That the chairmen of said committees of five be required to submit, at each annual meeting of this Association, a report embracing a full statement of what has been accomplished by each.

II. That the faculties of the several medical schools within the limits of the United States be once more urgently requested to

CALL A CONVENTION

at some central point, for the purpose of consultation and the adoption of some more general and uniform system of medical education. That, in addition to a four years' term of study, the requirement of a preliminary education, including some

KNOWLEDGE OF THE CLASSICS,

shall be suggested. Any school or college which shall refuse to enter into such an arrangement shall be excluded from all connection with the American Medical Association, and its alumni shall not be recognized as members of the regular profession.

The speaker said that he was aware that these suggestions embraced some very radical, and seemingly impracticable, changes. If these seeds fell upon barren soil, he would at least enjoy the consciousness of having honestly, conscientiously, and fearlessly met the great and pressing issue of the day.

DR. GARNETT then referred to the

INTERNATIONAL MEDICAL CONGRESS

in the following words: "It is with no little satisfaction that I can here refer to the successful meeting of the ninth International Medical Congress, which took place at the capital of the United States in September last. To my lamented and distinguished predecessor as President of this Association,

THE LATE DR. AUSTIN FLINT,

belongs the credit of having suggested, at the meeting in 1884, that this Congress, through the authority of the American Medical Association, should be invited to hold its ninth meeting in the United States. Through the ability and diplomatic tact displayed by the gentlemen intrusted with the mission of conveying the invitation to the meeting of the Congress at Copenhagen, Washington City was selected as the place for the meeting of the ninth International Medical Congress.

Notwithstanding the defection of some of those who were identified with the movement at its inception, and who subsequently disassociated themselves from all connection with the Congress, we entertain no misgiving as to what the verdict of the medical world will be:

"EQUAL, IF NOT SUPERIOR, TO THE WORK OF ANY PRECEDING MEDICAL CONGRESS."

The speaker referred to the founding and naming of the city of Cincinnati, just one hundred years ago, by Dr. Arthur St. Clair.

Reference was also made to the mortifying position in which the Rush Monument Committee has been placed by he apparent

LACK OF INTEREST

and liberality on the part of the medical profession of the country.

He concluded the address by offering congratulations upon the proud and enduring position now occupied by the Association. It is to-day more powerful, more self-reliant, more progressive, and stronger in the affection of its members than at any former period of its existence.

A vote of thanks was offered to the President, and it was moved and carried that the address be referred to the Committee on Publication.

DR. LEWIS A. SAYRE was invited to take a seat upon the stage.

DR. N. S. DAVIS presented a petition from many members, that the various sections be allowed to hold sessions in the morning as well as in the afternoon. This request was granted.

Invitations were presented to the members of the Association to visit the Chamber of Commerce, the College of Music, and the Technical School.

Dr. N. S. Davis stated that the secretary of the

JUDICIAL COUNCIL

had been obliged to resign on account of ill-health, and though, happily, there was no work for the Council to perform, the members were requested to meet in order to preserve their organization and be able to act in case of necessity.

In the evening the members met in the parlors of the Burnett House in an informal reception.

WEDNESDAY, MAY 9th—SECOND DAY.

The general session was called to order by THE PRESIDENT at 10.30 A.M.

DR. ROBERTS BARTHOLOW, of Philadelphia, delivered the

ADDRESS ON GENERAL MEDICINE.

The last International Medical Congress was, in some respects, the most important one that has ever been held, especially in regard to preventive medicine. To an unprejudiced observer it would seem that its proceedings ought to have received some consideration from the public press. Yet such was not the case, and this is the usual

POSITION OF THE PRESS TOWARD THE MEDICAL PROFESSION.

Those organs of public opinion do not ordinarily regard medical organizations seriously, and they seldom notice matters of the utmost importance to the general welfare of the community which may be discussed at these meetings. A surprising amount of ignorance still exists in this latter part of the nineteenth century, and people still think that the therapeutic art is based on some 'ism or 'pathy. On the Continent of Europe

HOMŒOPATHY IS NEARLY EXTINCT,

but here it still lives, being held up by social influences and by misrepresentations on the part of its advocates. The statistics upon which these men rely to win converts are often made up out of whole cloth, as was done by a Dr. Somers, whose pretended official figures, showing the results of practice in the larger cities of this country, seem to prove that homœopathic methods of treatment are fifty or sixty per cent. more successful in curing disease than are those of legitimate medicine. In one of the large cities of the West circulars were widely distributed in which the claim, based upon these supposed official figures, was made that regular medicine would soon become extinct in this country. The speaker had taken pains to consult the proper authorities in regard to the sources of these alleged official figures, and had found that there were none, and that the statistics were pure fictions. No further argument was necessary to establish the falsity of a system which had to resort to such means to insure its success. The remedy for this, which regular medicine has to offer, is to improve its art.

THE SCIENCE OF THERAPEUTICS

should be made more certain. This is a branch of medical study which is not cultivated as it should be, and a true knowledge of drug-action is not widely enough diffused. The acquisition of this knowledge is greatly hindered by the mass of old prejudices which still cling to this science, and impede its progress like the barnacles on the hull of a ship. All this complexity and superfluity of olden times must be wiped away; at least two-thirds of the pharmacopœial preparations could be dispensed with, and scientific therapeutics would thereby be the gainer.

The knowledge of a drug and of its various constituents should be thorough, and only its active principles, or, if these have not been isolated, its strongest and most constant preparation, should be prescribed. In

THE ALKALOIDS

we have singleness and simplicity of action, and they may also be given in small doses and in a form most agreeable to the patient. This is a matter of no small importance.

The speaker then referred to the

DOSIMETRIC SYSTEM OF MEDICINE,

into the claims of which he had carefully examined, but which he did not consider as in any sense new. Furthermore, the system was crude, and its adherents did not usually base their modes of treatment on true scientific grounds.

A great objection to the employment of a crude drug was its uncertainty of action. In the case of

JABORANDI,

for example, there were two alkaloids, pilocarpine and jaborine, whose action was dissimilar, and in prescribing the crude drug the practitioner could not be as certain of obtaining the desired result as when an alkaloid was exhibited. Many other drugs, such as opium and nux vomica, offered examples of this same complexity of action. The study of

THE PHYSIOLOGICAL ACTION OF REMEDIES,

as a basis for their scientific use in the case of disease, is still young and dates only from the early part of this century. It is a curious fact that, at the same time that the foundations of our knowledge of the physiological action of remedies were being laid, Hahnemann and Mesmer were imagining the spiritual essence. An illustration of the utility of the modern methods of the study of therapeutics is furnished in the employment of the nitrites in the treatment of angina pectoris. It was through the knowledge of their physiological action, experimentally obtained, that they came to be employed therapeutically. Homœopathy, the speaker maintained, had nothing to do with the progress of modern scientific medicine. The true therapeutic action of drugs was one of antagonism.

Therapeutics also presses into its service the physical forces whose action is fixed and according to known laws. Even the most sceptical is forced to admit the

EFFECTS OF THE GALVANIC CURRENT UPON CONGESTION

and upon the products of inflammation, such as strictures. Electrolysis is comparatively new in its application, and it is full of therapeutic promise.

The address was referred to the Committee on Publication.

Dr. J. H. Hollister, Secretary of the Board, presented the

REPORT OF THE BOARD OF TRUSTEES ON THE PUBLICATION OF THE "JOURNAL,"

showing that it was in a flourishing condition.

Dr. Wood presented the

REPORT OF THE COMMITTEE ON DIETETICS.

He stated that this was intended to be only a preliminary report, and suggested that the original committee be enlarged, or that a section on dietetics be established. Thinking Americans, he said, are beginning to recognize the peril attending the use of bad food badly prepared. The young science of dietetics has joined hands with organic chemistry and with physiology. It has also taken the cook by the hand, and is raising the preparation of food to the dignity of a scientific pursuit. It has also entered the schools, and young girls are beginning to be proud of their ability to cook, and they now recognize that the humming of the tea-urn is sweeter music than the sound of the piano. Housewives are learning that a neatly laid table and a clean table-cloth are potent in keeping the men of the family from the grog-shop, and do more good for the cause of temperance than all the orations of professional lecturers. It is said that Americans are a race of dyspeptics, and this is partly true. But a dyspeptic race must inevitably deteriorate, and the physicians of the land, from motives of pure patriotism, if for no other reason, should put the axe to the root and seek to prevent it, by inculcating in the minds of the people

THE NECESSITY OF GOOD AND WELL-PREPARED FOOD.

But in the treatment of disease, as well as in its prevention, the science of dietetics has before it a great work. It is often more easy to lead the sick back to health by the food route than by the drug line, and it is a curious fact that he who relies least upon drugs has the greatest confidence in their action. Drugs often fail when relied upon exclusively, but may work wonders when combined with a proper diet. There is, however, one abuse which has crept into modern medicine, under the apparent sanction of dietetics, against which the committee desired to raise its voice in protest. That abuse was the

TOO GREAT RELIANCE OFTEN PLACED UPON VICARIOUS DIGESTION.

The giving of nourishment in other ways than by the mouth may often be necessary, but it has its limits of usefulness. It can never be of any but temporary service, for it supplies only a low grade of nutrition. If it is employed for too long a time, or when not absolutely necessary, it makes paupers of the digestive organs and unfits them for the proper discharge of their functions.

Dr. Woodbury then read the

REPORT OF THE SUB-COMMITTEE ON INFANT FEEDING.

The committee had had the subject under consideration for only a short time, and was not yet prepared to make a final report, but it would offer the following as useful facts: 1. In the case of infants deprived of breast-milk, the artificial substitute should correspond as nearly as possible to human milk. 2. Cow's milk corresponds to breast-milk in most respects, but its caseine should be broken up, so as not to coagulate in large masses in the stomach. The caseine of a portion of milk should be first peptonized, and then added to fresh milk. 3. Raw starch is inadmissible, and the practice of adding it to fresh milk, to break up the caseine, is wrong. The products of the complete digestion of starch, when taken in excess, cause indigestion. The administration of fully digested food to either adults or infants is bad for the digestive organs. 4. All nursing bottles should be boiled several times a day in order to destroy the germs of decomposition. Desiccated (partly peptonized) milk is often a convenient and efficient substitute for mother's milk. 5. Success in infant feeding depends largely upon the ability of the physician to individualize for each patient.

On motion of Dr. L. A. Sayre, of New York, amended by Dr. Lee, of Philadelphia, it was resolved that the Committee on Dietetics be continued and be instructed to present a report at the next meeting of the Association, embodying the general principles to be observed in a rational system of dietetics.

The consideration of three

AMENDMENTS TO THE CONSTITUTION,

which had been proposed at the last meeting, then came up for discussion.

The first amendment was that the so-called members by application should be such members of State, county, or district societies, as should present a certificate of good standing. They should have all the rights and privileges of permanent members, and should retain these privileges under the same conditions as the permanent members adopted.

The second amendment related to the Committee on Publication, and provided that the work of this committee should be undertaken by a board of trustees consisting of nine members, three of whom should be elected annually, to serve for three years. This board should have charge of all records, proceedings, memoirs, and other matters formerly referred to the Committee on Publication, and should also have power to appoint the Editor of the *Journal*; this was adopted.

The third amendment related to the substitution of a general Standing Committee for the present Committee on Nominations. This committee should consist of two members from each State and Territory, elected by the delegates present at each meeting. One member should be chosen each year to serve two years. The duty of the committee should be to present the names of the candidates for the various offices, but the committee could not present the name of any of its own members for any office.

The proposal of this amendment gave rise to considerable discussion, some of the speakers fearing that it would result in the formation of a ring, and in the eventual taking away from the members constituting the general body their political rights. It was finally moved, and carried, that the consideration of this amendment be made a special order for the next general session.

In the evening a reception was tendered the members of the Association by the citizens of Cincinnati in the Art Museum at Eden Park.

THURSDAY, MAY 10TH—THIRD DAY.

The general session was called to order by the President at 10 A.M. A communication was received from the Arkansas State Medical Society, containing a series of resolutions condemning

THE PUBLICATION OF QUACK ADVERTISEMENTS IN RELIGIOUS PAPERS,

which had been passed by that Society at its last annual meeting. On motion it was resolved that the American Medical Association endorse these resolutions and spread them upon the minutes of this session.

A communication was received from the Philadelphia County Medical Society, inviting the Association to hold its meeting next year in that city. The Chairman then presented the

REPORT OF THE COMMITTEE ON NOMINATIONS,

in which the following candidates were proposed for election. *President:* W. W. Dawson, of Ohio; *First Vice-President:* W. L. Schenck, of Kansas; *Second Vice-President:* Frank Woodbury, of Pennsylvania; *Third Vice-President:* H. O. Walker, of Michigan; *Fourth Vice-President:* J. W. Bailey, of Georgia; *Treasurer:* R. J. Dunglison, of Pennsylvania; *Secretary:* William B. Atkinson, of Pennsylvania; *Librarian:* C. H. A. Kleinschmidt, of the District of Columbia; *Trustees* (to fill vacancies): E. M. Moore, of New York; J. H. Hollister, of Illinois; and J. M. Toner, of the District of Columbia; *Members of the Judicial Council:* W. A. Phillips, of Kansas; A. M. Pollock, of Pennsylvania; W. C. Vanbibber, of Maryland; J. F. Hibbard, of Indiana; C. S. Wood, of New York; J. M. F. Gaston, of Georgia; W. H. O. Taylor, of New York; and G. L. Porter, of Connecticut; to deliver the Address on General Medicine at the next annual meeting: William Pepper, of Pennsylvania; Address on General Surgery: P. S. Connor, of Ohio; Address on State Medicine: W. H. Welsh, of Maryland. For the Committee on State Medicine one member was appointed from each State. Sub-committee to fill vacancies that might occur: J. B. Hamilton, William Brodie, and A. Garcelon. The candidates proposed were unanimously elected. It was announced that the Association would hold its next annual meeting in Newport, R. I., on the second Tuesday in June, 1889. Dr. H. R. Storer, of Rhode Island, was appointed Chairman of the Committee of Arrangements.

DR. E. M. MOORE, of Rochester, N. Y., then delivered the

ANNUAL ADDRESS ON SURGERY.

He reviewed the history of surgery from the earliest times, showing that many of the supposed novelties were in reality only revivals of the methods of the past. But in one particular more than any other the

PROGRESS OF MODERN SURGERY

was most remarkable, and it was one of prime and vital importance, upon which the success of operations in greatest measure depends; this was in the

TREATMENT OF WOUNDS.

Progress in the management of amputation wounds may be said to have begun with Paré and his ligature of arteries. At first a limb was amputated by a circular incision, the soft parts and the bone being divided at the same level; then it was thought advisable to cover the bone with integument, and this gave rise to the multiplicity of flaps of all shapes and size. The surgeon always had

TO MEET AND CONTROL HEMORRHAGE,

and it was strange to see how nearly the ancients approached the modern methods of hæmostasis without reaching them. A cord was tied tightly around a limb, but it was long before the tourniquet was devised. A number of bandages were wound around a member to expel the blood from it, yet it is only in our own day that

THE METHOD OF BLOODLESS OPERATION

has been perfected by Esmarch. Before the introduction of the ligature amputation wounds were necessarily left open, and the exposed surfaces were covered with all sorts of ointments. Galen, however, favored the application of a

COLD WATER DRESSING,

and Liston revived this method many centuries later, urging its general adoption in vigorous and characteristic language. After the employment of ligatures had superseded all other methods of controlling hemorrhages from the large vessels, attempts were made to secure primary union by immediate closure of the wound; but they were of very doubtful success until the introduction of antiseptic methods. As regards the question of

AMPUTATION FOR GANGRENE,

the speaker favored the selection of the red line of demarcation for the site of operation, when possible, and he believed the success was far greater in such cases than when the limb was removed at a higher point. In this he differed from most surgical teachers of the present day, the method being a return to that of ancient times.

GUNSHOT WOUNDS

were formerly regarded with the utmost dread, it being supposed that the leaden bullet was an active poison; but since the adoption of thorough antiseptics in wound treatment, surgeons had lost much of their fear in dealing with these injuries. In the matter of

OPERATIONS UPON THE ABDOMINAL CAVITY,

the same changes had taken place. It was no longer thought that the surgeon who dared to remove an ovarian tumor was no better than a murderer, for to such a degree of perfection had the methods of dealing surgically with the peritoneum been brought, that the mortality following laparotomy was now below that attending any other capital operation. Surgeons no longer dreaded to touch the peritoneum, for they had learned by experience that it was not injury that this membrane resented so much as it was dirt. Thorough and absolute cleanliness was the keynote of success, and this was the essence of antiseptic surgery. The name of Lister would be written by posterity alongside of that of Jenner, for he had added a word to the language which would ever remain there, although it was not necessary to use carbolic-acid gauze in order to practice Listerism. Perhaps nothing showed in a more striking manner the results of antisepsis than did the statistics of Volkmann regarding

COMPOUND FRACTURES OF THE LEG.

Of 885 cases of this nature, treated in the civil hospitals of Germany and England prior to the discovery of antiseptic wound treatment, 339 resulted fatally, while of 75 consecutive cases treated since the adoption of antisepsis there was not a single death. Many of these cases were complicated by wounds of the joints, and of those treated conservatively anchylosis had followed in but one instance. The speaker recalled an invitation that he had received fifty-one years ago from Professor Mutter, to see him perform

SUBCUTANEOUS TENOTOMY

of the tendo Achillis. The operation was vehemently opposed by many of the older surgeons of that day, Barton even refusing to be present and to be a witness of what he considered a most hazardous and unjustifiable operation. These men did not understand the great principle involved in subcutaneous surgery, and they little thought that this new method of operation was to be

THE FIRST STEP TOWARD ANTISEPSIS,

which is truly the legitimate descendant of subcutaneous surgery. The surgical world soon, however, awoke to the realization of a great advance in operative procedure, and subcutaneous methods were adopted in all possible cases, their application reaching the most extreme point when Guérin divided all the spinal muscles in his attempt to cure lateral curvature.

Dr. Moore then took up the subject of

COMPOUND DISLOCATION OF THE ANKLE-JOINT.

Amputation in these cases, he believed, was seldom necessary. Even in the most severe cases he advised the adoption of conservative measures, and, if the course of events rendered operation necessary, he would first resort to resection, reserving amputation as the last and most extreme measure. He looked upon

CONTINUOUS WARM-WATER IRRIGATION

as a most effective means of preserving the vitality of the contused soft parts, and preventing sphacelus, when resection was to be performed. The malleoli and their attachments to the astragalus should be preserved, if possible. At first the parts should be immobilized in plaster of Paris; but very delicate passive movements should be begun early and continued carefully from day to day. If such were done, the result would, in most cases, be a perfect preservation of the joint-motion.

The speaker then referred to the employment of hydrochloric acid, one part in twenty, in the

TREATMENT OF CARIES.

This had been recommended at a previous meeting of the Association, and he had tried it with some misgivings, but had found such great benefit to follow its use that he was led to count it as one of the greatest advances of the age in surgical therapeutics. He spoke of the attempts which had been made to secure a sterilized atmosphere in which to operate, which had, however, been hitherto unsuccessful. The spray was often bad, for it favored a deposit of minute foreign particles on the surface of the wound. A striking feature of the present age was that

THE REALLY GREAT MEN OF MEDICAL SCIENCE

were separated by no great distance from their colleagues; there were leaders, it was true, but their disciples followed closely in their steps, and at times even outstripped them. In conclusion, the speaker referred to the

VAST BENEFITS

which had been conferred upon mankind by the members of the medical profession, and by none more than by surgeons. These had long ago left the ranks of the barbers, and were now invading the field formerly regarded as peculiarly that of the physician. The spleen, the kidneys, the intestine, the liver, and the brain had all been subjected to the knife of the surgeon, and it was difficult to define the possibilities of modern surgery, which was an admirable blending of science and action.

The address was referred, with the thanks of the Association, to the Committee on Publication.

THE REPORT OF THE RUSH MONUMENT COMMITTEE

was then read. The response of the medical profession to their appeal had not been as ready as was to have been desired. Thus far but $709 had been received. The Michigan State Society had promised $100, and the Pennsylvania State Society had promised $400, in addition to the $100 already contributed.

THE REPORT OF THE TREASURER

showed a balance of $2,407.83 in the treasury.

The editor of the "Transactions of the International Medical Congress" announced that two volumes of the Transactions were now ready for distribution.

THE LIBRARIAN

reported that there were now seven thousand five hundred volumes in the library of the Association.

The amendment to the constitution, creating a

GENERAL STANDING COMMITTEE

to supersede the present Committee on Nominations, which had been made a special order for this session, was then brought up for discussion, and was, after a short debate, laid upon the table. A petition was presented by the Woman's Temperance Union, asking physicians to abandon the use of alcohol in their practice, and substituting therefor some other stimulant. In the evening the delegates were entertained at a complimentary concert in the Music Hall.

Friday, May 11th.—Fourth Day.

The general session was called to order by The President at 10.30 a.m.

Dr. H. P. Walcott, Chairman of the Massachusetts State Board of Health, delivered the annual

ADDRESS ON STATE MEDICINE.

He first related briefly the history of the State Board of Health of Massachusetts, which was established by legislative action in 1869. Its duties were at first advisory rather than executive, but in proportion as public intelligence in sanitary matters was quickened, the functions of the board were enlarged, until now it is charged to some extent with the power of enforcing the rights of the people to pure air, soil, water, and food, and preventing and punishing any violation of them. It is also intrusted with the business of gathering information concerning any matter pertaining to public health and diffusing such information among the people. Among the chief of its duties in this connection is the investigation of the causes and the prevention of infectious diseases. A comparison of the mortality statistics will show, in a measure, the effect which all this work has had upon

THE HEALTH OF THE PEOPLE.

The number of deaths from all causes, in proportion to the population, has changed but little during a period of thirty-six years, ending with 1886; but the percentage of deaths from zymotic diseases has almost steadily decreased, during the period that the State Board has been in existence, from 25.6 to 19.0; there has also been a general tendency, though less marked, in the direction of a decrease of deaths from constitutional diseases. The classification of

PREVENTABLE DISEASES

is as yet not well defined, and year by year, as the experience of sanitarians becomes widened, a larger and larger number of affections are found to be the result of influences that can be removed. This fact is illustrated in the case of

CONSUMPTION,

the prevalence of which was shown, twenty-five years ago, by a former president of this Association, Dr. H. G. Bowditch, to be largely influenced by conditions of soil, moisture, and land-drainage. The most marked reduction has occurred in the case of small-pox, which is a disease that is absolutely preventable by means of

VACCINATION AND RE-VACCINATION.

In demonstration of the saving of life in consequence of better sanitary conditions, the speaker offered a comparison between the results of ovariotomy and those following the labors of an intelligent and efficient board of health. The largest number of deaths in Massachusetts in any one year from ovarian dropsy was 51. In the single city of Somerville, the death-rate has been reduced, since the organization of a municipal board of health, from 22.86 to 16.68 per 1,000. Thus, the adoption of sanitary measures has saved more lives in one year, in a community of thirty thousand people, than could have been restored to health in the same period in a State of nearly two millions of inhabitants, by an operation which is justly regarded as one of the greatest triumphs of American surgery. It has been said by Dr. Russell, of Glasgow, that nothing is more conspicuous than the

HELPLESSNESS OF THE INDIVIDUAL,

under the conditions of civilized life, to secure the physical basis of health. How can any single individual in a crowded city detect and remove all possible causes of disease in the water, food, sewerage, and air contamination?

THERE IS NO HELP BUT IN CO-OPERATION

on the most extended scale possible—individual, municipal, State, and national. The individual must be compelled to give up the liberty to injure his neighbor; the city must be restrained from converting into a sewer the river which supplies water to the villages that cluster about its banks lower down in its course; no State should permit its own causes of disease, whether they are persons or things, to be transported into another State; lastly, the General Government should take cognizance of those causes of disease which can be controlled by no other power.

A SUFFICIENT SAFEGUARD

will never be established by voluntary associations on the part of persons, towns, States, or even nations. How, then, shall we organize for the protection of the public health? For the individual, the speaker maintained: Let the State give him some assurance that the legally used title of physician designates a person sufficiently qualified to give advice for the prevention and cure of disease; established, by direct provision of State law, local health authorities for each village, town, city, or county; and, to control all these local organizations, let there be a State board, clothed with ample powers. All arguments that have been used for the existence of State health authorities, Dr. Walcott believed, are also available for the creation and support of some

CENTRAL HEALTH AUTHORITY.

The question of form of this organization is one that may be left to the law-making powers—a board in which every State was represented might be cumbersome, but it could easily delegate its powers to a small and compact executive committee during the intervals between the necessarily infrequent meetings of the full board. The only alternative to this seemed to the speaker to be a single officer at the head of a bureau in connection with some one of the Departments at Washington; this central authority, however constituted, should have ample means for investigating into the State boards of health. There is still in legal existence

A NATIONAL BOARD OF HEALTH,

but, through the neglect of Congress, it is in a state of hopeless lethargy. This board entered upon its work with every promise of success, and it demonstrated that local, State, and national health authorities could profitably and harmoniously unite in suppressing an epidemic of yellow fever and preventing its spread from State to State, yet this did not save it from practical extinction. The failure of the board to survive the unjustifiable attack made upon it was due, in great measure, the speaker thought, to its organic form, embracing, as it did, members of the army, navy, and marine hospital service, and having a totally insufficient State representation.

In conclusion, Dr. Walcott urged the proper organization of some

CENTRAL HEALTH AUTHORITY,

whether in the form of a bureau of health or a board of health, provided, only, that some part of the great resources of the nation might be turned to the protection of that greatest of all property, human life.

The address was referred, with the thanks of the Association, to the Committee on Publication, from the Section on State Medicine.

A resolution was adopted, urging upon Congress the necessity of the immediate passage of the Senate Bill No. 2493,

TO PERFECT THE QUARANTINE SERVICE OF THE COUNTRY.

This bill has already passed the Senate, and is now pending in the House of Representatives.

The President announced that he had appointed the following members as

DELEGATES TO FOREIGN SOCIETIES:

R. H. Plummer, San Francisco, Cal.; H. A. Kelly, Philadelphia, Pa.; N. S. Davis, Chicago, Ill.; W. H. Myers, Fort Wayne, Ind.; A. E. Hoadly, Chicago, Ill.; F. E. Waxham, Chicago, Ill.; Alexander McAlister, Camden, N. J.; J. J. Chisholm, Baltimore, Md.; D. A. K. Stiele, Chicago, Ill.; J. V. Shoemaker, Philadelphia, Pa.; S. J. Jones, Chicago, Ill.; J. E. Owens, Chicago, Ill.; Ephraim Cutter, New York; L. A. Sayre, New York; C. C. Vaughn, Ann Arbor, Mich. The

REPORT OF THE COMMITTEE ON METEOROLOGICAL CONDITIONS

was presented by Dr. N. S. Davis, Chairman. The election of

OFFICERS OF SECTIONS

was then announced, as follows: Practice of Medicine, F. C. Shattuck, Boston, Mass., Chairman; G. A. Fackler, Cincinnati, O., Secretary. Surgery, N. P. Dandridge, Cincinnati, O., Chairman; W. Q. Roberts, Louisville, Ky., Secretary. Obstetrics and Gynecology, W. H. Wathen, Louisville, Ky., Chairman; A. B. Carpenter, Cleveland, O., Secretary. State Medicine, J. B. Lindsley, Nashville, Tenn., Chairman; S. T. Armstrong, Marine Hospital Service, Secretary. Ophthalmology, Otology, and Laryngology, G. E. Frothingham, Ann Arbor, Mich., Chairman; G. C. Savage, Nashville, Tenn., Secretary; Diseases of Children, J. A. Larrabee, Louisville, Ky., Chairman; C. J. Jennings, Detroit, Mich., Secretary. Medical Jurisprudence, W. Kiernan, Chicago, Ill., Chairman; — Evans, Baltimore, Md., Secretary. Dermatology and Syphilography, L. D. Bulkley, New York, Chairman; M. T. Corlett, Cleveland, O., Secretary. Oral and Dental Surgery, F. H. Rehwinkles, Chillicothe, O., Chairman; E. S. Talbot, Chicago, Ill., Secretary. The report

OF THE SPECIAL COMMITTEE ON CRIMINALITY OF FŒTICIDE,

and measures for its prevention, was read by Dr. Quimby, of Jersey City. The committee stated that the life of the fœtus begins with the first moment of conception, and it advised the enactment of a general law making the malicious procurement of an abortion without lawful cause the crime of murder. The report was referred to the Section on State Medicine. The special

COMMITTEE ON DUTIES COMMONLY EXERCISED BY CORONERS

made a report through its Chairman, Dr. Marcy, of Boston. The committee recommended a system of medical examiners, similar to that in vogue in Massachusetts. The report was referred, and the committee continued for another year. It was announced that the number of delegates registered was about 1,200.

A resolution was adopted extending the thanks of the Association to the professional citizens of Cincinnati for the cordial reception tendered them, and for the numerous acts of courtesy which the members had received personally and collectively. At the request of the Section of Ophthalmology, Otology, and Laryngology, a new section on otology and laryngology was created.

The meeting was then adjourned.

SECTION OF PRACTICAL MEDICINE, MATERIA MEDICA, AND PHYSIOLOGY.

Tuesday, May 8th—First Day.

Dr. N. S. Davis, of Chicago, opened the meeting of the above section by announcing the death of Dr. A. B. Palmer, of Ann Arbor, the chairman-elect, and the unavoidable absence of the secretary, Dr. N. S. Davis, Jr., of Chicago.

The election of officers being in order, the following were elected: *Chairman:* Dr. W. C. Van Bibber, of Baltimore, Md.; *Secretary:* Dr. G. A. Fackler, of Cincinnati, O.

The topic for discussion was

PNEUMONIA: ETIOLOGY, PATHOLOGY, AND TREATMENT.

Dr. Van Bibber opened the discussion with a consideration of the mechanism of pneumonia and its treatment. Dr. Van Bibber's paper had two objects: First, an inquiry into the initial causes of pneumonia; and, secondly, the treatment of the disease. He said a few words in regard to the anatomical arrangements of the parts. By the term mechanism of pneumonia the author attempted to show, in a general way, how the different changes in the structure of the lungs are brought about, which are recognized during life, are seen after death by the microscope, and demonstrated by the scalpel.

He recognizes among the predisposing causes of pneumonia four, which are quite different from each other, and each one of which must produce the same effect, viz., congestion in the capillaries, by a different mode of action. They are age, cold, malaria, and alcohol. He arrives at the following conclusion: The predisposing causes, as the name implies, do not produce pneumonia, *de ipso facto*, but they have already worked such structural changes in the body that, upon further disturbance of the system, a congestion of the numerous pulmonary capillaries is more likely to occur than any other diseased condition. A study of these structural changes, brought about by the predisposing causes, gives advantages both in advisory prophylaxis as well as in treatment. The author introduced the discussion of the treatment of pneumonia with the statement from Fothergill, that "every new remedy almost is tried in turn for pneumonia. It is a disease particularly suitable to speculative medicine." He had determined to present the subject by means of

FOUR HYPOTHETICAL CASES,

one, a child of eighteen months; one, a youth of twenty-five years; one, sixty years of age, complicated with malaria; and one case seventy years old, complicated with old age, malaria, and alcohol. In the discussion of the cases much stress is laid on cupping over the roots of the lungs, between the shoulders, or, more particularly still, between the third and eighth dorsal vertebræ, in order that, by the laws of counter-irritation over affected parts, the circulation through the roots of the lungs may be kept entirely free and open. It is also a means of controlling, or at least of moderating, the effects of high arterial action during fever. It is valuable from the relief of pain and oppression it affords. The medicines recommended are only five in number, viz., muriate and carbonate of ammonium, the former acting upon the circulation in the capillaries, assisting to unload them when they become engorged, and as a resolvent, a general expectorant, and a diaphoretic; the latter acting as a stimulant, a resolvent, and as a remedy which prevents the coagulating or engorging of blood in the capillaries. It may also be used as a vehicle in inhalations.

ANTIPYRIN AND ANTIFEBRIN

seem to control the fever, diminishing the heat of the blood.

Digitalis, veratrum viride, strychnia, strophanthus, and other remedies, are valuable in the hands of those accustomed to their use.

In regard to

THE MECHANISM OF HEART-FAILURE,

Dr. Van Bibber remarked: 1st. There is diminished lung area, hence diminished supply of arterial blood. 2d. Exudation and engorgement in the lung. 3d. The amount of blood which arrives in the heart has to be forced through the obstruction. This brings a heavy weight upon the left ventricle. If this is continued the heart must fail.

DISCUSSION.

Dr. Whittaker remarked that he did not exaggerate if he stated that the last two years had been more eventful in the study of pneumonia than any period in the two thousand years preceding them. For they removed it from the general to the acute infectious diseases. All the errors that clung to the disease have fallen. It does not attack the vigorous and strong, but shows a predilection for the feeble. Cold is no longer considered a cause of pneumonia. Juergensen was the first to show where the disease belongs, even without a definite knowledge of the cause. The speaker then recited the discovery of various micro-organisms of pneumonia, selecting finally those of Friedlander and Fraenkel as the probable causative agents. We know that it may also be produced by other micro-organisms, as by the typhoid bacillus, or the staphylococcus of pus.

There is hence no poverty of material. May there not, then, be many forms of pneumonia? One has been isolated and called

CROUPOUS PNEUMONIA,

but may not this be resoluble into a number of kinds? Thus far it has been divided into primary and secondary pneumonia; the latter due to the invasion of the respective bacilli. Investigation has shown that in seventy to ninety per cent. of cases of true croupous pneumonia, the bacterium of Fraenkel, the diplococcus, is found. The physician is thus enabled to diagnosticate pneumonia by means of the bacterium twenty-four hours before the manifestation of physical signs. The speaker describes the process of staining. In this study we get some nice points as to treatment. The bacteria are sensitive to heat: 170° attenuates the bacteria of Fraenkel in twenty-four to forty-eight hours; 105° attenuates the bacteria of Fraenkel in five days; 104° attenuates the bacteria of Fraenkel in seven to eight days. This corresponds pretty well with the clinical history of a case of pneumonia. The fever may be the very agent destroying the disease. It has been observed that those were the most favorable cases in which the temperature was most pronounced. Danger is not on the part of the fever, but on the part of the heart, and the question is, whether it is not the best plan of treatment to sustain the heart. Let the fever alone. Be content with small doses of antipyrin or antifebrin to do away with any evil effects of high temperature. For the heart nothing is better than digitalis. If rapid stimulation be necessary, nothing is better than nitro-glycerine and black coffee, alcohol. Under such regime, the speaker had found, during twenty years' practice, the mortality of pneumonia reduced from twenty to ten per cent.

Dr. N. S. Davis thought it a curious fact that the

MORTALITY IN PNEUMONIA

of to-day is indubitably greater than that of forty-five years ago. If anything is established this very fact has so been, by statistics gathered not in hospitals only, but in among the population of the United States, city and country, in private and in general practice. As to the question of cold, it has been indubitably demonstrated that the disease prevails more during winter than summer months. He referred to the statements made by a prominent Canadian physician, in one of the early meetings of the Association of that Dominion, to the effect that during a practice of thirty years, he had adopted three plans of treatment. During the first of the three decades the treatment consisted of bloodletting. The second decade constituted the transition period from the bloodletting, antiphlogistic treatment, to the expectant plan; and the third the stimulant method. He found, in footing up his records, that the mortality was least during the first decade, and greatest during the last. The speaker dwelt at some length upon the benefits derived from bloodletting during the first stage, followed by cardiac depressants during the subsequent twenty-four to thirty-six hours. He cited cases in illustration.

Dr. Von Klein, of Dayton, O., had, during service in the Russian army, found that pneumonia prevails to a less extent in a climate in which the temperature is 50° below zero, than in our moderate climate. He believed in the judicious use of the lancet. He ascribed the increase in mortality to the fact that the people are not as robust as those of fifty years ago. They have changed their surroundings, habits, clothing, etc., and our treatment ought to be guided by the peculiarities of each case.

Dr. Octerlong, of Louisville, took issue with Dr. Davis in regard to increased mortality. During the time of mixed treatment, according to the statements of Skoda and Austin Flint, the results improved fifty per cent. J. H. Bennet, of Edinburgh, introduced the method of furthering the natural progress of the disease, with the result that the mortality was reduced to 1 in 36. The speaker had, on former occasions, depended upon local causes, that the changes were local, and that they were amenable to

LOCAL TREATMENT.

But, impelled by more extended observations, he had become a convert to the theory of pneumonia being an essential, specific fever due to a specific cause, probably the pneumo-coccus. He thought that a physician was rarely called to a patient during the first stage, but generally when the exudation had already commenced.

Dr. Jenkins, of Iowa, attributed the apparent increase in mortality to the improved facilities of diagnosis and the advances in our knowledge in pathology.

Dr. Baily, of Louisville, advocated decidedly the

USE OF STIMULANTS,

especially during the last stage.

Dr. F. C. Shattuc, of Boston, stated that although it was doubtful whether the increased temperature is a salutary process, yet he thought that more attention should be paid to the

CONDITION OF THE PULSE

than that of the fever. During the past the influence of temperature in pneumonia has been overrated. He has discarded the systematic use of antipyretics in this disease. It is a febrile affection of short duration, and he believed that the use of antipyretics, especially at the approach of the crisis, is dangerous when the heart's action is enfeebled, and this plan of medication may cause dangerous collapse.

In conclusion Dr. Van Bibber stated that he had received a letter from Dr. W. H. Welch, in which the statement was made that, "it is apparent that the evidence is not conclusive that either of the organisms is the infectious agent of croupous pneumonia;" certainly no such evidence has been presented as that which leads us to accept the tubercle bacillus, the typhoid bacillus, or the cholera spirillum as the cause of the respective diseases.

Dr. Frank Woodbury, of Philadelphia, Pa., spoke of

THE HIPPOCRATIC OPERATION FOR EMPYEMA,

and reported a case in illustration.

Dr. Morris H. Henry, of New York, in a paper entitled "My own Clinical Experience in the Administration of

IODIDE OF POTASSIUM IN THE TREATMENT OF SYPHILIS,"

prefaces his remarks with a few words on the value of mercury in the early, or what is termed the middle, period of the evolution of the disease.

In the discussion of the subject proper the essayist stated that the iodide may be administered in doses varying from 5 to 50 grs. every four hours; from 30 to 300 grs. in every twenty-four hours. He spoke of the value of the remedy in syphilitic rheumatism. The remainder of the paper dwelt upon the claims of various authors to the priority of the adopted treatment of late and inveterate lesions of syphilis by the administration of *large* doses of the iodide of potassium.

BACTERIOLOGY AND PRACTICAL MEDICINE.—All researches hitherto undertaken have aimed at learning the excitants of disease; very many of them have been discovered, and many have been profoundly studied, so that the cause of nearly all infectious diseases has been made known; but bacteriology has hitherto confined itself to these limits. Practical medicine, in the more limited sense—prophylaxis excepted—has gained very little therefrom; but it may be hoped that the medicine of the future will play quite a different part, in consequence of the deeper knowledge of the various bacteria and their properties. Many purely empirical drugs will be rejected, and in their stead will be employed those which bear directly upon the morbific agent, or which act by strengthening the resistance of the organism. Unfortunately, many questions still remain open. We know, for instance, very little of the way in which bacteria influence the physiological life of the organism. We cannot as yet determine why many micro-organisms, which are introduced into the body in enormous quantities with water, air, or food, do not give rise to derangements, or in what manner the really harmful organisms disappear from the blood, or organs of some animals. Of great importance for the practitioner are the facts that similar groups of diseases can be excited by wholly different micro-organisms. Abscesses are produced, for instance, by the action of staphylococcus aureus and albus, streptococcus pyogenes, micrococcus tetragenus, and others. Erysipelas following wounds depends not only on the streptococcus erysipelatis of Fehleisen, but also on other streptococci and micro-organisms. Pneumonia is not only excited by Friedlander's pneumococcus, but also by other bacteria. Two very similar diseases—cholera asiatica and cholera nostras—arise from two very different kinds of bacteria. There are other facts of still greater importance, such as mixed infections. Rosenbach found many very different bacteria in the same abscess. The same is the case with septic infection of wounds. Similarly, as Wiegandt has observed, a kind of streptococcus is occasionally associated with tubercle bacilli. Dr. Dunin has shown that certain complications of typhus depend on the presence of other bacteria, etc. When all these questions are solved, then our system of diseases will also be changed; we shall then no longer group them according to symptoms, but causes. There still remain many such questions unsolved. We do not know, for example, upon what depend the different results of experiments on animals when we inject small or large quantities of bacteria. Lastly, we also know very little of the reason why individuality plays so large a part in the manifestation of disease. Very interesting but unexplained is a research pursued by Wysskowitsch. He found that bacteria which had no effect on healthy animals excited diseases in other animals whose organism was slightly deranged. Thus, injections of staphylococcus excited endocarditis in animals whose heart-valves were injured. When all the foregoing and many like problems are solved, then it will become more easy to employ bacteriology in practical medicine, and then we shall learn to estimate rightly the great value of this new study.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, April 6, 1888.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. V. P. GIBNEY presented a patient with

CROSSED SPINAL PARALYSIS.

The case showed one of the most extreme types of poliomyelitis. The left arm was wholly powerless, except that fair motion was preserved in the hand. The right arm could be raised to a right angle with the body. The right leg was completely paralyzed, with the exception of very slight power remaining in the adductors of the thigh, and the atrophy was extreme. In the left leg the motions were nearly normal. The paralysis had appeared suddenly when the patient was about three years of age. The attending physician had made a diagnosis at first of scarlet fever. The treatment had been the application, for a long period, of electricity, together with mechanical support. By means of a brace, locking the knee-joint on the right side, the girl was able to walk fairly well. Her general health had been good until last December, when she developed a very marked degree of

ANÆMIA.

This had increased steadily, until now her pallor was extreme. An examination of the evening urine showed a specific gravity of 1.008, acid reaction, an excess of urates, and some albumin. The morning specimen had a specific gravity of 1.017, and contained urates, but no albumin.

DR. A. H. SMITH suggested a trial of the compressed-air bath, which had been said to yield excellent results in the treatment of anæmia.

THE PRESIDENT asked whether Dr. Gibney believed that there was any relation of cause and effect between the paralysis existing for so many years and the anæmia recently developed.

DR. GIBNEY did not think that there was. He thought it not improbable that the case was simply one of extreme chlorosis, which was of not infrequent occurrence in girls of this age.

DR. POLK asked whether any of the members of the Society had had any experience with inhalations of oxygen, combined with the internal administration of iron, in the treatment of anæmia.

DR. WALKER had used oxygen with iron in a number of cases with great apparent benefit. The patients inhaled the oxygen for from five to ten minutes two or three times a day, the iron being given in the ordinary doses three times a day.

DR. WILLIAM M. POLK then read the paper of the evening, entitled

ENDOMETRITIS TREATED BY DRAINAGE AND BY PACKING WITH IODOFORM GAUZE.

He referred briefly to the usual methods of treatment of endometritis, which, while differing among themselves in many respects, had one point in common, namely, that they were most unsatisfactory in their results. A consideration of the conditions present in endometritis should lead to the institution of a more rational therapy. In this affection there is an inflamed and suppurating surface lining a nearly closed cavity, and the conditions are almost exactly comparable to those present in an abscess with an opening of insufficient size for the free escape of pus. The discharge is retained in the cavity, bathing the already inflamed surfaces, keeping up the irritation, and preventing thereby any attempts on the part of nature to effect a cure. In the case of an abscess cavity with a small opening, the plain indications are to enlarge the opening and drain away all the irritating discharges as rapidly as they are formed, and a similar mode of procedure should be equally effective in the analogous condition found within the uterus in endometritis.

The speaker had adopted this plan in a number of cases, and had been exceedingly well pleased with the results obtained. His cases were as yet few in number, and it would be premature to assert that all cases of purulent endometritis could be cured by this method; but it was, at least, rational in theory, and the benefit thus far obtained by its application was sufficiently striking to warrant its further trial. His plan was first to dilate the os, if necessary, in order to give exit to the pus. This could be practised in most cases without danger, unless adhesions were present. Then, if the indications called for it, he used the curette freely, and finally secured an efficient drainage by the introduction into the cavity of the uterus of a strip of iodoform gauze. Several cases, in which this method had been employed, were reported.

DR. WALKER had had no experience in the treatment of endometritis by this method, but regarded it as worthy of trial. These cases were the opprobrium of gynecology, and any measure that promised to give relief ought to be tried.

DR. SHRADY asked whether there was disease of the tubes in any of the cases reported by the reader of the paper.

DR. POLK said that the tubes had previously been removed in one case, but the improvement following institution of drainage by the iodoform gauze was so speedy, that it could not be attributed to the natural process of involution, which might be hoped for in time after the removal of the tubes. He would say that the applications were made every few days for a month. He had no doubt that, in most cases, the main cause acting to keep up the disease was the stricture of the internal os.

DR. SHRADY said that the sequence of events was generally constriction of the os, endometritis, and salpingitis. To remove the tubes in such cases was to begin at the wrong end, to treat the result rather than the cause. It was certainly more rational to treat the causal condition, if possible.

DR. HUNTER had not had any experience in packing the uterus with gauze in this particular disease, but it was his constant practice to do so after scraping the endometrium for cancer of the uterus. He had tried in these cases a rubber drainage-tube, provided with a flange, but the tube could not be retained, and he was thus led to substitute gauze, and had been well pleased with its efficiency as a drain. He asked whether Dr. Polk had seen any instances of iodoform-poisoning in these cases. He had seen one case of poisoning by absorption of the drug through the walls of the vagina, but he had never seen an instance of death from iodoform-poisoning.

DR. WALKER had seen one case in which very alarming symptoms had followed the application of iodoform in cancer of the neck of the uterus.

DR. GIBNEY asked whether any of the members had had any experience with the

SUBIODIDE OF BISMUTH

in antiseptic dressings.

DR. SHRADY had used it somewhat extensively at one time, but saw no especial benefit from it except that it excluded the air.

DR. GIBNEY said that he had employed it in quite a large number of cases and was very much pleased with its action. It seemed to be as efficient as iodoform, and it was a very good thing both for the surgeon and for the patient to get rid of the odor of the latter drug.

DR. SEXTON asked whether the reader of the paper had noticed any increase in the amount of the secretion from the uterine cavity following the introduction of the gauze. He had seen a case of epistaxis in which the flow of blood was kept up, and even increased, by the capillary action of some absorbent cotton introduced with a view to arrest it.

DR. POLK replied that the secretion, or at least the discharge, seemed to be increased in amount at first; but it was only temporary and the discharge was soon reduced to its former quantity and then lessened.

Dr. Sexton said that he had not found much benefit from the use of absorbent cotton and gauze in the treatment of middle-ear disease, and had abandoned the use of these materials in such cases when they were accompanied with a discharge. In reply to a question concerning the utility of boracic acid in cases of this nature, he said that occasionally he had had considerable trouble with this substance by reason of its caking in the external ear.

The Society then adjourned.

THE SEVENTEENTH CONGRESS OF THE GERMAN SURGICAL SOCIETY.

Held in Berlin, April 4, 5, 6, *and* 7, 1888.

Herr v. Bergmann, President, in the Chair.

(Special Report for The Medical Record.)

Wednesday, April 4th—First Day.

The Congress was called to order by the President, who thereupon delivered the

PRESIDENT'S ADDRESS.

He referred to the grief of the nation over its loss in the death of the Emperor, and recalled the fact that this Society was the first scientific association founded after the creation of the new German Empire. The Emperor Frederick, he said, looked with favor upon the endeavor of the Congress to erect a monument to the memory of its founder, the late Professor v. Langenbeck, and the Empress Augusta had suggested the establishment of a Langenbeck House which should serve as a headquarters and meeting place for the Society.

Herr Koenig then read a paper on the

PROGNOSIS OF CANCER.

The results of operative interference in cancer were much better now than they were before the introduction of antisepsis. This was partly, no doubt, due to the fact that surgeons had now less fear of making too extensive an operation, and they accordingly removed without any scruples all the glands in the neighborhood of the tumor, whether they were infiltrated or not. The immediate results of the operation depend largely upon the seat of the disease. Amputation of the breast is seldom fatal, but resection of the rectum for carcinoma is not infrequently followed by death. One reason for this difference is doubtless the difficulty of keeping the wound aseptic after an operation upon the rectum. He referred to the statistics of cancer of the breast operated upon in his clinic, which had been published by v. Bergmann. Of 66 cases in which there had been a recurrence of the disease, 23 died within six months, and 30 more before the end of the year, making 53 within the first year. During the second year there were 7 deaths, 3 in the third year, and 1 each at the end of four, six, and eleven years. In some cases the recurrence was plainly to be attributed to the

GERMS SLEEPING IN THE CICATRIX.

In other cases the disease was brought back by the extension from already affected glands. In 15 operations for carcinoma of the rectum, the patients had control of the sphincter in 6. In general it might be said that, after operation for rectal cancer about ten per cent. of the patients might be expected to remain free from the disease for three years or longer.

The speaker then referred to the operation of

COLOTOMY

in cancer of the rectum. He thought that German surgeons did not practise this operation as much as they might. He had performed it twenty times. Six of the patients died immediately after the operation, 1 survived three years, 3 lived two years, and the rest died at varying periods within two years after the operation. The greater number of these lived in comparative comfort, and were able to retain their fæces even when suffering from diarrhœa.

Herr Petersen read a paper on a form of

PERFORATING DERMATITIS

of which he had seen five cases. This was a peculiar affection of the skin, occurring chiefly on the face and scalp, which resembled herpes tonsurans, yet was not the same in all respects. It appeared in the form of small, red, elevated spots of irregular shape, which soon became covered with dirty yellow crusts. The lesions did not bleed when these crusts were detached. Around them were formed numbers of pustules, which disappeared later, leaving little crateriform excavations. The hairs did not fall out nor become friable. Each of these little excavations discharged pus constantly. The patients complained of itching and smarting, but had no fever nor other constitutional symptoms. The treatment, which was successful, consisted in scarification and scraping with the sharp spoon, and the application of a paste composed of the oxide and chloride of zinc. Numerous and careful examinations showed the constant absence of the trichophyton tonsurans.

Herr Steinthal presented a communication on the

SURGICAL TREATMENT OF PERITONITIS,

following perforation of the intestine. He reported three cases of laparotomy for intestinal perforation, in all of which there was a fatal issue. He was not discouraged, however, by the result in these cases, and advised the performance of the operation whenever the symptoms of perforative peritonitis were present. Early interference gave the best promise of success.

Herr Lauenstein advised washing out the abdominal cavity, after operation, with a solution of salicylic acid, and then turning the patient over so as to insure a free return of the injected material.

Herr Frank reported two cases of peritonitis following

PERFORATION OF A TYPHOIDAL ULCER,

in which he had performed laparotomy. Both patients died.

Herr Doelger had operated four times for perforative peritonitis and had had one recovery.

Herr Fillmann had operated successfully in a case of perforating ulcer of the stomach. The incision was made along the free border of the ribs, directly over the seat of the lesion.

Thursday, April 5th—Second Day.

Herr Brieger made a demonstration of the

ACTION OF THREE PTOMAÏNES.

He injected into a rabbit a solution of *tetanine*, obtained from the amputated arm of a man suffering from tetanus. In about five minutes the animal exhibited all the symptoms characteristic of traumatic tetanus in the human subject.

The injection of a solution of *neurine* caused first a flow of a thick fluid from the nose; then profuse salivation appeared, and later the animal suffered from dyspnœa, became paralyzed, and died in convulsions.

The third ptomaïne was *mytilotoxine*, obtained from diseased mussels. When given to a man suffering from tetanus it caused a relaxation of the clonic spasms, but in animals it did not have the same effect. An animal poisoned with this toxine had head-drop, dyspnœa, convulsions, and paralysis.

Herr Fischer presented

THREE CASES OF TREPANNING.

The first patient was a man, forty-seven years of age, who had received a blow on the head followed by hemiplegia.

The skull was trephined and the wound healed readily, but later he suffered from very frequent epileptic attacks. The symptoms indicated a lesion of the central convolution. At the end of six years he was trephined again, the result being a perfect and lasting cure.

The second case was that of a woman, thirty-three years of age, who presented symptoms of abscess in the frontal lobe following otitis media. The skull was trephined, and, the hypodermic needle showing the presence of pus, the abscess was opened and drained. The following day there was a return of consciousness and of the power of speech, and in nine days the patient was able to leave the bed.

The third case was in the person of a boy, eight years of age, who had facial paralysis following a depressed fracture of the skull. The trepan was applied, and in one week the child was nearly well.

Herr Bergmann presented a patient showing the results of

COMPLETE LARYNGECTOMY

for carcinoma of the larynx. The operation had been performed three years ago, and there had been as yet no recurrence of the disease. The attempt had been made to introduce an artificial larynx, but it caused considerable discomfort, and the patient could not get accustomed to its use. He was, however, able to make himself understood in conversation by a fairly distinct whisper. He was able to swallow with ease, and took his food in the usual way. The speaker said that he had never been able to make a diagnosis of carcinoma of the larynx, with any degree of certainty, by means of the mirror alone, and he always made a practice of removing a portion of the growth and examining it under the microscope before venturing an opinion as to its nature.

Herr Hahn had performed the operation of

EXTIRPATION OF THE LARYNX

twenty-four times on eighteen patients. Six patients underwent a partial operation, and of these 2 died. Of the 12 patients upon whom total laryngectomy was performed, 2 were cured and the others died soon after the operation.

Herr Fischer reported a case of

RESECTION OF THE STOMACH,

for carcinoma. The patient was a woman, fifty-two years of age, who had a tumor near the umbilicus. The growth was movable and seemed to be in the small intestine, but when the abdomen was opened it was seen to be situated on the greater curvature of the stomach. The operation involved the removal of a very large part of the organ. It was successfully performed, and within one week the patient was able to take her nourishment by the mouth. She died five months later of perforating ulcer of the stomach. The autopsy showed such perfect union that the cicatrix could not be discovered.

Herr Bergmann presented a patient upon whom he had performed

RESECTION OF THE JEJUNUM

four times for carcinoma. The mesenteric glands had also been removed. The patient was now perfectly well, and had gained forty pounds since the last operation. The most careful examination of the abdomen failed to reveal the slightest swelling in any portion. The speaker felt justified, from the result obtained in this case, in making the assertion that

CANCER IS CURABLE.

Herr Lauenstein read a paper on the

HEALING OF WOUNDS UNDER A MOIST BLOOD-CLOT.

He had tried this method in a large number of cases, and thought that its range of applicability was limited. It should never be employed when it was desired to obtain union by first intention, and it was also inapplicable in operations upon the mouth or neighboring parts, in laparotomy, or in acute abscess. On the other hand, it was useful in small wounds of the head, in lacerated wounds with denudation of the tendon, after the removal of tumors, etc. The great advantage of Schede's method was that, as a general rule, only one dressing was necessary.

Herr Woelfler then presented a communication on

MUCOUS GRAFTS.

He reported three cases of impermeable stricture of the urethra, in which he had transplanted mucous membrane, after exsection of the cicatrix, with excellent results. He had first tried conjunctival and vaginal mucous membrane taken from a rabbit, but the pieces did not adhere. He then made use of membrane taken from the freshly amputated cervix uteri of a woman. A catheter was left in the urethra for five days, after which the canal was found to be patent throughout its entire extent, so as to admit freely a No. 20 Charrière sound. No further treatment was pursued, but after five or six months', examination showed that there had been no recontraction of the stricture. This, the speaker thought, was evidence that the transplanted strip of mucous membrane formed a part of the wall of the urethra, and did not contract like cicatricial tissue. He had obtained equally good results in a blepharoplasty and a rhinoplasty in which he had used portions of mucous membrane from the cervix uteri and from the rectum, taken from these organs when prolapsed. In other cases he had succeeded in securing adhesion of strips of membrane taken from animals. From his own experience he was able to confirm the observation of Thiersch that mucous membrane, when transplanted to a part normally covered by skin, became transformed into skin, but in other parts where mucous membrane was normally found, it remained mucous membrane.

Herr Fischer exhibited

THREE LARGE GALL-STONES

which had caused intestinal obstruction. One of these stones had been passed spontaneously on the third day, and another on the sixth. The third stone was removed by operation, and the patient died.

Herr Bidder presented a patient showing a typical hereditary

ARREST OF DEVELOPMENT OF THE BONES OF THE LEG,

the fibulæ being merely rudimentary, which had caused a very marked pronation of the feet, so that the dorsal surfaces looked outward. There was also absence of some of the toes, with the corresponding metatarsal bones, in each foot.

Herr Kuester reported four cases of

RESECTION OF THE TEMPORO-MAXILLARY ARTICULATION

for anchylosis. He dwelt at some length upon the etiology of anchylosis of this articulation, and reviewed the different operative measures which had been employed at various times for its relief. He did not favor Koenig's method, in which an incision was made along the inferior border of the zygomatic arch, as it did not bring the field of operation into view, but forced the surgeon to rely upon his finger as a guide.

Herr Thiem read a paper on

POSTERIOR LUXATION OF THE JAW.

It is generally asserted that posterior dislocation, without fracture of the lower maxilla, is possible, but this the speaker denied. He based his assertion on anatomical grounds. He reported seven cases of dislocation of the jaw to the left, which he had seen in five patients during a period of only two years. He believed that many cases which were supposed to be pseudo-trismus or anchylosis of the jaw were in reality old luxations.

Herr Petersen reported a case of

ISCHÆMIC MUSCULAR PARALYSIS.

The cases hitherto reported by Volkmann and Leser were all due to compression resulting from a plaster-of-Paris bandage; but in this case such a cause was clearly to be excluded. The patient was a girl, four and a half years of age, who was suffering from a complicated fracture of the arm. The member was put up in a simple, well-padded splint, in which it was retained for six weeks. Upon removal of the apparatus, the elbow, wrist, and finger-joints were found to be strongly flexed and immovable, owing, apparently, to a shortening of the muscles and tendons on the flexor surface. Dissection showed the presence of areas of degenerated muscular tissue resembling fibrous connective tissue. These were excised and, after massage, forcible extension under ether, and the application of electricity, a very marked improvement was obtained.

It was announced that, on account of the national mourning, there would be no banquet, but many private entertainments were given to the members by the residents of Berlin.

FRIDAY, APRIL 6TH—THIRD DAY.

HERR ISRAEL presented a patient upon whom he had performed

RHINOPLASTY

twenty-two months before. The operation had been done after Koenig's method of the transportation of osseous flaps for the correction of the deformity of

SADDLE-NOSE,

and there had been no return of the deformity, the cure seeming to be a permanent one. He reported also another case in which he had taken a flap, including periosteum and a thin lamella of bone, from the frontal region, just at the root of the nose, to construct a new organ after its destruction by a syphilitic process. The result was excellent.

HERR HELFERICH showed a student who had lost the tip of his nose in a duel, and for whom he had constructed a new one by flaps taken from the cheeks. The first flap, taken from the left cheek, was turned over so that the integumentary surface lined the nasal cavity, and a second one, from the right cheek, was twisted so as to bring the raw surfaces in apposition. There was no septum except a narrow strip at the lower orifice of the nose.

HERR KOENIG said that the first thing necessary in cases of

TOTAL RHINOPLASTY

was to construct a bony framework. This he had done in two cases successfully. It was difficult, however, to estimate correctly the proper size of the new nose. In one case he had made it a little too long, and in another one too short. After the formation of the bony portion, he covered the granulating surface with skin transplanted from a neighboring part. He made no attempt to form a septum, contenting himself with giving plenty of breathing space.

HERR WEHR presented some specimens proving the possibility of the

INOCULATION OF CANCER.

Sänger had denied that the inoculation of material taken from true carcinomatous nodules would give any positive results, but in so doing, the speaker maintained, he was in error. Herr Wehr had placed little pieces of carcinomatous material under the skin of a dog, and had seen tumors develop which grew for a while and then gradually disappeared. Microscopical examination of these nodules showed their structure to be carcinomatous.

HERR BERGMANN thought that the cancerous nature of a tumor which disappeared spontaneously was very questionable.

HERR THIERSCH read a paper on

INTUBATION OF THE LARYNX,

after O'Dwyer's method. He reviewed the early efforts of Bouchut in this direction, efforts which were disapproved by the Paris Academy of Medicine and had been forgotten, and then referred to the rediscovery of the method in America. At first, he was not inclined to give much credence to the reports of wonderful results obtained by intubation, but, after reading the papers presented at a meeting of the New York Academy of Medicine in June last, he had come to the conclusion that the method was of great value, and had determined to put it to a practical test. He had performed intubation in 32 cases of diphtheritic croup occurring in the Leipzig Hospital. Of these cases the dyspnœa was permanently relieved in 14, of which number 3 recovered. In 18 cases there was a return of the dyspnœa, and he was obliged to resort to tracheotomy. All of these cases terminated fatally. He attributed the poor results to the fact that the disease was of a very malignant type. In all the cases the immediate result of the introduction of the tube was an

INSTANT RELIEF OF DYSPNŒA,

but, as before mentioned, this relief was only temporary in about one-half of the cases. He thought intubation was specially indicated in cases in which the membrane was limited in extent, and in which there was not much swelling of the epiglottis. The inconveniences of the operation were that the almost constant presence of the physician was necessary, because of the accidents which were liable to occur at any moment, and that the presence of an open tube, only partially covered by the epiglottis, exposed the child to greater risk of

ASPIRATION PNEUMONIA

(Schluckpneumonie). The tube caused ulceration at times.

HERR REHN had performed the operation fourteen times, with four recoveries. In four other cases he had subsequently resorted to tracheotomy, but without saving the lives of the little patients. In but one of these cases was the child able to swallow well. In some cases he removed the tube several times, once or twice a day, in order to give the patient nourishment.

HERR ROSE was a strong advocate of

TRACHEOTOMY,

and had performed the operation 1,926 times for diphtheria, with a mortality-rate of 71.6 per cent.

HERR THIERSCH presented two patients showing the results obtained by

SKIN-GRAFTING

after his method. The first was a woman, aged sixty-six, from whose forehead he had removed a cancerous growth. The wound was covered with strips of skin removed by the razor from the thigh of a young man. In the second case, a large area was covered over by a number of small pieces of very thin skin. In both cases the results obtained were all that could be desired.

HERR SOCIN made use of large pieces of skin, from eight to twelve inches in length and nearly two inches in width. In order to prevent the formation of disfiguring cicatrices, he made the strips to overlap a little, and found that this not only caused a smaller cicatrix, but also promoted very materially the healing process.

SATURDAY, APRIL 7TH—FOURTH DAY.

HERR WAHL presented a communication on

FRACTURES OF THE SKULL.

He divided fractures of the skull into two varieties, according to their mode of production. When a hollow sphere, such as the cranium may be considered, is compressed on two sides, it yields to a certain extent; but, if the force is continued, its elasticity is exhausted, and a fracture takes place at some point in the convexity of the sphere between the sides pressed upon. This might be called a "bursting-fracture" (Berstungsbrüche). If the force is applied suddenly, there is not time for the elasticity to come into play, and the result is a depressed fracture. The speaker showed several skulls illustrating these different forms of fracture.

Herr Schlange presented some vertical sections of the pelvis showing the anatomical conditions found in

HYPERTROPHY OF THE PROSTATE GLAND.

The specimens showed a greatly enlarged prostate, all its dimensions being equally increased. The urethra was elongated and consequently narrowed, and the curve of the prostatic portion was exaggerated. The internal orifice of the urethra was situated at a higher level than in the normal bladder. The portion of the bladder behind the prostate formed a sort of diverticulum from which the urine could with difficulty be expelled.

Herr Koenig had often met with symptoms in the aged resembling exactly those ordinarily attributed to hypertrophied prostate, but at the autopsy the gland was found to be perfectly normal. In these cases there was a large

DEPRESSION IN THE BLADDER,

which could not be emptied of its urine, and thus the symptoms produced simulated those caused by enlarged prostate. He always preferred metallic sounds, and those of the largest possible calibre, sometimes even resorting to

MEATOTOMY,

in order to allow of the introduction of an instrument of sufficient size. He condemned the use of small sounds as dangerous.

Herr Kuester thought that one great advantage of the metallic instrument was that it could be kept thoroughly aseptic, and the production of small abrasions in the urethra was preferable to the use of a dirty catheter.

Herr Bergmann maintained that it was perfectly easy to keep an elastic bougie surgically clean, and he thought the risk attending the employment of metallic instruments was too great to be taken without the strongest of reasons.

Herr Waldeyer exhibited some anatomical preparations of the

ANTERIOR WALL OF THE BLADDER,

showing its relations to the neighboring parts, and proving that the danger of wounding the vasa dorsalia penis and the pudendal venous plexus in the suprapubic operation is a purely imaginary one.

Herr Neuber then read a paper on the

HYPOGASTRIC SECTION.

He recommended that the operation be divided into two parts. For the first operation he divided all the tissues down to the wall of the bladder, marking the intended field of operation in the latter by a silk thread. The wound was then tamponed, and at the end of six or seven days the vesical wall was incised. By this means all danger of infiltration of urine was avoided, and it was also easy to prevent opening into the peritoneal fold.

Herr Trendelenburg did not think that this mode of operating was an improvement on the older method. He had performed the high section about forty times, and had never seen an abscess or peritonitis result. The time required for the extraction of the stone was seldom more than two minutes.

Herr Helferich presented a communication on

RESECTION OF THE SYMPHYSIS PUBIS

as an aid in operations on the bladder. He had performed the operation three times, removing a portion of the pubic bones, and thereby greatly facilitating the subsequent section of the vesical wall. The ultimate results were good, the patients being able to walk well.

Herr Bergmann reported a case of

ENCEPHALOCELE

in a child, aged five months, in which a cure was obtained by operation.

Herr Alberti presented a child upon whom he had operated for a

MENINGOCELE

with good result.

Herr Koehler related a case of

GUNSHOT WOUND OF THE OPTIC NERVE.

There was total loss of sight in the right eye, and the internal and superior recti were paralyzed. Atrophy of the optic nerve supervened in the course of time.

Herr Sonnenburg reported a case of

OLD FRACTURE OF THE PATELLA,

with very wide separation of the fragments. He had recourse to Bergmann's method of chiselling off the tuberosity of the tibia, and carrying it upward. The fragments of the patella were then sutured. They united firmly, and the tibial tuberosity became attached at a higher level without any necrosis occurring. The function of the joint was almost perfectly restored, flexion only being slightly impeded, but this he hoped to correct by passive movements after more solid union had taken place.

Herr Kuester reported a case of

TRAUMATIC ANEURISM OF THE POPLITEAL ARTERY.

The patient was a young man, eighteen years of age, who was suddenly seized one day with a violent pain in the knee which compelled him to go to bed. When seen by the reporter there was a fluctuating, non-pulsating tumor in the popliteal region, which was supposed to be an abscess. It was incised, and found to be an aneurism. The artery was ligated, and the aneurism excised. Examination of the specimen showed a perforation of the artery by an osteophyte growing from the posterior surface of the tibia. The speaker had been able to find but three similar cases recorded in medical literature.

Herr Bernays, of St. Louis, reported three cases of

LIGATION OF THE VERTEBRAL ARTERY,

in continuity for the cure of epilepsy. The benefit following the operation was only a temporary one, and the speaker condemned the procedure as one unproductive of good results.

Herr Wollf reported a case of

CLEFT PALATE AND HARE-LIP

treated by staphylorrhaphy and uranoplasty. The first operation was performed on the second day, and the second when the patient was five months old. The result was good.

Herr Beely presented several novel

ORTHOPEDIC APPLIANCES.

The President then made a

CLOSING ADDRESS,

in which he congratulated the members of the Congress on the good work which had been done, and requested each one of them to collect for presentation at the next annual meeting, all the cases that he could of

PERMANENT CURE OF CANCER.

He assigned a limit of three years as one at the expiration of which, if still free from a recurrence of the disease, the patient might be pronounced cured.

The Congress then adjourned.

Immunity of the Chinese from Typhoid.—The interesting observation is made by Dr. Underwood, Customs Medical Officer at Kiukiang, China, that the comparative immunity of the Chinese in that region from typhoid fever, notwithstanding most of the factors favoring it are present in abundance, may be attributed to the fact that "cold, unboiled water is rarely or never used when tea can be had."

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

Ninetieth Annual Convention, held at the Hall of the Faculty, Baltimore, Md., April 24, 25, *and* 26, 1888.

Dr. I. F. Atkinson, President, in the Chair.

Drs. G. L. Tanneyhill and R. T. Wilson, Secretaries.

(Concluded from page 507.)

Thursday, April 26th—Third Day.

Dr. Charles G. Hill, in a

SUPPLEMENTARY REPORT

from the

SECTION ON PSYCHOLOGY AND MEDICAL JURISPRUDENCE,

read a paper on

ALCOHOL IN ITS RELATIONS TO INEBRIETY.

After considering the number of drunkards in this country and the fact that twenty per cent. of all cases of insanity could be traced to inebriety, he treated the subject of alcohol as a food and as a narcotic, and then discussed the different diseases caused by inebriety, and the necessity of physicians paying more attention to guarding against this in their practice. He thought that this was a necessity which could not be too strongly insisted upon.

In the

DISCUSSION

which followed there was a lively debate on inebriety and drunkenness in general, which was discussed by Drs. John Morris, R. H. Goldsmith, and P. C. Williams.

Dr. Whitfield Winsey then read a volunteer paper on

SOME THOUGHTS ON BLOOD-LETTING,

in which he advocated the revival of this mode of treatment.

A lively

DISCUSSION

for and against this was carried on by Drs. H. Salzer, P. C. Williams, S. C. Chew, James Carey Thomas, J. W. Chambers, William Rickert, A. B. Arnold, and R. H. Goldsmith.

Dr. Charles O'Donovan, Jr., then read a paper on

A CASE OF URETHRAL STRICTURE WITH SEVERE AND UNUSUAL COMPLICATIONS.

Dr. Henry Salzer read a paper on

DIETETICS IN FEBRILE CONDITIONS.

Dr. J. H. Branham read a paper on

EXCISION OF THE LARYNX,

with a case.

Dr. J. H. De Wolf read a paper on

URGENT NEEDS OF THE MEDICAL PROFESSION.

The following elections took place for 1888–89:

President—Dr. John Morris.

Vice-Presidents—Drs. J. Edwin Michael and Thomas B. Evans.

Recording Secretary—Dr. G. Lane Tanneyhill.

Assistant Secretary—Dr. Robert T. Wilson.

Corresponding Secretary—Dr. Joseph T. Smith.

Reporting Secretary—Dr. William B. Canfield.

Treasurer—Dr. W. F. A. Kemp.

Menstruation in Old Age.—Dr. R. T. Knox reports the case (*Daniel's Texas Medical Journal*) of a woman who ceased menstruating at thirty-five. At the age of seventy-six she began menstruating regularly again, and has continued to do so for the past two years.

Correspondence.

THE GERMAN SURGICAL CONGRESS.

To the Editor of The Medical Record.

Sir: On the day preceding the formal opening of the Seventeenth Congress of German Surgeons, the Langenbeck Memorial Celebration was held in the "Philharmonie." The large hall was beautifully decorated and draped in mourning. The background of the stage was a grove of tropical and hot-house plants, and in the centre stood the life-size bust of the lamented von Langenbeck. Upon either side were seated the members of the executive boards of the German Society for Surgery and of the Berlin Medical Society. All the celebrated medical men of Germany, with but few exceptions, were in the audience, among them Esmarch, Thiersch, Trendelenburg, Miculicz, Waldeyer, Gerhardt, Du Bois Reymond, König, Helmholtz, Schede, Bardeleben, Schönhorn, Hahn, Braman, etc. The entire ministerial cabinet of the Emperor, the chief medical officers of the army, and also the Grand Duke of Baden, a brother-in-law of the present Emperor, were seated among the audience. The ceremonies were opened by the production of Mendelsohn's great chorus, op. 116, after which Langenbeck's successor, Professor von Bergmann, stepped upon the rostrum and delivered the oration. It was a masterpiece of biographical composition, and left a decided impression on the hearers. The exercises were closed by another chorus, and lasted in all something over one and a half hour.

The members of the German Society for Surgery assembled at nine o'clock in the evening for an informal lunch at the Hôtel du Nord. At one o'clock on Wednesday, Professor von Bergmann formally opened the Seventeenth Annual Congress of Surgeons in the Aula of the university. The hall proved almost too small to seat all the members and guests who were present. Ten years ago, when a pupil of von Langenbeck, I had joined this Society, it then had a membership of about 250. This number has now been doubled, and there were over 450 members present at the opening. The Society is looked upon, the world over, as facile princeps in its department of medical science, and its volume of transactions annually registers, either as original work or discussions, the most advanced surgical researches and experiences.

The Society has become wealthy, and at the present meeting papers of incorporation were made out and signed; the object being the erection of a building in the centre of the city of Berlin, to be called the "Langenbeckhaus." This will contain the hall, to seat eight hundred persons, a library room, museum of surgery, and laboratories. The rules for admitting members will be made more stringent, because membership will now be ownership in a valuable piece of property.

Among the most important papers read were one by König on the prognosis of cancer. One by Steinthal, Czerny's assistant, on surgical treatment of peritonitis following internal perforations. Schede's method of treating wounds, by allowing them to fill up with an aseptic blood-clot, gave rise to an animated discussion, during which some priority questions and jealousies cropped out between rivals, in a most amusing and refined manner. These questions were fought out impersonally, purely facts and objective statements being permissible. The general opinion was that Schede's method was nothing absolutely new, but that he had drawn attention to it in a manner that made an impression all over the world. The method was generally endorsed for a certain class of cases, especially of minor operations. Rosenbach's paper, proving conclusively that suppuration can be established notwithstanding the preservation of perfect asepsis, was perhaps as important a contribution as was produced at the Congress. Schimmelbusch demonstrated the new facts lately discovered concerning thrombosis.

At the morning sessions no papers were allowed to be read, the demonstration of patients, specimens, and short communications and discussions only being in order.

Americans will be pleased to hear that O'Dwyer's intubation was discussed and demonstrated in a matter-of-fact way by the eminent Thiersch, of Leipzig, and by Rehn, chief surgeon of the City Hospital in Frankfurt. Both gentlemen recommended further experiments with the method, and both feel that great improvements can be made in the instruments. Thiersch's results in thirty-four cases were not up to the twenty-seven per cent. claimed by O'Dwyer, but still he did not throw doubt upon the statistics in any way.

The only American member who spoke at the Congress was your correspondent, who made a report on the ligation of the vertebral arteries for the cure of epilepsy. After his report, in which he took the ground that the operation must be abandoned because it fails of its purpose, and is only of temporary benefit to the patients, the chairman, v. Bergmann, requested him to explain the performance of the operation anatomically, which he did.

By all odds, the most interesting demonstration was the one by Brieger. He exhibited the ptomaines discovered and chemically isolated by him, and by hypodermic injection showed their effects on animals. These substances are certainly the strongest and most deadly poisons known to us, and since they are the result of the life-functions of bacteria and micrococci, it is believed we shall soon be able to understand more about the deadly infections caused by these organisms.

On Sunday after the closure of the Congress, von Bergmann gave a fine dinner at his palatial residence, to which I had the honor of being invited, together with about thirty distinguished medical men, and about fifteen ladies. It was an elaborate affair, and most elegantly and tastefully served. The general surgeons of various armies were present, and among all the titled people a young American surgeon might have been overlooked, only for the great affability and social tact of the host and hostess.

I have noticed during the Congress that there is no personal favoritism, and no national chauvinism. All men meet here on the level of science, and are rated according to their deserts, judged by their published work. I think that to be the author or discoverer of some new surgical procedure, or of some new observations in any branch of medicine, would go farther to give anyone the entrée into scientific and social circles than any letters that might be brought.

The prejudice against Mackenzie is gradually disappearing in Germany. Among the new things that I brought over with me, was some moist antiseptic cotton, arranged between layers of gauze, which I had had made for me in New York. I showed it to von Bergmann this morning, and he was so much pleased with the article that he took it, saying he would use it on the Emperor's throat, where there was considerable secretion just at present. The throat disease is as little understood over here as it is in the United States, by the physicians generally. It is considered bad taste to express an opinion, since no authentic information is at our command. From a remark of Bergmann's, I should judge that there is little chance for the ultimate recovery of the patient.

Yesterday I assisted Braman at his polyclinic. The material is simply immense. For instance, four cancers of the breast in one afternoon; there are also four cases of cancer of the bladder in the hospital at the present time. Braman is von Bergmann's right bower, and operates perhaps as much as any man in Berlin. He is a most amiable and friendly gentleman, and always ready to show anything he has in the hospital. A. C. Bernays, M.D.

Berlin, April 10, 1888.

Heaviest Dew Point—When your bill comes in. The wisest of medicinal plants—The sage bush. The medical trinity—Ills, pills, bills.—*Medical Reporter.*

WHY THE CROWN PRINCE HAS ONE ARM SHORTER THAN THE OTHER.

To the Editor of The Medical Record.

Sir: Under the heading "Why the Crown Prince of Germany has One Arm shorter than the other," The Medical Record, in its last issue, publishes a story from a correspondent which is absolutely the contrary of the truth from first to last—if I am allowed to judge from personal communications with the late Professor Eduard Martin, with whom I was associated for nearly four years. One day I took occasion to ask him in regard to the rumor that Prince William's left arm was broken during delivery. He positively denied it, and told me that the baby was born with a *congenital atrophy* of the left arm. The other facts are these: When the present Empress Victoria anticipated her first confinement, it was decided to have Martin as the accoucheur, who was not long ago called to Berlin to fill the professorship left vacant by the death of Dietrich Wilhelm Heinrich Busch; besides, she had a midwife with the name of Katharine Stahl, and as her regular body-physician Dr. Wegner, who still holds the same position. When labor set in, the midwife, after examination, made the diagnosis of occipital presentation, with which Dr. Wegner concurred; but, instead of notifying Dr. Martin at once, they waited and waited, possibly wishing not to share the honor with somebody else of having the princess delivered. But when labor made no progress, after the bag had been broken some time, Martin was sent for.

He found breech presentation, and had to resort finally to extraction, which was extremely difficult. But notwithstanding his success, Martin was never called upon again. All the later confinements were conducted by Queen Victoria's English body-physician and the same German midwife. It was a current rumor in Berlin that Martin had broken the baby's left arm, and either overlooked it or not mentioned it, trusting that it would heal spontaneously; and that for this reason he was dropped.

In regard to the "hereditary deafness," it is a well-known fact that the present Crown Prince contracted otitis media, following measles, two years ago.

Respectfully, B. Scharlau, M.D.

New York.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from April 29 to May 5, 1888.

De Loffre, A. A., Captain and Assistant Surgeon. Granted leave of absence for six months on surgeon's certificate of disability, with permission to go beyond sea. S. O. 99, A. G. O., April 30, 1888.

Edie, Guy L., First Lieutenant and Assistant Surgeon. Now under orders to report for duty to the commanding officer, Fort Douglas, U. T., will accompany the 8th Cavalry from Department of Texas to Department of Dakota, and upon completion of this duty, will proceed to Fort Douglas. S. O. 99, A. G. O., April 30, 1888.

McCaw, William D., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Leavenworth, Kans., and ordered for duty at Fort Crawford, Colo. S. O. 48, Department of Missouri, May 1, 1888.

Rafferty, Ogden, First Lieutenant and Assistant Surgeon (recently appointed). Ordered for duty at Fort Clark, Tex.

Lauderdale, John V., Captain and Assistant Surgeon. Ordered from Fort Clark, Tex., to Fort Davis, Tex. S. O. 98, A. G. O., April 28, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 5, 1888.

Hord, W. T., Medical Director, and Woolverton, T., Surgeon. Ordered as delegates to represent the Medical Department of the Navy at the Meeting of the American Medical Association, May 8th, at Cincinnati, O.

Bradley, George P., Surgeon. Ordered to Navy Yard, Brooklyn, N. Y., without delay.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 5, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	12	6
Scarlet fever	230	24
Cerebro-spinal meningitis	8	9
Measles	117	6
Diphtheria	168	49
Small-pox	21	6
Yellow fever	0	0
Cholera	0	0

The Medical Association of the State of Alabama.—Dr. Jerome Cochran, Senior Censor of the Medical Association of Alabama, referring to a recent editorial on the subject, writes: "Membership in the Medical Association of the State of Alabama can be obtained in only one way, namely, by first securing membership in some county medical society. There are sixty-six counties in the State; and in everyone of these sixty-six counties there is a county medical society; and in the constitution of every one of these county medical societies there is a section adopting the Code of Ethics of the American Medical Association. Moreover, the Code of Ethics of the American Medical Association is published at length in our Book of Rules, and is made of obligation by the constitution of the State Association. Surely it is not possible to give the Code of Ethics stronger endorsement than this. With us 'a medical education' sufficient to pass our examinations 'qualifies a man to be legally a doctor,' even as you say. But a man may be a legal practitioner and at the same time under the ban of the profession for ethical misconduct. In other words, legal recognition does not involve ethical recognition. In the meantime, the number of irregular doctors in Alabama is so small as to be of very little importance. Irregulars may pass our boards of examiners, but our standard is so high that such irregulars are very apt to merge themselves in the regular profession. We regard our law as ideally perfect. If we could have it amended according to our wishes, we would be at a loss to suggest any change. We would not know how to make it better; and we have nothing further to ask of the State but to let us alone."

A Portrait of the late Professor James L. Little, M.D., has been painted for the Post-Graduate Medical School, and may be seen in the reading-room of that institution.

The late Dr. E. G. Loring.—At a special meeting of the Board of Surgeons of the New York Eye and Ear Infirmary, held May 2, 1888, the following resolutions were adopted:

Resolved, That in the sudden death of Dr. Edward Greeley Loring, Jr., the surgical staff of the New York Eye and Ear Infirmary have lost an able and skilful colleague, who for nearly fourteen years has been a surgeon in the Ophthalmic Department of the institution. His kindly and lovable personal qualities were most attractive, and in his death we feel keenly the loss of a genial, frank, and warm-hearted friend. In his professional attainments he was most eminent; enthusiastic in his devotion to his special field of work, and, as one of its most distinguished exponents, he was justly esteemed an authority. We greatly deplore the cessation of his labors while still in the full enjoyment of his powers, which were enriched by a large and carefully digested experience. As an author, he was remarkable for his acute observation and logical reasoning, while the clearness of his style gave evidence of the directness of his thought. By his death scientific ophthalmology has lost an ardent and successful disciple, while the community has been deprived of the services of a skilful counsellor and practitioner. The surgeons of the New York Eye and Ear Infirmary desire thus to give expression to their feeling of affection and respect for his memory, and sympathizing sincerely with his family in their loss, offer them their respectful condolence.

Resolved, That this minute be entered on the records of the Board of Surgeons of the New York Eye and Ear Infirmary, and that a copy be sent to the family of Dr. Loring.

Chas. Stedman Bull,
Gorham Bacon,
Morris J. Asch, *Committee.*

The late Dr. C. R. Agnew.—At a meeting of the Board of Governors of the New York Skin and Cancer Hospital, the following preamble and resolutions were adopted:

Whereas, By the hand of an overruling Providence this institution has lost, in Dr. Cornelius Rea Agnew, one of its original incorporators and an earnest supporter, as well as an efficient consulting surgeon;

Resolved, That the Board of Governors of the New York Skin and Cancer Hospital desire to express their profound admiration of the peculiar and noble traits of character possessed by Dr. Agnew, and the very great loss which the institution has sustained in his early removal from our midst.

Resolved, That this preamble and resolution be entered upon the records of the institution, and that a copy be sent to the family of Dr. Agnew and to the medical journals.

The Health Board of the city of New York passed the following:

Whereas, It has pleased Almighty God to remove Dr. C. R. Agnew from this life; and,

Whereas, the late Dr. C. R. Agnew had endeared himself to all by his disinterested public spirit, and his unswerving fidelity to just principles of public health; be it therefore,

Resolved, That the death of Dr. C. R. Agnew has deprived the people of this city of a vigilant and wise advocate of its sanitary rights and requirements, and also deprived this Department of a conscientious, impartial, and fearless counsellor.

Resolved, That these expressions be spread in full on the minutes of this Department, and that the President be directed to express to the family of the deceased the sympathy of this Department in their sad bereavement.

(A True Copy.) April 26, 1888.

Dr. Scanes Spicer has been elected Physician to the Department for Diseases of the Throat, St. Mary's Hospital, London.

Dr. Otis' Article.—Leiter should have been credited with the invention of the cystoscope, and not Lister.

Professor Paget carries in his obstetric bag an ergot-mill, resembling a small coffee-mill, compact in form, and designed to grind up ergot freshly for use. He claims that only the freshly pulverized ergot is reliable, and he thus secures it when wanted without depending on tincture and other liquid preparations, fetched from the druggists.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 20 New York, May 19, 1888 **Whole No. 915**

Original Articles.

COMBINATION OF CARDIAC NEUROTICS.[1]

By W. H. THOMSON, M.D.,

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS, UNIVERSITY OF NEW YORK; PHYSICIAN TO THE BELLEVUE AND ROOSEVELT HOSPITALS.

While physicians have been long accustomed to combinations of different drugs to act in unison toward producing a given action on gland-secretion, analogous combinations of neurotics have not yet been very definitely or generally established in practice. Each of the six purgatives employed in the pil. cathart. comp., for example, is too small in quantity to exert more than a moderate amount of its separate or specific action, but yet it is able so to add its own cathartic property to the similar action of the others that we virtually obtain, by the combination, a new medicine, which operates without some of the disadvantages of the single free action of either one of the ingredients. The principle which underlies this practice is, that the different agents will re-enforce or intensify an effect which they have in common on a given function, while their separate and, it may be, antagonistic, actions, are either of little effect in comparison, or even may be neutralized in the combination. Thus, both opium and ipecacuanha have singly a moderate diaphoretic property; when united, that property is more than doubled, and may be still further promoted in febrile cases by the addition of aconite. Calomel, again, acts only slightly on the kidneys, but, along with squills and digitalis, it assists each of these in making the most certain diuretic known.

It appears to me that this principle may be expected to apply particularly to neurotics, because their action, instead of involving the whole nervous system in one kind of operation, is, on the contrary, limited in each case to single effects on particular nervous functions without involving directly any others. We may, therefore, be thus enabled to secure some special effect by intensifying a given property of one neurotic by a similar property in another, though in other actions they may be more or less antagonistic. For it should be remembered that such antagonism has no resemblance in its nature to chemical incompatibility, but is throughout a difference of impression on some nervous function, and hence may be not only very variable in kind and degree, but may not extend to any other nervous function whatever. The conception, indeed, that one neurotic can be the complete antagonist of another, in the fashion that chemical antidotes neutralize each other, is a serious mistake, and has done more than anything else to prevent the proper recourse to their combinations in practice. This misconception arises from regarding neurotics in the light of the old definition, that "they are medicines which act on the nervous system;" a definition which implies that the nervous system is an organ, like the stomach or liver, which can be spoken of as a unit, and, therefore, as stimulated or depressed as a whole. The true definition of a neurotic is "a medicine which affects *some* functions of the nervous system," because even the most powerful or widely operative members of the class act specifically only on a few of the many different functions of a system which has a greater number and a greater diversity of functions than the functions of all the organs and all the textures of the body put together. In fact, progress in the knowledge of the different neurotics has been almost wholly in the direction of finding just what centres or functions are affected by them out of a multitude of functions which they do not affect at all. So far, therefore, from speaking of them as universal agents of any sort, one should even guard against being misled by the terms used to denote their actions when they appear to be similar. Thus, ammonia and digitalis are both spoken of as cardiac stimulants; strychnia and ergot as spinal stimulants, etc.; but it is plain that the "stimulation" in each case is quite different in kind from that of the others, not only because the functions affected are different, but also because the process itself may be different, and the effect of one may be direct and of the other indirect, in producing the characteristic operation.

In keeping, also, with the physiological law of the nervous system, that, so far from acting as a unit, it constantly presents examples of functions which are antagonistic or inhibitory of one another, so that when one is in action others are in abeyance, we have neurotics which are at the same time both stimulants and sedatives, according to the separate functions which they simultaneously affect. Thus, while opium stimulates certain cerebral ganglia, it paralyzes the gastro-intestinal secretory nerves; and, again, while checking secretion in the alimentary canal, it increases the secretions of the skin. Alcohol, while it stimulates certain brain-functions and also the heart, at the same time, not subsequently, as used to be taught, paralyzes general sensation, so as to make the excited man uncertain of the exact whereabout of his legs. Such names as "stimulants," or "sedatives," therefore, should no more govern our conceptions of neurotics than such a name as "tonic" should influence our prescription in other cases. The separate effects of neurotics are often so independent that the most seeming opposites easily may be made to promote that which they have in common, without any interference with that common action by their other differences, just as opposite views in politics may not prevent two men from being good partners in business. Thus the initial action of opium and of belladonna on respiration is so antagonistic that in the first stage of poisoning by either of them the one can be employed to counteract the effect of the other on that particular function. But, on the other hand, both have much the same sedative action on another function, so that each may be correctly termed an analgesic, and for this purpose their combination is often quite advantageous. Moreover, the counter action of these two agents is itself limited to a particular condition of the function acted upon, and no longer obtains when that condition has ceased. Thus I have known of belladonna being given freely in opium-poisoning when, in the state of the patient, it would do nothing but mischief. For in the latter stages of opium-poisoning we have all the symptoms of collapse from exhaustion by overstimulation. The contracted pupil relaxes and may be widely dilated; the pulse, from being strong, regular, and full, in the first stage, becomes weak, irregular, and small; the inspiration, from being powerful and deep, becomes shallow, etc. Belladonna now will but intensify these symptoms and hasten the fatal conclusion, for it should be given only when certain special functional effects of opium are present, which its own particular functional effects will then, and only then, antagonize, and not when those opium-effects have disappeared. Special antagonism, therefore, in neurotics, does not exclude special co-operation, and, as in the glandular medicines, we may hope to obtain by such co-operation a more effective joint action than either, singly, could produce.

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[1] Read before the Section of Materia Medica, New York Academy of Medicine, March 23, 1888.

I have long thought that, in the case of the nervous functions of the heart, associated as they are so intimately with the nervous functions regulating the blood-vessels, we had a promising field for bringing these principles into practical use. Moreover, there is no one class of nerve-functions which is so easily, or which has been so fully, studied of late years as that of the nerve-functions regulating the circulatory system. We know here both the mechanism which increases and that which decreases the frequency, force, and volume of the circulation, so far as nervous influence is concerned, better than we know about any other nervous work done in the body; and hence can entertain more definite conceptions about the action of cardiac and of vascular neurotics, than about any other neurotic actions, as the three medicines which we now proceed to mention will demonstrate.

Digitalis, when I first studied the materia medica, was classed among the heart-sedatives, because it slowed the action of the heart, made the pulse small, and often intermittent. The influence of names was then strikingly illustrated in this case by the recommendations for the use of this drug in disease, as they were based upon the meaning of the word "sedative," so that it was advised to give it for the same purposes, as far as the heart and circulation were concerned, as aconite or veratrum viride. Just now the same wrong influence of names is often illustrated in the recommendation of digitalis as a heart-tonic, when it is no more a cardiac tonic, in the sense that iron is, than it ever was a heart-sedative. What digitalis does do with the heart, so long as its influence lasts (which is necessarily temporary, because it is a neurotic), is to increase the contractility of the heart under certain conditions, in a cramp-like and rather irregular fashion, at the expense of its proper rhythmical relaxation, so that it interferes with the diastole while prolonging the systole. In a simply dilated heart this prolonged contraction is of great service, because, for the time being, the heart-cavities are brought more nearly to their normal state. We all know now, however, that one of the commonest causes of cardiac dilatation and failure is not to be found in the heart at all, but rather in an obstructed arterial circulation. It is probable that arteries, narrowed in their calibre, are the cause of cardiac hypertrophy and subsequent dilatation, three times in adults, to valvular disease of the heart itself once, and just here it is that the employment of digitalis in heart-failure often disappoints us most signally; for, unfortunately, while it increases the contractile power of the heart, it also contracts the arteries, and thus often adds as much obstruction to the circulation in that way as it aids the circulation by its increase of the heart's propulsion; a fact often illustrated in cases of dropsy in Bright's disease, where the condition of the systemic arteries is the primary cause of the anasarca.

It is in just such cases that nitro-glycerine can help us to administer the digitalis with more than double the beneficial effect of the administration of digitalis singly. Nitro-glycerine, by its universal and prompt relaxation of the whole arterial system, makes every stroke of the ventricles, stimulated by digitalis, not only more powerful but also far more effective in completing the systole with a short and heart-emptying contraction. Meantime, by its action in paralyzing the inhibitory action of the vagus, it insures a more rapid diastole, and, in many instances, I have found the intermittency caused by digitalis to disappear as soon as the effect of the nitro-glycerine is felt. The effect of this upon the anasarca in these cases is about as complete and gratifying as any remedial operation with which I am acquainted. But, on the other hand, the influence of nitro-glycerine alone, as I have noted in a number of instances, is almost *nil* on the dropsy, however much it often seems to have a beneficial influence on the secretory action of the kidneys by increasing the specific gravity of the urine.

In the new remedy, strophanthus hispidus, the profession, without doubt, has received a great addition to the list of cardiac stimulants. It is not our province now to enter upon the detail of the properties of this drug, except so far as to state that for functional derangements, like palpitation, we know of no superior to it, and that it has a particular effect to increase the power of the heart's contraction in a more regular and uniform, though not so powerful, manner as digitalis does. Meantime its contraction of the systemic arteries is very much less than that of digitalis, and its effect in increasing the specific gravity of the urine in chronic Bright's disease is much greater. I have never, in fact, succeeded in this respect with any other drug as with strophanthus. On the other hand, its combination with nitro-glycerine gives very much the same results on the circulation as the combination with digitalis, just mentioned, does, and hence I often give moderate doses of all three agents for the indications above specified in chronic obstructive conditions of the systemic circulation.

But it is in severe cases of acute disease that we meet with the most signal illustrations of the advantage of the combined action of cardiac neurotics. To prevent heart-failure until the patient can tide over the crisis becomes frequently the anxious problem in pneumonia, in sudden prostrations in fevers, in peritonitis, when the effect of shock in causing general arterial closure is so plain as a cause of cardiac exhaustion, and in many other cases of like conditions, and, I have no doubt, many practitioners will welcome some addition like this to the regulation brandy-and-ammonia prescription for such emergencies.

In illustration of my remarks, I now beg leave to cite in brief the histories of patients with both chronic and acute affections who have been so treated in my wards in the Bellevue Hospital during the past winter, as they are reported by my house-physician, Dr. E. J. Lorenze.

Case I. *Cardiac dilatation; general anasarca; bronchitis; hydrothorax; discharged improved.*—J. M——, aged fifty-nine, English, printer, widower; admitted December 8, 1887. Patient has been suffering from a chronic bronchitis for over six months. It became worse two days before admission. Headache, to which he had been long subject, had become more severe than usual. His urine became scanty and almost black in color. Had slight œdema of the legs for four months previously; this rapidly increased as his urine diminished in quantity; he had considerable dyspnoea, which was much intensified by exertion of the slightest kind, amounting at last to orthopnœa. No ocular symptoms, except those due to age. The scrotum began to swell as the œdema extended upward, then the abdomen became œdematous, and finally the whole cutaneous surface pitted on pressure. He had Chagres fever in 1851. Had syphilis thirty years ago. Eight years ago Dr. Gross, of Philadelphia, operated on him for necrosis of the frontal bone, the scar of which is now very marked. Has been a moderate drinker.

On admission, patient is a man of large, well-built frame; the œdema on the body reaches the axillæ; skin, dry and harsh, on the arms hangs in folds, and is generally studded with an old syphilitic eruption. Tongue dry, with a lemon-colored coating in the centre. He complained of intense dyspnœa and extreme weakness. In the evening he was slightly delirious. Temperature, 101.5°. Pulse, 82, irregular in rhythm, weak, rather incompressible, and small. Respiration, 38; lungs—breath-sounds weak, with universal bronchitic râles, dulness on percussion over both bases, and total absence of fremitus. Liver small, moderate ascites. Heart, much dilated, apex-beat diffused, and impulse almost absent. It was difficult, owing to the fluid in the pleura and the cutaneous anasarca, to make out the limits of the cardiac dulness. Heart-sounds were reduplicated at the apex, with a soft systolic murmur. Ordered to be dry cupped, and a purge of calomel, gr. v.; pulv. jalapæ co., gr. xxx. The urine, for the first twenty-four hours, was ℥ xv., dark; sp. gr., 1.026; no albumen. Ordered tr. strophanthus, gtt. iv.; tr. belladonna, gtt. x.;

spts. eth. sulph. co., ʒ j.; infus. digitalis, ʒ ij., every four hours.

December 10th.—Patient feels much better; dyspnœa much diminished; œdema disappearing rapidly. Pulse, 78, regular, full, and strong. Urine, over ℥ xxx. in the twenty-four hours, still dark red; sp. gr., 1.023.

December 13th.—Much improved; dyspnœa almost entirely disappeared; œdema of scrotum gone. Pulse, 76, strong, regular, full, and more compressible. The bronchitis has subsided, and but few râles heard at the base of the lungs. Urine lighter in color, ℥ xlv. per diem; sp. gr., 1.024. Ordered tr. strophanthus, gtt. iv.; nitro-glycerine, ♏ ij. (solution, 1 p. c.); tr. belladonna, gtt. x.; spts. eth. sulph. co., ʒ j., every four hours.

December 19th.—Patient steadily improved, face no longer puffy, feels better than for six months, dyspnœa very slight. Heart much stronger in systole; pulse, regular and full; discharged at his own request.

CASE II. *Cardiac dilatation, with anasarca; bronchitis.*—G. McK——, widower, machinist, Scotch. Patient, an old soldier of uncertain age, admitted December 22d, 1887. Two months ago he had an attack of rheumatism in right knee and hip. These joints swelled up, became exquisitely tender, but not red; feet have been swollen more or less for the last sixteen months; he has passed urine only in small quantities, for the last eight months; he is troubled with occasional frontal headache; has anorexia, cardialgia, and chronic dyspepsia. On the slightest exertion he has a fluttering about his heart, with slight precordial pain; blueness of the lips and dyspnoea; also muscæ volitantes. He has a chronic bronchitis, with thick, muco-purulent expectoration, which has been troublesome for four months. Bowels much constipated, with movements only once or twice a week. He received a double inguinal hernia while in the army, in 1863, and has also a ventral hernia in the rectus abdominis muscle, between the ensiform cartilage and the umbilicus. He has been a hard drinker for over twenty-five years, and often drinks before breakfast, and on an empty stomach during the day. He has had chancre, but no secondary symptoms.

On admission, patient has extreme anæmia; conjunctiva and other mucous membranes, as well as the skin, almost white; tongue flabby, but not coated. He complains of great weakness and pain in stomach, and in right leg. He has œdema of both legs, thighs, and of the cellular tissue of the abdominal walls, with moderate ascites. Temperature, 98.5°; pulse, 80, very weak, intermittent, and irregular; respiration, 24; much cough, with fine râles. Heart, increased area of dulness, weak impulse, no murmurs. Ordered pulv. jalapæ co., gr. xl.

December 24th.—Ordered tr. strophanthus, tr. digitalis, āā ♏ iij., every three hours.

December 26th.—Pulse, 80, stronger, less irregular or intermittent; urine, ℥ xii.; sp. gr., 1.022; no albumen. Continue treatment.

December 28th.—Pulse, 76, stronger; urine, ℥ xxx.; sp. gr., 1.022.

December 30th.—Heart-impulse stronger; pulse almost wholly regular; urine, ℥ xxxvi.; sp. gr., 1.020.

January 8th.—Urine, ℥ xl.; sp. gr., 1.012.

January 15th.—Urine, ℥ xxxvi.; sp. gr., 1.023; traces of albumen. Ordered tr. digitalis, tr. strophanthus, āā ♏ iij.; sol. nitro-glycerine, ♏ ij., every three hours.

January 20th.—Patient up and about the ward, feeling very well; urine, ℥ xxxv.; sp. gr., 1.024; pulse, 70, full and regular.

CASE III. *Cardiac hypertrophy and dilatation; old pericardial adhesions; anasarca; no improvement; death.*—A. H——, American, aged forty-six, married, butcher; admitted January 20th, 1888. Last October patient had an attack of right paralysis, coming on with vertigo, dizziness, aphasia, with paralysis of right arm and leg, which lasted one week, and gradually disappeared. He had articular rheumatism twenty years ago, without, as he says, any cardiac symptoms; again, sixteen years ago, without cardiac symptoms. He has been a hard drinker, taking liquors on an empty stomach, for the last seven years. He has been troubled for a year past with palpitation, muscæ volitantes, and vertigo. Four weeks ago, after working very hard as a carver in a restaurant, he had a sharp pain come on in the precordium, with a hacking cough and dyspnœa, but he had no fever. His thighs and legs became much swollen; urine, dark and scanty. One month ago had an ulcer develop on the left cornea, with conjunctivitis. He suffers now from dyspnœa and constipation. Had gonorrhœa and a chancre three years ago, without secondary symptoms. On admission, temperature normal; pulse very small, and only every other heart impulse reaches the radials; it is very irregular and intermittent; heart-beats, about 130; respirations shallow, 38; no cyanosis; countenance and conjunctiva slightly jaundiced; orthopnœa; œdema of legs to the middle of the thighs; urine, ℥ xviii.; no albumen. Ordered tr. strophanthus, ♏ iv.; sol. nitro-glycerine, ♏ ij., every three hours.

January 21st.—Heart feeble; pulse irregular, intermittent, and rapid. He is unable to lie down without morphia and atropia. Heart hypertrophied and dilated, lying transversely on the diaphragm, mitral regurgitant murmur soft and prolonged, and also at the apex a localized double, pericardial murmur; the fifth, sixth, and seventh intercostal spaces retract during the systole, owing to old pericardial adhesions. Ordered tr. strophanthus, ♏ vj.; sol. nitro-glycerine, ♏ ij., t. i. d. Urine, ℥ xvi., lighter in color.

January 23d.—No better; urine only ℥ viii. in twenty-four hours; œdema continues. Continue treatment.

January 24th.—Ordered tr. digitalis, ♏ v.; sol. nitro-glycerine, ♏ ij.

January 26th.—Patient has been delirious last two days; slight jaundice; pulse very feeble, irregular, and intermittent; œdema of legs and thighs; heart does not respond to digitalis.

January 26th, 1 A.M.—Died.

CASE IV. *Cardiac dilatation; Bright's disease; cirrhosis of the liver; anasarca; ascites; hydrothorax; much improvement; relapse; death.*—Margaret W——, aged forty-five, Scotch, widow, cook; admitted December 14, 1887. A month ago, patient began to complain of pain in precordial region. Had palpitation and dyspnœa and a muco-purulent expectoration, which, however, was only temporary. Pain in heart often radiated to shoulder and to back, and at times was quite severe and accompanied by fluttering sensation under the left nipple. Has suffered some from headache, and at times has attacks of amblyopia, and often sees spots, black and white, before the eyes. Her urine has been very scanty and dark colored, and she would sometimes go twenty-four hours without passing any. It contained a sediment. At the time her urine gets scanty her feet swell to an immense size. She has suffered from dyspeptic symptoms for the last eighteen months; never vomits, but suffers considerably from pyrosis and gaseous eructations. She has never had any acute illness since childhood; takes whiskey regularly, sometimes to excess, often on an empty stomach. At times, when she is drinking, does not eat for several days.

On admission, patient very stout and apparently well nourished; has considerable cyanosis about the ears, neck, and lips; extreme dyspnœa, and much inclined toward somnolence; legs very œdematous; arms and face much swollen. Temperature, 98.5°; pulse, 130, small, irregular, weak, and compressible; urine dark colored, and only ℥ xi. in twenty-four hours; sp. gr., 1.028; no albumen; has incontinence of urine and involuntary movements from the bowels. Respirations, 38, very labored. Nausea, can take nothing but milk and lime-water. Examination shows hydrothorax, with ascites. Heart, increased area of dulness, with diffused and feeble apex-beat; double aortic and systolic mitral murmurs, diagnosed as secondary to the dilatation and not to valvular disease.

Ordered, December 14th, pulv. jalapæ co., gr. xl.; calomel, gr. v.

December 15th.—Ordered, tr. strophanthus, ♏ iv.; sol. nitroglyc., ♏ ij., every three hours.

December 20th.—Pulse, from 130 has gone down to 108, much stronger and regular; urine increased markedly, and, although there is still incontinence, it is not so constant. The patient is much brighter, and the somnolence lessened, though still present; her dyspnœa is much diminished.

December 24th.—Patient felt so well that she got up and sat in a chair for an hour; the heart is much stronger in systole, and more regular in force and rhythm; pulse strong, regular, and full; urine increasing.

December 28th.—The incontinence of urine and fæces has ceased. Pulse continues strong, regular, and full; dyspnœa has disappeared, and the œdema entirely.

December 31st.—Patient shows signs of relapse; the urine and bowel discharges again becoming involuntary. Ordered tr. belladonna, gtt. xv.; ext. ergotæ, ʒ j., t. i. d.; with tr. digitalis, tr. strophanthus, āā ♏iij.; sol. nitro-glycer., ♏ij., every three hours.

January 5th.—Condition the same; to increase the digitalis and strophanthus to ♏v. each.

January 10th.—No change.

January 15th.—Patient much the same.

January 21st.—Died; was conscious to the last.

Autopsy.—Heart hypertrophied and dilated, with fatty degeneration; no valvular lesions. Liver smaller than normal, with fatty cirrhosis. Kidneys were small, granular, white, and fatty; the disease more advanced in the left than in the right kidney.

CASE V. *Cardiac hypertrophy, with dilatation; chronic bronchitis and rheumatism; anasarca, with extreme dyspnœa and cyanosis; marked improvement.*—Catharine F——, Irish, aged fifty, single, housemaid; admitted December 28, 1887. For the past year the patient has been very short of breath on exertion, accompanied by palpitation, blueness of face, and coldness of extremities; unable to lie down, and consequent insomnia. For the past five weeks the palpitation, dyspnœa, and cyanosis have increased; the feet swelled, and the dropsy extended up the groins. She gives a history of repeated attacks of rheumatism; the first, six years ago, when she was confined to bed with inflammation of ankles and knees for three months. Family history negative, no venereal. On admission the patient was livid in countenance and in extremities. Her dyspnœa was so intense that she could not articulate properly. Extremities cold and œdematous; the anasarca extends to the waist. No pulse can be felt. Heart hypertrophied and dilated quite extensively; sounds very feeble; asystolism, with indistinct mitral murmur; rate of heart-beats, 176; very irregular. Ordered a purge of pulv. jalapæ co. and calomel; then tr. digitalis, tr. strophanthus, āā ♏iij., sol. nitro-glycerine, ♏ij., every three hours. Urine, in twenty-four hours, ℥ xii., dark; sp. gr., 1.020; no albumen.

December 29th.—Pulse can be counted fairly well, 140; more regular. Urine, ℥ xxviii.; sp. gr., 1.021.

December 31st.—Pulse more regular, 109; much fuller and stronger. Urine, ℥ xxxii.; sp. gr., 1.018; dyspnœa much less; cyanosis disappeared; œdema rapidly decreasing.

January 4th.—Urine, xlv.; sp. gr., 1.023; pulse regular and not intermittent, except on exertion or excitement; can lie down without discomfort.

January 10th.—Up and about; no dyspnœa nor œdema; passing, on an average, ℥ xxxv. daily.

January 24th.—Is doing well; up most of the day; still has some œdema about the ankles; pulse regular and fairly full. Continue treatment.

CASE VI. *Cardiac dilatation, with anasarca; rapid action of the heart; improvement.*—Patrick K——, aged fifty, Irish, married, laborer; admitted December 30, 1887. Patient was in hospital last winter with attack of cardiac palpitation, cyanosis, dyspnœa, and œdema of extremities; was relieved and discharged. Patient now states that he did comparatively well, until three months ago, when he had an attack of pain in the region of the heart, accompanied by palpitation, dyspnœa, vertigo, blueness of lips and ears, and slight œdema of ankles. He had also an occasional dry, hacking cough, with watery expectoration. He was a moderate drinker. Had chancre three years ago; no secondary. Has been vomiting for the last two weeks; has taken no food, not even milk and lime-water. Has passed sufficient urine, and his bowels moved every other day, unless he took a cathartic, which was very seldom. No family history of cardiac or pulmonary disease. Had rheumatism six years ago; no cardiac symptoms. On admission, well-developed and well-nourished man. Has extreme dyspnœa; breathing much accelerated, 50 to the minute; orthopnœa; extreme cyanosis of lips and face. Cardiac action very much labored and weak; heart-sounds indistinct; asystolism; heart irregular in rhythm and force; pulse imperceptible. Rate of heart 150 to each minute. Œdema of feet and abdominal cellular tissue, pitting slightly on pressure. Fluid in both pleural cavities. Heart much dilated, with diffused and feeble apex-beat. Slight mitral regurgitation and double aortic murmurs. Urine was sufficient in quantity the first day of admittance, ℥ xxx., and dark red in color, with sp. gr. of 1.020; contained no albumen. Ordered a purge of pulv. jalapæ co. and calomel; then tr. strophanthus and tr. digitalis, āā ♏iij., every three hours; no nitro-glycerine given on account of rapid heart-action.

January 2d.—Heart-action much stronger, as shown by pulse. Pulse, 120, stronger, fuller, and very perceptible at both wrists; still irregular in force and rhythm, but less so than formerly; dyspnœa and cyanosis less. He rests in bed, on a general diet. Urine, ℥ xl. daily; dark; sp. gr., 1.020; acid.

January 4th.—Heart beats at the rate of 90 to the minute, full and strong, but still markedly irregular in force and rhythm. Urine, ℥ xlviii.; sp. gr., 1.024. Treatment continued.

January 7th.—Pulse strong and full, compressible, but still irregular and intermittent, 72 to minute; no dyspnœa while lying in bed. Urine, same in quality; amount, ℥ lxv. daily. Ordered, add sol. nitro-glycerine, ♏ij., to the tr. strophanthus and digitalis.

January 12th.—Improving gradually; is very comfortable; no dyspnœa or cyanosis; pulse, 75 to minute; still irregular and intermittent, but much improved in strength and calibre; œdema entirely gone. Nitro-glycerine does not cause dyspnœa, nor increased action of the heart.

January 17th.—No dyspnœa. Is up and about ward. Urine, sp. gr., 1.020; amber, acid; no albumen.

January 24th.—Pulse still irregular and intermittent. Ordered tr. digitalis and tr. strophanthus, āā ♏iv.; sol. nitro-glycerine, ♏ij. Patient feels quite comfortable.

CASE VII. *Cardiac hypertrophy and dilatation; bronchitis; general anasarca; improvement.*—Jane C——, aged fifty, Irish, widow, dressmaker; admitted January 12, 1888. Four weeks ago patient noticed that her feet were much swollen, and that her urine was scanty and dark colored, and her appetite completely failed. At the same time her heart troubled her more than ever. She had suffered for several months with vague pain and palpitation in region of heart, with sense of suffocation and shortness of breath. She had symptoms of a chronic bronchitis for a long time previously. Five years before, had a subacute attack of rheumatism. Gives a history of syphilis and hard drinking.

On admission, patient is dropsical all over body, with ulcers on her legs; extreme orthopnœa; cyanosis extreme; pulse imperceptible. On examination, heart greatly hypertrophied and dilated; action extremely rapid and irregular; double murmur at base; single systolic murmur at apex; heart-beats, 195; respiration, 50. Urine, the first twenty-four hours, ℥ xvi., dark; albumen, twenty per cent.; urates; sp. gr., 1.028. Ordered tr. digitalis and tr. strophanthus, āā ♏iv.; spts. ammonia arom., ʒ j., every three hours.

January 14th.—Cyanosis disappeared; œdema less. Heart more regular, and intermits only every 30 beats; rate, 110; pulse can now be distinctly felt and is quite regular.

Patient can lie down in bed. Urine, ℥ xxii. in twenty-four hours; light in color; albumen, fifteen per cent.; sp. gr. 1.026. Part of urine is passed involuntarily.

January 16th.—Heart is quite regular and much stronger; rate, 85; œdema has entirely disappeared from body, but not from legs. Urine, ℥ xxviii. in twenty-four hours; albumen, ten per cent.; all passed voluntarily.

January 28th.—Gangrene of the ulcers on the legs set in and patient transferred to Erysipelas Pavilion. Temperature, 102.8°.

Remarks.—The only service that can be expected of neurotics is that they should assist us in emergencies of functional derangements, as they can exert no permanent effect on organic changes in any disease. In all the foregoing cases, not only did such textural damage exist, but no more unfavorable class of patients could be selected, for constitutions broken down by drunkenness, syphilis, and bad modes of living in general. Moreover, not one of them was below forty-five, the average age being about fifty-two. In each case the emergency was liability to total cardiac failure, following upon chronic circulatory embarrassment, leading to water-logging of the body and death from the filling of the lungs. This particular danger was markedly relieved in each case by the combination of these cardiac neurotics, except in Case III., where no effect on the cardiac failure could be produced. In him, however, the heart seemed to be hopelessly fettered by extensive pericardial adhesions from any approach toward contracting to normal dimensions. In Case IV., the relief from suffocation and the disappearance of the anasarca were, at first, as marked as in any of the others, but, besides the cardiac changes, there was advanced Bright's disease with cirrhosis of the liver, and therefore, ere long, the neurotics began to fail, as sooner or later they always will. It may be objected that the favorable results were due to the digitalis administered, as similar effects, in cases of cardiac dilatation, can be cited from hospital patients, when treated by digitalis alone, along with rest in bed and the withholding of alcohol; but in Case I. the digitalis was given for only two days, in the fatal Case III. its addition did not improve matters, and in Case IV it was not given during the improvement, and not till the fatal relapse began. Moreover, the average dose of only three to four minims of the tincture of digitalis is another proof that not much can be ascribed to it alone. It is interesting to observe that in Case VI. the nitro-glycerine was withheld at first, because of the extremely rapid action of the heart, with apparent paralysis of the superficial vessels; but, on giving it afterward, instead of increasing this symptom, it appeared, if anything, to diminish it, and seemed much to increase the patient's comfort on its addition to the other cardiac remedies.

As the most common indication, however, for heart-stimulants occurs in the prostrations of acute diseases, I proceed now to cite examples of the use of the combination of cardiac neurotics in such cases.

CASE VIII. *Contracted pelvis; pregnancy, labor; Cæsarean section, followed by peritonitis, bronchitis, double catarrhal pneumonia; bed-sores; abscesses of the thighs; thrombosis of femoral vein; puerperal mania and pelvic abscess; recovery.*—Elizabeth L——, aged twenty-six, English, married; admitted November 21, 1887, in the Emergency Pavilion of the hospital, service of my friend Professor W. T. Lusk. Patient had been in labor five days, and, on admission, her pulse was 140, very weak and compressible; dyspnœa, due to exhaustion; held nothing on stomach for a week before entrance. Examination showed rachitic pelvis, conjugate diameter, 2½ inches, thus necessitating Cæsarean section, which was done by Professor Lusk, November 21, 1887, 2 P.M. After an uneventful recovery from the immediate effects of the operation, she first developed bronchitis on November 28th, which caused a broncho-pneumonia at base of right lung.

November 28th.—Temperature, 102.8°; pulse, 140; respiration, 40. Has had Magendie hypodermically, ♏vij., about every four hours, for restlessness and pain. Her cough caused her abdominal wound to gape, so that it had to be controlled by morphine; this, however, seemed to cause the mucus to gravitate to base of lungs. 4 P.M.: Tongue dry and brown; slight nausea and hiccough. Has had brandy, ℥ ss., q. three hours, and ammon. carb., gr. v., q. three hours. Oxygen inhalation for dyspnœa.

November 29th.—Temperature, 102°; pulse, 136; respiration, 40. Treatment kept up. Patient's condition the same, although tongue more moist. For temperature, cold fever coil was applied to abdomen.

November 30th. — Patient delirious. Temperature, 100.8°; pulse, 137; respiration, 35. Oxygen, carbonate of ammonia, and brandy, ℥ ss., q. three hours, kept up.

December 1st.—Very restless; nutritive enemata not retained. Temperature, 102.2°; pulse, 131, and feeble; respiration, 32, and dyspnœic. Morphine still kept up to the extent of ♏xxx. in the twenty-four hours.

December 4th.—Temperature, 103°; pulse, 138; respiration, 45. Pulse very weak and compressible. Is very restless, and delirious. Tongue dry and brown and sordes on the teeth and lips. Examination revealed pneumonia on left side. Antifebrin, gr. v., for temperature. Hypodermic of tr. digitalis, ♏v., every three hours, and carbonate of ammonia every three hours. 5 P.M.: Temperature, 104.4°; pulse, 142, dicrotic and irregular. Patient sinking rapidly; extreme dyspnœa and œdema of both lungs; delirious and restless. 6 P.M.: Cupped anteriorly. Pulse, 170, and almost imperceptible.

At this stage in the history of the case, I was asked to prescribe for the patient, and I recommended the combination of two minims each of tr. strophanthus and one per cent. solution of nitro-glycerin, to be given, hypodermatically, every hour, and pushed according to the urgency of the symptoms; while the oxygen inhalation should be given for fifteen minutes in every hour.

December 5th, 1 A.M.—Temperature, 103.4°; pulse, 138, much better than before strophanthus was given. It was a little fuller, stronger, and more regular. 9 A.M.: Pulse stronger, regular, and compressible, and 138 to the minute. Œdema of lungs has disappeared, and general condition of patient hopeful. The hypodermics of tr. strophanthus and nitro-glycerine were kept up for two days, after which these medicines were given by the mouth. She had, later, several attacks of dyspnœa and cyanosis, which were relieved by hypodermics of tr. digitalis and tr. strophanthus, āā ♏iv. The local irritation of the strophanthus, however, in some cases gave rise to abscesses, which led to its discontinuance by that method. The urine increased from ℥ xviij. to ℥ xxiv., in the first twenty-four hours, during administration of strophanthus and nitro-glycerine.

December 11th.—Large, burrowing abscess has developed on each thigh.

December 14th.—Thrombosis set in of left femoral vein, shown by pain localized in its course and by œdema of leg. Patient delirious, with pulse 150. Treatment: Leg elevated. Tr. of iodine applied to region of vein.

December 16th.—Attacks of dyspnœa and cyanosis very frequently occur. Pulse rapid and irregular.

December 18th.—Swelling of femoral diminishing and œdema also going down. Thrombi apparently broken up and softening, as discovered by palpation. Patient is maniacal at night; has delusions and hallucinations. Temperature, 99.8°; pulse, 130; respiration, 27. Has beginning of puerperal mania. Râles still heard in chest, accompanied by cough.

December 21st.—Mania continues, and of the most active character, and accompanied by rapid pulse and cold, clammy sweats. No temperature.

December 25th.—Still maniacal at night, with formation of a bed-sore.

December 27th.—An exudation felt between uterus and rectum, painful on pressure. Temperature, 99.8°; pulse, 140.

December 29th.—Sudden discharge of fetid pus from vagina, accompanied by some pain and great anxiety on the part of the patient. On palpation, mass was found to have disappeared from its position, and on opening, discovered in roof of vagina, showing spontaneous rupture. Temperature, 102.4°; pulse, 140; respiration, 30. Patient very restless and excited.

January 2d.—Patient rapidly improving; is still very weak, but is taking plenty of nourishment.

February 14th.—Discharged, cured.

CASE IX. *Double lobar pneumonia.*—John H——, aged twenty-eight, Irish, married, bricklayer; admitted November 29, 1887. Two days ago patient, while working in the rain, caught a chill which lasted nearly two hours, followed by a slight feverish condition, and the next day he had a cough, with no expectoration. The next evening, had muco-purulent sputum streaked with rusty blood. Had severe dyspnœa, and felt very sick. Had been a drinking man for five years and, the last two months, has been frequently intoxicated.

On admission, temperature, 103½°; pulse, 150; respiration, 44. Dyspnœa; cough, with tenacious, rusty sputa. On examination, middle of left lung consolidated. Ordered ammon. carb., gr. vj., q. two hours; whiskey, ℥ ss., q. two hours.

November 30th.—Pneumonic consolidation now in entire left lung; œdema of legs. Ordered ammon. carb., gr. v., q. two hours; whiskey, ℥ j., q. one hour. Cupped twice over left lung and apex of right, where crepitant râles could be heard. Pulse, 160; respiration, 39; temperature, 101⅘°.

November 31st.—Œdema of both lungs; signs of pneumonia in both lungs; sweating profusely. Ordered tr. strophanthus, ♏iv.; sol. nitro-glycerine, ♏ij., q. two hours. Whiskey stopped. Pulse stronger and more regular, 135.

December 2d.—Œdema has disappeared; also the profuse perspiration. Pulse stronger and fuller, 110 to minute. Ordered tr. strophanthus, ♏v.; sol. nitro-glycerine, ♏ij., three times a day.

December 6th.—Subcrepitant râles and other signs of resolution present. Ordered spts. ether nitr., ʒ ij.; potass. acet., gr. x.

December 10th.—Broncho-vesicular respiration. Very few râles. Ordered tonics.

December 13th.—Up and about ward.

December 20th.—Discharged, cured.

CASE X. *Double lobar pneumonia.*—Christian H——, aged thirty-eight, German, married, cabinet-maker; admitted November 24, 1887. Two days before admission patient had a severe chill followed by a high fever and cough. Expectoration at first frothy and mucous, later rusty and tenacious. Had been drinking considerable beer for a week past, and was under its influence when the chill attacked him—after exposure. On examination, apices of both lungs consolidated; also right middle lobe, with pure bronchial breathing and a few crepitating râles. Œdema of the right lung. Patient was delirious on entrance, with pulse very irregular and intermittent, rate, 165; respiration, 42. Dyspnœa; no cyanosis. Temperature, 102°. Ordered tr. digitalis. gtt. v.; whiskey, ℥ j.; sol. atropiæ, gr. $\frac{1}{120}$, three times daily. Cups to chest at 7 P.M.

November 26th.—Pulse rapid and irregular and intermittent. Œdema of lungs has disappeared. Ordered tr. strophanthus, gtt. iv.; tr. digitalis, gtt. iv.; sol. nitro-glycerine, ♏ij., three times daily.

November 28th.—Subcrepitant râles in both lungs. Pulse regular and strong, 110 to the minute; temperature, 100°. Ordered quiniæ, gr. v.; spts. ætheris co., ʒ j.; whiskey, ℥ ss., three times daily.

December 2d.—Resolution rapidly going on. Without digitalis and nitro-glycerine pulse gets weak and rapid, with a tendency to irregularity. Ordered tr. digitalis, gtt. v.; nitro-glycerine, gtt. ij., three times daily; ammon. carb., gr. v., q. three hours.

December 6th.—Up and about ward. Resolution almost completed. Ordered tonics.

December 11th.—Discharged, cured.

CASE XI. *Double pneumonia; phthisis.*—Susan G——, aged thirty-two, American, widow, domestic; admitted December 19, 1887.

Three weeks ago patient was taken sick with severe headache, dizziness, and high fever; had a cough and watery expectoration; had no chill; had a sweating spell four days afterward at night, and lost her voice until she could hardly speak above a whisper; said she was out of her head at night for a week before entrance; no hæmoptysis; has had a cough for five months, with muco-purulent expectoration; slight loss of flesh; said she had pneumonia six years ago, and recovered perfectly. Family history negative as regards lung trouble. On admission, patient has temperature of 103°; pulse, 138, full and compressible, but not much force to it; respiration, 40, and dyspnœic; tongue dry, brown, and fissured, with sordes on the teeth; voice husky, semi-delirious. On examination, pure bronchial breathing and other signs of pneumonia on the right side, posteriorly upper, and middle lobes, with few crepitating râles. Anteriorly, signs of small cavity, right apex. Ordered tr. digitalis, ♏v.; sol. nitro-glycerine, ♏ij.; ammon. carb., gr. v., every three hours.

December 20th.—Pulse, 120, full and strong; respirations, 35; temperature, 102.5°; expectoration scanty; lungs in same condition.

December 21st.—Pulse, 110; respiration, 28; temperature, 101°. Feeling more comfortable, only a little dyspnœa. Urine has increased five ounces over yesterday. Ordered the same.

December 22d.—Sudden sharp pain on left side in region of nipple, increased on inspiration. Temperature, 103°; pulse, 130; respiration, 29, and dyspnœic. On auscultation, signs of pleurisy. with beginning pneumonia at base of left lung. To continue the tr. digitalis, ♏v.; sol. nitroglyc., ♏ij.; ammon. carb., gr. v., every three hours. Poultices.

December 24th.—Temperature normal; no râles in chest. Pure bronchial breathing posteriorly on right side; broncho-vesicular and exaggerated on the left, posteriorly, above, with diminished resonance below (fluid suspected).

December 27th.—Patient rapidly improving; blister at right apex posteriorly, 4 × 4 inches.

December 28th.—No changes, patient up and about.

January 6th.—Discharged at own request. Broncho-vesicular respiration on the right, and amphoric at apex anteriorly.

Remarks.—Professor Lusk's most interesting case I cite simply as an example of the power of the combination of these cardiac neurotics at particular junctures. The patient seemed to be saved from fatal exhaustion by their administration, when every other resource had proved inadequate to rally her sinking powers. I have seen similar good results from them in cases of pneumonia in my consultation practice, when I have been called after urgent symptoms have set in, and then found them manifest their superiority to alcoholic stimulation in these conditions.

ALCOHOL AND RACE.—While alcohol does not seem to have produced any racial deterioration in white races, or rather in the Indo-Germanic family, it acts differently upon Asiatic and dark races. Says a writer in *The Contemporary Review,* alcohol in any quantity seems to set most Asiatics—the Jews are an exception—on fire, to produce an irresistible craving for more, and to compel them to go on drinking until they are sunk in a stupor of intoxication. They appear to delight but little in the exhilaration produced by partial inebriety, and to seek always a total release from consciousness and its oppressions. The condition of "dead drunkenness," which few even of drinking northerners enjoy, is to them delightful. "I not drinkee for drinkee," said the Madras man; "I drinkee for drunkee." Alcohol is therefore to such races an intolerable evil, and its consumption by them is in the eyes of all strict moralists an immorality.

DISEASES OF, AND OPERATIONS ON, THE TESTICLES.[1]

By EDWARD BORCK, A.M., M.D.,

ST. LOUIS, MO.

Mr. President and Gentlemen: My paper is not an elaborate treatise upon any single disease or operation upon the testicles. I merely wish to give you some general remarks, based upon personal experience and observation. I will only give my own opinions, and offer them for the purpose of soliciting, if time permits, a discussion upon this interesting topic, and call the attention of the profession to this subject.

Permit a few preliminary remarks. "The diseases of women," a term which we use to designate the diseases of the ovaries, uterus, and appendages, have received of late very much attention and study by the medical profession. We are half inclined to think that the progress in the treatment of these afflictions has been so wonderful, the cures so remarkable, that, if a new generation would grow up, the present generation before long ought not to suffer any more, for they will all be cured in some way or other. According to the latest information received, it seems that nine women out of ten have some tilting up or sinking down of their organs. The openings of the uterus in some cases are too narrow, in some too wide, and each case needs treatment of special skill! Now, I do not claim to be a specialist of any sort—only a modest general surgeon, and as such I am called upon to treat and operate upon the female generative organs, as well as upon other organs of the human body; and those of you who are acquainted with me know that I have given some attention to the study of these diseases, and have performed a few of the various operations upon the female sexual organs. These cases have taught me some things, and have set me to thinking, and the question now comes to my mind, "Why have women, or, rather, their sexual apparatus, received so much attention by medical and other men?" Is it not because we all love these dear, tender creatures so much—so much so that we think of little else, and are wholly absorbed in the welfare of her reproductive organs, and thus the great affection that we carry in our bosom and display for the opposite sex causes us to see everything pertaining to them through a magnifying-glass? Or has it come to this, that it is an actual fact that there are no sound and healthy women to be found upon mother earth any more, and none more to be born hereafter? Everyone may answer these questions for himself.

Now, the other side. We hear little or nothing said about the diseases of the testicles; very little, if anything, appears in the journals on this subject. No new works have lately been written upon the testicles. Are the ovaries in women not considered the counterpart of the testicles in men? The former organs have received from the profession the kindest attention possible; the latter, comparatively speaking, none. The question now comes up: "Why have the ailments of the testicles been so neglected? Do they need no attention? Is it true that every man is blessed with sound and healthy testicles? Is man endowed with generative organs entirely free from imperfections and liability to disease?" I do not believe that such is the case. Or is the medical profession to be blamed for not investigating the diseases of man's reproductive organs? If only one man out of ten should be affected with some kind of disease of the testicles, and I believe there are, what a rich field for study and inquiry is offered here for a specialist (testicologist).

Let us view, or glance over, a few of the diseases of the testicles and their appendages. First of all, there may be mentioned the congenital deficiencies and imperfections of these organs. And first, I mention supernumerary testis. Of this I have only seen one case in my practice. In this case a third perfect testicle was found, in a young man, twenty-four years of age, upon whom I operated for strangulated hernia. I have seen many supposed cases of supernumerary testis, but they all proved to be other bodies, such as fatty tumors, etc.

Second: Atrophy of the testicles. Arrest of development and wasting. Deposition of fat, elephantiasis, inflammation.

Third: Injuries of the testicles. Contusion, accidental puncture, and incised wound. (Since these latter heal up almost without any trouble, why, then, be afraid to incise a testicle if some disease indicates the need of it?)

Fourth: Acute, chronic, congenital, and encysted hydrocele.

Fifth: Hæmatocele.

Sixth: Orchitis. Tubercular disease. Cancer.

Seventh: Fibrous transformation and ossific deposits.

Eighth: Nervous affection, sympathetic and functional disorder. (These seem to me, in particular, to be very interesting studies.)

Ninth: Diseases of the testicles produced by injury to the head and spine.

The real causes, as well as the remote sequels, of the diseases of the testicle are very often overlooked.

I cannot go into detail of any of these diseases mentioned; time does not permit, nor is it the object of this paper. A few cases in point, to make clear the idea I wish to convey:

Case I.—Mrs. ——, a healthy, handsome young woman, marries; her husband is apparently well, but they have no children after four years of trial. The husband wants a baby, and, like other selfish men, wants by all means to have a boy-baby; he thinks the wife is at fault, of course. The family physician exhausted all his ingenuity, and his stock of prescriptions have all been tried in vain, but still no baby has come to bless this household with its smiles. Next, the case is referred to the gynecologist; surely he can find out what is the matter, and give relief. He discovered at once a little tilting of the womb backward; not very much, it is true, but he thought it was at least one-sixtieth of an inch out of the way, and there was, in addition, some abrasion of the cervix. Now the trouble is discovered why the family has no baby; so pessaries are introduced; iodine is applied locally to the neck of the womb for months; a small basketful of medicine has been purchased, from time to time. Every time the local applications were made to the womb, madam was assured by the gynecologist that she was getting better, and it would not be long to wait for the baby (special skill!). But madam herself did not think so. In her opinion she was getting worse all the time. One thing is certain, the baby did not come. At last her mind wandered, she became emaciated and despondent, and the case was taken from the gynecologist, and went into the hands of a first-class neurologist. He at once diagnosed the whole trouble. He very promptly decided that it was not the womb that was at fault—it was the nervous system; and, sure enough, he is right, for by this time it was the nervous system. Next in order come all the nerve-tonics, sea-bathing, travel, etc.; they did no good. Everything was done that could be thought of; even artificial fecundation was tried. The woman submitted to all this patiently, and with a heroism that was astonishing. But it was all to no purpose; the poor woman was now almost insane, and still there was no baby. Having failed of success, the neurologist now goes for his predecessor, the gynecologist, and shows how ignorant he was in his profession, and how lacking he was in skill. Remember, the first man sees everything through, and with the help of, the microscope; the second sees through, and with the help of, the speculum. However, neither of these gentlemen have discovered the true cause of all this trouble, nor have they pursued the correct treatment in this case. Last of all, this case was placed in my hands. Every practitioner is often called upon to explain the cause of barrenness, and to treat and cure it; but, very often, I am sorry to say, he is called upon to prevent pregnancy, or to cure (kill) pregnancy when already present. The latter is the most disgusting thing in all female practice. After examining this patient carefully, I found the gynecologist was right in his diagnosis—the womb was just one-sixtieth of an inch out of the way, and there was a little irritation of the uterus.

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[1] Read at the Thirty-first Annual Meeting of the Medical Association of the State of Missouri, at Kansas City, Mo., April 18, 1888.

But was this the cause of the sterility? Not by a long way. I know of many a womb that deviates a little from the imaginary natural line, and they become pregnant all the same, and more than once, too. We find plenty of men with crooked noses, but they smell straight. Why could not a uterus with a little crook in it be impregnated? In fact, it is well known that the best pessary for a little prolapsus of the womb, if the lady is married, is impregnation, for it brings the womb up, and keeps it in place. Let us go back to our patient. She exclaimed: "Oh, doctor, if I only could become pregnant once and have a baby—a boy-baby—I think I would get well, and my husband would be satisfied." I consoled her with the hope that she would get well in time, dismissed her for the present, and asked her to send me her husband. Upon inquiry of him, he stated to me that the act of coitus, in his opinion, was not perfect; "too soon, or often nothing came at all," as he expressed it. He said that he had a peculiar feeling all the time in his testes—often had pollutions without erections. I found that he was predisposed to fatty degeneration of the heart; had fatty depositions in his scrotum and testicles. Upon examination of the semen, I found he had fatty degeneration of the spermatozoa. I advised separation for a time from the wife. I now turned my attention, not to the wife but to the treatment of the husband, and, I am happy to say, in time he recovered. In the meantime, having gained the confidence of my lady-patient, and having assured her that the gynecologist corrected all her troubles in the most skilful manner, and that, without doubt, the neurologist had improved her nervous system in a remarkable degree, and if she would only continue his medicine she would in time obtain the full benefit of his advice in that direction, and that she would in due time be ready for a baby. However, I gently informed her that her husband was also somewhat at fault, which in time would also be remedied, and the baby would surely appear. From that moment the lady improved, became more cheerful and once more hopeful, and, on the return of her husband from abroad, after a six months' separation, she was well, and he was apparently well, and she became *enceinte* in a short time afterward, and happiness once more prevailed, and a boy-baby was born to the exultant pair.

CASE II.—In this case the wife was treated for sterility without any benefit. I found the fault with the husband; his penis was of a very small size. He informed me that the organ was growing smaller all the time. I found he had a large cyst of the left testicle, which prevented the proper introduction of the penis into the vagina; he had this cyst before he was married, five years ago; lately the cyst had grown larger. None of the many male doctors for the treatment of female diseases who had treated the wife for barrenness had ever inquired into the condition of the husband's genital organs. To be brief, I removed the cyst, the penis became more of a natural size, and the wife presented him in due time with not one, but with a pair of babies.

CASE III.—The wife was unsuccessfully treated for sterility. The fault with the husband again, and though he was the son of a physician, and had congenital phimosis, he informed me that he never did nor could enjoy the act of coitus. Circumcision relieved the man of his ailment, and the result was a female baby.

CASE IV.—Reflex nervous affections produced by disease of the testicles. A merchant, aged about forty, married, with a happy family around him, doing a good business. He became sleepless, languid, his mind wandering, hypochondriac, ready to commit suicide; he was under the care of a good physician and a skilful neurologist for a length of time. Cause of the trouble attributed to business. Quitting the business and turning to pleasure alone gave him temporary relief. As soon as he returned to his family and resumed business, there was the old story again. He was sent to a private retreat, but with only temporary benefit; returning home, the old story. When this man consulted me, and his wife informed me of all the previous circumstances, I told them I was not a specialist, nor a neurologist, nor a gynecologist, nor even did I practise medicine—I was only a general surgeon; but they insisted upon having my advice, as they had been recommended to me. Now I began to examine him with surgical eyes. I inquired whether he had ever received any injury upon the head or spine, etc. All these questions were answered in the negative. "Well," said I, "step into the other room," which he did. "Now undress, please." He began to pull off his coat, vest, shirt. "Keep on," said I; "I want it all off—undershirt, pants, drawers—everything; I wish to see you naked." "I hate that," was the gentleman's exclamation. "Well," said I, "I am glad that man possesses modesty as well as woman; but I cannot do anything for you, nor give my opinion, unless you strip naked." "Well, doctor," said the patient, with some embarrassment, "I have something the matter with my privates." "Oh, please, let me look at it." With a little hesitation he produced a very large hypertrophied left testicle, and informed me that some years ago he had epididymitis. Here, at last, was brought out the cause of all the man's brain-trouble in a bag. I asked him, "Did you not tell your previous doctors of this complaint?" "No, I did not like to." "Did they not examine you? Did none of them inquire into the state of your testicles? Did not the neurologist?" "No, sir." A positive "no" was the answer. It is hardly necessary for me to say that I advised the removal of the diseased testicle, assuring him and his wife that the loss of that one testicle would not unman him, as there was a healthy one remaining to perform all the functions. After a great deal of hesitation on his part, and a great deal of persuasion on the part of the wife, he consented. All nervous trouble soon disappeared after the removal of the diseased testicle; peace, tranquillity, and prosperity once more returned, his business once more prospered, and this was followed by an erection of a large new store, and, best of all, he soon had an addition made to his family.

I could give more and similar cases. These are sufficient for illustration.

A few words in regard to neuralgic pains of the ovaries and the testicles; both sexes suffer from the above. In the case of a woman, where all known means for the relief of pain have been tried and have failed, and the removal of the offending ovary or ovaries being advised, she will readily and cheerfully consent. In the case of a man, under the same conditions, he is not willing to give up one testicle, far less both; he prefers to suffer the most excruciating pain, until at last he lands at the insane asylum. Neither is the removal of such a painful organ advised by physicians, or, if proposed, it is done reluctantly. Why? Can anyone give a definite answer?

The removal of a testicle, or any other operation upon their appendages, is not nearly so dangerous as the removal of the ovaries, or any other operation upon the female reproductive organ.

The operation for varicocele I now prefer is to cut down upon it, under strict antiseptic precautions, ligate the veins above and below, excise the distended part, and close the wound.

In conclusion, let me admit that I am a strong advocate for specialties, special studies, and believe in specialists; but I do not believe that it is correct for every new graduate to rush off to Europe at once, to study a certain specialty for three months, then return and begin his special skilled practice, with one-sided ideas and but little practical experience. It takes more than this to make a specialist.

I hope that someone having had ten or fifteen years' large general practice will give the diseases of the testicles and the operation thereon his special attention and study, and adopt it as a specialty.

I thank you for your attention.

PTOMAÏNES.[1]

By J. C. OLIVER, M.D.,

CINCINNATI, O.

I HAVE prepared this paper with the object of presenting to this Society, in as condensed form as possible, the results obtained by the various workers in this domain of pathology, and hence make no claim for originality in the following remarks :

Ptomaines are described as poisonous alkaloids produced by the decomposition of proteids due to the action of bacteria upon these substances. A familiar example of this decomposition is the production of alcohol by the action of yeast fungus upon glucose. Lauder Brunton says : "The cardinal fact that results from all these researches is that albuminous, or, to speak more correctly, proteid, substances, which are themselves foods, may be split up so as to yield poisons. This decomposition is usually originated by various species of low organisms, and especially of bacilli ; but it may be effected by the digestive ferments of the healthy body. The poisons formed by the decomposition of proteid bodies, such as albumen, fibrine, and gelatine, vary not only according to the particular body which is decomposed, but to the particular organism or ferment which sets up decomposition, and according to the temperature at which it occurs and the length of time it continues. Some of the products of the decomposition of proteid bodies are poisonous, others are innocuous. Among the poisonous bodies we find various degrees of activity, some being but slightly poisonous, while others are most virulent. When these poisonous products are separated from each other, and isolated, they may remain unaltered for a length of time ; but, when mixed together, they are apt to undergo further decomposition and become inert."

My idea is to present, this evening, a review of the work that has been done in this department in regard to the isolation of particular ptomaïnes in certain diseases. From the very definition of these chemical products we shall look for them in those diseases where bacteria are known to play an important part.

It is not my intention to go into the chemistry that is involved in the elaboration any further than is necessary for a short and succinct review of this branch ; my principal object is to present, as concisely as possible, the pathological effects these alkaloids produce upon the human system.

The toxic effect of cadaveric fluids has been known for many years, and their toxic effect must be attributed to a chemical poison rather than to the introduction of micro-organisms. Dupré and Bence Jones made the first authentic discovery of ptomaïnes when they isolated what they termed animal chinoidine. The names of Selmi, Gautier, our countryman Vaughn, Brieger, and Neucki stand out prominently in this field of research.

The character of the ptomaïne produced is dependent upon the nature of the bacterium, the character of the food, and the length of time during which the process is active. In regard to the first factor, it is extremely probable that different species of bacteria elaborate different chemical substances, and that they must have certain pabulum, or else they are incapable of chemical action. The albuminoids are recognized as the substances most favorable for the production of ptomaïnes.

The essential phenomena of cellular life, vegetable or animal, are physico-chemical in their nature, and in the case of living beings the sources of vital power are of two kinds: They result either from molecular modifications brought about by means of oxygen, the organisms deriving their vitality in this way being anaerobic, and belonging for the most part to the lower order of ferments ; or they result from internal combustion—aerobic—resulting in the absorption of oxygen and elimination of carbonic anhydride, water, and urea. Bacterial anaerobic life, acting in cadaveric matters, gives rise to certain poisonous alkaloids named ptomaïnes.

It is definitely established that during the putrefaction of nitrogenous animal matter certain fixed or volatile bases are formed, presenting the closest resemblance to the vegetable alkaloids, as well in their physiological as in their chemical properties, although, for the most part, they exhibit simpler chemical formulæ. Gautier has also proved that alkaloids arise in the tissues, not only while undergoing bacterial decomposition, but also during their period of physiological activity. These latter products are known as leucomaïnes. Between ptomaïnes and leucomaïnes there exists the closest analogy, in fact, a certain number of alkaloids are common to both series. This close relationship would seem to indicate that the reactions of proteid materials undergoing destruction are analogous to the putrefactive phenomena induced by fermentation, and result from a decomposition of the same materials.

"About the year 1871 Selmi demonstrated the importance of ptomaïnes to forensic medicine, by his brilliant researches in a poison case, upsetting the expert testimony which tended to convict the accused. This was during the celebrated trial for the supposed murder by poison of the Italian General Gibbone, whose servant stood accused, on circumstantial evidence, of having administered to him the poison. Two prominent experts declared to have found delphinine in the intestines of the deceased. Selmi proved incontestably that the same reactions as produced by the experts for the prosecution would also result from a ptomaïne obtained by him in the usual manner from the alkaline fluids of the animal substances by extraction with ether. He showed, besides, that delphinine responded to many reactions which the substance derived from the deceased's body did not yield. Professors Ciaccia and Villa, of Bologna, demonstrated, over and above this, that the base obtained from the defunct's body did not coincide in physiological action with that of delphinine.

"This, of course, tended to revolutionize all dogmas in regard to poisoning by alkaloids, and the medico-legal proofs of their existence, especially as subsequently strychnine and morphine were found to be closely simulated in their reactions by those of certain ptomaïnes."

In another case in which death was supposed to have been caused by morphia, and the body exhumed twelve days after burial, the presence of morphia was said to have been demonstrated ; Selmi proved that the alkaloid which they claimed to be morphine was really a cadaveric alkaloid, which responded to chemical tests similar to those for morphine.

These investigations were soon confirmed by other observers, and the ptomaïnes are liable to upset the previous methods of chemico-legal research.

Another fact established by Selmi is, that the duration of decay has a very marked influence on the production of ptomaïnes, so that different bodies are generated at different times, and that all of them are unstable. The alkaloids formed early in the process of decomposition are more virulent than those formed later in the putrefaction.

For fear of prolonging my paper to too great a length—for this subject really embraces a very large part of the domain of pathology—I shall now devote the remainder of it to the consideration of special diseases, and the relations sustained by these animal alkaloids to the diseases in question.

Let us consider Asiatic cholera, and the problems it offers. In this connection I shall quote very largely from the writings of Brieger, and also from those of Koch. "The progress of modern medicine is due to the fact that it has become more scientific than it has ever been before. We now know that most diseases that affect man and animals are of bacterial origin, and that only a diminishing minority of the known diseases is due to external traumatic causes or disturbances of nutrition. It is now established undoubtedly that Asiatic cholera is due to the comma bacillus discovered by Robert Koch; but the pernicious influence which this unwelcome guest exerts upon the body of its host must rest, according to prevailing ideas, upon chemical changes. Koch himself, in his first publication on the subject,[1] expressed himself in the following words: 'The poison exerts its effect, in part, immediately, the epithelium, and in the worst cases the upper layers of the mucous membrane being killed; in part by its absorption and action upon the whole body, especially the circulatory organs, which suffer a kind of paralysis. The complex of symptoms of a true cholera attack, usually ascribed to a loss of water and the thickening of the blood, must be regarded as in reality due to poisoning, for they are occasionally seen when relatively small quantities of water are lost, and where the intestine, after death, is found to contain little fluid.' Koch obtained cultures of the comma bacillus which, when injected into mice, caused paralytic weakness of the hind legs, coldness of the head and limbs, delayed respiration, and death in a few days. V. Ermsugem[2] caused death and algidity in guinea-pigs by the injection of culture-fluid, from which the bacilli had been removed by a Chamberland filter, or destroyed by heating to 60° or 70° C. for half an hour. Attempts to isolate the active principle of cholera bacilli have not been very successful hitherto. Pouchet extracted by chloroform from cholera dejections, and, later on, from cultures, a toxine which soon killed frogs when used subcutaneously. Villiers obtained, by Stas' method, from the viscera of two cholera corpses, a liquid toxine of sharp odor, the hydrochlorate of which crystallized in long, fine needles. Nicati and Rietsch made similar experiments, producing a toxine which caused cramp and lowered the temperature.

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[1] Read before the Cincinnati Medical Society.

"Klebs and Lange have lately obtained a crystallized toxine by mercuric and argentic chloride precipitations in fish-broth cultures of cholera vibriones, which caused convulsions and death in rabbits when injected in small quantity into the jugular vein. In one rabbit calcification of the epithelium of the convoluted tubes, and in some of the straight tubules, was found.[3] In the *Deutsche Med. Wochenschrift* of 1887, Nos. 15 and 22, Brieger calls attention to his having isolated a substance to which he gives the name of cholera-red. The author says that its importance lies in the fact that it is a derivate of indol, a substance present in every fetid putrefaction. In fact, indol itself is formed by cholera bacilli, if these are reared on an albuminous nutrition.

"Cholera-blue, discovered and thus designated by the same authority, is less frequent. It is produced by the action of concentrated sulphuric acid upon 'meat-broth-peptone-gelatine' cultures, and only when cholera-red also is present.

"In his investigations into the ptomaines and toxines of comma bacillus, Professor Brieger used pure cultivations, repeatedly supplied by Koch. The cultures were sterilized, filtered hot, evaporated down, and repeatedly extracted with alcohol; the latter was then precipitated by mercuric chloride. The precipitate was boiled in water, the solution decomposed by H_2S, evaporated down, and extracted with alcohol. This extract was then precipitated by picric acid, or picrate of soda, or gold-chloride, or platinum-chloride.

"Cadaverin was occasionally present in considerable quantity after only twenty-four hours' growth of the bacilli; older cultures yielded still more cadaverin, and a little putrescin. Cholin, the base of lecithin (a complex normal constituent of flesh), also increased with the age of the cultures, and reached its maximum in four weeks. Kreatin proved much more resistant to the bacilli; but a small portion was gradually converted to a 'toxine' named methyl-guanidin, $C_2H_7N_3$, a powerful poison, causing dyspnœa, muscular tremors, and general convulsions in mammalia. This convulsion denotes an oxidizing power in the cholera bacilli, for methyl-guanidin can be obtained from kreatinin only by an oxidation process.

"Specific toxines were also produced, but only in small quantities, and some time after the appearance of non-poisonous ptomaines. Cadaverin seems to exert a restrictive action upon this formation. The cultures were modified in various ways, but only very small quantities of a toxine which seemed to have the formula $C_3H_8N_2$ could be obtained. The formula given is only tentative. Proof was afforded of the presence of a second toxine, hitherto unknown, which caused algid symptoms in mice, sometimes with bloody diarrhœa. Thus these bacilli formed cadaverin, a large quantity of putrescin, and small quantities of toxines; and, moreover, evinced in so doing considerable chemical energy, which may account for the violent character of the symptoms of Asiatic cholera.

"Observers have noticed the decided spermatic odor attaching to rice-water stools, and this odor is very pronounced in cadaverin. Schuerlein, Grawitz, and Fehleisen, each ascribe violent inflammatory and necrotic properties to putrescin, not only locally (loss of intestinal epithelium) but generally, as even minute quantities prevent the coagulation of the blood. Methyl-guanidin and the second toxine, having the formula $C_4H_8O_2$ cause convulsions, the latter toxine causing also algidity and bloody stools. Thus the main symptoms of cholera, together with their violent onslaught, are apparently accounted for as the combined action of the products of the comma bacillus. It remains for the clinician to search for these products in the dejections of cholera patients, and in the viscera and blood after death; if success attend this search, appropriate therapeutical measures will suggest themselves." This account is taken from a translation by E. J. Edwards, M.D., of the article by Brieger "On the Tissue-change Products of the Cholera-bacillus."

Puerperal Fever.—Dr. L. Bourget, in an inaugural address, states that he has succeeded in isolating certain ptomaines from the urine of several women suffering with puerperal fever. Having studied these substances from a chemical and biological point of view, he has arrived at the following conclusions:

1st. In puerperal fever the urine contains some bases of a very toxic nature.

2d. The toxic principles seem to attain their greatest development during the acute period of the disease. Their quantity diminishes with decrease of morbid phenomena.

3d. The chemical bodies in question produce in animals (frogs and guinea-pigs) exactly the same disturbances as are brought about by certain poisonous ptomaines.

4th. Various organs of a woman who had died from puerperal fever were also found to contain some toxic substances which, in their biological effects, closely resembled the toxic bases obtained from the urine.

5th. All those extractive products found in the urine gave all the general reactions of vegetable alkaloids and ptomaines.

6th. In a chemical analysis for medico-legal purposes they may be mistaken for vegetable alkaloids, or, at least, may interfere with the characteristic reactions of the latter.

7th. Such grave mistakes can be avoided by carefully purifying the examined material after Stas-Otto's method (*Brit. Med. Journal*).

I have presented the investigations of the chemical causation of cholera and puerperal fever at some length; but, for fear of prolonging my paper to too great length, I shall refrain from taking up, *in extenso*, the observations in typhoid fever, uræmia, tetanus, biliousness, septicæmia, rheumatism, summer diarrhœa of infants, milk- and cheese-poisoning, sausage- and mushroom-poisoning, and numerous other affections.

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[1] Berliner Klin. Wochenschr., 1884, Nos. 31, 32, 32a.

[2] Bulletin de l'Acad. de Méd. de Belgique, No. 12.

[3] Klebs: Allgemeine Pathologie, p. 374.

Ptomaïnes have undoubtedly opened up a field of research which, to say the least, promises a rational explanation of many of the phenomena met with in various diseases. These phenomena have never, hitherto, received any satisfactory or intelligent explanation. Take, for instance, the symptoms of typhoid fever, and we are compelled to confess that the usually given causes, such as the height of the fever, the lack of nervous control, etc., have been at the best but suggestions, and really no explanation at all; for we find cases where these supposed exciting causes are entirely absent; therefore I think we are forced to the conclusion that these symptoms are caused by the effect of poisons generated and elaborated within the system of the patient. The amount of fever may have an influence in accelerating or retarding the chemical processes, but the degree of fever cannot be said to produce delirium, somnolence, diarrhœa, subsultus, etc.

The statement has often been made that the medical profession, or rather medicine, is the most backward and least developed of all the sciences; but in the consideration of this very subject we are forced to admit that pathology is really waiting for organic chemistry to come up and take rank alongside of it. The late Dr. Austin Flint remarked, during the latter years of his life, "that he believed the future of medical progress lay through the domain of chemistry," and the present indications point strongly toward the confirmation of his statement.

The whole subject of ptomaïnology certainly seems like a reversion to the old humoral theory of the causation of disease; but it differs from it in the fact that the later theory is the result of exact, painstaking, and truly scientific methods of research.

References.

The Ptomaïnes. By L. Wolff, M.D.
Disorders of Digestion. By T. Lauder Brunton.
On the Comma Bacillus. By Robert Koch.
Tissue-change Products of the Cholera Bacillus. By Brieger.

Hysterectomy vs. Apostoli's Method.—Dr. E. S. McKee writes in the *American Practitioner and News:* "Keith has recently reported his hysterectomies for fibroid tumor of the uterus, and gives the mortality of all cases of all operators, if they have reported every case, at twenty-five per cent. This he thinks a terrible mortality. He says it may be higher. In comparing the electrical treatment of Apostoli, he remarks: 'I say it deliberately, hysterectomy is an operation which has done more harm than good, and its mortality is out of all proportion to the benefits derived by the few.' Keith accepts *toto animo* the teachings of Apostoli. In less than five months Keith & Son have applied electricity in strong and accurately measured doses more than twelve hundred times upon more than one hundred patients, the majority being cases of uterine fibroid. The labor of these operations was very great, but it opens out a field for study which daily increases in interest. Several patients came to them for hysterectomy for uterine fibroids. After treatment by Apostoli's method, these women have all gone home without operation, with menstruation almost normal, and improving after their return. In every case the tumor was gone; in one instance only has there been a return of hemorrhage. The tumor had gone down two-thirds, and she was allowed to leave town too soon. Should these improvements remain permanent, and from the experience of Apostoli there is every reason to expect they will do so, the field of hysterectomy is reduced to the narrowest possible limits. I would consider myself guilty of a criminal act were I to advise my patient to run the risk of her life before giving this treatment a fair trial."

Progress of Medical Science.

Incision of the Cyst in Hydatid Disease of Liver.—At a late meeting of the Leeds and West Riding Medico-chirurgical Society (*The British Medical Journal*), Mr. Mayo Robson described the case of a patient admitted to the infirmary, with a history of a swelling in the abdomen of fourteen days' duration, with pain for the last five days. He was looking ill and anxious on admission, with a temperature of 101° F., and there was a tumor in the abdomen yielding an impulse on percussion. The cyst was exposed by an incision outside the rectus muscle, and a multitude of small cysts were withdrawn through a trocar, the whole contents amounting to one hundred and twenty ounces. The edges of the sac were stitched to the abdominal wound, and the cyst was irrigated and drained. The patient made a good recovery. Mr. Robson referred to the various methods of treating this condition, namely, simple puncture, puncture with the injection of a solution of mercuric chloride (ʒ ij. of a 1 in 5,000 solution) as advocated by Dr. Sennett, incision *à deux temps*, and opening by means of caustic paste. He preferred in such a case as above, when the symptoms were urgent, to incise the cyst in one operation, and clear out the daughter-cysts. In the ensuing discussion Dr. Eddison thought it was very important to know whether secondary cysts existed, as, if not, recovery would follow tapping. Even if the daughter-cysts were killed by puncture they would remain as foreign bodies. Dr. Major thought that "hydatid fremitus" was rare and fallacious.

Methylal in Delirium Tremens.—Professor v. Krafft-Ebing, of Grätz, is a believer in the value of methylal in delirium tremens. Acting on the advice of Merck, he employed an aqueous solution of the strength of 1 in 10 as a hypodermic injection. Each injection contained one and a half grain of methylal, and in this strength produced only slight and transient smarting. Thus administered it was found that the drug only produced its effect after an interval of about two hours; if sleep was not produced after between two and three hours, the injection was repeated. Twenty-one persons were thus treated, about half the number being slight cases; in 6 instances sleep was induced by one injection, in 10 by from two to four, in 3 by from five to eight, and in 2 by from ten to twenty; deep, physiological, refreshing sleep, which sometimes lasted twenty hours, was then obtained; in other cases, the patient slept for two or three hours, to wake again delirious; but, the treatment being persevered with, the prolonged so-called critical sleep always ensued. Krafft-Ebing considers methylal to be the best sedative and hypnotic in delirium tremens which he has ever used; it has no depressing action on the heart, but rather the contrary, and it is followed by no unpleasant after-effects. He considers that it is likely to be useful in insomnia and restlessness due to inanition or cerebral anæmia, but that it is contraindicated in cases where there is cerebral hyperæmia.—*Therapeutische Monatshefte.*

Loreta's Operation on the Stomach.—Digital dilatation for fibrous stricture of the pylorus, which was first practised by Professor P. Loreta, of Bologna, in 1882, has already in his hands given most satisfactory results in a large number of cases. The operation was recently again performed by Dr. Loreta. In January last a man, fifty-four years of age, but looking much older, owing to his wasted appearance, came under his care with the following history: He had been excessively intemperate both in eating and drinking, and had suffered from severe dyspepsia since 1872. In 1880 he began to be troubled with vomiting, which occurred regularly four or five hours after taking food. The stomach was visibly dilated, and a splashing sound could be heard on succussion. Microscopic examination of the vomited matters gave negative results; neither blood, starch-granules, nor sarcinæ could be detected. No tumor could be felt in the hypochondriac or epigastric regions; the abdomen yielded readily to pressure with the hand, which, however, caused a slight amount of pain. At the place where this tenderness was most pronounced, a hard fibrous cord was felt at a point corresponding to the situation of the pylorus. On January 30th, after washing out the stomach with an alkaline solution, Loreta made an incision along the linea alba from the xiphoid cartilage to the umbilicus, and exposed the stomach, which was drawn partly out of the wound and opened about midway between the greater and lesser curvatures. The index-finger was then passed into the viscus in the direction of the pylorus, through which, however, it could not be pushed. A large-sized urethral bougie and afterward an œsophageal sound were then passed through into the duodenum. By this means the stricture was so far dilated that the operator was able to get his finger through the pylorus and draw it over almost to the abdominal wound. The index of the left hand was then also passed through on the right as a guide. The pyloric orifice was then dilated by forcible divulsion with the two fingers, a proceeding which the tightness of the stricture rendered very difficult. Finally, the wound in the stomach was closed by continuous, and that in the abdominal wall by interrupted, suture, and an antiseptic dressing was applied. On February 9th the wound was healed, and the patient had completely got rid of his troublesome symptoms. Digestion was perfect, vomiting had entirely ceased, and the man had lost the look of suffering which had been so marked before the operation. Dr. Bufalini, who reports this case, says that not a single instance of relapse after Loreta's operation has yet been heard of.—*The British Medical Journal.*

Bilharzial Epicystitis.—At a recent meeting of the Medical Society of London (*The British Medical Journal*) Mr. Hurry Fenwick showed a patient, aged twenty, who had suffered from Cape hæmaturia for five years, and who had come under observation on September 23, 1887, with symptoms of extra-peritoneal perforation of the bladder of nine days' duration. Ten days previously, after severe exercise, the patient suddenly passed large quantities of blood, and was seized with extreme suprapubic pain. The abdomen was tympanitic in its upper two-thirds, but absolutely dull in the suprapubic region. The dulness was not removed by catheterism of eight ounces of clear urine. The entire recto-vesical pouch was found to be filled with a softish fœtal-head-sized mass. He believed that pericystitis had been set up by incomplete perforation of, and leakage through, the posterior wall of the bladder, and that epicystitis and adherence of the intestines had resulted. A suprapubic incision was made for drainage purposes, but the prevesical space was found, on examination, to be free. The swelling in the recto-vesical pouch was gradually absorbed, and the patient recovered. He still passed bilharzial ova. Electric illumination of the bladder revealed multiple punctiform hemorrhages of the base.

The Pathogeny of Bright's Disease.—The Paris correspondent of *The Lancet* writes that, at a recent meeting of the Société des Hôpitaux, Dr. Gaucher read a paper on the "Pathogeny of Bright's Disease," of which the following is a summary: The excessive introduction or the exaggerated production of extractive matters in the organism is the ordinary pathogenic condition of what the author terms *gros rein blanc* (epithelio-parenchymatous nephritis). The exaggerated introduction or the excessive production of extractive matters suffices of itself to produce the epithelial form of Bright's disease; but if chronic nephritis produced by another cause had already existed, the defective elimination of extractive matters will aggravate the renal lesion. From these experimental facts result important therapeutic teachings. In the first place, there is the danger of employing meat broth in nephritis; for those suffering from Bright's disease "bouillon," or broth, is a poisonous solution. It is dangerous in all maladies; and even in healthy individuals, to employ extracts of meat, concentrated broths, and meat powders, which, besides the toxic mineral salts, principally the salts of potash, contain organic poisons and precisely all the excrementitious matters the noxious action of which has been demonstrated by the experiments undertaken by Dr. Gaucher.

Irritation as a Cause of Tumors of the Bladder.—At a late meeting of the London Pathological Society (*The Lancet*), Mr. Hurry Fenwick brought forward a series of specimens to show that irritation of various kinds plays a most important part in the production of vesical growths. He pointed out that the very earliest form of villous papilloma was to be found in a small patch of stunted papilloma known as subvilloid or cropped villi, and in most of these specimens there existed definite evidence of irritation. Thus, in a case of Dr. Beaven Rake's the patch was found at that part of the bladder which impinged against a straw, four inches and a half long, coated with phosphates. In Dr. Newman's case the tumor was at the apex of the bladder, and seemed due to the irritation of a large oval stone. Mr. Fenwick then alluded to the age and position of villous papilloma as corroborative evidence. In carcinoma he believed that the irritation of residual urine was a most important causative factor, and quoted cases from Stockholm, Glasgow, and London.

Injections of Albumen and Albuminuria.—Dr. Paul Snyers has recently completed a series of experiments undertaken for the purpose of controlling the experiments of Semmola on the pathogenesis of Bright's disease. He injected into dogs white of egg diluted with a small quantity of distilled water. The operations were done by means of a syringe of double the capacity of the ordinary Pravaz syringe. The syringe was carefully disinfected before each experiment, and the quantity of albumen injected varied from four to five grams per kilogram of the animal's weight. When this quantity is compared with the amount of albumen excreted daily by the kidneys in the gravest forms of nephritis, it is seen that the quantity injected into the dogs was incomparably greater than that excreted. After the animals were killed the kidneys were examined in the fresh state by congelation, and after the action of osmic acid, absolute alcohol, Müller's fluid, or boiling water. Continuous injections during three, six, nine, and twenty-three days never produced glomerulitis. At certain points albuminous coagula were found, and a little diapedesis on the interior of the capsule. In no case was there any fatty degeneration of the epithelium. These facts led Snyers to draw the following conclusions: 1. The albuminous (albuminuric) dyscrasia determined by the injection of egg-albumen is transitory, and ceases within twenty-four hours after the injections. The albumen found in the urine is only the white of egg that has been injected. It is a useless substance, passes through the organism, and is eliminated naturally by the kidneys without producing any lesion. 2. Histological examination of the kidneys shows no sign of any lesion of these organs, even after the injections have been carried on for thirty days. 3. The fact that injections of white of egg cause an albuminuria that is absolutely transient, and without action on the renal parenchyma, permits the conclusion: Injections of white of egg are incapable of producing either the lesions of nephritis or a pathological albuminuria. These experiments absolutely contradict the experiments and conclusions of Semmola, with regard to the causation of a clinical picture of Bright's disease by subcutaneous injections of white of egg.—*Journal of the American Medical Association.*

The Comparative Antiseptic Values of Chlorides, Nitrates, and Sulphates.—Mr. C. T. Kingzett, F.C.S., records the results of some experiments which he has conducted in order to determine the relative extent to which certain metallic chlorides, nitrates, and sulphates retard the appearance of mould on flour-paste and putrefaction in extract of beef respectively (*The Lancet*). The general bearing of the results is to show that the salts of the alkalies and alkaline earths, excepting magnesium sulphate, appear in many instances to promote and never to retard the growth of mould. The compounds of zinc resemble those of the alkaline earths in their action. On the other hand, the salts of iron, tin, lead, and aluminium exercise distinct but not very powerful effects in preventing the appearance of mould. The chloride of lead is, however, more active, while the most efficient are the chlorides of mercury and copper. In preventing the putrefaction of extract of beef, the chlorides of mercury and copper were also the most effective; while chloride of zinc was more, and chloride of lead less, active than in retarding the growth of mould on flour-paste. The value of the investigation is very much reduced owing to the experiments not having been conducted on the modern lines of bacteriological research. Thus the various test-glasses containing the experimental media were allowed to become accidentally infected from the air to which they were exposed, instead of being all inoculated either with some definite micro-organism or with some definite mixture of microbes, as is now invariably done in experiments of the kind.

The Treatment of Inflammation in the Region of the Ileo-cœcal Valve.—From a study of this subject, Dr. M. H. Richardson has arrived at the following conclusions: 1. In mild cases of inflammation in the region of the appendix there should be no surgical interference till physical examination reveals the presence of an abscess, which should be incised by the post-peritoneal method. 2. In violent cases, where it is evident that there is a general peritonitis, laparotomy should be done immediately, just as soon as a diagnosis of general peritonitis has been made. 3. In violent cases, where it is doubtful whether the general peritoneal cavity has yet been invaded, and where the history and the physical examination favor the presence of an abscess in the ileocæcal region, though it is impossible to locate the exact seat of the inflammatory process, an exploratory incision should first be made in the right iliac fossa, and the ileocœcal region explored post-peritoneally. 4. The best incision to reach the appendix in the average case is along the outer border of the rectus, about four and a half inches from the spine of the pubes. 5. The best incision for extra-peritoneal exploration is parallel and close to Poupart's ligament, beginning in about the centre, and extending outward and backward a sufficient distance.—*The Boston Medical and Surgical Journal.*

Sour Milk in Summer Diarrhœa.—The house surgeon of the Prison Zweibrücken, Dr. Osthoff, has in two annual reports spoken very favorably of the employment of sour, curdled milk in summer diarrhœa, in adults as well as in children. Dr. Osthoff endeavors to explain the beneficial action of sour milk in the following way: He believes that the bacilli of sour milk destroy and overcome, by their rapidity of growth, the other micro-organisms that are the cause of the diarrhœa, and that they thus bring the process to a stand-still. In addition to its value as a dietetic agent in summer diarrhœa, it proved exceedingly useful in all chronic abdominal affections associated with dyspepsia, in chronic intestinal and hepatic diseases with diarrhœa, or constipation, in jaundice, and as an article of diet in typhoid, pneumonia, and erysipelas. In tuberculosis of the intestines, however, it increased the diarrhœa. It forms a valuable means of support to Oertel's treatment in cardiac cases, and cases of emphysema, in small quantities, as a substitute for coffee, wine, beer, and water, as a thirst-quenching drink, as well as a food containing both muscle and fat-forming material in one and the same form. At the instance of the Bavarian Ministry Professor von Voit worked out an official report on this sour-milk therapeutic, and from this some interesting details may be extracted. Sour milk very much resembles fresh milk as a food (four per cent. albumen, three per cent. fat, four per cent. sugar). The use of it is to be recommended as an addition to the needful amount of hydrocarbons. Moreover, especially in summer, it forms a refreshing drink, and may be ordered with advantage in dyspepsia. The action of sour milk is very varied; sometimes it causes constipation and sometimes diarrhœa. For this reason he recommends that in infantile diarrhœa it shall be used with caution. In general, he recognizes the value of sour milk as an article of diet. A writer in the *Deutsche Medizinal Zeitung*, commenting on the above, draws attention to the similarity of sour milk and kefir. Both are used in phthisis. Koumiss at one stage (when fresh) is known to relax the bowels, while at another it constipates. It is the same with kefir, and doubtless it will be the same with sour milk; as it gets older it becomes more constipating. Dr. Osthoff has done well in drawing attention to a neglected and very useful article of food.—*Berlin Correspondence Medical Press.*

Fatal Intoxication from Dilute Solutions of Bichloride of Mercury.—Steffeck, of Hofmeier's Clinic at Giessen, reports the following case, which is instructive as an instance of fatal intoxication after the use of but two intrauterine douches of weak solutions of mercuric chloride. The patient was a multipara, who miscarried at five months with a macerated fœtus. Her antiseptic treatment consisted in a bath on admission to the hospital; cleansing of the external genitals with 1 : 1,000 solution of bichloride of mercury; and vaginal douches of 1 : 3,000 bichloride solution given once daily, in quantity of one quart, during the five days in which her miscarriage occurred. The placenta was retained after the expulsion of the fœtus; as hemorrhage persisted to some extent, the vagina was tamponed with iodoform gauze. After the placental retention had persisted for more than twenty-four hours, the patient was anæsthetized, the customary vaginal douche given, an intrauterine douche of one quart of 1 : 5,000 was used, the placenta removed, and an intrauterine douche of one quart of hot mercurial solution, 1 : 5,000, was employed to check the hemorrhage; ergotin was also administered. One hour after the removal of the placenta pronounced symptoms of mercurial enteritis supervened, followed by stomatitis and acute nephritis, with anuria. Death occurred in seven days after poisoning. The post-mortem examination revealed dysenteric enteritis, acute parenchymatous nephritis, with slight emphysema and pulmonary œdema. The intestinal lesions were so pronounced as to be typical. Steffeck ascribes the poisoning to the intrauterine douche which was given after the removal of the placenta, when he thinks that the mercurial entered the circulation directly through the placental site. In view of the dangers of intrauterine douches of bichloride of mercury, their use has been abandoned at the clinic at Giessen. Vaginal douches only, of bichloride solution, and these preferably before labor, are now permitted. In commenting upon his case, Steffeck emphasizes the fact that every precaution was taken to empty the uterus after the douche, and that uterine contraction after the expulsion of its contents was excellent. The cases reported by Fleischmann and Von Herff are somewhat similar, but not so striking examples of direct intoxication. —*The American Journal of the Medical Sciences*, April, 1888.

The Elimination of Medicines by the Mammary Glands.—From a study of this subject, Dr. John G. Cecil has arrived at the following conclusions: 1. That the practice of medication of the child through its nurse's milk promises very little, and is altogether too uncertain to be relied on. 2. That great caution should be observed in the administration of narcotics to nursing women. 3. That greater care than usual is demanded in the exhibition of drugs during the first few days after parturition, and when, for any reason, the milk is poor and thin in quality.—*The American Practitioner and News.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, May 19, 1888.

PECULIAR TYPES OF PLEURISY.

A STUDY of diaphragmatic pleurisy was made by Dr. Frank Donaldson, Jr., some two years ago (*Amer. Journal of the Med. Sciences*). He showed that primary inflammation of the diaphragm was rare, though it sometimes occurred in acute rheumatism and as the result of wounds. Much more frequently we observe diaphragmatic pleurisy. secondary in character, as the result of general pleurisy, pneumonia, peritonitis, fractured ribs, violent laughter, tight lacing, etc. It occurs, also, in phthisis, and it may result from cysts, abscesses, or tumors of the abdominal wall. It occurs oftener in the young, and in women. The patients suffer from pain along the attachment of the diaphragm, and in the neck and shoulder. The position of the patient is peculiar, the diaphragm is almost motionless, the breathing costal. Dysphagia occurs, but is not pathognomonic. Primary cases run a rapid course, and recovery occurs. Secondary cases are usually fatal. Jaccoud considers that the dry, harassing cough, easily excited by pressure upon the borders of the ribs. is very characteristic of diaphragmatic pleurisy.

This same author, in a clinical lecture delivered recently at La Pitié (*L'Union Médicale*), presented a case of diaphragmatic pleurisy of a typical kind, and dwelt especially upon the relation of such disorder to phthisis. Jaccoud's views upon this subject are well known. Phthisogenic pleurisies are not those attacking the apex especially. They occur rather in antero-lateral portions of the chest. They are dry pleurisies, but there is sufficient exudation because adhesion occurs. This adhesion weakens expansion, and is, in general, the focus of a later-developed tuberculosis. Jaccoud appears to think that diaphragmatic pleurisies may be equally serious as factors in causation of phthisis.

Pulsating pleurisy is a peculiar and rare form of disorder, described by Cornby in 1883, later by Eichorst, and recently discussed by Dr. Alfred Keppler (*Deut. Arch. f. Klin. Med.*, Bd. 41. Heft 3). The last-named author has collected and studied 38 cases. Pulsating pleurisy is generally a suppurating pleurisy, occurring on the left side. The co-existence of pericarditis, of air in the pleural cavity, and of paralysis of the intercostal muscles. are factors called in to explain the phenomenon.

The causes of sudden death in pleurisy have been studied by Dr. Edmond Weill (*Rev. de Médecine*, 1887, No. 1). In 20 cases in which post-mortem was made. myocarditis was found in 2; thrombosis or embolism of the heart in 9 cases; acute œdema of the lung on the healthy side in 6 cases; pericarditis and perforation of the lung were found in the others.

Atrophy of the muscles of the thorax and shoulder has been found by Dr. Desplats (*La Semaine Médicale*, June, 1887) in those who have recovered from pleurisy. This atrophy is often decided, and is, the author thinks, one of the elements which make a pleurisy predispose to subsequent development of phthisis.

LOW MEDICAL FEES.

The Druggists' Circular says: "While we hear a great deal about the evil of counter prescribing, not much is said about the contributory evil of high physicians' fees. As a rule, medical fees are always much too high in proportion to the earning capacity of most people who have to pay them. A man in the humble walks of life, who is compelled to have the visits of a doctor for, say, a week, finds himself with a bill as large as his week's earnings, to say nothing of the added cost of the medicines prescribed, and a consultation with a medical man at his office for five or ten minutes costs as much, at least, as such a patient can earn by a half-day's work."

We have always contended that it would be wiser for physicians to take small fees than to send all their indigent patients to the dispensaries or the drug counters. It might be a much better plan if physicians had certain hours for poor patients. At present the tendency is in cities to make the rich pay exorbitantly in order that the poor may be treated for nothing. And charity treatment is never so good as that rendered in return for some payment, however small.

NASAL STENOSIS AS A CAUSE OF HERNIA.

THE causes of hernia are generally stated to be a congenital deficiency or laxity of those parts of the abdominal parietes which go to form the inguinal, femoral, or umbilical openings. The exciting causes are considered to be sudden increase of intra-abdominal pressure, due to strain, coughing, etc. Roser's lipoma theory of the origin of hernia has not excited very much attention, except among German surgeons. Nor has there been much which is new suggested regarding the exciting causes.

A very laborious study in this last line, however, has recently been made by Dr. W. Freudenthal, of this city, who, in an article "On the Relation between Chronic Obstruction of the Nares and Abdominal Hernia," tries to show that the former condition bears an etiological relation to the latter.

Dr. Freudenthal thinks that nasal stenosis, from hypertrophy, adenoid vegetations, chronic catarrh, etc., is a potent factor in producing hernia.

The constant hawking, coughing, sneezing, and spitting of this class of sufferers raises intra-abdominal pressure, and tends to the development of hernia. He notes the case of a German family which came to this country. A large part of its numerous members developed nasal catarrh, with obstruction and hernia.

He set to work to study the matter systematically, and examined the nose and throat of five hundred ruptured children, patients at the Hospital for Ruptured and Crippled. In a very large proportion serious nasal stenosis existed, while in not a single case was the mucous membrane perfectly healthy!

Whether five hundred New York children, not ruptured, would present the same proportion of nasal disease is not known. It seems somewhat unlikely, despite the fact that nasal and pharyngeal disorders are so prevalent in this city.

If, however, nasal stenosis helps to produce hernia, and if, as is usually believed, nasal catarrh and stenosis are more common in the United States than in Europe, it ought to follow that hernia is more common. This is hardly the case. Among 1,000 recruits for the Northern army, 50 were rejected on account of hernia. In Germany, the proportion of recruits rejected on account of hernia is 82 per 1,000; in France, 65; in Italy, a country that presumably does not suffer from excessive nasal or pharyngeal troubles, it is 76. We can hardly admit, therefore, that Dr. Freudenthal has proved his theory, though the observations which he made are of themselves valuable.

MERYCISM AND THE MERYCOLE.

Two or three years ago attention was called by French writers to a condition termed merycism, or rumination in man. Several cases were reported, and the phenomenon was shown to be not especially rare, and to be possibly on the increase. Dr. E. Martel even claimed that merycism was a condition toward which civilization was forcing man, and that in time we would all be ruminants. The "merycole" was observed to be a person of highly nervous organization, a very rapid and voracious eater, with atonic stomach. The rapid accumulation of food in the stomach paralyzed the secretory function, and caused a sense of oppression. Through a peculiar laxity of the cardiac sphincter, the food could be easily returned to the mouth for complete mastication. The habit of rapid eating, the nervous temperament, and the dyspepsia, all exist in this country. We may well suppose, therefore, that Americans will become "merycoles," if any nation does; and it is well to understand the matter in time.

Two new cases of merycism have recently been reported, and it is significant that one of them was observed in the New World. Dr. J. M. Bandera reports it in the *Gaceta Médica de México*, 1887, p. 480 (*Revue Internationale des Sciences Médicales*, 1888, No. 2). The patient was a physician, fifty years of age. He had a good personal history, and had never suffered from any nervous disorder. The regurgitation of food had taken place since his youth. Meat, cheese, salad, raw fruits, were brought up at intervals of five or ten minutes for two hours after a meal. They were masticated and swallowed again. The patient's digestion was fairly good, but slow.

The second case was reported by Dr. Karl Debio, in the *St. Petersburg Medicin Wochenschrift*, January 14, 1888. The patient was a young man, of nervous temperament and hypochondriacal tendencies. He had ruminated since the age of twelve, the disorder beginning after an attack of whooping-cough. The stomach was found to be slightly enlarged.

In the first case just referred to, rumination developed also in the patient's child, and other cases of hereditary merycism have been observed.

The association of merycism with idiocy and insanity is well known. Bourneville found that about five per cent. of idiots had this disorder. Bouchaud found fourteen cases in an insane asylum containing 572 inmates. Bourneville and Seglas collected a large number of cases occurring in persons not insane, and it has often been observed in persons apparently of sound nervous system.

SULPHO-CYANIDE OF POTASSIUM AND THE URIC-ACID DIATHESIS.

Some time ago attention was called to the diagnostic significance of variations in the amount of sulpho-cyanide of potassium (Civks) in the saliva. This substance averages about one hundred and thirty milligrammes in twenty-four hours (Landois), but is subject to decided changes. It is not found at all in the saliva of many lower mammals. Its presence, significance, and origin have been the subject of much rather fruitless speculation.

Dr. M. G. Bruylants, in a series of communications to the Royal Academy of Medicine of Belgium, claims to have solved in a measure the mystery of the relation of this substance to the economy. He has found sulpho-cyanic acid as a normal ingredient, not only in the saliva, but in various secretions and fluids of the body, viz., the urine, blood, bile, milk, and even in the amniotic fluid. He states that as a rule a litre of urine contains about one-twentieth as much of the acid as a litre of saliva.

Sulpho-cyanic acid is, therefore, a normal product of tissue-disintegration. Its chemical history is therefore to be studied, as possibly throwing light upon pathological changes.

M. Bruylants finds that different persons living upon the same diet excrete different amounts of the acid in the saliva and urine, and the amounts differ while the individual continues on the same diet. Hence, he concludes that it is not introduced in the food. The amount in a litre of saliva is about a grain; in a litre of urine, about one-twentieth of a grain.

A long series of experiments is recorded, intended to determine the exact chemical process by which this compound is formed in the organism. The conclusions are: First, that the sulpho-cyanic acid is formed in the animal organism, and is derived from albuminoid decompositions alone, probably by a combination of the group CN, and of sulphur; second, that the formation of sulpho-cyanic acid depends upon the nature of the nitrogeneous excretion. When this is complete, and urea is in proper amount, the sulpho-cyanide is excreted normally. But in the uric-acid diathesis the sulpho-cyanide almost or entirely disappears from the urine. This furnishes, therefore, another test of the gouty or lithæmic state.

OBLITERATING ARTERITIS.

Among the disorders the knowledge of which modern pathology has furnished us is the so-called obliterating arteritis. This, in its chronic forms, has now been quite thoroughly studied. Certain subacute forms, however, have been recently described, and the studies made upon them furnish an instructive contribution to clinical medicine and pathology.

Some time ago, Dr. Hadden and Mr. Pearce Gould reported three cases of obliterative arteritis affecting the ar teries of one extremity. Recently Dr. W. J. Walsham (*The Lancet*, March 24, 1888) has reported a fourth case, and the symptoms in each instance were so very similar that the disease seems almost to merit a distinct clinical name. In no case was there a history of syphilis or alcoholism, nor could, in fact, any cause be assigned. The disease spread from below upward, reaching as high as an inch below the clavicle. There was the same indurated, tender, and pulseless condition of the radial, ulnar, brachial, and lower portion of the axillary arteries, and the subclavian artery formed an aneurismal-like swelling, the size of a small hen's egg. The swelling could be emptied by pressure, and there was no bruit heard in it. The hand and forearm were cold, and the tips of the fingers cold and bloodless. There was no swelling of the extremity, and no engorgement of the superficial veins of any part of the limb. The pain in the hand and forearm was intense, and the disease, after lasting for several months, subsided spontaneously. In all these respects the cases were alike. In two cases, however, gangrene set in, and in one case the dilatation in the subclavian artery varied greatly from day to day.

Dr. Walsham thinks that the disease has a nervous origin, and it appears to us also that it may have some relation to so-called Raynaud's disease.

Another form of obliterating arteritis, decidedly different in type, is described by MM. Dejerine and E. Huet in the *Revue de Médecine* for March, 1888. The case reported is one of subacute obliterating aortitis affecting the whole arch and part of the thoracic aorta. This part of the circulatory system is known to be especially prone to disease, but more particularly to chronic aortitis ending in atheroma and aneurismal dilatation. Instances in which the aorta is subacutely inflamed, if not rare, are at least rarely diagnosticated. The patient was a man forty-five years of age, who had not had syphilis, but who had drunk to a considerable extent, and had suffered exposures. His illness lasted about nine months. During the last three months the symptoms became marked. He suffered from attacks of angina pectoris, dyspnœa, and great weakness. He showed signs of aortic regurgitation. There was a marked supraclavicular pulsation on the left side, a full bounding pulse in the left radial, while in the right it was almost imperceptible. The precordial pains were very violent. The patient had finally an attack of syncope, and died. The heart presented very few signs of disease, while the aorta, from its beginning as far as its thoracic portion, showed a very intensely marked obliterating subacute inflammation. This inflammation was sharply limited at the points where its branches were given off, but it had merely obstructed the orifices into all these branches. So far as the cerebral circulation was concerned, it was found that the brain was nourished *by only one artery*, and that the vertebral; yet no cerebral symptoms had followed.

The authors collect a few other cases of obliterating aortitis reported by Germoul, Leger, and Ozenne. None are so typical as their own, however, or throw so much light upon the symptomatology of this obscure disorder. Incidentally they affirm that the symptoms of angina pectoris are not as a rule produced by the disease of the coronary arteries, but may be caused by arterial or cardiac disease elsewhere.

HYPEREMESIS GRAVIDARUM.

Dr. Theophil Jaffé, of Frankfort, describes, in Volkmann's *Klinischer Vorträge*, No. 305, a case of uncontrollable vomiting of pregnancy, ending fatally. The disease is, he says, very rare. at least in Germany, and he takes his case as a text for a systematic description of hyperemesis gravidarum.

As Paul of Ægina considered the "vomitus assiduus" of pregnancy not dangerous, it seems that the pernicious form was unknown to him. It was described in the eighteenth century by Mauriceau and Delamoth, and in the beginning of this century by Burns (1809) and Simons (1813). In the last thirty years much has been written upon it, especially by English and American physicians. In this country the trouble is not excessively rare.

Statistics of 118 cases show that it occurred in primiparæ 43 times; in multiparæ 75 times. Studies of reported cases show that the obstinate vomiting may develop directly after conception, or even as late as the seventh month of pregnancy.

The intimate pathology of the disorder is unknown. It is presumed that it must be a reflex neurosis. The stomach is richly supplied with nerves, which come from the left, and part of the right, vagus, and from the sympathetic branches of the cœliac plexus. The uterine organs, also, have a double nerve-supply from the spinal nerves and the utero-vaginal plexus of the sympathetic. There is nothing in this anatomical arrangement that throws much light upon the mechanism of the hyperemesis, except to show that a reflex or transfer of sensations is possible. In some cases of hyperemesis there have been found inflammatory conditions of the uterus, purulent infiltration, exudates, tumors, cysts, etc., but such changes are not always observed, and they may occur without causing uncontrollable vomiting. Malpositions of the uterus, vaginitis, excessive distention from hydramnion, appear to explain the irritation in some cases, but not in all.

The prognosis of hyperemesis gravidarum is very bad, though not absolutely unfavorable. The older authors gave a mortality of forty-four per cent. Joulin, in 121 cases, found that death occurred in 49. Horwitz lost 5 out of 13 cases. Such statistics are not of much value. It is evident enough, however, that about half the cases die.

The treatment consists in using nutrient rectal injections, in the employment of antiemetic drugs, in local applications to the cervix, and, finally, in producing abortion. Copeman's plan of stretching the cervix has sometimes been effective. In other cases it has done no good, and in still others it has produced abortion (Jaffé).

As to the efficiency of this last-named measure there can be no doubt. Statistics collected by Guéniot show that, among 118 cases, 72 were cured; 31 by drugs, etc., 41 after abortion. Carataga found, among 117 cases, only 14 cured. M'Clintock reports 36 cases, of which 27 were cured by abortion. Cohnstein's statistics include 200 cases. Of these, forty per cent. were relieved by abortion, and twelve per cent. died.

Such figures do not throw much light upon the real utility of the operation. It is felt to be very generally true that abortion, if successfully performed, will inevitably relieve the disorder.

The course of the disorder has been divided by some authors (Guéniot, M'Clintock) into three periods; by others (Horwitz), into two.

The first stage is afebrile; the vomiting may now be moderate, and some food can be retained. But there is much thirst, and pains in the stomach; constipation and salivation occur. Horwitz has observed "hyperæmia" in two cases. The patient begins to emaciate.

In the second stage there is slight fever, the pulse is more rapid and weak, the respiration more frequent. The tongue is dry and coated, the breath foul, there are constant epigastric pains. The urine is concentrated, and shows albumin and casts.

In the third stage there is high fever; great emaciation and weakness, delirium, sopor, and death, too often end the scene.

The duration of the fatal cases is about three months. When, by abortion or otherwise, a change occurs, the duration is about two months.

IS THE MODERN TREATMENT OF PNEUMONIA A FAILURE?

We meet at quite regular intervals contributions from writers who laud the ancient methods of treating acute inflammatory disorders by bleeding. Special pleas of this kind receive a perfunctory notice, and then are usually dropped from the memory. Venesection is not the vogue. The laity have been taught for forty years that it is an old-fashioned and dangerous practice. And the doctor who attempts its use is regarded as unsound.

But Dr. Henry Hartshorne has recently brought forward some facts in connection with this subject which deserve more than ordinary attention. In a paper read before the College of Physicians of Philadelphia, February 1st, he advances the following views: First, that pneumonia is much more fatal now than it was when venesection prevailed. Second, that this increased mortality cannot be explained by change in type or change in constitution. Third, it must be due to change in treatment. *Ergo*, the modern treatment of pneumonia is wrong.

With regard to the first point, Dr. Hartshorne publishes the results of treatment of 11,175 cases of pneumonia by between forty and fifty physicians of Great Britain, Ireland, and Europe, in the first half of this century. This shows a mortality under treatment by bleeding of 1 in 11.1 cases; by large bleedings alone, 1 in 11.6. In this country in the United States Army, between 1840 and 1844, when treatment by venesection prevailed, the mortality was 1 in 11.5 among 1,416 cases. Between 1855 and 1859, after venesection was given up, the mortality was 1 in 6.67 among 657 cases.

In the Pennsylvania Hospital, from 1845 to 1847, the mortality was 1 in 16; from 1884 to 1886 it was 1 in 3.2. The ordinary mortality from pneumonia in large general hospitals in this country is now stated to be about 1 in 4. The mortality as determined by the British Collective Investigation Committee was eighteen per cent. In venesection times Skoda's estimate of pneumonia-mortality was 1 in 8. In the hospitals of Europe, 1822 to 1856, the average mortality was 1 in 20.66. The conclusion seems inevitable from the figures given, therefore, that relatively over twice as many persons die now from pneumonia as died fifty years ago.

This is a case, however, in which statistics may be misleading, and very likely an industrious compiler might cite other figures to offset those above given. For example, Warfwinge, among 546 cases (not alcoholic), found the mortality to be 6.2 per cent., and Fraentzel states that he saw 100 cases among soldiers without a death. On the other hand, the average mortality in the Christiana Hospital, from 1845 to 1875, according to Winger, was 16.8 per cent. In the St. Petersburg Hospital it was twenty-one per cent. (Eichorst).

Dr. Hartshorne's opinion that this increase in mortality is due to bad treatment is one that is very hard to prove, but if proven would be a most serious indictment of modern therapeutics. Of late years the treatment of croupous pneumonia has been more and more based upon the expectant and nourishing plan. Opium is sometimes given; so also is quinine, alcohol, and antipyretics. The antipyretic method we consider to have been distinctly pernicious, but fortunately it had but a short career. Instead of expectancy, quinine, alcohol, antipyrin, etc., Dr. Hartshorne recommends that moderate bleeding be employed, except in the aged, the asthenic, alcoholic, and those with Bright's disease. Such bleeding may be local, by means of cups or leeches, or the blood may be taken from the arm. The venesection should always be done early in the disease, and only then. At this time, also, a purgative is indicated. If a change in treatment can improve the mortality-rates in our hospitals and bring them back to those of earlier days, we trust such change will be made. At any rate, Dr. Hartshorne's imputation upon the modern treatment of pneumonia deserves a careful examination.

HYPERARTERIAL TENSION AND ITS TREATMENT.

Much light upon the nature of a patient's condition, and much help in therapeutics, is given by a study of the tension of the arteries. In this particular field the sphygmograph has won what little reputation it possesses for practical utility in medicine. An interesting review of some of the conditions in which hyperarterial tension is found has been given by Dr. J. P. Bramwell in the *Edinburgh Medical and Surgical Journal* for March, 1888. Excessive tension of the arteries is found in a great variety of conditions, of which the following may be particularized:

1. Certain blood-poisons, either introduced from without or generated in the system, may cause abnormal tension. Among the former class are ergot and lead; among the latter are the products of faulty metabolism, like uric acid. Perhaps the high tension in Bright's disease and in pregnancy may be due also to this latter cause.

2. In some acute diseases of a specific character, such as scarlatina, diphtheria, and cholera, we find marked arterial tension; while in others, of which typhoid is a type, the pulse is dicrotic or hyperdicrotic, the arterial tension being very low. But when albumin appears in the urine of typhoid patients, as indicating the presence of intercurrent parenchymatous nephritis, the pulse loses its dicrotic character, and is transformed into one of hypertension.

In acute peritonitis the pulse is, as a rule, of low tension, but, when the abdominal sympathetic is much irritated, the arteries contract and the pulse becomes one of hypertension.

In acute and chronic interstitial nephritis, and in most cases of parenchymatous nephritis, the pulse is one of high tension; but in amyloid kidney it is low. There is an abnormally tense pulse in atheroma of the arteries—endarteritis. The pulse is also hard in cases of angina pectoris, and just before epileptic and migrainous attacks. Hypertonus may be therefore either paroxysmal or constant.

Dr. Bramwell classifies the causes of hypertension as follows:

a. Renal diseases and affections, acute and chronic.
b. Vascular system atheroma.
c. Angina pectoris.
d. Diseases of the blood and anæmia.
e. Acute diseases.

The relation of renal diseases to arterial tension is discussed at length by Dr. Bramwell. Two antagonistic explanations have been given of the hypertonus in these disorders: First, that of Johnston, Dickenson, Goodhart, and others, viz., that prolonged arterial strain produces, as a primary consequence, a thickening of the muscular coat of the arteries; this after a time may be followed by other changes of an inflammatory or degenerative character, such as endarteritis deformans, calcification, atheroma, or arterio-capillary fibrosis. Second, Gull and Sutton contend that strain is not the causation in these changes, and that, besides, the changes referred to are degenerative and not inflammatory. Further, that cases have been observed of extensive arterial degeneration (arterio-capillary fibrosis) where the kidneys have not been implicated at all, nor the heart hypertrophied, but where the arteries of the cord, liver, and brain, have all shown the hyaline degenerative character without any general thickening of the muscular coat at all. By these distinguished physicians the pathological changes referred to are regarded as tangible indications of a general senile degeneration, in which the kidneys may or may not participate—at all events, in which they are not the chief factors.

Our author defends very warmly the older view that the hypertonus is secondary. We believe, however, that while such may be the case in some instances, there is a large class of patients, especially those more advanced in life, in which the fibrous and degenerative changes occur in the arteries and kidneys as the result of a common cause, and the expression of a common condition.

In the treatment of hypertonus, the drugs and other remedial agents which may be employed are nitro-glycerine, nitrite of amyl, sodium nitrite, spiritus etheris nitrosi, and potassium bromide; purgatives, such as compound jalap powder; diaphoretics, as pilocarpine, vapor baths and warm pack; blood-letting, general and local; dietetically, skim or buttermilk in quantity. To this list American physicians would add aconite and veratrum viride.

In the hypertonus of acute nephritis, our author especially insists upon the value of blood-letting, and we can heartily indorse his practice here. Nitro-glycerine is also recommended in the same condition; while, as a prophylactic as well as a curative agent, skim-milk and buttermilk are to be given. We are reminded of the statement of Jaccoud that, since he began to feed his scarlet fever patients on milk alone, he has never had a renal complication. The hypertonus of anæmia is best combated by adding nitro-glycerine to the iron and arsenic which may be given.

In the hypertonus of gouty conditions, diaphoretics and purgatives must be added to the arterial sedatives given. Fat people who try to reduce their weight by living on lean meat get an accumulation of nitrogeneous matter in the blood, which causes high arterial tension, and may even produce apoplexy. Such persons need purgatives and diaphoretics. Dr. Galabin has shown that in some cases of peritonitis there is high arterial tension, and that such persons may need nitro-glycerine as well as free stimulation.

We have touched upon enough of the points in Dr. Bramwell's paper to show the importance and suggestiveness of the topic. The physician of to-day makes no such finical classifications of pulses as were established by Galen, but he has learned that the element of "hardness" may be quite as important as that of strength, frequency, or regularity.

THE MORTALITY-RATE AMONG PHYSICIANS.

The Gotha Life Assurance Bank publishes some statistics of the mortality among its policy-holders during 1887. From these it appears that the mortality of the medical members was 11.53 per cent. above the average of that of all the members taken together. The classes of disease to which this higher rate of mortality was due were diseases of the respiratory organs, phthisis, and infectious diseases—"typhus" having proved especially fatal to the younger members of the profession. There was only one case of post-mortem poisoning out of 1,052 deaths, and that was of a district physician. Cerebral apoplexy was remarkably frequent, beginning as early as thirty six years of age. There were 14 cases of suicide and 4 of accidental death. These are, however, below the general average.

Rutland's Medical College.—*The New England Medical Monthly* gives an account of a curious medical college which exists at Rutland, Vt. The institution was incorporated under the laws of Vermont a year ago, and a class of six has already been graduated. It seems that all the sessions of the school are held in Boston, but the Commencement takes place in Rutland. It is, we are told, nothing more or less than a diploma mill which works in Boston and dumps its products in Rutland. If the facts are correctly stated, the existence of the institution is a reproach to Vermont's medical laws, and we trust that the profession of the State will look into the matter.

"Acromegoly" is the title of a curious disease in which the feet, hands, and face are affected. It is more than a simple "large-footedness," and we would warn envious critics of St. Louis that it is not a disorder peculiar to Chicago, but has recently been described by Marie in France. Friereich also reported cases, and in the last issues of the English journals are accounts of several cases seen in London. One case has been observed also in this country, the patient now earning a steady income in a dime museum.

News of the Week.

The American Society of Microscopists meets in Columbus, O., on August 14th.

State Medical Societies.—During the present week the Illinois State Medical Society met at Rock Island; the Iowa State Medical Society met at Des Moines, and the West Virginia Medical Society, at Huntington. Next week the Connecticut State Medical Society meets at New Haven, beginning May 23d.

John B. McIntyre, M.D., died in this city, on the 6th inst., of acute peritonitis, the result of perforation of the appendix vermiformis. He was graduated from the College of Physicians and Surgeons, of this city, in the class of 1877, and at the time of his death was in his forty fourth year, and in the enjoyment of a lucrative practice. He was born in New York City, was never married, and leaves a father, three sisters, and one brother, Dr. B. C. McIntyre, of this city, to mourn his loss. Dr. McIntyre was a man of fine medical ability and sterling integrity; was devoted to his profession, and was respected and esteemed by all who knew him.

New Remedies.—Phenacitin, an ethylized phenol discovered by Hinsberg and Kast, is claimed to be a safe and efficient antipyretic, acting like antifebrin, but having no dangerous effects. Its dose is from gr. iv. to gr. viij. Sulphonol, a compound of ethylmercaptan with acetone, is said by Professor A. Kast to be a good hypnotic, in doses of forty to sixty grains. Dr. G. Rabbas confirms the results of Kast, and thinks that sulphonol is a more sure and agreeable hypnotic than amylene hydrate, or paraldehyde.

Tetanin is the ptomaine that is produced by the growth of the bacillus which Nicolaier, Flügge, and Rosenbach have all shown to be pathogenic of traumatic tetanus. Professor Brieger recently examined, chemically, the amputated arm of a patient who was suffering from tetanus, and he found *tetanin* in the tissues.

The Ethics of Washing out the Stomach.—Our esteemed contemporary, *Gaillard's Medical Journal*, says: "We are credibly informed that it is not unusual, in the city of Washington, for young men, before going to dinner parties, in order to better prepare themselves to play the part of gluttons, to wash out their stomachs a short time before the appointed hour." Our contemporary is pained at such popularization of a valuable hygienic and therapeutic measure. We venture, however, to say a word in behalf of these young men. The practice of stomach washing is a legitimate one. There is no reason why a young man should not wash his stomach as well as his face before going out to dinner, and there is no doubt that the youth of Washington do both. It might even be regarded as an act of courtesy to the host to bring to his table a stomach that has been scientifically laundried, and which lies in neat and antiseptic emptiness folded beneath the diaphragm. Perhaps America, with the curse of dyspepsia upon it, needs more such young men as are produced in Washington. Our contemporary should not too hastily condemn the fresh enthusiasm for clean mucous membranes that is developing in our nation's capital

The New York Legislature which recently adjourned passed laws empowering the State Board of Health to make rules and regulations for protecting from contamination all public supplies of potable waters and their sources within this State; making it the duty of local Boards of Health to destroy all animals affected with glanders; reducing the fees of the Health Officer of the Port of New York, and fixing his salary at $10,000.

A New Home for Consumptives has recently been opened in Brooklyn. It contains forty-two wards, in each of which there are from one to eight beds. The cost of the building is estimated at $70,000.

Improving the New York Quarantine Stations.—The supply bill of the last State Legislature contains, we are informed, provisions for the better equipment of the quarantine establishment at this port. It provides $50,000 for general repairs, $25,000 for a new hospital ship, $5,000 for the hospital, $2,500 for repairing the docks, $121,843 for putting Hoffman Island, the boarding station, and the Health Officer's residence in order, and $20,000 for a new tug; making a total of $224,343.

Antipyrine and the Salicylates in Rheumatism.—Dr. Charles Bayoux, in a Paris thesis, asserts as the result of his studies under Professor Sée, that in acute rheumatism with albuminuria, or with a highly nervous temperament, antipyrine is preferable. The salicylates fail in chronic rheumatic pains and in gonorrhœal rheumatism, while antipyrine acts promptly in these conditions.

A Vienna Physician, named Horéath, "whose clientèle is essentially aristocratic," says a despatch, has recently been arrested, charged with having produced more than two hundred abortions.

Medical Heroism.—The *British Medical Journal* mentions as an instance of the devotion of medical men to humanity the case of Dr. Landon, a surgeon in the British army. Mortally wounded himself, and with the agonies of death closing in, he heard a wounded soldier shrieking from his sufferings. Forgetful of self, he crept to where the man lay and gave him a hypodermic injection of morphine to relieve his distress, and giving it, died.

In the Death of Professor Edward S. Dunster, of Ann Arbor, Mich., which occurred on May 3d, the profession loses one of its best teachers, and a learned and talented physician. Professor Dunster was for a time editor of the *New York Medical Journal*, but he was best known for his work as professor of obstetrics. He had taught in the University of Vermont, at Dartmouth Medical College, at the Long Island Medical College, and at the University of Michigan.

Statistics of the Medical Profession in France.—According to recent statistics, the number of doctors practising in France is 11,995, and that of officiers de santé 2,794. In Paris alone there are 2,188 doctors and 182 officiers de santé. In some departments there are more officiers de santé than doctors. The number of pharmaciens, or chemists, reaches 7,100, of whom there are 797 in Paris. Consequently there are two doctors for one chemist in the whole republic. The midwives are put down as 13,610, and the herbalists as 1,013.

Flies and the Doctor's Horse.—A large fortune awaits the man who will devise a remedy which will keep flies from worrying the horse in summer, and at the same time not kill the horse. Carbolic-acid washes, the aromatic oils, especially pennyroyal, and various other drugs. to say nothing of mechanical appliances, have all been used, but with only temporary benefit. The oil of bay is said to be particularly efficient, and to be extensively used in Switzerland and the South of France.

Transplanting the Cornea.—We learn from a Philadelphia daily paper that an ophthalmologist of that city has performed Von Hipple's operation upon a woman suffering from opacity of the cornea.

Tolstoi's Views.—Our esteemed contemporary, the *Indiana Medical Journal*, thinks that we were unjust in criticizing Tolstoi's views of the medical profession, because we did not at the same time refer to the literary genius of Tolstoi. It is not the function of a medical journal to call attention to gifted works in general literature. Nor did we think it necessary to say of Tolstoi what must be every reading person's knowledge. We can advise our contemporary to read *Ketio*, if he is fond of noble writing. But, as regards the medical profession, Tolstoi is also "heroically wrong."

A Lady Physician, Dr. Hattie Allen, has been appointed Associate Professor of Medicine in the University of Michigan. Now we hope that Hattie will write herself Harriet.

For forty years Dr. Simon Pollak has occupied one chair in one place in the hall of the St. Louis Medical Society.—*Medical Review*. This quite beats the record of St. Simon Stylites, only St. Simon stood up, instead of sitting down.

A Testimonial for Soap.—We observe that a distinguished ex-President of the American Medical Association has written a testimonial in favor of a certain kind of soap. It is a little apart from the function of a great physician to indorse soaps; but he might have indorsed worse things. and we shall hope that the effect will be to give a fresh impetus to the use of commercial stearates among the numerous friends and admirers of our esteemed colleague.

Dr. C. S. Muscroft, of Cincinnati, O., died on May 1st, in the sixty-eighth year of his age.

The Medical Societies of the United States are said to number about six hundred and forty-eight.

Sulphonal—a New Hypnotic.—This substance is "diethylsulphondimethylmethan," an oxidation product of the union of ethyl-mercaptan with acetone, and has, therefore, the composition represented by the formula $(CH_3)_2 = C = (C_2H_5So_2)_2$. We owe its discovery to Professor E. Baumann, of Freiburg, and its therapeutical application, or, rather, some knowledge of its remarkable physiological properties, to Professor A. Kast, of Freiburg, who has a long article on the subject in the current issue of the *Berliner Klinische Wochenschrift* (April 16, 1888), in which he has nothing but praise for this new addition to the materia medica. The term "sulphonal" is due to a happy suggestion of Herren Fr. Bayer & Co., Elberfeld, who supply it. This substance crystallizes in large colorless tables, and is perfectly devoid of taste and smell. It dissolves in 18 or 20 parts of boiling water, in 100 parts of water at the ordinary temperature, and is easily soluble in alcohol or alcoholic ether. Employed medically, the drug has been given to 60 patients, and 300 observations of its effects were made (Professor Cramer gave it 200 times in the Marburg Lunatic Asylum). The results, almost without exception, were that the patients sank within from half an hour to two hours into a tranquil and sound sleep, lasting from five to eight hours, and awoke feeling perfectly comfortable. A few felt tired and sleepy next day. The digestion, pulse, and temperature were unaffected, and it is curious that no ataxy of any degree or kind was present, whereas this was the most prominent symptom in dogs after large doses. The ordinary dose for man is two grammes (half a drachm). Professor Kries has examined the effect of sulphonal on the blood-pressure, and has established the fact that in dogs, even after very large doses, the blood-pressure is not lowered. Poisonous doses in dogs, to determine the mode of death, caused severe convulsions, then, after a few hours, a heavy sleep, deepening to coma, and ending in death in about ten hours. Spectroscopic and microscopic examination of the blood revealed no alteration of its elements. Sulphonal appeared most efficacious in cases of sleeplessness in nervous subjects, but was given with benefit in all kinds of cases, including even cardiac valvular disease.—*British Medical Journal.*

A New Journal.—The *Revue Illustrée de Polytechnique Médicale et de Chirurgie Orthopédique* is the name of a new journal published in Paris, under the editorship of MM. Leblond and Chenet. It is the French edition of the well-known *Illustrirte Monatsschrift der Aerztlichen Polytechnik*, published by Dr. Beck, of Berne. We would be glad to see an English edition of this most excellent and instructive journal.

Leprosy is said by M. Besnier to be spreading rapidly, instead of dying out, as has commonly been supposed.

Cigarette Smokers will be interested to learn that 1,250,000,000 manufactured cigarettes are annually consumed in the United States. Probably as many more are made by the smokers themselves.

The Attendance at the spring lectures in the colleges of this city is about as good as usual.

Give Us the Quotation.—The physician who fails to have an eye to his fee, *first*, *last*, and *all* the time, will be left. Holy Writ tells us that the man who fails to provide for his family is worse than an infidel.—*The Southern Clinic.* We suspect that the foregoing is bad scripture as well as bad morals.

Dr. Joseph Ernst Hackl died in Toledo, Ohio, April 24, 1888, of laryngeal tuberculosis. He was born in Austria, August 22, 1847, and received his academical education at the University of Gratz. He graduated in medicine at the Starling Medical College in 1880. At the time of his death, and for five years previously, he was Professor of Physiology in the Toledo Medical College.

Society Reports.

AMERICAN MEDICAL ASSOCIATION.

Thirty-ninth Annual Meeting, held in Cincinnati, O., May 8, 9, 10, *and* 11, 1888.

SECTION ON SURGERY AND ANATOMY.

Tuesday, May 8th—First Day.

Dr. Donald McLean, President, in the Chair.

The first session was called to order by The Chairman, who delivered the annual address, entitled

SOME THOUGHTS ON RETROSPECTIVE AND PROSPECTIVE SURGERY.

Particular reference was made to antiseptics, anæsthetics, and abdominal surgery. To anæsthetics the greatest credit was given, as they not only relieve the pain of the patient, but remove the timidity and terror of the operator. Too much value has perhaps been attached to antiseptics, and they may come to be considered a nuisance. The teachings of Mr. Lister have, however, induced strict cleanliness at least, and, whatever there may be in the germ-theory, there is much to be thankful for in Listerism.

Chloroform, as a rule, is the best anæsthetic, yet there is reason to expect a new and better one in the near future.

An instrument for the administration of anæsthetics was displayed and described.

Mention was made of the microscope in surgical diagnosis and differentiation of tumors, pus, etc.

Electricity in suitable cases is a powerful agent for good, but, like others, is much abused; it offers one of the best methods in stricture of the urethra. An interesting case of such kind was reported cured by electricity. Electrolysis in the treatment of nævus is preferable to other remedies.

Esmarch's bandage and the animal ligature were also referred to. By their use, the speaker said, vessels as large as the femoral may be safely tied.

Joint diseases are now treated by rest, pressure, and resection, even when the disease has passed far beyond the articulation.

The many appliances that have been in use for the

TREATMENT OF FRACTURES

were passed over with the mention of but a few. Plaster of Paris was considered the best of all splint materials. Passive motion is beginning to be used earlier than in former times.

Lithotomy is perhaps being rapidly superseded by lithotrity, but the speaker strongly favored the former.

Dr. Henry Hollingsworth Smith, of Philadelphia, presented a paper on

THE APPENDIX VERMIFORMIS: ITS FUNCTIONS, PATHOLOGICAL CHANGES, AND TREATMENT.

He characterized the appendix as a "singular little organ, singularly placed, physiologically useless."

After a brief anatomical description of the appendix, the speaker referred to its anomalies, and then to its diseases. An early diagnosis in all cases of disease of this organ is of the utmost importance, yet it must often be made by exclusion only.

The prognosis of these affections was always grave.

In the treatment, he usually began with five-grain doses of calomel, repeated until twenty to thirty grains are taken.

Morphia was given hypodermically for the pain. Later in the course of the disease he employed saline purgatives, aided by palpation, to increase peristalsis. If all these measures failed the only recourse left was to operate.

Dr. T. G. Morton, of Philadelphia, said that one ought always to suspect disease of the appendix in any affection in which the symptoms pointed to the ileo-cæcal region as the seat of inflammation. He was strongly in favor of operation in these cases, believing that the general principle held good to evacuate pus whenever it was present, and to attack the seat of its formation in order to cut short the suppurative process when possible.

Wednesday, May 9th—Second Day.

Dr. L. S. McMurtry, of Danville, Ky., reported a case of

TYPHLITIS WITH PERFORATION; LAPAROTOMY; RECOVERY.

The patient was a physician who was subject to attacks of colic, for the relief of which morphine, hypodermically, was used. After a time tenderness was complained of, and a tumor was discovered in the iliac region. This was followed by hemorrhage from the bowels, vomiting, and tympanites, indicating perforation.

An operation was urged, and allowed. The appendix was found to be normal, but the cæcum was gangrenous in spots, with a perforation through which extravasation of fæces had taken place. The edges of the perforations were trimmed, and the openings were made elliptical in shape and were closed by suture.

Recovery.—The patient was a member of the American Medical Association, and was present at the meeting. The speaker said that he had the pleasure of reporting

THE ONLY CASE OF SUCCESSFUL LAPAROTOMY

for the relief of non-traumatic perforation of the cæcum. He maintained that one ought to operate early in these cases, and should not rely on opium.

Dr. Edward Andrews, of Chicago, said that the most interesting point to determine is, in what cases to operate, as there is often great difficulty in making a correct diagnosis. He added that there is much risk in operating in these cases, as there is no time to make preparation, as in ovariotomy. In the latter operation the mortality is one in ten.

There is little chance for recovery in perforation with effusion into the peritoneal cavity, but good prospects when there is simple perforation.

Dr. Gross, of Philadelphia, thought that the early operation was generally best, and that in a walking case of typhoid fever with perforation he would operate. If we wait, the patient dies; if we operate, there is a fair chance to save life.

Dr. Nelson, of New London, Conn., thought there was but little more danger from the use of the knife than from the aspirator.

The line of incision should be over the point of rupture.

The election of officers was then held, with the following result: *Chairman*, Dr. N. P. Dandridge, of Cincinnati; *Secretary*, Dr. M. O. Roberts, of Louisville.

Dr. Charles B. Penrose, of Philadelphia, read a paper on

INTESTINAL OBSTRUCTION IN ITS SURGICAL ASPECTS.

He said that operations are too often delayed by expectant treatment—opium, massage—and that it would be far better to make an exploratory laparotomy.

Enterotomy or colotomy is rarely desirable. The primary incision should be median, as it gives better opportunity to explore the abdominal cavity.

If the bowel is much distended by gas, it should be incised longitudinally, emptied of its contents, and closed by suture.

For the relief of obstruction, the plan recently suggested, of

INTESTINAL ANASTOMOSIS,

was mentioned but not advised. Resection, with the temporary formation of an artificial anus, the speaker thought, would offer the best chance for a good result. Both ends of the bowel should be stitched to the opening, thus giving more surface for the absorption of nutrition, as nourishment can be given by the mouth, and a special preparation can also be injected into the lower portion of the bowel. Especial value was attached to continual irrigation of the abdomen.

Dr. N. Senn, of Milwaukee, read a paper on

RECTAL INSUFFLATION WITH HYDROGEN-GAS AS AN INFALLIBLE DIAGNOSTIC MEASURE

in ascertaining the existence of visceral injury of the gastro-intestinal canal in penetrating wounds of the abdomen. The existence of any wound in the bowel where there is extravasation into the peritoneal sac has always been considered fatal unless laparotomy is done. Punctured penetrating wounds are less serious than gunshot wounds. In order to determine some means by which a clear diagnosis could be made, he had undertaken a number of experiments to find some innocuous gas which could be injected per rectum until the bowel was sufficiently distended for the gas to reach the wound and appear externally.

The first experiment showed that hydrogen-gas could be made to pass the entire length of the gastro-intestinal canal from the anus to the mouth. In a man a pressure of from one-third to two pounds is sufficient to effect the passage of the ileo-cæcal valve. Inflation through the mouth is only used to diagnose wounds of the stomach, as the gas does not easily pass the pylorus.

Hydrogen-gas is perfectly innocuous and unirritating, and is rapidly absorbed when injected into any serous cavity or into the connective tissue.

All that is necessary in using the gas is a rubber balloon holding sixteen litres. Inject gradually. The method not only establishes the diagnosis, but locates the wound of the bowel without tedious handling, and demonstrates whether there be more than one perforation.

A pistol-wound of the abdomen was produced in a dog, and the perforation of the bowel diagnosed, demonstrated, and the number determined by this method.

Dr. P. S. Connor, of Cincinnati, classified obstructions as acute and chronic. Acute cases should be operated upon after a few hours, if they do not yield to other treatment.

He agreed with a former speaker that the operation was not devoid of danger, as was claimed by Dr. Price.

We can sometimes gain much valuable information by opening the bladder, but we cannot always cure the patient by that means.

Dr. L. H. Weeks, of Portland, said that laparotomy is not necessary in every case, but we must nevertheless not put off the operation until it is too late. No physician of to-day should let a patient die from internal obstruction any more than he would from external strangulated hernia.

Dr. Marcy, of Boston, then read a paper on

THE SURGICAL ADVANTAGES OF THE BURIED ANIMAL-SUTURE,

and its adaptability to special purposes. He reviewed at some length the history of this procedure, and also suggested that the operating-room be made aseptic by the use of oxygen; it is refreshing, he said, to the operator, and safer for the patient under ether. He spoke of iodoform collodion painted over the part after the operation is finished, and recommended its use. The future of sutures, he maintained, depends upon the strict carrying out of antiseptic measures.

Thursday, May 10th—Third Day.

Dr. Elmer Lee, of St. Louis, presented a communication on

DRY MEDICATION IN THE TREATMENT OF THE URETHRA AND BLADDER.

There are plenty of drugs, he said, that we can use for this purpose, but the question is, which shall we select and how shall we use them? It was necessary to employ alkaloids, which were pure chemicals in a condensed form. These were best applied in the form of soluble granules made with pure cane-sugar. It was, of course, necessary to apply these in just the right place, for which purpose an instrument was required. The speaker exhibited the granules and instrument employed by him.

Dr. D. S. Campbell, of Detroit, read a paper on

ELECTROLYSIS IN THE TREATMENT OF NASAL AND PHARYNGEAL NEOPLASMS.

He had employed the method in a number of cases, and had found it superior to any other plan of treatment.

Dr. H. Landis Getz, of Marshallton, Ia., exhibited an

ANTISEPTIC SURGICAL CABINET.

It consisted of square frames covered with gauze, wet with a bichloride solution, forming three sides and the roof of a square tent, the window of the apartment forming the fourth side. The window was slightly lowered, and the opening filled by a strip of wood. Through a hole in this wood a tightly fitting soft rubber tube was passed, to which a mouth-piece was attached, thus allowing the patient and the operators to take an occasional inspiration of fresh air. The head and shoulders of the patient are brought out through a closely fitting aperture in the wall of the tent opposite the window. The walls of the tent are kept constantly moistened with bichlorate solution from an atomizer. Operations must often be performed when there is no chance to make the apartment aseptic, in which cases, the speaker thought, this device would prove to be of much value.

Dr. Thomas P. Davis, of Pittsburg, read a paper on

GRADUAL DILATATION OF ŒSOPHAGEAL STRICTURES.

He reported several cases of stricture of the œsophagus caused by swallowing lye. He urged early and very gradual dilatation. He also suggested that measures be taken to suppress the indiscriminate use of concentrated lye, owing to the frequent deaths resulting from the accidental swallowing of this caustic.

Friday, May 11th—Fourth Day.

Dr. Joseph Ransohoff, of Cincinnati, read a paper on

THE CÆCUM AND APPENDIX: THEIR RELATIONS IN HEALTH AND DISEASE.

The speaker considered the subject in its anatomical and physiological aspects, since here, as elsewhere, such knowledge is a prerequisite to the understanding of vital processes, normal and abnormal. He said that the topography of the cæcum, the vermiformis appendix, and the ileum is misunderstood not alone by the profession as a body, but by most anatomical writers. All agree that the cæcum is a blind pouch about three inches in diameter, two and a half inches in length, and is the widest part of the intestine. It is generally agreed that the cæcum is covered by peritoneum in front and on its sides, and that the posterior portion is connected to the iliac fascia by loose connective tissue. The fact is, however, that the cæcum is, with rare exceptions, completely surrounded by peritoneum from the ileo-cæcal valve to its apex. This was discovered as long ago as 1849, from the examination of 160 bodies. In 2 out of 63 bodies which the speaker had examined, he had found the cæcum invested only in front and laterally.

On the postero-lateral aspect of the cæcum, about an inch from its base, springs the appendix. This is not such a wanderer as is often supposed, but usually lies behind the cæcum, and can be seen only by drawing the cæcum aside. It points upward to the left, toward the spleen. In only seven of the examinations made did the speaker find the appendix in part a pelvic organ. Its average length is four inches; its diameter, that of a goose-quill. The appendix is rarely straight in its course. One instance of its complete absence was noted by Bartholin. Since it is nowhere attached to the abdominal wall and, like the cæcum, everywhere covered by peritoneum, abscess of the ileo-cæcal fossa must be limited, and perforation must involve the peritoneum.

If the cæcum and appendix have a function, it can only be inferred by comparative studies. In man the chief function of the cæcum is absorption. The appendix has even stronger facilities for absorption, hence its contents are always of a firmer consistency.

A probable function of the appendix is the secretion of mucus. Like the tonsil, the appendix is a lubricator.

SECTION ON OBSTETRICS AND GYNECOLOGY.

Tuesday, May 8th—First Day.

Dr. Ely van der Warker, President, in the Chair.

Dr. Henry O. Marcy, of Boston, read a paper upon

EXPLORATORY LAPAROTOMY.

Owing to the advances which had been made in recent times in surgical technique and in antiseptic methods, the question of danger has been practically excluded in a consideration of laparotomy. Although there have also been great advances in the clinical differentiation of abdominal diseases, cases are nevertheless constantly occurring in which a correct diagnosis can be arrived at only as a result of operation. And the experience of nearly every practitioner offers abundant illustration of the uncertainty which marks the fatal progress of cases of intestinal obstruction, extra-uterine pregnancy, etc.

Dr. Marcy entered a vigorous protest against the still too common method of waiting and treating symptomatically conditions in which there was the greatest danger to life, and urged a wise consideration of the measures of exploration. He related a series of eleven cases in his own practice, in which exploratory laparotomy had been performed. In no instance did death result, and in two of the cases the knowledge acquired as a result of the operation furnished indications for treatment leading to a cure.

Dr. S. C. Gordon, of Portland, Me., reported three cases of

VAGINAL HYSTERECTOMY FOR CANCER.

The speaker stated that the views of the profession were now in favor of the doctrine of local origin of cancer, and that the consequent practice of surgeons was early operation and entire removal of the organ or part affected. He also claimed that the uterus is no exception to the rule, and if the case is early seen and the uterus alone is involved and movable, the only rational operation is complete removal.

He believed the mortality would not be as great as after laparotomy, inasmuch as drainage acts as an important aid to recovery. Statistics already show as good, or better, results as regards mortality, and the operation is yet in its infancy. Frequent operations by experts will reduce the death-rate materially. Death is certain if the case is left to the natural course. There is every reason to hope more from complete than from partial operation.

Two of the cases recovered without any alarming symptoms. The third one died from obstruction of the intestines.

Dr. William C. Wile, of Danbury, Conn., exhibited a

RETENTION APPARATUS

for supporting the legs in operations about the perineum. It was well adapted to the purpose for which it was devised, and enabled the operator to dispense with the services of two assistants to hold the legs and feet of the patient out of the way.

Dr. W. W. Jaggard, of Chicago, read a paper on the occasional

RELATION OF ENDOMETRITIS TO THE VOMITING OF PREGNANCY.

He reported the case of a woman, aged twenty-nine, who had given birth to four living children, and had had two miscarriages. When the patient was seen she was in the twentieth week of pregnancy, and was suffering from constant vomiting, the slightest muscular exertion occasioning an exacerbation of the trouble. Abortion was induced, and it was found that endometritis existed, which the history of the case showed to be of long standing. The vomiting ceased immediately upon the termination of gestation, and the speaker believed that it was reflex in character, starting from the peripheral irritation of the inflamed endometrium.

Dr. Marcy had carefully studied a number of these cases, and believed that the true pathological condition was one of continued activity and growth of the uterine glands, which should normally atrophy as the placenta becomes developed. If this explanation were correct, the problem of treatment was greatly simplified. The blighted ovum must be removed and the uterine mucosa regenerated. Since the fœtus can hardly survive long enough to arrive at a viable period, early abortion should be the rule, and the case should not be allowed to progress to such an extremity as to jeopardize the life of the mother.

Dr. Joseph Price, of Philadelphia, presented a communication on

A SYSTEM OF FREE NURSING,

as it existed in Philadelphia. The organization was known as the Visiting Nurse Society. Its objects were to furnish visiting nurses to those otherwise unable to procure skilled attendance in time of illness, to teach cleanliness, and the proper care of the sick. The society was established two years ago, and the staff now consists of seven nurses and assistants, and one maternity nurse. During the present year these nurses have attended to about two hundred cases, one hundred of which were surgical. The speaker urged the adoption of this system by other communities.

Dr. William Goodell, of Philadelphia, read a paper entitled

THE NERVOUS RECTUM.

Hysteria is closely allied to insanity, and as the latter frequently consists of a single delusion, while the mind remains clear on all other subjects, so hysteria often exhibits itself chiefly by some localized disorder. It becomes, as it were, a sort of

MUSCULAR INSANITY.

The muscles most liable to become hysterical are the circular ones constituting the inlets or outlets of the hollow viscera. In one form, localized in the rectum, spasm of the sphincter occurs, and the symptoms mimic those of anal fissure. Defecation gives rise to great suffering, and a painful throbbing, which may continue for hours, follows the completion of the act. Patients thus afflicted often become victims of the opium habit. The seat of the pain may be higher up in the rectum, and the attacks may recur with some appearance of periodicity. In other cases there is a throbbing pain when the rectum is loaded, and the act of defecation causes a sickening sensation. The two last-mentioned forms are often dependent on prolapse and tenderness of the ovaries. Sometimes the tonic spasm of the sphincter is so pronounced that it can be overcome only by enemata. In some cases of nervous rectum there may be no pain, but the necessity of going to stool occurs at most unseasonable times, and is occasioned by the most trivial causes.

A disease which is in a measure peculiar to emotional women of a high degree of intelligence is

FOLLICULAR COLITIS.

This may be considered under the general heading of nervous rectum, although its pathology is as yet by no means well understood.

Dr. Goodell said that he knew of nothing which would cure this condition unless the general nervous prostration were first overcome. Various remedies, applied in the form of enemata or suppositories, had, however, a soothing local effect. Among these might be mentioned suppositories of belladonna, iodoform, or antipyrine, and injections of thin starch, flax-seed tea, hamamelis, lime-water, or carron-oil. Opium should not be used, because of the danger of the habit becoming established. The speaker's favorite remedy was a sugar-coated pill, composed of one-fortieth grain of arsenious acid, one grain each of dried sulphate of iron and extract of sumbul, and two grains of assafœtida. Blaud's pills were also useful. If a malarial element were present he prescribed a mixture of one part of Fowler's solution to nine parts of the sirup of the iodide of iron. Of this ten drops were given after each meal, increased by a drop at a time to thirty drops, decreased at the same rate to the original dose, and then discontinued. For sudden paroxysms of rectal pain in the hysterical condition, nothing was so good as antipyrine in five-grain doses, or hyoscine hydrobromate in the dose of $\frac{1}{125}$ grain. The rest-treatment is useful when it is practicable.

WEDNESDAY, MAY 9TH—SECOND DAY.

Dr. L. H. Dunning, of South Bend, Ind., reported a case of

DOUBLE UTERUS AND VAGINA.

and presented a review of the literature of uterine malformations.

He found the uterus bicornus to be the most frequent malformation. When the ovaries were normal and a small amount of the uterine mucosa was present, menstruation usually occurred. Fifty per cent. of the pregnancies in cases of uterus bilocularis resulted in abortion. When a thick vaginal septum existed, if it were recognized before the occurrence of pregnancy, it should be removed. He thought the best plan was to excise the septum and secure the edges of the vaginal mucous membrane with catgut, in order to avoid, as far as possible, the formation of cicatricial tissue in the vagina.

Dr. William H. Taylor, of Cincinnati, reported two cases which he had seen in his practice in the past year. In one of the cases there was a uterus bicornus and a vaginal septum.

THE CHILD STRADDLED THE SEPTUM

and tore it away. The labor was not followed by any bad consequences. The second case was one of double vagina.

Dr. William Goodell, of Philadelphia, related a case of uterus bicornus which he had diagnosed as one of extra-uterine pregnancy, and had lectured upon it for an hour before his class at the University of Pennsylvania. He had watched the case closely from the beginning, and his mistake had convinced him of the ease with which errors in diagnosis could be made in these unusual cases.

The election of officers resulted in the choice of *Chairman:* Dr. W. H. Wathen, of Louisville; *Secretary:* Dr. A. B. Carpenter, Cleveland, O.

Dr. F. H. Martin, of Chicago, read a paper on the

VALUE OF GALVANISM IN THE TREATMENT OF FIBROID TUMORS OF THE UTERUS,

according to Apostoli's method, of which the following is a summary:

1. A means of generating a continuous current of electricity of steady and uniform character, that can give an actual current strength, through a resistance of 200 ohms, of 500 milliampères, is necessary to obtain all the benefits of this treatment.

2. Fibroid tumors of small size can be completely absorbed by the proper application of strong currents of galvanism.

3. Hemorrhages from fibroid tumors can be promptly cured by the local coagulating effect of the positive pole applied to the interior of the uterus. Severe neuralgias, so often accompanying these troubles, can invariably be relieved by three or four applications of this treatment.

4. When the cervical canal cannot be entered by any form of intra-uterine electrode, flexible or otherwise, after repeated trials, a negative galvano-puncture should be made into the presenting part of the obstructing mass of the tumor and an artificial canal opened, which is to take the place of the impermeable uterine canal in all subsequent treatments.

5. The intra-uterine electrode should in all cases be negative, unless there is hemorrhage or excessive leucorrhœa, when the positive pole is required. The same patient may, however, present symptoms demanding the use of both poles at successive operations.

6. The strength of the current should depend entirely upon the area of active surface of the internal electrode, and should be 25 milliampères for each square cubic metre of active surface in actual contact with the endometrium. If more is used, the concentration of the current will be sufficient to cause troublesome cauterization. If less is used, the concentration at any one point will not be enough to cause the necessary coagulation for checking hemorrhage.

7. The duration of each sitting should be five minutes when the maximum current required is employed.

8. The number of operations is necessarily dependent upon, and influenced by, the result to be accomplished. A severe hemorrhage can be checked, and relief to the symptoms often accomplished, by four or five séances, while a general reduction of the tumor necessitates many operations, varied, of course, according to the size and location. In some cases of large multiple tumors a relief of the symptoms, or a symptomatic cure, must be accepted as a substitute for an actual cure.

9. The operation should be intermenstrual, if possible, but if the hemorrhage is continuous, it will be necessary to operate during the flow. The séances may be held every day, with the system of concentration adopted that enables one to attack different portions of the canal at succeeding treatments, or they can be given with advantage as seldom as once a week.

10. Since the adoption of the flexible intra-uterine electrodes and Dr. Apostoli's method of vaginal galvano-puncture, extra-uterine puncture should be practised, if at all, only as a last resort.

11. Galvano-puncture needles and the internal electrodes should be constructed of material that is not injured by coming in contact with strong carbolic acid, or 1 to 1,000 bichloride of mercury solution. All electrodes for internal use should be thoroughly scrubbed with a nail-brush and soap and water after each application, and allowed to remain in one or another of these standard antiseptic solutions until they are to be employed again, when they should be washed in a weaker solution of the same before using. Before a vaginal puncture is made, the vagina should be thoroughly wiped out with a 1 to 3,000 bichloride solution.

12. There is no excuse for any percentage of mortality in the proper application of this treatment. While Dr. Apostoli has had 2 deaths in 275 cases, he candidly admits that they were due to avoidable accidents, and should not be considered as legitimate consequences of the operation.

13. In experienced hands, and by the adoption of the present means of concentration, the most delicate and

sensitive patient can receive, without experiencing any severe discomfort, all the benefits to be derived from this valuable treatment.

Dr. Newman, of New York, thought that indiscriminate piercing might do much harm. A man must know where he is, and must have the proper instruments.

Dr. Marcy, of Boston, thought the subject one of the most important of the new departures. At the last International Medical Congress a whole day was given up to it. He had used the treatment during the past winter with much, though not unqualified, success.

Dr. A. B. Carpenter, of Cleveland, followed with another paper on

APOSTOLI'S METHOD.

He thought it very necessary to commence with a small dosage of galvanism, and then gradually increase it. Rest was also very necessary. He required his patients to remain an hour in the office after treatment. He had found that his patients were stimulated by the treatment, and were inclined to visit their friends and talk too much unless controlled. The speaker exhibited the apparatus employed by him, which created much interest.

Dr. L. S. McMurtry, of Danville, Ky., reported a case of

TYPHLITIS WITH DOUBLE PERFORATION OF THE CÆCUM

and peritonitis, in which laparotomy and suture of the gut were followed by recovery. The patient was a physician (who was present), who was attacked with typhlitis in January last. Symptoms of peritonitis supervened, and, when seen by Dr. McMurtry, he was in collapse, with serous vomiting and bloody stools. Abdominal section was at once performed, the incision being made on a line two inches to the right of the umbilicus and continued obliquely toward the pubes. The peritonitis was limited, but bore evidences of being recent, severe, and spreading. The vermiform appendix was unaltered, but two gangrenous perforations were found in the cæcum. The sloughing edges of the openings in the gut were trimmed away with scissors, and united with silk sutures, applied after Lambert's method. The peritoneum was cleansed, and a rubber drainage-tube inserted. The patient made a rapid and complete recovery.

Dr. McMurtry called attention to the fact that the treatment of non-traumatic perforation of the intestines by abdominal section is of recent date. The first operation of this kind was reported in 1883, by Mikulicz, for perforation of the vermiform appendix. The case terminated fatally. In June, 1887, Weir was able to collect only fifteen cases in which laparotomy was done for perforation of the intestines not due to traumatic causes. Of this number, nine were cases of perforation of the appendix. Two more have been reported since Weir's paper appeared, making a total of eleven cases of laparotomy for perforation of the appendix, with three recoveries. Only one case of laparotomy for peritonitis due to perforation of the cæcum has been reported, the perforation having been discovered only at the autopsy. The case here reported was the first one recorded of peritonitis, caused by perforation of the cæcum, treated successfully by abdominal section.

The speaker called attention to the importance of distinguishing between pericæcal abscess (perityphlitis), where the seat of inflammation and suppuration is extra-peritoneal, and cases of perforative peritonitis. He made a plea for more frequent resort to

EXPLORATORY INCISION,

which he thought superior to aspiration, and involving less danger of peritoneal infection. As soon as the diagnosis of perforative peritonitis had been made, the only hope of recovery lay in an immediate resort to laparotomy.

Dr. Thomas Keith has removed from Edinburgh to London.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE COLLEGE OF SURGEONS—A SUCCESSFUL OPERATION FOR CEREBRAL ABSCESS—THE DISCRIMINATION OF LARGE AND SMALL VALVULAR LESIONS OF THE HEART—LOOSE BODIES IN THE KNEE-JOINT—THE ROYAL MEDICAL BENEVOLENT COLLEGE—THE LATE PROFESSOR DE CHAUMONT.

London, April 21, 1888.

Affairs at the College of Surgeons continue pretty much in *statu quo.* No steps have been taken, as yet, toward meeting the wishes of the members. The ruling body seem to possess a great deal of inertia, and are apparently not to be roused by any outside pressure short of compulsion. One trifling reform has just been initiated by them, but one scarcely deserving of notice. Attention having been directed to the scanty attendance upon the college lectures, the Council have apparently felt it incumbent upon them to pay some attention to the matter. As the result of their lucubrations the lecture hour has been changed from four to five, which latter hour may prove somewhat more convenient to busy practitioners thirsting for college lectures.

At the Medical Society of London, on Monday last, Mr. Damer Harrison, of Liverpool, narrated a case in which he had successfully operated for cerebral abscess. The patient was a boy of fifteen, who had received a severe blow on the left side of the head eleven years previously. A wound was caused from which bone was removed, but no severe symptoms then followed. A year ago, however, twitchings in the right arm were observed. These were confined to the flexors of the wrist, the biceps, and the deltoid. Eight days before he was admitted into the hospital he had received a blow on the *right* side of the head. Three days later convulsions occurred on the right side of the body, first in the arm, and then in the face and leg. Loss of power ensued on the right side, especially marked in the right arm. Similar convulsive attacks followed in the succeeding four days. They were accompanied by giddiness and pain in the head, but by no loss of consciousness. The pain in the head increased and the paralysis became more marked, especially in the face and leg. Vomiting occurred. The intellect was impaired. Vision in the right eye was also affected. The reflexes on the right side were diminished. No ophthalmoscopic examination could be made. A diagnosis was made of cerebral abscess situated in the motor region of the cortex. An operation was determined on, and a circle of bone removed with the trephine, the centre of the trephine-hole being placed three-quarters of an inch in front of the fissure of Rolando, as determined by Thane's method. As there was no bulging of the dura mater it was not incised at once, but the wound was kept open. At the end of four days, the symptoms having become more urgent, a crucial incision one inch in extent was made through the dura mater. A vertical puncture was then made in the brain with a tenotomy knife to the depth of an inch and a quarter. A drop of pus exuded, and an incision an inch in length was then made, along which about four drachms of fetid pus rapidly flowed. The abscess-cavity was washed out with corrosive sublimate lotion, and a horsehair drain inserted. The patient was allowed to get up a month after the operation, and could walk about with assistance. At the present time the patient was perfectly well, the only noticeable symptom being the slightly feebler grip of the right hand as compared with the left.

Mr. Barker adverted to the immense difficulty of examining patients' eyes just at the time when such examination possessed the greatest interest. Dr. Beevor thought the tendency of all these cases of cerebral abscess was to confirm Dr. Ferrier's view as to the cerebral centres. He remarked that abscess, being of rapid growth, might not give rise to optic neuritis, whereas in tumors this was generally present. Dr. Money observed that their experience at University College Hospital, in cases of suppuration of the brain, was that the temperature was invariably subnormal, an opinion which was confirmed by Dr. Herringham.

Dr. Milner Fothergill then read a paper on the discrimination of large and small lesions in cases of cardiac valvular disease. He referred to the evolution of the heart from a mere pulsatile muscular sac, and said that nature compensated a valvular injury by falling back upon the primitive form of heart—the muscular sac. As in evolution valves economized muscular energy, so in dissolution an injury to the valvular mechanism of the higher heart was compensated by muscular growth—a development of the early lower heart—spoken of as compensatory hypertrophy. We realized that we could do nothing for a valvular lesion; our hopes centred on the primitive muscle. If by rest and good food, with cardiac tonics, we could aid nature's attempt to develop the primitive heart, so far so good. A small lesion was easily compensated, and the compensation easily maintained for years. With a large injury, complete compensation was unattainable, and such compensation as was possible soon wore out. It was consequently important to measure the extent of valve-mutilation, and from that to calculate the chances of the patient. A murmur revealed the existence of valvular injury, but was dumb as to its extent. To ascertain that we must examine the case physiologically (especially in mitral lesions) and test the effect of effort. With a small lesion the patient could run, but not very far; with a moderate lesion he could walk on the flat, but not get up hills easily or run; with a large injury all effort would be distressing. In strict proportion to the extent of the lesion was the organism crippled and life shortened.

A somewhat animated discussion took place at the Pathological Society, a few evenings since, on the subject of loose bodies in the knee-joint. Mr. Shattock showed a specimen of a rare form of foreign body which had been removed. It was discoidal in form, and invested by a thin capsule of connective tissue continued into the falciform synovial fold on the right side. At first sight it looked like an overgrowth of fat, such as often occurred in the alar ligaments, but histological examination showed a faintly stained structure with collections of reddish-brown granular pigment in trabeculæ, variously arranged. It was evidently the result of an old hæmatocele into the alar ligament from some injury. Mr. Bowlby referred to a specimen in St. Bartholomew's Hospital Museum, of a hæmatocele which had formed in the knee of a healthy man after injury, and formed a loose body in the joint. It had been removed by operation. He then showed a specimen from one of Mr. Morrant Baker's cases, of a loose body starting from a torn fringe of synovial membrane. Another specimen showed portions of the semilunar cartilages which had been found loose in the knee-joint after injury, and were removed by operation. A jar was also shown containing four hundred and fifteen loose bodies removed from the knee-joint of a man who had suffered from rheumatic fever. They were composed throughout of hyaline cartilage, and only four or five of them had pedicles. A case was mentioned in which, without any history of injury, a loose body was found in the left knee of a lad of eighteen. It was removed by operation, and turned out to be a small portion of cartilage detached from the surface of the femur. The patient made a good recovery, but returned a year later with a similar body in the other knee. The specimen was shown. Mr. Godlee mentioned that he once had the opportunity of removing a very peculiar body from the knee-joint. It had been diagnosed as a loose cartilage, but turned out to be a broadly pedunculated mass growing from the internal ligament. Mr. Clutton referred to a case in which he had removed a loose body from a knee-joint in a boy, and, two years later, another from the opposite knee. Professor Humphrey discussed the possibility of quiet necrosis of the cartilages, leading to suppuration, and observed that the presence of calcareous matter was a difficulty in connection therewith. Up to the present time, no instances had been adduced of a portion of bone or cartilage being chipped off and forming a loose body in the joint, except the case reported by Mr. Simon. Mr. Howard Marsh said quiet necrosis was a rare process, but it certainly did take place, and he thought that of all structures articular cartilage would be the most likely site for it to occur in. Sir James Paget remarked that in his own paper on quiet necrosis he was referring to the process in osseous tissue only, and the credit of first describing the process in cartilage belonged to Teale.

A highly successful festival in aid of the Royal Medical Benevolent College was held a few days since. This is an institution far less widely known than it deserves to be. Its functions are both educational and eleemosynary. In its former capacity it receives two hundred resident pupils, of whom fifty are foundation scholars, and receive a sound education free of all expense. The remainder pay about fifty (or, if not sons of medical men, seventy) pounds annually. There are also fifty pensioners (twenty-four of these being resident), who must be either medical men, or the widows of medical men, in reduced circumstances.

The death is announced of Dr. De Chaumont, Professor of Military Hygiene in the Army Hospital Medical School. Dr. De Chaumont was a well-known worker in the field of sanitary science, and assisted the late Dr. Parkes in his labors at Netley, finally succeeding him in the professorial chair. He edited the last edition of Dr. Parkes' well-known work on hygiene.

OUR PARIS LETTER.

DR. NACHTEL AND THE AMBULANCE SYSTEM IN PARIS—PRODROMIC SIGNS OF LOCOMOTOR ATAXIA.

Paris, April 20, 1888.

There is at last some hope that the system of ambulance proposed some time ago by Dr. Nachtel will soon be adopted in Paris. Authorization has been granted by the Board of Public Assistance to unite, by special telephonic lines, the St. Louis Hospital with twenty-seven warning-posts placed in different quarters of Paris, within a perimeter of eight kilometres (about five English miles), in the chemists' shops and in the bureaus of police. When an accident happens in the public streets, notice will be immediately transmitted to the St. Louis Hospital, where a staff of internes are in constant attendance. The ambulance wagon set apart for the purpose, which is always ready with horses harnessed, will start at the first signal, and the patient will receive medical or surgical aid in from three to ten minutes, according to the distance. The funds collected by Dr. Nachtel are estimated sufficient to give this system a year's trial, after which it will be decided as to whether it shall be permanently adopted or not.

M. Franck communicated the report of a special commission which was charged to examine the work of MM. Henrion and Charles Richet. This work was undertaken to determine the difference of activity in the exchange of gases which takes place in the lungs during natural sleep and hypnotic sleep. It results from these experiments and from the observations of the authors, as was confirmed by the commission, that a diminution of activity and a sort of semi-asphyxia are produced under the influence of hypnotism. This state explains the many phenomena, more or less strange or surprising, which accompany artificial sleep: Slackening of the respiration, weakness, and even the apparent disappearance, of the beats of the heart, general coldness of the body, pallor of the face, lethargic aspect, etc.

At a recent meeting of the Société de Biologie Dr. Galezowski read a paper on the prodromic signs of locomotor ataxy, two of which had particularly attracted his attention during the last few years—these are paralysis of the muscle of accommodation and anæsthesia of the peri-orbital region. He stated that within the last six years he noticed the existence of these two phenomena in a certain number of patients who have since become undoubted ataxics, although at the time they were first examined nothing led him to foresee the appearance of this malady, excepting a weakness of the rotulian or patellar reflex, which was established among some of the patients by Professor Charcot. The paralysis of the muscle of accommodation which Dr. Galezowski observed in his patients was not accompanied by mydriasis, nor paralysis of any of the other muscles supplied by the third pair of nerves. As this paralysis is, moreover, always localized in one eye only, it caused no trouble whatever in the vision whenever the patient looked with both eyes; while the paralysis of accommodation which succeeds diphtheria is, on the contrary, always binocular. That which presents itself after certain contusions of the eye is not accompanied by anæsthesia of the peri-orbital region. The same is the case with that which occurs in the course of syphilis. The author therefore believes that this paralysis, when it is unilateral, and when it is accompanied by anæsthesia of the peri-orbital region, constitutes a precursory pathognomonic sign of locomotor ataxy. Dr. Brown-Séquard observed that, as it has been shown that ninety-eight per cent. of cases of ataxy have a syphilitic origin, he saw no reason why the ocular troubles brought to notice by Dr. Galezowski would not also be of a syphilitic nature. To this Dr. Galezowski replied that, while it was admitted that in the majority of cases the ataxy is of a syphilitic nature, he could affirm that, of 1,016 cases of atrophy of the papilla which he had observed, he counted about eight hundred ataxics, and that, of these 800 cases, more than half had a syphilitic origin. It is, therefore, absolutely established that, in a great number of cases, atrophy of the papilla, in ataxic patients, is of syphilitic origin; whence this practical conclusion, that the ocular lesions of syphilis ought to be treated with great energy as soon as they make their appearance, in order to prevent atrophy of the optic nerves. To a remark made by Dr. Dumontpallier, that the paralysis and the anæsthesia of the peri-orbital region may equally be met with in hysterical patients, Dr. Galezowski responded that, in the latter, the paralysis of the ciliary muscle was always accompanied by mydriasis.

At a subsequent meeting of the same society, Dr. Gellé reported the case of a female patient who was many years affected with paralysis of the right vocal cord, due to the presence of a tumor on the course of the recurrent nerve, and who was suddenly seized with complete deafness. Examination of the ear elicited no appreciable lesion whatever. Thinking that he had to do with a dyscrasic condition, Dr. Gellé had the patient's urine examined, and a slight quantity of albumen was found in it. There was no œdema present, and the patient did not complain of any giddiness, either spontaneous or provoked. Fifteen days later œdema of the legs showed itself. The patient remained deaf for eighteen months afterward, and died with all the classical signs of albuminuria. The author concluded his report with the remark that this case is interesting in many points of view: It proves, in the first place, that the sudden deafness, without any lesion of the auditory apparatus, may be an accident of albuminuria in its incipient stage. This deafness is incurable.

A stomatological society for the scientific study of affections of the mouth and teeth has been founded in Paris. This society will be composed of the members who have founded it, and other national and foreign members. Medical men desirous of becoming members are requested to apply to Dr. Magitot, 8 Rue des Saints-Pères, Paris.

Dr. Baader, editor of the *Correspondenzblatt fur Schweitzer Aerzte*, died recently in Basle.

PROFESSIONAL QUACKERY.

To the Editor of The Medical Record.

Sir: I saw to-day a reprint from the *American Journal of Obstetrics* of an article on laparotomy, which the author had sent to the patient of another physician, with the apparent intention of encouraging the recipient to apply to him for the removal of her ovaries. I say *apparent*, for the reason that numerous paragraphs had been marked on the margin with a lead-pencil, and the pamphlet also contained, in addition to the article as it appeared in the *Journal*, a list, covering several pages, of the books and minor writings by the same author.

I think this subject worthy of bringing to the attention of the profession, because men who resort to this kind of advertising ought not to be eligible candidates for election to any office in our medical societies; and the members ought to be on their guard against allowing them to obtain positions of honor or trust which would indicate an approval by the profession of their methods of drumming up business. ⁂

New York, May 8, 1888.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from May 6 to 12, 1888.

McKee, James C., Lieutenant-Colonel and Surgeon. Granted leave of absence for one month. S. O. 107, A. G. O., May 9, 1888.

Par. 11, S. O. 104, A. G. O., May 5, is amended by Par. 4, S. O. 108, A. G. O., May 10, 1888.

Major and Surgeon Charles R. Greenleaf; Major and Surgeon Robert M. O'Reilly; and Captain and Assistant Surgeon John O. Skinner, are detailed as a board of medical officers to assemble at the U. S. Military Academy, West Point, N. Y., on June 1, 1888, to examine into the physical qualifications of the candidates for admission to the Academy, and, in connection with the Superintendent of the Academy and Commandant of Cadets, the members of the graduating class. S. O. 104, A. G. O., May 5, 1888.

Brown, Harvey E., Major and Surgeon. The leave of absence for seven days granted by Orders 68, Fort Barrancas, Fla., May 2, 1888, is extended twelve days. S. O. 90, Division of the Atlantic, May 8, 1888.

Loring, Leonard Y., Captain and Assistant Surgeon. Granted leave of absence for three months on Surgeon's certificate of disability. S. O. 105, A. G. O., May 7, 1888.

Brown, Paul R., Captain and Assistant Surgeon. Granted leave of absence for six months, on Surgeon's certificate of disability, with permission to leave the Division of the Atlantic. S. O. 107, A. G. O., May 9, 1888.

Benham, Robert B., Captain and Assistant Surgeon. To proceed from Fort Du Chesne to Fort Douglas, Utah, and report to commanding officer of that post, not later than 25th inst., to accompany battalion of Sixth Infantry to Fort Lewis, Col. Upon completion of this duty, will return to his station, Fort Du Chesne, Utah. S. O. 33, Department of the Platte, May 5, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 12, 1888.

Cabell, A. G., Passed Assistant Surgeon. Detached from U. S. S. Adams, proceed home, and await orders.

Simons, M. H., Surgeon. Detached from Naval Academy and to practice-ship Constellation.

HORWITZ, P. J., Medical Director. Leave of absence for six months, to leave the United States.

A Naval Medical Examining Board is now in session at the Naval Hospital, Philadelphia, for the examination of candidates for admission to the Medical Corps of the Navy. There are eleven vacancies in the list of assistant surgeons. Permits for examination can be obtained on application to the Secretary of the Navy.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT. — Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 12, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	10	3
Scarlet fever	170	42
Cerebro-spinal meningitis	3	3
Measles	150	14
Diphtheria	181	48
Small-pox	17	5
Yellow fever	0	0
Cholera	0	0

THE LATE DR. C. R. AGNEW.—At a meeting of the Alumni Association of the College of Physicians and Surgeons, held May 10, 1888, the following was passed:

Resolved, That the following memorandum be entered upon the minutes of the present meeting, and that a copy of the same be sent by the secretary to the family of the deceased and to the NEW YORK MEDICAL RECORD and the *New York Medical Journal:*

It becomes our sad duty to record the death, on Wednesday, April 18th, at his residence in this city, of our associate CORNELIUS REA AGNEW. He was the first President of this Association after it became incorporated, in 1873, and he served it faithfully in this capacity for a number of years. He held the same office, for the second time, at the time of his death. It was largely through his influence that the Association was changed from a formal and only feebly active society into an agency for the direct and vigorous promotion of the interests of the College in its work of medical education. From the very first, up to the time of his death, he never ceased to contribute time, earnest thought, and liberal offerings of money toward the attainment of this object. It is a pleasure for us now to think that he had the satisfaction, before he died, of witnessing the first-fruits of his own planting and unwearying cultivation. Without his energetic and untiring co-operation and wise counsel it is highly probable that a few spasmodic efforts at the beginning would have soon given place to the lifelessness that characterized the earlier period of the Association's existence.

To his sorrowing widow and children we would extend our sincere and heartfelt sympathy, begging them to accept from us the assurance that the memory of their distinguished husband and father will be warmly cherished by the numerous alumni of the College of Physicians and Surgeons in the City of New York.

NEW YORK, May 9, 1888.
A. H. BUCK,
G. G. WHEELOCK.

Extract from the minutes of the Annual Meeting of the Alumni Association of the College of Physicians and Surgeons. CHARLES HITCHCOCK, *Secretary*.

61 West Thirty-sixth Street, May 10th.

ISOLATION OF CONTAGIOUS DISEASES IN PUBLIC INSTITUTIONS.—Mr. James C. Bayles, the President of the Health Department of the City of New York, calls attention to this important subject by the following circular letter to the authorities of the different public institutions: "I am directed by the Health Board of this city to call your attention to the necessity for the provision of suitable facilities in your institution for the proper isolation of all cases of contagious disease that may come under your charge. It is, of course, evident to you that the inadvertent reception and the necessary temporary retention of cases of contagious disease, in contact with those dissimilarly affected, expose the latter class to a serious but preventable danger. The Commissioners of this Department, and also the Advisory Committee of the Academy of Medicine, consider that immediate steps should be taken to overcome this source of danger to the spread of contagious disease. It is deemed at present only necessary to call your attention to the requirement of this means of protection of the public, in order to secure the necessary action on your part to remedy the evil."

THE LIQUOR AMNII AND FŒTAL NOURISHMENT.—Dr. Opitz, of Chemnitz, in reply to Dr. Ott, who holds that the liquor amnii is concerned in the nutrition of the fœtus, brings forward a case of malformation which is preserved in the museum of the municipal hospital in Chemnitz, which seems to show that the nutrition of the fœtus must be independent of the liquor amnii. An apparently healthy and well-formed child was born, which respired normally and passed meconium and urine. It also sucked, but immediately brought up the milk in a frothy condition. A gum-elastic catheter was introduced into the œsophagus, but it could only be passed as far as the cricoid cartilage, consequently some obstruction of the œsophagus was diagnosed. The child lived six days. At the post-mortem examination it was found that the œsophagus ended abruptly in its middle third. The stomach was filled with meconium. A fine probe could be passed through the cardiac orifice into the trachea.—*The Lancet.*

HOW MUCH MAN EATS.—According to Richard A. Proctor, who writes in the *Cosmopolitan*, it has been calculated that, on the average, each man who attains the age of threescore and ten consumes during the course of his life twenty wagon-loads of food, solid and liquid. At four tons to the wagon, this would correspond to an average of about a hundred ounces of food per day, or, say, some one hundred and twenty ounces per day during adult life and about eighty ounces during infancy and youth. Most modern doctors agree in regarding one hundred and twenty ounces of food per day, corresponding to five or six half-pints of liquid food, and seven or eight pounds of solid food, as in excess of the real daily requirements of a healthy man or woman. Yet probably most of us take more than this, in one way or another, during the day. Dr. Lankester, from an extensive analysis of the dietary of soldiers, sailors, prisoners, and the better paid classes of artisans and professional men in London, found the average daily quantity of solid and liquid food to be one hundred and forty-three ounces. Doubtless many take much less; but unquestionably many take much more than this. When some one mentioned before Sydney Smith the twenty wagon-loads of food calculated for each man's allowance, he turned to Lord Durham, who like himself was corpulent (and not without sufficient reason), with the quaint remark, "I think *our* wagons, Durham, must be four-horsed ones."

CRACKED NIPPLES are treated with great success by Pinard, as follows: As soon as there are any appearances of cracks, or even tenderness of the nipples, a compress, folded in four and steeped in boracic-acid solution, three or four per cent., is applied. Oil silk is placed over the compress to prevent evaporation. Over this a layer of cotton wadding, and the whole secured by a bandage.—*Cor. Amer. Practitioner.*

DIGITALIS should not be given after its use ceases to increase the flow of urine. As to the dose, forty minims, four times daily, will generally secure the diuretic effect. —DR. STEWART, *Iowa. Med.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 21 NEW YORK, MAY 26, 1888 Whole No. 916

Original Articles.

OBSERVATIONS ON THE NORMAL SACCULI OF THE ANAL CANAL, BOTH IN HEALTH AND IN DISEASE, AND ALSO ON THE PRETERNATURAL POUCHES OF THE SAME REGION, AS DESCRIBED BY DR. PHYSICK.

By WILLIAM BODENHAMER, A.M., M.D.,

NEW YORK.

THE anatomy, physiology, and pathology of the normal sacculi of the anal canal, as well as the preternatural pouches of the same locality, as described by Dr. Physick, together with other morbid pouches of the anus and rectum, are not as well understood as they should be, or might be; and they certainly are of sufficient importance, in the estimation of the writer, to justify him, or anyone else, in making an earnest endeavor to further elucidate the subject.

The writer will now proceed to the consideration of the anatomical characteristics of the normal sacculi of the anus, as described by anatomists.

It is positively declared by some writers that, until recently, the normal sacculi of the anus were scarcely known, being neither well understood nor well described by the old anatomists, who considered them to be mere accidental occurrences, being neither normal nor constant. The writer, however, will attempt to demonstrate that the normal structure of the anus denominated *valvulæ*, *lacunæ*, or *sacculi*, as they are severally called, is not a recent discovery, as some who ought to know better would have us believe, but was fully recognized, understood, and well described, as forming a portion of the natural apparatus, by some of the old anatomists, more than a century ago, and since then verified and exemplified by eminent anatomists of recent times, as will now be shown.

Morgagni and Glisson describe the lacunæ of the anus very correctly, but call them semilunar valves—*ani valvulæ semilunares.* Morgagni gives the following drawing of a vertical section of the parietes of the inferior portion of the rectum, showing the bases of the columns of Glisson, or, as they are also called, the columns of Morgagni, and the valves of the anus, as he denominates the lacunæ.[1]

The celebrated Ruysch has also described these semilunar lacunæ of the anus.[2]

Astruc, the author of the most complete treatise on the venereal disease of his time, says that, "in the margin of the anus itself, several short ducts, or rather *lacunæ*, appear, which convey a viscid humor." [3]

The celebrated anatomist Winslow also describes these lacunæ in the following concise manner. He says: "Near the extremity of the rectum, the rugæ, or folds, become in a manner longitudinal, and at last, toward the circumference of the inner margin of the anus, they form little bags, or semilunar lacunæ, the openings of which are turned upward toward the cavity of the intestine." [1]

The distinguished anatomist J. Hippol Cloquet gives a full and clear description of the lacunæ or sacculi of the anus. He says: "The inner surface of the rectum is usually smooth in its superior half, but in the inferior portion there are observed some parallel longitudinal wrinkles which are thicker near the anus, and are of variable length. These wrinkles, whose number varies from four to ten or twelve, and which are called the columns of the rectum, are formed by the mucous membrane and the layer of subjacent cellular tissue. Between the columns there are almost always to be found membranous semilunar folds, more or less numerous, oblique or transverse, of which the floating edge is directed from below upward on the interior of the intestine. These folds form a kind of lacunæ, of which the bottom is narrow and directed downward. There are observed, moreover, on the inside of the rectum, the orifices of mucous follicles, which are directed from above downward, and reddish villosities which belong to the mucous membrane. The follicles in question pour into the rectum a white and pretty thick mucus, so long as they are examined at some distance from the anus, but at the anus itself a hair is seen rising from the centre." [2]

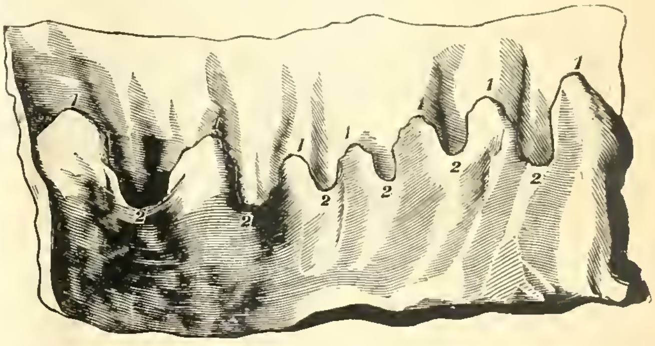

FIG. 1.—1, Ani columnæ; 2, interjectæ iisdem valvulæ semilunares.

M. Ribes describes the semilunar lacunæ, or sacculi of the anus, quite correctly. At one time, however, he denied their existence.[3]

Cruveilhier also describes the lacunæ or sacculi of the anus. He says: "The point at which the skin becomes continuous with the mucous membrane is deserving of notice; it is within the rectum, at the distance of some lines from the anus properly so called, and is marked by a waved line, which forms a series of arches or festoons, having their concavities directed upward. Sometimes there are small pouches in the situation of these arches, opening upward. From the angles at which the arches unite some mucous folds proceed, and small foreign bodies, detached from the fæces, are often detained in the cul-de-sac, and become the causes of fistulæ." [4]

The late eminent anatomist Professor Horner, of our own country, also describes the lacunæ or sacculi of the anus. He says: "The mucous coat of the rectum is thick, red, and fungous, and abounds in mucous lacunæ and glands. It is laid smoothly above, but below it is thrown into superficial longitudinal folds, called columns. At the lower end of the wrinkles, between the columns, are small pouches of from two to four lines in depth, the orifices of which point upward; they are occasionally the seat of disease, and produce, when they are enlarged, a painful itching. An original observation of Dr. Physick, on the nature of this affection, and the remedy for which consists in slitting them open, or removing them, induced me to look for the ordinary natural structure, which I have ascertained to be as now described."[1]

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[1] Adversaria Anatomica, Adver. iii., Animad. vi., pp. 10 et 11. Et Addenda Adversariis, Tabula iii., Fig. 1, p. 109. 4to. Lugduni-Batavorum, 1723.

[2] Opera Omnia, Anatomico-Medico-Chirurgica, vol. i., p. 221. 4to. Amstelœdami, 1737.

[3] A Treatise on the Fistula of the Anus, p. 6. Translated by W. Barrowby. 8vo. London, 1738. This description is brief, but correct, even to the function of the lacunæ and the character of their secretion. He believed they were normal and constant.

[1] An Anatomical Exposition of the Structure of the Human Body, fourth edition, vol. ii., p. 148. English translation, by G. Douglas, M.D. 4to. London, 1732.

[2] A System of Human Anatomy, p. 617. Translated from the French by Robert Knox, M.D. Imp. 8vo. Boston, 1830.

[3] Mémoires de la Société d'Émulation de Paris, tome ix., p. 107. 8vo. 1826.

[4] The Anatomy of the Human Body, p. 380. Translated from the French by G. S. Pattison, M.D. Imp. 8vo. New York, 1844.

Dr. Horner gives the following drawing, which completely illustrates his description. Dr. Reynell Coates very minutely describes the normal sacculi of the anal canal; indeed, his whole article on the anus, in the "American Cyclopædia of Practical Medicine and Surgery," is the ablest production on the subject the writer has ever read. Dr. Coates says: "Immediately below the margin of the internal sphincter we find a series of membranous pockets, or sacculi, corresponding in number with the grooves between the columns of the rectum, one of which grooves is directed toward, and terminates in, each of the cul-de-sacs. On the outer side the sacculi are lined by the mucous membranes of the grooves, prolonged into the intervals of the hemispherical eminences already noticed, but which are not sufficiently distinct after death to be well represented in a drawing from nature. Internally, or on the side next the canal, the sacculi are completed by portions of loose membrane, which are processes from the reverted integuments lining the canal below. Each of these loose portions is attached, at either end, to the base of one of the columns of the rectum, and its free margin hangs in a curve between these points, thus forming a purse with the mouth presenting upward, and resembling in some degree one of those formed between the valves of the aorta and the parietes of that vessel. Unlike the sacculi said to be sometimes formed by the intersection of the transverse and longitudinal folds of the rectum, near the upper part of the anal canal, these pockets may be compressed, but cannot be obliterated by the distention of the anus. Their number, form, and position must necessarily vary with those of the columns and swellings, which give them attachment; and, like the columns, some of them are frequently rudimentary. The upper margins of these pockets, taken collectively, appear to form the festoon mentioned by Cruveilhier as the termination of the cuticle."[1]

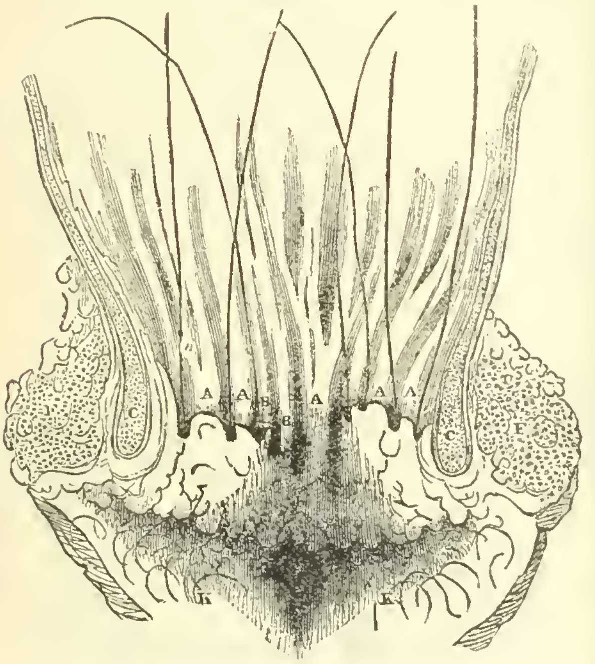

FIG. 1.—A Vertical Section of the Anterior Parietes of the Anus, with the whole Canal displayed so as to show the Relations of the Sacculi of the Middle Region, and their Relations to the Surrounding Parts, their Orifices being marked by Bristles. A, A, Columns of the rectum; B, B, rudiments of columns; C, internal sphincter; F, external sphincter; I, rudimentary or imperfect sacculi; K, K, radiated folds of the skin, terminating on the surface of the nates. *n*. A bristle in one of the sacs.

The writer could give additional authorities on the normal sacculi of the anus, but he deems those which have been presented quite ample to prove that the literature pertaining to this subject is neither scarce nor obscure, as some have declared, but abundant, and well understood by the intelligent portion of the profession. The writer himself has, for a number of years, paid considerable attention to this subject, having frequently examined the normal sacculi of the anus minutely, both in the living and in the dead subject. But these examinations only verified that which had already been demonstrated, namely, that the structure was normal and constant. He published some remarks on the subject in his treatise on "Anal Fissure," published in 1868, and in his work on the "Physical Exploration of the Rectum," published in 1870; and in both works he gave drawings of the probe-hook, and directions how to use it, to detect pouches or pockets of the rectum.

The writer will now consider the morbid condition of the normal sacculi of the anus, with a view to compare it with the preternatural pouches described by Dr. Physick himself, together with other morbid pouches of the rectum. It has always been a question with the writer whether the natural sacculi of the anus, morbidly affected, and the preternatural pouches of the same region described by Dr. Physick, were identical. The question is: Did Dr. Physick, in describing the preternatural pouches, mean the morbid condition of the natural pouches, or did he mean some other morbid production of these parts, independent of the normal sacculi? for it is certain that such pouches are sometimes found in the rectum, which are not occult fistulæ, and which have no connection whatever with, nor originate in, the normal sacculi, as can easily be demonstrated, and will be, further on.

The writer, however, is well aware that all surgical authorities, as far as he knows, claim that the preternatural pouches of Dr. Physick and the natural sacculi morbidly affected are one and the same malady. But the evidence upon which these distinguished authors attempt to establish this claim is, in the opinion of the writer, wanting, or at least is not made out clear, and rests more or less upon assumption; for they certainly do not arrive at such a conclusion from the description which Dr. Physick himself gives.

The writer will now present the pathogeny of the preternatural pouches or cavities of the anal canal, as described by the late and distinguished Dr. Physick, who alternately occupied the Chairs of Surgery and Anatomy in the University of Pennsylvania, and the question might here be asked, Who would be more likely to know than Dr. Physick himself of what he first discovered, described, studied, and successfully treated for a number of years? Was he mistaken?

Dr. Reynell Coates, the friend of Dr. Physick, says: "On the cause of the preternatural pouches or cavities of the anus, Dr. Physick entertains some views which can hardly be regarded as speculative. In his opinion they probably commence in the same manner with one of the forms of hemorrhoidal tumors—the constriction of the sphincters, which embarrasses the venous circulation of the part, aided by the pressure exerted in passing difficult stools, frequently giving rise to ecchymoses beneath the integuments. The effused blood produces no irritation of the cellular tissue in which it is placed, but forms for itself a simple inert receptacle. If the blood is neither absorbed nor discharged, but remains or becomes enlarged by successive ecchymoses, it constitutes (certain authorities to the contrary notwithstanding) one form of hemorrhoids. If, on the other hand, some accident, or the absorption of the integument gives exit to the blood after the cavity has become accustomed to its presence, the cellular tissue shows little disposition to reunite, no obvious marks of inflammation appear, and a preternatural cavity is established."

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[1] Special Anatomy and Histology, eighth edition, vol. ii., p. 47. Imp. 8vo. Philadelphia, 1851.

[1] American Cyclopædia of Practical Medicine and Surgery, vol. ii., p. 83. Imp. 8vo. Philadelphia, 1841.

"In support of this explanation Dr. Physick states that in the early part of his practice he has in several instances operated on hemorrhoidal tumors of the same part, in which, after the removal of the coagula, the part presented the same aspect with the preternatural cavities, wanting only the orifice. He refers, also, to the existence of similar cavities, after the discharge of ecchymoses of the scalp, such as most surgeons must have seen, particularly in children, and which often prove tedious and difficult of cure. He has also observed the same accident in other parts of the body. In most cases the first appearance of the cavities was preceded by troublesome piles." [1]

Dr. Physick thus gives a full and graphic description of the origin, nature, cause, and characteristics of the affection which he denominates *preternatural pouches or cavities of the anal canal.* He plainly shows the origin of these pouches to be, first, the formation of hæmatomata, the result of a small quantity of extravasated blood into the loose submucous tissue of the part, from the rupture of a venule or venous capillary, consequent sometimes upon violent straining efforts to expel indurated fæces. A hæmatoma thus formed, and before opening and establishing an orifice, is the first stage of one form of hemorrhoids, and may be called an encysted submucous hemorrhoidal tumor, as the writer has fully explained in his treatise on the hemorrhoidal disease (p. 62). The contents of such bloody tumors may, under favorable circumstances, be in process of time absorbed, and the tumors entirely disappear. But this happy result does not always take place, for if the causes which first produced the tumors continue for a length of time, with the addition of prolonged irritation or inflammation of the parts, the very thin covering of the tumors sooner or later becomes absorbed, or is invaded by ulceration, and their contents escape into the anal canal, and the openings thus made, showing no disposition to heal or close, but remaining permanently open, are then, in reality, what Dr. Physick calls them, preternatural pouches or cavities. And, furthermore, these ecchymoses or hæmatomata, under the mucous membrane, are completely cut off from the circulation; they are not supplied with blood afterward from the same vessels which caused or produced the extravasation, and in this respect they differ very widely from the erectile and the varicose hemorrhoidal tumors, which are so abundantly supplied with blood-vessels. On opening one of these bloody tumors, and emptying it of the blood-clot, which is all that it contains, a little sac will be seen, which is lined with a smooth, soft, and delicate membrane which had, as it were, been thrown around the clot. The structure of such a sac resembles, in almost every particular, that of a degenerated normal sacculus, and which fact can be verified by any student. Furthermore, if anyone will examine the interior of the anal canal soon after forcible dilatation of the anal sphincters, he will find the mucous membrane studded with numerous small, round ecchymoses or hæmatomata, like good-sized bird-shot. These will under favorable circumstances soon spontaneously disappear, leaving no bad sequelæ; they are liable, however, from sufficient morbid causes of the mucous membrane, to degenerate and result in sacculi.

To illustrate this subject still further, in favor of the opinion of Dr. Physick, the writer will give the views of the distinguished French professor, M. Chaussier, on the origin of hemorrhoidal tumors, translating his words from the French as follows: "Hemorrhoidal tumors are due to a rupture of some of the capillary branches, situated in the cellular membrane, between the mucous and the muscular coat of the rectum. The blood being poured out of the ruptured vessels, raises up the mucous membrane, and forms on the spot a bluish or brownish tumor, just what we frequently see to result from the contusion or percussion of the skull, to arise almost instantly—a lump or bloody tumor, more or less voluminous; hence hemorrhoidal tumors, in the commencement, are only an ecchymosis, or an effusion of blood furnished by the rupture of some capillary branches, and which is accumulated, circumscribed, and retained under the membrane lining the inferior extremity of the rectum and margin of the anus. If the causes which have determined the extravasation of blood cease, and are not renewed, resolution occurs spontaneously and the tumor disappears. On the contrary, if constipation prevails, if the efforts of defecation are repeatedly made, if, at the same time, there is plethora, or a particular disposition to it, the tumor remains, it increases, and new ones form from it, either in the interior or on the exterior of the anus." [1]

It is evident from what has been presented that the preternatural pouches of Dr. Physick, whose description of them is very lucid and cannot be misunderstood, is an entirely different morbid production from that of the degenerated normal sacculi, and consequently they cannot be identical, as authors represent them to be; indeed, the opinion of Dr. Physick on this subject is not speculative but demonstrative, and does not in the least depend upon the diseased normal sacculi to sustain it.

The writer will now attempt to show how the normal sacculi become diseased or degenerated. It has been demonstrated that in health they have very small foramina and small cavities, and are in communication with follicles which supply them with mucus, which is poured out at the moment of defecation for the lubrication of the contiguous parts concerned; but, in consequence sometimes of continued excitation, irritation, or chronic inflammation of the mucous membrane in which they are located—they, of course, partake more or less of the same—they become relaxed, weakened, enlarged, and elongated, lose their contractile power, and permit foreign bodies readily to enter into their cavities; for unless their foramina and cavities are relaxed and enlarged by some efficient morbid cause, they are too small, when in health, to admit foreign bodies into them. As soon, however, as such bodies as small seeds, particles of fæces, fluids, or gases enter into any of these morbidly enlarged sacs, they produce great irritation, with a painful sense of distention of their delicate and highly sensitive parietes, attended often with a burning, smarting, itching, or tickling, which occurs soon after stooling, and lasts for an hour or two. It is positively stated by authors that the primary cause of disease in a sacculus is that a foreign body gets into it accidentally; but the writer maintains that this seldom if ever occurs, unless it is relaxed and enlarged by previous disease, so as to admit such a body into it. In the experience of the writer the degeneration of the anal sacculi is rare, he having met with only eleven cases in a practice of many years.

The writer will now name some of the distinguished authors who differed from Dr. Physick's pathogeny of the preternatural pouches, but, strange to say, give no good reasons for, nor any explanations of, the differences, but seem to ignore Dr. Physick's opinion on the subject altogether. If he was in error, it behoved them to point out the error in a plain and unmistakable manner, which they have not done; his opinion, therefore, whether right or wrong, stands unharmed by any sound argument or criticism brought against it.

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[1] The American Cyclopædia of Practical Medicine and Surgery, vol. ii., p. 125. Imp. 8vo. Philadelphia, 1841.

[1] Dissertation sur les Hémorroïdes, p. 12. Soutenue par J. B. Lavedan. 8vo. Paris, 1814.

Dr. Gibson was the first author who differed from Dr. Physick, both in regard to the name and to the nature of the affection. According to the testimony of Dr. Reynell Coates, who, in reviewing the fourth edition of Dr. Gibson's "Institutes and Practice of Surgery," in 1835, says: "Among the other additions made since the first appearance of this work, we may name *Encysted Rectum*, a name applied with rather dubious propriety to the preternatural pouches detected by Dr. Physick, as to the true nature of which Dr. Gibson appears to differ from the discoverer."[1]

Dr. Gibson, in his treatise on surgery, after very accurately describing the normal sacculi of the anus, under the head "Encysted Rectum," says: "So far back as the year 1792, Dr. Physick met with a peculiar disease of the rectum, which had never been described or noticed by any writer. It consisted of one or more sacs of different dimensions, which, by bending a probe upon itself, introducing it into the rectum, and hooking it into the mouth of the sac, could be drawn down and made to appear on the outside of the anus. From that period he was accustomed, in his surgical lectures, to speak of this case, and others which he subsequently met with. From what has been said it will be readily inferred that this disease, to which the attention of Dr. Physick was originally drawn, must consist in an expansion or dilatation of the small natural sacs of the rectum described in the commencement of this section. Such we have every reason to believe to be the fact, though, strange as it may seem, no dissection has ever yet been made, so far as we are acquainted, calculated to demonstrate that the preternatural pouch is an actual enlargement of the natural one. From the circumstance, however, of small portions of fæces or of foreign bodies, such as seeds, having been found in the dilated sacs at the time of the operation, it is more than probable that these articles, by finding their way occasionally into the natural pockets, may, by irritating them, cause their expansion and elongation, and produce the disease in question."[2] It will be perceived that Dr. Gibson gives no reason why he applies the term *encysted rectum* to the morbid normal sacculi of the anus. The word *cyst*, in pathology, means a closed cavity, not an open one; and the word *encysted* means a bladder or bag contained within a cyst, as an encysted tumor. The writer agrees with Dr. R. Coates in saying that it is of dubious propriety to apply this term in the manner Dr. Gibson has done in this instance. This term, which originated with Dr. Gibson, has, by several authors, been accredited to Dr. Physick, as will be shown, but it is known that he never used that term to designate the disease which he called preternatural pouches.

Dr. Gibson gives no substantial reason whatever why he believes that the pouches of Dr. Physick and the normal sacculi of the anus are identical, and is candid enough to say that no dissection had ever been made to demonstrate the fact that the preternatural pouch of Dr. Physick is an actual enlargement of the natural one. Indeed, in the opinion of the writer, it is impossible by any process to reconcile the description of Dr. Physick, with the description of the morbid sacculi, so as to make it evident that they describe one and the same affection. Dr. Gibson attempts to explain the manner in which the normal sacculi become diseased, which is by foreign bodies finding their way occasionally into them, and irritating them, and causing their expansion and elongation. The writer has already shown that this expansion and elongation must first take place by disease of the mucous membrane, before the foreign bodies can find their way into the sacs, for unless they are previously diseased and relaxed such bodies will not find their way into them. He seems to think that because foreign bodies are found in the sacs when operated on, that such bodies got into the sacs first, and caused the disease in them, they being the primary cause. All morbid sacs or pouches of the anus or the rectum, especially such as have their orifices or mouths looking upward, as it were, are certain to be invaded by small foreign bodies coming down from above, and entering readily into the previously diseased and relaxed sacculi.

The late Professor Gross, when speaking of the diseased normal sacculi of the anus, says: "A singular affection of the anus, first described by Dr. Physick under the name of encysted rectum, is occasionally met with, though comparatively seldom. A more appropriate appellation for it would be, sacciform disease of the anus, as it consists simply in an altered condition of the sacs, pockets, or pouches naturally existing in this situation."[1]

Dr. Physick never described the disease he called preternatural pouches under any other name; the name encysted rectum has been shown to have originated with Dr. Gibson. Neither did Dr. Physick, in his description, have any reference whatever to the morbidly altered condition of the normal sacculi of the anus, as Dr. Gross implies.

Professor Henry H. Smith, in his "Operative Surgery," under the head "Encysted Rectum," when speaking of the preternatural pouches described by Dr. Physick, says: "These pouches were subsequently minutely examined by the late Dr. Horner, of the University of Pennsylvania, and their anatomical relations strictly defined, so that now they are usually regarded as a normal portion of the gut, which only demands interference when it becomes the subject of disease."[2]

The writer has already, in a previous part of this article, given the whole of Dr. Horner's description of the normal sacculi of the anus, including the very brief remarks he makes relative to Dr. Physick; these few remarks, with their immediate connection, will be repeated here as follows: "At the lower end of the wrinkles between the columns are small pouches, from two to four lines in depth, the orifices of which point upward. They are occasionally the seat of disease, and produce, when they are enlarged, a painful itching. An original observation of Dr. Physick, on the nature of this affection, and the remedy for which consists in slitting them open or removing them, induced me to look for the natural structure which I have ascertained to be as now described."[3] The writer has now fairly presented Dr. Horner's description of the normal structure or sacculi of the anal canal, and Dr. Physick's description of the preternatural pouches of the same region, and the two descriptions disagree entirely. Dr. Horner seems to have taken it for granted, as others have done, that Dr. Physick was in error, and that his pouches must be the morbidly enlarged sacculi. He does not, however, say, in that clear and unmistakable language, as implied by Dr. Smith, that he had by dissection demonstrated the fact that the affection Dr. Physick had described, and the enlarged normal sacculi, were one and the same disease. His language is not clear, and will not, in the opinion of the writer, bear this strict construction.

The writer will repeat that all the authors he has read on this subject differ from Dr. Physick, and seem to take it for granted that there are no preternatural pouches in the anal canal and rectum, except the normal sacculi morbidly relaxed; consequently, that Dr. Physick was wrong, and could not have meant any others but these. But pouches or pockets are sometimes found in the anal canal, and higher up, besides the normal morbid sacculi, and those described by Dr. Physick, for the writer himself has often seen such, and others also have often met with them. They are those which result from chronic dysentery, diarrhœa, or, at the close of exhausting or wasting diseases, causing follicular ulceration, especially in the rectum. The solitary follicles, in such cases, first become inflamed and disintegrated, and finally open on the surface of the canal; the openings, or orifices, at first quite small, and showing no disposition to heal, gradually enlarge, while the little cavities below them penetrate into the submucous tissue and thus become elongated, and finally result in sinuses, pouches, or pockets. The same result may take place from the destruction of small patches of the mucous membrane of the anal canal or rectum, by the same causes, as well as by tubercular or syphilitic ulceration, and, sooner or later, form small pits or pouches. All such, if not detected and treated, are liable, ultimately, to result in occult or other anal fistulæ. All anal and rectal pouches may be detected by a probe-hook, as Dr. Physick has advised. The following drawing represents the instrument used by the writer for this purpose. By such an instrument, carefully manipulated, these pouches may be detected without any injury to the parts. The probe-hook should be passed up into the rectum three or four inches, and then brought slowly back, with the point bearing successively on the different parts of the circumference of the canal; and should any preternatural pouch, morbidly enlarged sacculus, or occult fistula, exist, the reverted point of the probe will pass into its orifice and cavity, and render its existence and character at once sufficiently obvious.

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[1] American Journal of the Medical Sciences, No. 32, August, 1835, p. 460.

[2] The Institutes and Practice of Surgery, eighth edition, vol. ii. Imp. 8vo. Philadelphia, 1850.

[1] A System of Surgery, vol. ii., p. 739. Imp. 8vo. Philadelphia, 1859.

[2] A System of Operative Surgery, second edition, vol. ii., p. 329. Imp. 8vo. Philadelphia, 1856.

[3] Op. cit.

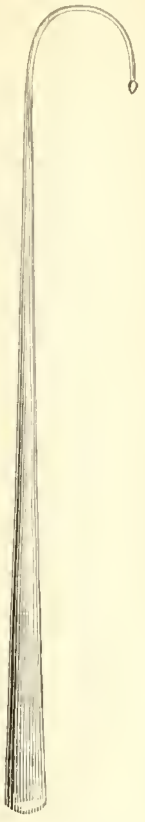

Fig. 3.

A hook for detecting occult anal and rectal fistulæ, and other pouches of the same locality, was used by Dionis and tabulated.[1] Heister also used a similar hook for the same purpose.[2]

The writer must now defer to another occasion the consideration of the subject of the causes, the symptoms, the diagnosis, the pathology, and the treatment of the different morbid pouches of the anus and the rectum.

27 East Forty-sixth Street, March 26, 1888.

Permanent Suppression of the Salivary Secretion.—A case of this rare description is reported by Dr. Rowlands, in *The Lancet*, as follows: The patient is a lady aged sixty, very thin and of a nervous temperament, and, although not vigorous, has always enjoyed fairly good health. She does not consider that the absence of saliva has made any difference to her general health. She gives the following history. About ten years ago, when in apparently good health, with the exception of a nervous shock caused by the news of the sudden death of a friend, she awoke one morning with an intense dryness of the mouth and throat, which prevented her from speaking or swallowing, and caused a sensation of choking. She found relief by constantly sipping cold water; but the distress was so great that for some nights she was unable to sleep. The discomfort gradually abated, but the tongue and mouth have remained perfectly dry ever since. The tongue has now the appearance of a piece of dry raw beef. There are no signs of papillæ on the anterior surface of the tongue, but the circumvallate are distinguishable. It is to be remarked that diminution, or even entire suppression, of the ordinary buccal secretions is sometimes observed in hysteria. But the affection is not a permanent one. In the cases reported above, it has not been conclusively shown that the secretion of saliva was altogether suppressed, for this may go on to a certain extent although the mouth appears quite dry.

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[1] Cours d'Opérations de Chirurgie démontrées au Jardin du Rio, 8me édit., tome i., p. 405. 8vo. Planche xxv., Fig. P. Par De La Faye. Paris, 1782.

[2] Institutions of Surgery, part ii., sec. 5, p. 256; tab. 35, Fig. 14. 4to. Translated from the Latin. London, 1743.

SOME OF THE SIMPLE METHODS OF PERFORMING HYSTERO-TRACHELORRHAPHY.[1]

By O. E. HERRICK, M.D.,

LATE PRESIDENT OF THE GRAND RAPIDS ACADEMY OF MEDICINE, GRAND RAPIDS, MICH.

The rapidly advancing specialty known as gynecology seems to have stricken terror into the heads and hearts of certain members of the profession, many of whom are constantly entering protests against all mechanical and surgical interference in the treatment of diseases peculiar to women. Even surgeons who are known to be extremely radical upon the subject of general surgery are among the loudest in lamenting the frequency with which the gynecologist operates upon the female body. They do not seem to comprehend the fact that the same rule which governs ordinary surgery also applies to female surgery, and that conservatism is as likely to act as a check upon the one as upon the other. So long as "conscience makes cowards of us all" there is but little danger of humanity being injured by bold surgery, either general or special, at the hands of educated or reputable men. Each operator's regard for his own success and professional reputation will keep him as conservative as is compatible with his patient's welfare; there is no man so radical that he will knowingly perform a Cæsarean section if he can deliver his patient by ordinary methods; regard for his own welfare, if he care nothing for that of the patient, will keep him sufficiently conservative.

If the general surgeon and practising physician will be careful to keep *their* practice always within the bounds of conservatism, we can safely trust the operations of gynecological surgery in the hands of the eminent men who were present at the accouchement of the young but healthy specialty; and when they are no longer here to look after it, their recorded experience will be handed down as an heirloom to their sons, who will grasp with strong and sure hands the helm of the gynecological ship as it drops from the nerveless fingers of the great masters.

Almost all great things ever accomplished for either medicine or surgery, all great advances made, have been more or less abused and overdone during the stage of incubation: scientific facts are only reached after the explosion of many false theories. Enthusiastic discoverers almost invariably claim too much for their pet theory or hobby, be it operation, drug, instrument, or pathology, and what is good of discoveries is only appropriated after a careful weighing and sifting process by a critical and stern non-partisan jury of professional peers; only then do discoverers occupy their proper places and their discovery receive due credit.

Listerism has recently undergone the ordeal and taken its suitable place among the archives of medicine and surgery, not so high, to be sure, as its confident discoverer expected, but still much better than no place. Someone has said that it was the "best-blown medical bubble of modern times." I cannot agree with the sentiment which calls Listerism a bubble, for antiseptics surely hold an important place in both medicine and surgery, and as auxiliaries will always be useful, if they are not, as Dr. Lister expected they would be, indispensable. Operations upon the lacerated cervix has received a full share of attention since its discoverer first published his experience to the profession and detailed his method of operating. Since that time there have been thousands of lacerations operated upon by Dr. Emmet and other gynecologists; besides, these operations have been by no means confined entirely to specialists, for many surgeons in general practice have tried their hands at the new operations, and with all kinds of results. Emmet and others have claimed a great deal for the operation, and have charged upon the condition it is intended to remedy a multitude of sins, while some other gynecologists think too much is claimed for the operation, and too many abnormal conditions charged up to laceration of the cervix; just what the outcome will eventually be can now only be conjectured.

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[1] Address of the retiring President, delivered at the Annual Meeting of the Grand Rapids Academy of Medicine, February 7, 1888.

There are, however, some undoubted benefits which have grown out of Emmet's teachings, and if there be no others added. the results have amply paid the investigation. Foremost and chief among these benefits has been the doing away of the old-time *ulceration*, which has been shown to be, in the majority of cases, a simple rolling out of the uterine mucous membrane. In all cases of complete laceration the lips spread apart as soon as the patient assumes the erect posture; this is caused by the weight of the uterus, which is always more or less increased after confinement, and consequently, when the woman rises the uterus presses downward, and its lacerated lips are drawn apart by the posterior lip catching upon the posterior vaginal wall. When the flaps formed by the laceration are once thus separated they are forced farther and farther apart by the anterior lip being forced forward in the axis of the vagina, thus producing constantly increasing traction upon the everted posterior lip. In such cases irritation is immediately established and involution of the whole organ arrested.

The angle of the laceration is the first point attacked, and erosion gradually extends over the entire everted surfaces. These facts being known, the importance of keeping the woman in bed and giving the lacerated parts time to heal before the upright position is assumed must be apparent to all. When this is not done, and the woman is allowed to get up before restoration of the parts has taken place, the uterus will continue to advance more and more toward the vaginal outlet, until in the majority of cases complete prolapse of the organ has taken place. As these conditions are progressing, the uterus will increase in size, and the mucous follicles upon the eroded surfaces will gradually enlarge by the constant irritation produced by rubbing against the posterior vaginal wall. These follicles after a time undergo cystic degeneration, and by bursting produce a profuse cervical leucorrhœa. After they are ruptured their cavities are gradually filled up by contraction, but while one set are undergoing this change others are being developed by the constant irritation, and in this way a constant leucorrhœa is kept up, with every now and then a bloody show, for when these little granular follicles are forming they are distended with blood, and the whole eroded surface bleeds upon the slightest touch. The patient is constantly tormented with all the ordinary symptoms of uterine trouble in general, such as backache, irritation of the bladder, pains down the thighs, ovarian neuralgia, etc., while added to these distressing symptoms there is in most cases marked nervous disturbances of almost every grade. As stated above, this condition of the cervix was, until Dr. Emmet demonstrated the difference, mistaken and treated for ulceration, and so generally has the error been practised that the idea has obtained among women that ulceration is the most frequent abnormal condition of their sex, while the profession all know, or should know, that it is one of the most rare conditions met with in the catalogue of woman's ills. Formerly these cases passed from one physician to another, only to undergo essentially the same treatment at the hands of each, which consisted of the frequent and repeated application of caustics in some form. This kind of treatment continued, in most cases, until either the patient became discouraged and gave up the hope of ever regaining her health, or until the profuse menstruation diminished, and the leucorrhœa ceased, from the cicatrization of the eroded surfaces by the constant application of caustics. They were then dismissed as cured, but, as a rule, they were very far from it, for the reason that with the impairment of their general health from the long continued uterine trouble the nervous system had received irreparable injury, which. together with the hypertrophy of the uterus that always remained, left them, in their anæmic condition, fit subjects for the development of epithelioma at the point of the old injury. Some robust women were enabled to so far regain their health, and the injury became repaired sufficiently to allow them to become pregnant and give birth to another child, perhaps a number of them, and in these parturient states and processes they obtained almost complete relief from their lacerations and its results, as the lacerations became in part or wholly healed during the process of involution.

These cases were of course the exceptions, but occurred with sufficient frequency to produce the belief among many of the older members of the profession that pregnancy was the panacea for ulceration of the os uteri, in common with almost all other non-puerperal uterine diseases.. Had the physicians confined their treatment to such wholesome advice their results would have been much better, and their experience would have robbed Emmet's operation of very much of its glory. That there are many conditions of uterine disease directly chargeable to laceration of the cervix, there can be no doubt at the present writing, especially among those who have taken the pains to investigate the subject.

Among the most frequent disturbances consequent upon laceration may be mentioned cellulitis, menorrhagia, dysmenorrhœa, endo-cervical metritis, metritis, hyperplasia of the cervix, sympathetic ovaritis, hypertrophy, and epithelioma. Besides these, Dr. Emmet, in a long list of tables collected from his cases and those of his colleagues, charges directly upon this condition almost every disease peculiar to women; and among the rest I notice that in his long essay upon menstrual changes, containing three long tables requiring a prodigious amount of study to make them intelligible to the ordinary mind, he concludes that "the general effect of the injury is to increase in after-life the length of the menstrual flow by an average of *nearly one day*." If his deductions are true, the necessity for an operation to remedy such condition will hardly be apparent. Another condition for which he recommends the operation is sterility, which he thinks is brought about by a greater or less degree of retroversion, existing as a result of the laceration extending into the posterior cul-de-sac and causing contraction of the parts or tissues located posteriorly.

Now I am entirely unprepared to deny, or even question, the truth of the pathology as quoted above. In truth, it seems reasonable; but any tyro knows that it is far from being a rule, and must have seen many pregnant women with both single and double lacerations. The liability, however, of the pregnant woman with a lacerated cervix to miscarry can be readily seen. It is beyond the scope of this paper to consider in detail all the conditions which the operation of Dr. Emmet is supposed to relieve, and I would not, if I could, mar in the least the lustre of his discovery, for if it is not all that has been claimed, there is enough good in it to be still a boon to suffering woman.

Perhaps it is strictly in accordance with facts that each condition mentioned above, and all others claimed by its discoverer, may in given cases be produced by a laceration of the cervix; but the point I wish to distinctly emphasize is, that by no means all cases of laceration of the cervix produce post-partum lesions; neither does every woman with a little rent in her cervix require it sewed up.

I am fully convinced that the claim that subinvolution of the uterus is associated with, and caused by, these lacerations is partly, but not universally, true; it does not necessarily follow that because there is a laceration, either single or double, the woman must needs be afflicted with uterine subinvolution. That there is greater liability, under such circumstances, I am ready to admit; but that the arrested involution can only be remedied through the medium of an operation to restore the cervix to its natural condition, I am unwilling to agree to, and for the reason that, through the administration of ergot, and local application of appropriate remedies, we are often able to bring about involution without in any way interfering with the lacerated cervix. In quite a proportion of cases there is entire immunity from any bad results following laceration of the cervix. When they do not heal up promptly and without any interference they will often remain in the lacerated condition for a lifetime without becoming everted in the least, and with neither erosion, hypertrophy, nor any of the other many local manifestations. In such cases it would be idle to interfere, or to charge upon the laceration all the nervous aches and pains which may occur in all parts of the body; where there is a button-hole laceration, or one through either the anterior or posterior lip, it would be meddlesome to attempt any operation, for the reason that the rent is almost sure to unite itself.

The other class of cases, and perhaps the larger class, are intolerant of almost any degree of cervical laceration, and are the cases liable to any and all of the morbid conditions attributed; these are the appropriate cases for operation.

Cicatricial tissue has been charged with causing much reflex irritability, and some teachers of gynecology have taught that morbid conditions were more often produced by the cicatricial tissue which covers the lacerated edges of the lips than from the eversion and consequent irritation of the edges, and have urged this theory in favor of frequent operations for closing them.

Emmet, Goodell, Pallen, Mundé, Skene, and many others, claim that all such tissue should be entirely removed, and especially the wedge-shaped cicatrix at the angle of the laceration. Emmet lays great stress upon the absolute and complete removal of all this tissue, as, he says, "it is often the cause of much reflex disturbance of the nervous system, and is frequently the cause of neuralgia in other parts of the body." He also says that when the parts are brought together without entirely removing the cicatricial tissue "there will be no improvement, even should they unite perfectly;" and, finally, "there will be a marked increase of the anæmia and the neuralgia, owing to the additional irritation to the nervous system, and nutrition becomes still further impaired."

While it is undoubtedly as well to remove the entire cicatrix while denuding the laceration prior to closing, I question the absolute necessity of the procedure, and should expect to get union of the edges even though there were a portion of the cicatricial plug left in the angle.

From the fact that there are in many cases of old lacerations extensive cicatrices without any marked nervous symptoms, and that there is always more or less cicatricial tissue at the line of union in lacerations that have healed spontaneously after childbirth without subsequent nervous disturbance, it would seem to be clearly proven that there are at least some cases with cicatricial tissue at the uterine neck without irritation of the nervous system and with permanent improvement. While Dr. Goodell has frequently advised its removal when practicable, he must have had the facts above stated in his mind when he said: "I have removed wedges of cicatricial tissue without restoring my patient to health. From my observations I am disposed to believe that the painful influence on the system of hard and gristly tissue left after some cervical tears has been overrated."

As Dr. Goodell's ideas upon this subject harmonize so well with the position taken in this paper, I continue to quote from his article in the *American Journal of Obstetrics* for January, 1882, in which he says: "Of the beneficial results of the operation of trachelorrhaphy, I must admit that I am not so sanguine as at first. The good rule may be laid down that when marked ectropion exists, associated with enlarged Nabothian glands, with leucorrhœa and menorrhagia, the issue of the operation will be a happy one. In such cases I have had capital results; when, however, I have operated on a tear without ectropion, or merely on account of cicatricial tissue in the angles of the fissure, I have met with bitter disappointments."

Operations for closing laceration of the cervix, as done by Emmet, Goodell, and many others, are by no means either simple or devoid of difficulties to the operator, or bloodless and free from subsequent danger to the patient, as many operators who, doing the operation for the first time, perhaps without skilled assistants, can testify. In fact, the operation, as described by Emmet in his work upon gynecology, is one of the most delicate and difficult known to female surgery, and whoever attempts it for the first time without professional assistance (which is often necessary in private practice, as many women strongly object to the presence of a second physician) will be quite liable to be in the condition of Dr. O. B. Will, of Dunlap, Ill., who said, in reporting his first case before the Peoria Medical Society: "My gynecological reputation was nearly wrecked. I wished most heartily I had never seen the patient, and she probably entertained like feelings toward me." That the operation as performed is needlessly tedious, and much too numerous in details, full of difficulties for the operator and unnecessarily painful and bloody to the patient, has been fully demonstrated in the last three years by myself and many other operators.

After the lacerated edges are well freshened it takes very little force to hold them sufficiently together to get union; this is often seen in cases where the edges have been touched with caustics, and especially where nitric acid has been used. They will sometimes unite without anything being used to hold the lips in contact, and if pledgets of lint or cotton are packed in closely around the cervix they will generally unite at least a portion of the distance, and sometimes complete union will take place.

Dr. Joseph H. Warren, of Boston, writing in the *Virginia Medical Monthly* for March, 1881, mentions this fact and says: "I have for nearly twenty-five years succeeded in uniting many a case by the application of the fuming nitric acid, after denuding the surfaces with the acid, coapting them in position, packing iodized cotton around the cervix, and inserting a stem pessary or a portion of a bougie."

I have had a similar though not so large an experience, and find that in many cases, especially where the tear is slight or limited to one side of the cervix, that the operation of Dr. Warren is quite sufficient for the purpose. I have also seen a number of cases, where the laceration had even existed for years, that united spontaneously; no doubt a slight inflammation was set up from some cause, and during the process the parts became adherent. One such case recently came to my notice while I was South.

Dr. W. H. Johnston, of Selma, Ala., asked me to see a case of laceration of the cervix which had existed for a number of years, with the view of having me operate upon it. We made an examination with a speculum, when to our great surprise the cervix was found to be intact and without a sign of laceration. He had not examined the case for over a year, but said there was a well-defined laceration nearly down to the juncture the last time he had examined the case. A number of other physicians had also examined the woman and diagnosed laceration of the cervix, and among the number was a specialist, who proposed an operation, but the patient had neglected having it done. The lady and her husband both declared that an operation had never been made. This was certainly a case where the laceration united without any operation. I was also called in consultation with Dr. J. M. Sligh, of this city, on a laceration of the cervix which he had often seen, and when we introduced the speculum we found that complete union had taken place.

Such cases are, of course, exceptional, but these two cases show they do sometimes occur, nevertheless; and while it would not be good practice to always wait for such chance results, it shows that the parts readily unite, and that it requires but little retentive power to secure such union.

In 1880 I reported for the Philadelphia *Medical and Surgical Reporter*, vol. xlii., No. 3, a "Modification of Emmet's Operation," which had for its object the doing away with sutures through the uterine mucous membrane, claiming they were unnecessary, as good union could be had without them, thus saving the patient much pain and the operator no little trouble, and making professional assistance not absolutely necessary, as the patient could be operated upon without being etherized. As the introduction of sutures is the most tedious step of the operation, it is also the most painful to the patient, and is the only part requiring special skill. The modification, in brief, is as follows: The lacerated edges of the cervix are denuded as usual, care being taken that they are properly coapted; then, instead of introducing sutures, a wide elastic rubber band, shaped like the cervix, and large enough to cover the whole os and neck, with the exception of a hole in the end for the secretions to pass through, is slipped over the os, while the lacerated edges are held together by a pair of tenaculum forceps, over which the band is first passed; the band being wide and covering the whole neck, it keeps up equal pressure upon the bloodvessels, thus preventing enough blood getting into the parts at any one time to produce inflammation or swelling, and, as a natural sequence, union takes place much sooner than it otherwise would. The introduction of sutures is often followed by inflammation, and when suppuration follows there is non-union, which is prevented by the use of the elastic band.

The advantages of this method are: 1. As about all the pain experienced during the operation is from the introduction of the sutures, if they are not introduced there is little pain, and hence an anæsthetic may be dispensed with. 2. If the patient is not etherized it is not necessary to have professional assistance, and one can operate upon patients that would not listen to such a proposition if strange physicians were to be present. 3. The parts are kept in just as close contact, and union takes place just as soon. 4. There is less danger of inflammation. 5. There are no stitches to remove. 6. In slight cases patients can be operated upon without their being obliged to keep their beds for a single day, or their knowing they are undergoing an operation. Since the publication of this method of operating in the *Medical and Surgical Reporter* the operation has been frequently performed, as modified, not only by myself but many other surgeons, some of whom have published their results, which have been uniformly successful.

Some have objected that it is somewhat difficult to throw the band around the cervix, and to always get a band that will fit every case. Considerable care is sometimes necessary in its accomplishment, and I have found that there are other ways of retaining the lacerated edges in apposition, and the following is the plan I most frequently adopt, as it does away with that objection, and holds the parts as firmly together as though sutures were introduced through the cervix. I take a piece of block tin about one-sixteenth of an inch thick, and long enough to reach around the cervix, then cut a strip wide enough to cover the cervix from the vaginal juncture to the end of the os; I then punch from three to six holes through each end of the strip, through which I pass silver wires, which are twisted with a pair of forceps until the cervix is grasped sufficiently tight to hold the lacerated edges firmly together. This proceeding is easily accomplished, and answers every purpose of sutures.

NOTES ON GLYCOCHOLIC AND FELLIC ACID.—A German observer, Schotten, says that glycocholic acid can be obtained in colorless crystals from fresh bile in the following simple manner: Add to the fresh bile a drop of hydrochloric acid, shake and filter. Now add to the filtrate ethyl ether and hydrochloric acid in the proportion of 5 parts of acid and 30 of ether to 100 parts of the bile. Shake well and allow to stand. Collect the crystals which will form, and wash them in water containing a small proportion of ether and hydrochloric acid. Dry the crystals in air. According to Schotten the second acid in human bile is neither choleic nor desoxycholic, but an acid of the formula $C_{23}H_{40}O_4$, to which the name of fellic acid is given. With Pettenkofer's reaction, it gives a red and not a violet color.

IMPACTED RENAL CALCULUS, WITH THE REPORT OF A CASE.[1]

BY GEORGE ROE LOCKWOOD, M.D.,

NEW YORK.

THE patient, Mr. President and gentlemen, whose history I bring before you this evening for discussion, is a gentleman forty-four years of age, of good physique and family history. His previous history was unimportant until sixteen years ago, at which time he began to suffer from attacks of renal colic on the *right* side, which recurred at about monthly intervals for a year, and then ceased. He does not remember having passed calculi at that time. He remained a well man until February, 1884, when he suffered from renal colic on the *left* side, convalescing, however, in two weeks. In July, 1884, he was again attacked by renal colic on the left side, and passed into a drowsy, uræmic condition, this uræmic state being relieved in four to five days by a free urinary flow. Just how much urine he had been passing during his uræmic stage is not known. This attack was followed by severe cystitis, which lasted till the following March, 1885, at which time a waterworn uric-acid calculus was passed; the cystitis then subsided until the following September, when it recurred, lasting till April, 1886.

Since this time he has passed gravel in moderate amount; but, except for an occasional aching pain in the left lumbar region, remained in good health until December 23, 1887.

At that time he was confined to the house, with dull pain in the left side, of its usual severity. His urine contained a trace of albumen.

December 27th.—Early on the morning, however, of December 27th he was seized with severe pain in the same location, sharper and more violent that ever before. This pain continued until the forenoon, when he suddenly passed into general convulsions lasting several minutes, the convulsions being followed by stupor of several hours' duration. During the stupor his pupils were contracted; his pulse of high tension.

He was given a hot-air bath, and his bowels freely moved.

For the first twelve hours he passed no urine at all; during the next twelve hours he passed 12 oz. of bloody urine, containing 46 gr. of urea.

December 28th. — On the second day patient was drowsy, pupils contracted, tongue dry. Temperature, 99°-100.2°. Pulse, 112, and of fairly high tension. He sweats freely in the hot-air bath—the sweat having a markedly ammoniacal odor.

Bowels were kept freely open, steaming continued, diuretics added.

During the twenty-four hours of this the second day he passed 18 oz. of clear urine, containing 142½ gr. of urea, albumen in moderate amount, with a small number of hyaline and granular casts.

December 29th.—On this the third day his condition was the same. During the twenty-four hours he passed 4¼ oz. of clear, sparkling urine, containing 35 gr. only of urea.

December 30th.—On the fourth day his condition was unchanged. He dozes most of the time, but is bright and intelligent when awake. There are no additional uræmic symptoms. Pupils still moderately contracted; pulse still of high tension. He sweats well in the vapor-bath, and the treatment is continued.

During this the fourth day he passed 4¼ oz. of urine, containing 39½ gr. of urea.

December 31st.—Condition practically unchanged.

During the fifth day he passed 4¾ oz. of clear urine, containing 48⅓ gr. of urea, and ninety per cent. of albumen, moist volume.

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[1] Read before the Section on Practice, New York Academy of Medicine, April 17, 1888.

January 1st.—Condition unaltered. Careful physical examination has shown at no time the slightest evidence of abdominal tumor or of bladder distention.

During this the sixth day he passed $4\frac{1}{4}$ oz. of urine, containing 31 gr. of urea, and thirty per cent. of albumin.

January 2d.—Upon the seventh day, from 1 A.M. to 10 A.M., patient experienced several times a desire to urinate, but passed only $1\frac{3}{4}$ oz. during this time.

At 10 A.M. the desire to urinate returned, and, to his intense satisfaction, he passed, within an hour, $47\frac{3}{8}$ oz. of urine, the first few specimens being bloody, the color rapidly becoming clear and sparkling as the flow progressed. The urine was 1.013 spec. grav., and contained $363\frac{4}{5}$ gr. of urea. At the end of the hour he passed a fresh blood-clot, shaped like a plug, 4 ctm. in length.

During the next hour he passed 35 oz.; the next, 23 oz.; the amount passed hourly becoming less and less, until at midnight he was passing 8 oz. an hour.

During the day he passed $235\frac{3}{8}$ oz. of urine—1.012—containing 2,148 gr. of urea ($4\frac{1}{2}$ oz.), and thirty per cent. of albumin.

He had now emerged from his drowsy condition, but complained of great weakness. Paregoric was given to control the diuresis, and stimulants carefully administered.

January 3d.—Mind clear and bright. Pulse, 110, and of less tension. He passed, during the day, $88\frac{1}{2}$ oz. of urine—1.014—containing 1,062 gr. of urea, and forty per cent. of albumin.

Calculating, however, the amount he passed for the first twenty-four hours of his diuresis, we find he passed 299 oz., or $18\frac{3}{4}$ pints, and this amount contained 2,401 gr., or 5 oz., of urea.

January 4th.—During the day patient passed only $68\frac{1}{2}$ oz. of urine, containing $667\frac{1}{4}$ gr. of urea, and only a trace of albumin.

Toward evening he experienced a return of his old pain, which continued, in spite of opiates, until 4 A.M. of the following day. During this period of pain he passed only $1\frac{3}{4}$ oz. of urine.

January 5th.—At 4 A.M. patient experienced a desire to urinate, but passed only ʒ ij. of bloody urine, the first he had passed for four hours.

At 5 A.M., however, a free flow occurred, amounting to $188\frac{1}{4}$ oz. during the remainder of the day. With the occurrence of the flow his pain disappeared. The urine was of specific gravity 1.029, contained 1,220 gr. of urea, and was free from albumin.

January 6th.—Patient passed $139\frac{1}{2}$ oz., containing 1,004 gr. of urea.

January 8th.—Patient passed 110 oz., containing 1,141 gr. of urea and a faint trace of albumin.

From this time his urine became more natural in quantity and in amount of urea excreted, becoming normal in these respects in two weeks, but contained, and still does contain, albumin (one-half to four per cent.) with hyaline and granular casts. His recovery was rapid and satisfactory. About three weeks after his polyuria began, he passed two uric-acid calculi, one the size of a grain of rice, the other slightly larger. His *present* condition is good, and except for remembrances of the past he would consider himself a well man. During his illness either Dr. C. D. Scudder or myself remained in constant attendance, and great care was taken to secure accuracy in clinical data.

From his previous history, from the history of his recent illness, and from the passage of the calculi, I think there can be but little doubt but that he suffered from impacted calculi in the left ureter. Starting from this diagnosis as a basis, we are brought face to face with some interesting clinical problems. Let us consider, *firstly*, the period of anuria, and, *secondly*, the period of polyuria.

I. In the first place, then, why did he have anuria, or practically anuria, at all?

If the other kidney were competent there would have been no such history, as then it would have been able to assume the whole task of urinary secretion.

With such a history, however, as the patient presents, we must consider the other kidney to have been incompetent from either *functional* or *organic* causes.

(*a*) The *functional theory*—the theory that suppression of urine in one kidney may cause a sympathetic suppression in the other—seems a plausible enough one at first glance, but it is not supported either by the records of reported cases or by what we know of reflex inhibitions in general.

The only case I have been able to find where functional incompetence has operated to produce anuria is one reported by J. Rickman Godlee to the Royal Medico-chirurgical Society of London,[1] in which, after an attack of renal colic, anuria set in, and lasted for seven days. At the end of this time patient began to pass scanty, highly albuminous urine, which soon became more natural in quantity and in amount. Patient died, however, five days later from exhaustion. Autopsy revealed impacted calculus in right ureter—slight interstitial nephritis of left kidney.

You will notice that the inhibitory reflex suppression gave out some days before death, and this is in accord with what we know about inhibitory reflexes in general. We can understand inhibitory insufficiency resulting from such an acute irritation as the passage of a renal calculus, but it is difficult to understand how such an inhibition can be operative over a considerable period of time, especially after the acute irritation of the opposite kidney has subsided.

(*b*) Falling back, then, upon the theory of *organic* incompetence, we find more abundant clinical testimony.

Julia Fontanelle[2] and Jonathan Hutchinson[3] have reported a case each in which fatal anuria resulted from calculus impacted in one ureter, the other kidney being congenitally absent.

Dittell[4] reports a horseshoe kidney with double pelvis, each being separately but coincidentally blocked by calculi.

Murbeck[5] reports a fatal case of anuria resulting from impaction of calculus in one ureter, the opposite kidney being previously destroyed by hydatids.

Rayer[6] reports a case of calculous obstruction on one side with hydronephrosis on the other.

By far the most common cause, however, of the organic destruction is previous calculous disease—the impaction of a calculus upon a previous occasion having been followed by atrophy of that kidney.

Roberts[7] reports four such cases. Parker,[8] Nunnely,[9] Rayer,[10] Alberti,[11] Fuller,[12] Paget,[13] Bagshawe,[14] Bischoff,[15] Tenneson,[16] and Dickinson[17] report similar cases.

Reviewing, then, our case at this stage, it seems most likely that sixteen years ago. when he complained of pain in the *right* side, his right ureter became occluded by a calculus; that atrophy of that kidney (not hydronephrosis, as we shall see later) has resulted, and that he has gone on since then with but one working kidney until *its* functions were thus suddenly arrested by occlusion of its duct.

A word in reference to the period of the anuria in these cases. In all the cases reported three noteworthy facts impress us:

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[1] Proceedings of the Royal Medico-chirurgical Society, 1887, ii., p. 229.

[2] Arch. de Medecine, 1823, p. 577.

[3] The Lancet, 1874, ii., p. 1.

[4] Anz. der k. k. Gesellsch. der Aerzte in Wien, 1822 (quoted by Ziemssen), xv., p. 712.

[5] Quoted by Tenneson: L'Union Méd., 1879, p. 947.

[6] Traités des Maladies des Reins, t. iii., p. 490. 1839. Quoted by Tenneson, loc. cit.

[7] Urinary and Kidney Diseases.

[8] Proceedings of the Royal Medico-chirurgical Society, 1887, p. 231.

[9] Transactions of the Pathological Society of London, May 20, 1860.

[10] Loc. cit.

[11] Wien. Med. Blätt., No. 37 (quoted, Virchow & Hirsch's Jahresbericht, 1884).

[12] Transactions of the Pathological Society of London, xiv., p. 192.

[13] Transactions of the Clinical Society, ii., p. 171.

[14] Transactions of the Pathological Society of London, xiv., p. 177.

[15] Deutsche Arch. f. klin. Med., No. 36, p. 183.

[16] L'Union Méd., 1879, p. 947.

[17] Renal and Urinary Affections, iii., p. 959.

1st. The long duration of the anuria.

2d. The immunity from uræmic symptoms.

3d. The possibility of recovery even after a long-continued anuria.

The first two points are well illustrated in Bischoff's case,[1] in which anuria of twenty-three days' duration is recorded, and not until the twenty-first day did uræmic symptoms intervene, and even then they were of mild character.

The possibility of recovery after a long-continued anuria is illustrated by the case I have presented to you. Such a happy conclusion, however, is rare. I have been able to find only twelve cases reported.

Russell[2] narrates a case of recovery after twenty-one days' anuria; Ostrander,[3] recovery after eight days; Reliquet,[4] recovery after fourteen days; Salgado,[5] thirteen days; Roberts,[6] one case, nine days; another case, ten days; Bartels,[7] five days; Hutchinson,[8] six days; Laing,[9] six days; Picard,[10] nine days; Tournadre,[11] eight days; and Peshek,[12] nine days.

It would seem that here we have a striking point in differential diagnosis between the obstructive anuria of impacted calculus and the non-obstructed anuria of inflammatory origin. In the former, a longer period of anuria, and without marked toxic symptoms, from which the patient may recover; in the latter, an anuria with eruptions of severe uræmic symptoms, more rapidly terminating in a fatal issue.

II. When we come to consider the period of polyuria we are led to ask ourselves what the cause was of the sudden and abundant flow of urine. To this there can be but two answers. Either it came from the emptying of a hydronephrotic distention of the urinary tract above the impacted calculus, *or*, it was due to a true *diuresis* without the formation of any hydronephrosis at all.

I am strongly inclined to believe that the latter is the true explanation in our patient.

I will start with the somewhat dogmatic statement that *hydronephrosis never originates* from a sudden and complete occlusion of the ureter. I make this assertion, well aware that it is at variance with many good authorities. For example:

Ralfe,[13] in a recent work on the kidneys, says: "It is when the occlusion is more or less permanent and *complete*, and *has come on suddenly*, that the hydronephrotic distention of the kidney acquires a considerable size."[14]

Henry Morris,[15] in a paper on hydronephrosis, read before the London Medico-chirurgical Society, says that when hydronephrosis exists there has been *sudden* and *complete* obstruction to the urine secreted by a kidney in its full function; that instances occur in cases of impacted calculus. "Up to the time of obstruction," he writes, "the kidney has been rapidly secreting, *it still goes on doing so*,[16] and the urine, finding no exit, dilates the pelvis and upper end of the ureter."

Let us examine this statement more carefully.

In the first place, we know that the extent and rapidity of urinary secretion are directly affected by the arterial pressure within the Malpighian tuft. The greater the excess of arterial pressure within the tuft, over the pressure in the urinary tubule without the tuft, the greater the amount of urine secreted. If, then, we can offer an opposing force which shall so neutralize this arterial tension that the pressure without the tuft equals the pressure within the tuft, there can be no secretion.

This Hermann[1] did by inserting a mercury manometer within the ureter, imitating exactly the conditions produced by impacted calculus. A pressure of 10 mm. of mercury, he found, caused a sensible diminution in the flow of urine, which diminution became more and more marked as the mercury-pressure became raised, until with a column of 60 mm. Hg. (2.4 inches) the two pressures were in equilibrium, and urinary secretion was completely suppressed.

Alexander James,[2] in a paper on the "Mechanism of the Bladder and Ureter," makes the statement that in four hours after complete obstruction to the ureter, the pressure becomes sufficient to arrest the secreting function.

Roberts[3] writes that ʒ ij. to ʒ iij. of pent-up urine are enough to check secretion, and he substantiates his statement by autopsies.

According to Edes,[4] when the ureter of a rabbit is ligated, atrophy of the kidney, with but little dilatation, is observed; the pressure of the urine puts a stop to further secretion.

In the second place, the ureter and pelvis of the kidney are not easily to be distended.

Bennet May,[5] injecting water into the cut end of a human ureter, could only inject one-half ounce. When this amount had entered, resistance to further injection became extreme. On applying more force, the liquid flowed out from the renal vein.

James, in the paper referred to, has proved that the ureter can stand a strain of 5 feet Hg.—the greatest possible pressure exerted by pent-up urine is 2.4 inches. How, then, can dilatation occur?

Thirdly, these statements are substantiated by autopsies. From ʒ ij. to ℥ j. is usually all the urine found pent up in recent cases. In old cases the kidneys are found atrophied and not hydronephrotic.

An occlusion of the ureter, then, causing a back pressure of 2.4 inches Hg., is regularly followed by suppression of urine and atrophy of the kidney. It is only when the back-pressure of the pent-up urine is less than this, and continuous, that hydronephrosis occurs.

We come, then, by exclusion, to find the explanation of the flow in a true diuresis, and we are led to place confidence in the fact that such a diuresis is possible, and probable, for two reasons.

1. That after such a prolonged anuria, with so scanty an urea excretion, there must be an abnormal abundance of urea and urea-like compounds in the blood, and these we know act as direct diuretics.

This was proved by Moutard-Martin and Pichet,[6] in experiments on curarized dogs. The rate of urinary secretion having been determined, urea was injected hypodermically. The amount of urinary secretion was first greatly increased—in one case trebled—and this more abundant urine showed, after some minutes, an excess of urea percentage; the first effect being a diuresis, the second effect being the elimination of the offending irritant itself.

The second reason is one not capable of direct proof, and one which I have not seen mentioned in the literature of the subject. It is this: We notice, for example, the increased vascularity of a limb after the removal of an Esmarch bandage from vaso-motor relaxation. Why should not such a localized congestion take place in the kidney when the pressure of the pent-up urine is suddenly removed? If this *does* follow, we have the most favorable condition for diuresis, viz., a relaxation of the renal artery without compensating relaxation elsewhere.

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[1] Loc. cit.

[2] Medical Times and Gazette, May 3, 1879.

[3] New York Medical Journal, November 26, 1887.

[4] L'Union Médicale, 1882, No. 69–70.

[5] El Siglo Méd., October, 1871, quoted by Schmidt's Jahrbuch, 158, p. 139.

[6] Urinary and Kidney Diseases, p. 39–41.

[7] Quoted by Fagge, ii., p. 367.

[8] The Lancet, 1874, i., p. 1.

[9] Kidney Diseases, quoted by Tenneson, loc. cit.

[10] Gazette Médicale de Strasbourg, 1870, p. 116, quoted by Tenneson, loc. cit.

[11] Gazette des Hôpitaux, 1874, p. 961.

[12] Arch. der Heilkunde, 1873, p. 568.

[13] Diseases of the Kidney, p. 318. 1885.

[14] Italics mine.

[15] Medico-chirurgical Transactions, vol. lix., p. 237.

[16] Italics mine.

[1] Henle and Pfeufer's Zeitschrift, 1862, p. 1, quoted by Roberts, loc. cit.

[2] Edinb. Medical Journal, November, 1878.

[3] Loc. cit.

[4] Pepper's System of Medicine, iv., p. 57.

[5] Brit. Medical Journal, January 20, 1883.

[6] Arch. de Physiologie, 1881, p. 1.

It seems to me that this vascular condition, with the direct stimulation of the renal epithelium by the increased urea in the blood, would favor both elements of urinary secretion—filtration and secretion proper—and account not only for the amount of urine passed immediately after the dislodgement of the calculus, but for the continuance of diuresis several weeks afterward. This latter the hydronephrotic theory will not account for.

What effect this vascular condition of the kidney had upon the elimination of albumin, I cannot say; but it seems probable that the excessive amount of albumin passed during the first diuresis might well enough be thus accounted for.

In conclusion, I desire to extend my thanks to Dr. Gerardus H. Wynkoop, for the privilege he has given me of bringing the case before you for discussion; to his partner, Dr. Charles D. Scudder, for his invaluable assistance in supplying clinical data, and to Dr. Johnson, of Waverly, N. Y., for the record of previous history.

SOME INTERESTING CLINICAL PHENOMENA OBSERVED IN A CASE OF CIRRHOSIS OF THE LIVER.[1]

By GEORGE R. ELLIOTT, M.D.,
NEW YORK.

THE subject of this communication is a male, thirty-eight years of age, Irish by birth, married, salesman by occupation. Family history is good.

There is a clear history of acquired syphilis, and for years he has drunk freely of the strong alcoholic liquors. Prior to 1876 he was very rugged. Since 1876 he has lost his voice at times, so that he could not speak above a whisper, and these attacks of aphonia would last from a few days to weeks.

I saw him for the first time in November last. He then gave a history of having been jaundiced four months, and sought treatment for his throat, having been unable to speak aloud for months, and having undergone treatment for same by a number of physicians without relief.

Aside from the throat symptoms he did not complain; he could eat and sleep well, and was free from pain and digestive disturbances.

He sought to regain his voice in order to resume his place as a salesman, which he had been compelled to give up from his inability to talk aloud.

Laryngoscopic examination of the throat failed to show sufficient local cause for his profound aphonia.

His slight icteric hue incited me to make a careful examination, which revealed the following:

Area of liver-dulness considerably diminished, while that of the spleen was markedly increased.

There was slight ascites and some œdema about the ankles; the veins about the lower part of the abdomen were enlarged and tortuous. Urine normal. Heart and lungs normal.

The patient was informed that his major difficulty was cirrhosis of the liver, and his loss of voice purely an accompanying symptom.

Treatment was advised to that end. Antisyphilitic treatment was tried, but availed nothing. Under the use of iodide of potassium his condition became decidedly worse.

The abdominal enlargement became enormous, and anasarca developed to a considerable degree, localized in the lower part of the trunk and lower extremities.

There was slight hydrothorax in the right pleural cavity; dyspnœa moderate. Various diuretics were used, without materially increasing the quantity of urine, which did not vary far from two and a half pints daily. It was normal as regards specific gravity, absence of albumin, and casts. Cathartics, causing copious watery stools, were freely used.

At this time Dr. G. L. Peabody saw him in consultation with me. Dr. Peabody confirmed the diagnosis, and agreed that little could be done other than a continuance of the rigorous symptomatic treatment inaugurated. Dr. Peabody advised trying strophanthus, and it was agreed on, as a preliminary step, to use nitro-glycerine. The arterial tension was high, this largely the result of digitalis, but the increased arterial tension seemed rather to decrease than increase the diuresis. Nitro-glycerine tablets, āā gr. $\frac{1}{100}$, were administered every two hours. Almost immediately there followed a decided increase in the quantity of urine voided, the quantity increasing from two to six pints in the twenty-four hours. After twenty-four hours the nitro-glycerine was replaced by strophanthus, which maintained the large quantity of urine voided, and this with arterial tension moderately low.

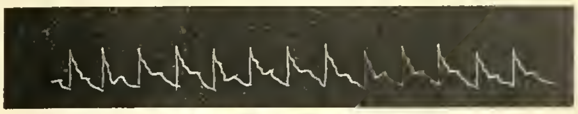

FIG. 1.—Urine, two and one-half pints in twenty-four hours.

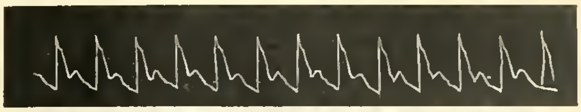

FIG. 2.—After taking nitro-glycerine, gr. $^1/_{100}$, every two hours, for twenty-four hours; arterial tension diminished; urine, six pints in twenty-four hours.

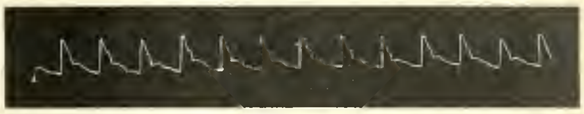

FIG. 3.—After taking digitalin, gr. $^1/_{100}$, every two hours, for twenty-four hours; arterial tension increased; urine, two pints and twelve ounces in twenty-four hours.

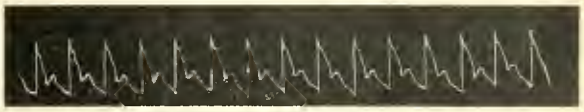

FIG. 4.—After taking tincture of strophanthus, gtt. x., every two hours, for forty-eight hours; arterial tension again diminished; urine, six and one-half pints in twenty-four hours.

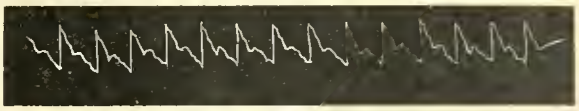

FIG. 5.—After tincture of digitalis, gtt. v., every four hours, for twenty-four hours; urine, three pints in twenty-four hours.

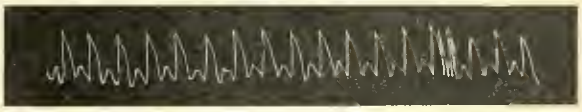

FIG. 6.—Fully dicrotic pulse; has taken neither digitalis nor strophanthus for twenty-four hours; urine, three and one-half pints in twenty-four hours.

By substituting digitalis for the strophanthus the arterial tension would apparently increase decidedly, and the quantity of urine would drop from six pints to three in the twenty-four hours.

By continuing the baths, diuretics, and purgatives the dropsical accumulation entirely disappeared, excepting a slight œdema about the ankles, and the patient became stronger.

Emaciation, however, progressed, and was especially noticeable about the upper extremities, neck, and face. He remained free from dropsical accumulations for some six weeks, during which time his strength improved so that he was able to go out and walk short distances.

With the disappearance of the fluid, it is interesting to note the complete disappearance of the aphonia.

While thus apparently improving, he was suddenly seized with a violent pain, localized in the right axillary line, accompanied by a febrile movement and hacking cough.

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[1] Read before the New York Academy of Medicine, Section on Practice, April 17, 1888.

Examination revealed pleurisy with effusion.

The pleuritic friction-sound was well marked. Under treatment the pleuritic symptoms subsided.

Now the dropsical condition again gradually returned, and his strength would not admit of the extreme measures being used that had proved so valuable a few days before.

The ascites became now again marked; anasarca manifested itself in the upper as well as in the lower extremities. The right pleural cavity became nearly filled with fluid, and the dyspnœa extreme. The latter symptoms were temporarily relieved by the withdrawal of one gallon of bloody serum from the cavity.

He finally sank into a condition of semi-stupor, and died comatose on the afternoon of March 25, 1888.

The only cardiac symptom was a slight systolic murmur heard at the base of the heart and transmitted a short distance up the great vessels of the neck.

Autopsy.—Autopsy made thirty-two hours after death. Body considerably emaciated, but showing well the condition of general anasarca.

Pericardium contains about two ounces of bloody serum; no evidence of pericarditis. The heart is not materially changed from the normal, either in the thickness of its walls or the size of its cavities.

The aortic valve shows slight thickening at the attached border of its cusps. The other valves of the heart are normal.

The left pleural cavity contains about one ounce of serous fluid. The right pleural cavity contains about three quarts of bloody serum, and its thoracic and diaphragmatic surfaces are covered with lymph.

The left lung is normal.

The right lung is compressed against the spinal column to such an extent that it is not larger than would be represented by a ball three inches in diameter. Its substance presents the condition of carnification.

The abdominal cavity contains about two quarts of serous fluid.

The peritoneum is normal.

The intestinal mucous membrane is congested. Stomach shows evidence of chronic gastritis, and the veins about the pyloric end are very large and tortuous; common bile-duct pervious. The liver is markedly diminished in size, weighing two pounds and eleven ounces. Surface nodular, presenting the well-known "hob-nailed" appearance, and throughout its substance the lesion of cirrhosis is exceedingly well marked.

The spleen is greatly increased in size, weighing three pounds. It appears to be only hyperæmic, showing but very little hyperplasia of the connective tissue; there is also evidence of *perisplenitis.*

The right kidney is enlarged, capsule non-adherent, surface smooth, markings fairly well marked. Left kidney is in a similar condition.

Larynx *normal.*

Microscopical examination of the kidneys shows nothing abnormal, beyond excessive hyperæmia.

Certain clinical phenomena observed in the progress of this case would seem to merit some consideration, and I wish briefly to emphasize the following:

1. *The marked scarcity of gastric symptoms.*—The stomach remained able to digest food up to ten days prior to death, and hæmatemesis occurred but once, at a late stage of the disease. His complaints were few, and he was a decidedly close observer.

2. *The healthy action of the kidneys.*—The urine at no time contained *albumin* or *casts*, or other signs indicative of nephritic complication.

Just prior to death the urine became scanty, and the inability to obtain any of it is to be regretted.

3. *The complete disappearance of the dropsy*, after it had steadily progressed, in spite of treatment up to a point almost incompatible with life, and remaining absent for a period of weeks, and this directly traceable to the action of remedies which apparently decreased the arterial tension.

A steady increase of the dropsy had taken place, in spite of antisyphilitic treatment—in spite of almost heroic medication directed to the end of inducing free catharsis, diuresis, and diaphoresis. As long as digitalis was used, and the arterial tension high through its effect upon the arterioles, the quantity of urine voided was comparatively small; but just as soon as the action of digitalis upon the blood-vessels was rendered *nil* by the aid of nitro-glycerine, and the heart's action sustained by strophanthus, the diuresis was greatly increased.

It is already an established physiological fact that strophanthus exerts a more powerful action upon the heart, and a less powerful action upon the blood-vessels than digitalis.

The case under consideration illustrates well the significance of this action to therapeutics.

Digitalis increased arterial tension, but at the same time diminished, rather than increased, the diuresis.

Strophanthus also increased arterial tension, but caused a very decided increased diuresis.

An explanation would seem to rest upon the fact that in the former case the high arterial tension was due to the action of the drug upon the blood-vessels, and the arterioles of the kidneys, affected in common with other vessels, were practically in a condition of spasm, thus greatly interfering with the *filtration function* of the kidney.

That such was the case is rendered probable by the free diuresis which immediately followed the use of nitro-glycerine, and this is further sustained by sphygmographic tracings of the pulse, which, by the free excursions of the needle, show diminished tonicity of the walls of the blood-vessels.

This free diuresis was maintained by the use of strophanthus.

The substitution of digitalis was followed almost immediately by the same increased arterial tension, the same apparent spasm of the arterioles, the same diminished diuresis—all of which gave way at once upon the re-employment of strophanthus.

This observation at least would seem to show certain advantages of strophanthus over digitalis, in certain conditions where some of the good effects of digitalis would seem to be antagonized by the action it so strongly produces upon the blood-vessels.

4. Not the least interesting fact connected with the progress of this case is the complete restoration of voice following the disappearance of the dropsy, and this, too, without local treatment. Notwithstanding the fact that this patient had been subjected to prolonged courses of treatment by several eminent throat-specialists of this city, on the basis of a local malady, the original supposition that the aphonia was not due to a local lesion *per se*, but purely secondary, and probably dependent upon an œdematous condition of the mucous membrane of the larynx, would seem to be borne out by the complete restoration of the voice with the disappearance of the dropsy and the healthy condition of the larynx revealed at the post-mortem.

48 East Twenty-sixth Street.

Typhoid Fever and Pregnancy.—1. Typhoid fever is rare in pregnant women. 2. It determines abortion in about one-half of the cases; the more surely, the less advanced is the pregnancy. 3. The lightest forms may produce abortion. 4. This complication arises usually in the course of the third week, and sometimes at the beginning of convalescence; it causes no recrudescence nor return of fever. 5. Puerperal accidents are the exception.

A New Symptom Characteristic of Cancer Uteri has been brought out by Petit, Troisier, and Raymond. Each of these gentlemen found the existence of an enlarged lymphatic gland above the left clavicle in cases of cancer of the cervix uteri.—*Cor. Amer. Practitioner.*

VERSION BEFORE LABOR IN MALPOSITIONS OF THE FŒTUS.

By EDWARD A. AYERS, M.D.,

INSTRUCTOR IN OBSTETRICS IN THE NEW YORK POLYCLINIC, N. Y.

Fœtal mortality, maternal lacerations of the cervix and perineum, vesico-vaginal and recto-vaginal fistulæ, uterine ruptures, and pelvic inflammations are so much less frequent, proportionally, in occipito-anterior presentations in labor than in any others, that any procedure that will convert the latter into occipito-anterior presentations without adding new dangers should receive hearty approbation. In occipito-posterior presentations a severe laceration of the perineum, and perhaps the sphincter ani, is the rule where craniotomy is not performed, unless episiotomy be judiciously employed. In addition, the dangers of prolonged and laborious labor fall to the mother's lot.

In breech presentations the necessity of haste in the completion of the second stage imposes great risk to the cervix and perineum. In transverse presentations the dangers to the mother are very great. Spontaneous version or evolution, artificial version or evisceration, are means of relief that are usually obtained only after prolonged exhaustion and pressure, with local blood stasis, have supervened. Generally speaking, the only cases in which occipital presentations may be undesirable are such as can be accomplished by podalic version in preference to cephalic perforation.

We have, then, an argument of almost universal inclusion in favor of the conversion of all presentations to that of occipito-anterior, depending upon the comparative dangers involved in bringing about such changes. Version, when the cervix has dilated and the membranes ruptured, is a difficult and dangerous operation, on account of the active contractions of the uterus, the retraction that has taken place, with loss of space in the uterus, and the risk of sepsis. Wigand, in 1807, argued clearly, forcibly, and effectually in favor of version before labor, and with such complete monographs in our possession to-day as those of Pinard on "Abdominal Palpation," and Mundé on "Obstetrical Palpation," it seems strange that this procedure is not more generally employed.

In version before dilatation of the cervix the conditions that will increase the difficulties are: Scarcity of amniotic fluid, largeness of the child, thickness of the abdominal wall, and firmness or irritability of the uterus. But it is in reverse conditions, *i.e.*, abundance of amniotic fluid, diminutiveness of the fœtus, and laxity of the uterine and abdominal walls, that breech and transverse presentations usually occur. In fact they are frequently the result of such conditions. Therefore, as a rule, the conditions are favorable for turning before labor in those presentations that require correction.

If we hesitate in completing version before labor where the accomplishment is difficult—a situation most apt to exist in breech presentations—we must consider which will be more conservative to both mother and child, the difficult immediate version or the final delivery in the malposition. Immediate version should not always gain our approval. The practical application of early version involves a change of custom with both patient and physician, probably a bigger stumbling-block than the operation itself. Patients must be trained to recognize the early engagement of the accoucheur, and abdominal examinations before labor as the proper custom. Inasmuch as vaginal examinations are usually unnecessary in making a diagnosis of fœtal position in utero, patients will more readily submit to investigation. I have found the following general rules most useful and necessary in making the diagnosis of fœtal position by abdominal palpation.

With the patient lying upon her back, the thighs well flexed, and bladder empty, we should first seek the fœtal head. If it is at the "brim," by passing the fingers of both hands downward and backward, starting two inches above the symphysis, with a space of three inches between the index-fingers, it will be felt as a hard, incompressible body of a diameter corresponding to that of the fœtal head. In most cases after the eighth month the portion of the head lowest in the pelvis will be beyond the fingers' reach. If the head is not at the brim, search for it in other parts until found. It is much the easiest recognized of any of the fœtal parts. If it is at the fundus or at either side it will, in cases of difficulty due to excess of amniotic fluid, be found more readily by *ballottement*. The breech very rarely affords this sign. The hard character of the head, as compared with the fleshy shoulder, back, or breech, will also be recognized in this class of cases, and also when the abdominal walls are thick.

If the walls are thick and the amniotic fluid scarce, cephalic outlines or density can almost invariably be recognized. Having found the head, the back should next be found, not the breech. Following the head there will be found either a large cylindrical body, the back; or small irregular bodies, the extremities. Frequently both can be felt. In such cases the fœtus lies upon one side. Knowing which way the back is turned, we can tell the position of the head or breech at the pelvic inlet, unless it be a transverse presentation. If the back lies forward in cephalic presentations, the occiput will be anterior and right or left, as the back lies to the right or left; or if it is a face presentation, a fact next to be determined, the diagnosis will not be difficult. The position of the back will in the same way give us the position of the fœtal sacrum in breech presentations. To determine the degree of extension or flexion of the occiput, a fact necessary for diagnosticating by abdominal palpation, face, brow, or occipital presentations, ascertain the angle of junction of the head with the shoulders and back. If the angle is very obtuse and unrecognizable, it indicates extension of the occiput; if acute, extension of the chin.

Palpation through the anterior wall of the cervix with the index-finger will serve to confirm judgment as to the *presentation*, but not as to the *position* of the presenting part. The custom in serious cases of introducing the entire hand to diagnosticate "position" cannot become obsolete too soon. The differentiation between the breech and head at the inlet is gained in this way: In head presentations the fingers cannot reach the most inferior portion, as the head rests too low in the pelvis, except in hydrocephalus or pelvic distortion; but in breech presentations the fingers can generally pass below the fœtus and meet with only the maternal tissues between them.

Before attempting version, localization of the placenta would be desirable, but the "bruit" is a diagnostic myth, and recognition of its additional thickness to the uterine wall too difficult. We can only be careful in manipulating the fundus. When to perform version before labor will depend upon individual conditions. The fœtus in many women examined at the seventh month will be found with the breech presenting, but is born at full term with the occiput first.

The proportion of breech and transverse cases is much greater in premature than in full-term labors. But version just before labor is more difficult than it is several weeks earlier. If the amniotic fluid remains relatively large in amount up to the end of pregnancy, then version should be delayed to two weeks before labor, and *vice versa*; if the child is getting large enough to occupy so much space that turning will soon be difficult, then immediate version should be practised.

The possible dangers in version before labor are in the order given: Laceration of the amniotic membranes, of the placenta, cord, uterus, and indirectly from any of these death of the fœtus; labor may be precipitated. None of these dangers are at all imminent. In performing version, if the abdominal walls are tense from intestinal overloading, a half-drachm to a drachm of fl. ext. cascara sagrada will, by emptying the bowels, give more latitude in turning. Emptying of the bladder should never be omitted.

Gentleness, warm hands, cessation of effort during uterine contractions, and absence of all haste, will command success where opposite methods will cause failure and perhaps lacerations of the uterine contents. Anæsthesia is uncalled for. In converting a breech presentation into a cephalic, it will be found more difficult to pass the breech up out of the cervical segment than to bring the cephalic end down to the transverse diameter of the uterus, especially when the cervix rests well down in the pelvis. It may then be found necessary to elevate the intra-vaginal portion.

If it is a left sacro-anterior, the left finger should be introduced, and pressure made upward and to the mother's left, and *vice-versa* in a right sacro-anterior. In swinging the long diameter of the fœtus beyond the transverse diameter of the uterus, an assistant may prove useful by making pressure upon the fundus and cervix, with the object of increasing the transverse diameter. In sacro-posterior positions, rotation of the fœtal back to the front should be undertaken before attempting cephalic version, as it is easier to do in a breech presentation. If much difficulty presents in trying to lift the breech out of the pelvis, place the patient in the knee-chest position, and admit air into the vagina, thus permitting the uterus to fall away from the pelvic inlet. This aids in displacing the presenting part from out the inlet. There is a tendency in transverse positions for the head to glide to the fundus in the genu-pectoral position.

Rotation of the fœtal back to the front is difficult, from a want of leverage. The lower limbs afford the best purchase in rotation on the fœtal axis. If the fœtal back lies to the right posterior side of the uterus, the knees should be pressed downward and backward to the left posterior side. Then, while they are held here with one hand, pressure with the other should be made from as posterior a part as possible on the right side against the fœtal back, and effort directed to lifting it forward and thus over to the left. In performing version before labor we must, to avoid injuries, exercise extreme care not to use one point for pressure too long, or use too great force in displacing the fœtus. When labor has begun, these considerations are of less importance. Version accomplished, if before labor, there is no guarantee that spontaneous reversion to the previous malposition may not ensue. A study of the various causes of the malpositions in each case will aid in directing treatment for retaining the fœtus in place.

In hydrocephalic cases, the condition being recognized, if at all, by manual estimate through the abdominal walls, of the disproportionate size of the head, the frequency of breech presentations is said to be due to the decreased specific gravity of the head permitting the breech to gravitate to the pelvis. Such a cause could scarcely act late in pregnancy, so that version would prove lasting, except for the fact that here, as in contracted pelves, impaction of the head in the inlet is difficult, and much mobility prevails in the presenting part, shoulder presentations are apt to result. Not very much can be done to insure fixation. Mild compression of the lateral abdominal walls, by means of padded splints or bandages, will prove useful. In malpositions due to laxity in the uterine and abdominal walls, a supporter or bandage, such as that recommended by Pinard, which supports the entire abdomen and prevents sagging of the fundus, is needed. In hydramnios, where extreme distention of the uterus exists, bandaging is useless. But it is especially desirable in hydramnios to have an occipital presentation, as the child's vitality is poor, the uterus sluggish and weak, causing delay in breech cases that is very fatal to the child. Having obtained the desired fœtal position, the dangers of a bad result justify, if the pregnancy is within a couple of weeks of full term, artificial precipitation of labor.

Table of Cases of Version before Labor.

No. of Case.	No. of Pregnancy.	Period of Pregnancy.	Position of Fœtus.	Etiology.	Version.	Method.	Presentation when delivered.	Remarks.
1	Third	11 days before labor at full term.	Right sacro anterior.	Unknown.......	Cephalic to left occipital anterior.	Wigand's method. Both hands external.	Left occipital anterior.	First labor was a breech.
2	Second.....	12 days before labor a full term.	Right sacro anterior.	Short conjugate diameter.	Cephalic to left occipital anterior.	Wigand's method.	Left occipital anterior.	Lateral compresses were used for three days after version.
3	Second.....	In labor 2 hours; full term.	Right mento iliac.	Chest very large. Over 3 gallons of amniotic fluid.	Left occipital anterior.	Schatz's method ..	Left occipital anterior.	Head had to be held in place until forceps could be applied and traction enough given to get impaction of occiput, then forceps were removed. Child weighed 13½ pounds.
4	Fourth	5 days before labor at 8½ months.	Do sŏ anterior. Right shoulder.	Small child. Uterus very much relaxed.	Left occipital anterior.	Wigand's method.	Fœtus had returned to former position. Changed to left occipital anterior by Wright's method.	Child weighed 6¾ pounds.
5.	First	In labor at full term.	Right sacro anterior.	Unknown.......	Left occipital anterior.	Knee-chest position until the breech was displaced from the inlet; then dorsal position. Wigand's method.	Left occipital anterior.	Membranes ruptured unintentionally, but this did not prevent external version.
6.	Ninth	2 weeks before labor at full term.	Transverse dorso anterior. Right shoulder to left of inlet.	Unknown.......	Left occipital anterior attempted and given up.	Wigand's method.	....	Uterus was irritable, and fœtus rather immovable. Thought best to wait.
		Second trial. In labor at full term.	Right shoulder presenting, dorso anterior.	....	Left occipital anterior.	Wigand's method.	Left occipital anterior.	Head had to be held in place until fixed in pelvis by dilatation of os and rupture of membranes.

American Association of Medical Editors.—This body met in regular annual session at the Burnet House, Cincinnati, Monday, May 7, 1888. Meeting called to order by the President, Dr. William Porter, of the *Medical Review*, St. Louis, Mo. Dr. William C. Wylie, *New England Medical Gazette*, Danbury, Conn., Secretary, read the minutes. The question was propounded, "How far do Medical Journals distributed by Drug-houses and Manufacturers Interfere with Regular Medical Journalism?" This subject was discussed at length, from all points, by a number of gentlemen. This class of literature was condemned strongly, but many maintained that its effect upon regular journalism was not important. A new constitution and by-laws were adopted. The following officers were elected: President, Dr. W. C. Wylie, of *New England Medical Gazette*, Danbury, Conn.; Vice-President, Dr. Dudley S. Reynolds, of *Progress*, Louisville, Ky.; Secretary and Treasurer, Dr. J. C. Culbertson, *Lancet-Clinic*, Cincinnati; Censors, Dr. Richard J. Dunglison, of Philadelphia, Pa.; Dr. Young H. Bond, of St. Louis, Mo.; and Dr. William Davis, of St. Paul.

Progress of Medical Science.

The Antiseptic Injection of Inflamed Joints.—Dr. Hager advocates, in the *Deutsche Zeitschrift für Chirurgie*, the early use of antiseptic injection in a variety of cases of arthritis. He has used various liquids, but employs 1 : 20 carbolic-acid solution, or 1 : 1,000 sublimate solution, according to the character of the inflammation. He believes that a portion of the good effects realized from the use of the former fluid is due to its astringent property, and cites the practice of Dr. Schede, who has used it as an intra-articular injection in cases of habitual luxation of the shoulder-joint, and with excellent effect. He has himself cured a case of the well-known troublesome relaxation of the temporo-maxillary joint by a series of carbolic injections into the articulation, inserting them between the condyle and the zygoma, while the mouth was widely opened. Of 100 cases of hydrops articuli of the knee, a cure resulted in all but 1, who died of pulmonary tuberculosis a few weeks afterward. In only four instances was it necessary to repeat the injection and washing of the joint, although in nearly fifty per cent. of the cases the disease had existed for from one to ten years. Gonorrhœal arthritis he divides into two groups: 1. Those cases in which there is a pronounced exudation into the joints. 2. Those in which there is intense periarthritis with but trifling fibrinous effusion. His results were, as might be expected, especially good in the first class of cases, nine of which he treated by the injection method. In those of the second group they were, at least, as satisfactory as those attained by the usual methods. He details other cases of rheumatic, tuberculous, and fungous forms of arthritis of various joints, in which more or less complete cures were obtained in relatively very short periods of time. He dwells, in conclusion, upon the simplicity and safety of his method of treatment, which, even in those cases that might have been curable by other means, shortens the time required, and immediately relieves the joint of effusion which otherwise often persists for years.

In other cases incision and drainage would have been thought justifiable, but puncture and washing out answered the same purpose, with much less difficulty and danger. The operation is performed as follows: The region is cleaned and made absolutely aseptic; a trocar is introduced into the joint, together with a cannula fitting the syringe to be employed. After it is evident that it has entered the cavity, the trocar is withdrawn, the fluid evacuated, and the antiseptic solution injected forcibly and repeatedly until it issues clear and free from all mixture with blood or pus. It should be thoroughly diffused, so as to come into contact with the inner surface of the capsule at every point. Strong flexion and extension, made while the trocar-opening is closed with the fingers, and the joint half filled with fluid, aid in bringing this about. Some caution is necessary in performing this part of the operation, as it has happened to as distinguished a surgeon as Billroth to lose a patient by carbolic-acid poisoning from penetration of the intermuscular spaces of the thigh by the liquid forced out of the capsule by too vigorous movement. The little puncture is covered with an antiseptic dressing and the joint immobilized for eight or ten days, after which, at a time depending on the severity of the case, passive motion is begun. He gives details as to the best points of entrance of the various joints. The paper is a valuable contribution to this branch of surgery.—*The American Journal of the Medical Sciences*, April, 1888.

The Pathology of Infectious and Infective Diseases.—An instructive series of articles have recently been published in *The Lancet*, from the pen of the well-known pathologist Joseph Coats. The author states his conclusions as follows: "We have seen that, in the case of a large number of diseases of this class, inheritance, whether we take it more broadly in the race or more particularly in the family, has an undoubted and frequently a very great influence on the susceptibility to infection. This varying degree of susceptibility exists in the case of diseases which are demonstrably due to the action of micro-organisms, and we are driven to the conclusion that a micro-organism, which is pathogenic in the individuals of one race to a high degree, is non-pathogenic, or nearly so, in the individuals of another race. Recurring to our remarks on the general principles of inheritance, it seems necessary to relate this difference in susceptibility to fine differences in the structure and activity of the tissues. We have seen that the differences in the races depend on variations in the details of their tissues, such as singly might seem to be of comparatively little moment. The differences in individuals of the same race are still more minute, and depend on still finer variations in the details of the tissues. Coming to undoubted cases of inheritance of morbid conditions, we saw by illustrations that it was variations in the details of structure and function which are the subject of inheritance. In ichthyosis it is the structure and mode of growth of the epidermic cells; in hæmophilia it is the structure, presumably, of the blood-vessels; in Daltonism, the finer details of the structure and function of the retina. In all these cases it is the structure and activity of the finer elements of the tissues concerned which are at fault. When we find that the varying susceptibility to infectious and infective diseases is also related to inheritance, then we must, I think, relate it to the same kind of variations as those which we have found to be the subject of inheritance both of normal and abnormal structures. It is, again, the structure and vital activity of the elements of the tissues with which we have to do. If, as we have seen, the negro race differs very remarkably in its susceptibility to infectious disease from the European races, then we are led to believe that this depends on fine differences in the structure and activity of its tissues, such as determine the characters of race. It is the living active tissues with which we have to deal, and it is peculiarities in these, determined by inheritance, which, I believe, constitute the differences. Let us take it for granted that some at least of the diseases in question depend on micro-organisms. We know that the living active cells which compose the epidermic and epithelial tissues exercise an important influence in preventing the entrance of micro-organisms. Abundant bacteria are present on the surface of the skin and in the alimentary canal, but the epithelial and epidermic cells inhibit them, and prevent their entrance into the body—that is part of the function of these cells. Similarly, the cells of a granulating wound inhibit the bacteria which may swarm in the pus bathing the wound. These micro-organisms become dangerous when they are carried beyond these surfaces, as when perforation of the stomach or intestine occurs, or when decomposition takes place in a recent wound before granulations have had time to form. The living tissues beneath these surfaces have less power of inhibition, although still possessing it in some degree. It is only certain micro-organisms which will survive, even if introduced in the way mentioned. It is important to remember that each living tissue consists of an immense number of living active cells, each of which has its own vital processes. The micro-organisms also consist of living active cells, which possess an extraordinary power of multiplication by division. I believe we must look for the solution of the problem to the contending activities of the two kinds of cells. No doubt there are intricate chemical problems involved in all this. Each cell has its incomings and outgoings, and it is quite possible that it may be by means of some of the chemical products that the inhibition is effected; but of this we know nothing, and we can only associate it with the vital activity of the elements of the tissues. Of course, it is not to be inferred that inheritance is the only item in determining variations in susceptibility. We know that the same individual will at different times present remarkable variations in the degrees of susceptibility to the same morbific agent. I have chosen inheritance to illustrate the subject, because it appeared to me to offer examples which would serve to indicate the kind of influence concerned in the varying degrees of susceptibility to the class of diseases under consideration. If my remarks are justified by the facts which I have adduced, then I think there can be nothing contradictory in speaking of the varying susceptibility of different persons, or of the same person at different times, to the same infective or infectious disease. We can recognize in all such cases the action, on the one hand, of the morbific agent, and, on the other, the reaction of the living tissues."

PANCREATIC CARCINOMA IN CHILDREN.—Dr. Kühn has placed on record the history and post-mortem examination of a two-year-old female child that was affected with this disease. When the child was brought to him it was anæmic and troubled with constant diarrhœa. The child had been ill for several weeks before this time. Syphilis and other infectious diseases were absent. Physical examination revealed anasarca, slight bronchitis, general anæmia, stools yellow or rather brown in color, lymphatic glands and spleen not enlarged. Before death the stools became colorless and watery. Death ensued from pneumonia. The post-mortem revealed carcinoma of the pancreas with a metastatic deposit in the lower lobe of the left lung. Dr. Kühn concluded that the morbid growth must have commenced during fœtal life, as the disturbance manifested itself in the first year of its existence, after which the pancreas began to act more violently on the digestive organs. The dropsical appearance was caused by the pressure of the tumor on the venous circulation of the liver. The secretion of the bile was consequently diminished by the fatty degeneration of the liver, though not entirely suppressed. There was no jaundice.—*Berliner Klinische Wochenschrift.*

CREOLIN.—According to the Vienna correspondent of *The Lancet*, another antiseptic which Dr. Neudörfer has advantageously tried is creolin. This is a sort of tar which is obtained from the English pit coals by dry distillation, and from which the poisonous hydrocarbons have been eliminated. The chemical constitution is not yet established, but owing to its characteristic qualities it can be very easily recognized by the practitioner. It is derived from the aromatic class of hydrocarbons, and is closely related to creasote, carbolic acid, resorcin, hydrochinon, etc. The very first results which Dr. Neudörfer had obtained with this drug were very favorable, and he had for this reason at last abandoned all the other antiseptics and used only creolin. The first success he had obtained with it was in the case of a girl, aged seven, who suffered from erysipelas bullosum migrans faciei. The skin of the nose, the upper lip, and over both zygomatic arches was greatly stretched and much reddened; some pustules were also present. The lower eyelids were œdematous, the frequency of the pulse and the temperature were increased, and the patient also suffered from headache. Dr. Neudörfer said to the relatives that the erysipelas would spread over the forehead and the ears, and that it would disappear in from seven to ten days. He ordered a two per cent. solution of hydrocarbonate of sodium with syrupus simplex, and directed the erysipelatous parts to be brushed thrice a day with undiluted creolin. The erysipelas did not advance, the pustules dried up, the infiltration of the skin disappeared, and the patient ceased to complain of any pains. The symptoms of fever also disappeared, and the erysipelas was cured in two days and a half. Dr. Neudörfer has, since that time, tried creolin in two other cases of erysipelas with like success. In former times he used always to treat severe cases of erysipelas successfully with subcutaneous injections of carbolic acid, and he had therefore no reason to resort to the method of Krascke. Since he had tried creolin, however, he no longer used subcutaneous injections of carbolic acid, which had recently been again recommended by Fehleisen. The second case which had been antiseptically treated with creolin was that of a butcher, aged twenty-seven, who had cut the last phalanx of his left middle-finger and the terminal front of his ring-finger. After treatment with a two per cent. solution of creolin, and the application of creolin gauze, the wound healed, in eight days, without any suppuration or swelling. In the third case, in which a tumor in the region of the lower jaw was removed from a woman, aged thirty, creolin was used during operation and afterward as a dressing, two silk sutures closed the wound, and no drainage-tube was put in. On the third day the sutures were removed; the wound was already closed, and the dressing could also be removed. The author has since used creolin in several minor operations, both in the Polyklinik and in private practice, and has always observed that it relieved pain, checked the hemorrhage, and limited suppuration. At first he used a two per cent. solution, but he has now found that creolin is efficient in a one-half per cent. solution. Dr. Neudörfer prepares a fresh solution each time by adding two drops of creolin to seven ounces of water. He uses only ungreased gauze, which, being folded from ten to twelve times, is wrung out of the milky solution and applied to the wound, which is afterward covered with several layers of dry gauze. The dressing may be left until healing has taken place. This dressing is very convenient, both for the physician and the patient, and it is also very cheap. The surgeon's wards, the patient's skin, and the instruments can be disinfected with a two per cent. solution of creolin. Dr. Neudörfer concludes his paper by stating that he is so satisfied with creolin that he does not desire any other antiseptic. For country practice, as well as for use in war, creolin is, in his opinion, the most trustworthy and convenient, as well as the cheapest and most harmless antiseptic.

NON-CALCULOUS ANGIOCHOLITIS.—Hepatic suppuration may be due to many causes, and the channels of infection may be as numerous as the tubes entering the liver. M. Ferrand has recorded the case of a tailor, aged thirty-nine, who had been dyspeptic for two years, with increasing constipation and enlargement of the abdomen (*The Lancet*). Sudden attacks of pain and vomiting, with melæna, fever, and tender enlargement of the liver, were the chief clinical signs during the last month of his life. The necropsy exhibited a dilated stomach with slight ulceration of the large curvature near the pylorus. The liver was voluminous, presenting slight projections of its parenchyma, of dark-red color. The autopsy showed a multitude of disseminated abscesses varying in size from a hen's egg to a pea; the largest made a cavity at the root of the Spigelian lobe, and its walls were blackened, tomentose, and gangrenous. The majority contained a yellow-ochreous fluid, evidently composed of biliary matter; the gall-bladder appeared intact and filled with a similar liquid; nowhere could a calculus be discovered; the hepatic substance between the abscesses was of a red and granular aspect, due to a commencing cirrhosis. The case was therefore described as hepatitis with suppurative angiocholitis leading to peritonitis and melæna; the portal system appeared to be innocent of infection.

IODINE IN ASCITES.—Dr. Rivadeneyra, writing in *La Correspondencia Médica* on ascites due not to lesions of the heart, kidneys, or liver, but to the general condition of malarial poisoning, speaks highly of the success of iodine applications. He applies the tincture to the surface of the abdomen in strips or fringes, leaving a breadth of clear skin between each. The untouched parts are similarly painted when the iodine has caused the skin to begin to peel off. In cases where the ascites is very considerable, paracentesis is first performed, and the iodine applications commenced a few hours afterward.

A MAN has been condemned at Carlsruhe for inducing hypnotism in a young man, nineteen years of age. The court regarded it as a case of assault.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, May 26, 1888.

SOME NEW STUDIES OF THE CARDIAC MOVEMENTS.

MARTINS has made a series of careful and ingenious experiments with the cardiograph, as the result of which he has perfected the instrument, and corrected, as he believes, some errors in the conclusions of previous observers.

The cardiograph is an instrument which has heretofore been little employed in clinical medicine, and it is not likely to become widely used. But it is not difficult of application, and if it can furnish more exact data in obscure cases the fact should be known and taken advantage of. For this reason, we call attention to the subject now. The articles of Martins, published in the *Zeitschrift fur klin. Medicin*, Bd. xiii., Heft 3–6, and in the *Deutsche medicinische Wochenschrift*, No. 13, 1888, are lengthy and technical. We cannot attempt to give even an outline of the author's line of argument, but shall only refer to his results.

There has been considerable difference of opinion among the physiologists Marcy, Landois, Ott, Ziemssen, and others as to the proper interpretation of the cardiogram.

The first part of the tracing produced by placing a cardiograph over the position of the apex-beat consists of a rather sharp ascent, followed by a rather sharp descent. The line of ascent, says Martins, marks the period of the contraction of the ventricle upon the blood which fills its distended cavity. At the moment that the line reaches its highest point the semilunar valves open, and during the descent of the line the blood rushes into the arteries. The systole of the heart is represented by a curve, therefore, consisting of a line of ascent and descent. The ascent marks what Martins calls the systolic closure-time; the descent, the time of the "heart-aortic-stream." This latter line is longer or shorter, according to the amount of pressure in the arteries or the obstruction at the aortic valves. Its course, therefore, is clinically of value in studying arterial pressure or stenotic conditions. A second and smaller curve now follows, whose apex corresponds to the closure of the aortic valves. This curve would be disturbed in regurgitation. Following this, the cardiographic line sinks, corresponding with the relaxation or diastole of the heart. But the diastolic fall is interrupted by an impulse due to the backward impact of the blood on the aortic valves after the arterial systole is completed.

There are therefore three distinct elevations in the cardiographic curve. If the interpretations placed upon them by Martins are correct, a study of their variations in valvular and arterial disease may furnish data of practical interest to the clinician.

THE CLASSIFICATION OF THE DYSPEPSIAS.

THE term "dyspepsia" is rapidly being relegated to the realm of old-fashioned and mystical pathology. It can no longer be used by exact clinicians, except when carefully qualified. To be sure, there are many cases yet in which the particular form of functional stomach disorder from which a patient suffers cannot always be diagnosticated. But such cases are diminishing in number, and the physician who makes a diagnosis of dyspepsia, without further inquiry, must be put down as a loose and careless observer.

There is little excuse, for example, in failing to recognize decided gastric catarrh, or well-marked dilatation. The determination of the functional disturbances is constantly being made easier.

Dr. Julius Glax, in a recent work (*Ueber die Neurosen des Magen—Klinische Zeit- und Streitfragen*, Band 1, Heft 6), has done excellent service in presenting systematically the knowledge so far accumulated regarding many of these different forms.

In fact, under neuroses of the stomach may be included nearly every gastric disorder of a functional kind.

His classification will interest our readers, in showing, if nothing more, the refinement in symptomatological analysis which recent observations have made possible. The classification is as follows:

Group I. Motor neuroses. (a) Hyperkinesis, or irritative forms: (1) Peristaltic and antiperistaltic mobility of the stomach; (2) morbid eructations, belching, etc.; (3) nervous vomiting; (4) cramp of the stomach—general—of cardia, and of pylorus. (b) Hypokinesis, or depressive forms: (1) Atony of the stomach; (2) insufficiency of cardia, regurgitation, merycism; (3) insufficiency of the pylorus.

Group II. Sensory neuroses: (1) Cardialgia, central, reflex; (2) changes in the physiological sensations of hunger and satiety—anorexia nervosa, or gastric hysteria, bulimia, parorexia, or perverted sensations of hunger.

Group III. The secretion neuroses: (1) Irritative forms, hyperacidity, nervous gastroxyusis; (2) depressive forms, deficient secretion.

Besides the above, there occur, no doubt, vaso-motor disturbances, but their independent existence can hardly be recognized. It happens, practically, that many of the above disorders may be united, and that some of them may complicate inflammatory or other organic changes. At the same time, many typical examples of the special forms enumerated are on record and are not difficult to recognize.

INTRAPLEURAL INJECTIONS OF STERILIZED AIR IN THE TREATMENT OF PNEUMO-THORAX.

MUCH interest has been aroused over the presentation by Professor Potain, before the Académie de Médecine, of a patient whom he had cured of pneumo-thorax by the injection of sterilized air. Such a statement seems at first paradoxical, but an account of the case explains it.

The patient, twenty-three years of age, suffering from incipient phthisis, was suddenly attacked with fever, which lasted fourteen days and was accompanied with extensive pleuritic effusion, accompanied, at first, with air in the pleural cavity. As the effusion increased the lung became compressed, and the opening connecting it with the pleura was closed. The effusion finally reached the fossa supraspinata, and the patient's condition called for interference. If the effusion were withdrawn, however, it was thought probable that the connection with the lung would be opened, and the pneumo-thorax would reappear. Professor Potain therefore devised an apparatus, in the shape of a double cannula connected with a manometer, by which, as fast as the liquid was withdrawn, sterilized air took its place. The air was sterilized by being passed through cotton and then through a strong solution of carbolic acid. During the next three months the fluid, which was slightly purulent from the first, was withdrawn twice more. The amounts removed were fourteen hundred, sixteen hundred, and five hundred cubic centimetres. The patient gradually improved, his original pneumo-thorax did not return, and even his tuberculous symptoms disappeared, so that he was discharged cured. Two other cases were treated in a similar manner, one being cured and the other improved.

Professor Potain thinks that his results quite justify him in recommending this new procedure in appropriate cases. It allows one safely to remove a large amount of liquid from the pleural cavity, and thus obviate the danger of repeated evacuations and of producing congestions and rupture of the lungs from sudden expansion.

The prognosis of pneumo-thorax ordinarily is very bad. Among 46 cases of tuberculous origin collected by Professor West, of Heidelberg, 44 died and 2 were cured. Among 11 previous cases of this disease observed by Potain, 8 died and 3 were cured.

AUXILIARY PUBLIC SCHOOLS FOR FEEBLE-MINDED AND BACKWARD CHILDREN.

In several of the larger German towns auxiliary schools have been established for the benefit of children who are unable to bear the strain of the ordinary curriculum. Describing them the *British Medical Journal* says: "Those children who after two years' trial have been shown to be quite unable to follow the instruction given in the classes of the national schools are drafted into these special schools, where, all the pupils being on about the same intellectual level, it becomes possible to place them under the charge of a specially trained teacher, who instructs them in classes not exceeding twenty members, so that some care may be devoted to their individual capacity and requirements. This withdrawal of the feeble and more backward children from the national schools enables more care to be given than to the ordinary children working in the curriculum, a heavy incubus and tax upon the teachers' time being thus removed."

The German schools have been successful, and the *British Medical Journal* urges the adoption of the system elsewhere. It certainly meets a practical want. The only question which arises is, whether the State should undertake to educate the defective classes as well as the healthy. We believe that it should, and that such policy would be the most humane and economical in the end.

THE THERAPY OF GONORRHŒA.

Dr. E. Finger, of Vienna, contributes to the *Internationale klinische Rundschau*, 1888, No. 19, an article upon "some new antiblennorrhagics," in which he shows apparently that Vienna physicians are a little behind the Western world in the treatment of gonorrhœa. Dr. Finger, like most German physicians, accepts the specific bacterial pathology of this disease, and remarks truly that our therapeutics have not advanced in the same measure as our pathology.

Among what Dr. Finger calls recent internal remedies are two which he thinks are of especial value, viz., sandalwood oil and kava-kava. The former, he finds, possesses the same value as copaiba, but has the advantage of not irritating the stomach. He gives it in five-grain capsules, of which four to six are taken daily. The kava-kava is given in doses of twenty to thirty drops of the fluid extract. The indications for both drugs are the same. They are to be given in acute urethritis, anterior or posterior, and in acute urethro-cystitis. Both are contraindicated in the very severe forms of urethritis, the so-called "phlegmonous gonorrhœa."

With regard to topical measures, Dr. Finger speaks in the highest terms of lanolin ointments. Lanolin has the advantage of being aseptic and antiseptic, and also of being absorbed by the mucous membrane, carrying deep into it, therefore, the active agent with which it is united. The ointment is applied by means of a specially constructed syringe, which consists of a catheter—No. 16 to 18—with a single opening at its vesical end. In this is fitted a piston, the whole holding about one decigramme of ointment. Lanolin ointments are indicated only in the ordinary acute forms of gonorrhœa, and not in the chronic types. The formula given by Finger is as follows:

℞.	Nitrat. argenti vel cupri sulph. .	Gm. j. to iij.
	Lanolin	Gm. xcv.
	Olei oliv.	Gm. v.
M.		

In obstinate cases the following is recommended:

℞.	Potas. iodid	Gm. v.
	Iodin.	Gm. j. to iij.
	Lanolin	Gm. xcv.
	Olei oliv.	Gm. v.
M.		

Dr. M. A. Castellan (*Arch. méd. Belges*) has been making some experiments with alkaline injections in gonorrhœa. It has been observed that the gonococcus thrives in acid media, hence he employed eight to ten per cent. solutions bicarbonate of soda three or four times daily. In old cases, in which other remedies failed, the alkaline medication "led to rapid and complete recovery."

Dr. Turpura Impallomenti has been employing one per cent. solutions of creasote in decoction of camomile. His results are, that "five out of seven patients were cured in six days."

Dr. Rohé is quoted by the *Maryland Medical Journal* as recommending ten per cent. dilutions of liquor sodæ chlorinatæ. He finds that "the discharge promptly ceases in the majority of cases."

L'Union Médicale, 1886, p. 664, gives a number of formulæ which are highly recommended by "M. Jones" in the *Rev. de thér. gén. et therm.*, 1888, No. 13. These formulæ amount to little more than those of the Lafayette mixture and weak solutions of sulphate of zinc. We are inclined to think that, after all is said, these two preparations will accomplish as much as any of the therapeutic novelties in the vast majority of cases of gonorrhœa.

THE SANITARY PROTECTIVE LEAGUE.

UNDER this name an organization was formed in this city three years ago, for the purpose of assisting the health-authorities in case of emergency. Members of the society, co-operating with medical and other organizations, secured, in 1887, the passage of important amendments to the tenement-house law and also of the small parks bill.

The league has now been revived again, and proposes: (1) to encourage work in the inspection of tenements, factories, and workshops, and report defects; (2) to employ a corps of women visitors to distribute sanitary tracts, and to teach the poor how to keep their health; (3) to encourage tree-planting and additional small parks; (4) to establish hot public baths for winter use; (5) to encourage the formation of building associations for the erection of small houses for working-men in the suburbs.

These are all objects that deserve a hearty support from those interested in promoting public health and in improving the condition of the poor. Certain figures are given which accentuate this fact: "Some sixteen thousand children under five die every year in New York—just twice the normal mortality for a large city. Last summer four thousand one hundred and nineteen were carried off, and nearly a thousand in a single week—a larger number than in any year since 1872. If viewed rightly, this would be called simply massacre.

"The deaths from diphtheria have doubled in four years (from 1884 to 1887). If cholera were as frequent and fatal, the city would be deserted in a panic."

Just now one would think that the stability and happiness of society depended on the question of a tariff. In reality, we believe that wise sanitary reforms would have a vastly greater influence in saving money and promoting happiness and morality in the nation than the reduction of duty on wool. A truer sense of proportion will doubtless in time be educated into the minds of those who are presumed to mould public opinion. Meantime, we wish success to every sincere effort to promote sanitary reform, and the Sanitary Protective League is one of these.

MIDWIVES IN CLEVELAND, O.—According to the Cleveland *Medical Gazette* there are in that city nearly fifty midwives, mostly Germans, with a number of Bohemians and a few English. "As to qualification, nine-tenths of them have no training whatever, and too many of them have not the recommendation of habits of common, decent cleanliness. A large percentage of the cases of puerperal septicæmia which occur in the city are in the practice of the midwives, and innumerable instances of mismanagement and malpractice occur which never meet the light of investigation, as one may fairly judge by the occasional cases that do come under the observation of physicians." In Ohio, anyone can practise medicine or be a midwife by simply announcing themselves.

News of the Week.

TAKING THE THERMOMETER AND LOSING THE TEMPERATURE.—An Italian patient in one of Dr. Shrady's wards in St. Francis Hospital, deliberately chewed a fever thermometer and swallowed the greater part of it before he was made to understand that the instrument was not intended as a medicine. Luckily, he has had no subsequent increase of temperature, which would make it necessary to risk another thermometer in that way. The rectum will be the next choice.

CALIFORNIA needs laws providing for compulsory vaccination of school-children, and for burial of human bodies only upon the authority of a death-certificate. At the last meeting of the State Society the following resolutions were passed:

"That the Society cordially indorse the efforts of the State Board of Health in their endeavors to procure a law to forbid interment and cremation of human bodies in this State without first having obtained a permit from some proper constituted authority; and also,

"That the Society cordially indorse the efforts of the State Board of Health in their endeavor to procure a law whereby vaccination will be compulsory upon all children entering the public schools, and also in their endeavor to make the law relating to the registration of births, marriages, and deaths effective.

THE LITERARY MACHINE FOR INVALIDS.—It will interest the innumerable admirers of, and sympathizers with, the illustrious German invalid to learn that his comfort has been considerably enhanced by a cleverly constructed apparatus for holding books over a bed, known as the literary machine, which the Kaiserin had herself ordered from the London inventor.

THE LATE DR. EDWARD G. LORING.—At a regular meeting of the Practitioners' Society of New York, held May 4, 1888, it was

Resolved, That in the death of Dr. Edward Greely Loring the Society has lost an eminent colleague, whose contributions to its scientific work were characterized by distinguished ability; whose agreeable companionship contributed largely to the enjoyment of the social entertainments of the Society; and whose absence will long be felt and lamented.

Resolved, That these expressions of regret be entered on the minutes by the Secretary, and that he be requested to furnish a copy of the above resolutions to THE MEDICAL RECORD and Journal for publication, and to send a copy to the family of Dr. Loring, with the sympathy of the members.

SAMUEL SEXTON,
ROBERT F. WEIR,
JAMES B. HUNTER,
Committee.

A NOVEL REASON FOR DECLINING A CONSULTATION.—Professor Kremianski, says *The Lancet*, has recently been invited to take a journey from his residence in Kharkoff in Russia to Xeres in Spain, to attend a consultation in a case of phthisis, the local physicians being disposed to employ his system, which is sometimes, though not very correctly, described as the "aniline treatment." This consultation the professor has declined, on the ground that until his work, entitled "Zarasy i Chakoti" (Infections and Phthisis), which at present exists only in Russian, is translated into some language which the Spanish physicians read it would be useless for him to go such a distance, as his proposed consultees cannot be fully acquainted with the principles on which his treatment is based. He therefore foregoes a very large fee on a somewhat novel ground.

THE MUCH ADVERTISED QUACK MEDICINE, VITA NUOVA, according to the *Boston Journal of Health*, is nothing probably but a native port.

THE PRACTITIONERS' SOCIETY OF NEW YORK, at its last annual meeting, elected Dr. F. P. Kinnicutt President.

A PROVIDENT MEDICAL ASSOCIATION.—A Medical Aid and Co-operative Society has been started in Brooklyn. It has established a graded scale of weekly, monthly, and quarterly dues, according to the ages of members and the number contained in the family, and the prompt payment of which is in lieu of fees for all medical services, surgical and obstetrical services not being included.

THE MICHIGAN STATE MEDICAL SOCIETY will meet in Detroit on June 14th and 15th.

BLOOMINGDALE INSANE ASYLUM TO BE MOVED TO WHITE PLAINS.—The Society of the New York Hospital has resolved upon a removal of the Bloomingdale Insane Asylum to White Plains, the demolition of all the buildings now composing the asylum except the Mrs. John C. Green memorial building, and the sale at auction by lots of the tract now occupied by the asylum for building purposes. The sum of $1,000,000 has been appropriated by the managers for the new building. The present grounds will make about five hundred and fifty-eight city lots, the amount received from the sale of which it is estimated will bring in an income of $200,000, quite enough, it would seem, to run the new asylum. The Green memorial building is to be left, and will probably be utilized as a general hospital. The present site of the asylum was purchased seventy-two years ago for $4,000. It is now worth at least $3,500,000.

THE "CHRISTIAN SCIENTIST," Mrs. Abbie H. Corner, of Malden, Mass., whose daughter and daughter's infant died in childbirth, is being tried for manslaughter. The evidence seems to show that the woman neglected to provide proper medical care for her daughter, but continued praying over her until death occurred. Exactly similar cases have at times come before the English courts. In London, there is a "Peculiar People" who believe in prayer and laying on of hands, but in no medical or surgical treatment. Occasionally the leg of a peculiar person gets broken, or a fever attacks him. If death occurs, the law steps in, as in the Malden case, and it has, so far, decided against the Peculiar People.

THE JOHNS HOPKINS HOSPITAL, at Baltimore, is said to be now completed, and it will be formally opened next fall. The hospital is probably the costliest and most complete in every detail of any institution of the kind in the world. The total number of the buildings is now twenty-three, and their cost has reached among the millions.

A CHINESE SURGEON, named Leon Jack, has recently arrived in this city and established himself.

A NOVEL EXTENSION OF THE USE OF COCAINE.—Mr. E. Hurry Fenwick claims that strong (twenty per cent.) solution of cocaine, injected in small amount into the urethra, will relieve renal, lumbar, and other pains due to slight irritations. The drug acts by reflex inhibition.

THE ENGLISH medical world is shouting with laughter. The last edition of *Fun* speaks of the Galen Club, of London, as a place where doctors may be found "re-Galen" themselves.

THE DONDERS MEMORIAL FUND has reached the sum of $10,000. Professor Donders' seventieth birthday is on Sunday, May 27th; the presentation of the fund to him will be made on the 28th.

ST. ELIZABETH'S HOSPITAL, of this city, formerly, if not now, under the charge of Sisters of the Third Order of St. Francis, is reported to be lapsing into desuetude, owing to some technical religious troubles among its managers. The hospital was at one time a very prosperous one.

MEDICAL OPINION IN ST. LOUIS.—St. Louis seems to be one of those ideal spots in which politicians actually pay some respect to medical opinion. The mayor appointed as health-commissioner a physician of high standing recommended by the St. Louis Medical Society. This society has formally thanked him, and the St. Louis doctors are thinking of putting up a candidate for President of the United States.

THE EMPEROR OF GERMANY has his temperature taken by a half-minute thermometer placed in the mouth. Professor Leyden insists on his eating grape instead of cane sugar.

THE LOUISIANA STATE MEDICAL SOCIETY ON CONTRACT PRACTICE.—At its recent annual meeting the Society passed the following resolution, which has the triple merit of brevity, candor, and truth:

Resolved, That we regret that physicians do contract practice, but the Society cannot do anything to prevent it. Adopted.

THE OVARIES AND THE SEXUAL SENSE.—Certain laparotomists, whose specialty is removal of ovaries, have claimed that such removal does not affect the sexual or maternal feelings of the patient operated upon. Evidence, so far, has come mainly from the gynecologist-operator. Dr. John W. Taylor, in the *Birmingham Medical Review*, cites an illustration of the bad effects of the operation on the natural instincts of the woman. The question is, at any rate, not to be considered settled by the apodictica of our operating oöphiles.

THE BEST ANÆSTHETIC in obstetrical practice, according to Dr. Stephens, of Brighton, is a mixture of equal parts of alcohol and chloroform, to which may be added, if desired, a little cologne water.

THE ILLNESS OF DR. FRANK P. FOSTER.—We learn with deep regret that our friend, Dr. Foster, editor of the *New York Medical Journal*, is suffering from an attack of perityphlitis. Fortunately, the symptoms have not assumed a grave aspect, and there is every reason to hope that his valuable life will be spared.

Society Reports.

AMERICAN MEDICAL ASSOCIATION.

Thirty-ninth Annual Meeting, held in Cincinnati, O. May 8, 9, 10, *and* 11, 1888.

SECTION ON DERMATOLOGY AND SYPHILOGRAPHY.

Tuesday, May 8th—First Day.

L. D. Bulkley, M.D., President, in the Chair.

At the opening session the question proposed for discussion was

THE ETIOLOGY AND TREATMENT OF ECZEMA.

Dr. L. D. Bulkley, of New York, said that the causes of eczema were twofold, viz., internal and external, and each of these might be again divided into predisposing and exciting causes. Among the internal causes, the predisposing were heredity and various diatheses—the rheumatic, gouty, strumous, and neurotic—and the exciting cause was lowered vitality resulting from overwork or worry, or from digestive disorders and consequent malassimilation. Of the external causes, the most active were climate, occupation, diet, and external irritants.

Dr. Zeissler, of Chicago, referred to the opposing theories concerning the etiology of eczema which were held in Germany and in this country and England. In the former, the predominant theory, most strongly upheld by Hebra, was that eczema is due to purely local causes, and very strong arguments, derived from the results both of experiments and of therapeutics, were advanced in support of this theory. The view most generally held in this country was that eczema is a constitutional affection, but the speaker thought that this was too sweeping, and he was of the opinion that there was a measure of truth in both these theories. It was possible that the disease was due to the

PRESENCE OF MICRO-ORGANISMS;

but if this were so, there must be a large number of these, and consequently it would be necessary to subdivide the affection into several distinct diseases.

As to treatment, the speaker favored the use of internal remedies, but he did not rely upon them to such an extent as formerly. He used arsenic only in the dry form of chronic eczema.

Dr. Shoemaker, of Philadelphia, thought that the rheumatic element in eczema was often ignored. He had seen a number of cases in which benefit had followed the administration of

ARSENIC IN SUPPOSITORIES AND HYPODERMATICALLY,

after the remedy had been given by the mouth without relief. He had also seen remarkable results, in certain cases, follow the employment of massage or electricity. The latter might be given in the form of either galvanism or faradism.

Dr. Ravogli said that it was very necessary to take into consideration the individual characteristics of the patients, their age, the normal condition of their skin, their constitutional tendencies, etc. The symptoms of eczema varied greatly according to the age of the individual, the general tendency being to acute manifestations in infancy, and to a more chronic form in the aged. Anything which interfered with the circulation of a part might act as a cause of local eczema. He thought the disease might well be characterized as a

CATARRH OF THE SKIN.

In the eczema of infancy he had obtained good results from resorcin and salicylic acid.

Dr. Reynolds, of Chicago, relied chiefly upon the

LOCAL TREATMENT OF ECZEMA,

which was soothing or stimulating according to the nature of the disease. He did not, however, neglect constitutional treatment, which was sometimes of very great importance.

Dr. Ricketts, of Cincinnati, had observed a number of cases of eczema in which the urine was found to be highly acid. He was unable to say whether there was any more than an accidental relationship between these two conditions.

Dr. Fleischner, of New Haven, was a firm believer in

ARSENIOUS ECZEMA.

He used arsenic to some extent, but less than in former years.

Dr. W. T. Corlett, of Cleveland, then read a paper on

PRAIRIE ITCH.

There are four features, he said, which are supposed to distinguish this affection: 1, Itching; 2, an eruption; 3, the alleged presence of a parasitic organism; and, 4, the rebelliousness of the affection to antiparasitic remedies. He reported a number of cases, which had come under his observation, of the so-called prairie itch, or lumberman's itch, and came to the conclusion, as a result of a careful study of these cases, that there was no morbid entity which could be called by a separate name, but that the designation had been bestowed, at one time or another, upon almost every affection of the skin which is accompanied with pruritus. The inevitable conclusion was, that practitioners in general were lamentably weak in their powers of diagnosis of cutaneous disorders.

In the discussion which followed, the speakers were in accord with the author of the paper in denying the existence of such a disease, and they thought that the name was only a cloak for the ignorance of the medical adviser.

Wednesday, May 9th—Second Day.

The subject for discussion at this session was announced to be

THE LIMIT OF THE PERIOD DURING WHICH SYPHILIS CAN BE COMMUNICATED BY CONTAGION OR INHERITANCE.

Dr. L. B. Bangs, of New York, had sent a letter in which he concluded, from a study of a number of cases collected by Fourrier, that (1) the so-called tertiary lesions of syphilis are not contagious; (2) the contagious period of syphilis may disappear spontaneously; and (3) the extreme limit of the contagiousness of the disease may be put at five years. He cited several authorities who were inclined to put the limit of contagion at a much earlier period than this. Another argument in support of this view was that derived from

REINFECTION.

A person who is capable of contracting the disease a second time may reasonably be supposed to be so far cured as to be unable to communicate syphilis to another. The writer instanced eleven such cases, the average period at which the reinfection occurred being about five years after the beginning of the first attack.

Dr. Keller reported a case which had come under his own observation. A man married within a few months after having contracted syphilis, and had mucous patches in the mouth some time later. The wife remained perfectly well during her pregnancy, but the child had sniffles immediately after birth, and soon presented a skin eruption. Ten days after its birth the mother presented a well-marked macular eruption over the entire body. The children born subsequently showed no evidences of syphilis.

Dr. Palmer, of St. Louis, did not think that any definite time could be set as the limit of the contagiousness of syphilis.

Dr. Ohmann Dumesnil, of St. Louis, read a paper entitled

DOUBLE CHANCRE À DISTANCE.

He reported two cases, in each of which there were two well-marked hard chancres, one on the prepuce and the other on the lip. Both patients suffered from cracks in the lips. The speaker did not regard the cases as examples of auto-inoculation, but believed that the two chancres had been acquired at the same time, since they were apparently of the same age, the induration and glandular enlargement appearing and disappearing simultaneously.

The speaker then reviewed the evidence for and against the possibility of

AUTO-INOCULATION OF SYPHILIS,

closing his review with the following conclusions:

1. The probability of auto-inoculation in early syphilis has not been demonstrated.
2. While there may be strong presumptive evidence in favor of it, it is only at best a possibility.
3. The most crucial experiments prove that excision of the chancre, at the earliest possible moment, is futile and falls short of its purpose.
4. In multiple chancres *à distance* the lesions are due to the same inoculation, as a rule.
5. In multiple chancres of different ages, it is probable that the younger lesions are merely irritative scleroses.
6. Experiments, so far, apparently prove that syphilis is constitutional at the time the initial sclerosis makes its appearance.

Dr. Palmer, of Louisville, did not believe that syphilis was auto-inoculable, and thought that excision of the chancre was useless as a therapeutic measure.

Dr. Ravogli had seen two cases in which there was a double chancre of the penis, one on each side. He saw no valid argument against the auto-inoculability of syphilis, and he believed that early excision of the indurated chancre would, in many cases at least, prevent a generalization of syphilis. He had performed excision in six cases, and in no instance did the patients present any further manifestations of syphilis, although no other treatment was resorted to. The operation was very simple, and was well worth trying in the light of the results which he had obtained. Care should, of course, be taken to remove thoroughly all the indurated tissue.

Dr. Zeissler, of Chicago, did not believe that excision would prevent syphilis, and those cases in which it had seemingly done so were to be explained by the fact that the constitutional disease did not always follow the appearance of a hard chancre. He had seen a number of such cases, and had also met with others in which the disease followed a chancre without any induration.

Dr. Keller, of Hot Springs, believed in the value of excision, but to be effectual it must be practised within forty-eight hours after the appearance of the lesion.

Dr. Reynolds had no faith in excision, for he did not look upon the evidence alleged in its favor as at all conclusive.

Dr. Palmer thought excision was of sufficient value to at least warrant its execution. He did not think it would cure the syphilis, when once induration had taken place, but he believed that it would lessen the severity of the subsequent symptoms.

Dr. Ohmann Dumesnil said that the mere fact that no secondary symptoms were noted after excision of the chancre proved nothing, for often the secondary manifestations of syphilis were so slight as to escape notice.

Dr. Joseph Zeissler, of Chicago, then read a paper on the importance of the

LOCAL TREATMENT OF SYPHILIS,

which he thought was often underestimated. He had found mercurial plaster useful in promoting the disappearance of the induration. For the roseola he used white precipitate ointment, of a strength of from ten to twenty per cent. Chrysarobin had been recommended for the cure of the papular syphilide of the palms and soles, and for the moist condylomata he had found nothing better than the solid nitrate of silver. The best results of local treatment are seen in the later manifestations.

Dr. Shoemaker, of Philadelphia, was partial to hot baths of water, steam, or air. He had found chromic acid very useful as an application to the mucous lesions.

Dr. Ohmann Dumesnil had obtained excellent results from the use of nitric acid in the treatment of syphilitic lesions of the anus and vulva.

Dr. Keller had found

THE ANIMAL FATS

much better than the mineral as bases for ointments, and he now never made use of vaseline for this purpose.

Dr. Palmer wished to emphasize the remarks of the last speaker, for he had found that the presence of animal fats increased very appreciably the efficacy of ointments.

Thursday, May 10th—Third Day.

Dr. H. J. Reynolds, of Chicago, read a paper on

THE GALVANIC METHOD OF TREATING VEGETABLE PARASITIC DISEASES OF THE SCALP.

The explanation of the want of success in the ordinary methods of treating these diseases was that the remedy could not reach the hair-follicles and destroy the fungus there situated, and his method was designed to effect the penetration of the parasiticide. After having washed the parts, he applied the positive sponge electrode, wet with a one per cent. solution of corrosive sublimate, for about ten minutes, the negative electrode being placed at any indifferent point in the neighborhood. Any other efficient parasiticide might be used in place of the bichloride. The strength of the current varied according to circumstances, the main point being to apply as strong a current as the patient could bear. He had read a paper on this subject before the International Medical Congress, and since that time had had two additional cases. Eight other cases had been reported by Drs. Charon and Gevaert, of Brussels. In all of these a cure had been obtained within three weeks, on the average, although several of them had persisted, in spite of active treatment by the old methods, for years. He believed that this plan solved the problem which had so vexed dermatologists of how to cure parasitic diseases of the scalp.

SECTION ON STATE MEDICINE.

Dr. Henry B. Baker, of Lansing, Mich., Chairman of the Section, delivered the annual address, taking as his subject

RECENT ADVANCES IN STATE MEDICINE.

At the present day, he said, sanitarians may be characterized as disease-preventers rather than nuisance-abaters. Public health officers are becoming in a greater sense instructors, and are less dogmatic and mandatory in their methods than they formerly were. An evidence of progress is seen in the constantly increasing number of sanitary publications and in the more frequent articles on State medicine which appear in the medical journals of the country. The work done by State Boards of Health in spreading among the people knowledge useful in the prevention of the most dangerous diseases is productive of great and immediate good, as is evidenced by the decrease of mortality from preventable diseases.

ORGANIZATION

of those interested in sanitary matters is of great importance, and the steps in that direction which have been taken in many of the States are a hopeful sign of growing popular interest in these subjects. The

NATIONAL CONFERENCE OF THE STATE BOARDS OF HEALTH,

which had just been held in Cincinnati, was not intended to supplant the older American Public Health Association. Its work differed from that of the latter body, being largely concerned with practical questions of public health, and its membership was restricted to officers of health boards, who are in position to put into practice the conclusions reached by the Conference.

The speaker then referred to

LOCAL, STATE, AND NATIONAL LEGISLATION,

the most important part of which was that relating to the collection of facts. It was a cause for regret and for shame that the Government of the United States is apparently less concerned about human health and life than it is about protecting swine and domestic animals from disease. It is behind all other governments in this respect. It is true

THE NATIONAL BOARD OF HEALTH

was established in 1878, and for a time it did excellent service, but it was opposed by some of those in power in Washington, who finally succeeded in crippling it by cutting off the needed appropriations. In Germany and some other countries bacteriological laboratories are maintained by the government, but here the only opportunities for study of this new science are found in a few of the larger medical schools.

Dr. Barker then spoke of the results of

BACTERIOLOGICAL STUDIES

as shown in the new views concerning the nature of typhoid fever, summer diarrhœa, and other diseases.

Great progress has apparently been made in warding off certain diseases by means of

QUARANTINE.

This service in New Orleans has reached a high state of perfection, and even in New York, although the system of that port has been severely criticised, good work has been done during the past year in preventing cholera from gaining a foothold. The cry is now for the general Government to take charge of quarantine at all the ports of the country; but the speaker did not think that past experience in national sanitary legislation held out much hope that such a change would be an improvement, and he preferred to leave the control of such matters where it now rested, at least until the general Government showed itself to be capable of doing the work.

In conclusion, the speaker advocated the collection and publication of statistics of sickness as well as of mortality, and he believed that much could be learned from a comparison of such figures with the records of temperature changes and atmospheric conditions.

Dr. Benjamin Lee, of Philadelphia, read a paper entitled

SHOULD NOT THE NATIONAL GOVERNMENT DEFEND OUR PORTS AGAINST THE NATIONAL ENEMY, CONTAGIOUS DISEASE?

It would seem that there could be but one answer, and that an affirmative one, to such a question; yet the proposal had been opposed by many, some of whom were influenced, possibly, by local interests or sectional jealousy. It had been contended that quarantine was a police regulation, and, as such, belonged to the various States to enforce. But Congress has the power to provide for the general welfare as well as for the common defence of the United States, and the term "common defence" might be more liberally interpreted than as referring solely to protection against the armies and navies of foreign countries.

MILLIONS OF DOLLARS

have been expended for the defence of our coast line, and millions are yet to be spent, but nothing can be of more importance than to protect the entire nation from pestilence introduced from without. During the past twenty years the assaults of foreign contagion have cost this country more lives than were sacrificed in the great war immediately preceding that period, yet most of these lives might have been saved by the expenditure of a sum which is insignificant as compared to what has been spent on coast defences, the navy, etc.

When quarantine was regulated by the local authorities all stations could not be of equal efficiency, but the weakness of one was a source of danger to the whole country. A port of limited commerce could not afford to spend as much for its quarantine as a larger and wealthier place, and the only remedy for this inequality was the assumption of the entire regulation of the matter by the national Government.

A NATIONAL QUARANTINE,

properly conducted by trained officials, would tend to prevent panic, allay undue anxiety, and favor a reasonable sense of security. It would do away with the necessity for the vexatious temporary

INTERSTATE QUARANTINES

which so seriously disturb inland commerce.

In conclusion, he begged leave to offer the following resolution: "That the Section on State Medicine respectfully suggests to the American Medical Association the importance of formally urging upon the National Congress the duty of at once assuming entire control of the maritime quarantine, and taking immediate measures to make such quarantine effective before the advent of hot weather."

SECTION ON PRACTICAL MEDICINE, MATERIA MEDICA, AND PHYSIOLOGY.

Wednesday, May 9th—Second Day.

The election of officers for the ensuing year resulted as follows:

Dr. F. C. Shattuck, of Boston, Chairman; Dr. G. A. Fackler, of Cincinnati, Secretary.

The topic for discussion at this session was the

DIAGNOSIS AND TREATMENT OF DISEASE OF THE STOMACH.

Dr. William Pepper, of Philadelphia, opened the discussion with some practical remarks on the diagnosis of diseases of the stomach. To illustrate his points he cited a number of cases:

Case I.—A man had been losing two pounds in weight per week for a period of sixteen weeks. No disease could be detected. Blood and urine normal. No affection of heart and lungs. No enlargement of the spleen or glands. Inspection of the fundus of the eye presented no data of significance. No pain, vomiting, or constipation. Teeth had failed and hence mastication was imperfect. Careful diet, with small doses of arsenic, brought about a temporary improvement, but emaciation in time resumed its progress. Only by a process of exclusion did the speaker arrive at a diagnosis of developing cancer in the walls of the stomach. The case resulted fatally three or four months after it was first observed by the speaker, and the walls of the stomach were found to be the seat of general carcinomatous infiltration. Such cases demonstrate the want of something necessary to render a diagnosis accurate. Not only in rare cases like this, but in many others, only one or two symptoms of any importance may be present, and these will not be clear enough to warrant a definite diagnosis.

The speaker had but recently seen a business man, sixty-four years of age, who had previously enjoyed good health, but was suddenly attacked with severe pain in the pit of the stomach, coming on when the organ was empty. It recurred every night, and extended from the pit of the stomach to the back. The bowels were rather inactive. He had lost thirty to forty pounds, and was pale but not cachectic looking.

Most careful search of the epigastrium revealed nothing. The radial arteries were hard; arcus senilis was present; the abdominal aorta pulsated strongly and appeared somewhat enlarged. No evidence of pancreatic disease. Under the institution of a careful diet, the administration of hydrocyanic acid, and the application of the thermo-cautery to the region over the stomach and back, a most remarkable improvement was noted. But it was only transient. Months passed and emaciation advanced, and a hardness could be detected close up to the crura of the diaphragm. Patient died, and an autopsy revealed a fungous epithelioma in the superior and posterior walls of the stomach, doubtless involving nervous filaments in the dense adhesions.

The speaker desired to call attention to the application of organic chemistry in the examination of the contents of the stomach. Vomiting occurs so frequently, and the vomited matter is so mixed with portions of the previous meals or with mucus, etc., that it is necessary to remove the contents of the stomach by aspiration. It should be done at a definite time after the ingestion of a definite meal, consisting of a certain amount of mixed starchy and nitrogeneous food. The matter so obtained should be tested for free hydrochloric acid, lactic acid, and peptic strength, that is, the power it possesses to still further digest albumen. The methyl violet is the best test for hydrochloric acid. It is asserted by Riegel, on evidence furnished by thousands of investigations, that, when cancer is present, no free hydrochloric acid will be found in the contents of the stomach six hours after a test-meal. Here, then, we have a point of enormous importance if it be established.

The secretion of the stomach is just as easily obtained as urine. Here, then, a field has been opened that appears to promise large results. These new diagnostic methods may be accepted as possessing confirmed value, although not regarded as infallible.

Dr. F. C. Shattuck, of Boston, said that these modern methods of diagnosis are very promising, but that, for the present, our position must be a waiting one. The

HYDROCHLORIC-ACID TEST

is not an infallible one, for free hydrochloric acid has been found in undoubted cases of cancer, and has been absent in atrophy of the gastric tubules, in chronic gastric catarrh, and even in an apparently normal state. Another question to be considered is the quantity of the acid present. While the test for the acid is satisfactory and easy of application, yet, unfortunately, we possess no test which can be put to much clinical use to determine the amount.

We know that in cases of

GASTRIC ULCER

there is a condition of undue gastric acidity. A method has been suggested by Ewald to gain some light as to the proper performance of digestion. He has taken advantage of the new remedy, salol, which is a combination of carbolic acid and salicylic acid, and is not broken up into these constituent parts in acid vehicles. It passes, hence, through the stomach as a whole, but when it comes in contact with the alkaline secretions in the duodenum it is broken up into carbolic acid and salicylic acid, the latter of which, or its salts, are absorbed and may be detected in the urine. This experiment is of value especially in cases of supposed gastric dilatation. Ewald's investigations led him to think that salicylic acid can be detected in the urine one hour after the time of its administration. The speaker had administered the remedy in 50 cases, in 27 of which the reaction was obtained in one hour, or less; in 13, in one to one and a half hour; and in 10, in one and a half to three hours. These were cases in which the stomach was in normal condition. He had also given salol in a few cases of gastric disease. In two cases of chronic catarrh the reaction was obtained in one hour. In one case, two hours to three hours and twenty minutes; in a case of gastric irritation, one and a half hour; case of cancer, one and a half hour; and in a second case of cancer, in two and a half hours. The speaker also referred to the cases of gastric dilatation, or suspected dilatation, in the examination of which auscultatory percussion yields the best results.

Dr. Octerlony had for several years made use of chemical analysis in the diagnosis of gastric disease. In no single case did the examination fail to corroborate the diagnosis. In malignant disease free hydrochloric acid was always absent. The speaker referred to some symptoms which are commonly present in malignant disease of the stomach. Hemorrhage is of frequent occurrence, reversion of appetite is an early symptom, and a temperature habitually lower than normal is noticed at a comparatively early period.

Dr. J. Whittaker confined his remarks to the consideration of the presence or absence of free hydrochloric acid. The general practitioner is not content with a method that demands execution by a chemist, but there can be no such objection here, for the test is easy of execution. A piece of congo paper dipped into a solution of gastric juice is turned blue by free hydrochloric acid. This is a very sensitive test. Should there be any doubt, then the methyl-violet test may be applied. These are easily obtained. It is rarely necessary to employ the pump. The contents should be obtained several hours after the ingestion of a meal. Lactic acid is sought for by means of the carbolate of iron test.

DOES THE ABSENCE OF FREE HYDROCHLORIC ACID INDICATE CANCER?

On this point all seem unanimous that the persistent absence of hydrochloric acid, day after day, is an indication of the presence of cancer. The speaker did not mean to assert that this was infallibly true, but it was just as certainly an indication of cancer as the persistent presence of albumin was of Bright's disease. Hyperacidity indicates ulcer. It is no more necessary to send the material to the chemist than to send urine for the detection of sugar or albumin. The intensity with which congo paper is colored points to the degree of acidity. An interesting point in this connection is that hyperacidity may cause ulcer, and also be the factor which prevents the healing of the ulcer.

Dr. E. Cutter, of New York, then read a paper, entitled

FOOD IN NERVOUS AFFECTIONS.

Thursday, May 10th—Third Day.

Dr. W. C. Wile, of Danbury, Conn., read a paper entitled

SIRUP OF HYDRIODIC ACID IN GENERAL PRACTICE.

The form of remedy employed is the unalterable sirup presented to the profession in 1878. It has been the author's favorite remedy in all asthmatic troubles, and was never exhibited without unmistakable evidences of relief. Excellent results have been obtained in chronic bronchitis of long standing, chronic lead-poisoning, scrofulous diseases, obesity, and in all the latest stages and manifestations of syphilis.

Dr. J. McFadden Gaston, of Atlanta, read a paper on

CEREBRO-SPINAL MENINGITIS.

His object in preparing the paper has been to emphasize the great importance of recognizing the gravity of the situation at an early period, by means of the general symptoms indicative of congestion, and not waiting for indication of inflammation to determine upon the nature of the disease.

As to treatment, the speaker thought that while the recourse to opiates has, in some cases, seemed to afford relief, it is evident that in most cases it only soothed the passage to the grave. There is an urgent demand for restoring the functions of the vital organs, and arousing the nerve-centres to action by revulsive applications externally and revolutionary measures internally.

Relying upon the special properties of calomel and quinine, he has employed them for the purpose of jugulating the progressive development of the congestive stage of this disease. Hot mustard baths were applied to the lower extremities, and cold to the head.

Mustard plasters may also be placed along the spine, as an aid in restoring the energy of the nervous system, and mustard applications may be made to the inner portion of the arms and legs for the same purpose.

The speaker cited cases in illustration and proof of the efficacy of this treatment, followed by the administration of salicylate of sodium and fluid extract of jaborandi.

Dr. Didama, of Syracuse, gave in detail five very obstinate cases of

HÆMATURIA,

which, after resisting ordinary and extraordinary treatment for periods of from six weeks to three months, finally yielded in the course of a week or so to large doses of alum—twenty grains three times daily—or smaller quantities every three hours. He called attention to the importance of having the alum dissolved in a large quantity of water, and claimed that, when so diluted—twenty grains to a goblet of water—it found ready access to the blood and urinary passages, and never produced constipation.

Some of his cases had, under the care of the most eminent physicians, received the best known treatment without the slightest benefit. Alum had been used in some instances, but never in the large doses which he had employed with invariable success up to the present.

Dr. N. S. Davis had met with cases of persistent hæmaturia, so severe as to greatly impoverish the patient and endanger life. He reported a case which could not otherwise be explained than upon the theory that there existed a defect in the influence of the vaso-motor nerves over the vessels of the kidney. Acting upon this theory, the speaker had found the only remedies of value to be ergotin in moderately full doses and the fluid extract of hamamelis. It was probable, he said, that alum well diluted, so as not to create gastric disturbance, would pass through the kidneys in sufficient quantity to increase the tonicity of the kidney vessels.

Dr. G. W. McCaskey thought that the majority of cases of persistent hæmaturia were due to an effusion of blood from the parenchyma of the kidneys, or else to local lesions of the urethra, bladder, ureters, or pelvis of the kidney. He thought that Dr. Davis' view was probably the correct one in many cases.

Dr. H. Gradle, of Chicago, read a paper entitled

HEADACHES FROM OVERLOOKED CAUSES IN THE NASO-PHARYNX AND EARS.

Dr. John V. Shoemaker, of Philadelphia, read a paper on

NAPHTHOL,

in which he spoke in favor of beta naphthol, maintaining that it was of value, and that it was undeserving of all the hard words that had been spoken against it.

Dr. V. C. Vaughan, of Ann Arbor, Mich., presented a communication entitled

THE ETIOLOGY OF TYPHOID FEVER,

presenting in detail his experiments with the Eberth bacillus obtained from drinking-water, and the successful inoculation of dogs with the germ.

Dr. John North, of Keokuk, Ia., read a paper upon the part taken by the

SYMPATHETIC NERVOUS SYSTEM IN DISEASE.

The Session was then adjourned.

The Number of Births in Paris in a week averages 1,065, of which 779 are legitimate, and 286 illegitimate.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 17, 1888.

SECTION ON PRACTICE OF MEDICINE.

R. C. M. Page, M.D., Chairman.

Dr. G. R. Elliott read a paper (see p. 579) entitled

SOME INTERESTING CLINICAL PHENOMENA OBSERVED IN A CASE OF CIRRHOSIS OF THE LIVER.

Dr. Page asked whether there was a malarial element in the case, or whether the cirrhotic condition of the liver alone would account for the enlargement of the spleen.

Dr. Elliott replied that there was no history of malaria, and quinine was administered without effect. He thought the enlargement of the spleen might be accounted for in part, at least, by the condition of the liver and the interference with the return circulation.

Dr. A. F. Currier thought it important to determine in what cases strophanthus might be contra-indicated. He had, the past few days, used it in a case of supposed fatty heart, the patient being one on whom he had performed Alexander's operation and posterior colporrhaphy. The previous night, while still under the influence of strophanthus, the patient went into profound collapse and was with difficulty revived. The drug had proven so ineffective in this case, both as to its immediate effect upon the heart and its influence upon the arterial tension in general, that he felt sceptical as to its value in fatty degeneration of the heart. The patient was again put upon digitalis, which had previously been employed, and the signs of convalescence again returned.

It was claimed that strophanthus was purely a heart-stimulant, its action being, he supposed, upon the muscular fibre of the heart, and the question had arisen in his mind, why should it not have had more effect in this case?

Dr. Leonard Weber, speaking of the value of strophanthus in general, said he had found Frazer's tincture, used in doses of ten to fifteen drops three or four times a day, an efficacious remedy where a cardiac tonic was indicated. But it was not as uniformly efficacious as was digitalis. He would have expected the result experienced by Dr. Currier, that strophanthus would fail in fatty degeneration of the heart, while digitalis would prove useful as long as a majority of the muscular fibres were capable of responding to its influence. He could testify to what the reader of the paper had stated, that strophanthus had a decided effect upon the heart-muscle without increasing the arterial tension, so far as could be determined by feeling the radial and temporal arteries. He had satisfied himself of this action of the drug in a case of cardiac dilatation resulting from primary cirrhosis of the liver, in which strophanthus proved beneficial while digitalis failed. He had had no experience with it in dropsy due to cirrhosis of the liver. He would mention incidentally, however, two cases in which calomel had proven of much benefit by its diuretic effect. It was well known that the diuretic effect of calomel was most marked in heart disease, particularly that of the mitral variety. It should not be forgotten that in some cases of dropsy diuresis could not be induced until mechanical obstruction had been overcome by tapping.

Dr. George R. Lockwood then read a paper (see p. 576) on

IMPACTED RENAL CALCULUS, WITH REPORT OF A CASE.

Dr. Weber thought the reader of the paper had expressed the belief that neither in his case nor in others could suppression of urine have been due to complete occlusion of one ureter, while the other kidney and ureter remained normal. In opposition to that view, he cited his own case as an example among others in which renal colic had caused suppression of urine for as long as six hours, although neither kidney, so far as could be determined, was the seat of organic disease. The passage of the calculus was followed by an abundant flow of urine, and diuresis for some hours afterward. All must have observed functional suppression of urine in urethral fever following internal urethrotomy, etc. He had seen complete anuria in two cases of scarlet fever in children, which continued five days, yet the patients recovered. Dr. Weber conceived that a calculus completely occluding a ureter, for a period of not two or three hours but of from six to twenty-four hours, might lead to such relaxation of the tissues and such functional disturbance as to allow in that length of time of a certain amount of hydronephrosis. If such cases were spoken of as acute hydronephrosis, of course it would not be expected that the tumor would have attained to the immense size often seen in chronic hydronephrosis. Nor would he suggest that the amount of hydronephrosis in such a case would explain the abundant flow of urine which took place after the passage of the calculus. That and the subsequent diuresis might well be accounted for by the influence upon the blood-vessels as suggested by the author. He asked whether morphine had been administered?

Dr. Lockwood said only half a teaspoonful of paregoric had been administered by the mouth every two or three hours during one period of the attack.

Dr. F. W. Jackson asked Dr. Lockwood whether it was not possible that the diuresis was due to a nervous element such as physicians were accustomed to see in hysterical polyuria.

Dr. Lockwood said the man was not in the least hysterical, and he thought it was unnecessary to fall back on some obscure nervous trouble in explaining the polyuria.

Dr. Page, speaking with reference to hydronephrosis, mentioned the case of a woman whom he first saw six or seven years ago, who had a large tumor in the left lumbar region, determined to contain urine, and which disappeared from time to time on the passage of a large quantity from the bladder. He was unable to trace the hydronephrosis to obstruction of the ureter from a calculus in the first instance.

The discussion then turning upon the general treatment of calculus,

Dr. Weber spoke of the value of the waters of Poland Springs, Me., and of the Cabot Springs, W. Va., expressing the belief, based on personal experience and that of friends and patients, that they were not inferior to those of Vichy or Carlsbad or other alkaline waters. He further expressed the belief that the value of such waters was not due alone to washing out of the system, as simple water taken in large quantity did not have the same beneficial influence. Mineral waters artificially prepared, however, might be equally efficacious.

Dr. Page had made quite a study of the Carlsbad waters in 1885 and 1886, and while there had learned that eminent physicians in Germany did not claim that they possessed solvent power over calculi which had formed in the system, but that they washed the uric acid out of the tissues and thus prevented the formation of large calculi. It was claimed that the Buffalo lithia water in Virginia was a solvent of uric acid, and it had acquired much reputation in Germany as possessing such power.

Dr. A. Jacobi remarked that there was a greater affinity between uric acid and potassium salts than between uric acid and sodium salts. He had found by experience that this was not only chemically true, but that potassium salts were superior to sodium salts when taken internally against gravel. One drachm of bicarbonate of potassium might be taken daily for an indefinite length of time without causing gastric disturbance or affecting the general health. The drachm should be dissolved in a quart of water and be drunk during the day. It cost but a trifle. It might be dissolved in one of the sparkling waters if preferred. Dr. Jacobi remarked that washing out would not be sufficient if a stone were lodged somewhere; the alkaline water should reduce it, permitting of its passage outward, and should prevent the further formation of stone.

Dr. Devlin said that about two years ago an account was published in the *British Medical Journal* of experiments which went to show that salicylic acid and its salts acted in a way to break up the nitrogeneous secreta and reduce the amount of uric-acid deposit. He was in the habit of giving small doses of salicylate of sodium in cases in which there was much deposit in the urine.

Dr. Lockwood, in closing the discussion, said he had admitted in the paper it was quite rational to suppose that pain arising from a calculus lodged in one ureter might for a time cause suppression of urine by its reflex action. But he did not think the anuria due to such reflex action would continue as long as in the cases reported, viz., from one to twenty-three days. Regarding whether sudden and complete obstruction of the ureter would cause hydronephrosis, he had argued only from experiments and the findings at autopsies. Hydronephrosis had been found only in cases of long standing; in none was it acute.

Buffalo lithia and other alkaline waters had been given in his case with negative effects; when Farmville lithia was administered the uric acid in the urine was enormously increased in quantity. It seemed possible it resulted from dissolution of the uric-acid calculus in the kidney.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE SUMMER SESSION—RECENT MEETINGS OF THE SOCIETIES—INCISION VS. EXCISION OF JOINTS—PERI-HEPATITIS—OVARIAN TUMOR WITH PRECOCIOUS PUBERTY—PRIMARY CANCER OF FALLOPIAN TUBE—CASE OF MULTIPLE CANCER—CANCER OF THE BRAIN—THE PARKES MUSEUM OF HYGIENE—THE ROYAL COMMISSION ON UNIVERSITY EDUCATION IN LONDON.

London, May 7, 1888.

The summer session of the medical schools began nominally on Tuesday last. Practically, real work will begin with this week. The commencement of work at the medical schools is singularly synchronous with the advent of warmer weather, to-day being almost the first real warm day we have had. We are not usually troubled with excessive heat, in this country, even in the summer, though I have heard a medical student exclaim, as a reason for not working in the summer session, that it was "too hot!" Such an excuse would not be of much use now, for the increased stringency of almost all the examinations has rendered it necessary for students to work as hard in the summer as in the winter. Several of the most important examinations, also, are held within the next three months. When it gets to the middle of July, however, the benches will begin to thin, and both teachers and students will be looking forward with eagerness to the vacation. At one of the metropolitan schools, so difficult is it to get a class in July that it has for several years become the custom to bring the summer courses of lectures to a close during the second week of that month. The medical societies will cease to meet at a much earlier date. Some, in fact, have already closed for the session.

An interesting case was described by Mr. Wainewright at the last meeting of the Clinical Society. The patient was a boy, three years of age, who was admitted into the West London Hospital with a large superficial abscess on the outer aspect of the left thigh. This was said to have resulted from a fall. It was opened and drained, but, a fortnight later (before the incision had healed), the right hip became inflamed. At the end of another month, distinct fluctuation being detected in four of his joints, the right hip-joint was opened, a quantity of pus evacuated, and some carious bone removed by scraping from the anterior part of the neck of the femur. The wound was dressed antiseptically, and healed in a month, leaving a movable joint. The left knee then became tender and painful; it was freely incised and the cartilaginous surfaces freed from an overgrowth of synovial membrane by means of a sharp spoon and scissors. Antiseptic dressings and drainage were employed, and the child left the hospital six weeks later with a plaster splint on the knee, the wound having healed. Seven months afterward he was readmitted, and a small exfoliation of bone was removed from a granulation-cavity just above the left knee. The sinus healed, but the knee became partially flexed, from the splint having been removed by the parents against orders. An effort had been made to correct this by extension and another plaster splint, but considerable deformity still existed. The knee was nearly immovable, but the movements of the right hip were perfect. Some discussion followed the reading of the case. Mr. Bennett questioned whether the condition of the joint was better than would have followed excision. Mr. Lucas thought that so far as the hip was concerned he would agree with what Mr. Wainewright had advocated; viz., incision, examination, and removal of any carious bone in the neighborhood. He remarked that, as at present practised, excision was a very different operation from what it used to be. He always clipped away the synovial membrane all round before proceeding to remove the bone. Mr. Howard Marsh thought the question was whether the disease of the joint was tubercular or pyæmic. He had often seen good results follow Mr. Wainewright's treatment in pyæmic abscesses, but doubted whether this would be the case in tubercular disease. He had himself been much disappointed with the results obtained from excision of the hip, and thought excision was destined to become more rare. Mr. Symonds said his own experience was in favor of the method adopted by Mr. Wainewright, but there were a number of cases in which excision was the only operation.

At the same meeting of the Society, Dr. Hale White read a paper on peri-hepatitis in which he expressed the opinion that universal peri-hepatitis was, in the great majority of cases, part of a general disease consisting of chronic peritonitis and universal capsulitis of spleen and liver, and that it was almost invariably associated with granular kidneys, and frequently with gout, syphilis, alcoholic excess, or diseases of the heart or lungs causing backward pressure. Mr. Lucas read a paper on a case of malignant tumor of the ovary in a child of seven, associated with precocious puberty. Ovariotomy was performed, and the tumor proved to be a round-celled sarcoma. The child made a good recovery, and when seen, two years and nine months after the operation, was in good health.

At the Pathological Society Mr. Alban Doran exhibited a specimen of cancer of the Fallopian tube which he believed to be an example of primary cancer. The tumor-substance was made up of collections of large polymorphous cells, surrounded by trabeculæ which were infiltrated with small cells. Only three cases of primary malignant disease of the tube had been placed on record, viz.: (1) A doubtful one by Scanzoni; (2) a case of sarcoma by Dr. Senger, of Breslau; and (3) a case of Dr. Martins, described by Dr. Orthmann as an instance of true cancerous papilloma. Dr. Joseph Coats showed a specimen of multiple cancer of various organs. There was an old cavity with cancerous walls in the right lung, which he regarded as a primary ulcerating cancer of the lung. There were secondary tumors in the bones, liver, pancreas, and kidneys. In the brain, there were twenty-four cysts of various sizes, ranging from one-fourth of an inch to two inches in diameter; the cysts had a definite lining of epithelium. The bones were also affected, the expanded ends of the femur being largely occupied by cysts in various stages of development, from simple collections of epithelium to large spaces filled with colloid material. Dr. Coats also exhibited a specimen of primary cancer of the brain. The tumor was oval, and measured an inch and a half in diameter. It was situated above the pons and peduncles, apparently growing in the aqueduct of Sylvius, distending it and projecting into the fourth ventricle. The anterior part of the aqueduct was unaffected, and the third ventricle normal. Microscopic examination showed the principal constituents to be cylindrical epithelium cells arranged in rows and enclosing spaces. Dr. Coats suggested that the tumor originated from the epithelium of the aqueduct. The patient had been under Professor Gairdner, and the clinical history of the patient was that she had suffered from "weak turns," pain in the head, vomiting, and retraction of the head. She gradually became very lethargic and difficult to rouse, and became more and more emaciated, until death.

The Parkes Museum of Hygiene has not yet been able to attain a satisfactory financial position, in spite of its added strength due to amalgamation with the Sanitary Institute. It is now proposed to unite with it several other institutions; viz., the National Health Society, the School of Cookery, and the Smoke Abatement Society. It is hoped thereby to form an establishment for the practical teaching of hygiene in all its branches. At a meeting held at the Parkes Museum on Saturday last, at which the Duchess of Albany presided, Sir Douglas Galton said that if those institutions would combine there was reason to believe that ample funds for the endowment of a great national college of hygiene would be forthcoming.

The constitution of the forthcoming Royal Commission on University Education in London has been now definitely settled. Lord Selborne, a former Lord Chancellor, is to be the chairman, and all the members of the commission may fairly be regarded both as men of eminence and representative of varied interests. It is, however, a disappointment to find that no medical man is to sit on the commission.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE ETIOLOGY OF GOUT—RESULTS OF OPERATIONS FOR CATARACT.

Paris, May 4, 1888.

Various views prevail concerning the etiology of gout. Most English and American authors attribute it to troubles, more or less pronounced, of the liver or of the stomach, or of both organs a tthe same time—troubles which almost always precede an attack of gout.

At a recent meeting of the Société de Biologie, Dr. Leven endeavored to show that gout is not a malady in itself, that it is caused by a trouble of the nervous centres. The author explained that in health the blood, which is an alkaline liquid, eliminates in twenty-four hours forty or fifty centigrammes of uric acid. When an attack of gout is about to occur, the blood loses its alkalinity, owing to the presence of organic acids—lactic acid, oxalic acid, etc., and particularly in consequence of the presence of the urates of soda which accumulate in it. The blood, surcharged with uratic salts, gets rid of them either by depositing them in the kidneys or in the articulations, and in that of the great toe in preference, or in the tissues. The blood, when rid of its urates, recuperates its alkalinity until, by some excess of the table, the urates reappear in excess, to prepare a fresh attack of gout. It is by this chemical fact, which characterizes an attack of gout, that clinicians endeavor to explain the innumerable maladies with which a gouty subject is affected in the course of his existence. Uricæmia is made responsible for headaches, giddiness, asthma, angina pectoris, dyspepsia, enteralgia; but Dr. Leven considers that the excess of urates is only an accidental transitory circumstance, whereas the diseases named are the results of neurosis, which succeed and evolve long before the appearance of the uricæmia. Thus a child who would become gouty only at the age of twenty or thirty years, suffers for a long time before from headache, giddiness, etc.; that is, long before the first attack of gout. It is under the influence of neurosis that the nutrition is troubled, and that the urates accumulate at certain periods. The neurosis begins either in the brain, the solar plexus, or in the spinal marrow, or in the nerves which emanate from one of the centres. It is for this reason that the individual is affected with headache, giddiness, etc. The author therefore concludes that gout should not be considered as a malady, but as a neurosis; and that it would disappear when the nervous centres are re-established; consequently the treatment of gout should have in view particularly the treatment of the nervous system.

In this connection it may be interesting to place before your readers an extract from a work recently published by Dr. Robson Roose, on gout and its relations to the diseases of the liver and of the kidneys. This author insists particularly on the derangements of the liver or of the stomach which almost always precede an attack of gout, as having a very great importance in the etiology of the malady. He refuses to admit the neuropathic origin of gout. "I would not ask for better," he said, "than to admit that, behind a good number of symptoms, there is a trouble of the nervous system; but these latter are due to the toxic action on the nervous centres of excrementitious materials engendered in the blood by imperfect metabolic transformations. The varied neuroses which often torment gouty subjects are probably dependent on an analogous cause. In any case, the hypothesis of antecedent nervous lesions has no demonstrative fact." Uric acid under the form of urate of soda constitutes the materies morbi of gout, its production in excess is the result of a transformation of albuminoid substances, and the cause of this imperfection is for a great part due to the functional trouble of the hepatic gland. As to the kidneys, they are implicated in the lesions only in a secondary manner, although the distinct attacks of gout may be subdued as long as the renal function is adequate to the work of the elimination of this uric acid in excess. According to this theory, the therapeutic indication would be the neutralization of the materies morbi by the aid of alkalies, and particularly by the restoration in their integrity of the functions of the liver.

Dr. Landolt, the well-known ophthalmologist, lately made an interesting communication to the Academy of Medicine, proposing certain reforms in the treatment of strabismus. The author looks upon, as one of the predisposing causes of strabismus, a defect of harmony in the development of the different parts of the visual organ. He includes also, in the etiology of strabismus, contractures and hysterical paralysis of the ocular muscles, a cause that is frequent but scarcely known, and which necessarily demands a particular treatment. As regards the diagnosis, Dr. Landolt exacts a good deal of precision in the measure of the degree of strabismus, of the movements of the eyes, and of their function, whether isolated or simultaneous. But the principal reforms which he proposes bear on the therapeutics of strabismus. The treatment, based on complete and exact observations, should consist in the combination of all the means appropriate to diminish the tendency to strabismus, to fortify the muscles, and, above all, to develop the binocular vision. By these means the number of operations will be reduced, and if surgical intervention be necessary, it will be less extensive, more efficacious, more durable, and more complete. Although the operative procedures have been improved, Dr. Landolt has recourse to them only after having reduced the strabismus, as much as possible, by methods to which he has given the name of orthoptics. He continues these even after the necessary operations, as a sort of finish, not only in an æsthetic point of view, but principally as regards the function of the eyes. Without binocular vision, says the author, we give the patient only an apparent cure; if, on the contrary, we succeed in rendering to him the harmonious function of his two eyes, he will have, besides the considerable advantages of this faculty, that of being guaranteed against a return of the strabismus.

In a paper giving the results of operations for cataract, performed by Professor Panas, he stated that, of 480 cases during the last three years, success was complete in 427. The learned professor attributes these happy results to the antiseptic "lavage" (washing out) of the anterior chamber. Formerly, he employed for this purpose a solution of the biniodide of mercury; he now prefers a saturated solution of boric acid of three or four per cent. In concluding his paper, M. Panas remarked that "antisepsis, properly practised, had not only rendered the optical success constant, but it permitted a complete return to the operative ideal, to the method altogether French of our immortal David."

THE DIAGNOSIS OF VESICAL TUMOR BY THE CYSTOSCOPE.

To the Editor of The Medical Record.

Sir: In The Medical Record of May 5th last, Dr. Fessenden N. Otis reports a case of diagnosis of tumor of the male bladder by the use of Leiter's cystoscope, and considers it especially interesting as being the first case of tumor thus diagnosed and verified by subsequent operation in America. Undoubtedly Dr. Otis did not happen to see an article of mine published in the *Boston Medical and Surgical Journal* of December 1, 1887, on "The Endoscopic Instruments of Joseph Leiter, of Vienna, and the Present Development of Endoscopy." He will there find that I have twice diagnosed a tumor of the bladder with the cystoscope of Leiter. I did not then go into the details of the cases, as they were seen in consultation and are to be published later. The first case was diagnosed on October 23, 1887, and operated upon four days later by Dr. M. H. Richardson, at the Massachusetts General Hospital. The second case was seen on the 10th of the following December, at the same hospital, in consultation with Dr C. B. Porter. It was a recurrent villous tumor, the original growth of which Dr. Porter removed by suprapubic cystotomy, September 29, 1886. The microscopic examination by Dr. W. W. Gannett, at that time, showed the tumor to be a papillary growth from the mucous membrane of the bladder, composed of delicate loops of vessels covered by a many-layered epithelium. The patient, who is kept under observation, was seen last Thursday, May 17th, and still has no symptoms which incline him to another operation. Dr. Richardson's case, in which the tumor was also removed by suprapubic cystotomy, will soon be reported in full in the *Boston Medical and Surgical Journal*.

Very truly yours,

Otis K. Newell.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 19, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	5	4
Scarlet fever	175	29
Cerebro-spinal meningitis	7	6
Measles	191	8
Diphtheria	211	63
Small-pox	19	5
Yellow fever	0	0
Cholera	0	0

The Solubility of Benzoic Acid.—Dr. G. W. Tinkham, of Weymouth, writes that he prescribed a mixture of benzoic acid, ʒ ij.; borax, ʒ iij.; in water, ℥ xij., as recommended by Dr. Chunn, for irritable bladder, but was informed by his druggist that the benzoic acid would not dissolve in that quantity of water. Benzoic acid is soluble in 500 parts of cold water, and in 15 parts of boiling water, but its solubility is largely increased by the addition of one and a half part of borax.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 22 New York, June 2, 1888 Whole No. 917

Original Articles.

SULFONAL, A NEW HYPNOTIC.

By EDMUND CHARLES WENDT, M.D.,

VISITING PHYSICIAN ST. JOSEPH'S ASYLUM; CURATOR AND PATHOLOGIST OF THE ST. FRANCIS HOSPITAL, AND OF THE NEW YORK INFANT ASYLUM, ETC.

Among the class of so-called "troublesome" affections, insomnia is entitled to a foremost place. If medical statistics are to be trusted, idiopathic sleeplessness is certainly on the increase all the world over. And perhaps this is true to a larger extent in our own country than anywhere else. So long as the pathology of the condition in question, if it has a pathology, is so little understood, we must be content to deal with it in an empirical way. For neither the assumption of cerebral anæmia, nor of cerebral plethora, nor of any other single morbid state, will suffice to explain many of those cases that prove alike troublesome to the practitioner, to the patient, and to his family.

These facts have for some time been so clearly understood, that earnest and persevering researches have been undertaken, with the view of finding some remedy that would meet the symptomatic indications of the disorder, without possessing, at the same time, properties that involved actual or potential danger. It is, unfortunately, only too true that our best-known narcotics are potent for mischief in both directions. Baneful habits are encouraged by their unstinted employment, and in more moderate dosage they fail to afford the desired relief.

Thus it has happened that, within the past few years a number of new remedies have been introduced, the action of which, we have been told, was unlike opium, chloral, cannabis, or the bromides. Most of these drugs belong to the acetal group of compounds. They include methylal, acetophenon (better known as hypnon), urethan, paraldehyd, and hydrate of amylen. The two last named have found some favor at the hands of the profession, although none of the remedies named have proved uniformly satisfactory.

The most recent drug of this kind comes to us with the endorsement of eminent German authority. But it comes to us unheralded by the usual exaggerated accounts of hitherto unheard-of efficacy and universal applicability. According to Professor Kast,[1] of Freiburg, sulfonal is a hypnotic pure and simple. It does not compel sleep through a paralytic effect on the nerve-centres, nor through a profound impression produced upon the vascular system. From numerous experiments on animals, and many clinical observations on man, the action of this new remedy would appear to consist merely in the intensification of those factors that lead to natural sleep in the physiological sense, or in supplying the periodical desire for sleep in those cases where it is wanting. It is for this reason, probably, that the range of applicability of sulfonal is a more limited one than that of some other drugs employed as hypnotics.

But sulfonal, we are informed, has none of the disadvantages inherent in the deadly narcotics, and it is much more reliable than any of the bromides. This new body does not disturb digestion, it is not constipating, it has no unpleasant after-effects, it is perfectly harmless, it does not invite the formation of "a habit," and, finally, it does not appear to lose its efficacy, even when employed for a long period. Surely this is enough to recommend sulfonal to our attention, and if the profession will confirm the claims put forth by its sponsors, there can be no doubt that an extremely valuable addition will have been made to our stock of remedies.

Sulfonal was first prepared by Baumann,[1] formerly assistant to Hoppe-Seyler, and well known for his numerous researches concerning organic compounds. It would appear that, like so many of our newer drugs, this body was found only partly in consequence of a definitely understood purpose, and in part as the result of accident.

Professors Kast and Baumann had been engaged in investigating a series of bodies known as disulfones. Almost the first substance submitted to a more detailed analysis and examination was the product of oxidation of a compound, resulting from the action of acetone or æthylmercaptan. It was this body that later was found to be the valuable hypnotic under consideration.

Chemically this substance enjoys the euphonious designation of "diæthylsulfondimethylmethan." We fully concur in the opinion expressed by Professor Kast, that "sulfonal" is a more comfortable name. The formula of the new drug is $(CH_3)_2 = C = (SO_2C_2H_5)_2$. It occurs in the form of large flat, colorless crystals, which are tasteless and devoid of smell. Sulfonal is soluble in 18 to 20 parts of boiling water. In tepid water the solubility is only about one to one hundred. The crystals dissolve more readily in alcohol and alcohol mixed with ether. Acids and alkalies do not affect the composition of the body, which appears to possess considerable chemical stability. The crystals melt at a temperature of 257° to 260° F.

As regards dosage, we learn that fifteen to sixty grains usually suffice to insure several hours of refreshing sleep. The hypnotic effect is observed from half an hour to two hours after the exhibition of the drug. It is best administered mixed with a little water, or in wafers or capsules. An average dose to begin with is fifteen grains.

It appears that sulfonal is specially applicable to the simple insomnia so often witnessed in neurotics. But it has also been found useful in febrile wakefulness, in the restlessness of organic heart disease, and even in the delirium of dementia.

Sulfonal has already been largely employed in the treatment of mental disorders. Dr. Rabbas,[2] of the Marburg Lunatic Asylum, has published a special report in which he speaks very highly of this new remedy. He has used it over two hundred times, with uniformly gratifying results. He emphasizes particularly its absolute harmlessness, which contrasts favorably with the greater or less danger of the hypnotics hitherto usually employed in lunacy practice.

The best time to administer sulfonal would appear to be the late afternoon and evening hours. From five to eight, or even ten, hours of profound sleep usually follow its use. Women are more readily influenced by the drug than men, and fifteen grains is generally sufficient to put them to sleep.

Professor Kast believes that sulfonal affects the gray matter of the brain, but in what way he does not state. From carefully conducted microscopical and spectroscopical examinations, it is asserted that this substance has no ill effect on the blood. This holds good even in the case of animals actually poisoned by its use. The mucous membrane of the alimentary canal likewise remains unaffected by its internal administration.

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[1] Sulfonal, ein neues Schlafmittel. Von Prof. A. Kast, in Freiburg i. B. Separat Abdruck aus Berliner Klin. Woch., No. 16, 1888.

[1] Ber. der deutschen Chem. Gesel., vol. xix.

[2] Ueber die Wirkung des Sulfonals, von Dr. J. Rabbas. Separat Abdruck aus Berlin. klin. Woch., No. 17, 1888.

I have not hitherto been able to obtain the drug in this city, and I have, consequently, no personal experience concerning its efficacy.

Through the kindness of my friend Dr. Kammerer, of New York, I am able to state that a supply of this drug, sufficient for clinical trials, has already been shipped by Professor Kast to him, and is daily expected by us.[1]

I have not hesitated to give to the readers of THE MEDICAL RECORD early information regarding sulfonal, because it has the endorsement of gentlemen whose professional standing offers a guarantee of the trustworthiness of their assertions. It goes without saying that we will require the confirmatory evidence of the profession at large, before we can state positively that, in the discovery of sulfonal, we have really found the much-sought-for desideratum, namely, a safe, unfailing, and yet powerful hypnotic.

712 MADISON AVENUE,
May 21. 1888.

ON THE CHEMICAL EXAMINATION OF THE GASTRIC SECRETIONS FOR DIAGNOSTIC AND THERAPEUTIC PURPOSES.[2]

By FRANCIS KINNICUTT, M.D.,

PHYSICIAN TO ST. LUKE'S HOSPITAL AND THE NEW YORK CANCER HOSPITAL.

IN view of the interest shown, at the present time, in investigations of the character of the gastric secretions in various derangements of the stomach, a practical demonstration of the methods most recently employed in these studies, with a statement of some of the conclusions deduced from the latter may be of interest. With a knowledge of the part which hydrochloric acid takes in stomach digestion, any means which will enable us to determine with accuracy its presence or absence in the gastric juice, and with approximate correctness an excess or diminution in its secretion, must be regarded of much practical importance. Various chemical tests have been employed in the examination for free hydrochloric acid and the organic acids in the gastric secretions; the best known qualitative tests for the former are the methyl-violet, the Congo-red, the tropæolin, and, finally, the phloroglucin-vanillin test of Günzberg. A thorough trial of these, extending over a period of two years, has led me to rely wholly, at present, upon the last mentioned, which is of comparatively recent introduction. Its advantages, which do not obtain with the other tests, are that it is not affected by the organic acids or by the chlorides in combination with these acids, and, finally, that its delicacy is not impaired by the presence of peptones. The formula [3] for its preparation and the technique for its application are now comparatively well-known.

The delicacy of the test is sufficient to invariably detect the presence of one-twentieth of one per cent. of free hydrochloric acid. I have repeatedly detected with it the presence of one-fortieth of one per cent. in artificial solutions.

Uffelmann's carbolized chloride-of-iron test for organic acids may be regarded as sufficiently accurate for clinical purposes. The formula for its preparation is as follows: Mix three drops of liquor ferri chloridi (German Pharmacopœia), three drops of a very concentrated solution of carbolic acid, and twenty cubic centimetres of distilled water.[1]

The solution thus prepared has an amethyst-blue color. It becomes yellow, and is finally decolorized in the presence of minute quantities of lactic acid, the organic acid most commonly found in the gastric secretions. The methods employed for the quantitative estimation of hydrochloric and lactic acids will be considered later.

For a number of months a systematic examination of the contents of the stomach in all patients suffering from gastric disorders has been made in my wards in St. Luke's Hospital. Many analyses have been made in the same and different patients, and the results obtained have been instructive in many ways and of assistance in diagnosis and therapeusis. The technique of the examinations is very simple. A test meal, consisting of bouillon, meat, and a small quantity of well-cooked rice, is given, and the contents of the stomach withdrawn, *undiluted*, by means of a stomach-pump, from three to four hours later. They are then filtered, and a few drops of the phloroglucin-vanillin solution added to an equal amount of the filtrate, which is gently heated in a white porcelain dish. The reactions previously described demonstrate the presence or absence of free hydrochloric acid. A test for the organic acids is then employed, and finally a quantitative estimation of the hydrochloric acid, if present, is made. I shall not detain you, this evening, with a detailed report of cases, but wish simply, with a practical demonstration of the methods employed, to point out certain sources of error in these examinations, chiefly learned by personal experience; to state the rules of procedure which I have adopted in consequence, and finally, to refer to such conclusions as seem reasonably justified by the work in this field up to the present time.

As the stomach frequently has been found to be empty five or six hours after the ingestion of food, the time recommended by Riegel for examinations, I have adopted the rule of examining its contents between the third and fourth hours after a meal. Occasionally an absence of hydrochloric acid has been found in an analysis made at this time, and its presence detected in a re-examination at a later period. I am, therefore, in the habit of again employing the stomach-pump as late as the sixth or seventh hour after a meal, if hydrochloric acid has not been found in the earlier analysis. The non-observance of such a rule may possibly explain some of the contradictory statements which have been made in regard to the absence of hydrochloric acid in apparently similar gastric derangements. I have accepted the statements of German observers in regard to the percentage amount of free hydrochloric acid present in normal digestion. As it apparently fluctuates within certain limits, a range between 0.22 and 0.28 per cent. has been regarded by me as normal. The quantitative estimation of hydrochloric acid in the gastric secretions, in the *absence* of organic acids, is a comparatively simple process. The well-known titration method is employed for this purpose.[2] My experience, however, leads me to believe that very frequently organic acids are *present* in the contents of the stomach in many of its derangements. In this case all methods for the quantitative determination of hydrochloric acid *without the previous elimination of the organic acids are quite worthless for correct conclusions.*

From a very careful review of the work of many German observers in this field of investigation, the conclusion has been forced upon me that the presence of organic acids is frequently disregarded by them. The quantitative estimation of hydrochloric acid in such cases necessarily, therefore, is only one of the *absolute* acidity of the gastric contents.

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[1] The druggists Eimer & Amend have, at my suggestion, also ordered an adequate supply of the drug from the German manufacturers, Fr. Bayer & Co., in Elberfeld.

[2] Read before the Practitioners' Society, May 4, 1888.

[3] One part vanillin, two parts phloroglucin, are dissolved in thirty parts of absolute alcohol; one drop of this solution in the presence of concentrated HCl gives a bright red color, with the formation of cherry red crystals. With the dilute acid a similar reaction occurs only after gently heating the fluid, preferably in a white porcelain dish, when a red zone or streaks appear at the edge of the evaporating fluid.

[1] It is necessary to prepare the test fluid fresh each time before using.

[2] To estimate the amount of hydrochloric acid in a given amount of a solution (for example, 50 c.c.), ascertain how many cubic centimetres of a standard alkaline solution are required to neutralize it. The alkaline solution usually employed is a deci-normal solution of sodium hydrate. Each cubic centimetre of this contains .004 gramme of caustic soda, and will exactly neutralize .00364 gramme of absolute hydrochloric acid. The test alkali is slowly added from a burette, with constant stirring, until a neutral reaction is obtained with litmus or any other suitable indicator. The number of cubic centimetres so used, multiplied by .00364, gives the number of grammes of absolute hydrochloric acid contained in the 50 c.c., from which the percentage can be readily calculated.

The only accurate method for the estimation of the percentage of hydrochloric acid in solution with the organic acids, I am convinced, is that described by Cahn and Meering. The details of their method are as follows:

1. A given quantity (for example 50 c.c.) of the gastric filtrate is carefully distilled in an ordinary distilling apparatus, until it is evaporated down to 10 c.c. By these means the filtrate is freed from the volatile organic acids (viz., acetic, butyric, etc.).

2. The lactic acid [1] is now abstracted from the concentrated residue by agitating it with a large volume of ether and removing the ethereal stratum. Several successive portions must be used to insure that all the lactic acid is taken up.

3. The amount of hydrochloric acid in the sour, watery fluid remaining after the removal of the ether, and therefore in the original portion of gastric filtrate used, can now be ascertained by titration as above described.

I need not call your attention to the fact that a diagnosis of gastric hypersecretion, in contra-distinction to hyperacidity, is only justified by a *demonstration* of the presence of a considerable quantity of fluid, giving the reactions of hydrochloric acid and capable of rapidly digesting albumin, in the stomach quite empty of food. For such an examination the stomach should be thoroughly washed out, preferably in the evening, and the patient should be compelled to fast until the following morning, when the stomach-tube is again introduced. In a patient present this evening such a demonstrable condition exists, associated with dilatation of the stomach. The true position of Riegel and several other observers on the much discussed question of the absence of free hydrochloric acid in cancer of the stomach, it seems to me, is misunderstood. In the absence of hydrochloric acid in the gastric secretion, Riegel by no means finds proof of the existence of cancer, as this condition obtains in several diseases of the stomach. It is in the *constant presence* of free hydrochloric acid that he finds the strongest proof of the absence of cancerous disease. This conclusion is apparently borne out by the great majority of observations up to the present time.

In conclusion, I would earnestly urge the importance of further observations in this comparatively new field of investigation. My own observations, up to the present time, lead me to believe that much assistance is to be gained from such examinations for diagnostic and therapeutic purposes. The determination of the presence or absence of free hydrochloric acid and the organic acids in the gastric secretions is entirely practicable for the practitioner, requiring merely a knowledge of the tests and no more time than is demanded for urinary analyses. Only the quantitative estimation of hydrochloric acid in solution with the organic acids, is possibly impracticable without hospital or laboratory facilities.

The following table embraces the conclusions which seem at present reasonably justified by the chemical examination of the gastric secretions in certain disorders of the stomach:

H Cl, absent or present in minimum amount in the presence of a considerable quantity of bile in the stomach.
H.Cl, absent or present in minimum amount in toxic gastritis.
H.Cl, absent or present in minimum amount in cancer of the stomach.
H.Cl, present in diminished amount in chronic gastritis.
H.Cl, present in excessive amount in ulcer of the stomach.
H.Cl, present in normal amount in nervous dyspepsia (so-called).

I desire to express my indebtedness to Dr. Collins, the house-physician of St. Luke's Hospital, and to Dr. Robert J. Devlin, for their very efficient assistance and co-operation in my investigations.

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[1] To estimate the amount, if desired, of lactic acid in the ethereal solution, evaporate the combined portions of ether, dilute the residue with a convenient quantity of distilled water, neutralize as in the estimation of HCl, and multiply the number of cubic centimetres of the test alkali used by .009 to determine the number of grammes of absolute lactic acid in the residue.

I. A CASE OF CORTICAL HEMIANOPSIA, WITH AUTOPSY.—II. A CASE OF ARSENICAL PARALYSIS; MULTIPLE NEURITIS.[1]

By L. PUTZEL, M.D.,
NEW YORK.

CASE I.—A. B——, aged fifty-four, merchant, regular habits; while a student drank considerably, but has been a very moderate drinker since graduation; family history unimportant. For a couple of years before death he presented the classical symptoms of chronic diffuse nephritis (abundant urine, of low specific gravity, with a trace of albumin and medium-sized hyaline casts; cardiac hypertrophy and dilatation; uræmic dyspnœa). A year ago the disturbance of the renal and cardiac functions began to approach a climax, and since then they have almost always been performed very poorly. It is an interesting feature, in connection with the Bright's disease, that toward the end of life the daily amount of urea excreted, which was usually much below normal and occasionally would fall to 80 grains, rose on two occasions to 480 grains.

On December 3, 1887, the patient, who was very much constipated, rose during the night and strained very hard at stool, until his eyes seemed bursting from their sockets. On the following morning he informed his wife that he could not see distinctly with the right eye. I did not see the patient until the following day, and he then told me that he had noticed some dimness of vision on the evening preceding the violent straining at stool. On examination I found complete right hemianopsia, the boundary of the blind half of the field of vision passing through the point of fixation. The pupillary reactions were apparently normal. At first I thought there was slight blunting of sensation and paresis of the right arm, but subsequent examination (on the following day) proved that this was probably erroneous. The patient remained in *statu quo* for ten days, when he began to have visual hallucinations on the blind side. He saw men, with whom he conversed, immense flies, spiders, and other insects, etc. For a few days he recognized the deceptiveness of these hallucinations when spoken to on the subject, but then he became convinced of their reality. The delusions were present almost constantly during his waking moments, but attention could be diverted from them at times for a little while. Vision in the opposite halves of the field of vision appeared to be perfectly normal.

The number of hallucinations increased in frequency, and at the end of a few weeks they kept constantly trooping across the blind side. At this time the patient became extremely suspicious of everyone about him, and could not be kept quiet in bed. He would walk about the rooms for an hour at a time, looking in closets and corners for the monsters that tormented him. Occasionally he would have long lucid intervals, and during these I was told by him that the hallucinations always seemed to travel from left to right, but I do not know how much credence should be attached to this statement.

Uræmic dyspnœa now became constant, and the patient was compelled to sit upright in bed while sleeping. When the asthmatic attacks were at their worst, he was afraid to fall asleep for fear that he would suffocate.

On December 14th he began to manifest the Cheyne-Stokes type of breathing, and this persisted almost continuously until death. The periods of apnœa generally lasted from thirty to sixty seconds.

On December 30th he began to suffer from involuntary twitchings of the neck, which generally drew the head violently toward the right shoulder. At the same time the entire head was red and hot. Every few minutes the patient gave utterance to the following explosive sounds—rat-a-put-a-kee, repeated a number of times, and terminating in a sort of whoop. His wife informed me that he had been in the habit of uttering these sounds years before while playing with his children and tossing them in the air.

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[1] Read before the Neurological Section of the New York Academy of Medicine, May 11, 1888.

This condition lasted for a few days, after which it was found that the right arm and leg were paralyzed. Sensation seemed to be unaffected. The arm was much weaker than the leg, and could only be raised with the aid of the other arm. The muscles of the forearm and hand were less affected than those of the arm and shoulder.

After the occurrence of the right hemiplegia (probably on January 3d) the mental symptoms cleared up to a considerable degree, and the twitchings of the head grew less violent and continuous, but the visual hallucinations still persisted. But even when the mental disturbance was at its height it was evident that the hallucinations were seen on the right side, because the head was always turned to the right in looking at them and speaking to them.

Three days before death the twitching of the head and the restlessness again made their appearance, retention of urine occurred, and the pulse became extremely feeble. Apathy set in and deepened into coma, in which the patient died on January 15th.

The following diagnosis was made: Chronic diffuse nephritis, cardiac hypertrophy and dilatation, hemorrhage or softening of the left cuneus, and a later focus in the left internal capsule. I leaned more strongly toward the diagnosis of hemorrhage than of softening, on account of the existence of Bright's disease, the age of the patient, and the apparently normal condition of the arteries at the wrist.

The autopsy, in which I was kindly assisted by Dr. E. A. Maxwell, was made forty hours after death, and disclosed the following appearances:

The body was very much wasted; the abundant adipose had disappeared, in great part.

The calvarium was unusually thick, and the cancellous tissue firm and solid.

The dura mater was slightly adherent to the skull.

Rather more than the usual amount of subdural fluid was present. The vessels at the base of the brain were uniformly dilated and excessively atheromatous, but contained no ante-mortem thrombi, nor could I discover a plug in any of the other vessels.

The pia mater was slightly cloudy, but not more than is common at this period of life.

The cortex seemed to be normal, with the exception of the left cuneus. This presented a slightly yellowish tinge, and was boggy to the feel. On cutting through it a spot of softening was found, the interior of which contained a rather turbid serum and some fine meshes, apparently composed of connective tissue. The wall of the cyst was nearly one-eighth of an inch thick, and much firmer than surrounding parts. The cyst was nearly three-fourths of an inch in diameter, and extended forward exactly to the parieto-occipital fissure; inferiorly it extended just across the calcarine fissure, and posteriorly to within one-fourth of an inch, or perhaps a little more, of the posterior extremity of the cuneus. It extended inward nearly half an inch. The pia mater was slightly adherent in this locality. The plugged vessel could not be discovered.

In the internal capsule of the same side, at the genu, was found a small yellowish patch, a little softer than surrounding parts. In the external part of the lenticular nucleus, at the junction of the anterior and middle thirds, was a minute cavity, with sharply defined borders and without any contents. Dr. Maxwell and I were unable to decide whether this was the remains of a small spot of softening or an indication of the etat criblé.

Apart from the lesions mentioned, the brain tissue appeared to be entirely normal.

The heart was enormously hypertrophied and dilated in all its parts; it was judged to weigh about thirty-five ounces. The mitral valve was somewhat thickened, and the leaflets slightly adherent to one another.

The kidneys presented an exquisite picture of advanced chronic diffuse nephritis (small size, adherent capsule, granular surface, extreme atrophy of cortex, Malpighian bodies barely visible and apparently destroyed in great numbers, markings very indistinct, and numerous vessels with thickened walls).

With the exception of a calculus in the gall-bladder, the other organs presented no changes worthy of note.

Remarks.—This case is interesting and important in several respects. In the first place, it adds a strong argument to those already adduced by clinico-pathological experience in support of the position that the cuneus is the cortical centre for sight. Cases in which such circumscribed lesions are confined to the occipital cortex are rare, and since the publication of Seguin's very important and interesting paper, in which four cases of this kind, including his own. are collected, only one other has been reported. Even in this, which is described by Wilbrand, the lesion was more extensive than in those referred to above. It included the cuneus and entire occipital lobe behind the calcarine fissure; also the posterior half of the third temporal convolution and the gyrus hippocampi. In our patient the lesion was exactly limited to the cuneus, except that it passed across the calcarine fissure, although it did not extend into any adjacent convolution.

These cases, taken with the large number of other less decisive ones, seem to warrant the inference that lesion of the cuneus is the essential element in the visual disorder under consideration.

In one respect our case appears to be unique, so far as we have been able to discover in our unfortunately incomplete examination of the literature—we refer to the occurrence of visual hallucinations on the blind side of the field of vision. Cases have been reported in which the development of the hemianopsia was attended with faint impressions of light in the field which was becoming blind. But in these it cannot be said that the destruction of the cortical centre was yet complete, inasmuch as the visual impressions ceased when the hemianopsia was fully developed. In our case, on the other hand, the visual hallucinations—which, it is well to remember, were of a very complex character, and, furthermore, were projected into space, as is shown by the fact that the patient hunted for the spectra in closets, etc.—did not appear until ten days after the hemianoptic attack. This was at a time, therefore, when it may be assumed that the irritative process around the focus of softening (which was evident at the autopsy) was beginning to make itself apparent. This forces us to the conclusion that there must be other and higher centres for sight. We are compelled to assume, it seems to me, that the stimulation of fibres passing from the cuneus (by the irritative process around the softened spot) was conveyed to some other centre, in which, in accordance with the doctrine of the specific energy of the nervous elements, it was converted into a visual conception. The cuneus, accordingly, is a visual perceptive centre, while visual concepts must be located in some other region, probably in other parts of the occipital cortex, whose exact localization is not known at present.

This higher visual centre must possess connections with numerous other centres, because it can be stimulated through the agency of the centres of all the special senses, and also of tactile sensation.

Quite a number of instances in which the higher visual centres have been injured (so-called mind blindness or psychical blindness), either combined with hemianopsia or independent of the latter, have been reported.

Charcot describes a remarkably interesting example of the latter variety, of which we will give a brief abstract.

Mr. X——, a highly cultured man, born in Vienna, versed in German, Spanish, French, Latin, and Greek, also acquainted with modern Greek.

Until a year ago he had an excellent memory. This consisted, as also in his father and son, of a visual representation of objects. Simple memory awakened in him the images of persons, the form and color of objects, with as much clearness, distinctness, and accuracy as in reality.

If he wished to recall a certain sentence in any letter, the entire letter appeared to him as an image, which he could read like the original.

It was impossible for him to think of any portion of a drama without seeing in his mind the stage, scenery, actors, and audience. He could draw an entire landscape from memory. Memory of auditory impressions was much inferior to visual memory.

A year and a half ago he had great business worry, lost his appetite, and suffered from insomnia. One day he was frightened by a remarkable change which had taken place in himself. Although he could see everything distinctly, he had lost completely the optical memory for forms and colors.

Whenever he returns to town after a journey, it seems to him as if he has entered a strange city. He looks at the streets and buildings as if he had seen them for the first time. But memory gradually returns, and finally he can find his way in the labyrinth of streets.

He now draws buildings, persons, etc., in a very primitive manner, as if it were done by a child. He is unable to remember the physiognomies of his wife and children, and even his own person. A short time ago, while in a public gallery, he asked an individual to allow him to pass, and found it was his own image in a mirror.

Examination of the eyes revealed nothing beyond slight uniform impairment in the perception of colors.

Formerly he could add long columns of figures by mental images, now he only ventures on short columns, and repeats them at the same time in a gentle tone.

He now relies upon his auditory memory. The words seem to resound in his ears—an entirely new sensation. In order to write down a few lines which he had read in a newspaper, he was compelled to appeal to the auditory sphere. When he reads, he makes the corresponding movements with his lips, and must rely upon the inner voice and the movements of articulation in order to understand what he reads.

In order to learn a series of phrases, he repeats them several times in a loud tone, and thus impresses them upon the ear. When he repeats these phrases later, he experiences the sensation of an internal voice before articulation. This sensation he had never experienced formerly. Mr. X—— now dreams only in words, almost exclusively in Spanish.

In addition to the loss of mental images, there is also a certain degree of word blindness. The patient states that his condition has made him less impressionable to anger or grief, and less enthusiastic.

Wilbrand, who has written a very learned treatise on mind blindness, reports a very similar case, except that the condition was associated with left homonymous hemianopsia.

Quite a large number of such cases have been observed in the insane; but, as a matter of course, these do not possess the clinical value which attaches to the history of the affection in intelligent sane individuals. So far as we can judge from the teachings of pathological anatomy, the lesion of mind blindness is situated in the convexity of the occipital lobe; perhaps, also, in the posterior part of the parietal lobe, but, in the majority of cases, the lesions have been too diffuse to permit rigorous localization.

We have merely referred to this condition here, in order to awaken an interest in the subject. Without conscious attention it is apt to be overlooked, or to be mistaken for some other form of mental derangement. We know from our own experience that even such a simple condition as hemianopsia is overlooked time and again by the physician as well as the patient.

Our knowledge of this subject is still in its earliest infancy, and, even in regard to disorders of the purely perceptive centres, much remains to be learned. For example, a few cases have been reported in which cerebral lesions have given rise to crossed amblyopia, not to hemianopsia.

In conclusion, we will give a brief note on an instance of this kind, and will ask the members of the Section for their opinion on the causal lesion.

Mrs. H——, aged forty, exceedingly stupid, contracted syphilis six months ago. On Christmas she fell to the sidewalk and became unconscious. Since then, has been paralyzed in the left arm and leg, and also lost vision of left eye. Examination by my colleague, Dr. Hepburn, shows in both eyes retinal atrophy, veins normal, not tortuous, arteries smaller than normal, no choked disk. He could find no ocular cause for the blindness. In the right eye, central vision is good, but a hurried examination seemed to show impairment at the periphery.

Is the lesion in this case single or double, and where is it situated?

CASE II.—ARSENICAL PARALYSIS; MULTIPLE NEURITIS.—Charles B——, single, aged twenty-eight, native of France, fencing-master; family history unimportant. Patient drank considerably from the age of eighteen to twenty-five. Does not remember to have had any diseases of childhood. Had gonorrhœa once. Denies syphilis.

In 1883 he took a position as master in a gymnasium. His duties entailed a great deal of muscular exercise, which lasted eight hours a day. In the morning he would be very tired and hardly able to rise from bed on account of stiffness in the muscles. The back was constantly painful. He was engaged in this occupation about two months.

On July 26, 1884, he took about four grammes of arsenic by mistake. Three hours later he began vomiting severely, and had great pain in the epigastrium. The following day, he was seen by a physician, who gave him an antidote and mucilage. On this day he felt great tingling throughout the body. On the third and fourth days he was greatly constipated, rectal injections being often of no use. The pain and vomiting continued, he had some fever, and was so much prostrated that his life was despaired of. On the fifth day he vomited fecal matter once. After this the vomiting diminished, and stopped entirely on the seventh day. Constipation remained obstinate for two weeks. About two weeks, or a little earlier, after taking the arsenic, he began to have pricking sensations, formication, and very severe shooting pains, first in the upper extremities, and a week later in the lower extremities. The pains were sufficiently severe to prevent sleep, and were shooting in character, coming on every few minutes. The limbs ached greatly when free from the darts; the muscles were quite soft and tender on pressure. About three weeks after the poisoning he noticed trouble in using the hands. He could not lift a glass from the table on account of inability to grasp it, but had the power of raising the limb. Could not button his trousers or pick up small objects. At the same time noticed diminished power in the lower limbs. He could not walk well because the limbs gave way under him. At the end of the first month could not use the hands at all in picking up small objects, and the other movements of the upper limbs were also diminished in vigor. He was unable to walk, although he could perform some movements with the lower limbs when sitting or lying down. He states that the hands presented somewhat of the claw appearance; could not straighten the fingers, but could close the hand fairly well. The co-ordination of the thumb and fingers was said to be much impaired. There was a feeling of numbness, and some loss of tactile sensation in these parts. The movements at the wrist, elbow, and shoulder-joints were fair, but by no means normal. All the muscles of the arms were wasted. The pains were still intense. The pricking sensations and formication stopped in the lower limbs. The feet were extended at the ankle-joints, and the toes were strongly flexed, so that flexion of the foot or extension of the toes was very imperfect. The movements at the knee and hip-joints were tolerably fair. The muscles were wasted, soft, and very tender on pressure. The pains in the lower limbs were still severe.

At the end of the first month the patient was admitted to the French Hospital, where he was put on large doses of potassium iodide and tinct. ferri chloridi, and the actual cautery was applied to the spine once a week. Remained there thirteen months. Improvement began in the upper limbs during the fourth and fifth months after admission. The pains ceased entirely, he could use the hands better, the muscles grew firmer, and lost their tenderness. Improvement in the lower limbs did not begin until the ninth month. He then began to flex the foot and extend the toes a little. Nine months after the accident he got out of bed, and continued improving until his admission to Randall's Island Hospital, September 10. 1885.

Present condition, September 10, 1885: The patient is a well-developed, healthy-looking man; intelligence excellent; fair power in upper and lower limbs; can pick up small objects with ease, button and unbutton coat, etc.; flexion and extension of fingers not quite up to the normal; a slight feeling of numbness in the fingers, but tactile sensation apparently normal. Dynamometer: Right hand, 38; left hand, 43; has always used the left hand more than the right; electrical reactions normal.

Lower extremities: Feet partly extended and cannot be flexed on account of rigid contracture of the Achilles tendons, except when the limbs are held straight; they can then be flexed slightly. The toes are flexed, especially the big toes, from contracture of the flexor tendons. The patient does not stand well, partly on account of the flexion of the toes, partly from weakness of the leg muscles. Thigh muscles well developed, and act normally. Sensation slightly diminished on the toes; can feel a fly better than a sharp point.

Right anterior tibial nerve responds to a strong galvanic, but not to a faradic current; the left anterior tibial responds to both currents, but a stronger current than normal is required. Electrical contractions of the muscles of the anterior and posterior groups of both legs are slower than normal, and more ready to the galvanic current, very slight contraction being obtained from the faradic current, especially on the right side.

Cutaneous reflex from soles of feet is very slight. Cremaster reflex of left side is fair; of right side *nil*.

The following tendons were divided by my colleague, Dr. F. Heuel: Both Achilles tendons, the left flexor longus pollicis, and part of the left plantar fascia. Three weeks after the operation, he was allowed to leave the bed, and could walk quite well with the aid of crutches. During this time the interrupted galvanic current was applied, every other day, to the anterior tibial groups, the constant current to the calf muscles. The patient improved steadily and quite rapidly, and was soon able to walk some distance without the aid of a cane. The upper limbs also acquired their normal power, but sensation in the upper limbs, as well as in the lower, did not improve materially. The patient was soon able to perform satisfactorily the duties of an orderly.

We presume there can be little doubt that this was a case of arsenical multiple neuritis, and we shall therefore not attempt to fortify the diagnosis. Another case, of a somewhat similar character, has also come under our observation; but in this the sensory symptoms were far more prominent than the motor disturbances, and recovery was much more rapid and complete than in the case described above. We may also refer briefly to a case in which a patient, while taking arsenious acid for diabetes, suffered, in addition to the ordinary symptoms of the physiological effects of arsenic, from numbness and paresis in the distribution of the right ulnar nerve. In this case, also, we are justified in assuming the production of a peripheral neuritis as one of the toxic effects of the administration of arsenic.

Quite a number of cases have been reported by various writers, and attributed to multiple neuritis. We believe, however, that it would be one-sided to regard all cases of arsenical paralysis as peripheral in their nature. In 1880 we had under observation a patient in whom there developed, after acute poisoning with Paris green, an incomplete motor paraplegia of the lower limbs, attended with great pain in these parts, and some numbness, but also accompanied by paralysis of the bladder and rectum. In such a case it is more plausible to assume a subacute myelitis as the real lesion.

In the majority of the reported cases, however, it is very probable that the lesion was a peripheral one.

Dr. Seguin, who has reported three very interesting cases, believes that arsenical paralysis is due to diffused central myelitis, with special involvement of the anterior gray matter. We must confess, however, that the clinical histories which he furnishes seem to us to be explained better on the assumption of a peripheral than a central lesion. The chief points in favor of the former view are the prominence of the sensory symptoms, the absence of bladder symptoms, and the completeness of recovery.

The theory that arsenical paralysis is the result of a myelitis received strong support from the experiments of Popow on dogs, and in which post-mortem examination showed evidences of inflammation of the spinal cord. But these results have been disputed by Kreyssig and Schultze, who maintain that the appearances described by Popow are, in great part, artefacts, and they obtained negative results in their experiments on dogs and rabbits. Vulpian also obtained negative results in his experiments. So far as we know, no autopsy has been obtained hitherto in a case of arsenical paralysis in man.

OXALATE OF CERIUM AS A REMEDY FOR COUGH.[1]

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Mr. President and Gentlemen: About eight years ago I read a paper on this subject before the County Medical Society, which was published in The Medical Record. The subject attracted some notice at the time, but I believe merits more careful and general attention than it has yet received. Since then, having had further experience with the remedy and accumulated quite a large number of cases, and, furthermore, since many of you are probably unfamiliar with that paper, I venture to present the subject to-night. To do it justice necessitates a review of the experience which is the basis of the former paper.

The importance of alleviating cough in phthisis and in other diseases is recognized. Watson says: "Cough is usually present, more or less, during all the stages of phthisis, and is often that symptom which most harasses both the patient and his family." Another authority remarks that, "in many cases, it is the chief cause of annoyance throughout the disease. The violent efforts exhaust the invalid, induce perspiration, disturb sleep, and excite vomiting; they also inflict direct injury, and, unless moderated by treatment, may hasten the course of the disease." The constant unrest caused by frequent and violent paroxysms of cough, the exhausting efforts attending them, and the direct injury done the delicate and diseased organs, not only present formidable obstacles to any possible success in treatment of the disease, but are potent active factors in hastening the fatal issue. The demand is for a remedy which can be relied on with reasonable certainty to reduce the cough to a minimum; which will not derange digestion, impair nutrition, nor disorder nervous function, but which will allay gastric disturbance and aid digestion; one which will not clog the lungs, nor lose its effect by prolonged use. Such is the ideal cough medicine, to discover which the ambitious therapeutist may still find employment. To anticipate, it it is not fully realized in the oxalate of cerium.

In 1859, Sir J. Y. Simpson introduced the oxalate of cerium for the vomiting of pregnancy. The evidence of its efficacy in this disorder rests upon testimony too general and reliable to be questioned. Ramskill has noted its successful use in cases of epilepsy, having, as an aura, some gastric commotion. Previous to 1868 it had been employed in the vomiting of laryngeal and in pulmonary phthisis, hysteria, and in various dyspeptic conditions, with good results. In 1878, Dr. Clark, of London, first recorded its beneficial effects in chronic cough and shortness of breathing, observed in several cases of phthisis. In 1879, Dr. Morjé used it, with success, in whooping-cough.

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[1] Read before a meeting of the Manhattan Medical and Surgical Society, May 5, 1888.

According to current authority, the cerous oxalate has the power, like some other insoluble metallic powders, to allay local nervous irritability. Dr. Ramskill, of the London Hospital, thus formulated its apparent mode of action: "It is a sedative and conserver of nervous force; the sedative action, being exerted on the periphery of the pneumo-gastric, conveys the influence to the grand centre of excito-motor action, the medulla, and thus not only prevents an attack, but diminishes the chances of future ones, by lessening the morbid excito-motor sensibility."

Perhaps, not enough stress is ordinarily laid on gastric and hepatic disturbance as the cause of cough; and, especially in cases of evident disease of the respiratory organs, may not other causes be too frequently overlooked? The respiratory organs being free from disease, we are ready enough to search a disordered stomach or liver for the irritant which excites the cough. But may not the stomach and liver be just as active agents in exciting cough, when disordered during the course of phthisis, as at other times, when the lungs are healthy? It has appeared, in my experience with phthisis, that these patients are very subject to "bilious" attacks. Such attack, being attended by aggravation of cough and other distressing symptoms, may be mistaken for exacerbation of the disease. But the symptoms subside on removal of the "biliousness," like attacks of asthma in bilious subjects. This might partly explain the mode of action of the oxalate in relieving spasmodic asthma, a fact noted in a number of cases. At least, treatment of asthma directed to the stomach and liver, meets with ready response in a large number of cases in my experience. But whether much of the cough present during pulmonary disease arises from disturbance in the digestive organs or not, theoretically, the oxalate of cerium would seem an appropriate remedy for it, by its sedative action exerted through the pneumogastric.

My experience with the oxalate of cerium for the relief of cough began in 1879, at St. Luke's Hospital, during my service as house physician, and it was there that the data for my former article were collected. In order to attach proper value to the results, it should be known how they were obtained. There were at the time in the wards a daily average of about twenty or twenty-five patients requiring cough remedies. The coughing of so many made the wards very noisy at certain periods of the day, which, while harassing to themselves, was annoying to others, and a continual reminder to the physician of the inadequacy of his resources. In seeking for something more satisfactory than the conventional cough remedies, or at least, to prove whether opiates might not for the most part be dispensed with, the oxalate of cerium was put on trial. I recognized that phthisis is not the most satisfactory condition under which to test the merits of a cough remedy, knowing how intermittent the cough usually is, and that it may cease to give much trouble for long intervals without medication. In the hospital some experiments were made for which, in other circumstances, there is not opportunity, and which were particularly intended to meet this difficulty. It does not seem probable that all the patients would simultaneously experience relief, unless it were due to the drug. The effects on each patient could be observed, and simultaneously on all in the wards. As a measure of the latter, I tried to estimate whether the noise in the wards became less when all those requiring cough remedies were taking the oxalate, than when they were not. To make surer on this point its use was interrupted two or three times for several days. It evidently made a difference, for when all were taking it the wards became comparatively quiet; while within twenty-four or forty-eight hours after stopping it, increase in noise and complaining became evident. The same course was pursued in individual cases, the remedy being frequently suspended to observe the effect of its withdrawal. At first the oxalate was employed in a desultory way in a few stubborn and distressing cases, with such good effect that the more thorough and systematic trials were begun. For a period of three months all other sedatives, opiates and cough medicines, with rare exceptions, were abandoned, the oxalate of cerium alone being employed for cough; without, however, the general treatment being interrupted. Twenty-six different patients were experimented on, about sixty separate trials of the oxalate being made, none of which extended over periods of less than a week or ten days, and many of them were continued several weeks without interruption. During this time I visited the wards frequently day and night to make observations, noting them myself; also, instructing orderlies and nurses to watch particular cases and report their observations. In a matter of this kind more satisfactory results are thus possible than in private or dispensary practice, where the testimony of patients is accepted, in large part unsupported and unqualified by the physician's own constant observation.

My subsequent experience has been of this character, embracing quite a number and variety of diseases, while the hospital cases were confined to phthisis, bronchitis, and two or three anomalous conditions. But in many of the more recent cases no such complete records have been kept, and in others none at all. They have, however, on the whole, sustained the conclusions reached in the former paper, extending the scope and modifying impressions here and there, but not altering essentially the results. A few months after completing my service at St. Luke's, Dr. A. H. Smith, on reading my notes which were handed him, became interested in the subject and collected about fifty additional cases from physicians whom he induced to make trials of the remedy. These trials added nothing new except in variety. A report of results was read by Dr. Smith before the Therapeutical Society, and published, about the time of mine, in the *New York Medical Journal.* Through Dr. Smith's courtesy, these additional cases were cited in my paper previous to their being printed. Since then, so far as I know, nothing has appeared on the subject.

In over half of my trials with the oxalate decided relief to the cough, and often to other symptoms, has occurred; in some of them only moderate effects were apparent; while in a few the drug has proved nearly or entirely ineffective. Some cases do not yield readily to any measure, but often in them the oxalate has proved, after all, most satisfactory. It should be persisted in for a number of days, in increasing doses, before being abandoned as useless.

The oxalate of cerium has proved a remedy for cough in every stage of phthisis, but, perhaps, the best effects are seen in the irritant cough of the earlier stages. It is impossible to know just how much of the cough of advanced stages is due to irritation in freshly invaded portions of lung, or to gastric and hepatic disturbance. However this may be, I have often noticed a hoarse, deep, and harassing cough in the third stage lose its harsh character under the use of the oxalate, after which the cavities were emptied with less effort. It is an error, I think, to suppose that violent and exhausting cough is best left unchecked, because there is abundant secretion to remove. The cough of laryngeal phthisis has been successfully treated with it, also other forms of laryngeal cough. Dr. George Bayes reports, in a case mentioned in my former paper, that "a chronic laryngeal cough of a croupy quality was entirely and permanently relieved by its use." In the vomiting of laryngeal and pulmonary phthisis it is beneficial. In chronic bronchitis it has been used with good results, and in cough associated with an asthmatic condition, of phthisis, or of bronchitis, it may relieve both the cough and dyspnœa; and it has proved effective in spasmodic asthma, as already mentioned. An interesting case was quoted in my former article, of "a very distressing cough in empyema which immediately subsided" under the use of the oxalate, "after which the pus which was being discharged through the lungs was expectorated with less effort." It has been used with some effect in whooping-cough and in the cough of measles, and also in cases of cough of obscure origin without assignable lesion. It has been recommended chiefly in chronic cough, but in acute bronchitis my experience is that it often moderates the cough and lessens discomfort.

I have never seen any dangerous symptoms attributable to the drug, although I have given twenty grains several times in one day. A sensation of dryness in the mouth and throat is the only symptom noticed by patients, and they ceased to mind this after the drug had been taken a few days. Generally patients sleep and rest better while taking the oxalate, and in a few instances moderate drowsiness has accompanied its use. But I am undecided whether this was the direct effect of the drug, or due to the fact that "tired nature's sweet restorer" was making up for lost time. It might be supposed, the drug being a sedative, that the sedative action, being collected and transmitted by the pneumo-gastric to the grand centre of excito-motor action, the medulla, would be reflected with most effect on those functions in direct association with the pneumo-gastric, while less directly and in less degree as a general sedative.

Administering the drug dry seems the most satisfactory method. Tablet triturates I have not tried. The effects seem better when it is given on an empty stomach and in fairly large doses, rather than the same quantity distributed in smaller ones. The initial dose being five grains, to be given early in the morning, at bed-time, or both, with intervening ones as required, may be increased, unless relief is obtained, to ten grains, or more, several times a day. Large doses may succeed where smaller ones have no effect, or the cough, being for the time relieved by small doses, may return and be again moderated by increasing them. It loses its effects with continued use in some cases altogether, while in others the effects last so long, at least, as it is found necessary to employ the remedy. Its benefits may be prolonged by stopping or reducing the doses as soon as relief is obtained, and resuming them on return of the cough. One or more failures may be followed, in the same subject, with subsequent success.

Had I read all my cases instead of the imperfect conclusions, my subject might have been more fully presented; but they are too many and extended to permit it. Begging your indulgence, I will read a few, as examples:

CASE I. *Phthisis pulmonalis, second and third stages.*—J. A. S——; aged thirty-five; United States; painter.

August 13th.—Has been coughing for many weeks. Physical examination shows consolidation and softening in upper and middle portions of left lung.

August 25th.—Has had hard, loud, and distressing cough, worse at night, no vomiting. Expectorates but little and with much effort. Ordered *ten grains* of oxalate every night.

August 26th.—Coughed less and rested better last night, but coughed two or three times pretty hard.

August 27th.—Only one hard coughing spell last night.

August 28th.—No distressing cough last night; rest not broken.

August 29th.—Same report.

August 31st.—No more complaints of coughing, general condition improved.

September 2d.—Same report as to cough, which has seemed at its minimum for some time. Expectoration has suddenly become copious and characteristic, and physical examinations show a cavity in left lung.

To omit particulars, patient coughed only moderately and expectorated with little effort for two weeks.

September 18th.—More coughing, for several days, at night; night dose of oxalate increased to twenty grains.

September 22d.—Better; cough moderate, but expectoration profuse; oxalate stopped to observe the effect.

September 27th.—Five days later; worse; asking for "the powders," meaning the oxalate, but it is still withheld.

October 1st.—Coughs a great deal and sleeps little. Oxalate resumed, five grains twice a day, but a different preparation is used.

October 3d.—Distressing cough night and day; oxalate increased to ten grains twice a day.

October 5th.—No improvement; oxalate being given in water. Changed and given dry.

October 6th.—Rather better.

October 8th.—About the same.

October 12th.—No better; coughs hard and frequently. *Oxalate changed to Merck's.*

October 13th.—Better.

October 16th.—Better.

October 17th.—Passed a good night.

October 18th.—Same.

October 21st.—Improvement continues; rest is better, and improvement general.

October 30th.—Cough continues moderate, and the patient fairly comfortable.

CASE II. *Cough and dyspnœa without discoverable lesion or assignable cause.*—L. T——; aged twenty-five; United States; no occupation. Family scrofulous; she has rachitic deformity of bones; never has had good health; looks fairly well; has neurotic tendencies, which are inherited. Suffered for many weeks from severe paroxysms of cough and dyspnœa, alternating—when the cough ceases the dyspnœa is worse, and *vice versa.* Paroxysms come on suddenly after intervals of quiet; sometimes sits up much of the night coughing or gasping for breath. Recently has had several attacks of syncope.

From September 7th to the 26th many different remedies were tried in vain for the cough and for the dyspnœa. On the latter date the oxalate of cerium was ordered three times a day in ten-grain doses.

October 1st.—Five days later there was no improvement, and the oxalate was stopped. Repeated examinations of thorax, larynx, and other organs failed to discover any cause for the symptoms. The cough is loud, deep, and hoarse, of a quality suggestive of aneurism.

October 16th.—Two weeks later the oxalate was again ordered, twenty grains at night and ten grains morning and noon, but with no effect after over a week's trial.

CASE III. *Phthisis pulmonalis, third stage.*—George H——; aged thirty; United States; clerk. Family phthisical; has been complaining for a year or more. Physical examination shows cavity at right apex, consolidation at left.

October 5th.—Has annoying hacking cough, worse at night. Ordered ten grains of oxalate every night, dry.

October 16th.—Cough has been better, but of late is more troublesome again. Oxalate increased to ten grains twice a day.

October 22d.—Cough has been less troublesome for several days. Oxalate stopped to observe the effect.

October 25th.—Coughing quite hard in the afternoon, yesterday almost continuously, when the oxalate was resumed, in ten-grain doses at night and five in the morning.

October 26th.—In the evening reports: not much coughing at night, but still considerable in the afternoon. Morning dose of oxalate increased to ten grains.

October 27th.—Better. October 30th.—Same report. Oxalate reduced to five grains twice a day. Three days later patient was complaining again and continued to grow worse. A Philadelphia oxalate was used at this period. After using it fifteen days with no effect, Merck's was substituted on the 16th, five grains twice a day.

November 17th.—Some better.

November 19th.—Better, but still cough is at times annoying. Expectorates with less effort. Oxalate increased to ten grains twice a day.

November 30th.—Complains no more—is quite comfortable. On questioning the patient, who is unusually intelligent, says that the only unpleasant symptom noticed by him on taking the oxalate is a sensation of dryness in the mouth and throat, but that he ceased to mind this after taking the drug a few days. He is enthusiastic in its praise, believing that it relieves the cough much, excepting the Philadelphia preparation, which, if anything, makes him worse.

Case IV. *Localized gangrene of lung.*—Ellen B——; aged twenty-nine; domestic; Ireland. September 18th. Previously robust. Had a chill three weeks ago, followed by fever, sweating, short breathing, cough, and pain in right side of chest. Temperature, 102°; pulse, 88. Dulness and pain on percussion near edge of right scapula, and a few days later moist râles were audible in the same region. Patient expectorates a tenacious matter of brownish color and cadaverous odor, but with much effort and frequent and severe paroxysms of coughing and gagging.

September 23d.—Same symptoms. Other cough medicines stopped and oxalate of cerium substituted in ten-grain doses twice a day.

September 26th.—Better. Coughed hard but once all last night. Expectorates with less effort, and the cough is no longer teasing, and gagging has ceased.

October 1st.—Sputum still fetid. Cough has been no longer distressing. Oxalate stopped.

October 3d.—Much the same.

October 6th.—Coughing hard again. Oxalate resumed in ten-grain doses at night only.

October 7th.—Did not cough last night. Oxalate to be given in the morning hereafter instead of at night.

October 8th.—Evening cough not so troublesome of late.

October 16th.—Has not complained until to-day of cough. Last night had one rather severe paroxysm. Oxalate increased to ten grains twice a day.

October 18th.—Cough gives no more trouble.

October 25th.—Same report. To be brief, cough did not return while patient was under observation, although there was still expectoration.

Finally, I would say that it has not been my intention to raise extravagant expectations on the part of those who may use the oxalate of cerium for the relief of cough. The conclusions indicated have been stated, but I will repeat a few general ones:

1. The oxalate of cerium is a serviceable remedy for many kinds of cough, at least for a considerable time, and is very useful as an alternate with other cough medicines. 2. When it is employed opiates may be dispensed with for the most part. 3. It may be safely given, in doses of ten grains or more several times a day, for many days in succession.

244 West Fifty-sixth Street.

Smokers' Vertigo.—Dr. Decaisne recently investigated a number of cases of vertigo in smokers. Out of sixty-three patients forty-nine were between fifty and sixty-six years of age. More than half of them suffered in addition from digestive troubles, with constipation alternating with diarrhœa, insomnia, palpitations, dyspnœa, and diuresis. In a third of the number there was marked intermittence of the pulse, and granular pharyngitis, while others suffered from aphthæ, amblyopia, etc. Thirty-seven were persons who smoked habitually on an empty stomach, and these suffered from vertigo, principally in the morning. The vertigo generally coincided with suppression of perspiration and diminished excretion of urine. The treatment consisted mainly in regulating or suppressing the cause, but thirty-three out of thirty-seven patients ceased to suffer on merely refraining from smoking on an empty stomach.

EARLY STAGES OF CARCINOMA.

By B. FARQUHAR CURTIS, M.D.,

ATTENDING SURGEON TO ST. LUKE'S HOSPITAL; ASSISTANT SURGEON TO THE NEW YORK CANCER HOSPITAL.

Having recently removed two tumors at the New York Cancer Hospital (service of Dr. William T. Bull), which are of great interest as showing the earliest stages in the formation of cancer, and throwing some light on the etiology of the neoplasm, I take this opportunity of placing them on record.

Case I. *Small lipoma of thigh, containing a carcinomatous lymphatic gland.*—Mrs. S——, aged forty-eight, native of Maine, married twenty-six years, has had three children, no miscarriages. Her general health has been good, except some chronic bronchitis, and there is no history of syphilis. Her mother died of a large tumor of the liver, and her father of some abdominal tumor, the exact situation of which is not known to the patient. One sister died of an ovarian tumor, another had a "lipoma" removed from the breast.

Nine years ago she first noticed the tumor upon her thigh, which appeared without any known cause, has grown very slowly, and has given her no trouble except after considerable exercise, when she experiences a slight pain in the popliteal region, attended by slight spasmodic muscular contraction.

The tumor is situated on the posterior surface of the right thigh, over the sciatic nerve, about one inch and a half below the gluteal fold. It is soft, round, movable under the skin, elevated half an inch above the level of the skin, looking like a nipple seated on a broad round base. At the operation, on January 30, 1888, the tumor was found to extend down between the muscles like a wedge, and it was not very distinctly encapsulated. It was entirely removed.

Pathological report (kindly furnished by Dr. George C. Freeborn, Pathologist to the Hospital).—The surface of the tumor is covered with numerous excrescences, having the appearance of normal fat, and most of them are covered with a layer of blackish material. On section, what might be called the cortical zone of the tumor, is found to be composed of a series of oval and round masses. Some are the color of normal fat, while others are white, and others of a light pink color. These masses are imbedded in a mottled yellow and red material of a soft consistency. In the centre of the fatty tumor a dense, white, irregularly shaped mass, about a quarter of an inch in diameter, is found. This sends prolongations into the surrounding fat tissue. To the outer and upper side of the central mass, another of similar appearance is found.

Microscopical examination.—The bulk of the tumor is found to consist of fat tissue. The two white masses described above are found to be lymph-nodes, in which the bulk of the normal tissue has been replaced by carcinoma. This new-growth, especially in the neighborhood of the central mass, is infiltrating the fat tissue.

Case II. *Chronic mastitis with beginning carcinoma.*—Mrs. W——, aged thirty-nine, native of England, married for eighteen years, has had one child, and five miscarriages since, the last ten years ago. Family history negative. General health good, no uterine trouble or history of syphilis. Menstruation regular, but attended by some pain. There is no history of abscess of the breast or of any injury. She first noticed a lump in her breast four and a half months ago, when her attention was attracted to it by a dull aching pain. The lump was about the size of a bean when discovered, and increased in size very slowly. For the last two months she has had pain in the breast and in the arm. The tumor is situated in the upper and outer quadrant of the left breast, and consists of several nodules which are very sensitive to pressure. The mass is freely movable and not adherent to the skin. There is no local heat, or discoloration of the skin, and no discharge from the nipple. There is no retraction of the nipple. The most prominent point of the tumor is a hard globular nodule, rather more than half an inch in diameter, lying close under the skin, feeling like a tensely distended cyst, but without fluctuation. The axillary glands are apparently not enlarged. The other breast feels slightly indurated, but no distinct tumor can be felt.

Operation, March 10, 1888. An exploratory incision through the cyst showed the latter to have hard, rigid walls, with an irregular interior surface, and to contain a dark brown fluid with flakes of lymph. The underlying portion of the breast was almost as hard to the knife as scirrhus. The entire breast was removed, and, as enlarged glands were then felt in the axilla through the incision, the axillary contents were also removed.

Pathological Report (by Dr. Freeborn).—Section of the breast shows the entire gland to be composed of a dense white tissue. On the edges of the gland several cysts are found, measuring from one-quarter to one inch in diameter, of a dark red color, and on section they are found to be filled with a grayish granular mass of soft consistency.

Microscopical Examination.—Sections from various parts of the gland show a marked increase of the connective tissue. The ducts are dilated. The membrana propria of the ducts, and the connective tissue in the vicinity are infiltrated with small round cells. The walls of the cysts are found to be composed of loose connective tissue, infiltrated with small round cells. In the vicinity of one of the cysts (the subcutaneous cyst described in the clinical examination) a nodule of tissue, composed of large granular cells arranged in narrow alveoli and surrounded by a stroma of connective tissue, is found. The accompanying lymphatic glands exhibit simple hypertrophy. Anatomical diagnosis—chronic mastitis with commencing carcinoma.

Both patients made a good recovery, but, of course, it is too early as yet to look for recurrence. The early operation and thorough removal warrant an excellent prognosis.

The remarkable family history of the first patient is of great interest, for it is not often that such marked heredity has been observed. It is noteworthy, also, that both cases bring confirmatory evidence to the theory of continued irritation as a cause for cancerous growths. In the first case, the small lymphatic gland was probably irritated by the increased pressure of the lipoma, situated in a part of the body exposed to constant pressure in sitting. In the second case, the tense cyst would also exert great pressure upon the chronically inflamed tissue around it, and would be a constant source of irritation. It is to be noted that the mastitis gave no symptoms of its existence until this cyst developed.

The practical deduction to be drawn from these cases is the importance of looking upon all benign tumors with suspicion, and of removing them at the very first indication that they have begun to cause irritation. In cases of chronic mastitis, if it is ever possible to recognize the condition before any cysts or tumors have formed, the patient should be warned that the breast should be removed at the first moment that any true new-formation of tissue can be detected, or any cysts develop. An ounce of prevention is worth a pound of cure, and any woman with a benign tumor of the breast will live a life clouded with apprehension until the tumor has been removed.

AN INDUSTRIOUS SURGEON'S CARRIAGE.—According to a correspondent of *The Lancet*, M. Peau, of Paris, pushes so far his love for work that he has had his coupé so arranged as to enable him to study, eat, sleep, and even make his toilet therein. Surgical instruments, books, writing material, drawers full of notes, and a chest for linen and clothes; in fact, there is everything in this elegant carriage that might serve as a model for the carriage of an army surgeon in campaign.

MEDICAL CASES IN THE COURTS.

By HENRY A. RILEY, Esq.,

NEW YORK.

THERE is a very wide range in the decisions of judges regarding the admissibility of evidence, whether this relates to verbal testimony or the introduction of some inanimate article.

In a recent case in Connecticut, the suit was for damages on account of personal injuries, caused by a person driving into the plaintiff's wagon, and throwing her out and breaking a rib. The defendant, in order to contradict the plaintiff's testimony, offered to show the exact location of the ribs in the human system by means of a section of a human body, but the judge decided that, such an exhibition being unnecessary and offensive, it was a proper exercise of discretion for the court to refuse it.

In another case, in a New York court, where the action was for breach of warranty of a horse, an impression of his mouth, in wax or plaster, was held to be competent testimony. It was considered to be "classed as a species of evidence with diagrams, drawings, and photographs."

Another case, and a more amusing one, is narrated in a legal journal. The question to be decided was the ownership of a dog, and, as the evidence was conflicting, the judge, toward the end of the case, had the animal placed beside him on the bench while the plaintiff went to the far end of the room and called out "Sam, Sam." No sooner did the dog hear the voice than it ran through the crowded court-room, and began to gambol about the plaintiff. The judge thought this was satisfactory evidence, and decided that the dog belonged to him.

The Morris Plains (N. J.) Insane Asylum shows, under the investigation by the committee appointed by the Legislature of New Jersey, a most alarming condition of mismanagement. A sample of the testimony of the various witnesses is given in the following report in the daily papers: "David Edwards, the next witness, said that he had been the butcher in the asylum for the last five years, and severed his connection with the institution about two weeks ago. He said that the meat used in the institution came from the Newark Beef Company for the last three years. In October, 1887, the Newark Beef Company shipped six carcasses of beef which weighed 4,078 pounds to the institution, all of which was spoiled when it was received. He called Warden Monroe's attention to the bad condition of the meat, and the Warden told him to do the best he could with it. In the same month the Newark Beef Company shipped twenty-five cases of veal. One-half of this shipment was in bad condition, being tainted and having a bad odor. A portion of the meat was green and decayed. Witness called Warden Monroe's attention to this fact, and was again told to do the best he could with the meat.

"The witness further stated that in December last he received from the Newark Beef Company sixty-five head of sheep, and that this meat was in bad condition. In February last he received forty-four car-loads of mutton from the same company, which was in poor condition, a portion of the meat being black. The warden told the witness to cut up this meat as quickly as he could. The witness knew the meat to be bad, but had to obey the warden's orders.

"George Butchard, another witness, said that he was employed as carver in the kitchen from September, 1887, to March, 1888. He served food to the patients under the warden's instructions. The meat was very poor and sometimes in a decayed condition when sent to the kitchen to be cooked for the inmates. The attendants often picked out the worms found in the breadstuff and sent them back to the witness in the kitchen. At this point Counsellor Corbin, for the physicians who instituted the charges against the warden, said that he would not introduce any more testimony, as he believed that his clients had produced sufficient proof of their charges. The investigation was then adjourned until June 1st."

Physicians, like most persons in good circumstances, travel in sleeping-cars, and they will be interested in a recent Louisiana case which holds that the railroad company is not responsible in damages when a porter assaults and, without provocation, beats a person who enters the car for the purpose of asking the privilege of washing his hands. The Court says: "We do not lose sight of the fact that plaintiff was not a trespasser, but had a right to enter the car for the purpose of asking permission to wash his hands, or of trying to hire the privilege, and that in addressing the porter he was dealing with him as a servant of the company. This emphasizes the outrage to which he was subjected, but would be dangerous ground for holding the employer responsible. A person has the right to enter a bank for the purpose of collecting a check, and to present it to the paying-teller for payment; but if, on such presentation, the teller should leap over the counter and knock him down, surely such an act would not subject the bank to liability. So one may lawfully enter a store and deal with any clerk with reference to the purchase of goods, but if, on some dispute, the clerk should commit assault and battery upon him, the merchant would not be responsible therefor." The courts hold sleeping-car companies to a strict liability for valuables taken from the berths, but an assault by a porter is held not to lay them open to a suit for damages.

One of the most interesting subjects to a physician is that of fees and their collection, and the profession will no doubt read with attention a statement of the experience of Dr. Milton Josiah Roberts, of this city. The report of the case, as given in one of the daily papers, is as follows:

"Charles C. Lloyd, of Cleveland, O., had a little daughter four and one-half years old, suffering from a disease which no doctor whom he had consulted was able to cure. He brought her to this city, and on January 1, 1884, made a contract with Dr. Milton Josiah Roberts, by which the latter was to treat her for a year, and was to receive $700 for his services. He treated her for nearly four months, and then her father removed her from his care and refused to pay a balance of $350 which the doctor claimed. Dr. Roberts sued for this amount with interest, and, on a second cause of action, demanded $56 more for constructing a machine to regulate the movements of the child. The case was in the Superior Court before Justice Truax and a jury. The defendant said that the contract was terminable on his expressing dissatisfaction with the treatment, and that he was dissatisfied. He denied that he was properly chargeable with the cost of the apparatus used by the physician. The jury gave the plaintiff $431.38 on the first cause of action by direction of the court, and on the second, found for the defendant."

Persons very frequently forget to pay their life insurance premiums until after the date when they are due, and if the money is received under such circumstances, the insurance companies usually require a statement that the person is in "good health," or has not been "sick or afflicted with disease" during the lapsed period. The latter statement, in a recent New Jersey case, was held not to be necessarily false because the insured had a "cold." There was nothing in this fact which required the inference that the insured had been "afflicted by disease," or even "sick." These terms are not to be construed as importing an absolute freedom from any bodily ailment, but rather of freedom from such ailments as would ordinarily be called disease or sickness.

Quite an amusing case was recently reported in a Georgia court, where a famous patent-medicine company was the defendant and the beaten party. A newspaper published what purported to be a voluntary interview between the plaintiff and a reporter, in which the plaintiff is represented as having made statements to the effect that her mother, having been bitten by a cat, was afflicted with a disease similar to hydrophobia; that she dreaded the approach of water, suffered extreme pain, and was much swollen in her body and limbs; that she acted like a cat, purring and mewing, and assuming the attitude of a cat in the effort to catch rats, and did other like acts; and that a wonderful cure of this disease had been effected by a certain medicine called S. S. S., which was sold by the defendants.

The newspaper report was held to be libellous, but certainly the reporter had a vivid fancy in devising the interview.

Clinical Department.

THE EVACUATION OF MAMMARY ABSCESSES THROUGH THEIR NATURAL OUTLETS.

By G. W. SQUIRES, M.D.,

EAST AVON, N. Y.

Among the manifold accidents that befall the puerperal woman, few are more aggravating than abscesses of the breast. They cannot always be prevented, but it falls to the lot of some practitioners to meet with more of them than do others. Abscess of the breast is produced by retention and pus transformation of the secretion of the mammary glands. The milk is deposited during the interval of nursing in the dilated tubes or reservoir of the lactiferous ducts, of which there are fifteen or twenty, located in the breast at the base of the nipple. These tubes on entering the nipple contract to very small calibre, pursue a straight course to its summit, where they open individually by slightly raised circular rings, and are lined by a continuation of the nipple membrane. Now, from some reason or other, there appears a hard lump in the breast, the alert nurse discovers it and informs the attending physician of the fact. It is an engorged milk-duct or overfull reservoir. There have been many causes assigned for its production, but the most plausible is irritation of the nipple, which extends into the small exit-ducts, closing them up, perhaps only one or maybe several. The source of the irritation may be due to a change of the normal secretion of the child's mouth, or to a lack of care to dry and lubricate the nipple after the application of the child. It may be so hyperæsthetic as to cause the mother intense suffering every time she nurses her baby. When the breast-pump is applied the orifice of the duct corresponding to the location of the lump, if examined with the aid of a lens (as a watchmaker's lens), will pout out, appear swollen and closed up, preventing the escape of the contents of the pent-up reservoir, and as there is no connection between the lactiferous tubes, there is no other avenue of escape, and the result is the formation of an abscess. Now, the treatment I propose is to dilate the tubuli lactiferi of the nipple and draw off the milk, if done early enough, or pus, if such has formed. I have succeeded by dilating with a small silver probe and applying the breast-pump to relieve the engorgement, and have seen with a lens pus flow from the dilated duct when the breast-pump was applied. The better way is to use the capillary catheter with glass receiver and hand-bulb exhauster attached, invented by John Ward Cousins, of London, England. By this instrument an engorged duct or abscess can be evacuated through the duct of the nipple, without being obliged to lance the breast. This is a nice little operation, but by a little patience and practice, with the aid of a good lens, the orifice of the closed duct can be located, dilated, and catheterized, and thus the milk or pus contained in the pent-up tube or reservoir may be removed.

Gingival Chancre.—Dr. Girode reports, in *La France Médicale* of March 20, 1888, a case of syphilitic chancre engrafted upon a gingivitis, due to the action of phosphorus.

OXALATE OF CERIUM IN SEA-SICKNESS AND OTHER DISORDERS.

By W. H. GARDNER, M.D.,

SURGEON, U.S.A., FORT M'HENRY, MD.

In the article on "Sea-sickness," in The Medical Record of March 24th, nothing is said about the use of oxalate of cerium in this distressing disease. Now I have been a traveller by land and water ever since I was able to toddle around, and have met many cases of sea-sickness—in stages, ambulances, cars, boats, and ships—and I can confidently assert that oxalate of cerium administered in ten-, fifteen-, or twenty-grain doses, every two or three hours, in about one tablespoonful of water, will cure more cases than champagne, bromide of potassium, chloral, or anything else I ever tried. I do not think I exaggerate when I state that it will cure, or materially relieve, seventy-five per cent. of all cases that come up for treatment.

I was induced to use this remedy, in these seemingly large doses, by a patient with gastritis following a debauch, who came before me years ago. I had given him pounded ice, chloral, bromide of potassium, creosote, hypodermics of morphine, mustard over the stomach, and all that the books prescribe or the ingenuity of the profession has devised; then I prescribed six powders of oxalate of cerium, five grains each, one powder to be taken every two hours in a tablespoonful of water. I went to see him six hours afterward, and found his stomach quieted, and he was drinking some iced milk. I found he had taken the first powder (five grains) and had thrown it up, so he took the remaining five powders at one dose (twenty-five grains) and it quieted the stomach at once, and he got well immediately. Shortly afterward I was called to see a man who had been shot in some little discussion over a game of cards; the ball—thirty-one calibre—entered on the right side of the abdomen, ranging upward, backward, and to the left, not wounding the bowel, but probably some branches of the solar plexus, and lodged somewhere in the muscles to the left of the spine; there was little or no hemorrhage (external), and when he recovered from the shock, under the use of ammonia, brandy, and digitalis, the most persistent symptom was the continuous and exhaustive vomiting, which, however, was controlled in about twenty hours by the use of ten grains of oxalate of cerium in a tablespoonful of water every three hours. The man made a speedy and good recovery, and is still driving a stage-coach in Arizona.

I have used the oxalate in hundreds of cases of sick headache, and the morning sickness of pregnancy, and almost always with marked success; but it must be used in at least ten-grain doses for adults, to do any good. I have also found it very useful in relieving the cough of phthisis in these doses. I do not pretend to know its *modus operandi*, but believe it acts as a sedative to the pneumogastric and sympathetic system of nerves, and I have never seen any unpleasant effects from its administration in twenty-grain doses every three hours.

A BULLET WHICH HAD PASSED THROUGH THE ABDOMINAL WALL DISCHARGED PER ANUM.

Dr. J. O. Stewart, of Cedarville, O., reports the following case: "Laura B——, aged sixteen, colored, was shot on August 2, 1887. The ball, which weighed sixty-eight grains, penetrated the abdomen to the right, and a little above the umbilicus. The opening made by the ball was round, and was not probed beyond a depth of one inch. The wound was washed with water containing carbolic acid, and absorbent cotton with adhesive plaster was applied. The patient rallied well from the shock. The treatment was directed toward absolute rest. The bowels moved eighteen days after the accident. Urine, during this time, was dark, and contained a substance like coffee-grounds. She vomited occasionally during the whole time of her confinement to bed, which was about three months, and at times the vomited matters contained a little blood. Her temperature frequently was as high as 105°, and was kept down by antifebrin administered freely, in doses of about five grains, every three to five hours. The ball was passed per anum on the thirty-sixth day. It was considerably altered in shape, and was indented in several places. The patient was under the care of my father, Dr. J. M. Stewart, and was seen frequently also by myself."

HYOSCYAMINE IN THE TREATMENT OF THE INSANE.

Dr. W. A. McCorn, of the New York City Asylum for the Insane, Ward's Island, writes: "In a recent issue of The Medical Record is noted a fatal result from the use of hyoscyamine in one-twelfth of a grain dose, by Dr. Johnson, of Toronto. I have had considerable experience in the use of the drug, and believe it to be a useful remedy, particularly in the treatment of the insane. A fatal result from hyoscyamine is of extreme rarity, and as yet the first case is to be recorded in this institution, where it is used extensively. It is administered subcutaneously, in doses varying from one-twentieth to one-fifth of a grain, Ulrich's amorphous sulphate always being used. It has proved itself to be very efficacious in quieting the motor excitement of acute, chronic, and recurrent mania, and in senile dementia with destructive proclivities; but it is not as good an agent as chloral hydrate in general paralysis of the insane. It is a drug usually considered dangerous by asylum physicians, but unjustly so, as it is much less liable to be attended with unpleasant symptoms than are chloral and the bromides. As is the case with other narcotics, those to whom it is given become gradually habituated to its effect; but it is always well to begin with a small dose, as one-twentieth of a grain, and increase as necessity demands. In all cases that I have seen, where untoward symptoms have manifested themselves, they have yielded readily to the use of stimulants."

Stretching the Optic Nerve, writes Dr. W. B. Meany in *The Lancet*, is alone practised by De Wecker, whose performance of which I had the pleasure of witnessing in a patient with marked ataxic symptoms, suffering from gray degeneration of the optic nerve. There was no pupillary response; field of vision limited concentrically; papillæ simply atrophic; chromatic reflections. The vision of the left eye was lost. Stretching of the optic nerve was practised in the left or lost eye. The eye (left) was rotated toward the temporal side; a conjunctival incision was made near the insertion of the internal rectus, the tendon of the muscle divided, and the capsule opened and freely loosened. The instrument for stretching—resembling a diminutive obstetrical forceps—was introduced so that the little blade or hook at its extremity encircled the optic nerve; then the other blade or branch was also introduced, when the two were closed, the optic nerve resting in the concavities of the two blades. A slight lifting of the eyeball concluded the operation, the blades being then withdrawn. It was observed that the operation left no other appearance than that usually met with in an ordinary tenotomy, except that the pupil remained dilated. The operation was performed under antisepsis and cocaine.

Administering Quinine by the Skin.—Dr. F. A. Carter writes to the *N. C. Medical Journal*, that if one use an oleate of quinine he will have no trouble in securing its ready absorption. "I," he adds, "have repeatedly caused cinchonism about as rapidly in the case of children by this method of administering quinine as by giving it by the mouth. Four minims of a twenty-five per cent. oleate correspond very nearly to one grain of the sulphate, and twenty minims can be absorbed by the skin of the abdomen in a very few minutes and with very little friction.'

Progress of Medical Science.

Sporadic Cretinism.—At a recent meeting of the Harveian Society (*The Lancet*) Mr. Edmund Owen showed a case of sporadic cretinism which had been sent to him by Dr. Davson; the child, aged five and a half, had been born in the Hampstead district, of healthy parents. She looked about three or four years younger than her actual age. She had been weaned at three years, but was still fed from the bottle. Among the chief clinical features were the large mouth and protruding tongue, and the absence of all trace of thyroid gland, the presence of diffuse tumors over the subclavian triangles, and of large and rounded limbs. The child could not walk or stand, neither could she speak. Reference was made to a valuable paper which was contributed nearly forty years ago by Mr. Curling, on two similar cases, in which he suggested that the physical and intellectual defects in these children were probably due to absence of the thyroid gland, depriving the economy of certain assimilation processes. Mr. Owen then referred to the works of Cocher, Ord, and Horsley upon the subject of cretinism, which he called the myxœdema of childhood. He was of opinion that the characteristic deposits in the neck, as also those which shrouded the muscles of, and thickened the limbs, were the result of mucoid infiltration of the subcutaneous tissue, and were not of the nature of fat. He concluded by calling attention to the importance of Mr. Horsley's vivisection experiments upon monkeys, by which it had been amply shown that the removal of the entire gland was likely to be followed by progressive myxœdema. Mr. Horsley thought the case a striking example of the disease. With reference to the kind allusion of the president to his own work, he wished to mention that Munk, of Berlin, had challenged his results. As he would take another opportunity of replying to Munk's statements (which could be easily explained), he wished only to remark on what appeared to him to be the most pressing problems connected with the destruction of the thyroid in these cases. There are three forms of the one disease resulting from atrophy of the thyroid. They are: (1) Intra-uterine cretinism—child always born dead; (2) sporadic cretinism of childhood, in which there is early extra-uterine loss of the gland; (3) adult cretinism, or myxœdema of middle life. Now, we are familiar in the last form with the congestion of the gland, its invasion by leucocytes, and its subsequent atrophy, with destruction of the gland tissue; but we are ignorant of what like destroying changes occur in the thyroid in the first two forms. The solution of this question he desired to urge on the attention of pathologists. In conclusion, he agreed with Mr. Owen that the resiliency of the arms seemed more than fat of connective tissue would account for, but he thought we must be very cautious in estimating the amount or existence of mucin, for, as he had himself shown, this element in the case is wanting where the chronicity of the disease is notably increased.

The Liver the Excretory Organ for Iron.—The way in which iron introduced into the body is excreted being somewhat obscure, Dr. Zalêski, of Dorpat, has endeavored to clear up our knowledge of the subject by some very carefully planned experiments. He first took two rabbits of the same litter, as nearly as possible of the same color and weight, and reared them under similar conditions, taking care that they had access to no food or drink containing any iron. When they were ten weeks old they were kept without food for four days, being allowed water only. Into the jugular vein of one of them was then introduced a solution of sodio-tartrate of iron, containing a known quantity of metallic iron. No symptoms of acute poisoning occurred during three hours. At the end of that time the carotid artery was opened, and as much blood as possible removed. The whole vascular system was then thoroughly washed out by means of a special apparatus which is used for this purpose in the Strassburg Pharmacological Institute. The liquid employed was a warm weak solution of sugar, which was introduced into the aorta and allowed to run out from the portal end. This washing out was continued till the red tint of the muscles and other organs had disappeared so completely that the spectroscope detected no hæmoglobin lines. The other rabbit was also deprived of blood in precisely the same way. The organs of the two animals were then examined chemically, and the iron contained in them accurately estimated by the volumetric method. The result showed that the only organ in which the percentage of iron was markedly increased in the animal into whose system the sodio-tartrate had been introduced was the liver, the dry substance of the organ containing 0.0998 and 0.1723 per cent. of iron in the two animals respectively. A similar research was subsequently carried out in the case of two kittens. Here the livers contained respectively 0.0431 and 0.0895 per cent. of iron, most of the other organs showing more iron in the animal into which none had been introduced than in the one in which the sodio-tartrate had been injected. The most remarkable instance of this was the muscular tissue, which in the kitten that had had no iron showed a percentage of 0.0206, and in the one which had had iron only 0.0073. Of this curious fact Dr. Zalêski does not see his way to offer any explanation, and it certainly appears somewhat paradoxical. In both the rabbits and kittens it was plainly demonstrated that the walls of the stomach and intestines contained no more iron in the animals which had been subjected to the intravenous injection than in the others. The result of the research would appear to suggest that the liver has some claims to be considered the excreting organ for iron.—*The Lancet.*

Angioma of the Epiglottis.—Dr. C. M. Desvernine reports an example of pedunculated angioma of the epiglottis. The patient was a man, aged fifty-three, of robust constitution, who for two months before he came under notice had suffered from occasional slight bleeding from the throat. On November 14th he lost a large amount of blood, and the hemorrhage only ceased on syncope supervening. Laryngoscopic examination showed an ovoid tumor of lobulated appearance and dark-blue color, and measuring two centimetres in length by one in breadth, springing from the laryngeal surface of the epiglottis to the left of the middle line, about midway between the base and the apex. The tumor was attached by a short pedicle, and there was no infiltration of the tissues around its root. On November 27th, the pharynx and larynx having first been anæsthetized with a concentrated solution of cocaine, the tumor was removed with the galvano-caustic snare. The only trace of the operation was a small eschar, which came away a few days later, leaving the site of the tumor completely healed. Microscopic examination showed that it was an angioma enclosed in a fibrous capsule.—*The Lancet.*

The Pathology of Uric Acid.—Since the discovery of uric acid by Scheele in 1776, theories have assigned to this body a variable *rôle* in general pathology. At first it was regarded solely as a "concreting" acid formed in the kidney, which bound together the earthy matters of the urine to form a stone; hence its synonym, *lithic acid*, which is still frequently applied to it. The fact that gouty deposits also contained it led Murray Forbes, in 1798, to suppose that it was formed in the general fluids of the body, and not in the kidneys. The earlier views, up to the brilliant discovery of Garrod, who first detected urid acid in the blood of gouty patients in 1848, regarded the association of uric acid with gout as the result of physical rather than of chemical changes, and spoke of the formation of gouty tophi more as a consequence of insoluble material being deposited, than of a specific inflammation leading to increased formation, by chemical changes taking place in the tissues, either generally or locally. Even at the present day, evidence exists that this early view has considerable influence over the minds of some who are recognized as authorities on the subject. In fact, it is still possible to separate the teachers into two schools, the chemical and physical: the one holding that the chief relation of uric acid to gout depends upon an increased formation in the body; the other referring such relationship simply to the insolubility of uric acid and its tendency to deposit in parts of little vascularity under circumstances which retard its elimination or prevent its destruction. In England, the chemical school has the larger, if not the more influential following, owing, no doubt, to the advocacy of Garrod, Murchison, and Latham; on the Continent, however, the supporters of the physical theory are more numerous, and there is increasing evidence that their teaching is beginning to spread more widely in England. The latest addition to the teaching of the chemical school is that of Dr. Latham, whose Croonian Lectures of 1886 explained the whole *rôle* of uric acid so far as concerned its relationship to gout, rheumatism, and diabetes—that is, if the whole of his hypotheses can ultimately be sustained by facts. Indeed, so far as we can judge, he is probably correct in his assumption that uric acid is formed in the body as he describes, viz., by the conjugation of residues of glycocine with residues of urea. But we think he throws too much stress on the part played by the liver and kidney to be quite in accord with clinical experience. As is well known, he accounts for the presence of urate of sodium in the blood by the imperfect metabolism of glycocine. "Unchanged, it passes from the alimentary canal or elsewhere into the liver; there, under the action of the gland, it is conjugated with urea, and is converted into hydantoin; it then passes on to the kidneys, to be combined with other molecules of urea or bi-uret, forming ammonium urate, a portion of which overflows into the circulation, and is converted into sodium urate." Now, as a matter of fact, in frank gout at all events, the first appearance of the disease is not in the kidney but at the extremities, in the small joints, and it is not till repeated attacks have occurred that we usually have evidence that the kidneys are affected. Undoubtedly in some cases we have evidence that renal changes in the form of nephritis and lithiasis precede the arthritic inflammation, but these are commonly witnessed in the anomalous and irregular forms. In accepting Dr. Latham's views, then, with regard to the formation of uric acid, we do so with the belief that the hypothesis should be made to include the possibilitp of the conjugation taking place in other organs and tissues besides the kidneys. Some writers have extended the *rôle* of uric acid beyond that of association of gout, rheumatism, and diabetes, and would attribute eczema to a rush of uric acid to the skin, headache to a rush of uric acid to the brain, and it has even been stated that urate of sodium has been found deposited on the valves of the heart. We are not aware of any well-authenticated observations that have proved, like those of Garrod in acute gout, the presence of uric acid in the blood of patients suffering from eczema or from megrim. In the absence of such proof we may be excused if we hesitate to believe that uric acid is necessarily concerned in their production. With regard to the skin, we have evidence of the excessive formation in some cases of lactic and butyric acids; and with regard to many forms of headache, the altered reaction of the urine points to some diminished alkalinity of the blood as a sufficient reason; while, with respect to the deposit of uric acid on the valves of the heart, evidence is conflicting. Those deposits that we have had the opportunity of examining have, on chemical investigation, proved to consist of crystals of cholesterin. The physical theory of gout assigns to uric acid a far humbler *rôle* than the chemical. Without denying the possibility that in gout an excessive formation of uric acid occurs, it attributes the phenomena of the gouty seizure more to local influences, and may be thus briefly formulated: Supposing an anomalous formation (Ebstein), or an accumulation in the textures (especially the fibrous) brought about either in connection with a tropho-neurosis, or, as some believe, by vital decay, some of the tissues of the body hold more uric acid than can be destroyed. In the more vascular parts this excess is washed away by the more rapid current, and appears in the blood; while in the least vascular, the cartilages of the joints, especially those more remote, the force of the blood-current is too feeble to insure removal, and consequently an attack of gouty inflammation ensues. With repeated attacks the system gets more and more saturated with the accumulated uric acid, the larger joints become invaded, and the straight tubules of the kidneys blocked sooner or later with uratic deposit. There is much to be said in favor of this view. The facts that frank attacks of gout commence usually, unless determined to a larger joint by a sprain or other injury, in the most remote and smallest joints, and also that attacks are more frequent in limbs that have been injured or have had their activity impaired, as Ebstein has pointed out as of frequent occurrence in paralyzed persons, the joints of the paralyzed limb being always more deeply implicated than its fellow, go a long way to support the mechanical theory. Even in cases where the kidneys are affected before any arthritic outbreak occurs, the theory of stasis is sufficient to account for the phenomenon, since the deposition of the sodium urate does not occur in the proximal part of the tubule, which is the most vascular, but at the distal, which is the least. The determination of the attack to the kidneys and not to the small joints in some cases is accounted for, by the physical theory, by some undue acidity of the urine causing deposition of urate in the tubule, and not to an increased conjugation of hydantoin and bi-uret in the vessels of the kidneys. Probably on this theory of stasis a more chemical one may be grafted, for it is very likely that diminished alkalinity of the fluids and tissues, such as is well known to occur in gout, is concerned in aiding the deposition of a substance so insoluble as sodium urate, though without the aid of some local stagnation it may be doubted whether that alone, as some writers have suggested, would be sufficient.—*The Lancet.*

KREMVANSKI'S TREATMENT OF PHTHISIS.—Dr. Albitski reports a case of pulmonary phthisis treated, according to Kremyanski's method, by inhalations of aniline oil, a special diet, and the administration of antifebrine. At first the drugs and regimen were very badly borne, but soon the patient became accustomed to them, and then began to improve rapidly.

THE BLOOD IN DIABETES.—Lépine has recorded a case of diabetes which terminated fatally in coma, and in which, for the first time, it was positively shown that in this state the blood loses its alkaline reaction (*Revue de Médecine*). As far back as 1883, at the debate on diabetes at the Pathological Society, Dr. Ralfe first drew attention to the fact that the symptoms of diabetic coma were not unlike those produced in animals poisoned by an injection of acids into their veins, or whenever attempts were made to diminish the alkalinity of the blood by other means; whence the speaker inferred that the poison concerned was of an *acid* nature, which by decomposition in the urine became converted into acetone. This idea of "acid intoxication" has since been generally adopted, and Minskowski has discovered the presence of an acid (oxybutyric) in diabetic urines which is capable of breaking up in aceto-acetic acid, and thus furnishing acetone. This acid does not, perhaps, exist in the blood and tissues in a free state, but is probably combined with some base with which it forms an acid salt In Lépine's case, intravenous injection of a saline fluid containing about an ounce each of sodium chloride and sodium bicarbonate to three pints of water was employed when the coma first set in. After this there was some immediate improvement from the coma, the pulse rallied, the temperature rose from 96° to 97.5° F., and the patient could speak, but not swallow. Twelve hours afterward venesection was employed prior to the trial of a fresh injection, when it was found that, in spite of the previous injection of a large quantity of alkali, the reaction of the blood was neutral—a clear proof, Professor

Lépine thinks, of the acid nature of the disease, and its power to destroy the normal alkalinity of the blood. It may be a question, however, says *The Lancet*, whether the injection of an alkaline bicarbonate into the blood in diabetic coma is a right procedure. For, though the reaction of the salt is alkaline, yet its constitution is acid, and, as Dr. Ralfe pointed out some years ago, probably acts as an acid salt in its decomposition with other salts in the body, and so actually tends, after the immediate effect of its alkalinity has passed off, to diminish the alkalinity of the blood. Should this on further inquiry prove correct, it might be advisable to employ neutral sodium phosphate instead of the acid sodium carbonate for intravenous injections.

Professor von Bergmann's Method of Antiseptic Treatment.—Dr. F. Bramann, first assistant surgeon to the Surgical Clinic of the University of Berlin, reports on the antiseptic treatment adopted by Professor von Bergmann (*Archiv für klinische Chirurgie*, vol. xxxvi., 1887, and *Centralblatt für die gesammte Therapie*, December, 1887). Sublimate gauze is prepared by exposing gauze during one quarter or half an hour to a continuous stream of water-vapor of 100° C. (212° F.), after which it is rapidly dried and impregnated with a solution of sublimate. Plain sterilized gauze is but rarely employed, and only in minor operations. The cotton-wool used for dressing is not impregnated, but merely sterilized by steam in the above manner. The water-proof sheets, linen sheets, napkins, towels, and sponges are disinfected in the same way. Small rolled-up pieces of sublimate gauze are generally substituted for sponges. The silk for sutures is sterilized; catgut is immersed for from ten to fourteen days in an alcoholic solution of sublimate (4 : 1,000), and afterward kept in a solution of 1 : 800 of sublimate in alcohol and 200 parts of distilled water, in which the catgut will not become brittle. The wound during the operation is irrigated with sublimated water (1 : 2,000); but in operations in the abdominal or pleural cavity the wound is merely wiped with pieces of sublimate gauze. In the mouth, rectum, and in the bladder, instead of sublimate, salicylic acid (1 : 1,000), boric acid (2 : 100), and at the termination of the operation iodoform ether (1 : 10), are employed. The instruments are left half an hour before use in a solution of three per cent. of carbolic acid. Hæmostasis is most carefully attended to, and the wound is not closed before the slightest trace of bleeding has disappeared, by which precaution the best results even without drainage are achieved; but there are exceptional cases in which the hæmostasis cannot be perfect and the wound cannot be kept free of serious oozing, or in which an aseptic progress is doubtful. In such cases, the wound is irrigated with a 1 : 1,000 sublimate solution, rinsed with iodoform ether, and loosely tamponned with a strip of iodoform gauze, the end of which is brought out in the corner of the wound, and is dressed over the tampon with sublimate gauze and cotton-wool, according to antiseptic rules. Should the dressing become saturated with the discharge of the wound, the external layers are to be renewed, but the iodoform gauze is left for two days, after which it can be easily and safely removed. The wound is now accurately closed by sutures, and union by first intention will take place even in cases in which the tampon had been left, owing to special reasons, for four to six days.—*London Medical Record.*

On the Innervation of the Liver.—Dr. Pal, working in the laboratory of Professor Stricker, read a paper on the innervation of the liver. Since the discovery of the "piqûre" by Claude Bernard, there was a hypothesis in physiology which stated that there existed special hepatic nerves which took their course along the sympathetic nerve. Several authors had also repeatedly claimed the existence of "vaso-dilators" and "vaso-constrictors" for the liver. No exact evidence of the correctness of these statements had, however, been furnished, and, according to the opinions of Heidenhain, the blood-current in the liver chiefly depended on the condition of innervation of the portal vein, and, on the other hand, on the conditions of blood-pressure in the inferior vena cava. In order to elucidate the question as to the innervation of the hepatic blood-vessels, all the different vessels had to be ligatured. Dr. Pal had eliminated from the circulatory system all those blood-vessels which were supplied by the splanchnic nerve, by ligaturing the thoracic part of the aorta, the inferior vena cava above the entrance of the renal veins, and finally the portal vein. All the blood-vessels which conveyed blood to the liver were thus closed, whereas those which carried off the hepatic blood were allowed to remain open. The peripheral stumps of the splanchnic nerve were then irritated, and a considerable increase of the blood-pressure was obtained, which was first looked upon as being due to the liver alone. There were now performed controlling experiments in such a way that the inferior vena cava was ligatured opposite the entrance of the hepatic veins, and the peripheral stumps of the splanchnic nerve were irritated. An increase of blood-pressure was also obtained on this occasion, but it was inferior to that obtained when the hepatic veins were allowed to remain open. It resulted from these experiments that the liver pressed out blood during the irritation of the splanchnic nerve. To make this statement quite sure, Dr. Pal, in part, availed himself of the method devised by him and Ikalowicz, and, in part, that of Claude Bernard, viz., he introduced, through the external jugular a catheter into one of the hepatic veins or into the inferior vena cava, as far as the diaphragm, and applied ligatures around the aorta, the cava (below the entrance of the hepatic veins), and portal veins; the splanchnic nerves were irritated. An increased discharge of blood from the hepatic veins was thus caused. It therefore became evident from these experiments that the splanchnic nerve exerted a direct influence on the liver, or, in other words, that it contained hepatic nerve-fibres.—*Medical Press.*

The Treatment of Pulmonary Phthisis by Parenchymatous Injections of Creasote.—Dr. Leo Rosenbusch, of Lemberg, publishes in the *Przeglad Lekarski*, Nos. 5 and 6, 1888, the report of a series of cases of phthisis treated by parenchymatous injections of creasote. His method consists of injections of a solution of three per cent. creasote in almond-oil into the affected places of the lungs. The injections are to be made by means of the Pravaz syringe, with a needle 6 to 8 ctm. long, every second or third day, one-half syringeful being injected into each apex. The injections should be made very slowly, and the patient must not breathe deeply, and after it must lie still for a few minutes. After the injections, the writer states, the cough becomes less violent, and in from five to eight hours the temperature falls and remains normal for a period of ten or twelve hours. Sometimes directly after the injections the temperature rises for a short time, but afterward it falls to the normal. The quantity of sputum diminishes considerably, dyspnœa disappears, and the perspirations cease. The general condition of the patients is bettered, and an improvement is also noted in the physical signs. Creasote employed for injections should be of vegetable origin, and must be distinguished from mineral creasote, from which it differs in every respect.

Addison's Disease.—Dr. J. Parvinski reports in the *Gazeta Lekarska*, of Warsaw, Nos. 4 and 5, 1888, a case of Addison's disease observed by him in which the diagnosis was confirmed by post-mortem and microscopical examination. The author believes that the dark pigmentation of the skin is the result of either functional or somatic changes in the abdominal plexuses of the sympathetic nerve, and he bases this view upon the following: 1. The anatomical structure of the suprarenal capsules, which contain a net-work of nerves, starting from the cœliac and semilunar plexuses, the vagus, and the phrenic nerves. Besides this the medullary substance contains even nerve-cells. 2. The suprarenal capsules are most frequently the seat of anatomical changes in patients dead of Addison's disease. 3. These pathological changes, characteristic of Addison's disease, affect most frequently the medullary substance of the suprarenal capsules, that is to say, the part which is most richly supplied with nerves. 4. The nearness of the cœliac and semilunar plexuses to the suprarenal capsules.

The Rôle of Bile in the Digestion of Fat.—Dr. Dastre, in a recent report to the Société de Biologie of Paris, said that he had previously proven that the presence of bile in the stomach during different periods of digestion did not take from the gastric juice its digestive power. Consequently, it could not be the cause of vomiting or of severe gastric troubles. At the present time, owing to the success of two operations for cholecysto-intestinal fistula, he thought himself in a position to conclude that the bile contributed as well as the pancreatic juice to the digestion of the fats, an opinion which is counter to that expressed by Claude Bernard. In fact, the two animals being in good condition four months after the establishment of the fistula, they had been given a meal of fat and milk, and then slaughtered during full digestion. The examination showed with absolute clearness that the lacteals were transparent between the stomach and fistula, and, on the contrary, entirely white and milky below the fistula; that is to say, where the bile had been able to get. Consequently, if observation on the rabbit shows us that the bile alone is unable to emulsify the fats, the preceding experience shows us that the pancreatic juice alone is also powerless. They must be mingled, in order to act well. In other words, bile, as well as the pancreatic juice, takes part in the digestion of fats. —*Le Progrès Médical.*

The Varieties of Aconitine and the Dangers of their Medical Use.—At a late meeting of the West London Medico-chirurgical Society, Dr. Thudichum read a paper on this subject (*The Lancet*). He said that often drugs possessing healing properties have powers going far beyond. On account of progressive concentration alarming effects may be produced and a medicine become discredited. The different varieties of aconitine are due to its varying sources and differences in soil and climate. One variety is actually four thousand times more poisonous than another. Even the so-called "English" aconitine is not always the same substance; one manufacturer may prepare it from A. napellus, another from A. ferox. The German aconitines are also of different strengths, and the French "aconitine crystallisée" is really a nitrate. With such variations, it is surprising that fatal mistakes have not more often ensued. The author has compared the chemical properties of a large number of specimens of aconitine; there are certainly three distinct substances known by the name, and very likely a fourth. They vary in their chemical reactions, as well as in their poisonous power. On account of the danger of their use, he agrees with Professor Gluch that they should all be removed from the Pharmacopœia. He considers that with aconitine, paralysis of the sensory nerves is very slight and superficial, and that the motor nerves are more affected. He alluded to numerous experiments on rabbits, and especially remarked on the rapidity of the poisonous effects. In his opinion, the best treatment after a poisonous dose is the swallowing of charcoal and an emetic of sulphate of zinc.

Sour Milk and Buttermilk in the Nutrition of Invalids and Others.—Dr. Demuth advocates the use of sour-milk and buttermilk as cheap, effective, and easily assimilable nutritive agents. Both are easily digested, on account of the finely divided condition of the caseine and the presence of acids. He also says that buttermilk is useful in all cases where a milk cure is indicated, and is particularly to be recommended in consumption. Sour milk has shown itself to be very beneficial in scrofulosis, neurasthenia, hypochondriasis, in convalescence, in diseases of the organs of respiration and deglutition, chronic catarrh of the air-passages, nervous disturbances following excessive or exclusive meat diet, dropsy, albuminuria, and Bright's disease. It is also useful in diabetes mellitus. Both forms of milk are efficacious in chronic metallic poisoning and inflammatory and febrile conditions, especially in typhoid fever. They are not to be used in ulcerous processes in the alimentary canal, a fact not always considered in ulcer of the stomach, ulcerating cancer, and tuberculous ulceration of the intestines.—*Vereinsblatt für Aerzte.*

Notes on the Vegetable Globulins.—Vegetable globulins are divided by Martin into two classes, vegetable myosins and vegetable paraglobulins. The myosins are soluble in ten to fifteen per cent. sodic chloride solutions, from which they are precipitable by saturation with sodium chloride or magnesic sulphate; they are soluble also in ten per cent. magnesic sulphate solution, this giving a coagulum at 55° to 60° C. The paraglobulins are soluble in saline solutions, and are precipitated from these solutions by saturation with sodium chloride or magnesic sulphate. In a ten per cent. solution of the latter they coagulate between 70° and 75° C. If precipitated from their saline solutions by dialysis, unlike the myosins, they are still soluble in ten to fifteen per cent. solutions of sodium chloride and magnesic sulphate, and are not transformed into albuminates. In an acid solution in the presence of sodium chloride, hydrogen peroxide rapidly changes albumen into a proteid insoluble in water, a temperature of 37° to 40° C. accelerating the process. If the hydric peroxide solution be well shaken up with an equal quantity of white of egg, and about fifteen grains lactic acid and fifteen to thirty grains sodium chloride added, a clear mixture will be obtained, which becomes cloudy if held in the hand, and sets into a firm, cheesy mass if placed in an incubator for twelve hours. The precipitate is soluble in sodic-carbonate solutions, and can likewise be readily peptonized by artificial gastric juice. It belongs more to the nature of acid albumens than caseine, and is stated to be a mixture of gelatinous acid albumens, with a large quantity of a caseine-like proteid. Lactic acid, sodium chloride, and hydric peroxide, are all present in sweat, as also in certain of the tissues; it therefore becomes a question whether the deep cutaneous tissues may not be able to coagulate the proteids circulating in the lymph; and also whether the coagulation of blood and muscle, and the formation of caseine in milk, may not receive a similar explanation.

For the Relief of Pelvic Pain there is no remedy equal to cocaine; and its application is simple. After the vagina has been thoroughly cleansed with the antiseptic spray, it becomes a good absorbing surface, and is then sprayed with a four per cent. solution of cocaine directed mostly against the cervix, and a soft unabsorbent cotton tampon, with string attached, either plain or rolled in pulverized boric acid, placed in the vagina, to aid the retention of the solution. This forms an elastic support for the uterus, which is so often needed. Its action is not merely local in the vagina, but it is absorbed by the clean surface, and takes effect upon the whole capillary circulation of the pelvis. One application of this kind will usually relieve all the pain and soreness in simple troubles, and the patient will return with a smile at her next visit, and say that she feels like a new woman. Repeated applications, at intervals of two days, will cure well-marked cases of pelvic congestion and inflammation in a remarkably short time by relieving the capillary engorgement.—Dr. A. H. Goelet in *Annals of Gynecology.*

Nitroglycerine in Tinnitus Aurium.—Lautenbach has found nitroglycerine useful for the relief of ringing in the ears, associated with functional or organic heart disease, but not due to serious ear trouble. Marked benefit was usually obtained within a day or two, although occasionally the remedy was continued for two or three months before much improvement was noted.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, June 2, 1888.

HUTCHINSON ON THE ABORTIVE TREATMENT OF SYPHILIS.

IN a recent address on this subject, Dr. Jonathan Hutchinson (*The British Medical Journal*) informs us that for many years past he has been in the habit of assuring patients who came to him with indurated chancre, but without any other symptoms, that they would in all probability wholly escape the secondary stage. As the result of increasing experience, he now holds out this hope with more confidence than ever.

The best treatment of syphilis is of unquestioned importance, and so eminent an authority as Hutchinson is certainly entitled to a full hearing, even if his views are at variance with those held by others of equal prominence with himself. The author's doctrine is clearly opposed to the most recent teachings of the German and French schools.

This is what he says: "My treatment has been almost uniform, and has consisted in giving mercury in the form of gray powder in one-grain doses three times a day, at least, and more frequently if the symptoms did not quickly yield. I have always told the patient that he must take these pills for six months at least. The results have also been very uniform, or have varied chiefly according to the period of the disease at which the treatment was begun. The effect of the medicine in softening the induration is usually quite evident within a week, and may be expected to be complete in the course of a month or a little more. After this the patient remains without symptoms till the end of the course, except, perhaps, some slight persisting enlargement of the inguinal glands. At the end of the six months, if the treatment is left off, there not very infrequently follows in three weeks or a month an erythematous general eruption. This eruption is never severe, never becomes papular or scaly, and always vanishes in a few days if the mercury is resumed. It is never attended by failure of health, and but rarely by sore throat. On account of its frequency after six months' courses, I have lately been in the habit of continuing the treatment for nine or twelve months, and am willing to admit that it might be wise to continue it for still longer periods. As regards relapses at still longer periods, I must state that, in a certain proportion of cases, sores in the mouth or scaly patches in the palms, or a liability to transitory erythemata on the skin have occurred, but they have generally been in connection with some special kind of irritation."

Hutchinson maintains that it is quite possible, by the early and continuous use of mercury, to suppress the secondary stage—in other words, to make it abortive. In exceedingly few cases where it has been possible to use mercury without interruption in this way has he known a well-characterized secondary eruption or a typical sore throat to occur. In cases where diarrhœa or sudden ptyalism has caused the course to be interrupted, the success has been less complete. But where the patient is careful, and can bear the drug, he believes that it is easily possible to prevent secondary symptoms. This assertion is not by any means the same as saying that it is possible to cure syphilis, for it does not concern itself with the tertiary stage.

In concluding his instructive remarks, Hutchinson emphasizes the points which he has made, as follows: "The early use of mercury does not only greatly shorten the duration of the primary phenomena, but it also much modifies, and in many instances entirely prevents, those of the secondary one. When circumstances favor the febrile stage of the exanthem, syphilis may be rendered wholly abortive. If we can accept this proposition, we shall have gained a step in the orderliness of our future work, and in reference to this the following problems seem to lie before us.

"What plan of treatment is most successful in suppressing the febrile or secondary stage?

"Does the suppressing of this stage tend to prevent what are called reminders, or those minor, and for the most part local, symptoms which often intervene between the febrile stage and tertiary phenomena?

"Are those in whom the febrile stage has been aborted by artificial means more or less than others liable to tertiary phenomena?

"Is it possible, by anticipatory treatment, to prevent or abort the phenomena of the primary stage; and, if this be done, what is the influence upon the further course of the disease?"

It will remain for the accumulating experience of the entire profession to give decisive answers to this series of suggestive questions.

NEPHRORRHAPHY FOR FIXATION OF FLOATING KIDNEY.

IF the evidence of modern writers is entirely trustworthy, floating kidney is not as infrequent a condition as has been formerly supposed. Very annoying symptoms are often the result of this morbid state. The attempt to afford symptomatic relief by suitable bandaging is not always crowned with success. And not every person afflicted in this way can muster sufficient courage to submit to the operation of nephrectomy, which surgical pioneers rarely hesitate to advise. Hence any milder measure which affords some chance of cure is to be considered a chirurgical desideratum. The operation known as nephrorrhaphy appears to come under this head. First successfully performed by a German surgeon, named Hahn, it has already found quite a number of imitators and advocates. The operation consists merely in cutting down upon the kidney, and then stitching it to the edges of the wound, and expecting it to stay fixed there.

In our country we have heard but little of this simple little manœuvre. A case has recently been reported, however, by Dr. Wilcox, of Buffalo. It is published in the *Annals of Surgery*, and bears transcription here:

"Sarah W——, aged twenty-four. About nine years ago, while lifting heavily, felt something 'give way in her back.' A few weeks after, she detected a distinct tumor in the abdomen, a little to the right and on a level with the umbilicus. She suffered but little pain, but was worried over its presence. She consulted a number of physicians in England, where she was then living, but gained no satisfactory information regarding her trouble.

"As time went on she began having pains in the 'tumor' and a heavy dragging sensation. There were no urinary symptoms; in fact, the foregoing history was about all the subjective symptoms that could be elicited.

"Upon examination the tumor was found to be somewhat larger than an ordinary-sized kidney, was quite freely movable, and could be crowded up to the under edge of the liver or pushed down to the iliac region, and even on to the left side; it was somewhat painful if squeezed. It was with some difficulty forced back into its normal position. The diagnosis of floating kidney was rendered.

"An operation for fixation of the displaced kidney having been determined on, the patient was anæsthetized and turned well on her sound side. The skin was shaved and scrubbed with bichloride solution. A free incision was then made midway between the last rib and the crest of the ilium, extending from the anterior edge of the quadratus lumborum forward for about four inches. After controlling all hemorrhage, the incision was continued through the entire wall, the hand inserted, and the kidney grasped and brought out to the lips of the wound. Here it was held with some difficulty, as so long a time had elapsed since it had been in its natural place that it required some stretching of the tunica adiposa to retain it. After bringing it to the opening, examining its surface, and demonstrating its blood-vessels, there was left no doubt as to its being a kidney. A heavy catgut suture was passed through the perirenal fat and each lip of the incision; this was repeated three times, till the gland was securely anchored to the wound.

"The remaining portion of the incision was loosely drawn together and allowed to heal by granulation. It was dressed with the usual antiseptic precautions, and the patient put to bed.

"She made an excellent recovery, the temperature at no time going above 101⅕° F. She is now able to walk quite a distance and do ordinary light work. The gland has kept its position, and there is no pain or dragging."

This is certainly a gratifying and encouraging result, and should induce others to imitate this simple procedure before resorting to so grave an operation as nephrectomy.

WEAR AND TEAR OF THE MEDICAL PROFESSION.

At the April meeting of the State Board of Health of Illinois, Dr. John H. Rauch presented a report upon the mortality-rate and causes of death among physicians. The paper contains many facts of interest.

Dr. Rauch's observations are based upon data accumulated in the past ten years regarding Illinois physicians. He finds that the average duration of life among them is lower than is usually supposed to be the case among physicians, viz., fifty-two years, and that only eleven out of every one hundred reach the scriptural limit of threescore years and ten. During the past ten years there have been about six thousand physicians living annually in the State, among whom there were annually about eighty deaths, giving an annual death-rate of 13.3 per thousand, which is certainly quite high.

A table is given which we append, showing the yearly death-rates, per thousand, of physicians in Illinois, of all males in Illinois, and of both sexes in the United States, at grouped ages:

Ages.	Yearly Death rate per 1,000.		
	Physicians.	All Males.	Both Sexes.
24-30	6.4	6.6	9.7
30-40	7.4	7.6	11.9
40-50	11.5	10.3	13.9
50-60	19.5	16.5	18.1
60-70	31.1	32.0	23.8
70-80	53.0	64.4	46.9
Over 80	476.1	126.0	113.3

This shows that the death-rate among physicians in the early part of their practice is lower than that among males generally, or even in the general population. After the age of forty, however, the death-rate is proportionately greater, and after the age of sixty it is higher than in the general population. The doctor, after he gets to be forty, therefore, should be more than ordinarily careful, for his chances of life are less than those of his neighbor.

With regard to the causes of death Dr. Rauch gives tabulated statistics, and adds: "Of the grouped causes of death, consumption, diseases of the respiratory organs (including ninety-one from pneumonia), and Bright's disease, caused two hundred and sixty-eight deaths, or more than one-fourth of the total. If to these be added a share of the deaths from diseases of the heart—the sequelæ of rheumatism—a fair estimate may be made of the effect of exposure to the vicissitudes of weather upon the wear and tear of medical life. As a result of mental strain and anxiety; of insufficient, irregular, and interrupted sleep, and similar causes is the total of deaths from diseases of the brain and nervous system, embracing forty-three from various forms of paralysis. In the group of zymotic diseases (enteric fever given separately) there were five deaths from diphtheria, one each from small-pox and yellow fever, and eight from traumatic infection (septicæmia, etc.), all contracted from attendance upon patients.

"Less creditable to the *morale* of the profession are the eighteen deaths from overdoses of opiates and narcotics, the seven admitted suicides, and the deaths from alcoholism, direct and indirect—twelve of the former and at least eight of the latter. There is this to be said, however, in this connection—that the proportion of mortality from these causes is steadily diminishing."

EXPERIMENTAL INVESTIGATIONS OF TUBERCULOSIS.

Dr. Cornet, of Berlin, has been for two years investigating certain problems in the pathology and therapy of tuberculosis at the Hygienic Institute, over which Professor Koch presides.

A brief preliminary account of his results, which cover three different lines of inquiry, is given in a recent issue of the *Internationale klinische Rundschau.*

The first series of investigations takes up the subject of the presence of the tubercle bacillus outside the human body, or, in other words, a study of infected localities. The method employed was to rub down a supposed infected surface with a sterilized sponge, the dust and dirt collected was put in sterilized bouillon, and then injected into healthy guinea-pigs with proper precautions. Working as he did under Koch, it is safe to admit that Dr. Cornet's methods and technique were trustworthy. The injected animals were killed in about forty days after the inoculation, since within that time only the abdominal viscera can become infected.

In twenty-one wards of different Berlin hospitals, which were exclusively or in part occupied with phthisical patients, the walls at the head of the beds were treated in the way described. Fifteen of these wards were shown to contain infective tubercle bacilli. Of 94 animals injected, 53 died of intercurrent diseases; of the remainder, 20 were tuberculous, 22 healthy.

As phthisis often develops among the insane, the wards of two asylums were investigated, and bacilli were found at least once in each one of them.

Two prison-cells were tested, with negative results.

The dwellings of 53 phthisical patients were examined. In only 42 of the cases could the tests be used, and from these it was shown that nearly half of the houses contained infective dust.

Tests were made in two dispensaries, one inhalation-ward for chest diseases, one room containing two lupus patients, an orphan asylum with many scrofulous children, the audience-room of the Pathological Institute, all with negative results.

Nothing was found in several surgical wards, or in three much-frequented streets in Berlin.

On the other hand, active tubercle bacilli were found in a Berlin hotel, in which a phthisical patient had been living; also in a room in which, six weeks before, a woman had died of phthisis.

A most important observation was made, to the effect that *in no single instance in which the sputa were carefully disinfected* was there evidence of bacilli in the apartment.

The second part of Cornet's work is chiefly confirmatory of the observation of Koch that the infecting bacilli enter by way of the lymphatics. In inhalation-tuberculosis the bronchial glands are first affected; in abdominal tuberculosis the mesenteric glands.

In the third part of his investigation Cornet takes up the therapeutical phase of the subject. His method, which is not a new one, was to give animals certain drugs and then make inoculations of tubercle bacilli, watching to see if the tissues would be so modified by the internal medication as to retard or prevent the tuberculosis. The animals used were guinea-pigs and rabbits. The first experiments were with tannin, which was given in amount equal to about two ounces, for a man weighing one hundred and twenty-five pounds. The animals became tuberculous in twenty to thirty-four days. Other animals were given acetate of lead, pinguin, sulphuretted hydrogen water, menthol, corrosive sublimate, creolin, and creasote. They all died of tuberculosis within twenty to ninety days. Twelve animals were infected with tuberculosis; six of them were sent to Davos, six kept in the cages at the Hygienic Institute. They all died of phthisis, and in about the same time.

These experiments were, therefore, entirely negative. They appear to show that the living body cannot be medicated so as in any way to modify the progress of tubercular disease.

It is not quite legitimate, however, to draw definite inferences from guinea-pigs and rabbits, animals which are more sensitive to tuberculous infection than man.

News of the Week.

The Thirty-third Annual Meeting of the Kentucky State Medical Society will be held at Crab Orchard Springs, commencing Wednesday, July 11th.

The Ohio State Medical Society holds its forty-third annual meeting at Columbus, O., on June 13, 14, and 15, 1888.

The Forty-Second Annual Meeting of the State Medical Society of Wisconsin will be held in the Council Chamber, in the Court House of the City of Milwaukee, the session commencing Tuesday, June 5, 1888.

The New Jersey State Medical Society meets at Schooley's Mountain on June 12 and 13, 1888.

A Medical College in Kansas.—There is talk of organizing a medical college at Topeka, in connection with the University of Kansas. The peculiarity of Kansas doctors just now, says one of them, is that they do not propagate their species—they have no machine for manufacturing pure-bred Kansas doctors. Furthermore, we are told that Kansas doctors do not want such a machine, unless it is amply endowed by the State and made independent of students' fees.

The Southern California Medical College held its Annual Commencement at Los Angeles, on April 11th, and conferred degrees upon a class of nine. The Southern California College is devoted to the promotion of medicine and also of matrimony—three of the graduates being married shortly after they had received their diplomas.

The Patent on Antipyrine is, we are informed, a patent or copyright of the name only. The drug itself can be manufactured and sold under another name, and it is proposed in Paris to do this. Antipyrine will be made and sold as "Analgesine," or Dimethyloxyquinizine.

Dr. Jacob D. Conover, who for the past fifteen years had been employed by the health department as a sanitary inspector in the division of contagious diseases, died on May 28th, at his country home in Morristown, N. J. He was an able assistant to Dr. Cyrus Edson, who is in charge of the division. He had been in poor health for eight years, from disease contracted in the service of the department, and for eleven years the Doctor was engaged in vaccinating the pupils in the public schools. During that period 128,500 children were vaccinated by him.

Personal Nomenclature in Disease.—*Physician* (after a consultation): "I congratulate you sincerely."

Patient (smiling): "Am I recovering?"

Physician: "Not exactly that; but on consultation we find that your case is entirely unique, and we have decided to give your name to the disease, if our diagnosis is confirmed at the autopsy."—*Journal de Médicine*

Professor von Bergmann and Sir Morell Mackenzie.—At a meeting of the Berlin Medical Society on May 2d, Professor von Bergmann took occasion to refer to some comments upon his action in withdrawing from the Emperor's case, made by the Berlin correspondent of the *British Medical Journal.* The correspondent intimated that von Bergmann at least inspired some of the attacks publicly made upon Mackenzie and Hovell, and that as von Bergmann had not contradicted the intimations of this kind they might be accepted as true. Professor von Bergmann said at the meeting in question, that he "was silent not because he was wrong, but because he as well as every honorable British or German physician could not speak publicly of matters pertaining to the sick-bed of his patient." This was a slap at Mackenzie, and perhaps a justification of himself, though it is hard to see why he could not at least deny accusations of ungenerous conduct toward his colleagues.

Professor von Bergmann's insinuations regarding Sir Morell Mackenzie, referred to above, are replied to by the latter in a letter to the *British Medical Journal* of May 12th. Dr. Mackenzie shows quite plainly that von Bergmann must have inspired some of the attacks made by the German press upon the English physicians. He says: "I have never given any information to the press except such as was permitted by august personages, with a view of contradicting the false and exaggerated reports which certain people have delighted to spread. Whilst, however, Professor von Bergmann was in attendance, the minutest details from the sick chamber were published in the *National Zeitung*, a paper which received its information from Professor von Bergmann. Not only was the state of the pulse given, but the frequency of the respiration was published; not only was the exact food and drink stated, but the medicine, and *even the surgical measures proposed by Professor von Bergmann*, but not carried into effect, were described. Neither I nor my English colleague have ever given any information as to food or medicine, much less as to the frequency of respiration. Any details on such matters published in English papers have been taken from German sources." While Sir Morell is making out a very good case for himself, he is, nevertheless, we believe, making his first mistake in bringing his personal quarrels before the public.

Dr. William J. Moore, Norfolk's oldest physician, and one of the most respected citizens, died at his residence in that city on May 19th.

Preliminary Programme of the Fifth Annual Meeting of the American Climatological Association, to be held in Washington, D. C., September 18, 19, and 20, 1888, in connection with the Congress of American Physicians and Surgeons.—The first session will be held Tuesday, September 18th, at 2 P.M.; following which, there will be morning and afternoon sessions on Wednesday and Thursday. The President has appointed Drs. F. H. Bosworth, of New York, and E. C. Morgan, of Washington, a committee to provide a banquet to be held Wednesday evening, to which all the members intending to be at the meeting are invited to subscribe. The following papers and discussions have been arranged for, and others may be added to the list: The President's Address, Dr. A. L. Loomis, New York; "The Relation of High Altitudes to Germ Disease," Dr. S. A. Fisk, Colorado; "Is Climate an Etiological Factor in Graves' Disease," Dr. R. G. Curtin, Philadelphia, Pa.; "An Environment Experiment Reported," Dr. E. L. Trudeau, Saranac Lake, N. Y.; "Definite Results Obtained by the Climatic Treatment of Disease," Dr. A. Y. P. Garnett, Washington; "Invalids Suited for Treatment at Colorado Springs," Dr. S. E. Solly, Colorado; "Influence of Semi-Tropical Latitudes on Types of Disease," Dr. John Guiteras, Charleston, S. C. *Discussion:* "The Relative Importance of Different Climatic Elements in the Treatment of Phthisis," Referee, Dr. E. T. Bruen, Philadelphia, Pa., Co-Referee, Dr. V. Y. Bowditch, Boston, Mass.; "Observations on the Use of Terebine," Dr. D. M. Cammann, New York; "Climate and Bright's Disease," Dr. J. C. Wilson, Philadelphia, Pa. *Discussion:* "The Mineral Waters of the United States; Therapeutic Value as Suggested by their Chemical Composition," Dr. A. C. Peale, Washington, D. C.; "Their Therapeutic Value in Gastro-Hepatic Diseases," Dr. William Pepper, Philadelphia, Pa.; "Their Therapeutic Value in Urinary and Arthritic Diseases," Dr. A. H. Smith, New York; "Their Therapeutic Value in Malarial Diseases," Dr. J. C. Van Bibber, Baltimore, Md.; "Report on Mineral Springs," Dr. C. C. Rice, Chairman, New York; "Interpleural Pathological Products; their Cause, Significance, and Special Relationship to Pulmonary Phthisis," Dr. J. R. Leaming, New York; "Conditions which Tend to Render the Atmosphere of a Locality Aseptic, J. T. Whittaker, Cincinnati, O. *Discussion:* "Influence of Altitude on Cardiac and Pulmonary Diseases," Referee, Dr. F. Donaldson, Sr., Baltimore, Md., Co-Referee, Dr. J. J. Levick, Philadelphia, Pa.; "Climatic Characteristics of Texas," Dr. Morse K. Taylor, U. S. A., San Antonio, Tex.; "Therapeutic Differences of Mountain and Sea Air," Dr. W. H. Geddings, Aiken, S. C.; "Indications and Contra-indications for Altitude in Treatment of Phthisis," Dr. F. I. Knight, Boston, Mass. *Discussion:* "Nasal and Neurotic Factors in Etiology of Asthma," Referee, Dr. F. H. Bosworth, New York, Co-Referee, Dr. E. L. Shurly, Detroit, Mich.; "Therapy of Climate," Dr. I. H. Platt, Lakewood; "Therapy of Ocean Climate," Dr. A. L. Gihon, U. S. N.; "Climatic Characteristics of Roan Mountain, Eastern Tennessee," C. J. Kenworthy, Florida; "Notes of Summer in Switzerland," Dr. D. B. St. John Roosa, New York; "An Epidemic of Cerebro-Spinal Meningitis in Central New York," Dr. W. T. Ford, Utica, N. Y.; "Further Contribution to the Study of Consumption among the Indians," Dr. W. Matthews, U. S. A.

A. L. Loomis, M.D., LL.D., *President.*

J. B. Walker, M.D., *Secretary.*

Dr. John R. Conway died at his residence in this city on May 24th. He was born in New York October 21, 1825, graduated at the College of Physicians and Surgeons in 1847, and has since practised in this city, succeeding his father, Dr. Edward Conway.

The Extraordinary Increase of the Medical School in Edinburgh within the past twenty-five years has attracted general attention. In 1861–62 the medical students numbered 543, in 1886–87 they numbered 1,872.

England's leading Woman Doctor is said to be Mrs. Garrett Anderson, who has a practice worth $50,000.

Society Reports.

AMERICAN MEDICAL ASSOCIATION.

Thirty-ninth Annual Meeting, held in Cincinnati, O., May 8, 9, 10, and 11, 1888.

SECTION ON DISEASES OF CHILDREN.

F. E. Waxham, M.D., Chairman.

The discussion of the subject of

INFANT FEEDING

was opened by **Dr. C. W. Earle**, of Chicago, who began his paper with a résumé of Baginsky's last work, in which he attributes the great mortality among infants largely to their deprivation of mother's milk. When for any reason the child cannot be suckled by its mother or a wet-nurse, the basis of its food must be cow's milk. This is more liable to fermentation than is human milk, and must be sterilized by boiling before it is fed to the infant. In the case of premature children, when the mother's milk cannot be obtained, the speaker preferred a mixture of cream with barley-water or lime-water, to which milk-sugar is added. Later he used condensed milk. But there should be no routine practice for all cases, for a food which agreed with one child might cause digestive disturbances in another. He classified foods into young and old, according as they were best adapted for younger or older children. In the first class he included cream mixtures and malted milk; in the second, the Liebig foods and the starchy foods. The index of good nutrition is the growth of the child. It is objected to most of the prepared milk foods that they contain starch and that the casein of the milk is unchanged, yet in practice they are seen to act well. One cause of failure in the use of condensed milk is that it is often given in too great dilution. Peptonized milk disagrees with many babies, and foods prepared with pancreatine are theoretically objectionable, and practically are often unsatisfactory. The objection to starch in many of the prepared foods was, he thought, in great measure purely theoretical, for, as a matter of fact,

YOUNG CHILDREN DO DIGEST STARCHES.

Such foods are, however, of special value in the case of older children.

Dr. W. B. Atkinson, of Philadelphia, read the second paper, entitled

THE INFANT-FOOD PROBLEM.

The question of infant feeding was, he contended, one of great public importance, calling for the attention of legislators, for the weakly child becomes the sickly man. He thought that cow's milk was the best substitute for human milk, but the notion of one cow's milk being the best was erroneous, for the mixed milk of the whole herd was much more likely to be uniform and was less liable to contamination from accidental causes. The milk should be partially peptonized and diluted with water, and to the mixture a carbohydrate should be added. For this purpose he preferred dextrine, as this substance does not undergo fermentation and yet can be readily digested by the infant. The speaker preferred evaporated milk to condensed milk, as the process of condensation was, in this, not carried to such an extent. If dry milk solids were to be used, as advocated by Vaughn, they should be partially peptonized, and some dextrine should be added. A point of great importance was the thorough sterilization of all water added to the milk for infant use.

Dr. W. S. Christopher, of Cincinnati, had found condensed milk very serviceable during the first month or six weeks of life, but after this it caused flatulence and other digestive disturbances. He had not been pleased with the action of peptonized milk, which almost always caused diarrhœa. This was to be explained by the fact that the peptonizing ferment is trypsin, which renders the proteid compounds peculiarly suitable for the nourishment of micro-organisms, and all pancreatic digestion-mixtures are found quickly to swarm with bacteria. This does not so readily follow upon gastric peptonization. He regarded the absence of pancreatic secretion in the young infant as highly protective, and thought the addition of a pancreatic ferment to infant foods was therefore unphysiological. Infants ordinarily digest starches with ease, notwithstanding the popular notion to the contrary. The explanation of this is to be found in the fact that nearly every fluid in the body possesses amylolytic properties, and is therefore capable of digesting at least a limited amount of starch. He did not agree with the previous speakers who had maintained that dextrine is not fermentable. Dextrine is transformed into sugar, during digestion, and the latter is readily changed to lactic acid if the proper micro-organisms be present. He did not think the efforts made to imitate human milk were altogether in the right direction. Human milk, if it could be bought in open market like cow's milk, would in all probability give no better results than the latter. It would have to be given by the bottle, and the same septic influences would be at work as in the case of other foods. Two forms of abnormal fermentation may be recognized clinically: an acid fermentation, maintained by carbohydrates, and a putrid fermentation, maintained by the proteids. The diagnosis of these two forms of fermentation can be readily made by an examination of the stools. In cases of abnormal intestinal fermentation, occurring in infants at the breast, the speaker did not hesitate to wean at once, and to put the child on a suitable artificial food. For the proper handling of these cases the physician must have two foods; one a carbohydrate, to be fed during putrid fermentation, and the other a proteid, to be fed during acid fermentation, while both are to be given when the bowels are in a healthy condition.

Dr. I. N. Love, of St. Louis, said that in infants there was a natural tendency to impairment of the secretions, producing a further tendency to intestinal diseases. To correct this condition he was in the habit of giving calomel in small doses, as this agent not only stimulated secretion of the digestive fluids, but also prevented fermentation. He was by no means ready to insist upon the employment of a wet-nurse, for the moral objections against these individuals very often counterbalanced their usefulness. He had obtained the best results with peptonized milk, but always used the greatest care in its preparation, frequently attending to this himself. Condensed milk was good only for temporary use, and had a bad effect, when long continued, upon the child later in life, leaving it poorly fitted to combat subsequent disease. In infant feeding no point is too insignificant to deserve the closest attention. A change of food is often desirable. The speaker was in favor of frequent bathing, more for the absorption of water than for cleanliness. After bathing he favored rubbing the child with peptonized oil.

Dr. G. W. Jones, of Danville, Ill., had had a large experience in the management of bottle-fed babies, and he never hesitated, when occasion demanded, to take a child away from its mother and put it on the bottle. He was in favor of a change of diet from time to time. When the child was at the breast this change was effected by modifying the diet of the mother, but in bottle-fed infants it was an excellent plan to give some other and chemically different food after one had been taken for a time. It was of prime importance to boil the food thoroughly in order to sterilize it.

Dr. J. A. Larrabee, of Louisville, agreed with previous speakers that the mother's milk was not always best for the child. When a child has colic after nursing, this may often be prevented by giving it a diluent, such as barley-water, before it takes the breast. Testing the nutrition by the scales was not always reliable. Rachitic babies often grew fat and increased in weight, yet it could not be said that their nutrition was of the best. He believed some salt was necessary in all foods, and preferred the phosphate of soda. Dextrine, arrow-root, and barley-water were useful in effecting mechanical division of the foods employed.

Dr. D. A. K. Steele, of Chicago, read a paper on the

SURGICAL TREATMENT OF EMPYEMA,

of which the following were the conclusions:

1. The surgical treatment of empyema in children is eminently satisfactory and yields better results than in adults.
2. Multiple hypodermic aspiration is necessary to perfect a diagnosis, and should always be resorted to in cases of thoracic disease about which there is any element of doubt, especially in cases of pneumonia that continue beyond the usual period.
3. Aspiration cures a small minority of cases and should always precede a more radical operation, especially in localized empyemas.
4. Free incision and drainage, with local anæsthesia, under strict antiseptic precautions, gives the most satisfactory results in the majority of cases.
5. Subperiosteal resection of the rib is sometimes necessary to allow of perfect drainage.
6. Thoracoplasty is rarely required in children.
7. Other methods of treatment should be resorted to for special cases or circumstances.
8. Early incision, perfect drainage, and complete antisepsis should be the rule.

Dr. A. Y. P. Garnett, of Washington, remarked that in children empyemas are of recent origin, and therefore not complicated by the changes induced by long-continued inflammation, and hence afford a suitable field for the simpler operations. He favored the use of a large trocar and drainage-tube.

Dr. Begg, of Ohio, said that he had resected the rib in his first case, and regretted it afterward. He now used the trocar, aspirating subsequently in another place. He had treated three cases in this manner successfully.

Dr. M. P. Hatfield, of Chicago, presented a communication entitled

HEPATIC INCOMPETENCE IN CHILDREN.

Attention was called to the affection frequently found in children, more often in girls, characterized by sallow skin, anorexia, dyspepsia, and constipation, together with various neuroses. This group of symptoms was frequently confounded with malaria, but it was only aggravated by the use of quinine and iron. Sometimes it was called biliousness, a term of very indefinite meaning. The essayist proposed the term "hepatic incompetence," grouping under it all conditions resulting from a failure of the liver to perform any of its peculiar functions. He divided these into three classes: 1. Bilious, in which there is a diminution or loss of the normal amount of bile-pigments in the intestinal canal. 2. Lithic, a group of symptoms described by many writers under the term lithæmia, in which there is a failure on the part of the liver to transform albuminoids into urea. 3. Toxæmic, in which the liver fails to destroy the toxic substances (leucomaïnes) normally formed within the body.

Treatment should be largely dietetic, the diet-list containing starches, fruits, and broths, while the heavier animal foods are to be interdicted. Salicylic acid and compound spirits of lavender act well in the cases characterized by excess of urates in the urine. In the bilious cases alkalies and laxatives, especially calomel, are indicated. Among the hepatic stimulants corrosive sublimate, podophyllin, and ammonium benzoate were mentioned.

Dr. W. S. Christopher, of Cincinnati, referred to Schiff's experiments, which show that the liver is concerned not only in transforming into harmless compounds the leucomaïnes formed in retrograde tissue metamorphosis, but also in changing a somewhat similar class of substances, viz., ptomaïnes. In the digestion of albuminous substances the action of the gastric juice is first to change the albuminoid into syntonin and para-peptone, two substances exactly alike, except that the first is capable of further change into peptone under the action of the gastric juice, while the second cannot be so changed by this secretion. But on reaching the duodenum the latter is changed into two forms of peptone,

ANTI-PEPTONE AND HEMI-PEPTONE,

which differ from each other like the syntonin and para-peptone, the anti-peptone undergoing no further change under the influence of the pancreatic juice, while the hemi-peptone is further split up, and among the products are found leucin and tyrosin. In all probability true pancreatic digestion of proteids stops here, and the further change into indol and skatol requires the action of the micro-organisms present. After the micro-organisms have taken hold, the number of decomposition products increases, and among them we find a small proportion of ptomaïnes, the alkaloids of putrefaction. For this condition the speaker has been accustomed to use the term

HYPER-DIGESTION.

If, now, coupled with this formation of ptomaïnes in the intestinal tract, we have actual hepatic incompetence, or relative incompetence, due to the inability of the liver to deal with the excess of ptomaïnes brought to it, some of the latter are carried into the general circulation and produce their peculiar effects through the medium of the central nervous system, like all other alkaloids. Since ptomaïnes can only be formed from nitrogeneous food, it follows that, in the treatment of these cases, such food should be withheld. The speaker was accustomed to use, in these cases, calomel as a preliminary cathartic, and soda phosphate afterward in the mornings, both for its laxative action and its property as an hepatic stimulant. He also employed salol, salicylic acid, and naphthalin as intestinal antiseptics. On the whole, his treatment was very satisfactory.

Dr. George W. Jones, of Danville, Ill., approved of the name "hepatic incompetence," given by the essayist to this class of cases. In treating these cases he used oil of winter-green as a preferable form in which to administer salicylic acid, and with excellent results. He also employed common salt in the food used by these patients.

Dr. George Wheeler Jones, of Danville, Ill., read an abstract of a paper, which he had prepared, on

CHOREA,

in which he held that chorea was due to certain atomic changes in the central nervous system produced in children having a syphilitic or tubercular ancestry, by means of certain poisons, particularly that of rheumatism. Habit chorea he regarded as nearly related to epilepsy, and probably not properly classified with ordinary chorea.

Dr. Larrabee, of Louisville, claimed that chorea, being always chronic, is therefore always caused by some preceding condition. It is common to see choreic movements commence in one extremity, then pass to others, and finally be followed in the same order by rheumatic effusion. Overwork is a frequent cause of chorea. Chorea produced by sudden fright may be followed by endocarditis, and rheumatic effusion into the joints. Sudden great emotions may produce very marked changes in the blood. The speaker had seen a leucæmia produced in the adult by an intense fright, and in this case chorea followed.

The last paper read before the Section was by Dr. J. A. Larrabee, of Louisville, and was entitled

SOME POINTS CONCERNING THE ETIOLOGY AND TREATMENT OF FEVERS IN CHILDHOOD.

In the handling of fevers in children, the essayist recommended an abundance of fresh air, antithermic rather than antipyretic measures, careful diet, frequent bathing, large draughts of water, and but little medicine.

Remittent and typhoid fevers are so much alike in children that they are usually not differentiated. In all probability typhoid alone occurs in children; such, at least, is the opinion of most authorities.

In the management of typhoid fever good hygienic surroundings must be maintained, if possible. In the early stages he was accustomed to administer ipecac and warm water to produce emesis, followed by one-tenth grain of calomel every hour, until purgation occurred. Then a bath was given. When malaria is suspected, he adds to this treatment quin. mur. dissolved in hydrochloric acid. Two days will be required to carry out this treatment, and at the end of this time the diagnosis of malaria will be settled, or the patient given a satisfactory start to his typhoid fight, this preliminary treatment seeming to lessen the subsequent severity of the disease. During the fever he used a great deal of water, both internally and externally, frequently making use of the cold coil to the head. He also employed minute doses of morphine (gr. $\frac{1}{200}$ in infants), many authorities agreeing that this remedy assists in the excretion of urea. Tully powder not infrequently relieves bad head symptoms.

Antipyretics of the acetanilid type should not be employed when carbonic acid is accumulating in the blood. He has had good results with phenate of ammonia, both in gastric and typhoid fevers.

With regard to alcohol, the speaker considered it a food only in the most limited sense. It is always followed by depression. It kills young tissues.

Overfeeding, he thought, was dangerous. He had never seen good results from forced feeding in typhoid fever, but had frequently found great curds in the stomach, at times when there was imminent danger from ulcers.

He was a believer in the wise, conservative provisions of nature. As far as possible, he liked to feed according to the appetite, and considered common salt a valuable addition to milk and water. The wasting in typhoid is rather that of muscle than of fat. In convalescence he advocated good diet, fresh air, hygienic surroundings, and occasionally citrate of iron and ammonia.

Dr. Jenkins, of Iowa, remarked that he practised in a malarial region, and believed that children are more susceptible to the malarial influence than adults. He believed

REMITTENT FEVER

to occur very frequently in children—more frequently, indeed, than intermittent fever. In the treatment of this disease he used calomel, paid attention to the skin, and administered quinine by inunction, by the rectum, or by the mouth. He agreed with the reader of the paper that overfeeding frequently complicates fevers, even in babes at the breast.

Dr. Johnson, of Indiana, stated that he had not found typical typhoid fever as frequent as the atypical. He approved of the differentiation of malaria and typhoid by means of quinine.

Dr. Moore, of Omaha, believed that great good results from keeping the bowels open in children, as he had found disease often due to "the plugging up of the cloaca magna." In any case of doubtful diagnosis, his advice was to give castor-oil.

Dr. Lawrence, of Ohio, had found the use of the cold pack frequently followed by good results.

Dr. Boyce, of Grand Rapids, had had good results in the use of antipyrine in typhoid fever. He also used quinia as a diagnostic agent.

Dr. W. S. Christopher, of Cincinnati, referred to a recent epidemic of typhoid fever in that city, in which the appearance of the disease in adults had been preceded by an unusually large number of cases in children. He had seen three cases in children aged nine, fourteen, and eighteen months, respectively.

Dr. Larrabee, in conclusion, wished to emphasize the importance of his quinine mixture, the muriate dissolved in hydrochloric acid.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 17, 1888.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

Drs. E. F. Bruen, of Philadelphia, and **F. C. Shattuck**, of Boston, were invited to seats on the platform.

CARPENTER LECTURESHIP.

Dr. F. A. Castle, of the Board of Trustees, read the following clause from the will of the late Dr. Wesley M. Carpenter: "After the payment of my funeral charges and the expense of administering my estate, I give and bequeath five thousand dollars to the New York Academy of Medicine, with which to found a lectureship to be known as the Carpenter Lectureship, to be paid to the trustees of the New York Academy of Medicine, to expend the interest thereon annually for one medical lecture." Dr. Castle stated that the trustees had accepted the gift.

Dr. B. F. Westbrook, of Brooklyn, then read a paper,

PLEURISY AS A PREDISPOSING CAUSE OF PHTHISIS PULMONALIS.

He said that since it had been proven almost beyond doubt that the bacillus tuberculosis was the exciting cause of phthisis pulmonalis, it remained for us to inquire whether there were any demonstrable local conditions which might so affect the tissues as to render them specially liable to the invasion of this micro-organism. It must be admitted that something in the nature of a predisposing cause existed in susceptible individuals. There were instances in which the development of pleuritic disease, although non-tubercular in character, was shortly followed by pulmonary tuberculosis. The local inflammation might be taken as the indication of constitutional weakness which probably would have led to the development of the major disease sooner or later. In these cases the pleurisy should be regarded as a warning.

Cases of pleurisy antedating the outbreak of disease of the lungs might be divided into five classes:

1. Those in which pleurisy with effusion occurring in a person apparently in good health was immediately followed by evidence of pulmonary tuberculosis, which usually ran a rapid course to a fatal termination. This was a form of disease which was frequently observed both in private and hospital practice. Such a pleurisy was undoubtedly tubercular in origin, and formed but a part of the general disease. Its discussion was not germain to his subject.

2. The second class included those instances in which the sero-fibrinous pleurisy was followed by the slow development of chronic interstitial pneumonia, the fibroid phthisis of Sir Andrew Clark.

3. In the third class were cases in which an acute or subacute attack of sero-fibrinous pleurisy terminated in complete recovery, and was followed, after some months, by tuberculosis at one or both apices. It was usually observed in persons who were constitutionally weak or whose health had been injured by debilitating causes. Cases of this kind were not, he believed, very numerous, but yet were sufficiently common to have been seen by all physicians of a little experience.

4. This class included cases occurring usually in those of middle age or in the decline of life, in which a sero-fibrinous pleurisy had become chronic, and in which, on account of the density of the false membrane covering the lung, and the diminished pliability of the parietes of the chest, absorption had not occurred. They were typical cases of chronic serous pleurisy which had either failed to be recognized, or had been left to the mercy of that very unreliable agent, the *vis medicatrix naturæ*. It was nevertheless a fact that some of them finally developed tuberculosis, either in the lungs alone or in the disseminated form.

5. Cases of empyema, the appearance of which antedated the appearance of tuberculosis. This class was introduced only to make the list complete.

Dr. Westbrook gave the histories of cases illustrative of the second, third, and fourth classes, and said that in all the cases it would be observed there had been positive anatomical demonstration of pleurisy with effusion, with the exception of one sent him by Mr. Butler, whose diagnosis no one would doubt. The following conclusions were then drawn:

1. That sero-fibrinous pleurisy, apparently simple in origin and terminating in complete recovery, as far as the local manifestations were concerned, might be followed after the lapse of a few months by the development of pulmonary phthisis.

2. That, in all probability, the pleurisy in these cases acted as a predisposing cause of the tuberculosis.

3. That primary sero-fibrinous pleurisy might result in fibroid phthisis, with the subsequent occurrence of tuberculosis pulmonalis.

4. That fluid effusions remaining in the chest for a long time might finally so interfere with the nutrition of the lungs or of the body at large as to render it liable to tubercular inflammation, either local or general.

5. The rational deduction from these facts was that no case of pleurisy should be neglected; that after apparent recovery great care should be taken that the health of the patient was completely restored before he was lost sight of. When all signs of effusion had disappeared care should still be taken that the health of the patient was entirely restored before he was permitted to resume his former occupation. When there was a history of phthisis in the family, still greater pains should be taken; the patient should remain from business a longer time, and should have a change of climate, and entire mode of life if necessary, and should not be lost sight of by the physician for at least a year after his health had apparently been completely restored. When the patient had arrived at middle life, when the costal cartilages had lost some of their elasticity, an effusion should not be allowed to remain in the chest more than two or three weeks. If after aspiration the chest refilled, the operation should be repeated. When the fluid had been reabsorbed, but there was still dulness and feeble respiratory murmur at the base, the patient should be kept for a long time on the most efficient tonics and alteratives, with very liberal diet and plenty of out-of-door exercise. He should also be taught in the practice of respiratory gymnastics. In more delicate subjects he used passive motion to expand the chest, as by the inhalation of compressed air, or its equivalent, the use of the pneumatic cabinet.

Dr. Williams, of Brooklyn, then read a brief paper, discussing

SOME OF THE DETERMINING CAUSES OF PLEURAL EXUDATES.

After some general remarks he submitted three suggestions which he thought it would be profitable for those who wished to make an honest hand-to-hand fight in the treatment of pleurisy and its correlative diseases to remember.

First. Among determining causes of pleuritic exudates was hereditary or constitutional construction, with demonstrated richness of cell proliferation in inflammatory products, and proneness to organization. The subject of such a tendency would blanket his pleural surfaces with a pseudo-membrane in seeming disproportion to the exciting cause.

Second. Early pulmonary immobility, either regional or entire, consisting not in a circumscription of pulmonary movement by pleural disease, but a condition originating in fœtal life.

Third. Constitutional infection by the bacillus tuberculosis.

Dr. J. Blake White read some remarks on phthisis pulmonalis in persons in whom all signs of pleurisy had disappeared. He thought it had been well established that pleurisy not only frequently occurred in tubercular lung disease, but that it gave rise to tuberculosis in persons previously healthy. Expansion of the lungs should be cultivated after an attack of pleurisy, as thereby many cases might be prevented from degenerating into phthisis. The question of preventing as well as curing phthisis was largely one of increasing the lung capacity, especially at the apices, where there was naturally least activity. Systematic lung exercise in children, with judicious diet, would prevent phthisical tendencies and chest deformities as life advanced. In fibroid pleurisy, a disease which was both insidious and chronic, blisters, systematic exercise, and hygienic measures should be employed a long time after convalescence from the acute attack. His observations had tended to confirm the view that the bacillus tuberculosis was the result, and not the cause, of the phthisical process.

TREATMENT OF PREDISPOSITION TO PHTHISIS IN CHILDREN WHO HAVE HAD PLEURISY.

Dr. W. B. Wood read a brief paper on this subject. Between the natal condition of no disease and the time of well-developed disease, there lay somewhere that border-land, predisposition, a condition of the initial disease which was not phthisis, but which might be recognized and successfully treated; that, unrecognized and untreated, might ultimately become phthisis. The first physical manifestation of predisposition to phthisis was diminished breathing power, deficient respiratory function. The two great causes of deficient respiratory function in children were impeded nasal respiration, and thickened and immobile pleura at the base of the lung. Any treatment which would overcome these conditions constituting predisposition would, in the vast majority of cases, effectually prevent the development of phthisis in children. The treatment must be, first, securing free nasal respiration by proper treatment of the nose; second, a system of lung-gymnastics which would enable the child to take in and appropriate the air thus brought in contact with all the air-cells. Illustrative cases were given.

Dr. Brun, of Philadelphia, said it had been believed from the earliest history of medicine that phthisis was liable to follow pleurisy, and he thought it would be well to consider whether the reverse might not sometimes occur; whether the etiological conditions of phthisis might not, in turn, have a bearing upon the development of pleurisy. Within the past few years special attention had been devoted to this subject, and more and more cases were being recorded in which supposed primary pleurisy was demonstrated to have been of tubercular origin. The past winter he had seen two cases bearing on this subject. In one, the entire pleural surfaces were the seat of fibrinous pleurisy with adhesion. The patient died, and section demonstrated thoroughly the characteristic anatomical changes which were called tubercular, while no lesion was present in the lungs whatever. If a tubercular process in the peritoneum could' undergo resolution, as it often did, why might not recovery happen after the same process had taken place in the pleura or lung? Therefore he would lay more stress on the tubercular character of the pleurisy than Dr. Westbrook had done, and when recovery took place it might be attributed to a strong constitution, and the absence of the scrofulous or tubercular diathesis, as manifested in a tendency to cell-proliferation.

With regard to tapping, where absorption did not take place in sero-fibrinous pleurisy, he had usually found that in such cases the fluid was sacculated, and he had not derived the benefit from paracentesis which he had expected; therefore he put it off as long as possible. Pleurisy occurring in one with a tubercular or scrofulous tendency, or of feeble strength, should be watched carefully, as such patients were liable subsequently to develop pulmonary consumption. The after-treatment should not be one-sided. There should not only be pulmonary gymnastics, but the general body should be strengthened by exercise and other hygienic measures as well. He did not believe in attempting to restore the respiratory capacity by mechanical means alone. The respiratory muscles should be developed, and the whole system fortified.

Dr. F. C. Shattuck, of Boston, thought the subject under discussion was a large one and of growing importance. We saw cases of pleurisy in both hospital and private practice in which the disease, although apparently primary, was followed so closely by tuberculosis of the lungs that we could not but regard the pleurisy as also tubercular. In a second class of cases, there was apparently complete recovery from pleurisy with effusion, yet there developed some time later tubercular phthisis. In still a third class of apparently primary pleurisy, recovery took place and the patients remained well. Having stated these clinical facts, he asked whether primary pleurisy due to cold ever existed. If it did exist, how common was it, and how common was primary tubercular process starting in the pleura? Strümpel had stated, in his "Text-book of Medicine," that pleurisy due to cold was, in his opinion, extremely rare. Dr. Shattuck had added a note stating that such might be the German experience, but it was not the experience of American physicians, because so many of our patients recovered absolutely and permanently from pleurisy. There were other European authors who were disposed to think that all cases of pleurisy, except those directly traceable to injury, infection from scarlet fever, etc., were due to tuberculosis, and Dr. Shattuck said he was himself coming to regard the facts as looking in that direction. In the light of the present day, tuberculosis might exist quite independent of an affection of the lungs, and be an entirely local and comparatively innocent condition. Heretofore the conception of tuberculosis had been associated in our minds with the death-certificate. If recovery took place more frequently in tuberculosis localized in the pleura than when in the lungs, it was due, he thought, to the very favorable conditions for the development of the bacillus tuberculosis in the lungs. The difficulty of finding the bacillus in the pleuritic effusion was acknowledged, and a negative result in the examination could not weigh against the positive findings in many cases. Our inability to account for the way in which the tubercle bacilli reached the pleural cavity in the first place had no weight in the argument. It seemed to Dr. Shattuck that the best possible kind of pulmonary gymnastics was mountain-climbing.

Dr. E. G. Janeway had within a year seen evidence strongly impressing him with the view that if our knowledge were always perfect, we would very frequently recognize tuberculosis as preceding what then were apparently cases of primary pleurisy. Post-mortem findings usually pointed to tuberculosis in pleurisy, although the clinical signs were apparently those of simple pleurisy. There were cases of pleurisy occurring in persons of rheumatic history, in which recovery took place without evidence of tuberculosis. Regarding the treatment of the effusion, there was a method which had sometimes succeeded when repeated aspirations had failed. It consisted in limiting the amount of fluid taken to less than one-third or one-half of the urine passed, and at the same time giving salt and the iodide of potassium in sufficient quantity to make the blood perhaps somewhat thirsty for fluid. Dr. Janeway cited a case in which the examiner failed to find tubercle bacilli in fluid withdrawn from the pleural cavity, when at death they were found in the mediastinal glands; and also other cases illustrating the necessity for care in basing a diagnosis upon the findings regarding the bacillus.

Dr. Westbrook closed the discussion, and said his paper was intended to present the clinical rather than the pathological aspect of the subject. He had not undertaken to fully discuss the question of tuberculosis. While he admitted that nobody was justified in making the positive assertion that a pleurisy entirely recovered from was not tubercular, on the other hand, it was equally presumptuous to say that it was always tubercular. He knew of no reason to suppose that the pleura, of all organs of the body, could alone become inflamed only from infection.

The President thanked the members of the Academy for their large attendance, and reminded them that it was through the efforts of Dr. R. C. M. Page, the Chairman of the Section in Practice, that the meeting had been arranged, and he would now call on that gentleman for his views on that subject.

Dr. R. C. M. Page, in reply, said that the subject had been so thoroughly discussed by the learned gentlemen who had preceded him, and the hour was so late, that he had nothing to add on the subject at present. He thanked the members of the Academy in general, and those of the Section in Practice in particular, for their large attendance and the interest they manifested in this important subject.

AMENDMENT TO THE CONSTITUTION.

The constitution was amended, extending the area of membership to the entire State of New York, and permitting those residing outside the State to become non-resident members. The latter were to have all the privileges of the Academy except that of voting.

A portrait of Horace P. Farnham was accepted, with thanks to the donors.

Correspondence.

XERODERMA PIGMENTOSUM.

To the Editor of The Medical Record.

Sir: The very interesting and instructive paper by Dr. R. W. Taylor, on "Xeroderma Pigmentosum," in The Medical Record of March 10th, was read by myself with more than ordinary interest, and, considering the chaotic state of every department connected with that affection, I take it that, in giving my views on the whole subject, I shall be guilty, possibly, of no greater sin than a breach of modesty. However, that matter or act needs no qualification, as we are all earnest laborers in the interests of mankind, and naught but good can come from an interchange of views, though the humblest contribute. But to return to our subject. I was not a little disappointed to find little or no mention of the pathogenesis of the disease, and as to treatment, to find the most intelligent efforts fruitless. Hence, if my ideas of its genesis, pathology, and treatment are far from the truth and ill-founded, we are none the worse off. I have never met with a case of xeroderma pigmentosum that I am aware of. However, in this connection it might be of interest to relate the following: Two years ago I was treating a young lady for acne rosacea. There existed and persisted beneath the left eye a small red spot, after the acne was cured. This spot I took to be a nævus. There subsequently appeared another in the vicinity of the first. Neither became pigmented; the epidermis was not raised. I concluded to treat them both by igni-puncture, puncturing the periphery thoroughly. The spot which appeared first was no larger than a pea, while the second was just visible. The effect was satisfactory; there was no further development in them or their vicinity, and they disappeared with scarcely any trace. It is questionable if this were a case of incipient xeroderma pigmentosum, yet, had I allowed it to develop unmolested, it might have proved itself to be such. Funk, it is stated in the paper, believes the disease to be one of microbic origin. I am also *firmly of that opinion*, after a comparative study of the two possible etiological factors, viz., some disarrangement in the order of the epiblast or mesoblast, or both, and the microbic.

To my mind the weight of evidence is in favor of the microbic theory; *e.g.*, were it of embryonal origin we would, beyond all question, have met the disease more frequently. Instead of a few cases and reporters, up to date, they would have been legion. Further, it would seem all the cases so far reported had occurred in large cities.

Although the social plane of none of the sufferers is given, I presume it was poor. Ordinarily the disease begins with an erythematous patch, or a number of them, beneath one of the eyes. It is curious why it should select this particular part of the facial epidermis. Obviously if it were due to errors in the arrangement of either the mesoblast or epiblast, or both, we would not expect it to occur in any particular spot; though as the order of the embryonal layers in forming the orbit is complicated, and cysts and embryonal tumors are common to that region, these are governed by laws, developing at puberty, or in old age, or following traumatism, etc. Malignant affections of the skin, of embryonal origin, occurring among children, are remarkable for their rarity; while serious, not to say malignant, diseases of that tissue, which are of parasitic origin, are exceedingly common. I have assumed that the morbific agent in the causation of xeroderma pigmentosum is a parasite, and that the xeroderma is the result of the direct action of the parasite upon the embryonal cells of the deep layer of the rete mucosum, and that the pigmentation is the sequel, likewise the carcinomata. It seems to me that the parasite elects to attack the epidermis beneath the eyes for three reasons: 1, The skin in that locality is delicate or less corneous, I think, than other parts; 2, the epidermis about the eyes of children, as all know, is more frequently irritated and subject to abrasions; 3, the epiderma here, in children, is almost constantly bathed with tears. With these propositions I would connect the following:

It is noticeable that in all cases, and those of the author of the paper in particular, the disease was more malignant in the upper part of the face above the mouth, and it also spread with greater rapidity in that region, and as it extended, or rather the farther it got from that locality, the less malignant it appeared. As remarked before, the disease starts with a well-marked, smooth, superficial erythema. This, it seems to me, would point clearly to some interference with the physiological processes taking place in the rete mucosum and corium, in fact, a pathological process in loco, viz., a destruction of the protoplasm of the cells of the rete mucosum—in other words, a thinning of the epidermis and an elongation of the capillaries of the papillæ. In my opinion the degree of redness depends upon the above conditions in the rete and corium. I may state, also, that I believe that the essential pathological changes are the work of a specific pathogenic micro-organism, which flourishes in the nitrogenous protoplasm of the young cells of the rete mucosum. In regard to the relationship between the red and pigmented phases, in the progress of the disease, I cordially agree with Dr. Taylor. It is more than likely, "with regard to the production of pigment," there first takes place an elongation of the capillaries, "following the destruction of the rete above and between them," with dilatation—in fact, the production of telangiectasis. Pick says the endothelium is swollen and folded so that it obstructs the lumen. As a matter of fact, a capillary hemorrhage would follow the degeneration of their epithelial walls. Hence, I would account for the pigmentation upon the following hypothesis: The chemical and physical decomposition of the hæmoglobin by light, heat, and possibly the presence of an acid—"the product of organic decomposition, as in all probability varieties of non-pathogenic organisms are associated with those of the disease," with the production of hæmatin. Ziegler, in writing of cutaneous extravasation ("Pathological Anatomy," sect. iii., pp. 100, 101), says: "A third portion of the corpuscles shrink up or crumble down into brown granular masses." "This lies free in the tissues, and often becomes darker in color with age" (Ibid.). Gussenbauer has referred the production of melanin in pigmented tumors to a decomposition of the blood escaped from thrombosed vessels within the tumor. Ziegler, farther on, in reference to cutaneous extravasations, remarks as follows: "A fourth, and that the greater portion of the corpuscles, and the products of their disintegration, is taken up by leucocytes, which gather in large numbers round the seat of extravasation, and even penetrate into it. The cells become, in this way, corpuscle and pigment carriers. The transformation of the hematin into brown pigment is completed within these cells, the corpuscles breaking up into minute granules. The pigment may be set free again by the disintegration of the carrier cells. Probably the cells have also the power of eliminating it without themselves perishing."

Dr. Taylor quotes Neisser on this subject as follows: "The pigment is distributed in isolated spots similar to melanotic tumors, and is seated in the deep layers of the epidermis, and rarely in the corium. The pigment is precisely similar to that of melanotic new growths, and differs from that of ecchymosis?" Pick, in reference to this matter (Ibid.), says: "Pigment deposit keeps pace *with the invasion* of the *vessels*, and with the *small-cell infiltration* of the *corium*. The *cell infiltration* is *undoubtedly* the *carrier* of the *pigment*."

As regards the development of the keratosic patches, there is plain evidence of increased nutrition. On the other hand, in atrophy we have sufficient evidence of nutritive changes, and their cause, *i.e.*, a disappearance of the capillaries and their essential environments. It is well to note in this connection that the disappearance of the capillaries is coincident with that of the pigment. Hence, *à priori*, the capillaries have much to do indirectly with every phase of the disease.

With reference to the development of carcinoma from the innocent-looking papilloma, or the keratosic patch, I would say that Cohnheim's hypothesis elucidates that pathological process very satisfactorily. I think papillomata contain a matrix of embryonal cells. The keratosic patches undoubtedly contain, at their base, an aggregation of the same cells, "which amounts to a matrix." In xeroderma pigmentosum the papillomata are situated in a diseased area, and likewise the keratosic patches. These, if adequately supplied with vessels, as a matter of fact, do, and are at all times liable to, give rise to carcinoma; more especially is this liable to occur when the tissues in the vicinity of the above growths are suffering from disease or traumatism. They are benignant by virtue of the physiological resistance presented by the tissues in their immediate vicinity, though any interference with the normal functions of these parts may, "as was the case in some of those reported," cause an obliteration of the capillaries, and subsequent atrophy and disappearance of the papillomata.

Treatment.—The method to which I would pin my faith, were I called upon to treat a case of this disease, is igni-puncture, using the galvano-cautery with medium-sized needle; thoroughly puncturing the spots at their periphery, and from their centre to their periphery. Possibly, in the case of the large verrucuous plaques the pointed cautery of Paquelin would be more suitable and effective. It is my belief if the disease be treated on its first appearance by this method, it will end its career there and then.

I am not aware that it has ever been tried, though in the report of Dubois-Havenith's case, it is stated that he treated the raspberry-sized tumors by cautery and ablation; and they returned in most instances. "No mention is made of the method or extent to which it was carried."

I remain, very sincerely yours,
Buchanan Klaphel, M.D.

Memphis, Tenn.

THE MICROBE OF YELLOW FEVER.

To the Editor of The Medical Record.

Sir: In your issue of April 7th there is a short paragraph stating that the microbe of yellow fever described and cultivated by Dr. Domingos Freire, of Rio Janeiro, "has gone the way of many other specific germs," your grounds for this assertion being that Dr. Gibier "denies utterly the existence of the germ claimed to be specific." This conclusion has evidently been come to under the impression that the Parisian bacteriologist just mentioned has had full opportunities for verifying in Havana, within the brief space of six weeks, the results previously obtained in Brazil by Dr. Freire, in such a manner as to warrant his abrupt denial of what he had so warmly approved while experimenting in Paris upon Dr. Freire's Brazilian cultures. That such has not been the case I think you will admit after hearing the particulars of that investigation.

Dr. Gibier saw his first yellow fever case on November 16th, at the military hospital of this city. Between that date and December 28th, he examined altogether *five* patients and performed *four* autopsies. He collected fresh blood from *four* of the patients and urine from three, besides the pieces of viscera and secretions from the cadavers. In the urine of the first patient he thought at first that he had recognized Dr. Freire's micrococcus, but afterward changed his mind, having "satisfied himself" that what he had seen were mere insignificant organic granulations. In the blood and secretions, as also in the sections of viscera, he failed to discover any micro-organisms, nor did he succeed in developing any colonies in his numerous attempts with the same pathological material. One of the tubes of agar-agar jelly inoculated by him with heart-blood and presented to a military colleague, did, however, develop a yellow superficial colony, which Dr. Gibier attributed to an accidental atmospheric contamination, although the constituents of the colony turned out to be a tetragenous microbe quite distinct from the plain atmospheric micrococcus with which he had thought it could be identified.

This scanty material, collected at a time when yellow fever was sporadic in Havana, almost the only cases signalled being those present at the military hospital, constitutes the sole foundation for the abrupt retractation of Dr. Gibier from his former enthusiastic advocacy of Dr. Freire's views; never considering that the sporadic and epidemic forms of the disease might not be identical, any more than the equivalent forms of cholera have turned out to be, notwithstanding their clinical resemblance. Other observers had previously noticed that the same yellow fever products which, in their hands, had given colonies when collected from epidemic cases, failed to do so with the sporadic. In collecting blood from yellow fever patients, Dr. Gibier was noticed to disinfect the skin with bichloride solution, but took no pains to remove any excess of the germicide which might remain and sterilize the drop of blood as it would ooze out on the surface. Neither does it appear that he varied his culture media as to acidity, alkalinity, etc., nor that he kept his tubes at a uniform summer temperature. Yet, in spite of such obvious deficiencies, Dr. Gibier does not hesitate to condemn as erroneous the results of Dr. Freire's patient and laborious investigations, and likewise all others that might claim to have obtained successful cultures from similar yellow fever products.

Dr. Gibier had brought over some cultures proceeding from Dr. Freire's own tubes, inoculated at Rio Janeiro, and shortly after his arrival in Havana, full of faith in their prophylactic virtue, he inoculated himself, and thought he had gone through the phenomena of an experimental attack of yellow fever. In this, I fancied at the time, and he now acknowledges, that he was mistaken; but after examining my own cultures from yellow fever blood and urine, obtained by me last summer in Havana, and cultivated in sub-acid agar-agar jelly, he has repeatedly declared that both macroscopically and microscopically they were identical to Dr. Freire's. This coincidence, one would think, should have checked his precipitancy, and induced him at any rate to wait until the epidemic season before formulating his conclusions.

The only excuse, if so it can be called, for such haste in a practised bacteriologist, must lie in his unacquaintance with the disease and in his anxiety to proclaim a new bacillus of his own, isolated from the intestinal contents of yellow fever cadavers, and which he believes better entitled than its fellow-claimants to be considered as the true yellow fever germ.

My object in bringing forward these facts is to guard the American medical public against hasty deductions, and to show that Dr. Gibier's researches have not in any way altered the previous state of the question, except in so far that he has added another microbe to the list of the possible specific germs of the disease.

I am, sir, yours very truly,

CHARLES FINLAY, M.D.

HAVANA, April 17, 1888.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from May 13 *to* 26, 1888.

TOWN, F. L., Major and Surgeon. Post Surgeon at San Antonio, Tex., will take charge of the office of the Medical Director at these headquarters, and perform the duties of that officer during his absence on leave. S. O. 51, Department of Texas, May 11, 1888.

APPEL, D. M., Captain and Assistant Surgeon. Will be relieved from duty at Fort Davis upon the arrival of Captain J. V. Lauderdale, Assistant Surgeon, and proceed to Fort Hancock, and report to the Commanding Officer of that post for duty. S. O. 49, Department of Texas, May 5, 1888, and S. O. 50, Department of Texas, May 9, 1888.

EDIE, GUY L., First Lieutenant and Assistant Surgeon. Will proceed, not later than the 25th inst., to Fort Concho, and report to Commanding Officer 8th Cavalry for duty as medical officer, in compliance with par. 13, S. O. 99 c. s., Headquarters of the Army. S. O. 49, Department of Texas, May 5, 1888, and S. O. 50, Department of Texas, May 9, 1888.

WOOD, LEONARD, First Lieutenant and Assistant Surgeon. Leave of absence extended two months. S. O. 114, A. G. O., May 17, 1888.

WALKER, F. V., First Lieutenant and Assistant Surgeon. Will be relieved from duty at Fort Ringgold, and proceed with Company D, 16th Infantry, to San Antonio; he will then report for duty to Commanding Officer Post of San Antonio. S. O. 49, Department of Texas, May 5, 1888.

HARRIS, H. S. T., First Lieutenant and Assistant Surgeon. Par. 12, S. O. 49, Department of Texas, May 5th, relative to him accompanying 8th Cavalry to Department of Dakota, is amended by par. 1, S. O. 50, Department of Texas, May 9, 1888. Par. 1, S. O. 50, Department of Texas, May 9th, is revoked by par. 1, S. O. 51, Department of Texas, May 11, 1888.

HARRIS, H. S. T., First Lieutenant and Assistant Surgeon. Will be relieved from duty at Camp Pena, Col., and proceed to San Antonio, where he will report to Commanding Officer, Battalion 16th Infantry, for duty as medical officer with that battalion to its destination in Department of the Platte. Upon completion of this duty, he will return to his proper station, Camp Pena, Col. S. O. 51, Department of Texas, May 11, 1888.

CLENDENIN, PAUL, First Lieutenant and Assistant Surgeon. Par. 15, S. O. 49, Department of Texas, c. s. (relative to his accompanying 16th Infantry to its destination), is revoked by S. O. 51, Department of Texas, May 11, 1888.

CLENDENIN, PAUL, First Lieutenant and Assistant Surgeon. Will proceed from Fort McIntosh to Fort Davis and report to Commanding Officer 8th Cavalry, for duty as medical officer with that regiment on its march to Fort Concho, from which place Lieutenant Clendenin will return to his proper station. S. O. 51, Department of Texas, May 11, 1888.

Sutherland, Charles C., Colonel and Medical Director. To inspect the medical department at St. Francis Barracks, Fla., Fort Barrancas, Fla., Mount Vernon Barracks, Ala., and Jackson Barracks, La. S. O. 100. Division of the Atlantic. May 19, 1888.

Brown, Harvey E., Major and Surgeon. Directed to continue on duty at Fort Barrancas, Fla., until further orders. S. O. 115, A. G. O., May 18, 1888.

Kimball, J. P., Major and Surgeon. Leave of absence extended two months. S. O. 117, A. G. O., May 21, 1888.

McCreery, George, Captain and Assistant Surgeon. To accompany Seventh Cavalry from Fort Meade, D. T., to Fort Riley, Kan. From Fort Riley he will return to Fort Meade. S. O. 42, Department of Dakota, May 17, 1888.

Wyeth, M. C., Captain and Assistant Surgeon. Will be relieved from duty at Fort Barrancas, Fla., at the expiration of his present leave of absence, and will report in person to the commanding officer at Fort Huachuca, Ariz., for duty at that post. S. O. 115, A. G. O., May 18, 1888.

Kneedler, William L., First Lieutenant and Assistant Surgeon. Will accompany from Fort Snelling, Minn., that portion of the Twenty-fifth Infantry destined for Fort Shaw, M. T. From Cascade, M. T., he will accompany the portion of the Third Infantry en route from Fort Shaw, M. T., to Fort Snelling, Minn. S. O. 40, Department of Dakota, May 14, 1888.

Robertson, R. L., First Lieutenant and Assistant Surgeon. Will accompany from Fort Keogh, M. T., the Fifth Infantry to the Department of Texas, returning to his station on the completion of the duty. S. O. 43, Department of Dakota, May 18, 1888.

Ewing, C. B., First Lieutenant and Assistant Surgeon. Will accompany the Twenty-second Infantry, as medical officer, to the Department of Dakota, returning to his station on the completion of the duty. S. O. 56, Department of Missouri, May 17, 1888.

Banister, W. B., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, with permission to apply for an extension of twenty-seven days. S. O. 119, A. G. O., May 23, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 19, 1888.

Kershner, Edward, Surgeon. Detached from U. S. S. Pensacola and wait orders.

Sayre, J. S., Assistant Surgeon. Detached from U. S. S. Pensacola and wait orders.

Jones, W. H., Surgeon. Detached from Navy Yard, League Island, and to Pensacola.

Cooke, G. H., Surgeon. Ordered to the Navy Yard, League Island.

Crawford, Millard H., Passed Assistant Surgeon. Ordered to the Vandalia.

Wieber, F. W. F., Assistant Surgeon. Detached from the Vandalia and ordered home.

Stone, E. P., Assistant Surgeon. From Naval Hospital, New York, and to the Pensacola.

Harmon, G. E. H., Passed Assistant Surgeon. Commissioned a Surgeon, May 12th.

Dickson, S. H., Passed Assistant Surgeon. Detached from the Receiving Ship Dale, and to Marine Barracks, Washington, D. C.

Nash, F. S., Passed Assistant Surgeon. Ordered to the Receiving Ship Dale, in addition to present duties.

Ruth, Melancthon L., Surgeon. Granted one year's leave of absence from date.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 26, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	5	3
Scarlet fever	175	25
Cerebro-spinal meningitis	3	3
Measles	184	12
Diphtheria	154	56
Small-pox	6	5
Yellow fever	0	0
Cholera	0	0

In making Vaginal Examinations, soap is the best lubricant for the finger. It is cleaner and more slippery than oil or vaseline, and more easily removed from the hand, which is soon needed for something else; besides being more agreeable to the patient.—*Annals of Gynecology.*

Succi, the Fasting Man.—The Accademia Medico-Fisica of Florence has just given a diploma to Signor Succi, on the occasion of his having completed his thirty days' fast. The document runs as follows: "We, the undersigned, do certify that Signor Giovanni Succi, of Cesenatico, in the Romagna, African traveller and explorer, has completed at Florence a fast of thirty days—from the midnight of the 1st to the midnight of the 31st of March of this year—subjecting himself to all the regulations imposed by the Committee of Surveillance created *ad hoc*, and to all the scientific observations of the Commission nominated by this Academy, the results of which will be made *publici juris* at as early a date as possible. We further declare that by his courageous experiment, and by his scrupulous fulfilment of every moral pledge undertaken by him toward us, Signor Succi has deserved well of science." Then follow the signatures of Professor Angiolo Filippi, President of the Committee of Surveillance, and of Dr. Vincenzo Crapolo, his secretary; of Professor Luigi Luciani, President of the Academy, and the Secretary of its proceedings, Dr. Aurelio Bianchi.—*Lancet.*

Morning Sickness in the Husband.—At the meeting of the Obstetrical Society of Philadelphia, held April 5, 1888, Dr. Hamill reported the following case: "The occurrence of morning sickness in the husband, after the fact of pregnancy is known or suspected, I have frequently noted. The case I would report is unique, from the fact that the sickness appeared in the husband at such an early period of pregnancy. Two weeks after the appearance of menstruation for the last time, the husband had daily morning attacks, and not until it was time for the next menstruation had the woman any other evidence that conception had taken place, and then she failed to menstruate. The husband continued having the attacks for two months. During her previous pregnancies the husband had suffered from the same attacks, but not until they were both cognizant of the fact." Dr. William Goodell remarked that Sir Francis Bacon had written some lines on this subject, the substance of which was that "loving husbands so sympathize with their pregnant wives that they have morning sickness in their own person." A writer in *The Lancet* of May 4, 1878, p. 666, also refers to a case in point which occurred in his own practice. In this case the husband's nausea and vomiting began and ended with his wife's.

Considerable Antifebrine.—Dr. Albitski reports a case of phthisis treated by Kremyanski's method, in which over twenty thousand grains of antifebrine were consumed in one year.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 23 NEW YORK, JUNE 9, 1888 **Whole No. 918**

Original Articles.

ON THE ELECTRICAL TREATMENT OF DISEASE OF THE UTERUS.[1]

BY SIR T. SPENCER WELLS, BART., F.R.C.S.,

LONDON, ENG.

I HAVE had perhaps a longer and more varied experience than most men in dealing with uterine diseases, especially those which are characterized by overgrowth. I have so constantly had to regret the inefficacy of medical treatment, and the results of surgical operations, though sometimes brilliant, have often come so short of my desires, that I have, for many years past, fallen into a frame of mind readily disposed to listen to any suggestion of a mode of treatment which offered a reasonable chance of success, and avoided the risks and perils attending bolder practice.

So when reports reached me from Paris of what Dr. Apostoli was teaching and doing, they came with a welcome ring. Electro-therapeutics were no novelty to me. More than thirty years ago, I had put galvanism to the test, and had gathered, in various ways, evidence of its potency both in destroying and repairing tissues. What I had learned of the treatment of ulcers by galvanism was published in 1849, by Golding-Bird, and may still be read in an appendix to his book; but his son and Mr. Nunn are the only surgeons, so far as I know, who have made much use of the practice. Not long afterward I tried the galvanic stem-pessaries of Simpson in amenorrhœa, and have used them until now, with occasional good result. I knew also what Radford had done with galvanism in the treatment of uterine hemorrhage, and what Simpson had taught us as to the influence of galvanism on uterine contraction in labor. I have repeatedly made use of the galvanic cautery in various ways, and have very often removed masses of epithelioma, or the cervix uteri itself, by a platinum wire heated by a battery, and used as an écraseur, with very satisfactory results. Quite recently, with Dr. Goddard, of Highbury, I removed a cervix uteri without the loss of one drop of blood. My attention was, later on, attracted to the electrical work of the French and Americans in reference to fibroid tumors of the uterus. This was so little satisfactory that it dropped out of notice. Our English experiments were not more encouraging, and surgical enterprise seemed destined to throw into the shade all less dazzling endeavors.

In the meantime, taking up the idea of the wonderful influence of galvanism upon the nutrition of tissues, Apostoli was unobtrusively resolving the problem of its right application in the treatment of abnormal growths and exudations. His published observations were so interesting, and the reports of eye-witnesses were so confirmatory, that in the autumn of 1886 I determined to see and judge for myself. I went to Paris, and was received frankly and cordially. Dr. Apostoli explained to me his views, and demonstrated his mode of procedure. He threw open the records of his daily practice, and gave me the opportunity of verifying his diagnosis, and witnessing his treatment of the cases actually under his care. Besides this, he mustered for my inspection about sixty of the patients who had passed through his hands. I heard many of their histories in their own words, and could contrast for myself their actual condition of good health and activity with the symptoms reported in the early notes of their attendance, and the deformity represented in the plaster-casts of their bodies, taken before the tumors had been influenced by the galvanic current. I spent many laborious hours in what I may say was a rigidly sceptical examination of the evidence before me, seeking for weak points in the system and the resolution of theoretical objections.

The conviction was irresistible that, though the method might not have reached its point of perfection, the work, so far as it went, was good. If the women were not radically dispossessed of their tumors, they were symptomatically cured. Nothing but prejudice could have turned the back upon the facts; and it would have been unjust not to put the matter to further proof. This I have unhesitatingly done. If I have hitherto been silent, it was because I did not wish to prejudge the case. But I have not been inactive, for I wished that, if the utility of the method could be made as manifest here as elsewhere, it should be advocated impartially, and presented to the profession upon reasonable grounds.

The uterine diseases which come under Dr. Apostoli's care range through all degrees of fibroid development. He has to deal, as we all do, with simple cases of subinvolution, generally hypertrophy of the organ, with metritic deposits all round; polypoid excrescences in the cavity, thickening, more or less irregular, of the walls, and subperitoneal outgrowths, expanding into abdominal tumors. Practically, all these cases group themselves into two classes: First, those which give no trouble and may be left alone; and, second, those which threaten health and life by loss of blood, or, by mechanically interfering with the organic functions, cause a multiform series of distressing symptoms.

In the treatment of these conditions, instead of scraping and cauterizing the cavity with a curette, or caustics, or fire, Apostoli does the same thing with a pole of the galvanic battery. We give ergot, or mercury, or iodine, or bromine in the hope of altering the nutrition of the diseased mass; he sends a disintegrating current through it. We castrate to cut short a woman's sexual existence; he seeks to quiet down neurotic sensibility, and induce regularity of ovarian function. Where we proceed to a root-and-branch extermination, he proposes a denutritive paralysis of the uterine substance. Time will show whether, and how far, he surpasses us in his results.

But the novelty at present is not so much in the fact of electricity being used, as in the mode of using it. Others have tried the same means, but not in the same way. Former methods were uncertain, dangerous, and insufficient. The point that Dr. Apostoli has arrived at is this: He has studied the effect that certain currents will produce, he measures the intensity of those currents, and he has found the means of safely directing them, of proper force, through the diseased tissues, to insure the partial, if not complete disorganization, of these tissues, with the desired coincident relief of suffering, and often with restoration of general health.

It is the continuous galvanic current which is generally brought into action. For this purpose the operator must be provided with an apparatus which will guarantee him an unfailing current of at least 250 milliampères, or electro-therapeutic units. I may say, in passing, that it may probably be found convenient to speak of milliampères as *units* of current strength—10, 20, or 60 milliampères, for example, would be 10, 20, or 60 units. In practice at the hospital or surgeon's residence, a battery of Leclanché cells answers admirably. It is enduring and easily manageable. For work at the patient's home a portable battery of the bisulphate of mercury is convenient, but it requires great care and frequent renewal. An indispensable accessory is the galvanometer. With a fractional deviation, it gives a measure of the intensity of the current passing. The graduation should rise to 250 units or milliampères, though this intensity is rarely wanted. Before every operation the perfect working order of battery, galvanometer, and conducting wires should be ascertained. As it is a characteristic point in the Apostoli practice that the galvanic current should be carried either into the cavity of the uterus or into the substance of the tumor, appropriate sounds and trocars are essential. To avoid loss of power by action on the metal, the sounds are made of platinum. For punctures with a negative current, steel trocars are equally good; but when it is intended to transmit a positive current, a certain length of the sharp end of the trocar must be of gold. All that portion of the sounds and trocars passing through the vagina, from the handle of the instruments to the mouth of the uterus or point of puncture, must be insulated. Before every examination or operation, the closest attention should be given to antiseptic precautions, both as regards the patient, the operator, and the instruments. During the whole course of the treatment, vaginal irrigations, with sublimate or phenol, are never to be neglected.

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[1] Read at the Brompton and Sussex, England, Medico-Chirurgical Society.

The labors of Apostoli have expanded and given a definiteness to our knowledge of the special power of galvanic currents in the treatment of uterine diseases, and of the mode of applying the current in a way which I may thus resume:

In the first place, we have learnt from him better to understand the double action of the uninterrupted continuous galvanic current. The one action is purely local, and coincident with the flow. The tissues immediately in contact with the pole which delivers it are decomposed. The bases and acids of the substances and fluids acted upon are set free; and, according to their nature, produce cauterization of the surrounding parts, independent of any thermic influence. This effect is local, immediate and visible. The second action is due to the interpolar passage of the current. It is a *trophic* action influencing the nerves, vessels, and lymphatics, followed by molecular changes so as to modify the nutrition of the tissues through which the current goes, and varying according to the pole employed. The effect of the direct and of the secondary counter-current is durable; and, whatever may be our interpretation of it, it is remedially of far more importance than the mere galvano-chemical cauterization.

Secondly, though the coagulating power of the current passing from the positive pole was known from the writings of Ciniselli and A. Tripier, we have had disclosed much more since as to the distinctive character of the action of the currents from the two opposite poles. It was with the positive current that Apostoli began his attack upon uterine fibroids, because of the more striking nature of the hemorrhagic symptoms, and it was the speedy relief of this great trouble by the production of a hard, dry eschar and resisting cicatrix which encouraged him to persevere. The eschar resulting from the alkaline caustic action at the negative pole is just the contrary, softening and liquefying, and tending to promote discharge and hemorrhage. Logically enough, its dissolvent powers were applied to the opposite class of cases, where there was no hemorrhage, and the object was rather to reduce the bulk and solidity of compact masses of fibroid material. Experience has proved this to be as good in practice as in principle. The positive pole is therefore designated as anti-hemorrhagic or hæmostatic, while the words hemorrhagic or denutritive are applied to the negative pole.

Thirdly, Apostoli has taught us a much more satisfactory way of utilizing these currents in uterine diseases. His predecessors had used currents which were generally uncalculated and ineffective. They were not often strong enough to do much good, yet at other times sufficient to bring about mischievous results. They were brought into play in an ill-judged fashion, and when used by means of puncture the punctures were made through parts which ought to have been left untouched. Now, the operation is performed under such control as to be a matter of measurable certainty. A strong and regular current is at command. By means of the galvanometer a knowledge of the exact intensity of the current employed is insured. The dosage can be regulated in proportion to the cauterizing and trophic effects considered necessary. A current of high intensity can be made to traverse the tissues inoffensively, and brought out through the abdominal integuments in a dispersed fashion, without more than a temporary blush, and made to complete the circuit through the cutaneous electrode embedded in wet clay. Than this clay nothing as yet has been found more effectual. Then, by insisting upon the intra-uterine introduction of the current by means of the uterine sound, or its direct interstitial application through the inattackable trocar, a certainty of action is obtained which is otherwise out of reach. The whole performance is thus strictly at the will and under the control of the operator, who, granted his mastership, wants no other guide either as to the dosage, direction, or duration of the current, than the facial expression of the patient, or her declaration of tolerance.

Fourthly, other important points upon which we have clear and definite information are the modifications which this treatment requires according to the varying nature of the cases, and the successively changing circumstances of each case as the treatment is going on, and the wide range of uterine affections to which it is adaptable. Given a tumor and a current, there is no such thing as reciprocal automatic action. At every step of the process of cure, deliberation, judgment, and promptitude of resource are challenged. One day there is an unaccountable power of endurance, another an exaggerated sensibility; one day a perplexing structural resistance, another an easy flow of current, all which have to be taken cognizance of, and throw an ever-recurring strain upon the mindfulness of the surgeon, enough to baffle book-guided novices, and make inestimably valuable the more than five years' experience to which we can recur for counsel. A field, too, is opened up for exploration among the infinitely multiform presentations of disease of the female generative organs, untraversable by the limited powers of any one man, but to which Apostoli has pointed the way. This will be the work of the coming generation.

Lastly, there are several interesting questions upon which the work of Apostoli has thrown a new ray of light, such as the dangers and difficulties of the procedures; their being a cause, or the reverse, of subsequent sterility; the practicability of applying the treatment in cases where the uterus is impenetrable; the permanence of the benefits derived from the treatment in the mitigation of the symptoms and the reduction of the tumors; the relation of the menopause to the production or dispersion of fibroid enlargements. It would take up too much of your time if I were to consider these in detail, and it is needless, as Apostoli himself is here, on the invitation of your President, to give any required information.

But admit that there may be danger in treating our patients by electricity. Is this a reason for rejecting it? What surgical operation is free from risk? Would common-sense sanction our leaving disease alone till science has reached completion, and skill infallibility? The danger lies, not in the method, but with the operator; and the moral is, that no man should undertake this work till he has qualified himself to do it well.

Then as to the permanence of cure, where cure there has been, one can only say that though five years and a half is but a short term to form estimates upon, when we are assured that during that time the return of symptoms, or the necessity for further measures, has been quite exceptional, it augurs well for the future, and the objection of the possibility of relapse becomes of little weight.

Again, when Apostoli tells us that some of his patients now under treatment are women in whom the tumor developed after the menopause, no trace of such a growth having previously existed, what are we to say to the principle of Hégar's operation? To say the least, it would limit castration in the treatment of uterine disease to the cases where loss of blood is the prominent symptom in younger women. I might go on much further, but I think I have said enough to show that whatever may be, or may not be, the merits of Apostoli's method, we have made, since he began his work, a distinct scientific advance. And coupling the specific information we have thus acquired with our previous diagnostic tact and pathological exactitude, it appears to me that we are in a better position, even supposing that circumstances hinder the personal practice of the method, not only to discuss the abstract principles upon which it is based, but, as consultants, to pronounce upon its respective applicability to the cases submitted for our opinion.

There are conditions of fibroid tumors in which it would seem to me almost idle to suggest electricity. A polypoid growth from the mucous surface of the uterus, projecting into the cavity, or perhaps through the os, can be so easily and expeditiously taken away that I should not think of any slow or gradual process. Neither does it appear very probable that a subperitoneal outgrowth from the body or fundus of the uterus could be in any great degree affected by any current that could be made to reach it. Myomotomy would be then the work of minutes, and the risk scarcely worth mentioning. Even large solid tumors, the removal of which means the removal of a great part of the uterus, have been successfully removed by me and others, and success has increased with experience. But the risk must be always great, and there are tumors so large, or with such intimate connections, that no prudent surgeon would meddle with them. Here, surely, is the occasion for the electrician to show his power. His method is a new resource for a desperate condition, and should be welcomed as such. It has been successful in such cases; if not completely so, yet to a degree which has rendered life enjoyable. No weak prejudice should stand in the way of recommending a trial under experienced guidance.

Where the object is mainly to suppress hemorrhages, electrical treatment has decided advantages over other practices. Should the tumor be growing, but not advanced beyond the limits of reasonable surgical interference, balancing the comparative risk I should be disposed to put the matter to the test; since, in case of failure, the more hazardous operation of removal can still be done. In my opinion, with the option before her, it would be neither wise nor charitable to give a patient strong advice in favor of an immediate cutting operation.

Experience seems to show that there is a group of cases, numerous as they are troublesome, of chronic metritis with enlargement and surrounding deposits, which may be cited as pre-eminently eligible for electric treatment. They are, as regards the patient, painful and exhausting. To the judicious surgeon they are exasperating by their rebelliousness, and in some rash hands they have opened the way to practice more lamentable than the disease. It will be one of the crowning merits of electro-therapeutics, if proved to be equal to bring relief to these patients. Recent reports give good reason to hope that this end may be realized by a careful use of the positive galvano-puncture.

We have not, I am inclined to think, taken heed enough of the work of Tripier and Apostoli in reference to various disordered states of the uterine appendages. The soothing effect of the vaginal or uterine bi-polar application of the induced current, in some distressing forms of ovarian neuralgia and of vaginismus, is said to be marvellous and enduring.

As a last word, I may say that we are face to face with an important revival; and though some American surgeons have gone before us in its acceptance, nowhere more than in our own country has there been shown an open-minded readiness to weigh fairly all the evidence which Dr. Apostoli has to set forth in support.

In London we have heard, through the medical journals, of some failures, of one death, and of more than one accident, probably due to the inexperience of the practitioners. But we have far more encouraging reports from Edinburgh, and if some member of this society who combines sufficient knowledge of electrical science with practical experience of the diagnosis of uterine diseases, and of the treatment by other methods, will carefully put to practical test the conclusions already arrived at by Dr. Apostoli, I am very hopeful that the result will not be disappointing.

SOME CLINICAL OBSERVATIONS ON DIPHTHERIA AND VERATRUM VIRIDE AS THE BASIS OF TREATMENT.[1]

By J. M. BOYD, M.D.,

KNOXVILLE, TENN.

I propose to present some points founded on bedside study of diphtheria, and to suggest that plan of treatment which has proven most efficient under my own observation.

So far as I have any knowledge, this ancient and much dreaded scourge made its first appearance as an epidemic in East Tennessee in 1858, only thirty years ago. Then its outbreak was in Jefferson County, a case having been brought there from North Carolina. Thence its spread was rapid and its prevalence marked by great fatality.

In 1860 I saw one case of the disease in Knoxville.

In 1861 and 1862, having changed my residence to Jefferson County, the opportunity to see diphtheria was frequent, and in its virulent form and on the very spot where it had first found footing in East Tennessee, and where its fatality had been so notable since 1858. There my observation was extensive, and I realized fully that the results of treatment were, as a rule, unsatisfactory, for it too often happened that every child in a stricken family perished. For the first seven years after the war Knoxville had almost an immunity from diphtheria. About 1874 occasional cases were reported, and our mortality table has shown them each year since. But Knoxville has had, up to the present time, no such epidemics as have visited so many localities in our section of the State since its advent in 1858. So much for its local history and for the opportunity to make a practical study of diphtheria.

It is not the purpose of this paper to discuss the etiology of the disease under consideration, nor yet to consume our time in pushing any of the special views of its pathology.

These branches of the subject had better be delegated to those who are fitted to make elaborate research in the field of causation and in the essential nature of disease.

It is especially to the treatment that I wish to engage the attention of this body, and particularly to the modifying and benign influence of veratrum.

And while the idea about to be advanced may be earnestly combated by those who hold to the opinion of the accredited depressant influence of the drug, and to the view of the asthenic nature of diphtheria, I beg to submit, in maintenance of the plan of treatment now proposed, the following facts and argument:

On December 28, 1881, I was called to see a child in this city, aged sixteen months. I found a well-defined and vicious case of diphtheria in the person of my little patient, which in a few days terminated fatally.

During the course of this case a babe of Mr. L——, aged four months, and under the same roof, was attacked. It, too, was a case of marked severity, as shown by the rapid, hard, small pulse, the sallow skin, the range of fever, and the twitching of the muscles of the extremities.

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[1] Read before the Medical Society of the State of Tennessee, at its Annual Meeting, April 10, 1888.

At the end of five days the larynx was invaded and croupous diphtheria became a serious complication, and about the same time the nasal passages displayed false membrane and the nostrils were entirely occluded. Impossibility for the child to suckle added inanition to the danger of the situation.

The membrane covered the fauces, and protruded from the anterior nasal aperture in white hemispheres. The pulse was 180, small and thready, and sepsis was beginning to oppress the little sufferer. The grandfather of the child, Dr. W. Whitson, a practitioner of prominence of Jordan Valley, Tenn., was in daily correspondence with the mother, and suggested through her that a drop of Norwood's veratrum would be warranted if the pulse could not be controlled by less. I was then giving veratrum in smaller but increasing doses, and at once gave a drop, repeating it every two hours till the pulse fell to 80 per minute. This seemed to me at that time to be a very large dose for a four-months-old child; but after it had been given four or five times, and the pulse had dropped to this below-normal rate, a less quantity easily held it there.

Snow under sunshine never melted away more surely than did this membrane under the favoring conditions incident to the influence of veratrum. Within the following twenty-four hours the child was able to nurse, and its recovery was rapid.

The lesson was not lost, for, as other measures were unchanged, the only possible influence to which such a brilliant result could be attributed was to the effect of veratrum.

Can it be that there is an antiseptic or an antidiphtheritic agency exerted under the full influence of this drug? Could rest, so important, we know, to the recuperation of nerve-force, explain the rapid recovery in this case?

The patient was rested when it was first attacked, and the disease progressed until asthenia and sepsis threatened at any time to terminate life. Facts would make the opinion respectable that there is an antidotal virtue in the positive impression of veratrum.

But setting aside all claims to value as an antidote, the controlling power of the medicine can, on other grounds of merit, be presented, I hope, with sufficient reason to invite favorable consideration. Since the occurrence of the case above cited, observation has verified the good results of this therapeutic agent in diphtheria. In the six years since, sixty-seven cases have fallen primarily to my care, and a number of others in which I have had a consultant relation, and, under the timely use of veratrum, its claims to the merits of extraordinary efficiency have never disappointed me. And often in a single case conditions have occurred which offered more than once a demonstration of its value.

And the cases upon which the conclusions have been reached which have prompted this paper have not been questionable ones. Many of them have not been mild, but every one asserted as a basis for this record has been a decided case.

There has never been a malignant epidemic of diphtheria in this community, but we have often had individual cases of malignant type, and a fair share of such have fallen to the veratrum treatment. And I am prepared to make the assertion that the *early and decided use of veratrum*, as the basis of treatment, offers better promise of good results in diphtheria than does any other plan the effects of which I have had opportunity to witness.

It should not be used merely as an incidental measure, but it should be made the *basis of treatment*. To slow the pulse should be the *sine qua non*. To say it roundly, all the world has used veratrum in diphtheria. But it is a very different use of it when, *as an essential feature, it is made the prime purpose to slow the heart's action as the basis of treatment*.

Pardon the seeming immodesty, but the comparison answers my purpose for illustration: Everybody used carbolic acid, but it remained for Mr. Lister to present its use to the profession as a basis of antiseptic surgery.

Upon being called to a patient we find the dull, sallow complexion; the pulse is 112 to 140, hard and wiry, and subsultus is observed; cervical glandular enlargement is revealed to the touch, perhaps to the eye. "Is your throat sore?" "Yes." "Have you had scarlatina?" "Yes."

Now the diagnosis is almost definite, and it only remains to examine the fauces to verify what is already most probable.

So characteristic is the pulse of diphtheria in its rate and tense, wiry nature [only resembling scarlet fever and some cases of cerebro-spinal meningitis] that the disease may with great certainty be predetermined if inflamed cervical glands add to the grounds of suspicion. In sixty-seven cases, in six years past, I have found only two instances of slow pulse, that is, only moderately accelerated, and they were mild in type.

As a rule, the viciousness of the attack may be better measured by the pulse-rate and tenseness than by any other symptom. There may be little membrane in sight, for it may be more post-nasal than faucial. But the pulse will tell the earnestness of the invasion.

And it is not influenced in its rapidity or fulness by physical exertion, as in anæmia or asthenia, but keeps its even tenor of speed and tension almost to the fatal hour.

Especially will the characteristic pulse be displayed in those cases where the membrane is deep set in an ulceration and presents a pearly white color, and is so thick that it can be tilted about by the touch of a probe by reason of its firm consistency, a condition of deposit common in malignant types. I dwell upon the character of the pulse because there is reason to believe that it is through measures addressed to the function of the heart that we are to find the most effectual means of controlling the disease. If the heart is slowed, the rate of circulation is slowed, and the inflammatory processes about the seat of the lesion are mitigated.

It indeed appears that, while under the positive influence of veratrum, the system has a tolerance for the poison, and there is demonstrated a resistance to further progress of sepsis and to the spread of the membrane. My observation, which has compassed one malignant epidemic and quite a number of cases scattered through the past fifteen years, has led me not to fear asthenia in the use of veratrum, but rather to fear exhaustion from continued rapid heart action. We know how often patients are lost from syncope. The *rationale* of such deaths is, that the entire organism, under the stress of a systole and diastole of 160 to 180 times per minute, falters and succumbs from great waste of nerve-force. Rather rest the tired organ, and the economy will take on recuperation and resistance to the invading poison.

Constant tension cannot long be borne, as witness the effect of continued strain upon the ciliary muscle—how, when overtaxed, sympathetic disturbance begets dizziness, headache, nausea, and palpitation; or of a not uncommon punishment in the army, where a soldier is forced to hold up overhead some weighty body, as a brick, how soon his burden becomes unbearable.

The best protection against asthenia in diphtheria is rest through means of a slow heart.

Is veratrum a sedative in the sense of a systemic depressant? I was taught as a student that digitalis was directly a sedative; now it is daily given as a heart tonic.

Remember that it was in a case of heart exhaustion in pneumonia that Norwood made the first medicinal use of his tincture, and under unpromising conditions, and the woman's pulse was brought down from 180 to 80 per minute, and under its full influence she recovered.

And in the free use of it, remember, Dr. Norwood, a year before his death, and only four years ago, stated before the Georgia State Medical Society that no instance of death from its sedative influence had been reported or had been brought to his knowledge, though it had been taken through mistake and design in teaspoon and tablespoon quantities many times. Of course, positive nausea sakelessly continued would contribute to a fatal result by exhaustion.

In accordance with such views as have now been expressed, the treatment of a case of diphtheria should be conducted as follows:

First mop all the membrane in sight with this standard mixture: Liquor ferri sub. sulph., 1 drachm; glycerine and water, 4 drachms of each. Don't use a camel's-hair brush. Moths eat off some of the hairs, and the stubs puncture the softened mucous membrane and carry the poison to the cellular tissue beneath, which deepens and extends the local lesion, but use a cloth mop on a slightly elastic stick. A fresh mop should be made for each application. Then give to an adult a tablespoonful of saturated solution of potass. chlorate, with three drops of Norwood's tincture, every two hours, the veratrum to be increased one drop, if necessary, each time until the pulse is brought down to 60 or 70 per minute.

It is usual to find that when once lowered a less quantity will hold it down. After each dose give eight grains of sublimed sulphur, to be swallowed dry, or, better still, to be blown into the throat with a tube. Rub the outside of the throat with kerosene-oil or some other irritant, and give thoughtful encouragement to a simple, nutritious animal food.

The application of the mop may be made at only alternate times that the veratrum is given, if the membrane is easily detached.

This constitutes the general plan of practice which has best met my views. It is not the purpose of this paper to detail all the measures which might be suited to the many phenomena of diphtheria. But it is proper that a statement should be made in evidence of the good effects of calomel in grain-doses every hour in croupous diphtheria.

It may be of interest to mention the quantity of Norwood's tincture required to control the pulse in this disease. It is tolerated well, as a rule, but in case nausea is disturbing to our purposes it must be increased cautiously and omitted occasionally. The purpose should be to increase from a moderate dose for the age of the patient, to whatever is necessary to bring the pulse to 70 or below in an adult within six or eight hours.

In a child aged four months, three and a half drops were reached before any impression was made, and then the pulse dropped to twenty-four beats per minute. A few drops of whiskey threw off the influence sufficiently for comfort in half an hour.

A child, two years of age, required five drops, and another, seven years, seven drops every two hours to bring the heart under control. These were the largest doses I have found necessary, and in all of them the morbid condition was steadily lessened under the conditions of slowed heart. All the above instances required less to control and keep a steady action than was necessary to first bring about sufficient effect.

I have observed that a decided and abrupt slowing of the pulse accompanied by more or less distressing nausea is always followed by a mitigation of subsequent symptoms. And so, too, in scarlatina but not in so marked a degree.

Dr. Galeazowski, perhaps, has the largest clinique in Paris. He has now treated over one hundred and thirty thousand patients, and sees about twelve thousand new patients a year. Here is a good place for the study of internal diseases of the eye. Dr. Galeazowski operates for cataract without iridectomy, but does not wash out the anterior chamber, which he considers dangerous. For granulations he frequently cuts away the entire conjunctival sac and then cauterizes. On making iridectomy he withdraws the knife very quickly, and the aqueous spurts out, the iris following, and is seized without introducing forceps into the chamber.—Dr. Tiffany, *Kansas City Medical Index.*

ON THE OCCURRENCE OF CONSTITUTIONAL SYPHILIS WITHOUT OTHER THAN INITIAL SYMPTOMS.

By W. S. GOTTHEIL, M.D.,

INSTRUCTOR IN DERMATOLOGY, N. Y. POLYCLINIC.

It is undeniable that the syphilis of to-day is not the malady described by the earlier syphilographers. To the laity, and perhaps also to the large majority of physicians, it is still the dread and terrible blood-taint, the contraction of which alters and colors, and perhaps ruins the entire future life of the individual that contracts it. But to many of those who see most of it, it is a mild and tractable disease, self-limited, save in its sequelæ, and, in the immense majority of cases, of most excellent prognosis. In no way, apart from the accident of most frequent communication during sexual congress, is it a venereal disease. Its history and its very probable, though still unproven, etiology place it among the exanthemata; and the benignity of its course is due to the same diffusion and general exhaustion of the soil that render measles a mild and generally harmless affection.

It is certain that it sometimes occurs and runs its whole course without the patient being aware of the presence of any serious ailment. And it is also certain that these mild and unrecognized cases may be centres of infection as potent, and more dangerous, than are severer and more manifest forms.

The subjoined set of cases is somewhat remarkable, both from the completeness of the confrontation and the plainness of the lessons that it teaches. It is rare that cases of syphilis acquired by sexual contact can be traced with any degree of certainty. The history as given by the patient is so utterly unreliable as to have been practically abandoned as a basis of diagnosis. The history here given is objective entirely; the cases were carefully studied from the beginning, and are all under observation yet.

Case I.—Mr. H——, aged twenty-five, showed me, in September, 1885, a suspicious urethral discharge. He had always been a free liver; had had gonorrhœa repeatedly during and since his early college days; had been dilated, divulsed, and finally cut by a distinguished specialist; and had at last settled down contentedly in a chronically gleety condition. There was sometimes no more than an infinitesimal mucous discharge, for months at a time; and then, without there being any appreciable cause, a profuse, gonorrhœa-like discharge would occur, yielding very promptly, however, to a mild lead, or permanganate of zinc injection. (This is the gonorrhœa of commercial travellers—the "cured-in-three-days-by-a-simple-injection" cases that are so often hurled at us.) His discharge had never been contagious, and had in no way interfered with his habits of life.

Being an intelligent man, he had learned to recognize these attacks as simple exacerbations of his gleet, and by careful observation he had acquired great certainty in his alleviating treatment. When, therefore, three weeks or so before he consulted me, there set in a discharge which obstinately resisted the usual measures, he examined himself carefully, and noticed on the lower urethral floor, just inside the meatus, a snow-white patch which he could not remove, and a small, hard lump underneath and connected with it. Then he thought it time to get assistance.

I found a typical chancre in the urethra, with an induration the size of half a large pea. Its mucous surface was covered with a pultaceous membrane; there was no loss, but rather redundancy of tissue. There was slight but perfectly characteristic enlargement of the inguinal glands on both sides.

For six weeks we waited for a corroborative symptom, and finally there occurred a slight defluvium capillorum. The chancre rapidly disappeared under the use of pledgets of cotton soaked in five per cent. solution of oleate of mercury in oleic acid, which were introduced into the urethra after each urination. He was put upon the protoiodide, but only took some fifty $\frac{1}{5}$-gr. Garner and Lamoureux pills.

From that day to this he has not had a single symptom of the disease. He has had no treatment other than that mentioned above, and has been practically under continuous observation. It would almost be a question whether the man has had syphilis or not, in spite of the typical induration and the slight but unmistakable secondary symptoms.

But I ascertained that, while carrying the chancre, and ignorant of its existence, he had had intercourse with three different women; and it chanced that all three of them came under my observation.

CASE II.—The first was his mistress, L. A——, aged twenty, a vigorous, healthy girl of Irish descent. He had had intercourse with her repeatedly during the four weeks of the discharge; and I was therefore not surprised to find that, when he brought her to me a fortnight after his first appearance in my office, there was an unmistakable hard chancre on the left labium minus. There followed in the next few weeks general glandular swelling and a distinct macular syphiloderm. Three months later there was a marked falling off of the hair. This loss of hair has been permanent in part; and her thinned eyebrows and scanty and short hair mark the malady that she has passed through.

But this is the only sign. She would not submit to regular treatment, affecting not to believe that she had syphilis. She has certainly not taken mercury for a month altogether. Yet she only showed any effects from the malady for the first three months after the initial lesion. After that she was entirely well; and now, thirty months after her chancre, and without any treatment at all, she is apparently, and in truth, as healthy a woman as any in the city.

CASE III.—The second woman, Miss K——, I did not see at all during the initial period; but I did see her and treat her in January, 1886, and thereafter. She then suffered from excruciating osteocopic pains, and had a double iritis—first the right and then the left eye being affected. Though she noticed no initial lesion, she describes minutely a maculo-papular eruption and a sore throat, the date of the appearance of which would about correspond with an infection in September of the previous year.

This woman was a spinster, aged thirty-six. It is difficult to believe that the infection at this particular time came from any other source than from Mr. H——. She was rather stout, of a weak, flabby, lymphatic temperament, and in her case the disease has worked its worst. Dependent upon her own exertions as a seamstress for her livelihood, she has endured hardship and privation, and has passed through a syphilis that has completely broken her constitution. Half her time, for the last two years, she has spent in the various hospitals; in some the disease has been recognized, and in others it has not. She has not had proper and continuous treatment; and now, at thirty-eight, she looks ten years older. Her hair is gray and her face is wrinkled, and treatment seems to have but little effect upon the chronic bone-troubles from which she suffers.

CASE IV.—At the same time Mr. H—— informed me that he had twice had intercourse with a married woman of his acquaintance during the time that he was carrying his chancre. I urged him to bring her to me, which he finally did. She is a young and vigorous woman, and has never had a single sign of the malady.

Here there was a case where, in a man of exceptional intelligence, there was an initial lesion so situated as to remain undiscovered for weeks, and so slightly felt that it interfered neither with injections nor with intercourse. The lesson is a plain one. In an ordinary man—in a person of less intelligence—it would have remained absolutely unnoticed from beginning to end. With the greatest truthfulness on the patient's part, no account of it would have been elicited if, in future years, the orthodox surgeon should attempt to get a history of specific disease.

Such a man would scatter the virus from his initial lesion in utter ignorance and without criminal negligence. And the thought naturally arises, how much more readily could this occur in the more extensive and less sensitive genital passages of the female. Women could contract the pox from a man apparently so healthy, save during the first few weeks, that no subsequent medical examination could find any trace of the disease; and could then, themselves, without knowing it, become centres of infection. It is easy to understand how a few vaginal or buccal mucous patches may pass unnoticed; but the foregoing history shows that the initial lesion itself, indurated and well marked as it almost always is, may be so situated as to entirely elude ordinary observation. It is impossible to tell just how often this occurs; but I am convinced that the immense majority of cases of syphilis are gotten from primary and secondary lesions, the existence of which is absolutely unknown to their possessors.

We see here three undoubted cases of syphilis, and one case of undoubted and prolonged exposure to its contagion. In all, the virus factor was one and the same; it came from one source. But the cell factor varied. The virus factor is a living organism; for on no other supposition can we understand the phenomena of syphilis and the other eruptive fevers. The amount deposited in the tissues of the recipient does not matter. Given a suitable soil, its increase is so rapid that the amount originally received is at once lost sight of. But the cells of the young and vigorous male promptly resisted the micro-organic invasion. They hardly needed any assistance; they would have done almost as well without any drugs at all. In the first female the conditions were so similar that the result was almost the same. What colonies did gain a foothold in various parts of the system were rapidly disposed of by the cells; and in her case, also, the malady, entirely untreated, would have run a mild and harmless course.

In the third case the soil was suitable and the cells were feeble. They offered but a poor resistance to the invasion, and succumbed in many places to the growing virus. She suffered considerable destruction of tissue from the disease, and suffers yet from its sequelæ.

The fourth case illustrates the chance exemption from contagion under circumstances most favorable for its occurrence. Her husband, with whom she had continuous sexual relations, has not, so far as I can learn, suffered from any specific trouble; and there is no doubt that she escaped infection entirely.

CASE V.—Finally, in August, 1887, I had occasion to discover accidentally, in another patient, a urethral chancre precisely similar to Mr. H——'s. Here, also, although ten months have now elapsed, there has been but one single secondary symptom—a slight alopecia.

78 WEST FORTY-SIXTH STREET.

DENVER PHYSICIANS AND TRANSITORY FRENZY.—A case in which this form of madness was alleged to occur is related editorially in the *Denver Medical Times*: "A young man falls in love with a variety actress, drinks and carouses with her, until he learns that she is a married woman. That his fair dulcinea should have deceived and have worked him simply for his money maddens and stirs up within his innermost nature a spirit of revenge, and he determines 'to get even with her.' He deliberately plans her destruction, bides his time, seeks her company, and with murder in his heart plays the agreeable, to throw her off her guard, and kills her. He is arrested, tried by jury, defended by a shrewd and clever criminal lawyer, acquitted. The verdict was 'transitory frenzy.' The most disgraceful part of the whole affair is that regular physicians should have aided by their *expert testimony* in the procuring of this most unnatural verdict. There was no insanity, temporary or otherwise, in this case, but there was method in the young man's madness."

SIMPLE AND RAPID STAINING OF THE TUBERCLE BACILLI, FOR THE GENERAL PRACTITIONER.

By H. P. LOOMIS, M.D.,

NEW YORK.

ALTHOUGH the causal relation of the tubercle bacilli to pulmonary phthisis may be questioned by some, no one, we think, can deny the diagnostic importance of their presence in the sputum.

The ability to recognize them enables the physician to diagnose the character of pulmonary disturbances earlier than he can possibly do it either by physical signs or any other symptoms. If the technique of the staining of the tubercle bacilli can be reduced to a simple form, so simple that no special technical training is necessary, then I believe that this most important aid to diagnosis would be as constantly employed by the practitioner as the chemical and microscopical examination of the urine in suspected cases of Bright's disease.

The method at present generally adopted in the laboratories—the Koch-Ehrlich method—is a complicated process requiring much practice and judgment, especially in the decolorization by nitric acid; it is not consequently adapted to the general practitioner's use, and will yield reliable results only in the hands of experts.

The belief that any technique which is simple and rapid, and reduces the staining of the tubercle bacilli to a mechanical basis, would be of use to the general practitioner is my reason for presenting the following method, which I have used for some time with uniformly satisfactory results.

While working with Professor Koch last spring, I found that in his personal examinations he made use of a solution of fuchsine known as Ziehl's solution, and hardly ever had recourse to a double staining.

To an expert, this gives without doubt the quickest staining possible, but because of the weakness of the solution, if made according to Ziehl's formula with the ordinary fuchsine purchased in this country, and of the lack of a contrast color, it does not yield satisfactory results to others. Making use of the principle which Ziehl has incorporated in his solution, viz., that carbolic acid can be substituted for aniline oil, I first stain the bacilli with a very strong solution of carbolic fuchsine, and then make the contrast staining by what is known as Fraenkel's solution, which combines the decolorizing and dyeing in one process.

This furnishes a specific staining for the tubercle bacilli—a deep-red color; the other elements in the sputum, the putrefactive bacteria, the pus-cells, the epithelium, taking the second color—blue.

The advantages of the method which I propose are these:

1. Simplicity; one solution is poured on the sputum and then the other, with no judgment necessary as to the amount of staining or to the decolorization; this makes the process simply a mechanical one.

2. Quickness and precision; the whole process occupying but two minutes.

3. The great intensity of color with which the tubercle bacilli are stained.

4. The solutions keep indefinitely, especially the carbolic solution, which cannot decompose like the aniline water solution of fuchsine; they are therefore always ready for use.

THE METHOD OF PREPARING THE SOLUTIONS.—First: The Fuchsine Solution. 1. Pour into a small bottle of alcohol, say a four-ounce bottle, enough fuchsine to form a well-marked layer over the bottom of the bottle, or, in other words, more than enough for a saturated solution. 2. Let it stand for twenty-four hours, shaking the bottle from time to time. 3. Into a four-ounce bottle, containing a five per cent. aqueous solution of carbolic acid, pour enough of the first solution to produce a distinct precipitation of the fuchsine, say, about ten or fifteen cubic centimetres—the exact amount is not important. 4. Shake a few times and set aside for twenty-four hours. This is the carbolic solution of fuchsine to be used.

Second: The Methylene-blue Solution. Put into a four-ounce bottle,

Alcohol	30	parts.
Distilled water	50	"
Nitric acid	20	"

and add methylene-blue until the solution is more than saturated.

THE METHOD OF STAINING THE SPUTUM.—1. Prepare two cover-glasses in the ordinary way, by placing a small portion of the suspected sputum on one cover-glass and, by means of the other, pressing it out between them into a thin layer; on sliding the cover-glasses apart, a thin film of sputum will be left on each cover-glass. Allow the cover-glasses to dry, and then, holding them firmly with a pair of forceps, prepared side uppermost, pass them rapidly three times through the flame of a spirit-lamp. 2. Hold cover-glass as before, and pour on it a few drops of the fuchsine solution. Then warm the cover-glass over a spirit-lamp until steam rises, being careful not to allow the fluid to boil; now let the solution on the cover-glass cool. 3. Pour off the fuchsine solution. 4. Pour on the cover-glass the methylene-blue solution, and after half a minute or so, the exact time is not important—5. Wash off the stain carefully with running water (a wash-bottle is convenient). 6. Dry the surface of the cover-glass which does not contain the sputum. 7. Mount on a slide in water and examine.

A little practice will enable one to carry out this simple technique with great rapidity; the only difficulty is in preparing the solution at first, but, as they will keep for months and are always ready for use, this is not of much moment. One great advantage to the practitioner will be the doing away with all dishes, acids, etc. The two bottles always stand ready, and when necessary the sputum can be examined while the patient is in your office. To emphasize the quickness of the process, the whole formula can be stated in four lines.

1. Pour your fuchsine solution on prepared cover-glass.
2. Heat and then allow to cool.
3. Pour off solution and pour on methylene-blue solution.
4. Pour, wash this off, dry, and mount in water.

HOW A LONDON SURGEON WAS COMPLIMENTED.—The *Pall Mall Gazette* says: "There is a story going about so good that it ought to be made public, and so improbable that it must be true. A very eminent London surgeon—one of the lights of the profession—the other day observed a gentleman fall in the street. He went to his aid, and found he had broken his leg. It was only a simple fracture, but the man was badly hurt. The surgeon used his umbrella as a splint, and with his own and borrowed handkerchiefs bandaged the limb tightly, put the patient in a cab, and drove to the nearest hospital. There they were received by a young surgeon or his *locum tenens*. 'You've bandaged this very well,' said the hospital surgeon. 'You flatter me,' said the great gun. 'Not at all,' said the other, 'I suppose you have been attending an ambulance class. They say a little learning is a dangerous thing, but the little you've learnt you've put to good account. I can't give you your umbrella now, but if you leave your address it shall be sent home.' 'I had best give you my card,' said the eminent surgeon. And he did so."

TREATMENT OF ZONA.—Dr. Guibout recommends flexible collodion as an application in the treatment of herpes zoster. The advantages are that it has a local anæsthetic action, that it exerts a uniform pressure on the lesions, and that it forms an impermeable covering which protects them from the action of the air.

INTRA-PERITONEAL RUPTURE OF THE URINARY BLADDER—LAPAROTOMY—DEATH.

By JOHN YOUNG BROWN, M.D.,

HENDERSON, KY.

In April, 1887, I was called to see A. W——, the messenger stating that he had fallen while drunk and severely injured himself. When I arrived at the house I succeeded in obtaining the following history. Patient had been drinking heavily, and, while returning home on the evening of his accident in a state of intoxication, had fallen, striking himself over the hypogastrium on the corner of a door-step. I learned from his brother that he had been suffering for some time with gonorrhœa, and had experienced great difficulty, in the three or four days prior to his accident, in making water. Upon examination, I found patient in a condition of collapse, vomiting at intervals, and complaining of severe pain in lower abdominal region and intense desire to urinate. Just before my arrival he had passed about ℥ ij. of bloody urine. He showed no sign of external injury, and thorough examination of pelvic bones revealed no fracture. Morph. and atropia sulph. was administered hypodermically, and a catheter was with some difficulty introduced, which resulted in the withdrawal of ℥ jss. of bloody urine. Rectal examination succeeded in obtaining a very decided "snow-ball crepitation" from posterior surface of bladder, suggestive of hæmatoma. Intra-peritoneal rupture of the bladder being suspected, I called in consultation Dr. Arch Dixon. Catheter was again introduced, but with almost negative result, as only a few drops of blood came away. The diagnosis still being doubtful, the rectum was dilated with a Petersen rubber colpeurynter, and the bladder was then slowly injected with warm Thiersch's solution (℥ xxx.), after the method of Weir (New York Medical Record, January 22, 1887). There was no sign indicative of bladder distention, and only a third of the fluid injected was drawn off. The diagnosis of intra-peritoneal rupture being almost conclusive, immediate laparotomy was proposed. I explained to the patient's family his condition, the object of operation proposed, and its probable result, giving of course a grave prognosis. I could not get their consent for an immediate operation, but succeeded in gaining a promise that, if the patient was no better on the morning of the following day, operation would be permitted. A soft rubber catheter was tied in the bladder, and morph. and whiskey was ordered to be administered during the night. I left my patient even worse than I had found him, and with very little hope that he would live through the night. All preparations were made for the operation, and the next morning, twenty-two hours after injury, I visited patient and prepared to operate. He had spent a restless night, and gave evidence of profound shock complicated by alcoholic depression. Morph. and brandy was administered, and patient was put under the influence of ether.

The field of operation was prepared in the usual way. The abdomen was scrubbed with soap and carbolized water, shaved, and washed with 1 to 2,000 bichloride solution. Incision in the median line was made, and the peritoneal cavity opened. A quantity of blood-stained fluid escaped from the peritoneal wound. A rent in the posterior under surface of the bladder, an inch and a half long, was discovered. The edges of the bladder wound were everted, and the mucous membrane of the viscus was clearly visible. The rent in the bladder was closed with nine carbolized silk sutures, including the peritoneal and muscular coats of viscus, after the method of Loubert. After completing the suturing of the bladder, which was accomplished with some little difficulty, the viscus was again slowly injected with Thiersch's solution. There being no discoverable leakage, the bladder to all appearances being water-tight, the peritoneal cavity was thoroughly cleansed with hot water, and the abdominal wound closed and dressed in iodoform gauze and absorbent cotton. A catheter was tied in the bladder for drainage, and patient was placed in bed. Hypodermics of brandy were given at regular intervals, and hot-water bags were placed on feet and limbs. The operation lasted an hour and ten minutes. For the first six hours patient's condition seemed slightly improved, and about ℥ jss. of almost clear urine had escaped through catheter. Patient from this time on grew gradually worse, and died sixteen hours after operation.

Autopsy.—There were no signs of peritonitis, and post-mortem injection of bladder showed an absolutely water-tight viscus. Kidneys were not examined. Patient died from shock and alcoholic depression.

Notes.—Rupture of the bladder is by no means an unusual occurrence. Prior to the introduction of the present method of suturing the bladder, accomplished by means of abdominal section, intra-peritoneal rupture was in every case fatal, and of the ninety-four cases reported by Bartel[1] there was but one (?) recovery.

With such grave statistics as the foregoing, none can question the fact that laparotomy is a justifiable operation for vesical rupture. That the operation promises a great deal, as technique and diagnostic methods improve, is established beyond question by the two successful cases reported by Sir William MacComac.[2] Since MacComac's report both Holmes and Walsham[3] have operated successfully. I am able to find in the literature but these four successful cases, although the operation has been done a number of times both in this country and abroad. However, the cases above mentioned are sufficient to set a precedent, and it is fair to conclude that, ere long, laparotomy will prove successful in the majority of cases. Diagnosis of intra-peritoneal rupture is in the major portion of cases arrived at with difficulty, and it is questionable whether it can be accurately made without exploratory laparotomy. The method proposed by Weir[4] proved very satisfactory in my case, and seems to me to be the most certain of any yet proposed. As soon as diagnosis is arrived at, operation should be made, as every moment of waiting lessens patient's chances for recovery. Shock is a prominent feature in intra-peritoneal rupture, but this is no indication for postponement, for as soon as the peritoneal cavity is opened a decided improvement is noticed in patient's condition. The suturing, with the exception of the lower stitches, is accomplished with little difficulty. When complete, the bladder should be injected to insure against leakage. In regard to drainage, I think median cystotomy and a large drainage-tube fixed in the bladder will prove a far better method than drainage through a catheter. It can be done in a short space of time, and, besides giving rest to the bladder, it affords a free outlet to the urine.

Tobacco Vertigo.—Having investigated sixty-three cases of excessive use of tobacco, Decaisne finds forty-nine to be over fifty years of age. More than half the cases presented, besides digestive derangements, alternating constipation and diarrhœa, an exaggeration of the urinary secretion and more or less abundant sweats, insomnia, and palpitation. In thirty-seven cases the smokers pursued the habit fasting, and in these vertigo was present especially in the morning. The appearance of the vertigo coincides in one-third of the cases with the suppression of the profuse sweats and marked diminution of the urinary secretion. Sometimes the vertiginous symptoms have been confounded with those due to cerebral congestion, and even to heart disease. Besides the absolute suppression of the use of tobacco, laxatives, warm baths, magnesia, and bitters are prescribed. Injections of ether subcutaneously also appeared to stop the vertigo in a few minutes. —*Lancet.*

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[1] Coulsen: Diseases of Bladder, p. 64.

[2] London Lancet, December 11, 1886.

[3] Lancet, March 12 and July 23, 1887.

[4] Annals of Surgery, vol. v., p. 280.

Clinical Department.

LAPAROTOMY FOR TYPHLITIC ABSCESS—RECOVERY—WITH A REPORT OF FOUR ADDITIONAL CASES.

By C. B. KIBLER, M.D.,

CORRY, PA.

Case I.—E. S. M——, aged fourteen, came under the care of Dr. Clark, of Columbus, Pa., March 15, 1888, who gives the following history of the case: Constipation had existed for some time; there had been a slight chill; there was pain in the right inguinal region, extending into the lumbar, and shooting down into the testicle; temperature was slightly elevated; pulse accelerated only moderately, which condition changed from day to day. The pain and tenderness in the right iliac region increased, and general peritonitis ensued. He had been treated with morphine in frequent doses sufficient to control the pain; ol. terebinth. and ol. ricin., together with dry heat applied locally; liquid diet, etc. I was called on the afternoon of March 24th, by Dr. Clark, to see the patient in consultation. An aspirating needle of large size was passed into right inguinal region, and three ounces of very offensively smelling pus was removed. Laparotomy was performed the next morning at 10 A.M., when I was most ably assisted by Drs. Clark, Gilson, and Borroughs. The incision was made from just above Poupart's ligament, in the right linea semilunaris, extending upward and backward five and one-half inches, opening into an abscess-cavity from which escaped five pints of very offensive, fetid-smelling pus. The cavity was thoroughly washed out with a 1 to 1,000 sublimate solution of a temperature of 104° F. The cæcum was not to any extent involved, but in the appendix, at its distal extremity, was found an opening, through which had passed a grape-seed, which was, no doubt, the exciting cause of the perforation. Upon examination it was thought best to leave the appendix *in situ*. The wound was closed with deep silver sutures and superficial silk ones, and was dressed with iodoform and absorbent cotton. A drainage-tube of large size was left in for eight days. Castor-oil was given on the fourth day, with happy effect, and the lad has made an uninterrupted recovery.

Case II.—I was called in consultation to see D. B——, aged forty-three, male, who had been suffering for ten days with typhlitis, shown by constipation, vomiting, pain in the right iliac region, extending down into testicle, and distention and tenderness of the abdomen. Opium had been very freely given. As it was midnight and no instruments were at hand, it was thought best to wait until morning and then operate. But about 4 A.M. the abscess discharged per anum, when three pints of very offensive pus was passed; in the afternoon another discharge of about one pint occurred, and the patient fully recovered.

Case III.—In 1870 I treated E. W——, male, aged fifty-eight, for typhlitic abscess. He had great pain in the right inguinal region, extending down to the testicle and the right thigh. There was general peritonitis, with a rapid pulse, and excessive vomiting. Collapse occurred on the eighth day and death that night. No autopsy.

Case IV.—I was called to see R. B——, male, aged sixty-one. The bowels had been constipated for several days, and the man had taken compound cathartic pills (U. S. Ph.) in large doses with moderate cathartic effect. There was a chill followed by vomiting and great pain in the right inguinal region, extending upward to the axilla and downward to the testicle. The abdomen was very tender and distended. Temperature subnormal; pulse, 120, weak and thready. The patient died on the seventh day. No autopsy.

Case V.—J. D——, male, aged sixteen. The attack was ushered in with a chill. He had vomiting, a temperature of 103° F.; pulse, 126; pain and tenderness in right inguinal region, darting down into the testicle and thigh of the same side. Large doses of morphine were given, and hot applications were made. On the fifth day of his trouble I proposed to aspirate the abscess, but his parents objected to any operative procedure. After pointing out to them the danger of such delay I consented to wait until the next day; but what was my surprise, upon making my morning visit, to find that the lad had just a few minutes before evacuated three pints of very offensive-smelling pus per anum. From this time he made an uninterrupted recovery. Thus we see that it is not always possible to determine when to operate and when not to. One symptom in all the cases was well marked, *i.e.*, pain darting down into the testicle.

THE VALUE OF THE NUTRITIVE BATH AND OF INUNCTION.

By GEORGE EDW. HOPKINS, M.D.,

NEW YORK.

In the more chronic bowel-disorders, in which the child suffers through a period of several weeks, the whole alimentary tract being implicated, death finally takes place from exhaustion—essentially from starvation; for, no matter how carefully nursed and fed, the nourishment is not appropriated by the system. The blandest food acts rather as an irritant to the inflamed surfaces. The stomach itself, however, if there be no vomiting, is probably still capable of absorbing such material as requires no bowel-digestion. Here the most appropriate aliment is the whey of milk, and the white of egg thoroughly beaten with water to considerable thinness, and lightly salted. These may be given alternately. Milk itself is of doubtful utility in these cases. If not digested, it becomes only a source of irritation.

Gentle friction of the abdomen with some warm, bland oil is extremely useful. The absorbents of the skin are exceedingly active during such wasting diseases, and, if the friction be continued very gently for several minutes at different periods of the day, considerable nourishment may be thus obtained. Some oils are more appropriate than others, from being more readily absorbed.

Following each inunction, great relief is afforded by warm fomentations of camphor. Fold a light linen tissue (as a large handkerchief) three or four thicknesses, of a size to cover the whole abdomen; dip this in water warmer than the hand, wring out the drip, and, sprinkling the warm surface lightly with spirits of camphor, apply it quickly to the abdomen. Then cover all with dry flannel under the clothing. The warm, camphorized vapor has a most soothing effect

There are cases of these disorders in children in which the stomach will retain nothing. Even a teaspoonful of cold water is often rejected. Here it is manifestly impossible to do anything in the way of stomach-feeding, and we must resort to other measures. It is in these cases that *the soup bath* becomes a boon beyond all price. It not only relieves the thirst (which may be accomplished also by prolonged immersion in tepid water) but it imparts sufficient nourishment to tide the patient over the critical period. We have known a child's life most evidently saved by this simple means. Let some pieces of mutton or other meat, sufficient for making two or three gallons of good soup, be first simmered for an hour and then boiled sufficiently long to thoroughly soften and extract the juices. In skimming do not take away all the fat. This latter may be skimmed off while cooling and kept warm for inunction later. Pour the soup, when ready, into the little bath-tub, and, when sufficiently cool, immerse the child in it for a period of twenty minutes. It should, of course, have sufficient depth to cover the entire body, the head being supported by the nurse's hand. This should be repeated twice daily, the bath being rewarmed for a second use, and a fresh soup made, if possible, each day. Let the bath be followed by inunction of the entire body with the warm fat that was set aside. After two or three days, if the case improve, the stomach will begin to retain light nourishment. In the meantime, the fomentations of camphor may be continued. Attempts at nourishment by the rectum are apt to be futile in these cases, as may be readily seen.

THE USE OF ERYTHROPHLEINE AS A LOCAL ANÆSTHETIC.

By S. G. DABNEY, M.D.,

LOUISVILLE, KY.

On April 7th Professor Kastenbine, of this city, brought to my office a specimen of the new local anæsthetic erythrophleine, which he had received direct from Merck, of Darmstadt. Professor Kastenbine made a solution of a strength of a little less than one-tenth of one per cent., and of this three drops were instilled into the eye of a patient with strabismus convergens, just over the insertion of the internal rectus; the immediate effect was a slight pericorneal injection, unattended by pain. After fifteen minutes the anæsthesia was evident, though not complete. Stroking the eye, into which the erythrophleine had been dropped with a strabismus hook, was very little felt, while the same irritation to the corresponding part of the other eye was acutely felt. After half an hour's waiting the sensibility was further diminished, but not entirely abolished. At the end of one hour after the instillation the anæsthesia seemed complete, and the usual operation for internal strabismus was done; the taking up of the conjunctiva with forceps and cutting it were entirely painless, though, of course, the passage of the hook under the muscle and its pressure on the sclerotic caused some pain. Atropia had been used to paralyze the accommodation, and the pupils remained widely dilated. I did not see the patient again until the next morning, and then the insensibility had entirely disappeared.

Dr. S. P. Shroeder, of the resident staff of the Louisville City Hospital, was present, in addition to Professor Kastenbine and myself, and to each of us there was no doubt that the anæsthesia was at least as perfect as that induced by cocaine.

From the result of this experiment it seems likely that the great irritation reported from the application of erythrophleine, and its failure to produce anæsthesia, are probably to be attributed to the impurity of the preparation which was used.

TREATMENT OF CARBUNCLE WITH CARBOLIC ACID.

By W. FRANKLIN CHAPPELL, M.D., M.R.C.S. Eng.,

NEW YORK.

Carbolic acid is constantly recommended for injection in the treatment of this disease, and, no doubt, is of some service; but the difficulty of introducing a needle into the hardened tissue and then discharging some of the contents of the syringe is so great that it is almost impossible to carry out the treatment satisfactorily. During the past four years I have employed carbolic acid locally in this disease, in many cases with most gratifying results. In the early stage, when the carbuncle is small and symptoms not severe, a daily application, for two or three days, of a few drops of pure carbolic acid will arrest the process and produce a speedy resolution of the part.

When the disease has progressed further and infiltrated the surrounding tissue, and caused a gangrenous condition of the skin at numerous points, a more radical application is necessary. Vaseline is applied to the skin surrounding the sloughing centre, to prevent an unnecessary action of the acid, should any escape. With a small-pointed dropper I introduce one or two drops of pure carbolic acid into each suppurating point, and allow it to percolate into the tissue beneath. After each opening has been treated in this manner the intervening tissue is painted with the acid, and vaseline and protective gauze applied over the whole. Within twenty-four hours there will be a marked diminution in the local and general symptoms. The following day the same procedure will be carried out, and also each succeeding day, for three or four days, depending on the size of the carbuncle; by the fifth or seventh day the central slough can be picked out, as the superficial tissue will have been destroyed, and an antiseptic dressing may then be applied. Resolution goes on rapidly, and two or three dressings are all that will be necessary. Since I have employed this method of treatment, I have aborted every case that presented early, and the more advanced cases respond immediately to the treatment, and, in place of growing daily more formidable, will lessen in size, hardness, etc., from the first application of the acid.

An opportunity has not presented to employ the treatment in those severe cases where the necrosing process has extended many inches beneath the skin, and I would hesitate to apply pure acid to such a large surface at one time, but think satisfactory results would be obtained by treating a small surface each day, or by employing a weak solution of the acid. Viewed from my present experience, I think these severe cases will be unknown in the future, if the disease is seen early and the acid applied.

AN INTERESTING CASE OF DEPRESSED FRACTURE OF THE FRONTAL BONE.

By FREDERIC A. RICE, M.D.,

BRIDGEPORT, CONN.

Charles B——, native of England, aged twenty-eight, spoon-maker. On December 22, 1887, while under the influence of liquor, he was injured by the cars. He was taken to the Bridgeport Hospital, where he was found to have a crushed foot, a depressed fracture of the skull over the right eye, several scalp-wounds, and two or three severe contusions. As he did not present the symptoms of severe compression, the fractured skull was not operated on at this time, but the foot was amputated (Syme's amputation), and the other wounds dressed, all antiseptically, and all healed readily. It is his mental condition that we are particularly interested in.

From the time of the injury he lay in a state of low muttering delirium, unconscious of his surroundings, totally devoid of intelligence, reason, and memory, with no self-control, no appreciation of his natural wants, very little tendency to sleep, and great restlessness. It was necessary to fasten him into his bed.

There was no paralysis, but vision was lost in the right eye. An examination of the eye by Dr. F. M. Wilson, ophthalmologist to the Bridgeport Hospital, showed diminished arteries and enlarged veins, suggesting to him probable fracture of the orbital plate of the frontal bone with pressure in the orbit from the bone, or from infiltration of blood.

On February 1, 1888, when my term of service as visiting surgeon began, there had been no improvement in his symptoms. His only hope seemed to lie in an operation to relieve the pressure on the brain. Accordingly, on February 8th, seven weeks after his injury, assisted by Dr. C. C. Godfrey, of the visiting staff, and Drs. De Wolfe and Osborne, of the house staff, I removed the depressed bone. The skull at the seat of fracture was exposed by a large crucial incision, and, as we intended to replace the pieces of bone in the wound, the periosteum was raised with the flaps. On exposing the skull it was found that the fracture, which was comminuted and impacted, reached from near the median line of the frontal bone outward a little beyond the temporal ridge, and from the supraorbital arch upward for about an inch, enclosing a piece of bone about two inches long and one inch wide, which was depressed about the thickness of the bone, or about one-third of an inch.

Two buttons of bone were removed at the edge of the fracture with the trephine, and an attempt was made to lift the fragment; but, owing to the lapse of time since the injury, it could not be done. Then with the chisel and rongeur the fragment was entirely removed in small pieces. All the pieces of bone were kept carefully on warm carbolized gauze, and enough of them to loosely close the opening were laid back on the dura mater, the periosteum was stitched over them with catgut, a rubber drainage-tube was introduced, and the flaps were closed with catgut sutures. The wound was dressed with bichloride gauze and cotton, and was not disturbed for a week, when the tube was removed and a new dressing applied; at the end of another week the wound was healed. At the end of three weeks the fragments of bone were sufficiently united to give some firmness to the skin over the opening.

For the first two or three days after the operation there was no apparent improvement in the patient's mental condition; then his intellect began to gradually shake off the lethargy and brighten; his delirium subsided, he became more quiet, began to recognize his surroundings, and to appreciate his conditions and wants, and his memory began to return; in short, in three weeks from the time of the operation he was completely recovered, except that there has been no return of vision in the right eye. A recent examination by Dr. Wilson shows marked atrophy of the optic nerve.

ANEURISM OF THE THORACIC AORTA.

By HERMAN C. GARDINIER, M.D.,

TROY, N. Y.

E. E——, aged forty-seven, a freight-handler; was formerly addicted to the use of spirits, but of late has been strictly temperate; denies syphilis, and never had rheumatism. Prior to October 26, 1885, he was in perfect health. This was an unusually busy day, and he had been lifting very heavy packages, and while in the act of lifting he felt a sharp, shooting pain in the præcordial region and through the left shoulder, and suddenly exclaimed, "Something has given way." He fell backward in a faint, and when he came too, found himself in bed. The pain lasted for sixteen days, when he was able to resume work. He had had ever since that time great pain in the back, which he described as a constant boring sensation in the mid-dorsal region. He slept in a semiprone position on account of dyspnœa. He complained of weakness in the legs from the knees down, which gradually grew worse, and he shuffled his feet in walking.

Physical examination: Veins of forehead and thorax prominent; jugular and subclavian veins on left side full and distended; veins of arms prominent; marked pulsation of axillary, brachial, and ulnar arteries; distinct epigastric pulsation; thrill felt in both supraclavicular spaces near the sternal junction of clavicle; liver dulness normal; lungs emphysematous; dulness in right infraclavicular and axillary regions, possibly due to thickened pleura; good vesicular murmur posteriorly over left lung, much feebler and more distant over the right side; præcordial dulness an inch outside nipple line; the apex beat was felt in sixth intercostal space and outside the nipple line; at the apex was a double bruit, soft and see-saw in character, and low in pitch; the first sound was hardly perceptible at the apex; a rough systolic murmur was heard in the left carotid artery; a double harsh murmur was heard which had its maximum intensity at the right second intercostal space; the patellar tendon reflex was exaggerated; there was paresis in both legs; the pupils were minutely contracted; but there was no change in the voice, no dysphagia, and no evident thoracic tumor or localized pulsation could be made out.

The above symptoms, especially the paresis in the legs and great backache, together with the physical signs, led me to diagnose an aneurism of the descending portion of the thoracic aorta eroding the bodies of the vertebræ. I saw the patient a number of times after this examination, and there was no appreciable change in the physical signs, save an increased weakness in the limbs, with more marked exaggeration of the tendon reflexes. Patient died rather suddenly, December 25th.

Autopsy, eight hours after death: Left lung free from adhesions, emphysematous; lower lobe full of blood-stained serum; right lung universally adherent, pleura much thickened, lung full of serum. Pericardium non-adherent, sac contained about two drachms of serum; heart very large. An aneurism involving the transverse and descending portion of the arch of the aorta was found, the lower portion of which was adherent to the bodies of two mid-dorsal vertebræ, which were eroded down to the membranes of the cord. The heart and aneurism together weighed thirty-two ounces. Aortic valves were incompetent, a little thickened, and the orifice was much dilated. The orifices of the coronary arteries were calcareous. The left ventricle was dilated and its wall was about nine lines thick. The mitral orifice permitted the passage of four finger-tips, and the valve was thickened; the walls of the right ventricle were thinned, and its cavity was dilated.

POISONING BY CHLORATE OF POTASH.

By HORACE G. HILL, M.D.,

PHILADELPHIA, PA.

Lydia M——, a precocious little brunette, four years of age, about 10 o'clock on the morning of March 19th discovered in a closet a half-filled bottle of compressed tablets of chlorate of potash, and immediately conceived the idea of playing doctor with her two-year-old brother. The boy was doctor and the girl patient. With commendable care the doctor saw that the patient actually swallowed each dose that he ordered, and sometimes, by way of encouragement, took a tablet himself. The little girl is unusually intelligent for her years, and from her straightforward account it is probable that she ate at least two-thirds of the quantity, and possibly more. No scattered tablets could be found, and only one remained in the bottle. It is estimated, after a careful comparison with other bottles of the same size, and after weighing the tablets, that she must have taken at least eighty grains. The mother noticed at dinner that her appetite was poor, but thought nothing of this fact at the time. Early in the afternoon she began to complain of headache, which rapidly increased in severity, and was accompanied by nausea. By supper-time she was quite feverish, unable to eat, and extremely listless. High temperature, persistent nausea, great restlessness, hallucinations, and the voiding of a quantity of urine much above the normal were the prominent symptoms during the night. Unfortunately she was not seen at the worst, so that the maximum temperature and pulse rate cannot be stated. Toward morning there was a marked improvement, but upon attempting to dress her after breakfast she was found to be too weak to stand. Marked pallor was observed at this time, and continued for several days; but at the end of three days she had regained her usual condition, and now, after two weeks, seems as well as ever. The effect of the drug on the child's complexion is worthy of notice. Previously the skin had appeared quite muddy; but on convalescence it became unusually clear and transparent, and this transparency still continues. In fact, the mother asked whether chlorate of potash could not be utilized as a cosmetic. The boy was affected with similar symptoms, but in a much less marked degree.

Carbonate of Lithium is best administered, according to Liebreich, in highly charged selters or soda water. One grain of lithium, mixed with fifteen grains of sugar, will dissolve readily in a wineglassful of carbonated water.

Progress of Medical Science.

"Vaginal Pressure" in Chronic Pelvic Disease.—"Vaginal pressure" in the treatment of chronic pelvic disease was introduced by Dr. Taliaferro, of Georgia, in 1878. This original pressure was obtained by tampons of cotton, wool, and other substances, plain and medicated, and it has been brought to more perfection of method and detail by Drs. Engelmann, Wylie, and others. In the *American Journal of Obstetrics* will be found a complete exposition of this method of treatment. The procedure is safe; it affords immediate comfort; its effects are mild and continuous; rest is given the pelvic viscera; the treatment is clean and antiseptic, and all the pelvic viscera are influenced. The tampon acts as a support to hold in place the uterus or other of the pelvic viscera, and as a compressor; it acts as a stimulant to the tissues; it is a splint to steady the parts and to give rest; it cleanses and renders them aseptic by absorbing the discharges, keeping the vaginal walls dry and clean, and it can be made the carrier of remedial agents by enclosing the remedy within it, or by using a medicated cotton covering over the elastic body of the tampon. Well-prepared sheep's wool, fine, white, and clean, makes the best supporting tampon. Its use should be continuous, or almost so, and hence it should be renewed every second or third day.

Large Doses of Creosote in Pulmonary Phthisis.—Dr. Bogdanovitch has published some personal observations on the therapeutic value of creosote in phthisis. The writer, who has been suffering from pulmonary and laryngeal tuberculosis for about two years, had tried the drug on himself in small doses (half a grain four or five times a day) some time ago, but without appreciable benefit. After perusal of the observations of Sommerbrodt and Guttmann, however, he again began to take creosote in gradually increasing large doses, beginning with four grains a day, and reaching, in about two months, a daily dose of forty-four grains. There took place, fairly rapidly, an unmistakable and permanent improvement in his symptoms. Fever disappeared in a week; expectoration, cough, and dyspnœa steadily decreased to a considerable degree; laryngeal spasm, which had formerly occurred once or twice every month, ceased altogether. As regards the objective signs, however, there was only some diminution of dulness over a certain area, with complete disappearance of fine crepitant râles. As to tubercle bacilli in the sputum, they remained just as numerous as before the creosote treatment. The latter has lasted in all four months, during which period not less than four ounces and two drachms of pure creosote have been ingested. The drug must be taken in doses of about five grains four times daily, in the form of capsules (filled up *ex tempore*), after meals. With regard to disagreeable after-effects, Dr. Bogdanovitch observed in himself, when, by way of experiment, he took as much as twelve grains at a time, or twenty grains in the course of an hour, only giddiness, cardiac palpitation, small and accelerated pulse, general weakness, pallor, and anxiety; but all these toxic phenomena disappeared spontaneously and completely in about half an hour or an hour. On an empty stomach, however, he experienced epigastric uneasiness and pain even from small doses. Dr. Bogdanovitch resumed of late the use of creosote in order to study the effect of a six months' course. Dr. Hermann Sahli's paper on "Guaiacol as a Substitute for Creosote" seems to be unknown to him.—*The British Medical Journal.*

Laparotomy for Dilatation of the Colon.—A remarkable case of fecal accumulation is reported by Dr. Worrall. A girl, aged fourteen, was brought to the hospital suffering from an enlargement of the abdomen, which had been gradually increasing for two months (*The British Medical Journal*). The patient had not had any previous illness, and her mother thought her bowels were not regular. On examination, a solid tumor, neither painful nor tender, was found to fill the whole abdomen, except portions of the left hypochondriac and left lumbar regions, having its greatest prominence to the left of the umbilicus. The tumor was hard, nodulated, and irregular. It seemed to touch the liver above and dip into the pelvis below, being bounded laterally to all appearances by the colon. The tumor could be moved slightly in every direction. A day or two after admission, although the bowels were moved several times daily, a laxative powder and an enema were given prior to examination under chloroform. As the rectum was found to be still blocked with fæces, more aperients were ordered, and for the next ten days there was diarrhœa with numerous horribly offensive stools. The temperature averaged 101° F. It was decided to perform an exploratory laparotomy. On opening the abdomen what looked like an enormous cyst, fluid above and solid below, was seen, which, on being opened, was discovered to be the ascending colon enormously hypertrophied and dilated. The wound in the colon was sutured, and the abdominal incision closed. The youthful patient was discharged quite well on the fourteenth day after the operation.

Photoxyline as a Surgical Dressing.—The Paris correspondent of the *British Medical Journal* states that M. Von Wahl has lately tried substituting photoxyline, which is used in photography, for collodion in surgical operations. He employs a five per cent. solution mixed with equal portions of alcohol and ether. His experiments showed that photoxyline has the following advantages: It adheres more closely to the skin than collodion; it is absolutely impermeable, and is not deteriorated by washing or by prolonged contact with other fluids; it exercises a uniform compression on the tissues. It can, therefore, be strongly recommended in the case of slight surgical operations, when the patient is not obliged to lie up and a voluminous antiseptic dressing is most inconvenient; as in plastic operations on the face, and in those performed in the region of the genital organs in male patients (radical operations for hernia, hydrocele, castration, etc.). In these cases a thin layer of cotton-wool, free from all greasy principles and saturated with photoxyline, is applied to the wound and fixed by means of sutures and court-plaster after bleeding has stopped. This layer will resist the dissolving action of any foreign fluids for eight or ten days. The uniform pressure it exercises renders drainage superfluous. In the case of children, where it is almost impossible to prevent the contact of the dressings with the urine, photoxyline will be found especially valuable. In laparotomy this form of dressing will suffice by itself, and will protect the abdominal wound in the most efficient manner.

Acute Infectious Pharyngitis.—The above term, which should be supplemented by the word "primary," is used by Professor Senator to indicate a rare, and "perhaps always fatal," form of pharyngitis, not hitherto described in text-books of medicine. Two examples had occurred within the last few months, and a study of similar cases had revealed three more as having occurred within the last twelve years. In all these cases, reported at a meeting of the Berlin Medical Society, the disease affected previously healthy persons, without any apparent cause, and ran an acute course, ending in death in a few days. It began with cervical pains and dysphagia, accompanied by fever, often moderate; then followed hoarseness, or loss of voice, and dyspnœa; finally, the sensorium was affected, and death quickly ensued. The chief anatomical sign found *post mortem* was diffuse purulent infiltration of the deeper tissues of the pharyngeal mucous membrane, the inflammation extending to the trachea and glands of the neck, and secondarily to other parts, especially the gastric mucous membrane. Senator is of opinion that many cases hitherto regarded as examples of acute œdema of the larynx are in reality cases of the above disease.

Notably in a case of Cruveilhier's the pharynx was affected for a day or two before the larynx. The very rare "typical œdematous laryngitis," mentioned by Sir Morell Mackenzie as of septic origin, is also claimed as in all probability affording an example of the above diseases. The spleen was generally enlarged in Senator's case, and the kidneys, as a rule, showed parenchymatous inflammation. A peculiar exanthem appeared in one case. The blood removed both before and after death had been carefully examined, but no specific micro-organisms had revealed themselves in attempted cultivations, injections of which, as also of fresh blood, had been harmless in rabbits. The streptococcus of Friedländer (erysipelas coccus) was certainly absent. In the discussion which followed, Dr. Guttman argued that the cases were probably erysipelatous in spite of the above fact. Virchow leaned to Guttman's opinion, but also described other pharyngeal diseases which might mislead, especially metastatic abscesses in puerperal fever, suppurative pharyngitis accompanying acute gastritis, and, in one case, mediastinitis. But Senator urged in his reply that there was no abscess in any of his cases, but a diffuse purulent infiltration always beginning in the pharynx. The cause was absolutely unknown to him at present, but the system was very rapidly affected in a characteristic manner, and tracheotomy was of no avail. He had no doubt that a study of the subject, as revealed in hospital records, would reveal numerous examples of this disease overlooked under the title of "acute œdema of the larynx."—*British Medical Journal.*

THE CHANGES OF THE SPINAL CORD AFTER TEMPORARY OCCLUSION OF THE ABDOMINAL AORTA.—The Vienna correspondent of the *Medical Press* writes as follows concerning this subject: "At a meeting of the Verein deutscher Aertze, in Prague, Dr. Singer read a paper in which he said that he had imitated the experiments of Ehrlich and Brieger on the changes of the spinal cord after one hour's occlusion of the abdominal aorta (Stenson's experiment), for testing the results which had been obtained by those authors. The results at which Dr. Singer had arrived were the following: Twenty-four hours after compression of the abdominal aorta granular degeneration of the multipolar ganglion cells occurred, but no other change in the white and gray matter could be proved. After the lapse of eight days the cells of the anterior horns (cornua anteriora), as well as the plexus of the fibres of the anterior horns, had disappeared, and the secondary degeneration as above mentioned became more distinct. The funiculi posteriores, the spinal ganglia, and the posterior roots remained normal. After four weeks, shrinking of the whole transverse section of the gray matter, total degeneration of the anterior roots, and secondary degeneration of the whole transverse section of the 'funiculi anteriores,' except a narrow zone on the interior surface of these funiculi, and the posterior periphery of the lateral funiculi, supervened. Both these zones, however, were not to be identified with those regions which had been described by Ehrlich and Brieger. The complete disappearance of the anterior roots and the fibrillar plexus of the cornua anteriores made it possible to prosecute the course of the posterior roots in the gray matter with a particular facility."

THE TREATMENT OF URETHRAL STRICTURE BY RAPID DILATATION.—At a recent meeting of the Leeds and West Riding Medico-chirurgical Society (*The British Medical Journal*), Mr. Mayo Robson remarked that the rapid dilatation of stricture by means of Lister's graduated metal bougies—either used immediately, dilating at once up to No. 13 or 14, or, if the smallest metal instrument could not be passed, employing the same method after a fine filiform bougie had been left in for forty-eight hours—was in his experience a safe and efficient method of treatment. In some cases he had injected a solution of cocaine into the urethra before dilating, but in only one instance had he employed a general anæsthetic. In two cases of extreme distention of the bladder, where no instrument could be passed, the bladder had been aspirated several times, and then it had been possible to pass a fine bougie and to dilate. Mr. Robson related selections from fifty difficult cases thus treated, and remarked that if this method were adopted, cutting operations would be required but very occasionally—that is, internal urethrotomy in very resistant strictures, and external in cases of extensive fistulæ, or abscess, or extravasation. He always advised his patients to pass a No. 9 or 10 elastic bougie once a week. He had treated many other cases than those related, but had never seen any serious symptoms follow.

THE THERAPEUTIC PROPERTIES OF BROMIDE OF IRON.—Dr. Heequet states that bromide of iron possesses in the highest degree all the renovating properties of ferruginous medicines, and exercises, besides, a powerful sedative action upon the nervous system, diminishing, like other bromides, the after-sensibility. Hence it becomes a valuable remedy in various forms of anæmia, as it calms without depressing, and invigorates without excitement. From the year 1869 to 1887 Dr. Heequet has prescribed the bromide of iron in chlorosis, chloro-anæmia, leucorrhœa, amenorrhœa, and hysteria, with favorable results. In conjunction with Dr. Vacossin, the author had observed beneficial results from the use of this medicine in diseases of the heart, in phthisis, diabetes, and epilepsy. Its beneficial influence over spermatorrhœa is also affirmed by the author.—*L'Union Médicale.*

REMOVAL OF A PORTION OF THE LIVER.—Langenbuch has reported the successful removal of a constricted portion of the liver weighing about a pound (*The American Journal of the Medical Sciences*). Owing to its hinglike attachment to the body of the gland, and the congestive hyperplasia due to impeded circulation, it was both heavy and movable, causing intolerable distress, especially during the dorsal decubitus. The diagnosis was made by exploratory incision. The attachment was ligated in sections and the constricted portion removed. Symptoms of internal hemorrhage occurring the same evening, the abdominal cavity was reopened, the bleeding checked, the blood removed by sponging, and the wound closed. Healing was prompt, but ascites developed shortly, accompanied by some general œdema. The abdomen was twice tapped, and the patient fully recovered without further mishap. Langenbuch holds this to be the first case in which a large portion of the human liver has been removed by excision.

THE LEADING OPHTHALMOLOGISTS OF PARIS are all, with one exception, foreigners. Dr. Abadie is a Frenchman, Dr. Panas a Greek, Landolt a Swiss, Galeazowski a Pole, De Welcker a German, and Meyer a German. Landolt is the only one who, in operating for cataract, still uses iridectomy. Dr. L. is in the habit of occasionally making preparatory iridectomy for the extraction of cataract, and in cases of long duration frequently operates when the patient has considerable vision. The old idea of waiting until the patient is blind before the operation is made is about exploded. Dr. De Welcker operates by electric light. Dr. Panas always washes out the anterior chamber with a borated solution after extracting cataract. He makes the extraction without iridectomy and with most beautiful results, making, perhaps, the prettiest operation of extraction of any man that can be witnessed in all Europe, this being his particular *forte* as operator. Prof. Panas is the only oculist who holds a public clinique, his being a government institution, although all the other oculists have students following them, and the advantages with them are equally good as at the Hôtel Dieu.

PROFESSOR MÜNTER, upon the strength of his personal experience, recommends a daily excursion of three or four hours' duration upon the water as affording a remedy of the greatest value in certain cases of asthma. He regards it as very useful also in anæmia, and remarks upon the longevity and excellent health of seafaring people as confirmatory of his experience.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, June 9, 1888.

THE DOCTORS' MONTH.

THE month of June appears to be a particular favorite with doctors, or, more especially, with doctors' conventions. A third or more of our State Societies meet at this delectable time. The late Mr. William Cullen Bryant wanted to die, or at least to be buried, which would amount to the same thing, in June. Perhaps it may be some subtle instinct that June is a good month to die in which leads doctors to leave their patients and hurry away to the scientific convivialities of their annual State Society meetings. Or June may be perhaps for other reasons looked upon as a pre-eminently medical month. The sun is at that time leaving the obstetrically interesting sign of the Twins, and entering that permanent field of medical investigation, the Cancer. Besides this, our own Mugwump poet has said that,

> "Then heaven tries the earth if it be in tune,
> And over it softly her warm ear lays;"

thus performing the strictly technical and medical act of auscultation, and antedating Louis and Läennec by thousands of years.

Decidedly reason, astronomy, poetry, and custom make June the doctors' month. We trust that, in grateful recognition of the fact, this favored subdivision of time will treat the coming doctors' conventions with copious drafts of sunshine, together with soft and perfumed breezes, tempered to the point which promotes appetite and renders the assuaging of thirst with innocuous drinks a rational pleasure.

TRANSPLANTATION OF A NERVE FROM THE RABBIT TO MAN.

A PRELIMINARY account of the novel operation of transplanting a nerve from a rabbit to a man has been given by the Vienna correspondent of the *British Medical Journal.* The operation was done by Dr. Gersung, an assistant of Professor Billroth's, and the patient is Professor Fleischl. Sixteen years ago Professor Fleischl received a wound at a post-mortem examination, which resulted in inflammation of the right hand and arm, and, finally, gangrene of the terminal phalanx of the thumb, which was amputated. Neuromata developed, attended with great pain, and the branches of the radial and median nerves were successively resected until the thumb and nearly all the fore-finger became anæsthetic. New neuromata continued to develop, however, and the pains became so intense that the patient wished to undergo another operation, in order to procure at least temporary relief. Accordingly, the following operation was performed: On March 4th the patient was put under the influence of chloroform, and the neuroma, which was situated behind the volar carpal ligament, was excised, the nerve being cut through behind the neuroma. The peripheral nerve-stumps of the two digital branches above mentioned were then sought for. A rabbit was now killed, and as long a piece as possible of the sciatic nerve of the animal, with the two branches into which it becomes divided, was dissected from it (the animal still presenting voluntary contractions). The sciatic nerve was afterward inserted into the space between the central stump of the median nerve and its digital branches; the central end of the sciatic nerve was sutured to the connective tissue, which covered the median nerve, and the two branches were sutured to the digital branches of the median nerve—the portion of nerve, measuring about six centimètres, which was deficient being thus made up. After the operation severe pain persisted for some hours, but then entirely subsided. Healing took place by first intention. As two months have now elapsed since the date of operation and the pain has not returned, it may be hoped that the favorable result will become a permanent one. Sensibility, moreover, is becoming re-established in the part. Dr. Gersung has postponed the publication of the case, because he wished to observe whether complete sensibility would return; he hopes with confidence that this will be the case. The ultimate result will be awaited with great interest; for, if it be as favorable as now appears probable, Dr. Gersung's recommendation that the operation should be given an extended trial will doubtless be widely acted on.

DERMEPENTHESIS.

DR. G. F. CADOGAN-MASTERMAN thinks that the term human or animal skin-grafting is somewhat awkward, and suggests as a substitute the pentasyllabic mononym given above. Without attempting to discuss the question whether "dermepenthesis" is a term of greater vocal elegance or of more agreeable prosodical possibilities than "skin-grafting," we can at least speak with praise of a very interesting and practical contribution to this subject which Dr. Cadogan-Masterman has made. He says: "It is to be regretted that the practice of skin-grafting, which gives such excellent results, should be attended with so many inconveniences. The donor, as I have often personally experienced, finds the momentary 'snip rather painful, and the little sores are some days in healing. A sensitive patient does not like giving the grafts himself, and his friends, although eager enough to provide them the first time, are seldom willing to repeat the donation, and there is the danger, if alien skin be used, of conveying local or even constitutional disease. And if the surface to be covered be large, the process is extremely tedious, and often disappointing. Frog's skin has been used as a substitute, but these amphibia are so repulsive to most people, and especially so to women and children, that after two trials I gave it up, and the more so because it utterly failed in both cases, and sought for some other source which would avoid the inconveniences, and yet be generally available, and I believe I have found it in the skin of the rabbit."

He takes the skin of a young wild rabbit, using that from the abdomen. The animal is killed by a sharp blow on the back of the neck, and the necessary graft immediately dissected off and applied to the antiseptically clean granulating surface. He uses pieces as large as two inches in diameter. These are removed by sterilized instruments.

Not a moment must be lost in the transferrence, and the graft must be kept moist, not sodden, thoroughly warm, under gentle, equable pressure, and not disturbed for forty-eight hours. There is no need to remove the fur, it comes away in every case within a few days.

Dr. Masterman does not think that the skin is actually engrafted. The skin proper obviously does not grow, though possibly the fascia beneath may do so. But in some way it promotes the development of the granulation cells into integument.

The advantages of the method as summed up are:

"That the patient is spared all pain himself as well as seeing it inflicted upon others; that in place of minute centres of new growth being established, surfaces up to at least two inches in diameter may be covered at once; that in the case of burns this rapid tegumentation not only prevents much suffering, but greatly reduces the probability of subsequent contraction; that alien skin may be unhesitatingly employed; and that the duration of healing is reduced to a minimum."

As young wild rabbits are not so plentiful in America as in Stourport, where Dr. Masterman lives, our readers may be interested in the utilization of the rooster in the process of dermepenthesis. Dr. F. Altramirano, a Mexican physician, mentions (*El Observado Médico-Lancet*) a case in which he successfully employed the gills of a cock. Fragments were cut off, these were split, divided into ten pieces, and the raw surfaces applied to a freshened portion of the ulcer. A carbolized dressing was then bandaged on, the whole being constantly moistened. On the third day, on the dressing being removed, all the ten fragments were found organically adherent. A number of new grafts were then applied, cut from the comb, the gills, and the skin of the back of a chicken. None of these were successful. The cock's gills were again resorted to, and four more fragments successfully grafted. A fresh set of grafts were prepared from this source; but all the cellular tissue was cut or scraped away, in some cases little but the epidermis being left, in others the edges being bevelled, so that the epidermis was in direct contact with the raw surface of the ulcer. This set of grafts proved very unsuccessful, so that Dr. Altramirano was led to the conclusion that no advantage is gained by applying the epidermic layer immediately in contact with the surface of the ulcer.

WHAT IS THE BEST THERMOMETER FOR THE GENERAL PRACTITIONER TO USE?

If there are one hundred thousand physicians in this country, there are certainly twice that number of clinical thermometers, taking into account the number of anxious mothers and introspective adults who have been indiscreetly supplied with them. The story that the clinical thermometer tells, therefore, ought to be a correct one; but if we may judge by some recent experiments made by Dr. Makrocki, of Potsdam (*Deut. Mediz.-Zeitung*), this is not often the case.

There have lately come into use two new forms of thermometers, the minute-thermometer, a very small instrument modelled after the ordinary maximal thermometer, and the avitreous thermometer, an instrument made like a watch, very sensitive to temperature changes, but not maximal in its readings.

Dr. Makrocki made many experiments upon healthy and febrile patients with these new, as well as with the older, forms of thermometers. He found that the so-called minute-thermometers never in a single instance reached their maximum in one minute, and not often in two minutes.

The avitreous thermometer in six minutes only reached its maximum twice in twenty trials. The errors in the two thermometers ranged between one-fourth and one-third of a degree Centigrade. Tests made with ordinary clinical thermometers, and with ordinary non-maximal thermometers, showed similar, but slighter, degrees of variation.

Dr. Makrocki thinks, therefore, that the best thermometer for common use is the ordinary one, or preferably a thermometer without a maximal index, but long enough (fifteen centimetres) for the reading to be taken while the instrument is still under the arm or in the mouth.

THE LEGAL RESPONSIBILITY OF THE OBSTETRICIAN FOR PUERPERAL FEVER.

Times have greatly changed since Dr. Oliver Wendell Holmes wrote his classical essays, in order to prove to a doubting profession that puerperal fever was in any way a contagious disease. This question has not only long been settled, but a sentiment is growing that midwives and the general practitioner should be held in a measure legally responsible for the occurrence of this complication. At a recent meeting of the Chicago Medico-legal Society this subject was broached, and an editorial in the *Journal of the American Medical Association* discusses it further, giving at the same time the recently expressed views of Professor H. Fritsch, as to puerperal infection *in foro*.

The tendency of modern pathology is to look upon puerperal fever as puerperal sepsis. There is by no means, however, a general agreement that infection enters always by the genital tract, and never by the lungs or digestive organs.

The innumerable accidents and complications of the puerperal state, to say nothing of the peculiar susceptibility, or lack of vital resistance, which makes some patients so easily succumb to even feeble pathogenic agents, must be taken into account. And it can be only in very rare cases that the responsibility of infection can be directly traced to the midwife. Professor Fritsch says:

"A question that the judge addresses to the expert is the following: 'Do the operations or the omissions of the midwife stand in causal relation to the death of this puerpera?'" This question cannot be answered simply by 'yes' or 'no.' At most, only the scientific conviction can be expressed that a causal nexus does exist. But the expert is never in a position to swear that except for the operations or the omissions of the midwife the life of the puerpera would without doubt have been preserved. Fatal peritonitis may occur in consequence of the rupture of a pyosalpinx during the course of an otherwise normal labor; the possibility of purely accidental infection, in which the midwife plays no part, must be admitted.

"The modality of the infection must be clearly established before the causal nexus can be looked upon as demonstrated. To establish the modality of infection, three data are to be supplied:

"1. The source of the material of infection must be made clear.

"2. The omission of disinfection must be demonstrated.

"3. Any cause of death other than the puerperal disease must be eliminated."

This is a fair statement of the case, and it is evident that the fixation of legal responsibility upon a midwife or physician will, for a long time, be a difficult thing to do. An agitation of the subject, however, will be of benefit in calling attention to the importance of observing the ordinary methods of disinfection in the lying-in room, and especially of the importance of personal disinfection while attending other patients who have infectious or suppurative disorders.

News of the Week.

An English Contemporary in the *Medical Press* publishes the following: "The death is announced of Dr. Clemens Lozier, of the New York Medical College and Hospital for Women, from *angina pectoris*. The deceased lady was the pioneer of the movement in America for the medical education of women. She practised medicine for over thirty years, and had been Dean of the New York College ever since its establishment in 1863." Our esteemed contemporary will probably shiver in a double-leaded rigor when it learns that Dr. Lozier was a rank homœopath, and with all respect to her memory a demoralizer rather than pioneer in sound medical education. It is part of history that the Drs. Blackwell were the pioneers of medical education for women in this country.

Militant Gynecologists and Orthopedic Surgeons.—"Can anybody explain," says the *Medical Press*, "why gynecologists should be such irascible people when they meet together to discuss points in practice? That they are so is a matter which was forced on our notice at a recent meeting. Judging from the experience of that evening, it is quite sufficient for one man to allege highly successful results from one method of treatment for the others to fall upon him and lapidate him without even allowing him the time to mutter a benediction on his persecutors. There are one or two recognized camps the individual members of which insist upon, and receive—but not always—a certain amount of consideration. Outside these charmed circles all is assumed to be vanity. Mr. Tait only forced his way into the cœnaculum, thanks to a certain vigor in his build and arguments, backed up by a voice which it would be difficult to effectually muffle. Others, of less aggressive material, collapse, subside, and are seen no more for a time. The only other people whose ways resemble those of the gynecologists to whom we allude, are the orthopedic surgeons. They, too, think nothing of accusing rivals of 'faking' their photographs or drawings to exaggerate the importance of the results obtained, and the differences of opinion among them are at least as marked and irreconcilable as among the women doctors." We would venture to suggest that the trouble lies in the fact that the special societies are young and the specialty immature. Quarrelling is a characteristic of callowness and imperfect evolution. It is the experience in this country that after a time special societies become as peaceful as those of a general character.

E Pluribus Unum.—The four medical schools of Minneapolis and St. Paul have been discontinued, and in their place is the Medical Department of the Minnesota State University. The course is a three years one, and is graded. There is a regular and a homœopathic faculty.

Menstruation has been observed to occur in a child one year old, in a child of four, and recently Kornfeld reports a case of menstruation in a child of three who had been subjected to sexual irritation.

Statue to a Medical Legislator.—At Milan, on the 30th ult., a statue in bronze, the work of the great sculptor Vela, was erected to Agostino Bertani, who, as surgeon, medical legislator, and patriot, deserved so well of Italy. Statesmen of every political school were present at the ceremony, and the Syndic of Milan, the Senator Negri, dwelt in a strain of hearty, unaffected eloquence on the high aims, the pure philanthropy, and the scientific grasp of the man they commemorated. To sacrifice a brilliant professional career in order to act as medical head to the army of independence under Garibaldi; to keep abreast of the professional scholarship and practice of the day while tending the sick and wounded of the Italian "Risorgimento;" to dedicate the evening of a stormy existence to the moulding and maturing of a great body of sanitary regulations tending to lighten and lengthen the lives which he had helped to civic freedom—such was the peculiar merit of Bertani. He lived just long enough to complete his Hygienic Code, bequeathing the exposition and indication of its articles to his political friends; and it was a happy coincidence that scarcely was Vela's fine presentation of his Stoic figure and keenly intellectual countenance uncovered when the Italian Senate put the seal of its approval to his "Codice Sanitário."—*The Lancet.*

Papillomatous Tumor of the Bladder and the Electro-cystoscope.—Dr. F. N. Otis, of this city, writes: "The 'Case of Papillomatous Tumor of the Bladder,' published in The Medical Record of May 5, 1888, I claimed as the first of the kind in this country detected by means of the electro-cystoscope and confirmed through subsequent operation. Until seeing the note of Dr. Otis K. Newell, of Boston, in your last issue, I was not aware that he had previously published an account of two similar cases in the *Boston Medical and Surgical Journal* of December 1, 1877. I hasten to concede to Dr. Newell, with my congratulations, the priority, to whom it thus clearly is shown to belong." Bearing upon the same subject, we call attention to the following note from Dr. Clinton Cushing, of San Francisco: "In The Medical Record of May 5th, Dr. Otis reports a case of papilloma of the bladder diagnosed by means of the cystoscope, and thinks it the first case of the kind so diagnosed in this country." Dr. Cushing sends us a copy of the *Pacific Medical and Surgical Journal*, showing that this was first done in San Francisco, last November.

Pancreatic Diabetes. — M. Lancereaux describes cases in which occur sudden loss of strength, great thirst, polyphagia, wasting, and loss of sexual desire, with at first diurnal and later also nocturnal polyuria. Phthisis developed at the apices of both lungs. Death occurred with a low axillary temperature. Nothing was found at the necropsy except atrophy of the pancreas; the pancreatic duct was narrowed in one part of its length, and completely obliterated at another; there were no calculi, and the organ weighed thirty-five grammes. Violent epigastric pain is remarked upon; the polyuria is nearly always related to the quantity of liquid ingested. Atrophy of the pancreas has been described as due to sclerosis, calculi, obliteration of the duct, and steatosis. Some observers have thought that destruction of the pancreas is perhaps a cause of diabetes. Several types of diabetes are recognized by Lancereaux: pancreatic or lean diabetes, with very rapid progress; fatty or constitutional diabetes, which is more commonly hereditary, has a slow course, and presents no pancreatic lesions; traumatic or nervous diabetes, due to shock of some kind, and generally slight and curable. We do not give these views because we endorse them, but because they are suggestive speculations.—*The Lancet.*

New York Post-graduate Medical School and Hospital.—At the meeting of the Board of Trustees of the New York Post-graduate Medical School, held on Monday, May 28, 1888, the following appointments were made in the Faculty: Abraham Jacobi, M.D., Professor of Diseases of Children; Robert F. Weir, M.D., Professor of Clinical Surgery; Peter A. Callan, M.D., Professor of Diseases of the Eye; L. Bolton Bangs, M.D., Professor of Diseases of the Genito-urinary Organs and Venereal Diseases; Joseph E. Winters, M.D., Professor of Diseases of Children; O. B. Douglass, M.D., Professor of Diseases of the Nose and Throat. Dr. William A. Hammond, being about to remove to Washington, has resigned his position as Professor of Mental and Nervous Diseases. Dr. Hammond was one of the founders of the school.

June Meetings of the State Medical Societies. –The Indiana State Medical Society meets at Indianapolis June 5th and 6th. The Delaware Medical Society, at Georgetown, June 8th. The Massachusetts State Society, at Boston, June 12th. The Michigan Medical Society, at Detroit, June 14th. The Oregon Medical Society, at Portland, June 12th. The Ohio State Society, at Columbus, June 13th. The Colorado State Society, at Colorado Springs, June 19th. The New Hampshire State Society, at Concord, June 19th. The Vermont State Society, at St. Alban's, June 28th. The Maine Medical Association holds its thirty-sixth annual meeting at Portland, June 12th, 13th, and 14th.

The American Physiological Society, which holds its first annual meeting in Washington, D. C., September 18th, 19th, and 20th, announces the following preliminary list of papers: "On the Therapeutic and Forensic Aspects of Hypnotism," Dr. G. Stanley Hall; "On Enzymes comparable with Papain, found in Certain Fruits of Temperate Climates," Dr. G. L. Goodale; "On the Knee-jerk Phenomena," Dr. H. P. Bowditch; "On the Nature of the Knee-jerk," Dr. W. P. Lombard; "On the Effects of Varying Rates of Nerve Stimulation upon the Character of Muscular Movements," Dr. H. P. Bowditch; "Growth and Death," Dr. C. S. Minot; "The Cells of the Cortex Cerebri," Dr. C. S. Minot; "The Uterus during Gestation," Dr. C. S. Minot; "On the Temperature Limits of the Vitality of the Mammalian Heart," Dr. H. N. Martin; "Histological Changes Produced in Ganglion Cells by Stimulation," Dr. H. H. Donaldson; "On Fever," Dr. Isaac Ott; "On the Distribution of Bacteria in Drinking-waters and Public Buildings," Dr. W. T. Sedgwick; "The Origin and Regeneration of Blood-corpuscles," Dr. W. H. Howell; "On Certain Ptomaïnes," Dr. W. C. Vaughan; "On the Physiological Action of the Uranium Salts," Dr. R. H. Chittenden; "On Myoscin and Certain of its Decomposition Products," Dr. R. H. Chittenden; "On the Influence of Acetanilide or Antifebrin on Proteid Metabolism," Dr. R. H. Chittenden.

A British Laryngological and Rhinological Society is to be organized on June 29th. Great Britain now has obstetrical, gynecological, ophthalmological, neurological, and medico-psychological societies, and the work of specialization progresses.

The Late Dr. Edward S. Dunster.—At the last meeting of the Wayne County Medical Society the following preamble and resolutions were adopted:

Whereas, It has pleased Almighty God to remove from his earthly sphere our worthy companion and professional brother, Dr. Edward S. Dunster, of Ann Arbor, Mich.; therefore, be it

Resolved, That we as a society tender to his grief-stricken family our heartfelt sympathies. To the profession before whom he has appeared so eloquent in address, logical in his reasoning, honest in his opinions, which he maintained with his utmost power, and, above all, his loyalty to the profession he so dearly loved, and for whose best interests he so long and sedulously labored, we can only say that the loss of one so eminent can illy be told in resolutions or words; in this the heart alone can speak. In obedience to the Almighty power that rules the destinies of men, that can build up or cast down, that can give or take away, we bow in humble submission about the bier of our departed friend, fellow-member, and professional brother. Be it further

Resolved, That our Secretary transmit a copy of these resolutions to the press and to the family.

Wm. Brodie, M.D.,
Hal C. Wyman, M.D.,
C. Henri Leonard, M.D.,
Committee.

Office of the Secretary of the Wayne County Medical Society, Detroit, May 4, 1888.

The Recent Death of a Harvard Student from Opium-smoking has created a sensation, not only because of the tragic death of a promising young man, but because it reveals the fact that opium-smoking is one of the dissipations which certain fast young men consider it smart to indulge in.

Dr. A. R. Davidson, of Buffalo, N. Y., Professor of Medical Chemistry in the Niagara University, died on May 25th, after a brief illness. Dr. Davidson was forty-three years of age at the time of his death. He had been one of the editors of the *Buffalo Medical and Surgical Journal*, and was widely esteemed, and successful as an analyst, chemist, and practising physician.

Merck's Amorphous Sulphate of Hyoscyamine.—Dr. Charles Rice, of this city, writes: "On page 608 of last Medical Record, in a note by Dr. W. A. McCorn on the use of hyoscyamine, there occurs an error, probably by the compositor misreading the author's manuscript. It should read 'Merck's amorphous sulphate,' instead of 'Ulrich's amorphous sulphate.' The reason why Merck's *amorphous* sulphate is preferred is this, that a large percentage of this consists of hyoscine, the real hypnotic of hyoscyamus, which it is a difficult and expensive operation to isolate in a pure state."

The Rabbit Plague.—It is reported that the conference upon the means of dealing with the rabbit plague in Australia has resulted in the selection of an island where M. Pasteur's and other methods of extirpation will be put to a thorough trial.

An Antidote to Serpent Venom.—Dr. H. C. Yarrow, Curator of Reptiles in the National Museum, announces (*Forest and Stream*, May 10th, *et seq.*) that he has discovered the fluid extract of jaborandi to be an efficient antidote to serpent venom. This applies to mammals, but not to birds.

The Texas Medical College, first organized in 1864, reorganized in 1873, and deceased, it was supposed, in 1881, has been revived at Galveston. A Board of Trustees and a Medical Faculty have been created, a building secured, some money subscribed, and the institution will open in the fall. We do not recognize any familiar names among the Faculty, and infer that the new college is the result of local enterprise. It is not endowed; and we can but regard it as a serious injury to the medical profession to have more unendowed medical colleges organized in this country.

Prescriptions in the Vernacular.—In illustration of the French practice of not writing prescriptions in Latin, the *Journal of the American Medical Association* says: "In one of Simon's prescriptions for laryngismus stridulus we find *eau de tilleul* called for. *Tilleul* means a lime-tree, a linden. Turning to this word in a medical dictionary, we are referred to *tilia*, and find that the flowers of *Tilia Europœa* 'have been supposed to possess anodyne and anti-spasmodic virtues.' Under *Tilia Americana* we find that 'a mucilage, prepared by macerating the inner bark in cold water, has been applied in burns.' Thus far we have no clew as to what *eau de tilleul* is. Again, we find a prescription calling for *carbonato de litina*; we can only guess that carbonate of lithium is what is wanted, for the best Spanish dictionary does not give *litina*."

The Law Regarding Puerperal Fever and Midwives, enacted in Saxony three years ago, is as follows: "When a lying-in woman delivered by a midwife becomes the subject of puerperal fever, the midwife is not permitted to attend the sick woman any longer. Neither can another midwife undertake the further care of the woman sick with puerperal fever. The midwife is not permitted to undertake the management of another case of labor within a period of five days, or even longer, reckoned by the district physician from the day of her last visit to the sick woman." The last sentence is a faulty one, since it is not time, but proper modes of disinfection, which render safe a person who has come in contact with contagious disease.

Lanolin in Cuts and Burns.—A recent article in the *Pharmaceutische Rundschau* (No. 3, March, 1888) states that experience has shown that lanolin is an excellent dressing for cuts and burns. Professor B. Fränkel finds that it prevents the formation of scabs, and that burns under this treatment do not desquamate so much as under most others. In cases where it is desired to irrigate a wound in order to reduce heat and irritation, lanolin may still be applied, as it is not readily washed away. If a small wound is immediately dressed with this ointment basis, hemorrhage is stopped.—*British Med. Journal.*

Capital Punishment by Electricity.—The bill to abolish the gallows and to execute criminals by electricity has become a law, and New York will have the credit, if it is a credit, of being the first government to inflict capital punishment in this way.

Reviews and Notices of Books.

The Year-book of Treatment for 1887. A Critical Review for Practitioners of Medicine and Surgery. Philadelphia: Lea Brothers & Co. 1888.

This "Year-book" for 1887 is published after the same plan as those of preceding years, a plan which leaves little room for improvement. The vast amount of medical literature for the year ending September 30, 1887, has been thoroughly sifted, the essential facts being grouped together in a series of short notices covering all the more important points in practical medicine and surgery. The book is a very useful and handy manual of reference for anyone desirous of keeping posted on all the advances made in the healing art.

The New York Medical Journal Visiting List and Complete Pocket Account Book. New York: D. Appleton & Co.

The second part of the title of this book explains more fully its nature than does the first. It is not, strictly speaking, a visiting list, as that term is usually employed, since there is no room in it for a memorandum of engagements. It is rather an account book, and a very handy and convenient one it appears to be. Each page contains the accounts of three persons, showing the number of visits made and the amount charged or collected during the month. The same space will serve for the records for several months, when the visits are few and were not made on the same days in the different months. The book is not dated, and it may therefore be begun at any time.

Thérapeutique Chirurgicale Contemporaine. Par Albert Heydenreich. Paris: G. Steinheil. 1888. Tome II., pp. 304.

This work gives a critical summary of modern surgical therapeutics, including the technique of antisepsis and of difficult and capital operations.

Leçons de Clinique Chirurgicale, fontes à l'Hôpital Saint-André (de Bordeaux). Par le Dr. André Boursier, Professeur Agrégé à la Faculté de Médecine, chargé du Cours de Clinique Chirurgicale; Chirurgien des Hôpitaux. Paris: G. Steinheil. 1887.

This work comprises a series of fifteen lectures delivered by Dr. Boursier in the surgical clinic of the Hospital of Saint-André at Bordeaux. The subjects treated of are miscellaneous in character, but are well selected, and the book shows evidence of careful revision. The author's method of dealing with his material is felicitous, and those who had the pleasure of listening to him are to be congratulated on their good fortune. The book is both readable and instructive.

Forms of Systematically Recording Observations and Results of Treatment in Affections of the Throat and Nose, including adjacent associated areas. By Scanes Spicer, M.D., B. Sc. Lond. London: H. K. Lewis, 1887.

These are blank forms for recording the histories of cases of aural, nasal, and laryngeal affections. They are especially useful for students who have not yet learned what to look for and how to conduct their examinations. Outline-drawings of the parts, for the purpose of sketching the lesions, accompany the blanks.

Similia Similibus Curantur? Addressed to the Medical Profession. By Charles S. Mack, M.D. Boston: Otis Clapp & Son. 1888.

In this brochure the author discusses the question of homœopathic treatment of disease, and whether similars do or do not cure. He comes to the conclusion that there is no positive proof that similars do cure or that they do not cure, yet he is disposed to try to cure with them. We wish him all success in his attempts to cure, by whatever means.

Revue des Sciences Médicales en France et à l'Étranger, Recueil trimestriel analytique, critique et bibliographique. Dirigée par G. Hayen. Paris: G. Masson.

This well-known review, now in its sixteenth year, needs no special commendation from us. It gives one of the best and most complete summaries of medical progress.

Jahresberichte über die Fortschritte der Anatomie und Physiologie. Herausgegeben von Dr. L. Hermann und Dr. G. Schwalbe. Band L. Literatur 1886. I. Abtheilung. Anatomie in Entwickelungsgeschichte. Leipzic: Verlag von F. C. Vogel. 1887.

The present volume contains six hundred and fifty pages, and comprises, in a convenient form, a critical review of the anatomical and embryological literature of 1886.

Index of Materia Medica, with Prescription Writing, including Practical Exercises. By Charles H. May, M.D., and Charles F. Mason, M.D. New York: William Wood & Co. 1887.

This is one of the series of convenient little volumes which are intended to refresh the memories of students, and which are often of convenience to full-fledged doctors, known as Wood's Pocket Manuals. It maintains the standard of excellence set by its predecessors.

A Manual of Medical Jurisprudence, for the Use of Students at Law and of Medicine. By Marshall D. Ewell, M.D., LL.D., Professor Common Law in Union College Law School, Chicago. 12mo, pp. 396. Boston: Little, Brown & Co. 1887.

It is very properly said by the distinguished author of this manual that most works in medical jurisprudence are very voluminous, and are not adapted for the study of the abstract principles of the science. To supply this need, he has striven to enumerate certain general facts which serve as a very useful and practical groundwork for future and more elaborate study. It will be found to be a very useful and instructive handbook for the lawyer as well as the doctor. The subjects are well arranged and the salient points of each are well brought out.

The Transactions of the Academy of Medicine in Ireland. Vol. V. Edited by William Thomson, M.A., F.R.C.S. 8vo, pp. 366. Dublin: Fannin & Co. 1887.

The Transactions of this Society are models of their kind, and prove the members to be active, practical, progressive, and working men. The present volume contains papers of value in every department of medicine and surgery, and forms a valuable addition to the working library of every student and practitioner. The typographical execution is everything that could be desired, while the illustrations, of which there are several, are excellent.

Treatment of Hemorrhoids by Injection of Carbolic Acid. By Silas T. Yount, M.D., etc. 12mo, pp. 102. Lafayette, Ind.: The Echo Music Co. 1888.

This manual is rather a prolix setting forth of the advantages of treating piles in the manner indicated. It contains nothing of practical value which is not found in any system of surgery. The author has invented a "speculum" for rectal diseases, and this small volume is a "second degree" in the well-trodden specialist path.

Chronic Metritis. By Georges Apostoli, M.D., Paris. 12mo, pp. 117. Detroit: George S. Davis. 1888.

The full title is, "On a New Treatment of Chronic Metritis, and especially of Endometritis with Intra-uterine Chemical Galvano-cauterizations." The translator is Dr. A. Lapthorn Smith, of London, whose work has been creditably done. So much has been written, in medical journals of recent date, of Apostoli's views that we need not repeat them here. The whole subject is well summarized in these hundred pages.

Mechanical Massage. By George H. Taylor, M.D., New York. 12mo, pp. 173. New York: John B. Alden. 1888.

Mechanical massage is defined as "the principles and practice of remedial treatment by imparted motion." The author sets forth in plain language the advantages of the so-called "movement cure." He has practised it successfully in this city for many years, and his opinions are entitled to weight. After a general discussion of this therapeutic method, he speaks of its applicability to indigestion, nervous disorders, paralysis, rheumatism, and renal diseases. His ideas on "The Delusion of Tonics," as the heading of the last chapter reads, are open to criticism, but, on the whole, the book is sound in doctrine.

Obstetric Synopsis. By John S. Stewart, M.D., of the Medico-chirurgical Society of Philadelphia. 12mo, pp. 202. Philadelphia: F. A. Davis. 1888.

This volume is a condensation of the lectures delivered at the above institution in this department of medical study. It is not as large or as comprehensive as the well-known "King's Manual," but is clear and concise. The chapter on the development of the ovum is especially satisfactory. The Appendix contains the obstetrical nomenclature adopted by the Ninth International Congress. The judicious use of faced type for headings, and italics for important statements, gives the book a pleasing typographical appearance.

On the Wasting Diseases of Infants and Children. By Eustace Smith, M.D. Pp. 380. Fifth edition. Philadelphia: P. Blakiston, Son & Co. 1888.

Dr. Smith's valuable work is so well known to the profession that the fifth edition needs no commendatory remarks. The text has been somewhat revised, and some additions made, but the work is essentially the same as in the previous edition.

DISEASES OF THE SKIN: A Manual for Practitioners and Students. By W. ALLAN JAMIESON, M.D., Physician to Royal Infirmary, Edinburgh, etc. 8vo, pp. 646. Philadelphia: J. B. Lippincott Co. 1888.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By JOHN V. SHOEMAKER, M.D., Philadelphia. 8vo, pp. 633. New York: D. Appleton & Co. 1888.

THESE two companion volumes are able exponents of the present accepted knowledge of skin disease. The former is essentially an English work, confined to the treatment of cutaneous diseases endemic in the British isles. The latter is written from a somewhat more general stand-point, and bears intrinsic evidence of greater originality, especially in the line of therapeutics. Both are illustrated by wood-cuts and colored plates of a high order. In both the general classification of Hebra is adopted, though with some minor differences. We shall not be accused of over-patriotic zeal if we recommend Dr. Shoemaker's book as the preferable one for American physicians and students. His style is simplicity itself, and therein has he scored his greatest success over other authors we might name. An extensive formulary is embraced in the sixty pages following the text proper. As might be expected, the oleates receive prominent mention throughout the volume, which is the recorded experience of a practical-minded American physician.

RECTAL AND ANAL SURGERY, WITH A DESCRIPTION OF THE SECRET METHODS OF THE ITINERANTS. By E. WYLLIS ANDREWS, A.M., M.D. Pp. 111. Chicago: W. T. Keener. 1888.

To answer the questions, What are the best methods of diagnosis and treatment of rectal diseases, and what are the secret methods of the itinerants, and what is their value? is the object of the writer of this work. Many will differ from him, in some respects, in the way he answers the first question, while the attention which he has paid to the investigations of the "quack pill-doctors," and his *exposé* of them, and remarks upon them, will awaken general interest, and make the book one which the physician will be glad to see.

THE HYGIENE OF THE SKIN; OR, THE ART OF PREVENTING SKIN DISEASES. By A. RAVOGLI, M.D. Pp. 400. Cincinnati: Central Medical Publishing Co. 1888.

THIS book occupies the medium ground between a wholly scientific and professional work, and one addressed to the laity. It tends to bring together the specialist in dermatology and the adept in cosmetics. It blends with its descriptions of the skin historical details, practical directions, ancient receipts for hair-growing—withal a curious medley of information, some of which is interesting, some of which is practical, and much which is of doubtful utility.

DOCTOR AND PATIENT. By S. WEIR MITCHELL, M.D., LL.D. Pp. 177. Philadelphia: J. B. Lippincott Co. 1888.

DR. MITCHELL'S facile pen imparts an interest to whatever he may write, whether it relates to purely scientific subjects, or to fiction, or, as in this case, to the discussion of semi-medical subjects, which invite alike the attention of the physician and of the patient. These essays are, perhaps, more suggestive to the patient than to the doctor, yet they contain for the latter many valuable suggestions, which, if heeded, will go far to ensure the success which the writer of them has attained.

SIX HUNDRED MEDICAL DON'TS; OR, THE PHYSICIAN'S UTILITY ENHANCED. By FRED. C. VALENTINE, M.D. Pp. 144. New York: G. W. Dillingham. 1887.

WITH "Six Hundred Don'ts" to write, of all kinds and descriptions, it would not be surprising if the writer failed in some of them, in the words of the title of the book, "to enhance the physician's utility." In fact, it would be a brave doctor who would dare encounter a patient armed with these "Six Hundred Don'ts;" nevertheless, he might find in this armamentarium of prohibitions not a few which would prove useful to him in meeting that class of patients who are ready to pester the life out of a physician with questions as to what is healthy and what is not. In short, the book may prove no mean weapon both of offence and defence.

THE RECTUM AND ANUS: THEIR DISEASES AND TREATMENT. By CHARLES B. BALL, F.R.C.S.I. With fifty-four illustrations and four colored plates. Pp. 409. Philadelphia: Lea Brothers & Co.

THE writer has added a valuable text-book to those which have been written upon this subject. It is terse, well expressed, and practical. Not much can be said in praise of the lithographic plates with which the work is illustrated.

CLASSIFIED AND DESCRIPTIVE DIRECTORY TO THE CHARITABLE AND BENEFICENT INSTITUTIONS OF THE CITY OF NEW YORK. Pp. 227. New York: The Charity Organization Society. 1887.

THIS Directory, admirably executed and carried out, will prove of great use to the profession, since the doctor is constantly coming in contact with the poor and the afflicted, and constantly called upon to face the problem of relief for them.

A MANUAL OF THE PHYSICAL DIAGNOSIS OF THORACIC DISEASES. By E. DARWIN HUDSON, JR., A.M., M.D. William Wood & Co. 1887.

THIS work is the outcome of a smaller manual published by the author in 1885. At the time we paid a high compliment to the thoroughness and literary skill shown in the minor work. Of the present, we can only say that it has been amplified and more fully illustrated, and now most satisfactorily meets the needs of students and physicians who desire a complete modern manual of physical diagnosis.

The lamented author died before his work had been finally revised; but this revision has been satisfactorily performed by Dr. Laurence Johnson.

THE RULES OF ASEPTIC AND ANTISEPTIC SURGERY. A Practical Treatise for the Use of Students and the General Practitioner. By ARPAD G. GERSTER, M.D. New York: D. Appleton & Co. 1888.

THIS work is a timely publication that cannot fail to interest every surgeon who wishes reliable information on the subjects of antisepsis and asepsis. The author does not pretend to have written a systematic treatise on operative surgery. Nevertheless, all the more important surgical procedures are dealt with in such a way as to leave little room for improvement.

Two defects mar this otherwise highly instructive treatise. One is the unnecessary multiplication of cases from the author's own practice. The other is the introduction of photographic illustrations that are, for the most part, very imperfect as regards clearness of detail. The question whether the work would not have been improved had these illustrations been omitted, is one that naturally suggests itself. This is all the more to be regretted, as in all other respects the mechanical execution of the volume is simply excellent.

The author has wisely refrained from discussing the relative merits of the various systems of antisepticism now in vogue. He gives those methods with which he is personally most familiar, and at all times endeavors to inculcate principles, rather than to harp upon special methods of wound treatment.

In presenting to the English reader a complete, coherent, and often very enthusiastic account of modern aseptic surgery, the author has unquestionably earned the thanks of the profession. We predict for this volume a generous and appreciative reception by those to whom it is addressed.

Society Reports.

AMERICAN MEDICAL ASSOCIATION.

Thirty-ninth Annual Meeting, held in Cincinnati, O., May 8, 9, 10, *and* 11.

(Concluded from page 619.)

SECTION ON OBSTETRICS.

THURSDAY, MAY 10TH—THIRD DAY.

DR. WILLIAM H. WATHEN, of Louisville, read a paper on

ABDOMINAL SECTION IN EXTRA-UTERINE PREGNANCY.

Ten years ago he read a paper before the Kentucky State Medical Society on Cæsarean section, in which he suggested that the sac in extra-uterine pregnancy might be separated from the attachments by the proper use of ligatures. He had not then seen a similar suggestion, though Kiewisch and Stephen Rodgers had probably recommended this many years before. The idea was severely criticised at the time. The objection that the placenta might be so attached to the abdominal walls, intestines, or other structures as to prevent its removal, is more theoretical than practical; for such attachments are by no means constantly found in operations or post-mortem examinations. However, if the sac cannot be removed without incurring the risk of fatal hemorrhage, it may be left behind and partially resected and stitched in the abdominal wound with a drainage-tube in the lower angle of the incision. Nearly all gynecologists recommend the destruction of the fœtus with electricity before the fifth month, and before there has been a rupture of the vessels of the sac.

DR. C. R. REED, of Middleport, O., presented a communication entitled

THE EARLY REMOVAL OF ABDOMINAL CYSTIC TUMORS.

He reported a number of cases which were not unique, yet they taught the utter inefficiency of medication, and that the removal of the uterine tumor is the only hope of safety. Tapping raised false hopes, afforded but temporary relief, and complicated the operation for removal. A woman who has an abdominal cystic tumor should be told by her physician that its early removal, while it is small and free from complications, is devoid of danger, and she should be warned of the danger of delay.

DR. RUFUS B. HALL, of Cincinnati, read a paper entitled

A PLEA FOR EARLY OPERATIVE INTERFERENCE IN CASES OF OBSCURE PELVIC PAIN

and recurrent attacks of pelvic inflammation in women. The speaker thought that, in these cases, the ovaries were at fault, and he urged their removal early, before secondary changes had occurred to render the operation less beneficial in its secondary results. The speaker referred constantly to the operation as

TAIT'S OPERATION,

which was the occasion, later, of some strong words from Dr. Battey.

DR. WILLIAM H. MYERS, of Fort Wayne, Ind., read a paper on

THE TREATMENT OF PERITONITIS.

Is acute peritonitis ever idiopathic? Is it a symptom or a disease? Is it always septic? Again, Does the treatment properly belong to the physician or the surgeon? It is of primary importance that in every case the etiology be settled at the earliest possible moment. The blow must be struck simultaneously with the advent of the enemy, the only hope of rescue being the sudden arrest of the disease. The speaker believed that acute peritonitis is always septic and never idiopathic, and he thought that the treatment should be modified in accordance with these views. He quoted the published opinion of those who advocated the giving of salines rather than opium in the treatment of peritonitis, and related a case in which he had employed this means with excellent results. He then referred to the operative treatment of peritoneal inflammation, quoting Lawson Tait, who has written: "I have deliberately come to the conclusion that it is an act of almost criminal omission to allow a case of peritonitis to die without abdominal section."

DR. A. M. JOHNSON, of Danville, Ky., presented a communication on

THE MANAGEMENT OF EXTRA-UTERINE PREGNANCY.

After reviewing briefly the methods formerly employed, he discussed those most commonly recommended at the present day, viz., electricity and abdominal section, the former of which he considered thoroughly irrational and dangerous. Electricity, he said, will kill the fœtus, but it will not destroy the placenta, which will continue to secrete amniotic fluid until the period of nine months has expired. He thought that all cases of extra-uterine pregnancy, up to the fifth month, should be treated by laparotomy, and quoted from a letter of Lawson Tait, who said: "Electrolysis has already been exploded in our country, and has subsided into its original position of

RAMPANT QUACKERY."

The speaker thought that the proper management of extra-uterine pregnancy was still in its infancy, but he hoped that the electric battery would soon be banished from this field.

PROFESSOR WILLIAM GOODELL, of Philadelphia, said he was in accord with the substance of the papers just read, except that he thought they were too sweeping. He often gave saline cathartics with good results, but he would not keep opium from all cases, for he thought such practice was nothing less than cruel in some. He did not believe in operating on every case where there might be a little pus in the ovary. Cases which he had condemned to the knife had gone to Weir Mitchell, and had been cured. In a woman whose trouble is gonorrhœal in its origin he would recommend the removal of the tube and its ovaries. In syphilis he would wait and give constitutional treatment, for it is the local explosion of a constitutional disease.

DOES THE REMOVAL OF THE OVARIES AND TUBES UNSEX A WOMAN?

It does not absolutely. For one to two years the sexual feeling generally remains intact. The speaker had seen it even increase for a time, though this was only temporary.

DR. S. C. GORDON, of Maine, criticised Dr. Goodell's remarks. The latter, he said, would operate in cases of gonorrhœal disease of the ovaries, but how could any man say whether the ovarian disease was specific or not? He thought the advisability of an operation should be decided by a study of the symptoms. He claimed to have the second recorded case of operation for tubal pregnancy, Dr. Johnson having had the first.

DR. ROBERT BATTEY, of Rome, Ga., said that Dr. Hall, a youthful member of the profession, seemed to know nothing about American work, to judge from his constant use of the term "Tait's operation." Way back in 1872, before the time of Dr. Hall, there was

A HUMBLE AMERICAN SURGEON

who suggested and described this operation. The reader of the paper had spoken of Tait's struggles in introducing the operation, but older members of the Association would remember the struggles of the speaker to win the sanction of the profession for his operation. He was advocating the method for years, and not a word escaped from Tait until 1879. Should the mere say-so of Tait be accepted when he asserted that he had *thought* of the operation? Why should Mr. Tait come in at the end of the fox-hunt and claim the brush?

Dr. Battey said that he had modestly, too modestly, remained quiet, and had allowed Mr. Tait to talk about "his operation," for he despised this

MISERABLE QUIBBLING ABOUT PRIORITY;

but when an American, in the American Medical Association, and in his presence, talked so glibly about Tait's operation, it was a little more than an ordinary mortal could stand. He then referred to his experience in London in 1881.

"MAY GOD FORGIVE MR. LAWSON TAIT,"

he said, "and preserve me from falling into his ways."

Dr. Howard A. Kelley, of Philadelphia, said that many of the younger members of the profession were not acquainted with the claims of Dr. Battey. Tait, he said, had shown gross ignorance of American practice, and he believed also that his diagnoses of extra uterine pregnancy were jumped at. He had heard that Tait thrust his hand into the abdomen, pulled out something, said "extra-uterine pregnancy," and threw it away.

Dr. Johnson had seen Tait operate in five cases of extra-uterine pregnancy, and in all the specimens were carefully examined by all who wished to do so and were capable.

Dr. Hall said that he had not expected or desired to raise a question of priority, but whatever Dr. Battey might say, it was impossible to go back of the returns. Tait said he performed his first operation in February, 1872, Battey claimed to have done his in August, 1872. Tait was certainly the first man to recommend the operation for chronic inflammation or abscess in the ovary.

DR. BATTEY'S CAUSTIC REMARKS

had created a laugh, but the fact remained that Tait stood head and shoulders above all other operators in this particular field.

Dr. Ely Van de Warker, of Syracuse, N. Y., delivered the President's Address, the subject of which was

HOW GYNECOLOGY IS TAUGHT.

The address was an able exposition of imperfections in this teaching. Of 109 medical schools—those only which are approved of by the Illinois State Board of Health—in only 56 did the catalogues announce it as separately taught; in 14 the chairs of diseases of women and children were united; 32 announced a professor or a lecturer of gynecology; 10 made no mention of thesubject; 1 announced forty-four lectures on gynecology; in 66 the subject was taught by the professor of obstetrics or not at all. The "commercial spirit" is largely responsible for the imperfections of medical teaching. The attempted reform by the adoption of the graded system had not proven a success. The introduction of a graded system, with recitations from the text-books, was the adoption of a method which is already abandoned by progressive educators.

Dr. E. W. Cushing, of Boston, exhibited a number of microphotographs, illustrative of the pathological changes occurring in

ENDOMETRITIS, ADENOMA, AND CARCINOMA CORPORIS UTERI.

Dr. Nathan Bozeman, of New York, read a paper on

RENAL TENESMUS,

and its treatment by kolpo-uretero-cystotomy. By renal tenesmus he meant a violent and painful contraction of the ureter and pelvis of the kidney, the result of morbid irritability of these parts. The pain occurs in paroxysms which vary in frequency, duration, and severity. As a rule, the pain begins in one groin, and extends later to the lumbar region, being generally most severe at night and during the menstrual period. The patient awakes with an urgent desire to evacuate the bladder, and the act is followed by pain and cramps, sometimes by nausea and vomiting. He reported several cases in which he had relieved those symptoms by

KOLPO-URETERO-CYSTOTOMY

with intravaginal drainage. It was necessary to make a large opening, the diameter of a silver half-dollar, for it soon contracts down to the size of the index-finger. When the bladder is not kept completely drained, the spasm will persist, the reflux of urine into the ureters will continue, and the group of renal symptoms and complications will not be relieved. The artificial fistula must not be closed until all thickening of the vesical walls and tenderness about the urethra, bladder, and ureter have disappeared. In order to determine whether it is time to close the opening, the speaker was in the habit of introducing an intravaginal dilator, which kept the urine from flowing out through the fistula. If no distress in the bladder followed the wearing of this dilator for ten days or two weeks, he proceeded at once to close the opening. A complete cure was usually obtained only at the expiration of from six to twelve months.

CONNECTICUT STATE MEDICAL SOCIETY.

Ninety-seventh Annual Meeting, held in New Haven, May 23 and 24, 1888.

Wednesday, May 23d—First Day.

The meeting of the fellows was called to order at 3 P.M. by the President, **Dr. Francis Bacon**, of New Haven.

After the Committee on Credentials had reported, the President delivered his

ANNUAL ADDRESS

to the fellows. After welcoming those present, he spoke upon the proposed changes in the charter which had disturbed the harmony in the Society for a number of years, and expressed the hope that it would be amicably and finally settled at this meeting. More time, he said, should be given to reading papers and to scientific discussion. He also advised, as did the President of last year, that a standing committee be appointed to guard against the enactment of unjust laws by the State Legislature. It would be greatly to the benefit of the Society if the meetings were held in different cities of the State, and not confined to New Haven and Hartford, as is now the custom. It was with great reluctance that he announced that the Secretary and Treasurer both declined to hold their respective offices any longer. In conclusion, he was greatly opposed to sectional rotation in the election of Presidents of the Society. He favored the election of the man best qualified for the position, without regard to the county from whence he came.

After the President had announced the Committees, the Treasurer reported a balance on hand of $832.18.

Professor J. C. Dalton, of New York, was then elected an honorary member of the Society, and the name of Dr. Edward M. Moore, of Buffalo, was proposed. This, in accordance with a by-law, was laid over for one year.

THE ELECTION OF OFFICERS

for the ensuing year was then held, with the following result:

President—George L. Porter, M.D., of Bridgeport.

Vice-President—O. Brown, M.D., of Washington.

Treasurer—W. W. Knight, M.D., of Hartford.

Secretary—N. E. Worden, M.D., of Bridgeport.

Committee on Matters of Professional Interest—Drs. L. P. Almy, L. T. Day, and W. L. Ford.

Dissertator—P. H. Ingalls, M.D.

Delegates to the American Medical Association—Drs. J. B. Kent, C. B. Newton, E. C. Kinney, W. H. Welch, S. B. St. John, C. H. Hill, F. D. Edgerton, H. W. Buel, B. W. Munson, and F. E. Beckwith.

Delegates were also elected to attend the meetings of the State Societies of Maine, Massachusetts, New Hampshire, Vermont, Rhode Island, New York, and New Jersey.

In the evening a

MICROSCOPICAL SOIRÉE

was given by the Faculty of Medicine of the Yale Medical School, and later the members of the Society were received at the residence of Dr. Bacon, on High Street.

THURSDAY, MAY 24TH—SECOND DAY.

THE REPORT OF THE SECRETARY

was read, which showed that there had been received into the Society during the year thirty-four new members, and that there had been lost by death ten of the old members. There had been an unusual number that had left the State, and two who were dropped for non-payment of dues. The total membership at present is four hundred and ninety-four.

The President then delivered his annual

ADDRESS TO THE CONVENTION.

He began by speaking of the advances made in surgery, nervous diseases, and materia medica, and the profit which is to be derived from such advances; but there was one subject near his heart in which this State compared most unfavorably with most States, and made no progress toward improvement; this was the

RELATION OF THE INSANE TO THE LAWS OF THE STATE.

Here any man, who had the certificate of a justice that he was a "reputable physician," could commit his neighbor to confinement in a lunatic asylum. The average justice he did not think competent to determine who should pass judgment upon the sanity of his fellow-man. He recommended a competent and permanent commission to act upon all cases. He spoke sarcastically of

EMOTIONAL INSANITY,

and was thankful the courts of this State had never been disgraced by such a plea. He claimed that experts could not diagnosticate between such a case and uncontrollable anger. It was a very light opinion he held of some of the expert testimony given in the courts. After relating several cases of grave mistakes by experts, he said that he thought that society demanded that all homicidal lunatics should be confined, not for a definite period, but for life, in order that any future attacks might be guarded against.

The following delegates from other State societies were introduced and made remarks: Dr. C. A. Ray, Vermont; G. D. Colin and A. M. Smith, Massachusetts; W. H. Palmer and Charles O'Leary, Rhode Island. These were followed by reports of delegates from this Society to those of the neighboring States.

Dr. R. M. Griswold read a dissertation on the text

IN SORROW THOU SHALT BRING FORTH CHILDREN.

His argument was that man was made perfect, but with the downfall came sorrow, pain, and sickness. The obstetrician meets women diseased from the sins of their forefathers, and imperfectly formed women. After referring to the well-known regulations for the female during gestation, he spoke of the complications of labor, and the means we have for their relief. Uterine inertia was the first one we were most likely to meet in the first stage. For this he used quinine in doses of from two to five grains every twenty minutes until from three to five doses had been given. He also used ginger in the form of hot tea, and prescribed plenty of exercise. These were usually all that were required to stimulate uterine contraction. For a rigid os he used chloroform and emetics. In some cases the pain was so severe that it was impossible for the woman to help herself, and for such cases he recommended a few whiffs of chloroform at the beginning of the pain.

He concluded by speaking of the great usefulness of forceps, by the use of which we have fewer still-births and less rupture.

Dr. Douglass said that he used quinine and ginger together in cases of uterine inertia. He thought the action of quinine more certain when combined with an aromatic.

Dr. Kinney said he would never give ergot until there was no obstruction to the immediate delivery of the child. He thought we should never hesitate to use forceps when the vagina began to grow dry, or there were signs of failure upon the part of the mother.

Dr. J. M. Keniston then read a paper on

PARALDEHYDE.

He reviewed the history of the drug, and gave its chemical formula. For years a good sleep-producer, which had no disagreeable after-effects, had been sought for, and in the discovery of paraldehyde he thought we had found it. It was generally given before retiring, but he thought that it was best for the patient to get what natural sleep he could first. It could be given safely in ʒ j. doses until three doses had been given, and if no effect was felt from that quantity, it was best to try something else. Its action was quicker than chloral, and it was as safe as the bromides, as no important organ was likely to be injured by its use.

Dr. G. M. Shepherd, as Chairman of the Committee on Matters of Professional Interest, read a paper upon the

FREQUENCY OF ALBUMIN IN THE URINE OF THE HEALTHY.

That albumin is sometimes present in the urine of the healthy has been recognized for a hundred years. Usually in such cases its appearance is only temporary. The late Dr. Flint said that the presence of albumin, even with casts, was not always of grave import. The most of the paper was composed of statistics showing the percentages obtained by different observers of this occurrence.

Dr. E. F. Parsons followed with a communication entitled

ALCOHOL IN THERAPEUTICS.

He quoted scripture to show the opinions held of alcohol in the time of the ancients, and from these passages drew the conclusion that we should never hesitate to use it when demanded. He said it was a stimulant to the brain, heart, and stomach; it increases the size of the capillaries and slightly raises temperature. He asked the question, Is alcohol a food? This question he also answered by asserting that as it can take the place of food by carrying on the duties of the body, without the loss of weight, for a limited time, it is certainly a food. He concluded by saying that Dr. N. S. Davis, of this country, and Dr. B. W. Richardson, of England, were among those most opposed to the use of alcohol, and that even these gentlemen acknowledged its utility in some instances.

Dr. C. B. Newton then read a paper on

PNEUMONIA,

in which he treated of the prevention of the disease. He emphasized the desirability of maintaining a lower temperature and purer air in shops and dwelling-houses than is usual. He offered nothing new in the way of treatment.

Dr. J. K. Thacher presented a paper on

THE RELATIONS OF CARDIAC HYPERTROPHY TO NEPHRITIS.

He related the history of a boy who had scarlet fever, followed by nephritis, and this in turn by cardiac hypertrophy. From the beginning of the nephritis there was increased arterial tension. A few weeks after the nephritis disappeared, the hypertrophy also disappeared. From this and similar cases he was led to believe that cardiac hypertrophy was secondary to nephritis.

Dr. G. C. Legur, reported a case of

TYPHOID FEVER IN A CHILD,

thirteen years of age. This was a case of long-continued fever. Antipyrine was used in doses of from fifteen to twenty grains with good results. He thought antipyrine was *the* drug for the treatment of typhoid fever.

A large number of papers that had been read before the several County Societies were read by title.

The meeting adjourned at 3 P.M. The annual dinner was held at the New Haven House.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE CONTAGIOUS DISEASES ACTS IN INDIA—SIR JOSEPH FAYRER ON CHOLERA—DISCUSSION AT THE MEDICAL AND CHIRURGICAL SOCIETY ON THE VALUE OF HIGH-ALTITUDE TREATMENT IN PHTHISIS—A USEFUL DEVICE FOR A PATIENT WEARING AN ARTIFICIAL EYE—ANOTHER MEDICAL DECLARATION ON ALCOHOL.

London, May 15, 1888.

It is now about five years since the working of the Contagious Diseases Acts was suspended in this country. Although supported by the great majority of the medical profession popular feeling against them gained in strength and eventually led to the overthrow of the system of compulsorily examining women engaged in prostitution. Similar enactments have, however, continued to be in force in some parts of India up to the present time, though such abuses have crept in that the Government have now suppressed them. From accounts received here, it would seem that the system has not merely been carried out as a sanitary measure, but actually made a means of virtually legalizing prostitution. Public opinion in this country is too much against such measures to tolerate them, and it was accordingly announced in the House of Commons yesterday evening, by the Under Secretary of State for India, that the system had been discontinued. The compulsory examination of women is to be prohibited, and also the making of any regulations which may justly be construed into a legalization of prostitution.

The annual *conversazione* of the Medical Society of London was held on Monday last, and was highly successful. The annual oration was delivered by Sir Joseph Fayrer, who took for his subject the natural history and epidemiology of cholera. He maintained that under certain circumstances English cholera was indistinguishable from its Asiatic congener, and quoted various authorities to show that Asiatic, British, and Damietta cholera differed only in severity and not in kind. He did not believe that the theories of contagion and diffusion by human intercourse explained the movements of cholera epidemics, since neither the frequency, direction, nor rapidity of the spread of the disease bore any relation to the development of means of communication. In many instances the disease had already occurred before the means of contagion had arrived, and in Bengal the course of the disease was upward, that is, not with, but against, the course of the rivers. He believed that hygienic measures afforded the greatest security against cholera, but that cordons and quarantine had utterly failed to prevent its spread. He did not agree with the opinion that it was due to a specific poison.

The "high-altitude" treatment of phthisis has now attained so much popularity, both with the profession and the public, that it is not at all surprising that the whole evening should have been devoted to the discussion of the subject by the Royal Medical and Chirurgical Society at their last meeting. The Fellows of that august body have indeed frequently spent the time of their meetings in discussing at much greater length subjects of far less practical interest. On this occasion the ball was set rolling by the reading of a paper by Dr. Theodore Williams, in which he described the results he had obtained by sending 141 cases of phthisis to various sanitaria at high latitudes. Of this number, forty-one per cent. were cured, twenty-nine per cent. were greatly improved, eleven per cent. were improved, while eleven per cent. of the patients became worse. The improvement was the most marked in the case of patients sent during the first stage. Single-cavity cases gave better results than cavity cases with the opposite lung involved, and left-lung cavities showed less tendency to change, either for better or worse, than cavities in the right lung. To secure the advantages of residence at high altitudes, patients should be free from pyrexia and all acute symptoms, and possess sufficient lung surface to carry on respiration adequately in the rarefied atmosphere. Dr. Williams said the high-altitude treatment was specially adapted in cases where hereditary predisposition to phthisis was present; it was also of value in cases of hemorrhagic phthisis. It was also beneficial in some cases of disease other than phthisis, viz., 1, in cases of imperfect thoracic and pulmonary development; 2, in chronic pneumonia without bronchiectasis; 3, in chronic pleurisy where the lung did not expand after removal of the fluid; 4, in spasmodic asthma without much emphysema; and, 5, in anæmia. He concluded that the treatment was contra-indicated in any of the following conditions: 1, phthisis with double cavities, with or without pyrexia; 2, cases of phthisis where the pulmonary area at low levels hardly sufficed for respiratory purposes; 3, catarrhal phthisis; 4, cases of phthisis with great irritability of the nervous system; 5, emphysema; 6, chronic bronchitis and bronchiectasis; 7, diseases of the heart and large vessels; 8, affections of the brain and spinal cord, and conditions of hypersensibility of the nervous system; and 9, in patients advanced in life or too feeble to take exercise.

In the ensuing discussion Dr. Hermann Weber remarked that he had himself compiled tables of 106 cases which he had sent to high altitudes. His results had not been quite so satisfactory as those attained by Dr. Williams. He did not attach much value to altitude, except as making open air and exercise easy. At Frankenstein, for instance, which was less than 2,000 feet above sea-level, he thought they got quite as good results as in the high Alps. Dr. De Havilland Hall asked whether Dr. Williams agreed with the general opinion that no benefit was to be obtained for cases of laryngeal phthisis from high altitudes except in the cases in which the laryngeal mischief was merely catarrhal? Dr. J. E. Pollock said that altitude was only one of the many agents which might tend to cure phthisis, and on what all the others were we had still a great deal to learn. The cases Dr. Williams had selected to send to the Alps were just the cases that would do well in London also. They had often heard of a rich man's gout and a poor man's. The disease Dr. Williams had been talking about was emphatically a rich man's phthisis. What these people were suffering from who would indulge themselves in their weighing machines and their toboggans, and support their doctors and their parsons, was a very different thing from the malady of *les misérables* with which we all had so much to do nearer home. Dr. Tucker Wise remarked that in the Alps appetites improved and spirits rose in all who could enjoy the sun and take wholesome exercise, and there was little annoyance from lesser colds and coughs. The cold aseptic air acted as a sedative to the cough, and the rooms were often not heated above 50° F. The action of the sun's rays helped to change the white corpuscles of the blood into red, and to develop hæmoglobin. He had noticed that those who perspired readily did not have the usual dyspnœa of a high altitude. Dr. Ewart remarked that rich patients with phthisis suffered here from luxurious living; in the Alps they got physical and mental rest, a complete change, and a fresh spring of hope. He had himself been greatly improved by four winter visits to the Alps, and had been much struck by the comparative want of freshness and vigor in the Riviera. Dr. Huggard had not met with a condition of hypertrophy of healthy lung-tissue in the Alps, such as Dr. Williams had described; the chief change in the chest was increased capacity for movement. Dr. Quain then joined in the discussion and did not seem very amiable. He told Dr. Williams that his statistics were utterly valueless to him; his patients appeared to have got well because they could not help it, and would have got well anywhere. One point went strongly against his sending anyone to the Alps, and that was the unfriendly fashion in which Switzerland had forbidden English physicians to practise there. Dr. Theodore Williams then replied. He was glad, he said, that Dr. Weber, on the whole, confirmed his statistics. He should like to hear more about Frankenstein. He had found, as Dr. Hall expected, that laryngeal phthisis was not benefited at all by high altitudes. He had concluded that hypertrophy of healthy lung-tissue occurred, as there was no other hypothesis to explain the physical facts of increased nausea, chest capacity, and breathing, as shown by the spirometer.

At the last meeting of the Ophthalmological Society Mr. McHardy drew fresh attention to a useful device in the case of patients wearing an artificial eye. This consisted in allowing the patient to wear spectacles glazed with odd lenses, that in front of the artificial eye having a refractive power greater by three dioptrics than that in front of the natural eye. This produced an optical delusion to an on-looker as to the size and level of the artificial eye.

Whatever it may have been formerly, when very different views were held both by the profession and the public as to the action and value of alcohol, there can be no doubt that the opinion of the profession as a body is at the present day strongly in favor of the strictest temperance (by which I do not mean total abstinence) in the use of alcohol, both in health and disease. This is evidenced anew by a fresh medical declaration on the subject of alcohol and its prescription, which is being extensively circulated for signature. Similar documents were prepared and signed by many leading members of the profession in 1839, 1847, and 1871 respectively. In them, as in the present one, attention was drawn to the fact that alcohol is not a necessary article of diet for the healthy, that its value had been much exaggerated, and that it should be prescribed with great care whenever it was thought desirable to administer it.

NYCTALOPIA.—A correspondent of *The Lancet* directs attention to some remarks published by the *Cologne Gazette* on the confusion, in some night manœuvres in Russia, resulting from a large number of the troops being affected with *Hühnerblindheit*, or night-blindness. The affection is well known to result from imperfect nutrition. The following account, given by Dr. Meissner, sufficiently demonstrates the nature of the affection: In a small town of Podolia more than one hundred cases of the complaint occurred. It was the time of the Greek fast, when the inhabitants eat no animal food, but live chiefly on bread and groats prepared with oil. When Easter came they ate the liver of a blackcock or black swine, and were cured in a few days. Meissner examined, both by day and night, many of those affected, but perceived nothing particular in their eyes, except great immobility of the pupils. They maintained they were in perfect health, and would recover their vision in a fortnight. Two of those he examined began to eat liver and animal food, and saw as well as ever on the third day. By the following Sunday all those affected were completely cured. The affection occurs sometimes in nursing women, who are ill-fed, among the poor.

Navy News.

Official List of Changes in the Medical Corps of the United States Navy for the week ending June 2, 1888.

CRAIG, F. C., Passed Assistant Surgeon. Detached from Naval Hospital at Norfolk, and to the Naval Hospital at New York.

WENTWORTH, A. R., Assistant Surgeon. Detached from the U. S. S. Galena, and to the Naval Hospital at Norfolk.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 2, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	9	7
Scarlet fever	192	31
Cerebro-spinal meningitis	4	2
Measles	237	17
Diphtheria	176	51
Small-pox	9	3
Yellow fever	0	0
Cholera	0	0

THE LATE DRS. AGNEW AND LORING.—A special meeting of the New York Ophthalmological Society was called immediately after the death of Dr. Agnew, and another after the death of Dr. Loring, and the reports of the committees then appointed were read and accepted at the last regular meeting of the Society.

DR. CORNELIUS REA AGNEW.—The New York Ophthalmological Society records with profound sorrow the death of one of its founders and original members, Dr. Cornelius Rea Agnew, who died of peritonitis on April 18, 1888, aged fifty-seven years, seven months, and twenty days.

Dr. Agnew was President of this Society during the years 1864 and 1865, and was for many years a constant attendant at its meetings. He took a leading part in its scientific discussions, and his opinions, delivered in well-chosen words, were always listened to with that respect to which his vast clinical experience and his sound judgment entitled them.

For over twenty years Dr. Agnew ranked with the foremost ophthalmologists and otologists of the world, and his original contributions to practical, and especially to operative, ophthalmic and otic science, though not comparatively numerous, were exceedingly valuable.

The method devised by him for the removal of secondary cataract has long been referred to and described in all the text-books upon diseases of the eye, and is still accepted as the best method of operating in properly selected cases.

His methods of removing foreign bodies from the cornea, when they are embedded so deeply as to project into the anterior chamber, which was published, with a woodcut, in THE MEDICAL RECORD, Vol. I., No. 11, 1866, is still resorted to as the only available operation in such cases. Later, in 1874, he also published a method of removing a foreign body, deeply embedded in the cornea, by trephining.

The operation for the removal of chalazion, described in "Wells' Treatise on Diseases of the Eye" (4th. Am. Ed., Phila., 1883, page 90), by making an incision through the margin of the lid into the tumor, and then scooping out the contents, was devised by him, though he never published it.

In the *American Practitioner* for January, 1871, he published a paper on the "Treatment of Lachrymal Diseases." In this paper were outlined the methods of treatment which have since been pursued by many ophthalmic surgeons.

In 1875 he published a paper on "Canthoplasty as a Remedy in Certain Diseases of the Eye," in which he made the different steps of the operation clear by means of woodcuts, and in which he modified the operation by recommending a division of the external canthal ligament.

His "Method of Operating for Divergent Squint," by advancement of the internal rectus and tenotomy of the externus, described by him at the meeting of the American Ophthalmogical Society held at the Massachusetts Charitable Eye and Ear Infirmary in 1866, and published in the "Transactions" for that year, has since been practised by ophthalmic surgeons everywhere. He also published a "Contribution to the Subject of Strabismus" in the "Transactions of the American Ophthalmological Society" for 1870.

His last, and perhaps most valuable, contribution to operative surgery of the eye was his "Operation with a Double Needle, or Bident, for the Removal of a Crystalline Lens dislocated into the Vitreous Chamber," published in the "Transactions" for 1885. Other papers published by Dr. Agnew were, "A Method of Dressing Eyes after Cataract Extraction" (1869); a "Contribution to the Statistics of Cataract Extraction of One Hundred and Eighteen Cases" (1874); a "Case of Double, Extremely Minute, and Apparently Congenital Lachrymal Fistula" (1874); "Consecutive Enucleation of Both Eyes for Recurring Glioma" (1875); "Cases of Ophthalmic Diseases in which Enforced Exposure of the Eyes to Light and Air was Salutary" (1876); "A Preliminary Analysis of Ten Hundred and Sixty Cases of Asthenopia" (1876); "Cases of Persistent Pupillary Membrane," (1880); "The Insufficiency of the Ophthalmoscope as the Sole Test of Errors of Refraction" (1880); "Near-sightedness in the Public Schools," THE MEDICAL RECORD, Vol. XII., No. 3.; and, besides these, numerous clinical lectures and cases, and papers on subjects not medical.

Dr. Agnew was taken away when in the meridian of his usefulness. At the time of his death he was a Director of the Manhattan Eye and Ear Hospital, of the Brooklyn Eye and Ear Hospital, a Trustee of the New York Academy of Medicine, of Columbia College, of the College of Physicians and Surgeons, a Governor of the Woman's Hospital in the State of New York, a Manager of the Hudson River State Hospital for the Insane, and of the New York Skin and Cancer Hospital.

His hand was in many great and noble works of charity, and his sympathies were extended to everything that elevates and ennobles humanity. Those who knew him most intimately considered him the highest type of a true Christian gentleman, and felt the absolute integrity of the man in everything that he did.

His loss will be incalculably felt in this city, and in this Society.

HENRY D. NOYES.
D. B. ST. JOHN ROOSA.
J. S. PROUT.
DAVID WEBSTER.

DR. EDWARD GREELY LORING.—Dr. Loring joined the New York Ophthalmological Society, January 13, 1868. He was elected the President of the Society, January 12, 1874. He died suddenly in this city, April 23, 1888. During the twenty years in which he was a member of this Society, he was a constant attendant at its meetings; no one was more beloved than he for his many social qualities, and in the scientific work of the Society his word was listened to with a respect accorded to but few. It is fitting that a brief sketch of his life should be entered upon our minutes.

Dr. Loring was born in Boston, September 28, 1837; he was a son of Judge Edward Greely Loring. For a short time a member of the class of 1861 at Harvard College, he went abroad and began the study of medicine in Italy. For three years he was enrolled as a student at Florence and Pisa, and at the university of the latter place he was a devoted student in anatomy of Professor Duranti. In 1862 he returned to America, and in 1864 graduated at the Harvard Medical School, winning the Boylston Prize Essay.

Upon receiving his degree in medicine, Dr. Loring devoted himself to the study of ophthalmology under the direction of Dr. Hasket Derby, of Boston. He was appointed ophthalmic externe by Dr. H. W. Williams, at the City Hospital, and subsequently served for a short term at the Massachusetts Charitable Eye and Ear Infirmary.

In 1865 he established himself in practice in Baltimore, remaining there but little over a year, when he came to New York, to become associated with the late Dr. C. R. Agnew. Four years later this partnership was dissolved, and until his death Dr. Loring has practised medicine in New York City.

He was a surgeon of the Manhattan and Brooklyn Eye and Ear Hospitals, and subsequently a consulting surgeon of the latter institution. He was in 1874 appointed an ophthalmic surgeon of the New York Eye and Ear Infirmary, and held a similar position at St. Luke's Hospital.

Original in thought, scientific in method, bold in execution, Dr. Loring was a skilful surgeon, a thoroughly trained physician. As an author he was conspicuously known, both in this country and abroad, for his original contributions to medical literature. In this brief memoir it would not be in place to discuss the value and extent of his literary work. His writings were upon nearly every subject embraced in the science of ophthalmology. His text-book of ophthalmoscopy, the completion of the second volume of which occupied the last days of his life, will remain for all time his most lasting memorial.

Dr. Loring made the refraction ophthalmoscope a working instrument, to which nothing of any importance, except the tilting mirror, has been added since. By whatever name the latest manufacture is known, this instrument is still the Loring ophthalmoscope—vastly better than all its predecessors.

In the discussions of this Society he was frank and straightforward in his action and speech, scholarly in his address—the type of a brilliant, honest, and independent man. A keen observer, unfettered by the traditions of the schools, his opinions based on sound anatomical and physiological knowledge, he was a hater of sham, a follower of truth for the truth's sake.

RICHARD H. DERBY.
D. B. ST. JOHN ROOSA.
ARTHUR MATHEWSON.

CUNDURANGO IN CANCER OF THE STOMACH.—In the *New Yorker Medizinische Presse* for April, Dr. Franz Foerster reports four cases presenting all the symptoms of cancer of the stomach which were treated with this drug. In two cases no favorable effect was noticed; in the third he believes that life was prolonged, while in the fourth case a positive and permanent cure resulted. The dose is half a drachm of the fluid extract.

THE USELESSNESS OF ERGOT IN SUBINVOLUTION.—Some very interesting observations were recently made by Dr. Emile Blanc on the effect of ergot in involution of the uterus after labor. A fairly large number of women who had gone through normal labor were divided into three categories. Forty of them were left to Nature; forty were treated with daily hypodermic injections of Yvon's solution of ergotine (1 c.c. = 1 gramme of ergot) during the first five days after delivery; and the remaining twelve were similarly treated for ten days. Daily external measurements were then made in all the cases to ascertain the size of the uterus, and on the fifth and tenth days its internal measurement was taken by means of the uterine sound. It was found that the administration of ergot during the first five or ten days failed to produce any favorable effect in hastening the process of involution, but that, on the contrary, it seemed to delay the normal retraction of the uterus. Ergot is nevertheless an exceedingly useful agent in the treatment of secondary hemorrhage, and its action is more marked the less the interval of time that has elapsed since the confinement.

THE SEVENTH GERMAN CONGRESS FOR INTERNAL MEDICINE was held in Wiesbaden, on April 9–12, 1888. At the opening session the President, Professor Leube, delivered the annual address, in which, after referring to the death of the emperor, he dwelt especially on the present condition of medical science and the part Germany was taking in the rapid progress now being made in all branches, but especially in bacteriology. The first subject for discussion was the "Treatment of Chronic Diseases of the Myocardium." Professor Oertel spoke at length of the method, called by his name, of exercise for strengthening the heart muscle. After referring to the quantitative and qualitative changes occurring in the cardiac muscle, he reviewed the modes of treatment in vogue in the past. These were essentially absolute rest and a starvation diet. His method was exactly the reverse of this, namely, a nourishing diet composed largely of meat, and exercise for the heart. In addition to this it was necessary to lessen the amount of labor which the heart was called upon to perform by reducing the quantity of water in the body. This end was best accomplished by gymnastic exercises and especially by mountain climbing, which afforded the needed exercise to the heart and also promoted excretion of the watery elements by means of the increased perspiration. The ingestion of fluids should also be restricted as far as possible. The chief contra-indications were disease of the kidneys and severe chronic pericarditis. Professor Lichtheim opposed Oertel's method in almost every particular, believing it to be often exceedingly dangerous in practice, as well as erroneous in principle. He spoke at some length of the purely medicinal treatment of these affections. Other speakers also opposed the mechanical therapy of disease of the cardiac muscle. Professor Rumpf reported five cases of "Wandering Kidney." Professor Unverricht read a paper on the "Mechanism of Respiration," and detailed certain experiments which showed that irritation of certain points in the upper portion of the cerebrum had a marked influence on respiration. The question of "Alcohol as a Remedy" was discussed at some length by Professors Binz, von Jaksch, Nothnagel, Erb, Merkel, and Rühle. The general opinion was that the free use of alcoholic beverages was an evil, and that, while the drug is frequently a most valuable and indispensable remedy, it is often prescribed too indiscriminately, and may in such cases be productive of positive harm. Professor Adamkiewicz read a paper on "Degeneration of the Spinal Cord." Professor Leyden presented a communication on the "Treatment of Stricture of the Œsophagus" by a new method. These strictures are mostly cancerous in nature, and the only treatment admissible is palliative, the aim being to open the stricture sufficiently to permit of the administration of nourishment. English physicians had succeeded, in some cases, in opening the stricture and keeping it patent by means of a short cannula. The speaker had tried this method in certain instances with happy effect. He attached threads to the tube, so that it could be removed if necessary. No solids should be taken, for fear of clogging the cannula, but fluid nourishment could be taken in sufficient quantity to sustain life. One patient, whom he had treated in this way, had worn the tube for ten months, and gained considerably in weight. Professor Rühle had not employed the cannula, as at times some force was required in its introduction, and he had feared a rupture of the œsophagus in case the stricture was caused by the pressure of a soft carcinoma. A discussion on the "Treatment of Asiatic Cholera" was participated in by Professors Pfeiffer, Cantani, Berger, Stann, and others. The first speaker was a firm believer in the contagion theory, and opposed strongly Pettenkoffer's views of the origin of cholera. The annual dinner was largely attended, and, notwithstanding the recent discussion on alcohol, many toasts were drunk, and were felicitously responded to by many of the distinguished guests. About three hundred members were present at the Congress. It was decided to hold the next meeting at Wiesbaden, as in former years, although many of the members favored Berlin.

ALARMING EFFECTS FOLLOWING THE RAPID EMPTYING OF A DISTENDED BLADDER.—A correspondent writes as follows to *The Lancet:* "F. H——, aged twenty-three years, well built, perfectly healthy, left Lime Street, Liverpool, by the 12.45 night train for Edinburgh. An hour before starting he had eaten a hearty supper, with which he drank a pint of beer. During the journey he lay down reading and smoking, and fell fast asleep half an hour before reaching Carlisle. When the train stopped at Carlisle (at 4.15 A.M.), he awoke suddenly and hurried to the urinal, which happened to be exactly opposite the compartment in which he was travelling. After micturating freely, he in a few seconds felt slightly sick, and then, becoming 'quite blind' and insensible, fell backward full length. He was set on his feet by his fellow-passengers, and, though slightly dazed, feeling as if his head were 'ice cold,' and staggering, he walked back to the train. Ten minutes later he could scarcely realize that anything extraordinary had happened. With the exception of soreness about his elbows, head, and buttocks, which (owing to the heaviness of his fall) lasted two or three days, he experienced no further inconvenience. As he had never fainted or had a fit of any kind in his life before, my friend was naturally somewhat puzzled, if not alarmed. There can be no doubt that this was a case of fainting due to rapid emptying of a somewhat distended bladder. (He had not passed urine for four hours.) Dr. Lauder Brunton gives a very lucid explanation of this accident (if it may be so called) in his work on therapeutics. The case very well illustrates the points on which Dr. Brunton lays stress—viz., sudden awaking and rapid emptying of the distended bladder."

DECREASE IN RURAL MORTALITY.—A Presbyterian clergyman who has served in the ministry for nearly fifty years furnishes some interesting statistics and observations relating to the increasing longevity in the rural districts of Central New York. He has attended five hundred and seventy-three funerals altogether since 1840. The average length of life of the first hundred dead whose funerals were attended was twenty-six and one-half years, seven of these having lived over seventy years; of the second hundred the average was thirty-six years, and thirteen over seventy years; of the third hundred, the average was thirty-seven, and twenty were over seventy years old; of the fourth hundred the average was thirty-seven, and twenty-eight were over seventy; of the fifth hundred the average was thirty-seven and one-half, and thirty-two were over seventy; and of the remaining seventy-three the average was fifty-eight, and thirty-two were over seventy, the oldest of the seventy-three being the late Levi Hanford, of Walton, who died at ninety-six. These remarkable figures, it should be noted, apply to an interior farming population, from which large numbers of the young folks "go West" or to the big towns, and where the quiet and wholesome environment of rural existence promotes longevity to an unusual degree. The venerable clergyman's records also show that of infants now born fewer die in childhood in proportion to births than died in years gone by. Not as many children are now born in proportion to the population as were born twenty-five to fifty years ago. There are more deaths proportionately caused by drunkenness and by lung complaints in these days than in former years, and these fatalities serve to keep down the comparative scale of longevity below what it would otherwise reach. The increasing length of years attained by the rural population is attributed to the exemption of the present generation from the severe toils and hardships encountered by their progenitors in clearing up the wilderness, and to the better understanding and observance of the laws of health.

Some Antiseptic Preparations.—*Antiseptic Silk.*—Buy good sewing (not embroidery) silk of various thicknessess; remove the labels from the ends of the spools; boil for two hours (without removing from the spools) in ten per cent carbolic or plain water; store in alcohol in wide-mouthed bottle. Before operation soak corked bottle in sublimate solution. During operation remove cork, draw end of thread over edge of bottle and cut off ligatures or sutures as required. In the abdominal cavity use nothing but silk.

Antiseptic Sponges.—Buy in bales, at a cost of about two cents each. Beat out calcareous matter, soak in ten per cent hydrochloric acid solution for twenty-four hours, wash thoroughly in soft soap, put in five per cent. carbolic for three days. Dry in sun, in clean place; place in muslin bags and hang up in dry, clean place, or store in preserving jars, in three per cent. carbolic. Extreme care should be used in the management of the sponges during the operation. Those which have come in contact with pus, feces, etc., should be thrown under the table. Those which are only bloody may be rapidly washed in hot boiled water, and handed to the operator as he needs them.

Corrosive Sublimate Solution.—To make this salt soluble in water, it has been used in alcoholic solution, or double the quantity of common salt or chloride of ammonium has been added. The best formula is as follows:

Corrosive sublimate,
Hydrochloric acid.................. āā 1 drachm.
Distilled water, enough to make........ 1 ounce.

This forms a perfect and permanent solution. One teaspoonful to a pint of water makes a solution of 1 to 1,000. Or the solution may be made with tartaric acid.

Boro-salicylic Solution (Thiersch's).—This, which is called Thiersch's solution, and which is much used in Germany in peritoneal operations, on account of its blandness, is made by adding two parts of salicylic and twelve parts of boracic acid to 1,000 parts boiled distilled water. —Haynes, *Southern California Practitioner.*

How to Remove the Wounded.—Assistant Surgeon James E. Pilcher, United States Army, read a paper on March 21st, before the Military Service Institute at Governor's Island, on the "Transportation of the Wounded. Dr. Pilcher confined himself to that part of the subject connected with the removal of wounded men from the field by human bearers, and illustrated the methods he favors by having them rehearsed before the audience by a squad of men whom he had trained. He advocated the carrying of stretchers in the hands of bearers instead of on their shoulders, as was common in the civil war. He reminded his hearers that Stonewall Jackson was killed by the falling of one of the litter-bearers who were carrying him with the litter-handles resting on their shoulders.

Regulation of Vice.—The long debate at the Academy of Medicine on the public prophylaxis of syphilis, or, rather, the police regulation of prostitution, has been brought to a close, but the question remains exactly where it was when the discussion began. No less than thirty-three articles have been proposed by the Commission through Dr. Fournier, its reporter, on the best measures that should be taken to prevent the spread of the disease. Scarcely any of the articles have been accepted as proposed, as each speaker who took part in the debate had something to take from or to add to them. Dr. Diday, of Lyons, made a most interesting communication on the subject of prostitution. Formerly, he said, there were two sorts of prostitution—viz., that of licensed public houses (*maisons de tolérance*) or closed prostitution, and street or open prostitution. The progress of civilization has given birth to a third form, *la prostitution entr'ouverte*, or what may be termed clandestine or unlicensed prostitution, which is practised particularly in drinking shops where women are employed. To remedy this state of things, Dr. Diday proposed that Paris and other large cities should follow the example of the city of Lyons, where young women who are so employed should furnish every three months a certificate of good conduct and of good health under a penalty of a fine for any omission of the same, for which the masters are responsible. This declaration simply excited a smile, and one of the members facetiously remarked that if Paris should wish to preserve its title of the first city of France, it had only to exact from all the young women of wine or beer shops certificates similar to those exacted from the *employées* of Lyons as a proof of their morality. In the course of the debate, Dr. Le Fort made frequent allusions to the salutary effects of the English law respecting prostitution, but Dr. Brouardel took another view, and drew a comparison strongly in favor of the Paris system.—*Lancet.*

The Village Doctor.—Mr. Julian Hawthorne, in the *American Magazine*, gives this true and graphic picture of the country doctor: "One of the most entertaining people in the village is the doctor, for, however closely he may be allied with his patient-community, he must also be, to a greater or less extent, a man of the world. The time you spend with him will surely not be thrown away—unless, indeed, you visit him in his professional capacity; then it will all depend on circumstances. A doctor, in America, is very apt to have been a traveller; and, being an American, to have seen a great deal that the ordinary traveller misses. His knowledge of the inside of his fellow-creatures seems to assist him in observing facts connected with their external environment; he is comparatively free from prejudices, and his opinions upon things in general are dictated by solid common-sense. His professional training tends to sharpen his insight into human nature, and, if his own nature be sociable and humane, he forms many agreeable acquaintances in all parts of the world. In the seclusion of his rural study, shadowed by the elm-tree on the lawn, and rendered fragrant by the lilac-bush under the window, he cons over the latest discoveries of science, and meditates wisely and discriminatingly upon politics, literature, and art. He is amiably sceptical, and he is cheerful by force of professional habit; you may interest and amuse him, but you can scarcely surprise him; and he will easily detect in you, and demurely satirize, any tendency to indulge in the Munchausen vein. He is not a wealthy man, and most of his fees are paid in commodities other than coin, when they are paid at all; yet he has enjoyed his life, and has the consciousness of having been of some benefit to his fellow-creatures, if only by removing them to a happier sphere. But if he be the best man in the village, the reason is, it must be confessed, because he belongs to it only in the physical sense; his mind and faculties and his higher sympathies have a far wider range. He resides there because he was born there, and because a man who has surveyed existence in its larger aspect cannot do better than spend his closing years where his years began."

Early Remembrances.—Dugald Stewart was once asked what was the earliest thing he could remember. He said it was being left alone by his nurse in the cradle, and resolving to tell of her as soon as he could speak. This record, however, does not equal that of the American who remembered that, in his early embryo-life, he had a fear that, perhaps, he might be born a girl.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 24 New York, June 16, 1888 Whole No. 919

Original Articles.

UNUSUAL CASES OF PELVIC CELLULITIS AND THEIR TREATMENT.[1]

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NEW YORK.

On looking over a large number of cases of pelvic inflammation in search of those which could appropriately be termed "unusual," I have been struck by the great variety which they present, and have found a difficulty in selecting cases that were not unusual. Few if any other diseased conditions are liable to so many varieties in degree and in kind. All I shall attempt at this time will be to give the outlines of a few cases occurring in my own practice, with the means of treatment adopted in each, in the hope that I may provoke discussion on a subject of very general interest.

Case I.—This patient was a married woman, thirty years of age, who had had two children, and, three months before entering the Woman's Hospital, a miscarriage, probably induced. She was suffering severe pain, and had a temperature constantly high, varying from 100° to 104° F., with weak and rapid pulse. There was much vomiting, and scarcely any food could be retained. Examination showed a large mass on the left side of the pelvis, pressing the uterus over to the opposite side. The uterus was fixed. There was an indistinct feeling of fluctuation in one part of the tumor, the upper margin of which could be felt behind the pubes. After consultation with my colleagues, laparotomy was decided upon as the safest method of evacuating the contents of the abscess. On making a small incision the mass could be distinctly felt behind the uterus; while firmly attached to the margin of the tumor was a coil of intestine, which would inevitably have been wounded had an attempt been made to evacuate the abscess by vaginal puncture. It was found impossible, without incurring great danger, to make an incision into, or even to aspirate the mass, surrounded as it was by adherent intestine. The wound was therefore closed. The patient had apparently reached a crisis, and from that time improved slowly, and after a few weeks left the hospital. I saw and examined her one year afterward, when she was in excellent health, and could find scarcely a trace of the abscess, the uterus being movable and in position.

This case illustrates not only the great danger that may attend surgical operation, and also the fact that very bad cases sometimes recover without interference. The condition of the patient when at her worst would have justified the resort to almost any procedure, however dangerous, that would give any hope of relief or cure.

Case II.—This was the case of a private patient, aged twenty-eight, who when two months pregnant had an abortion produced, in consequence of constant and intolerable pain and vomiting. The contents of the uterus were evacuated under ether, with the utmost antiseptic precautions, and the patient did perfectly well until the tenth day, when she was moved from the bed to the sofa. On that day she had a chill, accompanied by severe pelvic pain on the right side, and a sudden rise of temperature. On examination the uterus, which had been in position, was found to be displaced to the left, an indistinct mass being felt upon the right side. No fluctuation could be detected at any point. The temperature varied for the next five days between 101° and 104° F., and there was intense pain, requiring the frequent use of morphia. On the sixth day a soft fluctuating point was discovered in the mass, and the small needle of the aspirator was introduced, bringing away about an ounce of fetid pus. On withdrawing the needle slowly, some urine followed, clear and unmixed with pus. The pain was relieved, and the temperature was lower during the next four days, at the end of which time there was fluctuation in another part of the mass. A narrow bistoury was introduced at that point, and about half an ounce of very thick, almost cheesy, pus escaped on pressure. The condition of the patient continued to be unsatisfactory, pain coming on suddenly at times, and the temperature varying between 99° and 104° F. with a weak and rapid pulse. I then determined to open more freely with the knife, and, in order to ascertain the situation of the pus, I passed a small trocar, as a preliminary measure, at a point behind and to the right of the cervix, trying to avoid the bladder. Pus escaped freely, but, on withdrawing the trocar in order to enlarge the opening, a very profuse hemorrhage occurred. The trocar had evidently cut through the displaced uterine artery. I rapidly enlarged the opening, and was able, with much difficulty, to grasp both ends of the artery with long pressure-forceps. During this procedure I introduced the finger and broke up some partitions separating the collections of pus, but I do not believe that it was all evacuated, or that all the pockets were reached. The forceps were left *in situ* for thirty-six hours, a firm tampon being introduced. All hemorrhage was checked in this way; but for two days afterward a large quantity of blood and pus appeared in the urine. All the bad symptoms subsided rapidly, and the patient made a good convalescence. The temperature became normal and remained so, and there was no considerable pain after the operation.

I have no doubt that the bladder was injured twice in this case, but no evil result followed. There must have been extraordinary displacement of that organ, as I chose a point as far back as possible in order to avoid it, warned by the first accident. I was also on my guard against wounding the artery, and endeavored carefully to find a point at which no pulsation could be felt.

Case III.—This case came into my service in the Woman's Hospital, suffering from well-marked pelvic cellulitis. The patient was thirty-four years of age, married, and had had children. The cause of the inflammation was obscure, as no satisfactory history could be obtained. There was a large mass on the right side of the uterus, apparently connecting with a smaller mass on the left side. On examination under ether it was thought that deep fluctuation could be obtained, but puncture with a large trocar at the softest point, and the use of the exploring needle at three other points, failed to bring pus. The condition of the patient was bad, and growing rapidly worse. An incision was therefore made in the right groin, and an attempt made to reach the contents of the mass without entering the peritoneal cavity, but without success. The weather was very warm, the hospital was about to close, and the friends of the patient were very anxious to take her away to the country, as they supposed, to die. Four months later I learned that her condition had very much improved during the summer, but that, so far as she and her friends were aware, there had been no escape of pus by the vagina or rectum, and no sudden relief. I saw and examined her some months later, and found her in a condition of satisfactory convalescence. The uterus was still fixed, but some induration around it was all that remained of the pelvic abscess.

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[1] Read before the Obstetrical Section, New York Academy of Medicine, April 26, 1888.

Case IV.—This patient was a woman, forty years of age, who when I first saw her had been confined to her bed for several weeks, and gave a history of having had much fever, great pain in the abdomen, and nausea. On examination the pelvis was found apparently filled with a solid mass, in which the uterus could not be distinguished. As fluctuation was discovered at one point, an exploratory puncture was recommended, and preparations were made for that operation; but a sudden escape of offensive pus from the cervix, as distinctly seen through the speculum, gave great relief, and rendered operation unnecessary. For several months afterward there was apparently a re-accumulation of pus, accompanied by pain and a high temperature, and in place of menstruation the same profuse discharge, and consequent relief.

Case V.—This patient was seen in private practice, in consultation. She had been seen by several physicians, who agreed in the diagnosis of pelvic abscess and salpingitis. The mass was not punctured, but, after many weeks of suffering, laparotomy was performed, and there was found not only extensive diffuse, pelvic peritonitis, with a number of small abscesses, but also salpingitis, the tube on one side being distended with pus, and also a dermoid cyst, the whole being bound firmly together by adhesions. The case terminated fatally. The lesson to be drawn from it was the danger in such a case of puncture, aspiration, or even the use of the hypodermic needle. If the needle had not reached the cyst it would have given no information as to the character of the tumor, and if it had reached it, the cyst being very tense, either collapse or fatal peritonitis would almost certainly have followed. The case is instructive also as showing the difficulty of making a diagnosis in cases of extensive pelvic inflammation. Several gentlemen of large experience in gynecology and obstetrics, expert diagnosticians, had examined the case carefully without so much as suspecting the existence of a dermoid cyst about or nearly four inches in diameter.

Case VI.—This case was that of a patient thirty years of age, never pregnant, who had been subjected to severe treatment by forcible dilatation of the uterine canal, on account of sterility. Extensive pelvic inflammation followed, and when first seen by myself her condition was not unlike that of the case last reported. The question of puncture had been seriously considered, but there was no point of fluctuation; and there was evidently salpingitis, with a discharge of pus from the uterine canal immediately after each menstrual period. After much suffering and prolonged treatment at the hands of several specialists, laparotomy was resorted to as affording the only hope of relief. A large, thin-walled sac of fetid pus—the distended tube—was found on the right side, and in manipulation was unavoidably ruptured. Though the abdominal cavity was thoroughly cleansed, a fatal peritonitis resulted. The case is mentioned simply to illustrate the possible danger, and the certain inutility, of puncture or other vaginal operation in similar cases.

Case VII.—This patient was twenty-one years of age, and pelvic inflammation developed ten days after a normal confinement—the first. The disease was signalized by a sudden rise of temperature, accompanied by pain and tenderness on the left side of the uterus, and the development of a mass quite distinctly felt on bimanual examination. This tumor persisted for several weeks, growing gradually smaller, and giving rise to less marked symptoms accordingly. Everything pointed to a circumscribed pelvic abscess, and the probable necessity for interference was constantly borne in mind. There were, however, domestic and other reasons—the case occurring in midsummer—for postponing to the last moment compatible with safety any surgical procedure. Without interference the patient gradually made a complete recovery.

Diagnosis.—The cases thus briefly outlined serve to illustrate the great difficulty and uncertainty of diagnosis in recent pelvic inflammation. The difficulty would be less if all the cases could be observed from the outset; but we are commonly called to see them when the disease is well advanced, and at a period of all others the most unfavorable for diagnosis. The cases are also obscured by complications. Pelvic abscess and salpingitis commonly go together.

The following conditions may simulate or complicate pelvic cellulitis: Salpingitis with dilated tube; dermoid cyst; suppurating or other ovarian cyst; cyst of broad ligament; hæmatocele; soft uterine fibroid; retroflexion or retroversion with adhesions; latero-flexion or version, with or without adhesions; encysted pus resulting from peritonitis; solid or semi-solid ovarian tumor; extra-uterine pregnancy; normal pregnancy.

These are some of the conditions and complications which may serve to make us modest and doubtful in our diagnosis, and the possibility of their existence should never be lost sight of.

Treatment.—As the diagnosis of pelvic inflammation is subject to much uncertainty, the treatment must be adapted carefully to each individual case. The good surgical maxim, that pus wherever it exists should be evacuated, does not apply invariably to cases of pelvic abscess. There are cases where the danger of resorting to surgery is greater than the danger of waiting. No inflexible rule can be laid down for our guidance in such emergencies. There is, perhaps, no class of cases in the whole domain of surgery in which good judgment is more imperatively necessary than in the class under consideration. And there is always an element of uncertainty even in the most favorable and apparently the simplest cases. The anatomical relations of the parts are so distorted, and the conditions of the organs so much changed, that we must always be prepared for the unexpected. All such cases, if seen early enough, should be carefully examined at least once in twenty-four hours, as they often undergo rather sudden changes. The temperature and pulse should be noted at least three times in the twenty-four hours, and the general condition of the patient should be carefully scrutinized. Constipation should be guarded against, as it is a very serious embarrassment in examining the patient. When there is so much pain or tenderness as to prevent a satisfactory examination, a little ether or chloroform should be given whenever there is a doubt as to the actual condition. When any one part of the mass which presents in the vagina begins to soften, the question of evacuation should be seriously considered. The following methods may be employed: The hypodermic needle, the aspirator, the trocar and cannula, the knife or scissors, Paquelin's cautery, the exploring needle.

Of these methods the hypodermic needle is utterly useless; and aspiration with a small needle, though some pus may be withdrawn, is of little practical utility. If evacuation is decided upon, the best way to do it is unquestionably by means of the knife—a narrow-bladed, curved bistoury answers very well. The ordinary exploring needle should be used first, and followed by the free use of the knife, in a region as remote as possible from large veins or arteries. The cautery has no advantages over the knife, and is much less manageable. The pus is often so thick that it will not flow through even a large cannula, and small needles are therefore not only useless, but misleading, as they may fail to show the presence of pus.

The operation should be undertaken with a full appreciation of its dangers and its uncertainties: arteries or veins of large size may be injured; the bladder or ureters may be wounded; a dilated tube may be cut into, while the abscess proper may not be reached. But, notwithstanding these dangers, the operation described is often the best and safest resource at our disposal. It is seldom, however, that a single puncture will evacuate more than one small collection of pus. It is well, therefore, to make the incision large enough to introduce the finger, which is safer here than any other instrument, to break down the partitions between the various pockets of pus, and make the evacuation thorough. It will then be necessary to drain the cavity. A piece of soft rubber drainage-tube may be fastened in the wound by a suture of silk or silver wire, and the cavity thus frequently irrigated with an antiseptic solution. Or the cavity may be packed with iodoform gauze, which must be frequently changed.

The operation should never be undertaken without ample assistance, and an abundant supply of instruments to meet any emergency. The patient should be etherized and placed on the side on a table, and Sims' speculum employed, in the hands of a skilful nurse or assistant. There is no excuse for surprises, for the operator should be prepared for anything that can possibly arise. Among the instruments which should be in readiness are: Sims' speculum, artery- and pressure-forceps of various sizes, knives and scissors, a director, needles straight and curved, needle-holders; ligatures of silk, catgut and silver wires; dressing-forceps, Paquelin's cautery; plain cotton and alum cotton, absorbent and non-absorbent, in large quantity, prepared for tampons; dressing-forceps, etc., and a lamp or reflector to insure good light in case an operation is done at night. An abundant supply of hot water should be at hand, and several pus basins or small vessels for use in irrigation. Ether and chloroform should always be in readiness.

Conclusions.—My experience and observation warrant me in arriving at the following conclusions:

1. That while a certain number of even bad cases of pelvic abscess recover without treatment, and do not rupture spontaneously, there is, nevertheless, a large element of danger in the expectant treatment—as of rupture into the rectum or into the peritoneal cavity, or of septic poisoning or septic peritonitis.

2. That no inflexible rule can be laid down as to surgical treatment, which must always be contingent on the severity of the symptoms, the progress of the disease, and the general condition of the patient.

3. That vaginal incision, thorough evacuation, and free drainage constitute by far the best and safest method of treatment in a large number of cases.

4. That the dangers of surgical interference are unquestionably considerable, even under what seem to be favorable circumstances, but that they are reduced to a minimum if the operator is fully prepared for any emergency, and is vigilant and uncompromising in the employment of antiseptics at every stage of the treatment.

5. That injury to the bladder cannot always be avoided, but is not usually a serious accident.

6. That injury to the large arteries or veins, if proper precautions are taken, need never result in fatal or even serious hemorrhage.

Tubercular Ulceration in the Nose.—Dr. M. A. Veeder, of Lyons, N. Y., writes: "In the second edition of Beverly Robinson's treatise on 'Nasal Catarrh,' it is stated that the author does not remember to have seen a well-defined ulceration of tubercular character in the anterior or posterior nasal passages. A case that recently came under the observation of the writer appeared to be of this variety. The patient was in the last stages of tubercular consumption, a cavity having formed in one lung, and the larynx being the seat of extensive ulceration, causing loss of voice. The nasal septum also was much inflamed and was perforated, the lesion apparently being entirely similar in its origin and progress to the ulceration in the throat."

The Physician's Bedside Record is the title of a very conveniently arranged clinical record, devised by Dr. S. C. Segur, of Hartford. It can be made to serve as a memorandum for the nurse's direction, and also for keeping a history of the case from day to day. It is compactly arranged and of small size, so that it may easily be filed away, and take the place of the large case-book.

THE TREATMENT OF STRICTURE OF THE URETHRA BY ELECTROLYSIS.[1]

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After an experience of sixteen years, embracing the care of nearly four hundred cases of stricture of the urethra, it seems somewhat surprising that at this late date the author should just have begun to appreciate the merits and foresee the possibilities of a method of treatment which hitherto he has looked upon with suspicion and distrust.

In 1872, while house-surgeon at Bellevue Hospital, I requested our fellow-member, Dr. Robert Newman, to treat according to his recently devised method of electrolysis some few cases of stricture of the urethra.

For causes now forgotten, these cases did not do especially well, and the treatment was abandoned. Since then I have never been sufficiently impressed with the advantages of the method, although they have been most enthusiastically presented by its advocates, until after reading Dr. Newman's more recent contributions, especially his paper read before the New York State Medical Association, November 25, 1885, and his subsequent synopsis of one hundred cases of stricture treated by electrolysis, read before the American Medical Association, June, 1887, to give it the unprejudiced trial that a new method of treatment is entitled to receive.

The following case was selected for experimentation:

J. B——, thirty-two years of age, good general health, and temperate; expressman by occupation. Had gonorrhœa with swelled testicles two years ago; the discharge has continued, off and on, up to the present time. Has been under treatment at several of the city dispensaries and hospitals, and has given the various treatments proposed more than ordinary attention. November 2d: Is now complaining of painful micturition, diminished and divided stream, and gleety discharge.

Meatus admits bougie à boule, No. 14, French. At two and a half inches from meatus, there is a quarter-inch contraction, barely admitting No. 12. At five and one-third inches, a second stricture half an inch long admits with difficulty No. 7.

The membranous urethra unusually granular, bleeding quite profusely on the passage of instruments. Bladder irritable. Urine alkaline; specific gravity, 1.028; containing pus with phosphates.

Meatus incised to No. 32 French.

Newman's insulated olivary bougie, No. 14, passed to first stricture. Current from six cells (Dreicher's forty-cell battery, zinc and carbon elements) passed through bougie, connected by negative pole, for fifteen minutes, when the bougie *slipped* gently through the stricture.

No further attempt at electrolysis was made that day. Not the slightest pain was produced and no unpleasant symptoms followed.

November 11th.—Newman's bulbous bougie, No. 15, was passed and engaged in the stricture; current from eight cells for seven minutes producing no pain, only a slight sense of discomfort, permitted the ready passage of the bougie.

The absolute painlessness of the procedure tempted me into essaying the deep stricture five and one-third inches from meatus. No. 8 bougie, six cells, fourteen minutes, passed readily to the prostate.

November 13th.—Not the slightest unpleasant result followed the passage of the bougie. The stream seems rather reduced in size.

November 17th.—Both strictures submitted to a mild current, six cells, eight minutes each. Bougies Nos. 9 and 11 passed lower stricture; No. 17, superficial stricture.

From this time on, bougies were passed once a week, until December 29th.

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[1] Read before the Northwestern Medical and Surgical Society, April 18, 1888.

January 3d.—Bougie à boule and Otis' urethrometer fail to detect any appreciable contraction. The discharge has entirely disappeared, the patient passing a full-sized stream.

April 7th.—Steel sound No. 30 passed readily into the bladder, no instrument having been passed for five weeks.

In reviewing the above case, I unhesitatingly express my belief that the treatment was conducted with less pain to the patient and followed by a better result, obtained in a shorter time, than possibly could have been obtained by any other method of treatment with which I am familiar.

Ordinarily, the first stricture I should treat by internal division—reserving electrolysis for the deeper one—and this is my present method of procedure for all anterior strictures, and for those of a not particularly dense composition.

CASE II.—J. S——, aged twenty-eight, German, bootmaker, dissipated. Has had repeated attacks of gonorrhœa and been under the care of many surgeons for stricture and gleet. Has had internal urethrotomy performed twice. The urethrometer shows numerous contractions from the fossa navicularis to a depth of five and three-fourths inches; No. 9 bougie à boule can be passed to a depth of three inches—when it is arrested against a tough, gristly stricture, about half an inch long, which admits No. 6 with difficulty.

November 4th.—No. 5 Newman's insulated bulbous bougie was engaged in the stricture and connected with negative pole. Positive pole placed over Scarpa's space. Current gradually increased until ten cells were in circuit. At the expiration of eight minutes, the bougie slipped through the stricture to encounter another at the depth of five inches. No further attempt was made at this sitting. An insignificant flow of blood followed the withdrawal of the bougie. No pain was experienced. The same evening the patient suffered from retention of urine. A whalebone guide was passed with great difficulty, and on this a No. 3 tunnelled catheter. A pint of water was drawn. No unpleasant result followed. Considerable scalding in micturition was experienced for the three successive days.

November 11th, 18th, 24th, and December 1st.—Bulbous bougies Nos. 8, 10, 14, 18, and 30 were successfully passed.

April 2d.—The patient was examined to-day for the first time in three weeks. A steel sound, No. 30, passed readily into the bladder, a slight obstruction being encountered at the depth of three inches. A slight gleety discharge remains; nothing, however, when compared with what it was in November. At no time during the past seven years has the patient's urethra been in as good a condition, or been as free from pain, or able to pass as large a stream as he has since electrolysis was commenced.

Seventeen other cases, embracing forty-one strictures (not including those in the first two inches), and varying in size from 9 mm. to 22 mm., have been subjected to this method of treatment. In two instances only has the pain been of sufficient severity to necessitate the subsequent use of anodynes. The utmost delicacy in the necessary manipulations has invariably been exercised in order that pain might be eliminated as far as possible. The same precaution has been observed in intensifying the current; commencing the séance at zero, and gradually bringing as many cells into use as the patient's own sensibility made possible. The fewest number of cells required—from a 40-cell Dreicher battery—to produce any appreciable electrolytic effect was five, and the largest fourteen. The longest séance was twenty minutes, in the case of a dense traumatic stricture situated in the membranous portion. The average length of the application has been not far from ten minutes to each stricture.

Regarding the duration of treatment, I have been surprised at the rapidity of cure. In several instances in which gradual dilatation has been employed for months, far better results were attained by electrolysis in weeks. After a stricture of average density has been electrolyzed up to about 20 mm.—from, say, eight or ten—its subsequent disappearance is more rapid than it was at the commencement of treatment.

In several instances I have noticed that at the second or third sitting comparatively little advance was made, whereas at the sixth or seventh a gain of several numbers, as determined by the urethrometer, was made between each séance.

Regarding the interval that should elapse between the sittings, I am convinced that a mistake is made in making them too near together in the earlier stages of treatment.

In five cases in which I purposely examined the urethra with the urethrometer on the second and third days after electrolysis, I found a diminution of the canal, from swelling, varying from 2 to 5 mm., although in each case of the five, at the expiration of a week, and after all swelling had subsided, there was a gain in the urethral calibre of from 3 to 5 mm.

Another observation of importance is the smoothness of the lining membrane of the urethra as compared to its condition after either dilatation or division. The sensation, as conveyed to the finger by the passage of either a steel sound or a bougie, or both, is suggestive of a more normal elasticity and smoothness. This was most strikingly shown in the case of traumatic stricture above referred to—a case that had been condemned to external section, and in which electrolysis was resorted to as a *dernier ressort*. The cure in this case is not complete, but the progress is gratifying, although somewhat tardy. In nine sittings the calibre has been enlarged, at five and one-eighth inches, from 9 mm. to 20 mm., with very slight tendency to recontract, with no pain, hemorrhage, or other inconvenience than a slight though temporary increase of discharge after each sitting.

Twenty cases of stricture of the urethra have been treated by electrolysis during the winter. Three cases out of the twenty did not improve in any appreciable degree, and the treatment was changed. As the result of my experience in the other seventeen cases, justice compels me to give expression to the following conviction regarding the application of electrolysis to the treatment of urethral stricture:

First.—Many cases of stricture of the urethra, especially those of a fibrous nature, can be more effectively relieved by the action of the galvanic current applied locally, after the manner recommended by Dr. Newman, than by either gradual dilatation, divulsion, or internal urethrotomy.

According to my experience, all strictures are not alike susceptible to this treatment, any more than all cases are susceptible to treatment by dilatation. A larger experience, however, may change this opinion. My most successful cases, thus far, have been those in which the fibrous element predominated. Elastic and resilient strictures of large calibre have not yielded as readily to electrolysis as they have to the dilating urethrotome. Not the least advantage of this method of treatment lies in the fact that, when judiciously employed, according to the views so concisely and intelligently laid down by its author, no harm can come to the urethra, and so, if this method fails, we can fall back upon other and more radical measures.

Secondly.—The operation, while radical and effective, is conservative and physiological.

It aims at producing its results by methods that are strictly physiological, and never by cauterization or other destructive agencies. In this I must join with Dr. Newman in taking exception to the somewhat remarkable opinion of the action of electrolysis as expressed by Dr. F. O. Marsh (*Cincinnati Lancet and Clinic*, 86., N. S. XVII., 184–6). "Electrolysis," he says "means cauterization, and therefore I condemn it." "The idea that tissue is melted down in cartilaginous or any other structure without producing excoriation of the parts is a delusion; since electrolytic action takes place only at the surface of the electrode and the effect when obtained, though ever so slowly, must be identical with that of a caustic or red-hot bougie bored through the stricture."

In truth, the effect of galvanic action upon living tissue is far from being uniform. Everything depends upon the method of its employment and the direction and intensity of the current employed. A current may be so passed as to vary in its effect through every possible shade of difference, from a gentle stimulant to blood-vessels and capillaries to the most potential galvano-caustic effect.

Galvanization does no more necessarily imply tissue destruction or cauterization than it does in its multifarious applications in the arts imply conflagration. The practice of causing absorption of scars and cicatricial tissues by galvanism antedates considerably its application to the treatment of urethral cicatrices. So far as the *rationale* of the treatment is concerned, urethral electrolysis is simply an ingenious application of well-established galvanic principles. Just how the galvanic current acts in dissipating urethral contractions, unless it is through a process of absorption, never having had an opportunity of examining the process microscopically, I do not profess to know. Neither the endoscope nor the bougie throw any light on the interesting physiological processes that are set in operation by the galvanic current; the effect, however, is readily demonstrable and unimpeachable.

Thirdly.—The operation is painless and bloodless.

Not the least satisfactory feature in the galvanic treatment of urethral stricture is the immunity from hemorrhage. urethral abscess, urinary infiltration, blood-poisoning, and probably urethral fever, which this method presents in comparison with the older methods.

While no one doubts that infinite damage may be done by the careless or incompetent employment of electrolysis, yet I doubt exceedingly if the injury could be much greater than that which, in equally incompetent hands, may be inflicted by any cutting instrument, and especially by that most perfect and beautiful of them all, the dilating urethrotome. Yet, who of us who know and value this instrument would be willing to sacrifice the absolute precision with which we operate, because of the blunders and injury it has inflicted in ignorant and brutal hands?

The principles of electrolysis as applied to the treatment of urethral strictures, and as enunciated by Dr. Newman, are so clear, simple, and definite, that no one can follow them without appreciating their *cleverness*, or practise them without success. The astonishing thing to me is the fact that they have been so long before the profession without their value being more generally recognized. I apprehend one reason of this lethargy is due to an unwarranted skepticism as to the remarkable results obtained. Another reason, doubtless, is the discouraging inferences one might legitimately draw from the behavior of the urethra after the first and second application of the current—the temporary congestion, swelling, and pain on micturition, which sometimes occur.

In this city, I regret to say, but few of our leading surgeons, if any, have expressed confidence in the method. Throughout the South and West the operation is slowly establishing itself. In England Berkeley Hill and Buckston Brown, both men of matured and excellent judgment, have expressed their skepticism of its feasibility, while, on the other hand, Mr. Stevenson says, "the treatment of stricture of the urethra by this method is the most simple and striking in its results." Swinford Edwards says, "I cannot but think that a great future lies before this method." Bruce Clark says, "I have relieved cases better than could be done by any other method." S. T. Anderson (*Lancet*, 1885, ii., 1040) reports four cases cured, two in one sitting of twenty-three and three minutes, respectively. Hayes ("Transactions of Academy of Med., Ireland. 1886") reports three successful cases.

I am unacquainted with any efforts that have been made in this line in either France or Germany.

Professor William T. Belfield (*Journal American Medical Association*, 1886) summarizes his conviction, after an experience with thirty-seven cases, in these words: "I now use it (electrolysis) almost exclusively, except for stricture within an inch of the meatus and for stricture of large calibre situated elsewhere in the penile urethra. I consider the following to be its advantages:

"1. It is applicable to stricture in any point of the urethra.

"2. Any stricture or succession of strictures, however rigid and cartilaginous, however long and tortuous, however tight, even if impermeable, can be readily and safely perforated.

"3. As a rule it causes no pain or bleeding, is followed by no chill or urethral fever, and is always devoid of danger.

"4. When properly performed it can produce no false passage or other local lesions.

"5. The effects are more enduring than either those of cutting or stretching."

The above deductions of my friend, Professor Belfield, as well as the principles of treatment enunciated by Dr. Newman, have my unqualified approval.

A RARE FORM OF VASO-MOTOR DISEASE.

A CONTRIBUTION TO THE STUDY OF HYDROPS INTERMITTENS ARTICULORUM.

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In the following paper I wish to present a form of joint disease which claims interest not only from the fact of its rarity, but likewise because it has in most instances resisted treatment, and because the present cases are, as far as I have been able to determine, the first of their kind to be recorded in this country.

Mrs. S——, a young married woman, twenty-two years of age, came to me during the month of May, 1885, to receive advice regarding a certain peculiar and obstinate affection of the knee-joints, of several years' standing. A brief inquiry into the nature of the complaint made me aware that I was to observe a remarkable and rare form of disease. The patient furnished the following details: She had always enjoyed good health, although never very robust. The flow became established between her fourteenth and fifteenth years, and at about the same time the present trouble appeared. This consisted in the development of a painful swelling of the right knee-joint, preceded by considerable pain, of a dragging character, in the right inguinal region, and attended by stiffness, heat, and tension in the joint, the circumference of which rapidly increased in size, and so remained for a certain number of days. This attack was sufficiently severe to confine the patient to her bed for three days out of the five that it lasted. Its progress was rapid, and it reached the greatest degree of intensity on the third day, subsiding gradually. A fortnight of perfect health followed, with restoration of the use of the limb, when the attack was repeated in the same joint and in precisely the same manner as before, but with greater intensity. Still another fortnight elapsed, counting from the last day of the previous attack, and with the advent of the fourteenth day a third attack, similar to the preceding, was ushered in. This lasted about six days, and at its termination was immediately succeeded by another attack, now affecting the left knee-joint, developing in the same manner and lasting five days. During the third, fourth, and fifth paroxysms both knee-joints were affected; the left always upon the subsidence of the swelling in the right limb, but not to the same degree. Each successive attack occurred with increased intensity, until, at the sixth attack, both knee-joints were equally affected. The seventh attack, however, was limited to the right knee, and the eighth, fourteen days later, to the left. Since that time the attacks have recurred with remarkable regularity, alternating from one knee-joint to the other, for seven years. The patient could foretell the appearance of each attack to the day, almost to the hour. It appeared precisely on the twenty-first day from the date of the first day of the preceding attack, and lasted exactly seven days, thus leaving an interval of fourteen days of perfect freedom. Finally, in her twenty-second year, the patient married. To her great gratification, the attack following this event, which was due on the twelfth day day thereafter, was extremely transitory and mild, and with the next return of the twenty-first day, it failed entirely to put in an appearance, and remained absent from that moment and during the whole period of her pregnancy. The patient nursed her child for two weeks; she again became pregnant four months later, having menstruated regularly in the interim. A second child was born, and six weeks later the attacks, which had not recurred since marriage, reappeared. At first they were mild, but they grew in intensity and recurred regularly during lactation, during the absence of the menses, and afterward, as well. Almost every conceivable method of treatment had failed to conquer this disease. During seven years the patient had subjected herself to compression, counter-irritation, inunction, massage, vesication, and had tried numerous internal remedies without avail. Aspiration had finally been resorted to. The right joint had been evacuated three times before marriage, and the left twice since the return of the affection after marriage, and about a tablespoonful of straw-colored, gelatinous fluid, of the consistence of white of egg, had escaped, and continued to flow from the puncture for half an hour afterward. Since the attacks have returned they have become altered somewhat in rhythm. Instead of recurring as before, at stated regular periods of twenty-one days, they now appear every twelfth day. At first the left knee-joint alone was affected, just as at the beginning of the malady seven years ago. But after the third attack the right knee-joint also became implicated, swelling up immediately after the subsidence of the process in the left joint. During the fourth, fifth, and sixth attacks, both joints were affected in immediate succession. The seventh attack, however, was limited to the left knee, and since then, and up to the time of this writing, the right knee-joint has not again participated. The attacks now last about six days, are quite distressing, and prevent walking. They are still preceded for two days by violent dragging pains in the groin, at the same time a certain degree of general languor and complete anorexia is experienced. There is no febrile movement, no headache, and no pain in any other joint. The patient is deprived of the use of her limb for about three days, and the pain is usually severe enough to prevent sleep. The last attack ended three days ago.

The peculiarities of the case, as described by the patient, were such as to raise some doubts in my mind as to the accuracy of her observations. I had not then read of anything analogous, and the text-books at my disposal failed to enlighten me on the subject. The patient was a slight, pale, and delicate-looking person. My first impression associated a strong flavor of hysteria with the history. I directed the patient to send for me at the onset of the next attack. Several days later I was summoned. It was the second day of the attack. The patient was reclining on a lounge, unable to walk. The left knee-joint was decidedly swollen, there was distinct elastic resistance to the touch, the fluctuation being limited to the capsule of the joint. The natural depressions at either side of the patella were effaced, and the fluid contents of the joint could easily be displaced upward, by compression, into the subcrural pouch. Ballottement of the patella was readily produced. There was moderate limitation of the excursions of the joint on passive motion, due to the mechanical distention of the capsule. Active movements were slowly and cautiously executed, and caused much discomfort. There was appreciable tenderness on pressure only at one point, viz., just over the inner aspect of the head of the tibia, at the insertion of the int. lat. ligt. On the following day the affection had reached its acme. The manifestations were the same, but they were more marked. The distention of the capsule was such as to render it quite tense; the pain was distressing; there was decided muscular resistance to any attempt at moving the joint. The hand applied to the surface detected an increase in the temperature as compared with the sound side. The circumference of the affected joint measured fourteen and three-fourths inches, that of the other twelve inches. The patient had retired to bed and was obtaining slight relief from the application of ice. She could not bear to walk a step. On the fourth day there was a decided diminution of all these symptoms, and on the fifth day the patient was able to walk with the aid of a cane. On the sixth day she was able to come to my office. An examination of the joint then failed to detect the slightest abnormality other than a difference in circumference of about one-fourth of an inch. The movements were perfect in every direction, and the bony contour of the joint was that of the normal limb.

My second case of this interesting affection was met with in the person of one Max W———, German, thirty-one years of age, during December, 1887. Unfortunately he was a dispensary patient, and did not fulfil his promise to report at regular intervals for observation. His history, however, in brief, was as follows: No hereditary influences. Never had been ill until 1875, when, after an unusual muscular effort in lifting, he claims to have "sprained" his left knee-joint. Two days later he noticed a painful swelling, which lasted eight days, during which time he could not bend the knee, nor ascend the stairs. He was then quite well for five days, when the swelling recurred again, lasting eight days. This series of joint attacks has recurred regularly during the past twelve years. The intervals now run from ten to fourteen days. On two occasions, four years ago, the attacks appeared in the right knee, instead of the left. The attacks are always preceded for two days by pain in the right groin, which interfere with walking in the erect posture. Patient was under Nussbaum's care in 1876. The nature of the disease was evidently overlooked at the time, since local treatment was resorted to almost exclusively; no improvement followed upon vesication, leeches, iodine, and immobilization.

Here was presented, in brief, a regularly recurring acute synovitis of a joint. The periodicity of the affection constituted its chief and most interesting feature. The patient had never had any serious ailment. There was no appreciable evidence of organic disease, either in the heart, lungs, kidneys, or other organs. There was no history of syphilis, malaria, rheumatism, or gout. I was at first inclined to admit malaria as a factor in the peculiar manifestations in the first case; but, aside from the lack of any clinical evidence to support the assumption, the patient assured me that she had been, on that same supposition, treated for a long while with large doses of quinine, absolutely without the least benefit.

Reference to the standard works for elucidation of the subject was not satisfactory. I was surprised to find absolutely no mention of this remarkable disorder in most of them. Gross, "System of Surgery" (edition of 1882) contains not a word of the existence of such an ailment. Barwell, "On Joint Diseases" (1881), is equally silent. Sayre's "Orthopedic Surgery and Diseases of the Joints" contains no mention of the subject; nor does Holmes' "System of Surgery" (1872), Erichsen's "Surgery" (1878), Gibney's "Diseases of the Hip" (1884), "Bryant's Text-Book of Surgery" (1881); Billroth-Pitha, "Lehrbuch der Chirurgie" (1882); article on joint diseases by Volkmann; Albert's "Lehrbuch der Chirurgie" (Vienna, 1884); Koenig's "Lehrbuch der Chirurgie" (1876); Ashhurst, "International Encyclopædia of Surgery," edition of 1884; (Barwell), Bardeleben, "Chirurgie," edition 1867; Vidal's "Pathologie Externe," Paris, 1861; Ziemssen's "Cyclopædia of Medicine," first edition; and this in spite of the fact that finally, in Hüter's "Klinik der Gelenkkrankheiten." Leipsic, 1877, I came across a half-page article on the subject, embodying six cases. To these I shall recur later on. In Holmes' "System of Surgery," revised edition, 1882, vol. iii., page 240, the following brief note occurs:

"Seiligmuller mentions a hitherto undescribed affection of the joints, an intermitting hydrops articulorum, usually affecting the knee, more rarely the hip. In the majority of cases a swelling appears without febrile symptoms, and from no known cause, and disappears, reappearing after a certain interval. The duration of the attack is usually four days, and the pause between the attacks from eight days to a fortnight. No treatment seems to be of avail." In the "Deutsche Chirurgie," edited by Billroth and Lucke, the most recent standard work on surgery of Germany, the chapters on diseases of the lower extremities (by Busch) had not as yet appeared in print. The chapter on diseases of the upper extremities, however, contains mention of one case, by Vogt, of hydrops intermittens of the elbow-joint. A bare mention of the existence of the disorder appears in Erb's "Handbuch der Elektrotherapie" (1882), and also in the latest edition (1885) of Koenig's "Surgery." Ross' "Diseases of the Nervous System" (1883), contains no mention of the disease. Strümpell's last edition mentions the affection, and devotes but a few lines to it. A systematic review of the current literature of the last twenty years was productive of more satisfactory results, and is embodied in the collection of the records of the following twenty-three cases, which, with my own, make twenty-five.

Case I.—C. H. M——: "Periodical Inflammation of the Right Knee-joint" ("Transact. Medico-chir. Society, London, 1867," p. 21). A female, forty-three years of age, received into the Middlesex Hospital in 1852, was the subject of recurrent swellings of the right knee-joint for nineteen years. In the beginning the periods were of thirty days each, later on the rhythm changed to eight days. Each attack lasted five days. The attacks ceased spontaneously in the third month of pregnancy and returned three months post partum; at eighteen years of age the patient had had ague for six months. In this case quinine in very small doses, and arsenic, proved unavailing. In point of time the menstruation was quite independent of the attacks.

Case II.—A female, twenty-one years of age, was received at the Middlesex Hospital in 1865; she had periodical swellings of the right knee-joint every twelfth day, each attack lasting five days. They were usually ushered in by shooting pains in the leg and thigh. Her menses were regular and natural, and independent of the attacks. Treatment by quinine and arsenic. The attacks became successively less severe and more irregular; she had six or eight more after leaving the hospital, and was then lost sight of.

Case III.—Lowenthal (*Berl. klin. Wochenschr.*, 1871, No. 48) observed this disease in a female, thirty six years of age, who had married at the age of twenty-two. The first attack occurred in her twenty-ninth year. The right elbow-joint was affected at first, and for six months was the seat of periodical swelling, recurring every three weeks, each attack lasting three days. During these periods, but not at any other time, she suffered with palpitation of the heart and exophthalmos, and her extreme anæmia, due to the profuse menstruation, gave her the appearance of one afflicted with Basedow's disease. She had never had malaria. During an intercurrent pregnancy the attacks ceased altogether. Two years later they reappeared in the left knee-joint every thirtieth day, and later on every twelfth day. Treatment with iron, quinine, the iodides, etc., failed to give any relief.

Case IV.—Bruns (*Berl. klin. Wochenschr.*, 1872, No. 1), records the following case: A domestic, aged twenty-nine, had had recurring attacks of swelling in the right knee-joint every eleventh day for nine years, each paroxysm lasting six days, with intervals of perfect health of five days. The initial attacks were preceded by a general but slight febrile disturbance, but later on they were not. The attack consisted essentially of a rapid swelling up of the joint, caused by a serous intracapsular effusion into, and limited by, the capsule, without inflammatory signs and with very slight tenderness on pressure. The subjective symptoms were those of a feeling of weight and stiffness in the limb, with disability. The patient now began to menstruate until her twenty-fourth year, and her periods stood in no relation whatever to the time of appearance or the intensity of the attacks. She had been under treatment at various times. Quinine had seemed to produce a temporary amelioration. Bruns applied compression to the joint by elastic bandages both before and during the attacks, without avail. The exhibition of doses of quinine, ranging from nine to thirty grains daily, during a period of six weeks, reduced the attacks to a mean duration of four days. The actual cautery was applied to both sides of the spinal column without success. A very prompt improvement followed the administration of Fowler's solution with cinchona. The patient was cured in five weeks and remained so for twenty months, when a relapse occurred; a repetition of the same treatment was again followed by a prompt cure.

Case V.—Grandidier (*Berl. klin. Wochenschr.*, 1872, No. 22.) records the case of a man, forty-four years of age, of gouty habit, who had been affected with swelling of the right knee-joint, recurring regularly on every fourteenth day, and lasting six days for many years. Failing to obtain any relief from the most varied methods of treatment, he finally went to "Heundorf" and there took the sulphur-mud baths, whereupon the attacks ceased. He remained free for three years, when a relapse occurred. The renewed use of the sulphur baths this time was unavailing. The attacks continued in spite of them.

Case VI.—Grandidier (*loc. cit.*). The patient was a woman, fifty-four years of age. The attacks had appeared in the right knee-joint every eleventh day, in the manner described, for several months. Each attack lasted five days. She bore no evidence of any organic disease, never had had malaria, and her menses, which were regular, were in nowise connected with the attacks. Quinine was administered, with the result of reducing both the duration and intensity of the attacks, but a cure was not effected.

Case VII.—Roser (*Centralblatt f. Chir.*, 1874, No. 25). A young and healthy man, aged seventeen, was seized with an acute swelling in both knees, when fifteen years of age. The attacks lasted two days, and recurred on the eighth day, and from that time regularly every eighth day for two years; both knee-joints were affected, sometimes simultaneously. Each individual attack lasted two to four days, and was followed by an interval of perfect health. His general condition was good, the pain was only moderate. Rest in bed, plaster-of-Paris dressing, compression combined with iron, iodides, quinine, arsenic, and ergotine, were employed without benefit.

Case VIII.—W. Bylicki (*Centralbl. f. Chir.*, 1874, No. 38). A healthy man, thirty-one years of age, experienced an attack of heat, swelling, and stiffness in the right knee-joint, which lasted six days, and then disappeared without any injury to the joint whatever. After an interval of perfect restoration the attack was repeated at the end of seven days, and from that time it regularly appeared every thirteenth day, for a year, when the disease passed into a chronic condition of hydrarthrosis of the joint. Various remedies, internal and external, failed to ameliorate matters.

Case IX.—Hüter ("Klinik d. Gelenkk.," 1877, p. 188) mentions a case observed by him in 1876, without giving any particulars as to rhythm or duration. He gradually effected a cure, after several months, by repeated injections into the knee of a solution of carbolic acid just prior to the expected onset of the paroxysm. They became irregular, then rare, and finally ceased altogether.

Cases X. and XI. are recorded by Jousset in the *Art Médical de Paris* for 1877, a journal to which I could not obtain access.

Case XII.—Panas ("Bulletin de la Soc. chir. de Paris, Séance du 27 Mars 1878") saw this affection in a young woman, twenty-two years of age, who had never had syphilis, rheumatism, or malaria; the attacks commenced in her seventeenth year, lasted four days, occurred in both knee-joints simultaneously, and had recurred every fourteen days for four years; they had suddenly ceased, and remained absent during two successive pregnancies, only to return, in one case six weeks after the birth of the child, and in the other two weeks after a miscarriage in the fourth month of gestation. Panas claims to have detected dry crepitation in various other joints, notably that of the ankle, wrist, elbow, and those of the fingers. During the attacks, and after the disappearance of the effusion, there was a certain amount of thickening and dry crepitus in the capsule of the knee-joint. Treatment by mercurial inunction, the iodides, vesication, massage, elastic compression, and quinine was quite ineffectual.

Case XIII.—Verneuil ("Bull. de la Soc. chir. de Paris," 1878, No. 3) observed a case occurring in a young woman twenty-five years of age, who had been a sufferer for many years. She had been under Nélaton's care eight years previously, and was said to have been cured by him with quinine. A relapse took place seven years later. Quinine was ineffectual, compression likewise. An intervening pregnancy cut short the disease. It returned six weeks after delivery. Discussion of the case at the meeting of the Society brought out the fact that it was probably identical with the one presented by Panas.

Case XIV.—Verneuil (*loc. cit.*) also recollected a second case, which he had observed some years previously in the person of a young woman, twenty-seven years of age, the particulars of which were embodied in the inaugural thesis (Paris, 1877) of his pupil, Dr. Ragan, together with the records of two other cases, observed by Canonne and by Le Denta.

Case XV.—Le Denta (*Gaz. des Hôpitaux*, April, 1878) described the condition as he had observed it, in 1856, in the person of a young man, sixteen years of age. The attacks occurred every fourteenth day, and lasted nine to eleven days, involving the right hip, and seven years later the left knee-joints and ankle-joints. Various internal remedies failed to give relief, likewise inunctions and injections of tr. iodine. Cauterization of the surface, with immobilization of the joints, had brought about a temporary cure. At any rate, the patient was discharged from the hospital and did not return.

Case XVI.—Canonne (Virchow-Hirsch "Jahrb.," 1868, vol. ii., p. 390) details a case of intermittent dropsy of the right knee-joint, following an acute inflammatory swelling of the right ankle, in the person of a domestic, twenty-seven years of age. Each attack lasted four days, and recurred regularly on the thirteenth day for nine months. The most varied treatment was unavailing.

Case XVII.—Perrin (*L'Union Méd.*, 1878, No. 61) states that in 1845 he published, in the second volume of the *Journ. de Médecine de Trousseau*, an account of a case which he then entitled "Cas curieux de contracture partielle intermittente à type octane, avec irritation violente et épanchement de sérosité dans plusieurs articulations." The patient in question was a man, in his forty-eighth year, who had had chronic rheumatism of the left shoulder-joint for several years. Four years previously he had had intermittent fever of the quartan type, which, after six months' duration, had disappeared spontaneously. The patient complained that for the past six weeks he had been seized regularly once a week, during the night from Friday to Saturday, with a moderate rise of temperature, ushered in by mild chills, and followed by a gentle perspiration. Simultaneously the forearm became slowly and gradually flexed upon the arm, which again became firmly drawn to, and held against, the chest; the elbow-joint seemed almost anchylotic, and resisted all attempts at extension. The tendon of the biceps felt like a hard, tense cord; the fingers were firmly flexed into the palms of the hand. During the attack the patient experienced a painful prickling in all the joints of the right extremities. Two or three hours later he noticed an œdematous puffing up of the elbow, the knee, and the interphalangeal joints of the fingers and toes, without heat or redness. After a few hours a considerable intra-articular swelling invaded the knee- and elbow-joints, which was completely gone after the lapse of three days. The contraction of the upper extremity generally lasted until the effusion into the joints had reached its acme, and then generally disappeared together with the fever. A cure was obtained, after one or two attacks, by quinine and belladonna.

Case XVIII.—Seelig Mueller (*Deutsch. Med. Wochenschrift*, 1880, Nos. 52 and 61). A manufacturer, aged forty-nine, had had intermittent fever for seventeen weeks some years previously. For twenty-four years he had had attacks of dropsy of the right hip-joint and of the left knee-joint alternately, recurring every twelfth day, each *attack lasting about* a day and a half. *Without treatment* the attacks ceased, but recurred six years later, lasted three months, and then again failed to appear for four years. They then returned in the fall and lasted till spring, mostly always invading the left knee-joint, and only occasionally the right hip. Six years later, relapse, affecting the left knee-joint for a short time. Three years later another relapse, this time limited to the right hip-joint, with very acute pain, but without distinct evidence of swelling. Three years later another relapse, affecting both hip-joints for a period of three months. In the month of July, 1879, the left knee-joint again became affected, after a respite of seven years, and from that time on attacks followed every twelfth day for two months. Then a change in the rhythm took place, in such a manner that for every two attacks invading the left knee, one involving the right, and one the left hip-joint, was interpolated, each of three days' duration. There had never been any febrile reaction. The circumference of the left knee-joint, at the acme of the swelling, showed an increase of nine ctm. as compared with that of the sound limb. A slight difference in circumference, amounting to one-half to one ctm., generally remains during the interim, with a noticeable thickening and effacement of the contour of the joint, but no pathological intra-articular alteration can be detected. Treatment by the administration of quinine, salicylic acid, and the use of ice, electricity, and carbolic-acid injections, was fruitless.

Case XIX.—Pletzer (*Deutsch. Med. Wochenschr.*, vol. vi., 1880) records a case of recurring dropsy of the right knee, which he observed during a period of twelve years in the person of a woman, forty years of age, the mother of seven children. The attacks commenced during the menstrual period in the eighteenth year, and returned every three months; the first attack was attended with febrile disturbance and with local surface heat. In all the attacks the pain and inability to use the limb were marked. She had never had rheumatism or intermittent fever. Electricity, baths, and various internal remedies aggravated the condition and brought about an increased frequency in the appearance of the attacks, which soon developed into an eighth-day rhythm. In the eighth year of the affection a general deterioration of the patient's condition was manifested by attacks of palpitation (130 to 160 pulse-beats a minute), uneasiness and anxiety. The patient became emaciated; a soft systolic murmur accompanied the first cardiac sound, and swelling of the thyroid gland, exophthalmos, conjunctival injection; in short, symptoms of Basedow's disease supervened, and with them the dropsical attacks disappeared. They returned four months later, with a rhythm of eleven days, whereupon a marked improvement in the patient's health was noticed. In spite of the many attacks, the right knee-joint showed no structural alteration whatever, and during the intervals the difference in the circumference of the two joints did not exceed one ctm. The menstrual periods stood in no relation whatever to the attacks, and their progress was not interrupted by a pregnancy occurring in the patient's thirtieth year, whereas in a subsequent pregnancy, in the thirty-ninth year, the attacks suddenly ceased, and remained away during the whole period of gestation. Two months after childbirth, symptoms of Basedow's disease again appeared, but finally subsided on the recurrence of the dropsical effusion, some weeks later, upon which the patient's health seemed to undergo a marked improvement. Of many and varied forms of treatment, arsenic alone proved partially serviceable.

Case XX.—Kolbe (*Deutsch. Med. Wochenschr.*, vol. vii., No. 4, 1881). A maiden lady, thirty-two years of age, of anæmic habit and of inherited nervous tendencies, met with a trifling accident to her left knee in her twenty-fifth year. This was followed by a swelling of the joint, which proved to be an intra-articular exudation, lasting, with intervals of improvement, six months. One year later the swelling reappeared, without appreciable cause, in the left knee-joint, and from that time regularly every ninth day, each attack lasting three days, and causing neither pain nor constitutional disturbance. Remedies directed to the alleviation of the marked anæmia resulted in a diminution of the number of attacks, and a gradual lengthening of the intervals of health. At the end of six months the attacks had ceased. Two years later a relapse occurred, of but one week's duration. One year later another relapse occurred, lasting one year, the attacks appearing every eleventh day. There was no evidence of organic disease. The left leg presented marked muscular atrophy and some thickening of the knee-joint about the ligamenta alaria, and the patient complained of a weakness and trembling in the limb whenever she attempted to walk. The repeated use of the induced current restored the tone of the muscles. A water glass immobilizing bandage was applied and the attacks ceased within five weeks.

Case XXI.—Pierson (*Deutsch. Med. Wochenschr.*, 1881, No. 7). A healthy and well-developed girl, eleven years of age, has been repeatedly attacked with swelling of various joints, accompanied by extreme pain and complete functional disability, during the past two years. At first they recurred every three or four weeks, lasting four days. After a year, they had become of so frequent recurrence that the child was free from suffering only for a single day at a time. The wrist and the ankle-joints were most frequently seized, but not rarely all the joints were included, occasionally even the cervical vertebral articulations. There had never been any typical regularity with regard to the time of occurrence; the longest interval between two attacks was but six days. The disease resisted all therapeutic resources, including arsenic. Local faradization caused violent pain, but was ineffectual. Galvanization of the spinal column, combined with the internal administration of arsenic, brought about a marked improvement within six months. The intervals between the attacks became much more prolonged, and the latter were far less severe.

Case XXII.—Fiedler (*Deutsch. Med. Wochenschr.*, 1881, No. 3). A woman, twenty-five years of age, had had periodical swelling of the joints for the last thirteen years; the disease commenced in the left knee-joint, which was the seat of attack for two consecutive years, every twelfth day, each attack lasting three days. After two years the right knee-joint occasionally shared in the affection, and several months later both elbow-joints and likewise the wrist- and the hip-joints became involved in the regular round of dropsical attacks, the whole period of which now consumed twelve days. When the disease had been in existence eight years, a change to a ten-day rhythm took place, possibly due to exposure to cold, and from this time forward with each attack all the joints became involved simultaneously. Fiedler improved his opportunities to watch the course of the affection in thirty-three successive attacks, which occurred with intervals of but two to four days, each lasting nine days. Later the joints became affected in regular succession. They commenced with a burning sensation in the eyes, and with conjunctival congestion. Then the swelling and pain would affect the joints successively in the following order: First, the right hip-joint, and on the following day the left; on the third day the right knee (half a day later, occasionally, the left knee); on the fifth day the swelling in the right knee would subside, only to appear in the left elbow, and half a day later in the left wrist-joint, with hyperextension of the hand, and simultaneously in the metacarpo-phalangal articulation of the left thumb, finally completing the circuit with the right elbow- and wrist-joints. On the seventh day, complete restoration of all the joints to the normal condition. On the tenth day, renewal of the regular succession of attacks. The menses had always been irregular, but there was no evidence of organic disease. She had been subject to certain forms of nervous paroxysms since her twelfth year, which were characterized by fainting spells, followed immediately by an icy coldness and pallor of the skin of short duration, and succeeded by a rapid rise of surface-temperature and profuse perspiration. These paroxysms generally terminated with retching and vomiting.

Case XXIII.—Vogt (*Deutche Chirurgie*, Part 64, p. 199). "A female, aged thirty-two, had attacks of swelling of one or both elbow-joints, with much pain and functional interference, every ninth day. The attacks were generally coincident with the menstrual periods." Further particulars are not given.

Case XXIV. is reported in the *Centralblatt f. Nervenheilk.*, No. 5, 1886, a journal which I could not secure.

There are thus, including my two cases, twenty-six cases on record at present.

We have here a series of cases illustrating a peculiar and interesting disease, the main characteristics of which may be briefly summed up as constituting a serous exudation into one or more joints, arising without appreciable cause, and recurring and subsiding spontaneously at certain definite periods. A comparison of some of the leading features serves to concentrate the attention upon those presented in common. These are mainly suggestive of involvement of the vaso-motor system. Palpitation, attacks of syncope, exophthalmos, rigors, and transpiration find mention in five cases. The symptoms of Basedow's disease are fully developed in two cases. Various emotional disturbances, depending perhaps upon the marked anæmia, are emphasized in others. The remarkable influence exerted upon the course of the disease by the intervening pregnancies must not be overlooked, although a satisfactory explanation is impossible. In eight out of nine recorded pregnancies occurring in the course of the disease, a complete cessation of the attacks, from the conception until an average period of six weeks post partum, is noted. There does not appear to be any causal or periodic relation between the occurrence of the attacks and the menstrual function, although in several instances the attacks originated at about the period of its establishment. This may be a mere coincidence, or may be regarded as an expression of the peculiarly impressionable state of the nervous system in females at the period of puberty, and not as in any sense an implication of the function. In fact, in Case V. we find the origin of the disorder antedating the first menstrual molimen by four years, and special mention is made, in the majority of the cases occurring in females, of the fact that the attacks occurred independently of the catamenial period.

The question as to the nature of this interesting disorder can only be answered in a general manner. We need not hesitate to look upon it as a neurosis of vaso-motor origin. But we shall be at a loss to define its exact pathology, and even an approximate idea of the seat of lesion can only be a matter of conjecture, not only on account of the imperfect state of our knowledge of the vaso-motor origin and distribution, but because no case has so far reached an autopsy. This much we are justified in concluding: knee-joint swellings are of vaso-motor origin. They must be produced by serous exudation from the capillaries of the synovial membrane. In the absence of any permanent disability or injury to the joint or involvement of the deeper structures, we may assume a non-inflammatory change in the vascular blood-pressure and consequent dilatation of the arterioles, due either to stimulation of the dilating or paralysis of the contracting vaso-motor nerve-fibres in the vessel-walls. As the vaso-motor contraction or tones of the arterioles is the more constant and uniform, this latter is probably interfered with or inhibited. Thus dilatation of the capillaries persists, permitting active transudation. When the lost influence of the nerve-fuuction is re-established, the vessels resume their normal tones, and the equilibrium between secretion and reabsorption is readjusted. The excess of fluid is absorbed as rapidly as produced. This exudation is not of an inflammatory nature. The pain and disability are due to a rapid mechanical distention of the capsule only. It is therefore a passive dropsy, and its transitory character a clinical reflection of a similar process in the nerve-centres. We can hardly picture to ourselves pathological changes in the central nervous system of a transitory nature otherwise than as the result of a disturbance of the vascular supply of the area involved, leading to exudation, œdema, and compression of the surrounding nerve-tissue. Vaso-motor disturbances are characterized by rapid changes in the calibre of vessels, thus favoring local congestions or ischæmias. These central changes must be supposed to subside spontaneously, or be in some manner checked before developing sufficiently to constitute a permanent lesion. Can such central disturbances produce joint swellings? When we consider the intimate connection of arthropathies with certain forms of organic spinal disease, with which we have become familiar through Charcot, Weir-Mitchell, Esmarch, Shaffer, and Gibney, we need not doubt the occurrence of temporary joint disease as a possible consequence of transitory central disturbances. Long before Charcot's writings, Dr. J. K. Mitchell, of Philadelphia, cured a persistent case of subacute "rheumatic" synovitis in a woman with an angular curvature, after failure of all the usual remedies, by treatment for spinal inflammation. He subsequently treated three similar cases with the same success. He concluded to regard rheumatism as a spinal neurosis.

Perhaps the most interesting feature of this joint disorder, apart from the mystery of its pathological significance, is its periodicity. It would hardly lead to more than an unprofitable speculation, exceeding the natural limits of this paper, to endeavor to find a physiological interpretation. Yet it may not be uninteresting to point out that vaso-motor disturbances are frequently characterized by periodicity. Witness the recorded instances of periodic acute congestions and œdemas of various parts of the body, of attacks of migraine, of regularly recurring paralyses, notably of monoplegia of the oculo-motories, of which nine cases have but recently been recorded by Hasner and Moebius (*Schmidt's Jahrbucher*, No. 9, 1885), and more recently by Hinde (MEDICAL RECORD, October 22, 1887); likewise the instances of periodic attacks of vomiting, not of hysterical origin, such as are reported by Struebing (*Zeitschr. f. klin. Med.*, vol. ix., 1885), by Leyden (*ibidem*, vol. iv., p. 605), and by Charcot as "crises gastriques," both as complications of spinal disease and independently of the latter. Periodicity may, therefore, be regarded as a possible expression of a transitory circulatory disturbance in the central nervous system, more particularly, perhaps, of those areas, whether in the brain, the cord, or the sympathetic ganglia, with which the vaso-motor tracts are connected. No satisfactory physiological interpretation of "periodicity" is possible at the present day.

We must content ourselves with the most plausible view, that it may be a perverted vaso-motor function, impressing a certain type on certain disorders, originating in temporary vascular disturbances in the nerve-centres.

We are more familiar with periodicity under another garb. It has come to represent to many the one constant and unvarying feature by which to detect the manifold disguises which "malaria" may assume. But our very familiarity with periodicity, mainly as a characteristic of malarial explosions, is misleading to many minds. Periodicity and malaria are synonymous. We are too prone to lay at the door of "malaria" all obscure affections of which periodicity is the salient feature. This accounts for the uniformity with which quinine is mentioned as having been administered in almost all of the cases of intermittent joint dropsy. Its failure to act demonstrates conclusively the non-malarial origin of this affection, and likewise the existence of periodicity independently of any malarial basis. Periodicity is not the exclusive trade-mark of malarial disorders any more than are chills and perspiration, although the phenomena may depend upon the same variations in the intra-vascular blood-pressure. Periodicity is the characteristic expression of vaso-motor disturbances in general, of which "malaria" is simply one of the more familiar types, sharing its general manifestations, albeit having a distinct and peculiar bacterial origin. This latter characteristic explains why the quinine salts exert a decided influence upon one particular variety of periodicity, and fail to do so in others.

Other instances of periodicity attending vaso-motor neuroses are not wanting. As far back as 1817, we find three cases of regularly recurring attacks of vomiting, of definite duration, and separated by equal intervals of health, communicated by J. Adams ("Transactions of the Medical Society of London, 1817"). Of the cases of transient and recurring spinal paralysis, I will cite those recorded by Hartwig (*Centralbl. f. d. Med. Wissensch.*, No. 26, 1885), describing an intermittent and complete spinal paralysis, lasting twenty-four hours, with loss of tendon-reflexes, under observation in hospital for over seven months, without improvement; and by Westphal (*Berl. Klin. Wochenschr.*, No. 32, 1885), illustrating a similar case; the attacks being repeated every four to six weeks at first, and several times a week later on; and periodic attacks of paraplegia, observed by Zischl (*Prag. Med. Wochenschr.*, No. 42, 1885); none of these cases having a malarial basis, or being at all influenced by quinine.

As regards the treatment of my case, it consisted mainly in the employment of electricity. The improvement in the patient's general health was rapid, and was attended by a diminution in the frequency and the severity of the joint attacks. Electricity was applied in the form of the galvanic current to the medulla daily at first, less frequently later, the electrodes being placed upon the mastoid processes, and the strength of the current being cautiously regulated according to the patient's sensations, avoiding dizziness and flashes of light. After the third application of electricity, the patient for the first time was able to pass through an attack without taking to her bed, and was able to walk with the aid of a cane. After three months of treatment, the patient was not at all inconvenienced by the attacks, but was able to attend to her household duties throughout. Finally, after treatment extending over nine months, the attacks ceased altogether and remained absent for five months, during which time treatment was suspended. They then recurred, although much less severely than formerly, and have persisted, in a moderate degree and in an irregular manner, ever since, in spite of the energetic resumption of the treatment which at first produced such prompt amelioration. The use of electricity was supplemented by the internal administration of iron, arsenic, and mercury in tonic doses, occasionally by cod-liver oil, and by various hygienic measures in the way of cold sponging, open-air exercise, and generous diet. The rapid general improvement in the patient's condition was marked, and suggested the possibility of the existence of an inherited syphilitic taint, especially when a younger sister, fifteen years of age, who had a perforated soft palate, interstitial keratitis, and a chronic nasal catarrh of some years' standing, was brought to me for treatment.

The future investigation of these cases of periodic vaso-motor neurosis should not lack a special inquiry in the direction of syphilis hereditaria tarda.

At last accounts the attacks were recurring regularly every fourteenth day, although in so moderate a degree as not to interfere at all with the patient's comfort or her household duties. It is not impossible that a more systematic and persistent use of the galvanic current might have resulted in a complete cure.

Certainly, as the result of the electric treatment, the patient's present state is a very satisfactory one, when compared with that of former years. Judging by the observations of the writers cited, no other method of treatment with which we are at present familiar can be resorted to with a more rational prospect of ultimate success.

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Clinical Department.

AN OBSCURE CASE.

By D. W. LONEY, M.D.,

OLENA, O.

A. A. F——, aged thirty-five, married, country store-keeper in good financial standing, and very ambitious for gain; has been liable to periodical attacks of drunkenness since boyhood, which in late years appear to have followed fits of despondency growing out of financial disappointments, howsoever slight. Owing to recent family trouble, involving him financially, he had of late been unusually despondent; in fact, his mind at times seemed to have been seriously affected. Had been troubled with persistent insomnia since the trouble came on him.

When drinking, he would swallow anything he could get hold of containing alcohol—patent medicines, flavoring extracts, etc.—keeping it up until his supply ran out, or his stomach refused to hold anything more, when he would sleep off the effects, and next day be ready for business again. On April 4th he began one of his sprees. Drunk again on the 5th, when he fell off a load of wood, from the effects of which accident he did not suffer at that time, or the day following. On the morning of the 6th he was apparently all right, and transacted some business in his usually shrewd manner. Later in the day, he drank freely of hard cider, and was helplessly drunk in the evening.

On the morning of the 7th he was somewhat delirious, and at times endeavored to take his own life. It was at this time that I was called to see him. Temperature normal; pulse, 85; headache and lumbar soreness. At times he seemed rational, but if left alone would relapse into a state of melancholia, or, at other times, he would be engaged in solving some perplexing business problem; failing this, he would pour forth a stream of malediction against the subject of his late mental disquietude. Large doses of sedatives would produce sleep for a short time, when on awakening he was more decidedly maniacal than before. He ate voraciously whenever he could get where food was. This condition lasted until the evening of April 9th, when he sank into a deep sleep, from which it was impossible to arouse him except by the persistent application of some painful measure. After being roused he would immediately relapse into his former lethargic condition, which only differed from natural sleep in that he could not be awakened. In response to questions pressed upon him at these times, he would give irrational answers. This condition lasted seven days. His temperature remained normal; pulse, 72 to 86; respiration, 20 to 26. Reflexes almost normal; cutaneous sensibility normal; sense of smell, taste, sight, and hearing but little if at all impaired. Pupils normal.

In the evening of the 16th his temperature rose to 101° F., which was accounted for by his having bronchitis. Fearing a hypostatic pneumonia, his position was frequently changed. From the 16th to the afternoon of the 19th his condition continued about the same—temperature ranging from 100° to 101½°, pulse and respiration corresponding; pupils continuing normal in their reaction to light. No signs of paralysis of any muscles. About 4.30 P.M. of the 19th, his temperature was found to be rising, and in three hours had risen to 103½°, when indubitable signs of pneumonia appeared. His temperature continued to rise until it had reached 108⅕° at 5 A.M., April 20th, when he died. A few hours before death he became insensible to all external influences. No post-mortem was allowed.

The interest in this case is the obscurity of the diagnosis. Was it a case of acute alcoholic mania, or was it delirium tremens, followed by a prolonged and fatal sleep? Was it the result of mental worry, the nervous system having been broken down by alcoholic excess? Did his fall on the 5th have anything or all to do with the case, some undiscovered cerebral or spinal lesion having existed latent, causing his condition?

There were no discoverable signs of paralysis of the ocular or other muscles from the beginning of his sleep to the time of his death. Family history discloses hereditary insanity.

During the first week of his lethargic state, he would eat and drink when aroused. His bowels were oversensitive to the effect of laxatives. Urine rather scant, but free from albumen and casts.

Although we had the best of local counsel we were unable to arrive at any definite diagnosis of the case.

RESUSCITATION IN THREATENED DEATH FROM CHLOROFORM.

By F. T. MILES, M.D.,

BALTIMORE, MD.

It being now generally conceded that the best means of resuscitating patients threatened with death during the inhalation of chloroform is to invert the position of the body, it is a matter of interest to consider how this change of position accomplishes the result aimed at. The explanation usually given, that the blood is sent in increased amount to the centres innervating the heart and the apparatus of respiration seems unsatisfactory, when we reflect that the cranial cavity is so nearly a completely closed one that the amount of its fluid contents can scarcely be expected to vary to any considerable extent through gravitation. Again, if the heart has ceased contracting, the effect of gravity will be principally upon the blood in the veins, diminishing its onward flow, and thus tending to arrest the movement of the blood in the capillaries. Now we know that stopping the movement of the capillary blood is one of the most prompt and effectual means of destroying the activity of the nerve-centres. Again, the danger to life from the action of chloroform arises from stopping (I do not say paralyzing) the heart, and while we know of a cardio-inhibitory centre in the medulla oblongata the excitement of which will slow, or stop the heart, we know of none whose excitement will increase its strength or arouse its activity. We must therefore look for some other explanation of the beneficial effects of the inverted position.

It appears to me that the strikingly good effect obtained by inverting the position of the body results from the direct excitation of the heart caused by the flow of blood into the right auricle (and ventricle), which takes place when the body is in that position.

The liver is roughly computed to contain one-fourth of the blood of the body. The length of the vena cava inferior, from the point where the hepatic veins open into it to its ending in the right auricle, is quite inconsiderable, and it is held open by its adherence to the comparatively unyielding substance of the liver. It is further kept patulous by its attachment to the tendon of the diaphragm just before empyting into the auricle. The hepatic veins, in their course through the liver to empty into the vena cava, cannot collapse, being adherent to the hepatic substance. All this is favorable to the pouring, so to speak, of the blood from the liver into the right auricle and ventricle when the body is inverted. We know from experiment that one of the most potent means of exciting the excised frog's heart to renewed activity, after it has ceased to beat, is to fill its chambers with blood or other fluids, and I do not see why the sudden distention of the auricle in the human body should not act in a similar manner.

Moreover, it is not impossible that a mechanical influence may contribute to the beneficial effects, inasmuch as the inversion of the body is brusquely made, and thus the sudden pressure of the heavy liver against the diaphragm and heart may act as a mechanical stimulant to the latter.

I have seen one case at least in which, during the inhalation of chloroform, death seemed imminent from stopping of the heart, and in which the organ was stimulated to contraction by pretty heavy blows administered with the open palm over the cardiac region. I see no reason why we should not use mechanical stimulation more energetically in case of stoppage of the heart during the administration of chloroform, even to the pricking of that organ with a needle through the wall of the thorax at the point where it is uncovered by the lung, with or without the transmission to it of the electric current. Of course, such procedures would be confined to desperate cases.

VISION PERMANENTLY AFFECTED BY SUNSTROKE.

By F. A. TUTTLE, M.D.,
JEFFERSON, O.

In a recent issue of The Medical Record, the question is asked: "Is vision ever permanently affected by sunstroke?" I answer yes, and will give a short history of my own case. In June, 1863, while in charge of a picket line as medical officer, I became insensible from sunstroke. The first thing I can recall after that was, I thought I had slept a long time, and wondered why daylight did not appear. I finally asked the attendants how long before daylight? They answered, it is just noon now. That was the first intimation I had that I was blind, and it was then the second day after the sunstroke. My hearing was intensely acute.

The first time that I saw light was on the third night. It was a lighted tallow candle in my tent, but I soon lost it and could not find it again that night. The next day seemed like pale moonlight. My sight gradually returned, but for two months I could not look at the bright sun without painful sensations. The angle of vision was entirely gone—it was like looking through two small gimlet-holes. The brightest day was mere twilight. I slowly gained my sight so that I could read coarse print, and now I can read for an hour (good print), although I can see but one word at a time. I have astigmatism that is corrected by lens. I have had to give up general practice, as on going from the out-door light into a room, it takes from fifteen to twenty minutes for my sight to adjust itself, and, of course, under those conditions, I cannot assume much dignity, for my feet seem to have a predilection for kicking over urinals and bed-pans. So I confine myself to my office practice, where the light is steady and strong. My vision now is fairly represented by looking through two tubes one inch in diameter. No angle of vision has ever returned. I am completely night-blind. Experts say that there is atrophy of retina. My general health has suffered much from the shock. As to blindness coming on ten or twenty years after sunstroke, I must agree with your correspondent in the belief that it is extremely improbable. There is no disease we meet, as members of examining boards, that gives us more trouble than profound shock to the nervous centres. Often the results are manifold. Objective symptoms may explain but little, and the subjective feelings and statements of the applicants still less.

I have taken much interest in this question, and, so far as my own experience and observation go, if a man received sunstroke in the army which did *not* affect his vision at the time or *shortly* after, and ten or twenty years later he loses his sight, I cannot see how to connect the last with his insolation.

This whole question of pensions, as it now stands, rests on the examining boards. Of course, the soldier's comrade remembers his straining his ankle on that march. It is patriotic that he should. The applicant comes before the board, and if he fails at first, he profits by experience. The next time he appears it is kidney disease. Examination shows an old cartilaginous stricture—perhaps the result of that furlough twenty years ago, from the Army of the Potomac, when he staid overnight in Washington—or chronic diarrhœa and its results. Who dare affirm that consumption, dyspepsia, piles, or all the ills flesh is heir to may not result from malnutrition of chronic diarrhœa? Verily, verily, if you wish to avoid perplexing questions, keep clear of examining boards. But, after all, the man who exposed his life in the army shall have the benefit of a doubt.

ADDITIONAL REPORT OF A CASE OF CHRONIC MEMBRANOUS ENTERITIS.

By H. S. KILBOURNE, M.D.,
U. S. ARMY, OF PORTLAND, ORE.

The general condition of this patient, whose case was reported in The Medical Record of February 18, 1888, during the summer and autumn of 1887, was much improved by a strict dietary and a course of Turkish baths. He gained twenty-five pounds in weight, and was well enough to resume his duties on February 13, 1888, but he still continued under observation. On March 4th he was found to have recurring attacks of nausea and vague sensations of discomfort in the abdomen, not amounting to pain. On March 9th, after a day of mental disturbance due to business matters, his nausea became so distressing and constant that he was ordered to take a drachm of mustard in a glass of warm water; this was taken, and produced free emesis, followed in a few minutes by a copious hemorrhage from the bowels (quantity estimated at about a pint). Frequent attacks of syncope followed the bleeding, and for several days exhaustion was so extreme that any attempt to rise in bed caused fainting. The patient was confined to his bed until May 1st, during which time he was slowly recovering. Emaciation and debility have been extreme. He is at this date (May 24, 1888) able to leave his bed during a part of the day, and his condition continues to improve.

Two peculiar features have been present in this attack: The hemorrhage (excited by the emetic), and a complete disappearance of the casts from the discharges from the time of the bleeding until the latter part of April, a period of about six weeks. Small flakes and strings of the casts have reappeared, and still continue to be found in the discharges, but not in all of them. During the attack the patient has presented most of the symptoms previously described.

The therapeutic record of the patient has been somewhat varied and extensive, as I have had some sixteen predecessors in the case. An attempt was made to arrest the discharge of casts by copious dilute injections of silver nitrate, administered once daily by the rectal tube passed as high as practicable, but without appreciable effect. A variety of other remedies have not proved of value. Iron, quinine, and calomel have in a general way been of service; malt liquors have been well borne; alcoholics were useful in steadying the heart after the bleeding, but later were not tolerated.

The chief reliance has been placed on a strict dietary of concentrated animal food in a liquid or semi-solid form, hot-air baths, massage, and faithful nursing.

NAPHTHOL IN STOMATITIS.

Dr. D. W. Loney, of Olena, O., writes: "I have used naphthol in several cases of stomatitis with good results. In a case of stomatitis in a nursing woman, which had resisted ordinary treatment for some time, the result was all that could be desired. In a case of mercurial stomatitis, with foul breath and secretions, naphthol gave almost immediate relief to many of the disagreeable symptoms. It is indicated in any case of stomatitis or sore throat where a reliable antiseptic and disinfectant is indicated; and has the advantage of being not unpleasant in taste, and non-poisonous in its effects upon the system. I have also used it in nasal catarrh with good results. It may be used for the mouth and throat as a wash or gargle, and in weak solution in the nasal spray or douche."

POST-PARTUM HEMORRHAGE AFTER DRINKING MULLED ALE.

Dr. F. W. Carmon, of this city, writes: "The following cases, occurring under my observation, may prove of interest by showing the influence of hot mulled ale in producing post-partum hemorrhage. Case I.—Mrs. C——, primipara, confined on October 19, 1887; labor normal, secundines came away naturally, and womb contracted well; patient did well in every way until the 30th; had sat up on the 28th, and, as she expressed it, felt as well as ever. On the 30th, shortly after dinner, during which she had drunk a glass of hot mulled ale, and while quietly sitting down, without any exciting cause whatever, she was seized with a terrific hemorrhage. I was away when sent for, and did not see the patient till two hours after the hemorrhage first occurred, and then found her in a state of collapse, with bloodless lips, sunken eyes, Cheyne-Stokes respiration, and pulse almost imperceptible. The patient had frequent fainting fits, and was still losing some blood. Under prompt treatment the hemorrhage was arrested, and a few hours later the womb was thoroughly curetted, but no particles of placenta or membranes were found. The patient ultimately made a good recovery. Case II.—Mrs. R——, multipara, confined February 28, 1888; normal and easy labor. On the seventh day after confinement she had a sudden and severe hemorrhage. Knowing the habits of the patient, I made inquiries as to whether she had been drinking or not, and found that she had drunk one or more glasses of hot mulled ale shortly before the hemorrhage occurred. Both of these patients were strong and healthy, and neither of hemorrhagic diathesis. In each case the hemorrhage occurred about one-half hour after drinking the hot ale, and, although I made careful inquiries, I was unable to find any other cause."

A SMALL SCARF-PIN SWALLOWED BY AN INFANT.

Mr. Washington Epps, of London, reports the following case: "Soon after Christmas Mrs. Scott's children were playing with the remains of some jewel cosaques, and the baby of eleven months took up a toy scarf-pin, put it into her mouth, and, before she could be prevented, swallowed it. The mother states she saw the pin disappear down her child's throat. This occurred at 3 P.M. Nothing was done to remove the pin. The child slept very well the whole night, and the following morning, eighteen hours after swallowing it, passed the pin, mixed with the fæces. The child had no pain whatever, and did not pass any blood. The exact measurements of the pin are: Flat head, composed of brass edge, with blue-glass jewel and tin-plate back, one-eighth of an inch in thickness and seven-sixteenths of an inch in diameter; pin very sharp, and loosely fastened to the head; one and one-third inch long."

Spontaneous Cure of Tubercular Pleurisy.—Dr. Fraentzel reports a case of acute pleurisy in the exudate of which, as well as in the sputum, large numbers of tubercle bacilli were found, which took on a favorable action and rapidly progressed to recovery.—*Charite Annalen*, 1887.

Progress of Medical Science.

Osteoplastic Amputation of the Thigh according to Gritti.—Dr. E. Ried, of Munich, discusses the value of Gritti's amputation, and attempts a finding of the proper indication for its application. Ten cases operated upon, according to the modification by the older Ried of Gritti's operation, in the Jena clinic, 1865–1884, are also reported. The originator of the operation intended to bring the cicatrix of the stump outside the point where it would be subjected to pressure, to shape the bottom of the stump of a tissue accustomed to pressure, and finally to eliminate the subsequent conicity of the stump after the healing processes were completed. The modification of Ried is as follows: The extremity is held in the extended position. The anterior flap is formed by an incision passing from the middle of the external condyle of the femur (on the right side), or the internal condyle (on the left) to within two or three finger-breadths below the border of the patella; the incision is carried from the other condyle downward and forward, meeting the first at the tuberosity of the tibia. The skin is retracted and the ligaments divided. The crucial ligaments are left intact. The femur is divided at the upper limit of the patella. The posterior flap is now formed of skin and connective tissue; the rest of the structure being divided as high as the situation of the point of division of the femur. The arteries were tied. The patella then is freed from fat and connective tissue, and the articular surface of the bone sawn off. The two flaps are apposed by means of one deep silver-wire suture and several superficial catgut and silk sutures; closing with drainage, antiseptic dressing, and higher position of the stump. The apposition of sawn surfaces of the patella and femur is a loose one. The quadriceps is given some room for shortening, without displacement of the patella. The exact apposition of patella and femur can be established after a few days, if the stump has been kept at perfect rest. In pre-antiseptic days the mortality resulting in cases operated upon by Gritti's method did not encourage its success. Antisepsis may change this entirely. On the battlefield this operation, even in the hands of a skilled surgeon, demands time, and the chances of displacement of the patella through transportation should be considered. The cases in which it is indicated are those where there is plenty of preservation of skin for the anterior flap. It is indicated where in ulcers of the foot the extensive changes in the skin bar out an amputation in the leg; in faulty union or imperfect healing of fracture of the leg in its upper third; in recent complicated fractures of the leg where there is no extensive laceration of tissues above the knee; in tumors of the upper third of the leg; in extended necrosis of the tibia which excludes amputation in the course of the leg; in gunshot wounds as high as the tuberosity of the tibia. It is excluded where the shot has involved in any way the knee-joint. The mortality in Ried's ten cases is thirty per cent. In one hundred and forty-four cases collected by Salzmann from all sources, the mortality reaches forty-eight per cent. In Ried's cases three were performed in pre-antiseptic days, with two deaths. Perfect cure and union of the patella resulted on an average in forty-eight days. (Salzmann, ninety-nine days.) As to age, Ried's cases ranged from the nineteenth to the sixty-sixth year of life.—*Annals of Surgery.*

Neuralgia of the Bladder.—According to Guyon, the causes of neuralgia of the bladder are varicocele, diseases of the testicle and kidneys, locomotor ataxia, and other forms of myelitis, hysteria, hypochondriasis, and nervousness. It is only to the last three causes that he pays attention, as the diagnosis otherwise is easy. The most common error is to confound neuralgia with painful cystitis. The following points are given: In cystitis there are frequent micturition, pain, and tenderness of bladder, and alteration of urine. In neuralgia the urine is normal, there is no frequency of micturition, the bladder is not tender on pressure over the hypogastrium, or through the rectum, nor on introduction of the sound. But there is a symptom which is present in all nervous people, or in those who are continually thinking of themselves—increased sensibility and resistance to the passage of an instrument through the membranous portion of the urethra, which is often mistaken for stricture. Further, the bladder will hold a considerable quantity of injected water, which it will not do in cystitis. Vesical neuralgia commonly occurs in people who suffer from similar pains elsewhere, and it is more frequent in men than in women. As regards treatment, its cause must be removed for a nervous person ; with no discoverable lesion, the general health must be looked after. Very gradual dilatation of urethra with bougies is recommended, but it is important that the dilatation be not rapid or forcible. Hydropathy is generally found beneficial.—*Le Progrès Medical.*

Spontaneous Rupture of the Rectum.—According to the Paris correspondent of the *Medical Press,* Dr. Quénu, at the Beaujon Hospital, related in detail the following case, which is not wanting in interest : A woman, aged sixty, of a very weak constitution, had suffered for the last six years from prolapsus of the rectum, which, however, she reduced with facility. Being habitually constipated, she made a free use of purgatives, and frequently passed blood. For the last six weeks she seemed to suffer more than usual, and kept her bed. The day of the accident she made great efforts in defecation, and suddenly she felt something come down, and great pain followed, with a considerable loss of blood. A doctor who was called in ordered her to be sent to the hospital, and when M. Quénu arrived he found the woman pale and cold, and on raising the chemise a portion of the intestine a yard in length was discovered, black and shrivelled. Introducing the finger into the rectum, a large rent by which the intestine had escaped was felt in the anterior wall. Under chloroform the abdominal wall was incised in the median line, and nothing but blood was discovered. The protruded intestine was removed close to the anus, but all attempts to suture the rent were useless. Iodoform dressing completed the operation. The patient succumbed on the following day. The autopsy revealed a rent of an inch and a half in length and a considerable amount of varicose veins, which M. Quénu considered pathogenic.

Sparteine as a Cardiac Tonic.—Sparteine is a base derived by Stenhouse from *spartinum scoparium,* and pronounced by Mills to be a tertiary diamine having the formula $C_{15}H_{26}N_2$. It is a colorless alkaline liquid, boiling at 287° C., of penetrating, disagreeable odor and very bitter taste. It is heavier than water, and only slightly soluble therein, easily soluble in ether or chloroform. It forms crystalline salts with acids, from which it is precipitated by alkalies. The sulphate is the best salt medicinally. Fick studied the action of sparteine on the animal organism, and Froumüller established its diuretic effect. Recently it has been rescued from oblivion by Germain Sée (*Comptes Rendus,* 1885, No. 21), who recommends it warmly as a cardiac tonic. This observer declared that sparteine had a stronger effect in prolonging systole and increasing the energy of the cardiac contractions than even digitalis or convallamarin ; also that rhythmic action was re-established, and that the pulse was rendered fuller and slower. A diuretic effect was not observed. Voigt (*Wiener med. Blätter,* 1886, Nos. 25-27) concluded that sparteine was a valuable drug, worthy to be placed beside digitalis, but that it had not the persistency of the latter in its effects, which, however, were superior to those of caffein, adonis vernalis, and convallamarin. Increased diuresis frequently resulted, but in this respect sparteine was easily exceeded by other medicines. Voigt recommended sparteine in insufficiency of the heart muscle, with or without valvular disease, in pericarditis, and as an adjunct to digitalis, or rather an occasional substitute. Leo (*Zeitschrift f. klin. Med.,* 1887, p. 143) found that sparteine acted as a powerful diuretic, and was beneficial in exactly those cases in which digitalis failed. The diuretic action Leo ascribes to direct irritation of the renal epithelium, and not to the increased blood-pressure from increased cardiac action. Palpitations and cardiac asthma were much relieved, but whether from some narcotic influence or from increased cardiac action is left undecided. The last observer in this department is Dr. Prior, Docent in the University of Bonn (*Berliner klin. Wochenschr.,* 1887, No. 36). According to Prior, sparteine only occasionally acts as a diuretic in health ; and this effect is probably due, when it occurs, to increased blood-pressure. He found it to act better in valvular failure than in simple insufficiency of the heart muscle from other causes. Its effects were, on the whole, fairly constant, rapid, and marked, but did not persist long. In some cases the heart's action was regulated for a long time by sparteine, the urine being increased, and œdema diminished or removed. Dyspnœa and palpitation were relieved within two hours, often less, in severe cases of heart disease, even when the heart's action was unaltered ; but the drug was of no use in bronchial asthma. A grain and a half of the sulphate was found the best to begin with. No cumulative action was made out. Prior advocates the use of sparteine sulphate in those cases in which digitalis has failed to do any good ; also when it is required to relieve severe stenocardiac attacks as speedily as possible, as sparteine often effects this even when the heart's action is unaltered by it. He also regards it as a valuable diuretic.—*The British Medical Journal.*

Pyridin as a Cardiac Excitant.—Dr. de Renzi has found pyridin to be an active cardiac excitant. He draws his conclusions regarding the action of the drug from seven cases which were observed at his clinic. 1. Pyridin, when given internally in daily doses of 6 to 10 drops taken in water, is well borne, and may be gradually increased to 25 drops, or even more. 2. The drug increases markedly the cardiac systole and lessens the feeling of oppression and fear. 3. The number of cardiac pulsations lessens, after the use of pyridin, simultaneously with the number of respirations. 4. By the use of pyridin the pressure of blood in the arteries is increased. After its use, by means of the sphygmomanometer, the arterial pressure was always found to be greater than before. 5. From numerous graphic tracings it was seen that the ascending line of the curve became much higher ; also that the pulsations became much more regular. In one case, which had been marked by an arhythmic pulse, pyridin caused this to entirely disappear, and the pulse became normal and perfectly regular. 6. Pyridin has conquered angina pectoris (?), as it relieves the attack more quickly and completely than any other remedy. In asystole it is also of great value, as it acts quicker than digitalis, and cumulative effects need not be apprehended.—*Therapeutic Gazette.*

Sterilized Dressings.—Two instructive papers have recently been published in Germany on this subject. In the May number of the *American Journal of the Medical Sciences,* for 1888, the following résumé of these publications is given : " Dr. Schlange has made a series of experiments which led him to the conclusion, first, that ordinary dressings thought to be aseptic are not so, but contain various species of germs ; and, next, that the antiseptic action of many, if not all of these dressings, believed to result from the liberation in the wound secretions of the material with which they are impregnated, is no less unreliable. The majority of his experiments were made with sublimate dressings and appeared to show that when freely mixed with blood or albuminous fluids much of the antiseptic action was lost. There are, of course, certain methods by which dressing materials can be rendered absolutely free from bacteria ; soaking in boiling water or in a sufficiently strong sublimate solution will effect this at once, and if we apply over a wound materials taken directly from boiling water or from the sublimate solution, and still wet, we may be sure we have put on a truly 'aseptic' dressing. The disadvantages of the wet dressings are numerous, however; among them being the interference with the evaporation of the wound secretions and the tendency to produce eczema, and they should be reserved for special cases.

"For routine employment we must depend on dry dressings. If, however, the wet sublimate gauze is taken, the layers separated from each other, hung up to dry, cut into the required sizes, rolled, etc., in every case infectious germs may be found afterward. For these reasons, in Von Bergmann's clinic, impregnation of the gauze with sublimate has been discarded and dependence is placed entirely upon gauze sterilized by steam. The raw material, cut of proper sizes and lengths, is put in a wire basket, exposed to superheated steam in an oven for an hour, then removed, and, after drying for a minute, the basket, with its untouched contents, is put in an iron cylinder from which the gauze is withdrawn as required. This secures, with the minimun of handling, an absolutely germ-free material under which wounds do admirably.

"Schlange thinks that the excellent results formerly ascribed to the antiseptic action of sublimate are really due to an entirely different cause—the speedy and undisturbed evaporation of the wound secretions. By another series of experiments he has shown that interference with the evaporation of these secretions and the development of germs are intimately associated, and that the latter disappear when the 'drying out' process is complete. While decomposition of the blood or discharges in a sterilized aseptic dressing is only possible through the action of germs alighting on its surface, it does not follow that such a dressing should be changed merely because the day after an operation the superficial layers become blood-stained. If, by attention to the patient's position, etc., evaporation is favored, no risk is ordinarily run. If, on the contrary, there is great soaking of the dressings the superficial layers should be changed, but the deeper layers, if they have begun to dry out, should be left undisturbed.

"E. Laplace examined a number of dressings containing two and a half, three, and four per cent. of sublimate, to determine whether or not they were aseptic. In 300 specimens of wood-wool only seven were not sterile, and all of 100 specimens of sublimate gauze were free from germs. He then investigated the antiseptic action of the same dressings, concluding that not only these but many others were unreliable, and that the good effects following their employment were largely due to the fact that they were aseptic when applied. His experiments showed that the germicidal action of the sublimate solution was satisfactory with non-albuminous fluids or discharges, but with albuminous fluids, like blood-serum, there was a precipitate of albuminate of mercury which left the solution inert. A mixture of equal parts of 1 : 1,000 sublimate solution and 5 : 1,000 solution of hydrochloric or tartaric acid prevented this result, and decomposing human blood, which was unaffected by the ordinary sublimate solutions, became absolutely sterile when treated with this mixture. He then tried it on a number of clinical cases with equally good results, arriving, finally, at the following conclusions: 1. We possess in the tartaric acid sublimate mixture a thoroughly satisfactory material for the disinfection of wounds. In order to obtain its good results, infected wounds must be washed daily for at least from ten to twenty minutes. In the treatment of fresh wounds a single washing and irrigation suffices. The solution for irrigation should consist of sublimate one part, tartaric acid five parts, distilled water 1,000 parts; for impregnating the gauze, sublimate five parts, tartaric acid twenty parts, distilled water 1,000 parts. 2. The sublimate dissolves more easily in the acid solution than in water, and the tartaric mixture remains incorporated with the dressings without destroying them. 3. Such dressings are thoroughly aseptic as well as antiseptic. 4. The dressing and the solutions are cheap and easily made and replaced."

Removal of a Hair-pin from the Peritoneum.—Dr. Freund, of Strasburg, has described a case where a hair-pin was found in the peritoneal cavity in the course of an exploratory operation for suspected disease of the uterine appendages. The patient was a sickly and emaciated woman, aged forty-one, who had symptoms of tertiary syphilis. Her menstrual period had been regular till about four months before she first applied for hospital relief; then it did not appear for two months; at the end of that period metrorrhagia set in, with the discharge of small shreds, and spasmodic pains in the sacral region and the hypogastrium. The discharge of blood continued for five weeks; then epileptiform fits occurred. The uterus was found anteverted, and a small oval tumor lay to its left side, connected by a tough cord with the pelvic wall. Tubal pregnancy was suspected. On March 2, 1887, an exploratory incision was made; the adhesions, which bled freely, had to be broken down, and a cyst of the left tube, "the size of an apple," was removed. It was universally adherent to surrounding structures; and, in securing some bleeding vessels to the great omentum, a piece of hair-pin, an inch long and consisting of part of the two shanks pressed close together just below their point of union, was discovered and extracted. A drainage-tube was left for twenty hours in the wound. The patient did well for a fortnight, then the stump of the tubal pedicle suppurated, and the pus which escaped contained ligature-threads. The first period after operation was attended with attacks of convulsions, which lasted eight days; but the second was only represented by the molimen without show, and by slight convulsive attacks. Ten days later a hard substance was detached, on vaginal examination, to the left of the cervix. The woman was in good health when last seen by Dr. Freund; but there were slight convulsions at every menstrual period. Should a portion of the hair-pin yet remain in the pelvis, the persistence of the neurosis is readily comprehensible; should the hard body be simply an inflammatory deposit, the persistence of the symptoms would be a feature already observed in other cases, where self-evident causes of nerve-irritation have been removed, the neurotic condition remaining for a long time after their removal. It appears that in this case the shanks of the hair-pin had been pressed together, and introduced into the uterus for the destruction of the imaginary fœtus, amenorrhœa having followed cohabitation. The pin had broken, found its way into the left tube, set up salpingitis, perforated the tube, and reached the omentum. Dr. Freund shows, on carefully considered evidence, that the prevalent theory that hair-pins are introduced into the genito-urinary tract, either in the belief that the practice may produce abortion, or for another repulsive purpose, is perfectly correct.—*British Medical Journal.*

The Treatment of Chronic Ulcers.—Dr. Bitot, writing in the *Journal de Médecine ae Bordeaux*, of March 18, 1888, speaks enthusiastically of the use of water-bags in the treatment of ulcers. He reports some cases of eczematous ulcers, which had resisted all modes of treatment, but healed readily under even pressure applied by means of small rubber bags partially filled with water.

Periodical Spinal Paralysis.—Greidenberg reported in *Vratch* the case of a soldier who suffered from total paralysis several times a month, each attack lasting one or two days. This condition, according to the man's report, had existed for ten years. The lower extremities were first attacked, the paralysis creeping up through the muscles of the trunk and upper extremities. The power returned in an inverse direction, the upper parts being the first to regain their normal strength. Westphal reported a somewhat similar case two or three years ago.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, June 16, 1888.

THE SELECTION OF CLIMATE FOR CASES OF PULMONARY PHTHISIS.

SEVERAL interesting contributions to the climatic treatment of phthisis have lately been made. As a rule, heretofore, an article on this subject meant simply the exploiting of some favorite health-resort by its local physician, or by some one who had been especially impressed with his experiences in one or two localities. But such mode of writing about climates is passing away before the larger knowledge and more critical spirit of the present day. It is questioned, now, if climate-cures will really be needed when home treatment has become more perfected. The late Dr. Austin Flint is reported to have said that one of the best climates for poor consumptives was the wards of Bellevue Hospital, and at the recent meeting of the Royal Medical and Surgical Society Drs. Quain and Pollock asserted that just as good results in phthisis could be obtained by home treatment as by that at health-resorts. The experiences of the Dettweiler Sanitarium bear out, in a measure, this latter view. Many patients have found out to their cost, as Dr. Robie states, that the Riviera has its mistral, the Alpine resorts their "föhn," or south wind, California its fogs, Florida its dampness and cold nights, and Colorado its storms of wind, dust, and sand.

Among the papers of interest which have appeared in the past year are one read by Dr. Assmann before the Berlin Medical Society; one by Dr. J. A. Lindsay, in *The Lancet;* one by Dr. Denison, read before the International Medical Congress (*Medical Register*); one by Dr. J. W. Robertson, on the climate of California (*Journal of the American Medical Association*); one by Dr. A. Tucker Wise, on the Alpine health-resorts; besides several special papers by Hössli on the Engadine, Schauffler on the climate of Texas, Geddings on the climate of Aiken, Lloyd on the climate of Asheville, Eyton Jones on the climate of Egypt, Frank F. Smith and Van Bibber on the climate of Florida, Douglas on the climate of Las Palmas in Grand Canary, Saville on the climate of Algiers, and F. Weber on the Crimea.

All these are referred to in order to show the number of alleged specially healthful spots which our favored globe offers to sufferers from pulmonary trouble. Besides this, Dr. Frederick I. Knight has written a careful article on "The Selection of a Climate for Patients with Pulmonary Tuberculosis" (*Boston Medical and Surgical Journal*, April 5, 1888).

Dr. C. Theodore Williams recently read an article on the treatment of phthisis at high altitudes, and Dr. Friedmann, of Berlin, has embodied observations, made upon himself and others, during a period of over seventeen years, under the title of "The Experiences of a Poitrinaire" (*Deut. med. Zeitung*, 1887).

Plainly, there are climates enough, and the important questions are, Whether the patient shall be sent away at all? and, if so, To what place shall he go?

As to these points, Denison thinks that the preferable altitudes range between 1,500 feet in the North in winter, and 10,000 feet in the South in summer. The contraindications for a high altitude are advanced age, heart disease, active pneumonia, high bodily temperature, extensive involvement of lung tissue, the stage of softening with marked pyrexia, or decided hemorrhagic diathesis.

Mountain-resorts, according to Dr. Lindsay, are most beneficial in cases of delayed recovery from pneumonia, chronic pleurisy with much fibroid change, incipient catarrh at the apex, chronic tubercular phthisis with good reaction, and hemorrhagic cases. In early uncomplicated cases with vigorous circulation, warm climates offer the best hope. When the circulation is feeble, or there is much nervous irritation, the choice lies between a sea-voyage and a dry inland climate like that of Upper Egypt, the interior plains of Australia, and southwestern parts of the United States.

Dr. Friedmann is of opinion (*British Medical Journal*) that the hygrometric condition of the air is of more importance than its density. As a rule, a fair proportion of moisture is beneficial, for though much moisture is somewhat depressing to the nervous system, it has a soothing effect upon the respiration. This question is equally made to turn upon that of the temperament, and most cases in the early stage of phthisis show the torpid "lymphatic" temperament, though this statement is contrary to the general opinion. Erethism, however, is a characteristic of all advanced cases, and of acute early cases. But different places vary considerably as to moisture in different seasons, and on this and other grounds (temperature, etc.) a change is occasionally desirable, especially in early summer. High plains and mountains are suitable for all torpid and chronic cases. Feverish cases do not bear a residence at the sea-side well.

Dr. J. C. Wilson thinks that patients with active febrile disturbance, those of highly excitable nervous organizations, and those who have repeated attacks of blood-spitting, should not be sent on sea-voyages.

Dr. Knight draws the following conclusions:

1st. As to patients presenting the earliest physical signs of chronic tuberculosis of the apex, who have as yet shown little, if any, general disturbance from the disease, and who complain only of morning cough and expectoration—these do best at mountain-resorts like those of Colorado and New Mexico.

2d. Patients with more advanced disease, showing some consolidation, but no excavation, nor any serious constitutional disturbance—these may do well at high altitudes; but it is better, if there is continuous hectic and considerable consolidation, to send them first to lower, dry elevations, like the pine-regions of Southern Georgia.

3d. Hemorrhagic cases—these do best at high altitudes.

4th. Cases of advanced disease with cavities or severe hectic symptoms. These should remain at home. But sometimes the moist, warm climate of Florida is beneficial.

5th. Acute cases should remain at home, at least till the acute symptoms subside.

6th. Cases of so-called fibroid or interstitial pneumonia. Special indications in these cases have to be considered. If the patient is young, and the heart is not enlarged, he may be sent to high elevations. If he is over fifty years of age, or if his heart is dilated, or if his cough is very harassing, a lower altitude should be chosen. Southern California offers excellent places for such, with varying elevation and moisture to suit individual symptoms.

7th. Patients recovering from acute pleurisy or pneumonia, in whom the irruption of tubercle is feared. High elevations is the place *par excellence* for these. The increased respiratory and consequent increased nutritive activity are exactly what is wanted to prevent the development of chronic disease.

8th. Patients in whom the tubercular process has seriously invaded the larynx. Such patients should be recommended mild, and even moist climates, and on no account be sent to high altitudes. Southern California answers the purpose well.

With regard to complications, it is admitted that cases with cardiac complications should not be sent to high altitudes. The same may be said of cases with acute or subacute rheumatic symptoms. Cases with nephritis or chronic rheumatism do not seem to be injured by high altitudes.

Dr. C. Theodore Williams, and Dr. H. Weber, found that among phthisical patients sent to mountain climates about forty per cent. recovered and about forty per cent. got better, and Dr. Pollock remarks that the forty per cent. which recover at high altitudes form just about the class of cases that recover in London.

Among the special conclusions which Dr. Williams draws as regards mountain climate are these :

1st. The circumferential chest-measurement augments from two to ten centimetres during the treatment. There is produced a considerable hypertrophy of the healthy pulmonary tissue, and more or less emphysema around the tuberculous lesions; the expansion of the thorax is accompanied by a diminution in the frequency of the pulse and of the respiration.

2d. Phthisical patients of both sexes equally profit by sojourn in elevated stations; as far as age is concerned, the results are less satisfactory in women before the twentieth year, and in men before the fortieth.

3d. The results are especially favorable in cases where there exists a hereditary predisposition.

4th. Mountain climates are useful in hemorrhagic phthisis, and diminish the tendency to hæmoptysis.

5th. The special influence of sojourn in elevated regions is observed at all altitudes above 1,500 metres.

6th. In the majority of cases the duration of this sojourn should be six months, at least.

7th. Mountain climates are useful not only in phthisis, but in other affections, such as incomplete development of the lungs and of the thorax, chronic bronchitis without bronchiectasis, pulmonary retraction after chronic pleurisy, spasmodic asthma not accompanied with notable emphysema, and in anæmia.

8th. Mountain climate is contraindicated in the following cases : (*a*) Tuberculosis with bilateral cavities, with or without fever ; (*b*) phthisis with considerable diminution of the respiratory surface ; (*c*) catarrhal phthisis ; (*d*) phthisis with considerable irritability of the nervous system ; (*e*) emphysema ; (*f*) chronic bronchitis with bronchiectasis ; (*g*) affections of the heart, of the large bloodvessels, or of the central nervous system ; (*h*) advanced age, or a state of feebleness too great to allow exercise in the open air.

PULMONARY RHEUMATISM.

Professor B. Ball has reported a case in which, during the course of acute rheumatism, general pulmonary congestion has occurred, with death following in a few moments. Sudden appearance of pulmonary consolidation in rheumatic fever is not very uncommon, and is especially frequent when pericarditis or pleurisy is present. In from seven to ten per cent. of cases of acute rheumatic fever some form of pulmonary or pleuritic trouble is noted.

Cases, however, in which the rheumatic phenomena leave the joints and appear in the lungs are not frequent, but do occur. M. Humblet has recently recorded such an observation in the *Archives Médicales Belges.* The patient, a butcher, aged twenty-six, a robust man, was attacked for the first time with acute articular rheumatism. Under treatment by salicylates all pain disappeared ; at the end of fourteen days he suddenly developed signs of pulmonary consolidation, with fever and "rusty" sputum. Under local treatment this disappeared at the end of five days, when rheumatic swelling with pain appeared in the left wrist. After twelve days the same symptoms appeared in the lung as before—dyspnœa, fever, etc. The joint affection disappeared, to reappear again in a few days. At the end of about a week both pulmonary and articular symptoms gradually began to disappear, and convalescence began.

There seems to be no doubt, in cases such as the foregoing, that the rheumatic poison produces an exudative inflammation in the lungs, with signs like those of pneumonia. The progress of the disease, however, indicates that it is not pulmonary rheumatism, as rheumatic pneumonia differs in its course from true croupous pneumonia.

SOCIETY PRACTICE AND ITS ABUSES.

Practising medicine, surgery, and obstetrics for benevolent societies has always been a poor kind of business. The doctor has been ill-paid, and we fancy that the patients have got, as a rule, but mediocre treatment, since many members resort to other practitioners when serious illness ensues. In this city, among certain German and Jewish societies, the emoluments are contemptibly small.

We learn with regret that this kind of practice is growing in other cities. The *New Orleans Medical and Surgical Journal* says : "The custom followed by so many physicians in this city, of taking 'society practice,' has grown to such an extent as to threaten destruction to all legitimate work by those few who value the dignity or well-being of the profession. Four-fifths of the people of this city are banded together into so-called 'Benevolent Associations,' whose objects are weekly indemnity while sick, free medical services, including drugs, and free burial in case of death. Every one of these societies annually chooses a physician, a druggist, and an undertaker, and always after fierce competition. Just before the annual election a committee goes around to some fifteen or twenty physicians, and the same number of druggists and undertakers, and requests each of these functionaries *to put in a bid.* Then begins the scramble. One physician will offer to do the work, which includes attention to the families of the members, for four dollers per member per annum; another will bid three, another two, and so on until, as actually happened a few weeks ago, the final and successful bidder sees a profit and honor in the job at 'forty cents per member per annum, payable quarterly.'"

The principle of society practice, and of provident associations generally, is a sound one, and cannot be attacked. But its application to medicine is made in a pernicious and evil way. The idea of getting "bids" for medical services, and accepting the lowest one, as if it were a contract to supply seamless socks or flannel underwear, is most shocking. It can only be great poverty or an utter want of self-respect that will allow physicians to enter into bargains in such a way. And it is extremely unwise for societies to contract at the lowest price for medical services upon which sometimes their lives may depend.

If a fair price for medical services were established by the societies, and then physicians were allowed to compete legitimately for the place, the system would not necessarily be a bad one.

THE TRUE SOURCE OF THE POWER OF THE PRESS

An American patent-medicine company recently sued an English company for damages, accusing the latter company of using the former's trade-marks. The American company sold a certain saint's "oil," and the English company advertised also a healing oil, substituting, we believe, St. Joseph for St. Jacob. The judge dismissed the motion promptly, with some severe and just words upon the matter of patent medicines.

The American company claimed that they had sold over twelve million bottles of their oil, and spent $2,000,000 in advertising it.

The English press, as a rule, were silent on the subject, but one journal, according to the *Chemist and Druggist*, said:

"To recur, however, to the sentence [of dismissal by the judge] we quoted in the beginning of this note—namely, that 'this American company which, according to its own statement, is flooding the English newspapers with advertisements of this quack medicine'—we may take this opportunity of reminding judges, journalists, and others whom it may concern, that to the patent-medicine advertisements of the past half-century they and all England owe, in a very large degree, and more, probably, than to any other influence, the wonderful development of the cheapness and consequent power of the press, which is one of the greatest features of the Victorian era."

"This," as Dr. Squibb, commenting on this matter, truly says, "seems equivalent to saying that it is good to foster quack medicines, although it may be at the expense of a legitimate materia medica, and of sound morality and truth and health, because quack medicines impose an enormous popular tax by which a powerful press is supported."

It is not the case, however, that our large city dailies are greatly supported by the quacks. The more reputable journals in this city will not average one or two columns as a daily subvention from quacks.

Local country journals and many religious papers, however, get their support largely from this class.

News of the Week.

The American Laryngological Association holds its Tenth Annual Meeting at Washington, D. C., September 18, 19, and 20, 1888. The following preliminary programme is announced: "Ten Years of Laryngology," Rufus P. Lincoln, M.D., New York; "Congenital Bony Occlusion of the Posterior Nares," Charles H. Knight, M.D., New York; "The Effects of varying Rates of Stimulation on the Action of the Recurrent Laryngeal Nerve," Franklin H. Hooper, M.D., Boston; "Subglottic Laryngeal Enchondroma," E. Fletcher Ingals, M.D., Chicago; "A Photographic Study of the Laryngeal Image during the Formation of the Registers, and Production of Variations in the Pitch of the Singing Voice," Thomas R. French, M.D., Brooklyn; "Lupus of the Nose, Pharynx, and Larynx," Samuel Johnston, M.D., Baltimore; "Imaginary Lingual Ulceration," George M. Lefferts, M.D., New York; "A Possible Substitute for Tracheotomy and Intubation in certain Cases," Edgar Holden, M.D., Newark; "Antiseptic Nasal Surgery," Clarence C. Rice, M.D., New York; "A Case of Sarcoma of the Tonsil," Alexander W. MacCoy, M.D., Philadelphia; "A Case of Subglottic Chronic Stenosis of the Larynx cured by Dilatation," Frank Donaldson, M.D., Baltimore; "Internal Œsophagotomy," John O. Roe, M.D., Rochester; "The Treatment of Atrophic Rhinitis by the Galvanic Current," J. H. Hartman, M.D. Baltimore; "The Anatomy of the Nasal Chambers," Harrison Allen, M.D., Philadelphia; "Notes on a Case of Nasal Caries, complicated with Meningitis; successfully treated by means of the Surgical Drill," William C. Jarvis, M.D., New York; "On Fixation of one or both Vocal Bands in the Phonatory Position (so-called Abductor Paralysis)," F. Donaldson, Jr., M.D., Baltimore; "Residence at certain High Altitudes as a Means of Cure for Laryngeal Phthisis," Clinton Wagner, M.D., New York; "Further Investigations as to the Existence of a Cortical Motor Centre for the Human Larynx," D. Bryson Delavan, M.D., New York.

The Medical Department of the University of Pennsylvania is to have a Maternity Hospital consisting of a central building and two wings.

A Christian Physician.—The Union League Club resolutions on the death of Dr. Agnew, prepared by Chauncey M. Depew, and presented by Sigourney W. Fay, contain the following: "If all Christians were like Dr. Agnew all men would become Christians. With him religion was not a cloak, but a career. It was not a formula, but a faith. It was not alone a liturgy or a creed, but the practice during every working hour of the commandment, 'Thou shalt love thy neighbor as thyself.' The profession was not only enriched by his genius and science, but thousands of young men owe to him the opportunities and examples which will enable them to take up his work and follow in his steps. The loss of such a man in the prime of life and usefulness is a public calamity, only mitigated by his good works while living and his glorious memory after death."

Engravings of the Late Dr. Agnew.—At the last meeting of the Ophthalmological and Otological Section of the New York Academy of Medicine a committee was appointed for the purpose of arranging for the making and publication of engravings of the late Dr. Agnew. We are informed that members of the profession who desire such an engraving, accompanied by an autograph signature, should send their names and addresses to the Secretary of the Committee, Dr. Charles H. May, 640 Madison Avenue, New York City, at once. When all such names shall have been recorded, those who have requested a copy of the engraving will be notified of the cost of the same, either by the publisher or by the committee having the matter in charge.

Ovariotomy in the Aged.—Dr. Schröder operated successfully on a patient aged seventy-nine, and on one aged eighty; Dr. Miner operated on a woman aged eighty-two, and recently Dr. Homans, of Boston, operated successfully on a patient aged eighty-two years and four months.—*British Medical and Surgical Journal.*

Of Executing the Death Sentence by Electricity, Dr. B. W. Richardson says: "Euthanasia for the worst of criminals, by the side of so-called natural, but often most cruel, death for the rest of mankind, is practically the proposition; a proposition which carries with it its own condemnation."

A Colored Medical Society.—The Lone Star Medical Association is an association of the colored physicians of Texas. Its second annual meeting was held at Austin, on May 14th and 15th. There is a society of young doctors in this town. The members are not colored, but they sometimes paint things red.

The Marshall Hall Prize is awarded only once in five years, and so far only three men have received it. These are Dr. Hughlings Jackson, Dr. Ferrier, and recently Dr. W. H. Gaskell.

"Are Doctors Scientists?" was a question Judge Turner had to settle. Mr. Goodjer, of Newcastle, objected to a charge for "preparing scientific evidence" made by Drs. D. H. Watson and Hughes. He held that this was professional and not scientific evidence, and therefore was only entitled to the usual professional fee. The judge, however, held that doctors must also be regarded as scientists, and allowed the item.—*Medical Standard.*

Massage Establishments in Chicago.—The police recently raided a massage establishment for being disreputable. Massage shops, as the police call them, are becoming assignation houses.—*Medical Standard.*

The Hydrobromate of Quinine is a good form for hypodermic use.

The Wholesale Price of Cocaine is now about two or three cents per grain.

The Defects of American Quarantine.—"Dr. Walcott, in his address on State Medicine," says the *Medical Standard,* "paid a well-deserved tribute to the now moribund National Board of Health, whose excellent system of inspection made it a terror to mercenary steamship companies and inefficient quarantine officials. These elements, however, finally gained the upper hand, and, aided by a New York homœopathic politician whose feeble and corrupt administration has since led to his removal from office, and by the old-code head of the unconstitutional Marine Hospital Service, who desired to make sanitation a pretext to continue an unconstitutional tax for the benefit of a special class of workingmen no more entitled to special medical treatment by the Government than any other workers, succeeded in preventing any appropriation for the Board by Congress, with the result, during the present year, of spreading small-pox broadcast over the country. The Association's endorsement of the Bureau of Health bill was a deserved rebuke to the Marine Hospital Service clique. To this desirable result Dr. Walcott in no small degree contributed."

Quack Advertisements in Religious Newspapers.—At the Centennial General Assembly of the Presbyterian Church, lately held in Philadelphia, the Committee on Bills and Overtures recommended the adoption of a resolution that the General Assembly, while disclaiming responsibility for, or authority over, religious journals not published under its direction, disapproves of "all those advertisements of patent medicine, dishonest in form, fraudulent in substance, or prejudicial to the refinement, modesty, and purity of the home life."

A Library for the Kansas State Medical Society.—Mrs. Jane Stormont, widow of the late Dr. J. W. Stormont, of Topeka, Kans., has offered the State Medical Society $5,000 to found a permanent library at Topeka.

A Simple Remedy for the Benefit of the American Medical Association.—The *Medical Standard* asks but little. "If," it says, "the American Medical Association will cast off the Washington barnacles which infest it, rid itself of the incubus of the national specialist organization already mentioned, retire the old fogies and young snobs who have been prominent in its councils of late years, and expel all diploma-mill professors, its republican organization will have a full chance to demonstrate its infinite superiority over any other body."

Dr. Harmon Heed, of Windsor Locks, Conn., died on April 7, 1888, in the forty-eighth year of his age.

Suppressing Quackery.—The Orange County Medical Society, at its annual meeting at Middletown, June 1st, adopted a resolution instructing the censors to prosecute illegal practitioners.

A National Association of Railway Surgeons.—Railway surgeons seem to think that they have special and peculiar interests in calling for a special national organization. At any rate, a committee of railway surgeons, consisting of Drs. C. B. Stemen, J. H. Tresset, and R. L. Sweeny, have called a meeting at the Palmer House, Chicago, Ill., on June 28th, at 9.30 A.M.

To Allay the Thirst of Diabetics, Dr. Duchenne recommends potas. phosphat., ʒ j.; aquæ, ℥ v. M. ʒ ij. to ʒ iv. several times daily.

The Association of American Institutions for Idiotic and Feeble-minded Persons holds its twelfth annual session at Toronto, Canada, June 18th. A number of interesting papers are on the programme.

A very Good Way to give Iodine is, says Dr. Squibb, by inhaling fifteen to twenty drops of iodide of ethyl. Iodine is found in the urine within fifteen minutes after fifteen to eighteen inhalations. It is indicated in syphilis, and in various disorders of the circulatory and respiratory apparatus. The bottle containing this iodide should be kept tightly corked in a dark place.

Six Living Children at a Birth.—According to the *Bund* of May 10th, at the village of Castagnola, near Lugano, Switzerland, the wife of the local Communal President, aged thirty-eight, has been recently delivered, at full term, of six living children, every one of which, however, died in the course of a few hours after their birth. This startling event has induced a correspondent of the *Berner Volkszeitung* of May 19th, p. 2, to publish the following statement, which, he says, can be very easily verified: "Many years ago a woman, residing at the village of Fullenbach, near Olten, was safely delivered of seven living, though tiny, infants. Since the nearest church at the time was at Olten, the seven children had to be carried to that town to be baptized. It happened that one of the rustic godfathers somehow lost one of his future godchildren on the way, the accident being discovered only after the napkins and wrappings had been carefully examined at the church. The happy father of the seven, plunged now into the very depths of unhappiness, registered a solemn vow to the Holy Mother that if 'the lost child was found alive he would erect on the self-same spot a chapel dedicated to her holy name.' The infant was soon found safe and sound, lying at the left bank of the river Aar, about five hundred steps from the Aarburg Bridge, close to Ruttigen, where there now stands the chapel as erected by the father, true to his solemn promise. An official document, relating in detail all these obstetrical and other events, is said to be exhibited within the chapel for public edification.—*British Medical Journal.*

Reviews and Notices of Books.

Practical Microscopy. A Course of Normal Histology for Students and Practitioners of Medicine. By Maurice N. Miller, M.D., Director of the Department of Normal Histology in the Loomis Laboratory, University of the City of New York. Pp. 217. New York: William Wood & Co. 1887.

This little volume is designed to pave the way for those who wish to study histology in a thorough manner. It is not intended to supersede the use of the larger manuals on this branch of anatomy. The subject is arranged by Dr. Miller in an eminently practical way, the language is clear and concise, the illustrations are well executed, and, altogether, the work commends itself to the attention of students and beginners in histology and microscopy.

A Manual of Auscultation and Percussion. By Austin Flint, M.D., LL.D. Fourth edition. 8vo, pp. 280. Philadelphia: Lea Brothers & Co. 1885.

The original work done by the late Dr. Flint in the development of the art of physical diagnosis will always make this manual an authority on the subject. Among all the works issued on this topic during the last few years none exceeds this one in simplicity and completeness. The fact that it has passed through four editions attests its popularity. There is a tendency among physical diagnosticians to make altogether too many varieties of morbid chest sounds, and especially of râles. The conciseness of Dr. Flint's manual is one of its chief advantages.

Hysteria and Brain Tumor. By Mary Putnam-Jacobi, M.D. 8vo, pp. 216. New York: G. P. Putnam's Sons. 1888.

This is a reproduction of various essays on nervous diseases, which have been read before societies or contributed to current literature. They are all of remarkable interest, and marked by that cogent reasoning which characterizes Dr. Jacobi's writings. The first two, from which the title is derived, occupy considerably more than half the volume, and are its most noteworthy contents.

Die Morphiumsucht und Ihre Behandlung. Von Dr. Albrecht Erlenmeyer. Dritte vermehrte und verbesserte Auflage, mit 22 in den Text gedruckten Holzschnitten. Berlin: C. Heuser's Verlag. 1887. The Morphine Habit and its Treatment. By Dr. Albrecht Erlenmeyer. Pp. 463.

This is a large and systematic treatise on morphine mania, and fills a vacancy in medical literature. The author has seen much of the disease, and his contributions to its symptomatology and cause are especially interesting. The book is a little diffuse, and would bear condensation, when it would be quite worth an English translation.

Du Catarrhe Chronique, Hypertrophique et Atrophique des Fosses Nasales; de l'Ozène, Obstruction catarrhale des Trompes d'Eustache, Végétations adénoïdes du Pharynx. Traitement par la Galvano-caustique chimique. Par Dr. Garrigou-Desarènes. Pp. 238. Paris: Adrien Delahaye et Emile Lecrosnier, Editeurs. 1888.

The author of the present treatise has got a galvano-cautery and treats his nasal cases with it. He is so pleased with the results that he writes a book. Other books, no worse than this, on similar subjects have been written when some other therapeutical fad was the inspiring influence.

Dr. Garrigou-Desarènes has written an interesting and suggestive work, containing many points of practical interest. He is not perhaps to be blamed because his treatise is not a learned, well-balanced, or philosophical one.

Neurectasy; or, Nerve-stretching for the Relief or Cure of Pain, being the Bradshaw Lecture, delivered at the Royal College of Surgeons of England. By John Marshall, F.R.S., LL.D. With an Appendix by the Author, and 12 illustrations by Victor A. H. Horsney, F.R.S. Pp. 53. London: Smith, Elder & Co.

These lectures, delivered in 1883, have been brought down to date by an appendix, and the work furnishes a very satisfactory, though not perfectly complete, *résumé* of the present status of nerve-stretching.

The Practice of Medicine and Surgery Applied to the Diseases and Accidents Incident to Women. By W. H. Byford, A.M., M.D., Professor of Gynecology in Rush Medical College, and of Obstetrics in the Woman's Medical College, and Henry T. Byford, M.D., Surgeon to the Woman's Hospital of Chicago. Fourth edition. Philadelphia: P. Blakiston, Son & Co. 1888.

Byford's treatise on women has been reviewed in our pages several times. The new edition differs in no essential respect from former issues. Revision, correction, and amplification have made the fourth edition more valuable than its predecessors. The fact remains, however, that this work represents Byford's teachings more faithfully than American gynecology. It is a book to be consulted by the specialist, rather than the student or general practitioner.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN OBSTETRICS AND GYNECOLOGY.

Stated Meeting, April 26, 1888.

J. E. Janvrin, M.D., Chairman.

Dr. James B. Hunter read a paper (see p. 653) entitled

UNUSUAL CASES OF PELVIC CELLULITIS AND THEIR TREATMENT.

Dr. A. P. Dudley opened the discussion with the history of two cases of pelvic abscess of more than usual interest. In the first case the patient had lifted a heavy weight, following which a tumor developed rapidly on the right side. He saw her about three weeks afterward, when she was suffering considerable fever, chills, and pain, and was very weak. She had what seemed to be a simple cyst in the right side. He had her taken to a hospital, where he attempted to relieve her without operating. It was difficult to determine whether she had a simple cyst, a pelvic abscess, or some other pelvic condition. That there was cellulitis was not doubted, but the pelvic walls were so tense that fluctuation could not be elicited through the vagina. Palpation over the abdomen pointed to what was believed to be a simple cyst. After as long a delay as he thought was justifiable, he opened the abdomen, and found on the right side a small cyst of the broad ligament. He tapped the cyst, but still thinking there must be some other condition present in the pelvic cavity, he did not excise the sac, but passed his hand in and felt a convex instead of a concave surface, which he attributed to some accumulation below, although fluctuation was still absent on account of the very tense condition of the tissues. He passed a trocar through the pedicle of the cyst into the tissues below, and there escaped over a pint of very fetid pus. The pelvic abscess was independent of the peritoneal cavity. He washed it thoroughly, and drained by a tube passing out through the cyst and abdominal walls. The patient recovered.

The second case was that of a woman who fell downstairs, struck the right side, and very shortly there developed fever, tenderness, and a thickening of tissues on the right side, felt per vaginam. The thickened condition or tumor soon extended around to the left side. As pointing was rather to the left side, a trocar was introduced, and about half a pint of pus was withdrawn. The patient got better; but there remained some thickening on the right side, between the bladder and uterus. His consultant thought it should be approached through the abdomen, but he concluded to use the aspirator, which he did, experiencing some difficulty in avoiding the uterine artery, and there escaped a pint of clear, limpid fluid. It came from a parovarian cyst. The patient was then convalescent.

Dr. Dudley believed the majority ot pelvic abscesses arose from a diseased condition of the ovaries and tubes; but he was convinced that they might occur entirely independent of the peritoneum. In the latter class of cases he believed aspiration was a safe method of treatment. Where the peritoneum was implicated there should be a free incision.

Dr. H. J. Boldt had been especially interested in the case of the author in which the intestine was adherent to the abscess. He had had two similar cases. In one laparotomy was done, and the bladder was found spread out upon the abscess and adherent. The case was let alone, yet the patient recovered. In another case, somewhat similar to the first one related by Dr. Dudley, he stitched the wall of the abscess to the abdomen, and drained. The patient recovered. He thought that after the diagnosis had been made, and it was intended to operate, the intention should be carried out before the patient had got too far along in a septic condition.

Dr. H. T. Hanks would emphasize the importance of Dr. Hunter's injunction to be careful in diagnosis, and, unless it could be made with certainty, to proceed with any operative interference with great caution. He could not forget his first case, which caused him much anxiety; but Dr. Walker, the consultant, advised him to wait, and, quieted his fears with the statement that it would not rupture into the peritoneal cavity. Finally rupture occurred into the vagina, and the patient recovered. Dr. Hanks thought that by early judicious treatment, as by frequent vaginal and rectal injections of hot water, the use of counter-irritants over the lower portion of the abdomen, antipyretics, and rest in bed, we ought to avoid the formation of large abscesses, and the necessity for an operation in many cases. When an operation was determined on, a free incision should be made, and pockets of pus be broken up. He was in the habit of making the opening into the abscess-cavity by means of a cervical dilator which had been brought to a sharp point, so that it would readily enter the tissues, and then the handles could be separated, enlarging the opening by dilatation.

Dr. Buckmaster thought an instrument would prove very satisfactory in these cases which he had seen employed by Dr. Thomas, consisting essentially of an aspirator-needle with a corkscrew-like projection, which entered the tissues and yet was sufficiently blunt to push aside any arteries. It left a track which would very readily close, differing in that respect from the one left by a straight-pointed instrument.

Dr. J. B. Hunter said the instrument employed by Dr. Hanks for penetrating the abscess-cavity was much like one devised a few years ago by a doctor of San Francisco.

A NEW SUTURE-FASTENER FOR SILVER WIRE, ESPECIALLY ADAPTED TO OPERATIONS ON THE CERVIX AND PERINEUM.

Dr. A. H. Goelet presented a new fastener for silver-wire suture, which was intended especially to do away with the necessity for twisting the ends. The need of such a fastener was seen in the fact that the silver-wire suture, when twisted, often left an indentation in the tissues which remained for years. By cutting the tissues it caused suppuration and interfered with ready union. To avoid this he had devised a lead button shield, which was pushed down over the wires when these had been put in place and clamped like the shot-fastener. The button could be made of various sizes, had a smooth concave under-surface, with rounded edges, while the upper surface had a teat-like projection upon the middle, through an opening in which the wire passed, and when in place it was clamped and thus held in position. Two sutures fastened in this manner on either side of the lacerated cervix were sufficient to hold the edges together. It was claimed that the expanse of lead covering the edges of the wound a little distance from the suture tended to retain those edges in apposition. The same objections to the use of the silver wire obtained in operations upon the perineum and abdominal wound in laparotomy, as in lacerations of the cervix, and could be overcome by the use of the suture-fastener presented, but modified somewhat to adapt it to the new situation.

Dr. Hanks would try the suture-fastener on the cervix, and would expect to derive benefit from it. In operations upon the perineum he used silk.

Dr. Cleveland thought the invention an ingenious one, but he agreed with Dr. Hanks, that those who had had much experience with the operation and had learned to do it skilfully and carefully would find little use for it. He found little difficulty from the silver wire in the cervix when it was not twisted too tightly. If there was likely to be difficulty, he cut the sutures on the fifth day without removing them, and thus took off the strain. On the perineum he used catgut, except the first suture, which was of silver wire.

Dr. James B. Hunter thought that if the silver-wire sutures were not twisted too tightly they would not cut, and if they were drawn too tightly no device would prevent them from cutting. It was at the point where they entered, and not where they were twisted, that the cutting would then take place. He thought the twist also had the advantage of leaving the suture in a shape that it could be tightened or loosened if found necessary. He remarked that some years ago Dr. Thomas devised a clamp through which the wires passed, and its surface extended somewhat over the wound, but he had abandoned it.

Dr. A. S. Hunter expressed the view, which several others present also entertained, that the button described could not have any effect in holding a larger extent of the wound-surface together than the suture would do alone. He also thought there would be danger of cutting both ends of the wire beneath the button when it came to removing it, and in that event it would be difficult to find the piece buried in the tissues.

Dr. Jacobus thought the kind of suture had less to do with bad union than failure to properly cut out the diseased tissues. Cut out the lacerated portion as it should be done, and union would readily take place under any form of suture.

Dr. Goelet closed the discussion, and claimed that the concave surface of the button did retain the edges of the wound in position a distance from the suture.

NORTHWESTERN MEDICAL AND SURGICAL SOCIETY OF NEW YORK.

Stated Meeting, April 18, 1888.

R. C. M. Page, M.D., President, in the Chair.

Dr. Burchard read the paper of the evening (see p. 655),

THE TREATMENT OF STRICTURE OF THE URETHRA BY ELECTROLYSIS.

Dr. Robert Newman had been gratified by the clear statement given of the subject. He would state that, in the two lists referred to, he had included only patients who had persisted in the treatment. He had not included cases in which treatment had been discontinued in the middle of the course. All of the cases included had, however, been followed, and it was known that relapse had not occurred. Failure was, he thought, always due either to wrong management of the current or to badly made or badly selected instruments. On having his battery renewed he had received it back presumably all right, and, on using it, he had been able to pass the stricture, but had been unable to withdraw the instrument. He had heard of others who had had this difficulty, and had known of cases in which the physician had then forcibly withdrawn the instrument. In a cited case he had suffered the patient to lie quietly for a few minutes, when the instrument had been spontaneously released. Afterward he had discovered that the connections of his battery had been changed, so that he had inadvertently used the negative pole. One must be certain of having the positive pole. In testing the poles, it was to be remembered that the needle of the galvanoscope turns to the positive pole. When placed in water, bubbles of hydrogen rise from the negative pole; when placed in a solution of potassium iodide, iodine gathers as a brown coloring at the positive pole.

It had been said that the speaker failed to cure because he dilated only to a 25 or 28, while it was the practice to cut to 40. It should be remembered that his instruments were blunt-pointed, while those ordinarily used were conical. The result obtained with his 28 was equal to that of the 34 of others.

A rule often neglected was, never to use the current when the urethra was inflamed, when there was an acute discharge, or hemorrhage showing a denuded surface. The cases in which the treatment was painful were, as a rule, cases in which this rule was neglected.

It would surprise many to know how widely the method had been accepted outside of New York. At the recent meeting of the American Medical Association, the West had risen as one man in its favor. Dr. Marsh's criticism but revealed his ignorance in regard to electrolytic action. The speaker recalled a case in which the patient had been cut seven times, and the contraction was so great that it was impossible to introduce even a guide. A country-practitioner had subsequently cured the patient by this method.

Dr. Burchard inquired whether a discharge was common during the first twenty-four or forty-eight hours after treatment. In his experience with three or four cases in which there had been no previous discharge, it had been quite profuse for several days.

Dr. Newman replied that such a discharge was not infrequent during the first two days; also, it was not uncommon for the coagulated mucus to form a plug which dammed back the gases produced and interfered with urination. The patient first found himself unable to urinate, but was relieved by the discharge of the plug, which came away with a puff like that which followed the cork of a soda-water bottle.

Dr. Burchard asked whether Dr. Newman checked this discharge.

Dr. Newman replied that he did not. He did not tamper with the urethra in any way during the first three or four days.

Dr. Burchard asked whether Dr. Newman's cases were troubled with irritability of the bladder after the treatment.

Dr. Newman replied that there was no such tendency, unless the current was too strong.

Dr. Burchard asked what was the usual duration of the séance.

Dr. Newman replied that he simply passed the instrument through the stricture, and withdrew it. From two to ten minutes were required, five minutes being the average. Where the instrument was kept in too long, no doubt irritation would result. He referred to a set of tunnelled-L sounds, by means of which he was able to withdraw the urine after the operation, so that the passage of an additional instrument was not required.

Dr. McLaury referred to an article by Sir Henry Thompson, of London, in which the alarming dangers of the old method were graphically represented.

Dr. Powell had had no personal experience in electrolysis of the urethra. In a patient said to have been discharged by Dr. Newman as cured, he had, subsequently, done the median operation for close stricture. He could not vouch for the veracity of the patient, who might have been one of the incomplete cases to which Dr. Newman had referred. The speaker would like to ask Dr. Newman two questions: First, what tissue was involved in the majority of strictures—the mucous membrane, or the submucous tissue; second, whether the mucous membrane was destroyed by the current, or whether a perfectly sound tissue was left?

Dr. Cole begged to take exception to Dr. Newman's remark in regard to the size of a bougie. A 28 was a 28, whether its extremity was conical or not; a 34 was a 34.

Dr. Wood was pleased with the favorable consideration given to this subject after the years of criticism, amounting to vituperation, which had been heaped upon it, especially in this city. Regarding the question of cauterization, he recalled a former meeting held in his own house, where Dr. Newman had demonstrated the effect of the current, using cartilage covered with mucous membrane. The cartilage had been dissolved and returned to its original elements, while the mucous membrane had been uninjured. He recalled a case which he had referred to Dr. Newman for treatment. The patient was fifty years of age, the bladder was emptied by drops, and a filiform bougie was entered with difficulty. The patient had suffered with chills, and had been disqualified for business for several months. After eight weeks' treatment he had been entirely cured, and had had no difficulty since. The speaker had recently referred the question of recurrence to Drs. Bangs and McBurney at the St. Luke's Hospital. He had asked whether, after division of stricture at one point, there was permanent cure. They had replied that the sound must be passed occasionally for a year, or even during life in some cases. The permanency of the cure by electrolysis was thus in its favor. Electrolysis destroyed the whole of the ring, while internal urethrotomy destroyed it in but one place.

Dr. **Dessau** referred to a case—that of a young man, twenty-two or twenty-three years of age, with two strictures, one two and one-half inches and one three inches back. Dilatation had been practised for a number of months without progress, and he had determined to resort to electrolysis. He had provided himself with the electrodes furnished by the Galvano-Faradic Co., and a new battery using five cells. At the end of five minutes there had been no pain, and the stricture had not been passed; at the end of ten minutes the stricture had not been passed, and bubbles of gas were escaping from the meatus; at the end of fifteen minutes he had turned off the current, there still being no pain and no progress. He had then been unable to remove the instrument for a number of minutes. It was not improbable that the wrong pole had been used. While there had been no pain throughout the treatment, the next day the prepuce had become œdematous, the whole organ had been swollen, the stream of urine erratic, and there had been a sanious discharge. Strange to say, one stricture had been cured, although the technique of the operation had been a failure. The other stricture had been subsequently divulsed.

Dr. **Baruch** had had no personal experience with the method, but referred to a report by Dr. Samson, of Texas, who had had a number of successful cases.

Dr. **Page** had recently tried the method upon one case. The stricture had dilated pretty well, but the application had caused such burning pain that the patient would not submit to it again. The patient's discharge had just ceased and the urethra was still tender; possibly, too, the negative pole had been used. He would not be deterred from trying it again in another case. The subject was timely. Urethrotomy had been abused. The speaker did not favor urethrotomy. Where cutting was done, a scar resulted and the stricture was apt to come back. The majority of strictures could be cured by dilatation.

In the absence of Dr. Burchard, Dr. **Newman** closed the discussion. The 200 cases he had reported had remained well for from three and a half to eleven years. He knew of no other method with which this could be compared.

In regard to Dr. Powell's question, he would say that the stricture might involve both the mucous and the submucous tissue, but that it might also involve the latter alone. So well accepted was this fact that some surgeons, in performing external urethrotomy, divided only the external tissues and left the mucous membrane entire. To the second question, he would say that the influence of the current was felt within a radius of one to one and one-fourth inch. It was capable of causing the absorption of the stricture without injury to the mucous membrane, if the current was sufficiently weak. Irritation was produced if the current was too strong or too long-continued, but the patient recovered from this in the course of two or three days. He had never seen the mucous membrane destroyed by the treatment.

In regard to Dr. Cole's objection, he would say that a conical bougie would forcibly dilate, and hence retraction would follow. The blunt bougie would, on the contrary, fail to enter at all until the stricture had been destroyed, and retraction did not follow its use. He had spoken with this sense in view when he had said that his 28 was equal to a 34. The electrode used by Dr. Dessau had been badly insulated, probably, and the current had escaped not only at the end of the instrument but along the stem also.

In judging of the strength of the current he had formerly trusted to his sensations, using more cells as the fluid became weak. He now used the galvanometer. Measured by the galvanometer, the strength varied between three and five milliampères.

Dr. **Powell** then presented an

URETHRAL DILATOR

devised by himself. It was his custom neither to electrolyze nor to cut, but to rely upon dilatation in the treatment of stricture. With the aid of cocaine it was possible to dilate to the full size of the urethra without pain, and he could refer to cases in which from three to ten years had gone by without a relapse.

Dr. **Leo** had used dilatation for eighteen years. It was the most ready method, and in his cases had always given good results.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Thirty-ninth Annual Session, held in Philadelphia, June 5, 6, and 7, 1888.

Tuesday, June 5th—First Day.

The Society was called to order by the President, Dr. **R. J. Levis**.

After prayer by Rt. Rev. Bishop Whitaker, Dr. **John H. Packard** delivered the Address of Welcome.

Some amendments relating to membership in the County Societies, and to the appointment of a Committee on Pharmacy, proposed at the last meeting, were adopted.

Dr. **Traill Green**, of Easton, delivered the

ADDRESS IN HYGIENE.

After speaking of the necessity of ventilation, bathing, and cleanliness, the author alluded to the fear of suffering in the hour of death, and considered it to be unfounded. Even in pseudo-membranous croup death is, as a rule, unaccompanied by suffering. Reference was also made to the fear of premature burial, which is quite general. A careful study of reported cases, however, showed that there is no well-authenticated case in which this has happened. In regard to the dread of being eaten by worms after burial, experience shows that there is no foundation for it.

Dr. **Edward R. Mayer**, of Wilkesbarre, then delivered the annual

ADDRESS IN MEDICINE.

The speaker dwelt largely on the value of internal antisepsis, referring especially to the use of the sulphites. He had found that after their administration in families where cases of scarlatina, diphtheria, measles, and pertussis existed, new cases rarely appeared. He had also found these agents of service in the treatment of these diseases. The use of antiseptic agents has largely taken the place of astringents and opium in the treatment of diarrhœal affections. The use of calomel in the beginning of gastro-intestinal affections was recommended. Afterward sulphuric acid, the sulphites, salicylates, etc., come into play.

Dr. **William Pepper**, of Philadelphia, presented a paper entitled

A CONTRIBUTION TO THE CLINICAL STUDY OF ALBUMINURIA.

He requested that the paper be read by title and referred to the Publication Committee. In doing so, he stated that the paper was based on the records of the chemical study of the urine in the cases occurring in his private practice during the past eight months. The examinations had been made by Dr. J. P. Crozier Griffith. The total number of cases was 239. Of this number, albumin was absent in 96 cases. The number in which albumin was found continuously or at some period was 143. As a rule, the test employed was that of Heller. It is therefore evident, he said, that there must be some forms of albuminuria not significant of organic disease of the kidneys. In 80 of the cases in which albumin was found, its presence was explained by the presence of pus or blood. In many cases, however, it was difficult to decide that the quantity of blood, pus, or other accidental addition to the urine was sufficient to explain the amount of albumin found. In 41 cases the presence of albumin could not be explained in this way, but yet, in none of these could casts be found, although they were looked for with great care. In only 22 cases of the 143 were casts found.

Dr. Frank Woodbury, of Philadelphia, read a paper on the

EFFERVESCENT FORM FOR THE ADMINISTRATION OF CERTAIN REMEDIES.

Attention was called to the fact that the last Pharmacopœia contained only two preparations intended to be administered in effervescent form. These are: Liquor magnesii citratis and magnesii citratis granulatus. Sparkling wines and malt liquors owe most of their palatability to the excess of acid which they contain. Modern works on therapeutics say very little with reference to the action of carbonic-acid gas as a medicinal agent; yet it plays as important a part in the animal as in the vegetable economy. Effervescing preparations were much employed by practitioners of a generation ago, and they afford a valuable means of administering nauseous and disagreeable medicines. Small quantities of alcohol are much more stimulating when given in the effervescent form than in the shape of spirits. Malt liquor is, when properly given, a better hypnotic than bromide of potassium. It is useful in gastralgia or nausea and in renal colic. It has been found useful, also, as a food and stimulant in children suffering with diphtheria. Effervescing draughts are especially valuable in fevers, being grateful to the patient, and tending to reduce the temperature and favor the action of the skin. In local affections of the digestive tract these agents are commonly resorted to, and in true migraine they may be given with the addition of a small quantity of deodorized tincture of opium. The author concluded the paper with the hope that the next Committee on Revision of the Pharmacopœia might be induced to extend the list of granular effervescent salts, and, if possible, establish uniform and standard formulæ for the carbonated and other mineral waters, both natural and artificial, that are now so largely used by the profession and the public.

Wednesday, June 6th—Second Day.

Dr. R. J. Levis delivered the President's address, entitled

THE TRADITIONAL ERRORS OF SURGERY.

Reference was made to the traditional custom of medical schools of recommending foreign medical works in preference to domestic books. The imperfect study of practical anatomy was regretted. With regard to specialism, it was said that the greatest advances in modern medicine have been made through attention to special lines of study and practice, but no specialty can flourish which separates itself from the common sources of science. Very few great advances have been made in medicine without being subjected to the opposition of prejudice. No more striking instance of this is to be found than that shown by the opposition to, and long probationary trial of, ovariotomy. The tardy recognition of the value of antiseptic surgery is a discredit to the times. It is now nearly thirty years since this method was introduced by Lister.

The traditional tendency to complication of surgical instruments and apparatus was alluded to. Few instruments are made straight, if it is possible to complicate them by making them crooked. Among other errors, largely the result of tradition, are the delay in operative interference in depressed fractures of the skull, the delay in operating in cases of strangulated hernia, and the failure to recognize the distinctly local origin of certain malignant growths, and the fact that they may be eradicated by thorough operation.

Dr. John R. Packard presented a communication on the proposed

STATE BOARD OF MEDICAL EXAMINERS,

in which he criticised some of the provisions of the bill which had been recommended by the Society.

Dr. L. F. Flick, of Philadelphia, read a paper on

THE CONTAGIOUSNESS OF PHTHISIS,

in which he took the ground that the evidence in favor of the contagiousness of this affection was sufficient to establish it as a fact.

THE ELECTION OF OFFICERS

was then held, with the following result: *President:* J. B. Murdock, of Allegheny; *Vice-Presidents:* L. H. Taylor, of Luzerne, Benjamin Lee, of Philadelphia, W. W. Dale, of Cumberland, W. S. Rowland, of York; *Permanent Secretary:* William B. Atkinson, of Philadelphia; *Recording Secretary:* Charles W. Dulles, of Philadelphia; *Corresponding Secretary:* J. H. Musser, of Philadelphia; *Treasurer:* O. H. Allis, of Philadelphia, officers for ensuing year.

It was voted to hold the next meeting in Pittsburg, beginning on the third Tuesday in May, 1889.

Dr. Theophilus Parvin, of Philadelphia, then read the

ADDRESS IN OBSTETRICS.

A large portion of the paper was devoted to a consideration of the advance made in the use of electricity in obstetrics and diseases of women. A consideration of the treatment of placenta prævia followed, the speaker holding that before viability the rule should be non-interference, unless there was severe hemorrhage. After viability, the occurrence of bleeding is the indication for immediate operation.

In closing the address, an earnest protest was entered against the indiscriminate performance of operations for the removal of the ovaries.

Drs. J. Price and **Penrose**, of Philadelphia, repeated the experiments showing the use of

INJECTION OF HYDROGEN GAS

in the diagnosis of perforation of the bowel in wounds of the abdomen, as performed by Dr. N. Senn at the recent meeting of the American Medical Association.

Dr. M. Price reported a successful case of

REMOVAL OF THE KIDNEY

for pistol-shot wound, and exhibited the patient, who was a girl, aged fourteen.

Dr. John B. Deaver, of Philadelphia, read a paper on

NEPHRECTOMY FOR MORBID GROWTHS.

He reported an unsuccessful case of removal of the kidney for carcinoma. The following were the author's conclusions: 1. Sarcoma in children should not be subjected to operation; 2. Sarcoma in adults should be operated on; 3. Carcinoma in adults, unless seen in an early stage, does not justify an operation; 4. Malignant morbid growths, in the majority of cases, should be removed by abdominal section; 5. Benign growths of the kidney are best treated by lumbar operation. If too large to be removed entire, they should be removed in sections, the pedicle being first ligated.

Dr. S. T. Davis, of Lancaster, reported a successful case of

REMOVAL OF THE UTERINE APPENDAGES.

Dr. J. H. Musser, of Philadelphia, read a memoir on the

LIFE AND CHARACTER OF BENJAMIN RUSH.

Dr. William F. Waugh, of Philadelphia, read a paper entitled

THE SPECIFIC TREATMENT OF TYPHOID FEVER.

The author had used the sulpho-carbolate of zinc, in a number of cases, with such results as to warrant a further trial of the drug.

Thursday, June 7th—Third Day.

Dr. H. C. Wood, of Philadelphia, delivered the

ADDRESS IN MENTAL DISORDERS.

The medico-legal aspect of this subject was the chief point discussed, and the manner of trying criminal cases in which the question of insanity arises was severely criticised. The defects existing in the Pennsylvania law on this subject were pointed out, and a resolution for the appointment of a committee to consider the advisability of making changes in it was offered.

Dr. James McCann, of Pittsburg, followed, with the annual

ADDRESS IN SURGERY,

taking for his subject the surgery of the brain.

Dr. J. V. Shoemaker read a paper on

THE CAUSE AND TREATMENT OF PSORIASIS,

exhibiting two patients.

Dr. B. Alexander Randall, of Philadelphia, delivered the

ADDRESS IN OTOLOGY.

This was followed by several papers on allied topics.

Dr. J. William White then exhibited two patients on whom the

RADICAL OPERATION FOR HERNIA

had been performed.

Dr. Charles W. Dulles, of Philadelphia, made a report on

HYDROPHOBIA,

giving the results of his study in this subject during the past year.

Dr. Goodwillie, of New York, read by invitation a paper describing new methods of treatment of

HARE-LIP AND CLEFT PALATE.

Dr. Laurence Turnbull reported a case of

EAR DISEASE,

in which the whole of the labyrinth was discharged from one ear, the result of disease following diphtheria and scarlet fever.

The Society then adjourned.

The Presternal Muscle.—At a meeting of the Anatomical Society of Paris, M. Roubanovitch reported an instance of this rare anomaly in man. Before the patient's death it was noticed that there was a prominent longitudinal band on the right side of the sternum. This was visible only during inspiration. At the autopsy a small fusiform muscle was found extending from the anterior surface of the manubrium to the seventh costal cartilage. The tendon of insertion was divided into three fasciculi, attached respectively to the fifth, sixth, and seventh costal cartilages. The tendon of origin was much smaller than that of insertion. One of the fasciculi of the latter was united with one of the points of the insertion of the pectoralis major, a fact which explained the prominence of the muscle during inspiration, the two muscles contracting simultaneously.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE CONFLICT AT THE COLLEGE OF SURGEONS—COLLEGE DIPLOMAS—THE NEW WORK-ROOMS AT THE COLLEGE—SUTURE OF RUPTURED BLADDER—COCAINE IN ACUTE TONSILLITIS—RHEUMATIC PARALYSIS OF VOCAL CORDS—THE QUEEN'S JUBILEE HOSPITAL IN THE LAW COURTS AGAIN.

London, May 19, 1888.

Those who advocate reform at the College of Surgeons have received a somewhat disheartening check, not to say repulse. It is now some months since the Council of the College applied for a Supplementary Charter. The members and fellows took the opportunity to lay their claims before the Privy Council, and not only was a petition with several thousand names forwarded to that body, but two deputations, of fellows and members respectively, attended before the Lord President of the Privy Council to state the grievances and urge the claims of the members and fellows. The latter were hopeful that some notice would have been taken of their statements, and that possibly their request to be represented by counsel before the Privy Council might have been acceded to. It is now announced that the Privy Council will grant the Supplementary Charter asked for by the College Council, omitting certain points "upon which there has been a controversy with the fellows and the members of the college." Almost the only alterations made by the new charter (thus modified) will therefore be the enlargement of the powers of the Council of the College as regards the amount of property they may hold, and the privilege now to be granted to the fellows of voting at the elections to the council by means of voting-papers in place of having to attend personally. Should the Supplementary Charter be granted without further question, the latter innovation is one that may be trusted to effect considerable changes in time. The Members of Council will no longer be the nominees of a few metropolitan surgeons, but will be representative of the whole body of fellows distributed throughout the country. The constituency made up of the fellows of the College of Surgeons is far more scattered than that of the fellows, or even the members, of the College of Physicians. By far the majority of medical men practising as pure physicians are living in London and the more important of the provincial towns and cities. The same might be said of those practising as pure surgeons, but the fellowship of the College of Surgeons is possessed by many medical men in general practice, and therefore located in all parts of the kingdom. Its possessor is not bound to restrict his practice to surgery, and all that the diploma implies is that certain stringent examinations have been passed. On the other hand, both the fellowship and membership of the College of Physicians imply that any one holding either practises solely as a physician. The license of the College of Physicians and the membership of the College of Surgeons are the inferior diplomas, which are merely licenses to practise, and correspond one with the other. Indeed, since what is called the "conjoint scheme" has been in operation, they are only given together, after the double examinations have been passed.

The recent extension of the college buildings has included the erection of work-rooms for scientific research. It is now announced that these are to be granted for the use of members and fellows on certain conditions. In all applications sent in it will be necessary to describe the proposed investigation and give a complete list of the material and apparatus required. The expenses of the investigation will be defrayed by the college, but a record must be kept of the time daily spent in work, and the place and mode of publication of the results will be determined by the Council of the College, to whom, also, investigators will be required to make reports on the progress made from time to time. The new work-rooms are likely to be extensively used, for the institutions in London at which scientific research can be carried on under favorable conditions are not very numerous. The Brown Institution is one, and work can also be done under certain conditions in the laboratories of University and King's Colleges. Hitherto, however, these have been the only institutions at which could be found the appliances necessary for conducting original researches in advanced physiology and pathology.

At the Clinical Society's last meeting Mr. Symonds read notes of a case in which he had sutured the rent in a case of rupture of the bladder in a female child, aged seven. The injury was caused by falling from a height. The abdomen was opened, about twenty Lembert's sutures inserted to close the rent in the bladder, and the peritoneum washed out with weak carbolic lotion and bichloride of mercury solution. The abdominal wound was then closed and a catheter tied into the bladder. The child did well for a time, but died on the eighth day. A collection of pus was found on the left side of the bladder, extending into the left ilio-lumbar region. The peritoneal part of the wound was soundly healed, but the non-peritoneal part was gaping widely, the sutures having torn through. The urine had escaped and set up the suppuration. Dr. De Havilland Hall then read notes of three cases of acute parenchymatous tonsillitis treated by cocaine. He applied the cocaine in solution (twenty per cent.) to the fauces by means of a brush. In one case the patient was somewhat strongly affected by it. Dr. Hall pointed out that the drug lessened sensibility and also the blood-supply; hence it facilitated deglutition. Dr. Percy Kidd then read notes of a case of complete bilateral paralysis of the vocal cords following acute laryngitis. He considered the paralysis to be rheumatic in origin. Recovery took place. Dr. Semon observed that it was the first case on record of bilateral rheumatic paralysis. Mr. Nunn then described a case of necrosis of the greater cornu of the hyoid bone and of ossified portions of the thyroid cartilage. The patient was thirty-three years of age. He had served in India for a short time, and suffered from constitutional syphilis. An abscess formed from which sequestra were discharged. Three attacks of profuse hemorrhage took place. Pneumonia followed, and finally phthisis, from which the patient died.

The Queen's Jubilee Hospital has again figured in the law courts recently. I should imagine the promoters of the hospital begin to wish they had never had anything to do with it. The superior landlord has, jointly with the occupiers of the adjoining premises, brought an action against the sub-lessee of the hospital premises to prevent the use of the latter as a hospital, on the ground that such use came within the scope of the prohibition in the lease which forbade the carrying on of any noxious trade. It was further argued that persons suffering from unpleasant complaints visited the hospital, and that there was no need for the latter, the neighborhood being a high-class one without any poor, those who visited the hospital coming from a distance. Judgment was given for the plaintiffs, but leave to appeal was granted.

CAMPHORATED CARBOLIC ACID.—In the *Correspondenzblatt für Schweizer Aerzte*, No. 7, 1888, p. 229, Dr. Th. Schneider, of Basle, recommends camphorated carbolic acid as an "elegant, reliable, and very convenient antiseptic preparation." As is well known, when one part of crystallized carbolic acid and three parts of powdered camphor are shaken up together in a test-tube, a colorless limpid fluid is produced. This mixture does not possess either the characteristic odor or the rubefacient and caustic properties of carbolic acid, while the antiseptic power of the latter remains intact. When placed on the tongue the compound causes but a very slight burning sensation. It has no effect on polished steel.

Navy News.

Official List of Changes in the Medical Corps of the United States Navy for the week ending June 9, 1888.

MAGRUDER, A. F., Surgeon. Detached from the Yantic, and granted sick leave.

BATES, N. L., Medical Inspector. Ordered to the Richmond.

KIDDER, B. F., Medical Inspector. Detached from the Richmond, and wait orders.

HEYL, T. C., Surgeon. Ordered to the Receiving Ship St. Louis.

STREETS, T. H., Surgeon. From St. Louis and to Medical Examining Board, as Recorder.

DUBROSE, R., Past Assistant Surgeon. From Naval Hospital, Norfolk, and to the Jamestown.

WELLS, HOWARD, Past Assistant Surgeon. From the Jamestown, and to U. S. Hospital, Chelsea.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 9, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	4	2
Scarlet fever	169	31
Cerebro-spinal meningitis	1	1
Measles	223	17
Diphtheria	136	44
Small-pox	13	2
Yellow fever	0	0
Cholera	0	0

CORRESPONDING MEMBERS OF THE PARIS ACADEMY OF MEDICINE.—At a meeting of the Paris Academy of Medicine in March last, among the names of foreign physicians proposed for corresponding membership were those of Drs. L. A. Sayre and W. T. Lush, of this city.

INHALATIONS OF CARBONIC ACID are recommended by Dr. E. Weill (*La France Médicale*, March 8, 1888) for the treatment of certain forms of dyspnœa, especially when occurring in phthisical patients suffering from laryngeal trouble. He attributes the good effects observed in such cases to the anæsthetic action of the gas upon the respiratory mucous membrane.

A NEW STETHOSCOPE, devised by Dr. Reynal-O'Connor, is described in *Le Progrès Médical* of April 14, 1888. The tube is of metal, and has three ovoid enlargements, which serve as resonators. The ear-piece is joined to the cylindrical part by a joint, so that the head of the auscultator need not follow all the movements of the stethoscope. Inside the cylinder are packed a red and blue pencil, an æsthesiometer, and a tape-measure.

THE ITALIAN SOCIETY OF HYDROLOGY AND CLIMATOLOGY will hold its first annual meeting in Bologna, in October next. The object of the Society is to make the Italian physicians better acquainted with the mineral springs of Italy.

THE MEDICO-LEGAL IMPORTANCE OF THE HYMEN.—Dr. E. S. Wikee writes, in the *American Practitioner*: "The presence of the hymen may be disguised by the presence of prolapsus vaginæ. I think the tendency of modern writers is to lay too little stress on the presence or absence of the hymen. There are, of course, many ways other than moral by which the hymen may be removed, but instances are rare; they are very rare. From the opinions expressed by most writers one would think they had been so unfortunate as never to find a hymen; therefore all women are unvirtuous. Like the young man who has spent his substance with harlots, he thinks all women are harlots; or, to cover his own sins, pretends that virtue is unknown save in new-born babes. In some localities and among some people this state of affairs may exist, but in the majority of places it is happily not true. Duverney says: 'When not found, in nine hundred and ninety-nine cases out of one thousand defloration has taken place.' He regards the restoration of the hymen as one of the many fables.' Casper says: 'I must declare that when a forensic physician finds a hymen still preserved, even its edges not being torn, and along with it (in young persons) a virgin condition of the breasts and external genitals, he is gratified in giving a positive opinion as to the existence of virginity, and *vice versa*.'"

Castration and the Development of the Genital Tract.—Dr. Kehrer has made a series of experiments to ascertain the effect of castration on the development of the genitals in young animals. He castrated rabbits between two and three months of age, and killed them one year later. He found that unilateral castration or spaying caused no arrest of development. On the other hand, when the operation was performed on both sides, the genitals and mammary glands remained stationary, never developing beyond the stage which they had attained when the essential organs were removed. Dr. Kehrer attempted to prove which theory was true—Pflüger's, according to which there existed in the uncastrated female a stimulus to growth through periodical irritation of the ovarian nerves set up by the ripening of follicles which goes on long before puberty; or, on the other hand, the theory that spaying caused a disturbance of the blood-supply of the remaining genital organs, through the occlusion of the ovarian arteries. For this purpose he ligatured the ovary and ovarian artery in two series of experiments. He found that neither in unilateral nor in bilateral ligature of the tubes or extremities of the uterine cornua, with separation of the ovarian arteries, was the normal development of the genitals in any way affected. He concluded that the ovarian nerves, or some other and unknown influence in connection with the ovaries, played the most prominent part in stimulating the development of the genital tract.—*British Medical Journal*.

The Influence of Cardiac Disease on the Mind.—In this year's Gouldstonian Lectures, delivered by Dr. J. Mickle (*British Medical Journal*), on "Insanity in Relation to Cardiac and Aortic Disease and Phthisis," the author speaks as follows concerning the influence of affections of the heart on the mind: "The chief factors of the brain circulation being the heart's action, the vasomotor apparatus of brain, the molecular functional activity of brain, and the atmospheric pressure (opposing return from skull, whose contents are partially withdrawn from its influence), it is evident that cardiac disease may play an important part in modifying that blood-supply and the cerebral functions. And the shrewd forecast of the late Sir G. Burrows, as to its frequent connection with insanity, has been justified by actual observation. Speaking of the mental disease with which so frequently an accentuation of the aortic sound is allied, Professor Rudolf Arndt said that it often takes origin when degeneration of the heart has followed its overstrain, and here the mental disorder, grounded in a disposition of the affected individual, is to be taken as an expression of general disease rather than as a brain disease, strictly speaking. The influence of heart diseases in the production of brain affections is chiefly to bring about functional disorders of the brain, including insanity. Although Dr. R. Law and Dr. William Stokes held that, independently of arterial disease, which Rostan connected with white softening of the brain, the latter might be brought about by heart disease, yet I have never seen a case of such 'exsanguineous softening' fairly attributable to cerebral anæmia the effect of cardiac disease; for in all cases where disease of the vessels locally was insufficient to account for the circumscribed softening, I have found embolism, or hemorrhage, exudation, or new-growth. But whatever their connection with cardiac or other disease, these several forms of local gross cerebral lesion may originate mental derangement, chiefly with dementia. An examination of this department of the relations of cardiac to mental disease would occupy too much time, does not fall within the scope of these lectures, and will now be dismissed for good. How, then, may cardiac disease either modify the symptoms of preexistent insanity, or of that which appears about simultaneously with itself; or give origin to the mental disease, play the part of a chief factor of the psychical malady? A question of difficulty and complexity. Combined as they usually are in operation, the several elements may be disentangled in some examples. They are as follows: 1. The heart disease may act by disturbing the balance of the general circulation in various ways and degrees. 2. Similarly, it may act by disordering the intra-cranial circulation (this includes its effect on the local vaso-motor mechanisms). 3. It may operate by leading to a change in the composition of the blood within the cranium; or, 4, of the blood generally. 5. It may act by the pulmonary disorder it induces, and the morbid impressions and sensations resulting therefrom, so that eventually some of the effects arising are of pulmonary origin, or partly so. 6. Through the nerves it may become a source of peripheral irritation, and influence cerebral functions reflexly, by sympathy, inhibiting some forms of activity, deranging others. Lest the above statements should bear a dogmatic impress, I must add that as yet they are not actually demonstrated and generally accepted facts. Some, indeed, while admitting a change of balance of general or of local association in heart disease, changed blood-pressure within the vessels, and altered quality of the blood therein, yet deny any effect, worth mention, of these on the production of mental symptoms, and hold that the original endowment of the nervous system, and the previous mental qualities, govern the state of psychic functions during the existence of heart or renal disease, of changes of pressure and circulation. Nevertheless, as regards the first two of the above-mentioned results of cardiac disease, and factors of mental, the preceding discussion shows their importance in determining the state of the brain, and therefore in producing disorders of it. In relation to this come cases with feeble circulation and with cerebral vessels imperfectly filled, in which the mental state or the sensory brain functions varied with the oscillations of arterial anæmia of the brain, according as the subject was in the erect or horizontal position; as where one, feeble-minded, apathetic, and peevish while in the erect position, became intelligent, lively, and conversational in the recumbent."

After some further explanatory remarks of a similar kind, the author continues as follows:

"With disabling heart disease, and especially if thereupon pulmonary disease supervenes as a secondary result, or even independently, come a general disturbance of the balance of the circulation, and impeded return of blood to the right side of the heart, including impeded return of blood from the cranial cavity, and all the more so as here comes into play the closed nature of the skull. And not only is the venous blood in the sinuses and large cerebral and meningeal veins brought to a state tending to stagnation, but it also acts backward toward, and upon, the arteries, in this course giving rise to irregular circulation, local retention and blood-stasis, poisoning of the parts with retained effete products of tissue-metabolism, and to changes in the pressure of the blood upon the vascular walls, and in the tension of the brain. Lung disease greatly enhances this condition of the intra-cranial circulation, a condition which also is accompanied with arterial cerebral anæmia, which we have seen the aforementioned changes tend to produce. And this being the state of affairs, should there now be also histological changes in the walls of the cerebral blood-vessels, their partial occlusion starves the brain substance, their diminished elasticity further aggravates the stasis and promotes gravitation of blood. Of the evil effects of persistent passive congestion of the membranes and brain substance, I need not tarry to speak. Yet the heart disease, in some forms particularly, and eventually in all, of itself directly, often mechanically, occasions a defective arterial supply to the brain, with or without venous congestion, and in the train of this arterial anæmia (and venous congestion) follow all the changes in the circulation and nutrition of the brain to which I have referred. And utterly mistaken are those who, in the diseased or healthy state of the brain-vessels, respectively, would seek the complete solution of the seeming mystery that one case of heart disease is attended by mental symptoms, and one, apparently similar, is free therefrom."

THE MICROBE OF YELLOW FEVER.—It is not often that the lay press publishes precise and reliable information concerning strictly medical topics. A noteworthy exception is found in a recent issue of the *New York Times*, which speaks editorially on the subject of the alleged microbe of yellow fever. The following account is given of this subject:

"The report of Dr. Sternburg concerning his search for the microbe of yellow fever will surprise many who have been led by apparently trustworthy statistics and descriptions to believe that the microbe not only had been discovered, but also had been used for the successful inoculation of thousands in Brazil and Mexico. It was proposed two or three years ago that the reported discoveries of Dr. Freire and Dr. Carmona, and the methods of inoculation used by these physicians, should be investigated by a commission of three persons appointed by the President The commission bill did not become a law, but provision was made in an appropriation bill for such an inquiry as had been proposed, and the man selected to do the work was Dr. George M. Sternberg, who had for some years been engaged in a study of yellow fever and in microscopic researches like those by which the Southern doctors were said to have found the microbe, and to have perfected their methods of inoculation.

"The brief account of his investigation which has been published in *Science*, and in which it is stated that he could not find the micro-organism described by Drs. Freire and Carmona, serves to recall the reports by which public attention has been directed in the last four or five years to the work of these physicians. Dr. Domingos Freire, of Rio Janeiro, began his researches in 1880, and in 1883 he inoculated human beings with the culture of the microbe which he believed he had found. He was aided by the Brazilian Government. He declared that the microbes were present in great numbers not only in the blood and organs of yellow fever victims but also in the soil of cemeteries where such victims had been buried. For the cultivation of them he chose the method of Koch, attenuating the virus by the successive inoculation of a number of guinea-pigs or rabbits. These animals died of a disease which seemed to be yellow fever. Human beings inoculated with the attenuated virus suffered a very slight attack of the fever, the symptoms continuing for two or three days. In a letter to Dr. Gaston, of Atlanta, Ga., dated December 29, 1885, and published by the House Committee on Epidemic Diseases, Dr. Freire said:

"'I judge that the commission of medical men of which you spoke will come very soon to give us the distinguished honor of verifying the results of our prophylactic mission, which up to the present time has been attended with such notable success that not one of the six thousand who were inoculated during the current year has died of yellow fever, while nearly five hundred who were not inoculated have sunk into the grave as victims of that disease.'

"Six months later, in a letter to Dr. Holt, President of the Louisiana Board of Health, Dr. Freire said:

"'I have performed over 7,000 inoculations with full success. The immunity was almost absolute, notwithstanding the intensity of the epidemic this year. More than 3,000 persons who were not inoculated died of yellow fever, while among the 7,000 inoculated, inhabiting the same infected localities, subject to the same morbid conditions, but seven or eight individuals whose disease was diagnosed as yellow fever died.'

"Writing to Dr. Watson, Secretary of the New Hampshire Board of Health, he declared that in the districts where 3,051 had been inoculated, 166 of those treated lived in houses in each of which from one to five fatal cases occurred, and in all of which 278 uninoculated persons died. One year ago statistics relating to Dr. Freire's work were laid before the Academy of Sciences in Paris by Drs. Gibier and Rebourgon, who are said to have repeated in that city his experiments, and these statistics were to the effect that 6,524 persons had been inoculated in Rio Janeiro in 1885 and 1886; that in those years the total number of deaths from yellow fever was 1,675, and that among these victims there were only eight who had been inoculated.

"It does not appear that the methods of Dr. Freire were reproduced in Mexico by Dr. Carmona. The latter is said to have begun his investigations ten or twelve years ago, and to have carried them on independently. He inoculated himself in September, 1881, and in the following five years is said to have inoculated 1,250 persons. In an account published in 1886 it was stated that of the first 208 not one was attacked, and that of the next 532 there were 26 who had the disease. Ten employés in the Mazatlan Custom House were exposed, and the four who had been inoculated escaped, while the fever killed their six companions who had not been inoculated. There is a marked difference between Carmona's methods and theories and those of Freire.

"These are some of the statements which convinced many American physicians and Congress that the reported discoveries ought to become the subject of an official inquiry. It seems to have been generally admitted that Dr. Sternberg was well fitted for the work of investigation. He has not completed that work, but neither in Rio Janeiro nor Vera Cruz has he found microbes. Neither the micrococci of Freire nor the zoöspores and yellow peronospores of Carmona have become visible under his microscope. But he has learned that, out of 44 inoculated persons in Rio, 22 took the disease and 9 died—the death-rate in this group exceeding the usual rate. What becomes of those stories about the failure of inoculation in only 8 cases out of 6,524? It may be that Dr. Sternberg will yet find some confirmation of the theories of Freire or those of Carmona, but his failure thus far to do so is not encouraging to those who would rejoice if it could be proved that a sure defence against yellow fever had been discovered."

TAR WATER IN HEMORRHAGE.—Dr. Corneille de Saint-Marc finds that distilled tar water has a hæmostatic effect very similar to that of hamamelis. When prepared with the tar of pine-wood it has valuable tonic astringent properties. It may be administered in quantities of from forty to sixty grammes during the twenty-four hours in congestive pulmonary hemorrhage, and in hemorrhage of the uterus and kidney. It arrests the hemorrhage of the first two stages of phthisis with remarkable promptitude.—*Lancet.*

"OVARIOCLASIE" is the name of a new measure advocated by Porro. It consists in destruction of the tissue of the ovary in cases in which removal of the organ is indicated, but cannot, for some reason, be carried out.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 25 New York, June 23, 1888 Whole No. 920

Original Articles.

SOME OF THE PRINCIPLES OF CRANIOMETRY.[1]

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In looking at a collection of skulls, or in examining the heads of a large number of people, one is struck at once by the great variation in their size, shape, and even symmetry, within strictly physiological limits.

A score or more of distinguished anthropologists of the present century have been trying to discover racial distinction in human skulls; but the fact is that there are not so many characteristics of race in the cranium as in other parts of the body, and accordingly there are still wide differences of opinion as regards a scientific craniological classification. Races have been mingling so many thousands of years that cranial dissimilarities are the rule among them even in tribes, and to some extent in families. These diversities of form have been designated as dolichocephalic, mesocephalic, and brachycephalic, words which merely convey an idea of the relation of the length to the breadth of the skull when viewed from above. The antero-posterior is to the biparietal diameter as 100 is to x, is the formula for determining this "cephalic index." All length-breadth indices below 78 are considered dolichocephalic; 78 to 80, mesocephalic; and above 80, brachycephalic. We may assume that the physiological limits of this index are 70 to 90. This is based upon thousands of measurements of skulls by various investigators. Any excess or diminution of these figures must hence be regarded as pathological.

I would merely make passing mention of the fact that, according to latest classifications (Huxley and others), most Europeans and most of the people east of a line drawn from Lapland to Siam are brachycephalic; that Negroes, Australians, English, Irish, and Scandinavians are dolichocephalic, and the Hollanders mesocephalic.

But, while one skull may be narrower or broader than another, there is compensation in other diameters. The dolichocephalic has a greater vertical diameter, for instance, than the brachycephalic skull.

Besides these characteristics something must be said regarding the physiological asymmetry of the skull. The fact that the arms and hands are not symmetrical on the two sides of the body, either in size or function; that the legs and feet are not symmetrical; that the left cerebral hemisphere is larger and more complicated than the right, would naturally lead us to anticipate some slight asymmetry of the two sides of the skull, and the facts of observation support us in the statement that asymmetry is the rule, and perfect symmetry the exception. More than a thousand post-mortem examinations, the examination of several hundred heads, and an inspection of some collections of skulls, such as that of Blumenbach, where I have particularly noted this point, together with the testimony of others, justify me in this assumption.

Asymmetry sometimes reaches extraordinary proportions, often with quite a normal state of brain function, often with marked psychopathic changes. Outside of purely physiological asymmetry we have that depending upon defective development and disease. One of the first of nature's constructive principles in fashioning the skull is the struggle of its contents for volume. Hence, as long ago pointed out by Virchow, premature synostosis of any cranial suture will lead to compensatory deformity. So, too, will arrest of development in any centre of ossification, or a unilateral aplasia or hyperplasia of the skull bones, or of the contents of the skull.

The diseases which most commonly produce cephalic deformation in early life are rachitis and hydrocephalus; in later life, tumors, exostoses, ostitis, etc.; while at all periods of life the shape of the skull is menaced by injuries, from a forceps delivery to a falling brick. The following are some of the commoner designations of well-known cranial deformities:

Macrocephalus, due to hydrocephalus, microcephalus, due either to aplasia of the brain or sutural synostoses, and the peculiar skull of rickets are three forms so familiar that I will not here take the time to describe them.

Oxycephalus, or steeple-shaped skull, is due to synostosis of the parietal with the occipital and temporal bones, with compensatory development in the region of the bregma, and is said to be common among epileptics and born criminals and their families.

Premature union of the frontal suture, resulting in very narrow forehead and great width behind, gives rise to the term trigonocephalus.

Plagiocephalus, or oblique deformity of the head, is due to unilateral synostosis of the frontal with one of the parietal bones.

Chamæocephalus is flat-headedness, said to be frequent among the insane.

Scaphocephalus is probably caused either by too early union of the sagittal suture or by the development of both parietal bones from one centre. Early synostosis of the frontal and sphenoid produces leptocephalus or narrow-headedness.

One of the principles of cranial development being struggle for volume, it is evident that in many cases the more marked the deformity of the skull, the more successful has been the struggle; so that very great cranial deformity is, as a rule, less indicative of psychopathic conditions than a moderate degree. It is difficult indeed, therefore, to define the exact limits of physiological asymmetry on the one hand, and a successful compensation in development on the other, with a pathological distortion between the two. We are accordingly under the necessity of regarding asymmetry of cranial structure as merely significant of a tendency toward mental deterioration. A misshapen skull affords ground for suspicion, but no absolute proof of mental disorder.

It is to be regretted that we have no studies of the psychical histories of tribes accustomed to producing artificial malformations of their heads during development. There are eight or ten species of artificial deformity which have been practised from time immemorial among the lower races of mankind, and are still in vogue among certain Polynesian and American tribes. The disfiguration is accomplished by means of bandages, boards, or masses of clay fastened upon the infantile skull to produce the prevailing fashionable shape.[1] Many of these skulls are to be seen in the famous collections at Paris, Shelton, and Göttingen.

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[1] Read before the New York Neurological Society, June 5, 1888.

[1] Topinard: Anthropology, pp. 178 to 185; trans. by Dr. R. J. H. Bartley. London: Chapman & Hall. 1887.

It may be affirmed that every segment of the skull represents some particular part of the brain lying beneath it. This may be assumed without proclaiming one's self a proselyte of Gall.

It is certainly true that single convolutions have no very marked influence upon the external configuration of the cranium; but they do, however, strongly impress the inner table of the skull, as will be seen upon examination. The indentations upon the inner table are most distinct on the orbital plate of the frontal, the squamous portion of the temporal, and the upper part of the occipital bone. The orbital surface of the orbital plate of the frontal is perfectly smooth. The outer table of the occipital presents no ridges correlated to the convolutional imprints within, but, on the contrary, has ridges for muscular attachment. The external surface of the squamous portion of the temporal bone is, indeed, modified by the size of the convolutions of the temporo-sphenoidal lobe; but on the head this portion of the skull is obscured by the temporalis. Yet although single convolutions do not impress themselves to such an extent upon the outer surface of the skull as to be recognized, this is not altogether the case with groups of convolutions. Groups of convolutions do modify the shape of the skull, do possess visible representation upon its outer surface.

The great recent advance in cerebral localization paves the way to a newer and more scientific, though a more limited, phrenology. Thus the parietal bosses correspond chiefly to the sensory, somewhat to the motor, cortical areas. The dimensions of the forehead have a direct relation to the frontal lobes, the higher intellectual substrata. The left temple has been shown by Benedikt, in one case, to be depressed in congenital aphasia. The parieto-occipital portion of the skull is doubtless modified by the countless sight-memories stored up beneath it. I have myself noted in two or three cases of infantile spastic hemiplegia an alteration in the shape of the skull on the side opposite to the paralysis. I here present cranioscopic drawings in one such case.

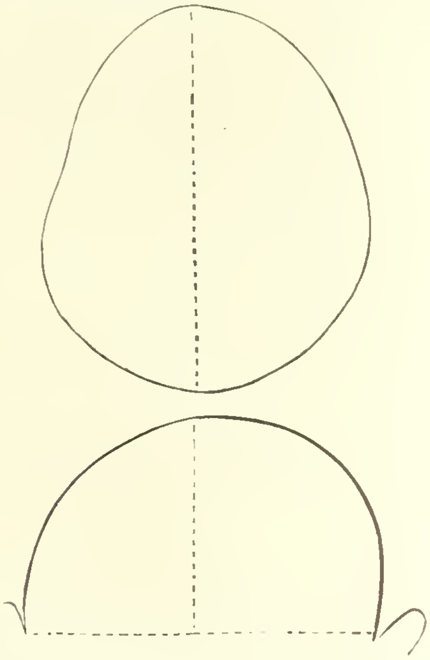

Fig. 1.—Depression of left half of skull in a case of congenital right hemiplegia spastica.

Thus far cerebral localization has been almost entirely directed to sensory-motor functions. Little scientific achievement has been made in the wide domain of ideational localization, yet there is a possibility of its being attained some day. From unfinished studies of mine in melancholia, I think that there is a strong probability of the seat of the disorder being located in the temporo-sphenoidal, and perhaps occipital lobes, and that there may be found in this region the chief cortical centres of the depressing emotions. The musical faculty is probably also situated in the temporo-sphenoidal lobe with the other auditory memories.

Even, however, if the new phrenology is far in the distance, craniometry and cephalometry have at present their importance and application. Virchow,[1] Welcker,[2] Weissbach,[3] Rieger,[4] Zuckerkandl,[5] and others have added much to our precise knowledge of the skull. I owe to my teacher, Professor Moritz Benedikt, a nearer acquaintance with a most interesting and useful science. Though in some sense an enthusiast, he is a learned and scientific man, an excellent mathematician, and an earnest seeker after truth. His long study of craniometry, culminating this year in a volume[6] which may be regarded as a forerunner of other dissertations, places the subject upon exact mathematical foundations, demonstrates that the skull is constructed upon crystallographic principles, and indeed inaugurates a new era in the science.

We are not in a position to practise craniometry proper to any great extent in this country, at least for pathological or forensic purposes, for no collections of the necessary sort exist. Comparative craniologists find at Philadelphia and Washington material for their purposes; but we neurologists have any number of heads at our disposal—normal, insane, and criminal—and there is a wide field for studies in cephalometry.

The two systems of measurement—the craniometrical and cephalometrical—differ but slightly from each other; the former, of course, being the more exact, since every portion of the naked skull is attainable. Both systems, if perfect, require such measurements to be taken as will serve at any time to reconstruct the skull. Geometry and trigonometry are pressed into use. Certain definite points are selected for the arcs and radii, as shown in some of the diagrams (Figs. 2, 3, 4, 5, and 6). It will be seen that the longitudinal, vertical, and horizontal sections of the normal skull all exhibit a certain and definite number of curves. In fact, its whole surface may be considered as composed of an aggregation of small cycloid surfaces, developed and joined together according to fixed biomechanical laws, just as a fruit is evolved on biomechanical principles, with its definite number of seeds and concentric disposition of substance. The object of these notes not being to present a formidable treatise on the triangulation of the skull, but to introduce a few practical ideas, and furnish an incentive for more and better work than has hitherto been done in this country upon this subject, I pass over the long series of craniometrical measurements, and also the thirty-eight cephalometrical formulæ recommended to thorough students by Benedikt, to select those which are absolutely necessary in order to form a just idea of the capacity and symmetry of any head—measurements which ought to be taken in every asylum, upon every patient admitted, and in every prison upon every criminal. Even the asylums of Italy surpass us in this respect. At San Servolo, in Venice, which I visited a year ago, fourteen cephalometrical measurements are taken upon every patient at the time of admission. Figures of this kind become in time of immense value.

I would recommend the eleven following measurements: 1, The circumference; 2, the naso-occipital arc

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[1] Virchow: Würzb. Verhandl. ii., 230; iii., 247; vii., 199. Gesammelte Abhandl., S. 191. Die Entwickelung des Schädelgrundes. Beiträge zur physischen Anthrop. der Deutschen, 2. Abdruck, 1887, Berlin.

[2] Welcker: Untersuchungen über Wachsthum und Bau des Menschlichen Schädels, 1862, W. Engelmann, Leipzig. Arch. für Anthropologie, Bd. xvi.

[3] Weissbach: Beiträge zur Kenntniss der Schädelformen öster reichischer Völker, Wiener Med. Jahrbuch, 1864–67.

[4] Rieger: Eine Exacte Methode der Kraniographie. Jena, 1885.

[5] Zuckerkandl: Morphologie des Gesichtschädels, 1877, Leipzig. Enk: Messungen der Schädel von Irren bei Meynert, Vienna, Jahrbücher für Psychiatrie, 1879, 2. Heft.

[6] Benedikt: Kraniometrie und Kephalometrie, Vorlesungen gehalten an der Wiener allgemeinen Poliklinik. Vienna and Leipzig, Urban & Schwarzenburg, 1888. His earliest brochure on the subject was the article "Schädelmessung" in Eulenburg's Real-Encyclopedie, 1st edition, 1882.

(Fig. 2, n to t); 3, the naso-bregmatic arc (n to β); 4, the bregmato-lambdoid arc (β to a); 5, the binauricular arc; 6, the antero-posterior diameter (s to o); 7, the greatest transverse diameter (length-breadth index); 8, the binauricular diameter; 9, the two auriculo-bregmatic radii; 10, the facial length; 11, the empirical greatest height (b to β or v).

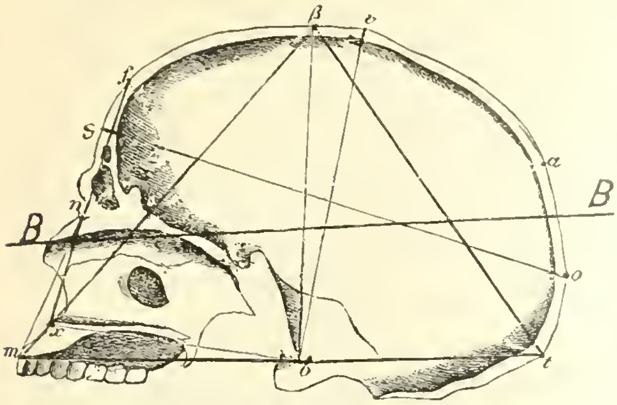

Fig. 2.—*BB*, Broca's visual plane; $m\ \beta\ t$, the triangle for ascertaining the empirical greatest height.

In addition to acquiring these mathematical data, cephaloscopic drawings are invaluable as exhibiting deformity clearly to the eye. Hence the horizontal circumference, naso-occipital curve, and binauricular curve should be taken with a strip of lead, or, what is better, with the instrument devised by Luys[1] (on the principle of the hatter's conformateur), and the curves projected upon paper.

We will now consider each of these eleven points in detail.

1. The circumference of the skull averages 52 ctm. in men, 2 ctm. less in women, with a physiological variation from 48.5 to 57.4. This measurement is taken horizontally around the glabella and the point just above the external occipital protuberance known as the maximum occipital point, from its giving the greatest antero-posterior diameter (Fig 2, s to o). The scalp and hair superadd about 3 ctm.; hence in cephalometry about six per cent. should be deducted to obtain the measure of the skull. (Six per cent. should also be deducted in measurements Nos. 2 and 5.)

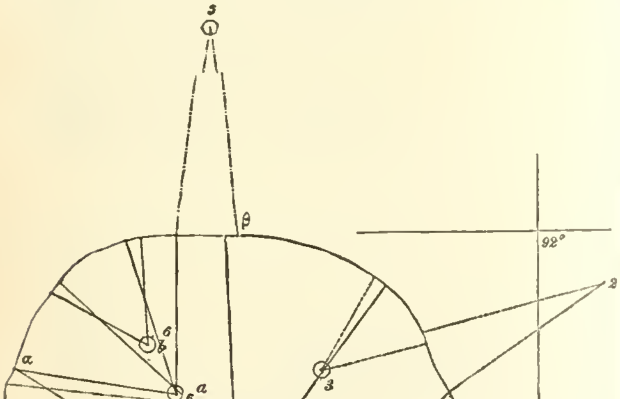

Fig. 3.—Cathetometric projection of vertical median plane, showing eight arcs of circles. (After Benedikt.)

An effort has been made by Welcker, and others, to determine the cubic capacity of the cranium through the relations of some of its diameters or its circumference. But it has been found that the cubic contents vary in different skulls even when the circumferences are equal. It is probable, however, that by the acquisition of long series of cranial diameters and volumes, we will in time arrive at some standard for approximating the quantity of brain in any head. A very rough empirical estimate is that where the circumference of the skull is 50 ctm. its volume will be about one thousand three hundred and fifty cubic centimetres.

2. The naso-occipital arc is measured from the root of the nose to the lowest part of the external occipital protuberance (Fig. 2, n to t). The average is 32 ctm. in men, one less in women, with a physiological variation between 28 and 38.

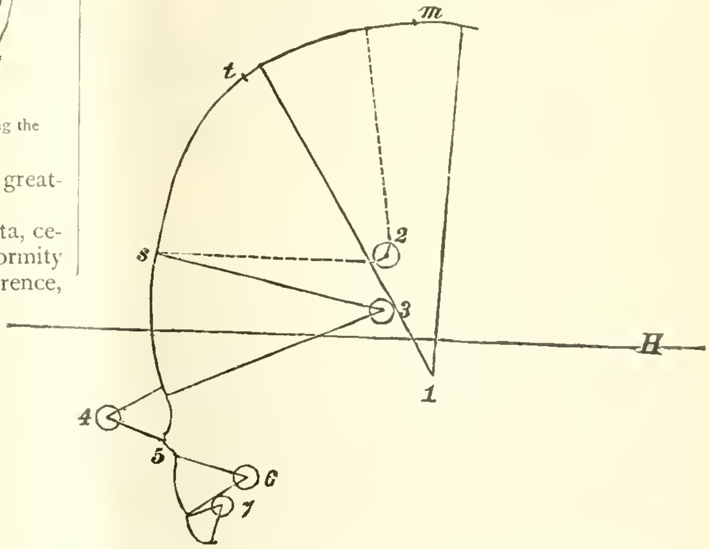

Fig. 4.—Cathetometric projection of left half of a transverse vertical plane perpendicular to the median vertical and horizontal plane, passing through the tip of the mastoid process. Seven arcs of circles shown. (After Benedikt.)

3. The naso-bregmatic, or frontal arc, taken from the root of the nose to the bregma (Fig 2, n to β), averages on the skull about 12.5 ctm. in men, 12 in women, with a physiological variation between 10.9 and 14.9.

4. The bregmato-lambdoid, or parietal arc, which is the measurement of the length of the sagittal suture, and hence the extent of the parietal bones, averages on the skull 12.5 ctm. in men and 6 mm. less in women, with a physiological variation between 9.1 and 14.4 (Fig 2, β to a). The bregma and lambda are easily found on the head after some education of the fingers.

5. The binauricular arc is measured vertically over the top of the skull, following Broca's vertical line, between the two auditory meatuses. We select at the meatus either a point on the anterior rim between the middle and posterior roots of the zygomatic process, easily felt on the head just behind the maxillary articulation, or a point on the posterior superior rim corresponding to a small depression, both of which are fixed points, and differ but slightly in elevation. The average is about thirty-two centimetres on the skull in men, one less in women, with a physiological variation between 28.4 and 35.

6. The greatest antero-posterior diameter is taken from the glabella, or middle of the forehead, to the maximal occipital point (Fig. 2, s to o). It averages 17.7 ctm. on the skull of men, 5 mm. less in women, with a physiological variation between 16.5 and 19.

7. The greatest transverse diameter is sometimes between the tubera parietalia, sometimes between the upper portions of the temporal bones. It averages 14.6 ctm. in men and 14 in women, with a physiological variation between 13 and 16.5. As before mentioned, the length-breadth index is obtained from these two diameters, Nos. 6 and 7.

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[1] Recherches sur la mensuration de la tête, etc. Paris: Baillière et frère, 1886. The expense of the instrument is about nine hundred francs in Paris.

8. The binauricular diameter is taken between either of the points described, on the rims of the auditory meatuses. It averages 12.4 ctm. in men, 5 mm. less in women, and the physiological variation is between 10.9 and 13.9. In measuring the head, the scalp averages 5 mm. in thickness; hence in the larger diameters (Nos. 6 and 7) one ctm. must be deducted to get the figures for the skull, while in shorter measurements (such as Nos. 8 and 9) it is sufficient to subtract 7 mm.

9. The auriculo-bregmatic radius of each side is taken from the usual point at the meatus to the bregma. By calculation from these radii and the binauricular diameter, we are enabled to ascertain the distance of the bregma from a point in the median plane, half-way between the two meatuses; this distance averages in the normal skull 11.7 ctm., with a physiological variation between 10 and 12.65.

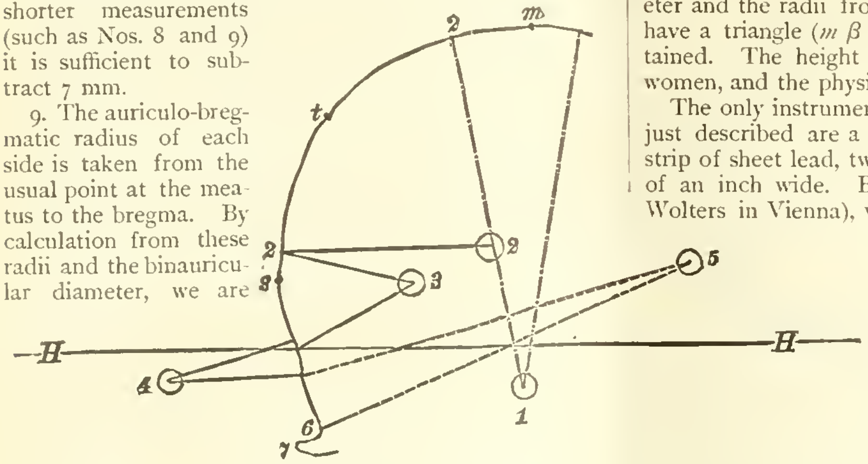

FIG. 5.—Same as Fig. 4, but about twenty millimetres farther forward, through middle of articular surface of inferior maxilla. (After Benedikt.)

10. The facial length is measured from the nasal root to the lowest median point of the inferior maxilla. It averages 12.37, with a physiological variation between 10.5 and 14.4. Including as it does the teeth, infants and the aged are debarred from this measurement. Dolichocephalic heads have, as a rule, narrow, and brachycephalic, broad faces. Something should here be said concerning prognathism, of which there are several forms. The best method of determining it is to measure the angle made by a line drawn from the nasal root to the junction of the inferior nasal spine and alveolar process (Fig. 2, $n\ x$), with a vertical line dropped from the nasal root to Broca's horizontal. It is found that every normal skull exhibits this subnasal prognathism, but there is wide variation in degree. Extraordinary prognathism, orthognathism, and opisthognathism, meaning extreme projection, straightness, or inclination backward of the subnasal line, are pathological.

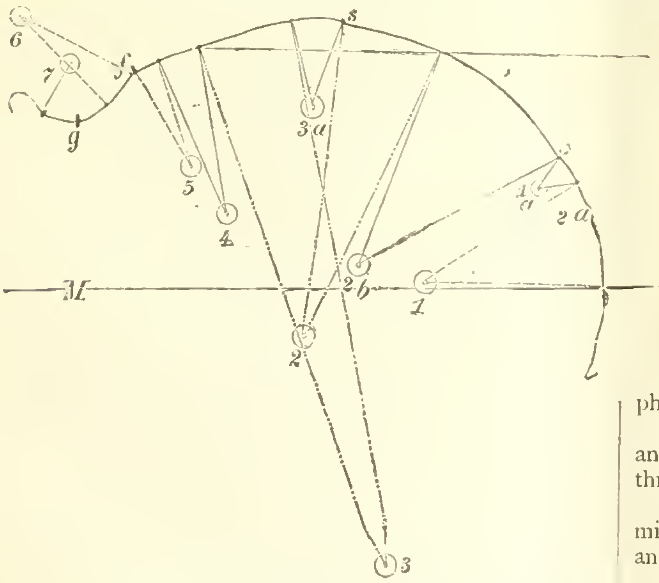

FIG. 6.—Projection of right half of a horizontal section through a skull on Broca's visual plane, showing seven arcs of circles. (After Benedikt.)

11. The empirical greatest height of the head is an approximate measurement of the distance between the basion and vertex of the skull (Fig. 2, b to β or γ). A line from the external occipital protuberance to the lowest median point of the superior maxilla, just above the incisors (Fig. 2, t to m), passes almost directly through the basion. Hence, in cephalometry, by taking this diameter and the radii from each extremity to the bregma, we have a triangle ($m\ \beta\ t$) whose height ($b\ \beta$) is easily ascertained. The height averages 13.3 ctm. in men, 12.3 in women, and the physiological variation is from 11.5 to 15.

The only instruments necessary for obtaining the data just described are a pair of calipers, the tape-line, and a strip of sheet lead, two feet long by half or three-quarters of an inch wide. Benedikt's calipers (manufactured by Wolters in Vienna), which are here exhibited, are to be recommended for their exactness (Fig. 7).

For a more careful study of cephalometry and the acquisition of further data not given here, two other instruments are needed, which have been devised by Benedikt, and which are here presented to the Society for inspection. One of these is applied to the orbits for the purpose of determining Broca's visual plane (made by Ploessel in Vienna, Fig. 8), and the other is a complicated instrument, designated as the pyramid apparatus (manufactured by Wolters, Fig. 9), for obtaining the exact distance of any point on the side of the skull to the vertical median plane, without the aid of which one would have to make a very tedious and intricate mathematical calculation. This is of particular service in the accurate determination of the amount of asymmetry.

In craniometry proper, still other apparatus is required, viz., one for volumetric estimates, with water in a thin rubber bag, and a cathetometric armamentarium, consisting of a craniofixator, cranioepigraph, telescopic levelling apparatus, and an instrument for projection, by means of which every arc and radius, and every portion of the bones and sutures may be exactly studied, measured, and drawn. With this instrument Benedikt makes some one hundred and twenty measurements of every skull. By its use the relations of normal and pathological skulls, and the relations of comparative craniology may be defined with scientific precision.

A knowledge of some of the pathological and forensic uses of the cephalometrical measurements here recommended for asylum and prison physicians may be gathered from the following facts:

It may be stated as a general rule that the defective and delinquent classes are recruited from the inferior anthropological portions of our race.

As regards the circumference of the head, excessive minima and maxima are more frequent in the insane and in criminals than in the normal.

With regard to volume, taking 1,500 c.c., as the normal cubage of the male skull, and 200 c.c. less as that of the female, with a physiological variation between 1,200 and 1,750, Schaffhausen and Benedikt found 175 criminal crania below the type; 203 skulls of insane men and women, measured by Zuckerkandl, Sommer, and Benedikt, were somewhat above the type, while 14 idiot skulls were, of course, far below normal. Schuppmann's 30 epileptic skulls gave rather a hypertypical result. But neither in insane nor in epileptics do the pathological characteristics lie essentially in their comparative cranial volume.

The naso-bregmatic or frontal arc, representing the height and development of the frontal lobes, presents minimal measurements more often in the insane and in criminal than in the normal series.

The bregmato-lambdoid or parietal arc exhibits extremes of minimal and maximal measurements more commonly in the defective and delinquent classes than in the normal. Here, also, the minimal are more frequent. These facts are thought by Benedikt to point to an aplastic development of the frontal and parietal lobes among the insane and criminals. He finds an atypic shortness of the parietal arc a characteristic, though not absolutely constant, observation in epilepsy. Less than 3 ctm. shortening is not to be noticed.

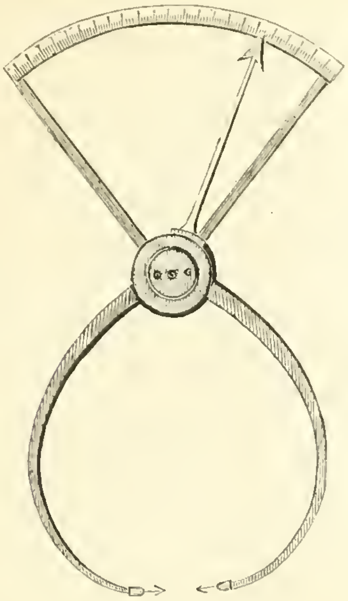

FIG. 7.

The arc from the lambda to the external occipital protuberance is worthy of study, particularly in cases of congenital or early acquired blindness, now that we know the cunei to be the principal visual centres; and the arcs of the temporal bones also demand investigation as regards their relation to similar conditions of deafness.

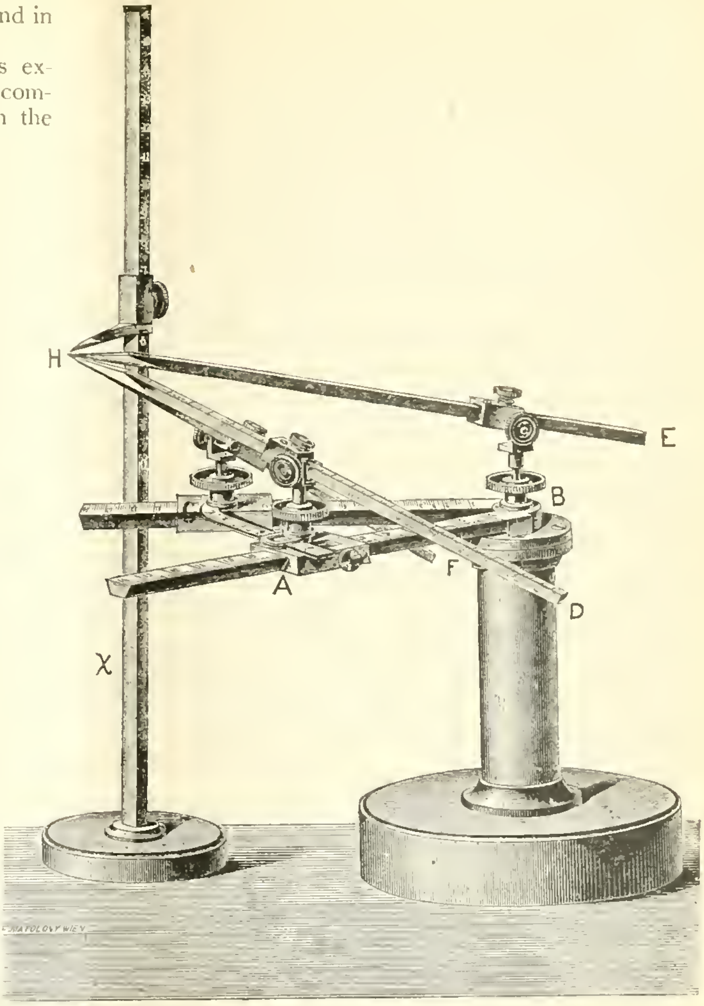

FIG. 9.—To ascertain the amount of asymmetry, that is, the distance of any point on the side of the skull to the median vertical plane, measure the distance to the asymmetrical bump from any three points in the median plane, and also the distances of said three points from each other. We then have all the sides of a triangular pyramid whose altitude is to be determined, its base being in the median plane. By transferring our measurements to this apparatus the height is quickly learned. *A*, *B*, *C* is the base of the pyramid. On the arms, *D*, *E*, *F*, the distances to the asymmetrical point are marked off, their points brought together at *H*, and by bringing the sliding point on the epigraph, *X*, also to *H*, the height may be speedily read off on the upright column of *X*.

As regards the length of the head, the measurements of Zuckerkandl and others in 119 male insane and 177 male criminal skulls show that maxima and minima are in these more common than in any normal series. The same is true of the breadth of the head. Minimal excess is slightly more frequent than maximal in defective and delinquent classes. The same skulls presented also enormously excessive dolichocephaly, and to a considerable extent excessive brachycephaly, when examined as to their cephalic index. The length-breadth index is indeed very useful as a means of judging of atypic and pathological cases. Now that Alphonse Bertillon's anthropometric system of identification of criminals[1] is being so generally adopted by different nations, students of craniology will soon have an enormous mass of material to draw upon in the study of the cephalic index, for two of his measurements are the length and breadth of the head. In the series of 100 cephalometric and cephaloscopic examinations[2] of people, mostly insane (from patients of mine in the Hudson River State Hospital), that I present here to-night, a number of these extreme variations from the physiological limits will be observed, as well as great asymmetry.

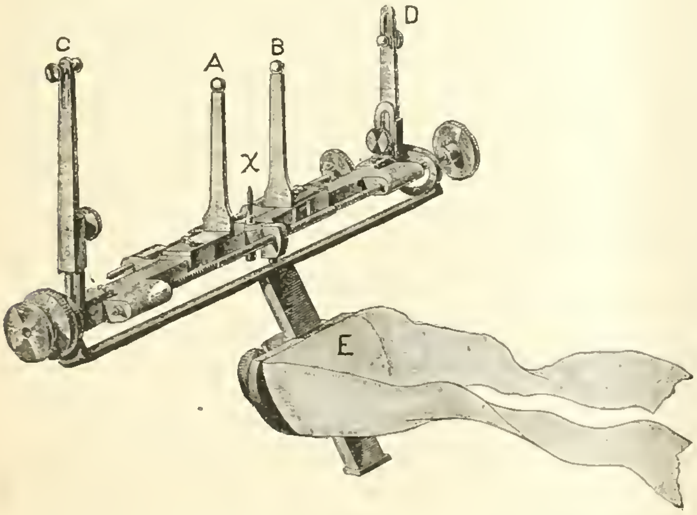

FIG. 8.—*A* and *B* are applied to the inner canthi of the eye, *C* and *D* to the middle of the outer orbital rims. *X* is a pencil of lead which marks a point upon the nose. *E* is a part for supporting the apparatus in position. The points *C*, *D*, and *X* are marked upon the face, and the triangle thus made is measured. This triangle lies in Broca's visual plane, and the whole plane and its relations to the rest of the head may be determined by taking various radii from these three points.

Excessive prognathism is found among criminals, in microcephali and in cases of hemi- and paraplegia spastica infantilis. Skulls known as crania progenæa[1] have considerable pathological significance. In these the lower teeth project beyond the upper, and the inferior maxillary angle is obtuse, due probably, to aplasia of the upper, or hyperplasia of the lower, maxilla.

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[1] Bertillon: New Method for Identification of Criminals by Anthropometric Descriptions. Address at International Prison Congress, Rome, 1885. Trans. by G. Muller, Joliet Prison, Illinois, 1887.

[2] To be especially studied when the collection is larger.

The demonstration of the empirical greatest height is often quite valuable as an index of degenerative and neuropathic types. The skulls of insane and criminals are found to be, as a rule, lower than normal. Hence an abnormally low skull may be considered as showing a tendency to crime or insanity. Occasionally there is excessive height in these classes. Oxycephalus may be cited as an example.

The following general statements may be made: Zuckerkandl's measurements of 127 insane skulls demonstrated atypical variations in 103, or more than eighty-one per cent. Bordier found that fifty-eight per cent. of a number of skulls of murderers presented abnormalities of construction.

A skull below the normal type in volume belongs to an abnormal individual.

Under-typical measurements of the head should always lead us to entertain the suspicion of defective cerebration.

Abnormal smallness of any part of the skull permits the conclusion that the part of the brain in its neighborhood is imperfectly developed.

Excessive development of the head has a double signification. It is always pathological, but may mean abnormality of brain or successful compensation. Wormian bones are also doubly significant. They either represent a pathological process or a successful effort of nature in repair.

Hemiplegia spastica infantilis, epilepsy, and intellectual or ethic weakness often exhibit unilateral aplasia of the skull.

The skull is representative of the brain only during the years of its development, and it must be remembered that psychopathic deterioration often has its inception subsequent to the completion of the process, when no impression can be made upon its bony walls.

In conclusion, I will state that the object of this paper is to present some of the most recent thought upon the science of craniometry, to provide a simple system of measurements for adoption in institutions, to introduce new instruments and data for mathematical precision, and to furnish an incentive to our own students to carry on scientific researches in this direction.

34 East Twenty-first Street.

Furrows in the Finger-nails.—Dr. J. W. Bovee, of Washington, D. C., writes: "I have been considerably interested in the condition mentioned in a recent number of The Medical Record as Furrows on the Finger-nails. I do not think they have received attention, except casual mention by a few dermatologists. I have seen this condition many times after an attack of some acute disease. In a case of diphtheria that was quite severe, the transverse grooves were very distinct on both finger-nails and toe-nails, and in a case of acute articular rheumatism the transverse grooves continued to be formed for nearly a year subsequent to recovery from the attack of rheumatism. This appearance of the finger-nails I have noticed in twenty different children, shortly after recovery from rotheln, and in a few of these, probably about five, I noticed the grooves in the toe-nails, and was assured by the parents that in that location also the grooves appeared only after the child was well. In the spring of 1885, I had a severe attack of intermittent fever, closely followed by German measles, and I had a good opportunity of watching the progress of these grooves from the matrices to the free ends of my finger-nails. Again, after quite a severe attack of sciatica, last January, I noticed these transverse furrows in my finger-nails, some of which still linger near the free extremities."

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[1] Meyer, L.: Arch. f. Psychiatrie, I., S. 96.

PUERPERAL SEPSIS.[1]

By D. O. THOMAS, M.D.,
MINNEAPOLIS, MINN.

Puerperal sepsis is a term which presents a clinical picture of variegated aspects, supposed by some physicians to be simple and intelligible enough to them without even their glasses, but regarded by others as complex and incomprehensible even with the aid of a microscope. Sepsis is a word used in connection with accurate or scientific medicine; yet it is not always that we are sure what is meant when we hear it employed, for the range of its meaning is so wide that it is often applied to the result of "absorption," "contagion," and "infection."

As practitioners, we are not expected to be special expounders of the various and unsettled theories of septicæmia. We are more immediately concerned with the practical in medicine; and I have selected this subject mainly with the intention of presenting one suggestion with reference to its treatment. But preliminary to this, we must consider the nature of puerperal sepsis. He is a mere empiric who is satisfied to treat only the symptoms of disease. Rational therapeutics demand that we should be equally interested in the cause and nature, the origin and development, of disease; so that we can intelligently treat the patient and prevent a disorder becoming a disease. It is also our duty to study the methods of nature in ridding the human system, when once infected, of sepsis and its effects. The physician of the past was guided mainly by symptoms, but the day is not far distant when diseases will be classified no longer by symptoms, but by causes.

It had been known for ages that puerperal fever was an infectious disease, and that fact had been sadly demonstrated by fearful epidemics in hospitals, and also in private practice; but the cause of the outbreaks was only conjectured. Within the memory of the present generation, Meigs said: "What the real principle of this epidemy is, I believe there is no man that can say." Long before bacteria were discovered, it was known that cadaveric poison and the infection of zymotic diseases produced sepsis; and the wounds inflicted by the claws of carnivorous beasts, and the scratches from the beaks and talons of carnivorous birds, had been observed to result in blood-poisoning. But how much more intelligibly do we comprehend septic infection in the light of bacteriology! Though it is not perhaps universally conceded that puerperal fever is caused by microbes, and though no typical disease has been produced by the inoculation of the lower animals with the microbes found in puerperal sepsis, yet enough has been demonstrated to establish the bacterial origin of all infectious diseases, and I therefore venture to consider puerperal fever from this standpoint. This position, I am aware, is not without its difficulties, but this is partly due to our ignorance of chemical and biological laws as applied to protozoic organisms. We are not able to detect all the subtle changes which take place in the blood from health to disease. Our knowledge of physiological chemistry is not able to tell us always when the blood is normal, nor what alkaloids are developed by overcrowding in hospitals. We are not able to say what is the normal habitat and nature of the microbes; neither can we explain the susceptibility to, or immunity of, one race or person from infectious diseases. For example, the white man is susceptible to yellow fever, while the negro is almost entirely exempt; while in epidemic cholera and small-pox the negro is more seriously affected than the Caucasian. Again, the negro has almost absolute immunity from syphilis, while he is far more susceptible to tuberculosis. Neither are we able, on bacterial grounds, to account for all personal idiosyncrasies, and some hereditary tendencies.

The study of bacteriology is, as yet, in its infancy, and the conclusions arrived at are few, and mostly incomplete; yet the proof, direct and indirect, is sufficiently convincing of the bacterial origin of such diseases as anthrax, tuberculosis, leprosy, and syphilis. Dr. Joseph Coats thinks the proof sufficient that all infectious diseases are due to specific micro-organisms. He admits, however, that this is not certain of all infective diseases, and alludes especially "to the spreading character of many skin diseases," discussed recently by Jonathan Hutchinson, and states that he is "far from assuming that in all those cases micro-organisms are concerned." But it has been proved beyond the possibility of a doubt that anthrax and tuberculosis are caused by micro-organisms; for inoculations of the respective germs from gelatine cultures have produced the typical disease, with all its characteristic pathological lesions, in the lower animals. About the same thing may be said of erysipelas. It is true that a specific puerperal fever by inoculation has not been so produced in the lower animals, but this is of very little significance, since those animals may have as much immunity from the microbes as the negro has from yellow fever. Some animals are more susceptible to certain diseases than others; for inoculations of lupus produce symptoms of general tuberculosis in the guinea-pig, while they produce only an ulcer or cold abscess in the rabbit.

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[1] Read at a meeting of the Medical Society held April 16, 1888.

What, then, is the indirect proof that bacteria are factors in the production of puerperal fever? In the first place, it has been observed that when the lochia of a healthy puerpera are examined the microscope discovers no microbes, or only a few; but, on the other hand, before and after the invasion of puerperal infection the lochia literally swarm with them, and each drop of vaginal secretion becomes a nest of microbes. Pasteur has been able to discover in the blood, before death, the same micro-organisms which apparently cause the disease, and which the post-mortem examination finds in all the pathological lesions: in the exudations of the pleuræ and peritoneum, in the pus of the lymphatics and blood-vessels, and in the metastatic abscesses of the mammæ and deep cellular tissues. Still further, "Pasteur, in the services of Harvieux and Championnière, has been able, by the simple microscopic examinations of the lochia, to predict the appearance of affections before the clinicians even suspected them." The groupings or arrangements of the micro-organisms in gelatine cultures are similar to those found in post-mortem lesions, demonstrating, like the "handwriting on the wall," the cause of the disease. It must be admitted that to workers in bacteriology we are indebted for all recently gained knowledge in the pathology of puerperal fever, and it is to them that we must look for a differentiation of the disease.

The term puerperal fever is too extensive for accuracy, for various diseases may attend the puerpera during puerperium. It is doubtful if there is a specific puerperal fever peculiar only to the puerperal period; but such diseases as small-pox, measles, scarlet fever, erysipelas, and diphtheria attending the puerperal stage are frequently accompanied with septicæmia, and consequently called puerperal fever. It is possible, of course, for a woman to take any of these during confinement, and though they generally produce fatal puerperal sepsis, they may occasionally run their course without the sign of septicæmia. To give a perfect classification of puerperal fever at present is perhaps impossible, because the disease is frequently complex, arising from mixed infection. The disease may originate in three ways: 1. By absorption of the secretions. 2. By contagion. 3. By infection from zymotic diseases.

1. *By absorption.*—The question has been frequently discussed whether puerperal fever is both auto-genetic and hetero-genetic; or, in other words, whether it arises *de novo* without contagion. It is argued that, as microbes are essential to produce sepsis or decomposition, without their presence disease is impossible, and that therefore puerperal fever cannot be auto-genetic. But it must be admitted that arrest of secretion and excretion are frequently factors in the production of puerperal fever. The patient takes cold, or has a chill; instantly the secretions fail, the temperature rises, the suppressed lochia are absorbed, and the condition goes from bad to worse. If the disease is not auto-genetic, why should the statistics show that, owing to exposure to cold, puerperal fever is more prevalent in winter than in summer? The condition of the puerpera, physically, is inviting to disease; for, before delivery all the organs are hypertrophied, and are strained to the utmost to maintain the equilibrium, and supply the demand of mother and fœtus. But, after delivery all the organs become atrophied and the emunctories of the body are severely taxed to carry away the waste material, so that when secretion and excretion are impeded or fail, the *débris* rapidly accumulate and systemic disturbance prevails. This much is evident; but it must be observed further that a puerperal woman is a wounded woman. Cruveilhier very properly pointed out the exact analogy between the uterine wound and a stump after amputation, with the added and still greater danger from more or less inevitable wounds and abrasions of the cervix and vagina. It is quite possible, then, for these to become avenues of infection by means of contagion from without or absorption from within. It is well known that the lochia of even a healthy puerpera, injected into the lower animals, causes profound systemic disturbance. Even lymph so injected is dangerous, causing fever and resulting in toxæmia similar to that of many poisonous vegetable alkaloids. When a puerpera is so affected by absorption of the lochia, no germs are seen in the blood, except possibly late in the course of the disease, and then very few. The disease may run its course with lightning-like rapidity, and the patient may be dead in thirty-six or forty-eight hours; but the post-mortem furnishes no pathological lesions save slight congestions—nothing to tell the story, or cause of death. The post-mortem appearance is somewhat similar to that of an alkaloid poison. In death from belladonna or digitalis the pathological changes are few.

After such a death, if the blood is injected into another animal it does not produce a similar condition, *i.e.*, belladonna or digitalis poisoning. In like manner the blood of a septicæmic patient, when injected, though it produces septicæmia, does not produce a specific disease unless there are bacteria in the injected blood. Simple septicæmia is analogous to traumatic or surgical fever. After operations of any importance there is more or less fever from absorption of lymph, even when the wound is treated antiseptically. In connection with puerperal infection we often speak of "absorption," but I feel that it is not always the correct word. "Absorption" is a proper term in connection with inert material. There are almost always bacteria in the vagina, and where there is possible access they need not be absorbed—they will penetrate the wound by their own energy. When a woman dies suddenly of septicæmia from absorption and no pathological changes are found, we are not able to detect the poison readily and announce the cause of death by a chemical examination, as in strychnia poisoning. However, more active researches have been carried on in the department of physiological chemistry of late years, and the action of subtle poisons is more closely observed. Bearing on this department of our subject, I may say that Dr. L. Bourget has lately isolated ptomaines from the urine of several women suffering with puerperal fever, and obtained reactions similar to those of alkaloids and ptomaines. It cannot be doubted that the toxic material in the breath, and effluvia of the air, when allowed to accumulate, frequently compromise the recovery of the puerpera. It is certain that there is morbific matter in every wound, for a wound otherwise healthy often refuses to heal for want of drainage. This is the condition at first when simple arrest of secretion takes place in the puerpera; but this condition is frequently complicated sooner or later by contagion.

2. *Contagion.*—There is a difference, at least theoretically, between simple septicæmia from absorption, and infection from contagion. In simple absorption the mor-

bific matter has no power of multiplying itself, and of increasing its virulence, but once absorbed it works directly on the circulation, producing toxæmia. In contagion the poison extends from a localized centre, and, after a period of incubation, reproduces itself with wonderful rapidity. If, for instance, the microbe of erysipelas is communicated by digital examination, it spreads from a localized centre in the parturient canal by means of the lymphatics, and it is attended by inflammation and fever. The wounds of the vagina soon assume an unhealthy appearance and become covered with a dirty yellowish deposit, and the neighboring tissues become œdematous and infiltrated. If the disease is localized in the vagina we have, first, puerperal vaginitis. It may, however, ascend and involve the endometrium, the tubes, and peritoneum; or, as is more probable, the inflammation may involve the deeper cellular tissues—the œdema impedes capillary circulation, and consequently the mucous membrane will become soft and sloughy, and the uterine wound covered with vegetations, and phlebitis and cellulitis will be followed by abscesses. The combat is between the resistance of the system and the power of the contagion, or bacteria; and the severity of the disease is generally proportionate to the territory invaded by the inflammation; but in septicæmia the severity of the attack is in accordance with the amount and virulence of the septic matter absorbed. The ingestion of putrid sausages, old bacon, and cheese is deleterious and fatal according to the amount absorbed. It appears that the system will tolerate with impunity a small amount of the most deadly poisons. The poison even of a scorpion is not fatal except in certain quantity. When a scorpion is allowed to strike fowls, the first and second die, but the third fowl generally survives the attack—demonstrating that the poison of the exhausted scorpion has no power of multiplying itself. In the case of the puerpera we have no means of determining the amount of septic matter absorbed, but we are sure (other things being considered) that the amount absorbed is in direct ratio to the gravity of the disease. It is well known that puerperal septicæmia occurs more often in primiparæ than in multiparæ, because in their case more wounds and abrasions take place in the parturient canal, rendering thus the avenues of absorption more numerous. According to our present knowledge, there is no way of predicting in what way the disease will spread, either in or from the parturient canal, because this depends on the kind of microbes involved, their law of propagation, and the resistance of the patient. When the contagion is once established it spreads rapidly by means of the blood-vessels, and especially the lymphatics; for the uterus may not improperly be compared to a vast lymphatic gland, with its mucous membrane and tissue interwoven into a plexus of lymph-vessels.

After a patient has succumbed to puerperal fever, pain and intermission and exacerbation of fever accompany the progress of the disease. The paroxysms are due probably, as in malaria, to segmentation of the microbes and the setting free of new micro-organisms, which in turn undergo a similar process of development and reproduction, until one brood after another pass by the lymphatics, through the thoracic duct, into the circulation. Finally, all the blood-clots and emboli, being invaded by microbes, become suppurated, and phlebitis fills the utero-ovarian veins with pus, and subsequently abscesses and exudations are established in remote parts of the body.

In septicæmia the germ varieties correspond to the degree and development of the disease. According to Pasteur and Doleris, two sorts of organisms preside over infection: "1, the cylindrical septic bacteria, which induce rapid septicæmia; and, 2, the micrococcus, which begins at a point and then is harmless, later forms in couples and determines suppuration, later still assumes the form of *chapelet de grain*, and causes attenuated variety of septicæmia." In this latter form the micrococcus greatly impoverishes the blood; the corpuscles are decolorized and deprived of hæmatin, and the system becomes loaded with the toxic products of the germs. Anticipating a thought on the treatment of puerperal sepsis, may I ask how does the bacterium kill the patient? Is it not possible that death from absorption and bacterial infection results in the same way, *i.e.*, that the microbe itself is not the direct cause of death, but the morbific substance and gases it generates; and that, therefore, the presence of bacteria is not necessarily fatal if the system can be made to expel their toxic product? What is the diaphoresis of hectic fever but the result of an inward struggle to expel the accumulated product of suppuration, which threatens daily to bring on toxæmia? As the fight is prolonged the patient becomes exhausted, and the system has no strength to expel the poison, which remains as an irritant. Much may be accomplished by antiseptics to avoid contagion, but antiseptic cleanliness is no absolute safeguard against infection.

3. *Infectious or zymotic diseases.*—It will not be questioned that, in spite of the most diligent antiseptic precaution, a puerpera may take scarlet fever, diphtheria, erysipelas, small-pox, measles, or typhoid. An invasion of any of these diseases may be accompanied with sepsis. Indeed, it has been found that not only the germs of these diseases but all air-living germs prepare the soil for the micrococci of suppuration, and different bacteria are frequently discovered in the same abscess. It is possible for a puerpera to have measles, scarlet fever, or any infectious disease named without septicæmia, but this is not generally the case. During the puerperal period there is so much waste product in the system that the infection of a zymotic disease serves as a match to the fuel. In cases where scarlet fever takes place, they generally occur during the first week of the puerperium, and they become rarer and less dangerous at a later period. We often have sepsis in two weeks after delivery. The patient takes cold in two or three weeks after parturition, and, expecting to get better, neglects to send for a physician, and consequently septicæmia sets in. In many cases the physician is not to be blamed, for he is not accountable for the careless exposure of the patient, nor for her, perhaps, unfortunate faulty hygienic surroundings. Septicæmia sometimes sets in, notwithstanding the greatest antiseptic precaution on the part of the physician, for all the elements of infection are not under his control.

Treatment.—I need not say in the line of treatment that the management of puerperal cases must be strictly antiseptic. Antiseptic precautions have been attended with wonderful results. There was a time when the mortality from puerperal fever in one of the Paris hospitals was about 1 in 10, but now it is only 1 in 250; and what wonder when one forceps is known to have produced fatal infection in sixteen cases successively; while, on the other hand, by means of antiseptic precaution physicians have gone from the dissecting-table to perform instrumental delivery, with favorable results. Since antiseptics reduce the mortality so wonderfully in the large and crowded hospitals, it is our duty to familiarize ourselves with the established facts of bacteriology, and especially with the principles of antiseptics. What, then, are the conditions under which septicæmia occurs? Workers in bacteriology have discovered by gelatine cultures that the following conditions are essential. Observe that each condition may be present in the case of a puerpera, rendering her that much more liable to the disease:

There must be: 1. Bacteria. 2. Proper soil, the culture-fluid in which bacteria may propagate themselves. Knowing what fine culture-fluid blood and lymph make, it is seen that there is in the puerperal secretions all that the parasites require. 3. Proper temperature. If the culture-fluid is too cold or too hot, the propagation of bacterial culture is impeded; but at the temperature of the body their incubation and segmentation is easily effected. 4. Alkalinity. Certain bacteria require an alkaline medium for propagation. In order to transfer the cholera bacillus, for instance, to the intestinal canal of a dog, the acidity of the stomach, as well as the antiseptic bile, must be overcome. The former is generally accomplished by a heavy dose of bicarbonate of potash, or some other alkali; and the latter is impeded by a dose of opium or by ligation of the bile-duct. In the case of the puerpera the usual habitat of the germ is the vagina, and it has been observed that the lochia are alkaline for a few days after delivery, rendering the condition more favorable to septicæmia. 5. Lack of oxygen. Some micrococci cannot propagate themselves when oxygen is abundant. This observation is well established by clinical experience, for pent-up rooms and overcrowded hospitals are the battlefields of septicæmia. Inasmuch as we see all the conditions requisite for septicæmia present in the puerpera, our chief concern should be to exclude bacteria.

The best prophylactic, possibly, would be for general practitioners to decline accouchement cases when there is the slightest possibility of carrying infection. It is not right for the man entrusted with human life to jeopardize a puerperal case by attending zymotic cases simultaneously. A person cannot disinfect himself, as he should, several times a day. It is true that many physicians wash their hands in a bichloride solution, brush their finger-nails, and change their clothes (a process simple enough to be repeated several times a day), and pride themselves on being antiseptically clean! But is that much only worthy of the name disinfection? There is still another source of danger—the gloves. Let us consider how it is in private practice. A physician, for instance, examines the throat of a scarlatina patient, the child possibly coughs in his face, or the saliva gets on his hand. Before he leaves he washes his hands very thoroughly, and uses the towel to his own satisfaction. Now, even if his hands were clean, is not the towel liable to infect them again? But he puts on his gloves and goes home, perhaps to wash more thoroughly and use his own towel; but he wears the same gloves again, and his next accouchement case is seized with sepsis. Our fur-lined gloves keep the hands perspiring, and are ready to give and take bacteria. It is known that septic parasites may adhere to the whole surface of the body, and may be communicated even by the breath; so a change of clothing and gloves is not a sufficient precaution, without a thorough medicated bath and fumigation or open-air exercise, to prevent infection by means of the breath. Wounds are dressed antiseptically, and the suggestion is not improper that antiseptic medicine, sooner or later, will require the physician, when waiting on infectious cases, to provide himself with a suit, gloves, and head-dress, so constructed as to render his entire person aseptic.

After confinement the patient should be placed in the most favorable condition. Ergot and quinine should be given to secure contraction and facilitate involution of the uterus, for the os uteri is always found patent in septicæmia. Everything in the way of drinks should be warm, and if the lochia are scanty, hot applications should be put to the hypogastrium. To oxygenize the blood there should be good ventilation—fresh air, but no draught. If everything is favorable, no medication is required. But, on the other hand, if the patient takes a chill, the temperature rises, the lochia are suppressed, the mammary secretion fails, the skin and mouth become dry, general symptoms of distress and pain appear, and septicæmia sets in. Now, if the case is allowed to run its course without any medication, what is nature's method of combating the septicæmia or toxæmia? Is it not to prevent further absorption, if possible, by bringing on healthy granulating cells in the wound? or, where the strength is sufficient and granulation impossible, does she not turn the wound into an abscess incapable of absorbing? Then, as to the poison already absorbed, does not nature attenuate it by rise of temperature, and attempt to expel it by forced diaphoresis? It seems to me, then, that the rational treatment of septicæmia is to anticipate nature's plan, and aid her in her method, and do at once what nature would do eventually, *i.e.*, expel the bacterial poison by judicious diaphoresis. To begin, let a full dose of antipyrin be administered, and let the diaphoresis be continued by minute doses of pilocarpus, combined with antipyrin if necessary. To aid perspiration, warm drinks and hot applications can be used; and to prevent further absorption, if the lochia are offensive, the vaginal douche can be employed, or the uterus may be examined and washed through a soft catheter, if necessary. If this is done very gently at first, the uterus generally will tolerate it without any bad effects. The danger from intra-uterine injection arises from surprising the uterus—the water being injected too suddenly at first, and the organ shocked. When injections are called for, several injections should be given in twenty-four hours, so as to thoroughly wash out the rapidly increasing poison. He who has a case of puerperal sepsis on hand needs to be up early and late, and to be most diligent in attendance, so as to superintend the case personally.

It has been customary to administer large doses of quinine with the idea of reducing temperature, but when the pyrexia is not of malarial origin the use of quinine is empirical, and frequently contra-indicated by gastric disturbance. If it is tolerated, it is well to give it as a tonic, but it does not modify the course of the disease, and better results can be obtained by free use of brandy or whiskey. Small doses are only of small value, but given freely, as advocated by Runge, alcohol, so to speak, saturates the system, sustains the strength of the patient, and by its affinity for fat penetrates the cells, checks metamorphosis of tissue, and retards bacterial activity. In advocating diaphoresis I do not wish to be understood as favoring an excessive and indefinite continuance of the method, but only for three or four days after the onset of the disease; and then it must not be pushed to the exclusion of sleep. Early in the course of the disease it is safe to give antipyrin in full doses, and encourage diaphoresis, but when the patient has been fighting with disease for a long time the heart's action becomes feeble, and stimulants will serve a better purpose than sedatives. However, if the patient takes nourishment well, and her strength is sustained, moderate diaphoresis may be kept up. To promote this, and also to improve the appetite, it is well to accompany the administration of alcohol with frequent tepid sponge-baths. I have not entered into the details of treatment, hence have said nothing of the place of opium in puerperal peritonitis, but have endeavored to emphasize one idea only, viz., the propriety of following nature's method, and instead of attempting to kill the poison in the system, aim rather to expel it by the main avenues of excretion—the skin, kidneys, and bowels. All of these we can assist. Respiration is another important avenue, but it needs no better medication than good ventilation. Briefly stated, I think that, besides local treatment of the parturient canal, the indications are: moderate diaphoresis, refreshing sleep, and good nutrition.

WEIL'S DISEASE, described by Dr. Weil in 1886, has been studied by Fiedler, who thinks it is not a form of typhoid fever, but a distinct disorder (*Deut. Archiv*, vol. xlii., p. 281). It is an acute infectious or toxic affection. The disease begins suddenly, without prodromal symptoms, but often with a chill. The constant symptoms are fever, headache, gastric disturbance, jaundice, and muscular pain, especially in the calves. The fever has a typical course, and lasts eight or ten days. Relapses have been observed. The spleen and liver are generally but not always swollen; the liver often becomes tender on pressure. Nephritis is often observed; herpes and erythema occur at times. The prognosis is generally favorable. Weil's disease is generally seen in hot weather, and men in the prime of life are the most subject to it. The cause is quite unknown, but butchers appear most liable to the disease, judging from the scanty statistics already at the disposal of the physicians who have studied Weil's disease.—*British Medical Journal.*

ESERINE AND CORNEAL ULCERS.[1]

By HERBERT HARLAN, A.M., M.D.,

SURGEON TO THE PRESBYTERIAN EYE, EAR, AND THROAT CHARITY HOSPITAL, BALTIMORE; DEMONSTRATOR OF ANATOMY IN THE UNIVERSITY OF MARYLAND.

Having been much impressed with the value of eserine in corneal ulcerations, and finding that very few druggists, even in so large a city as Baltimore, keep a supply of the drug on hand, it occurred to me that physicians were neglecting a valuable remedy, and that it would perhaps not be amiss were I to call the attention of this Society to its value as a therapeutic agent in this class of cases.

Eserine is an alkaloid obtained first by Vée and Levan, in 1865, from the now well-known calabar bean (*physostigma venenosum*). It can be had in the form of the alkaloid, the sulphate, or the salicylate. The best-known physiological effect is the marked contraction of the pupil following the instillation even of very dilute solutions into the eye. It was in 1875 that the anti-glaucomatous effect of eserine was first discovered by Professor Laqueur, of Strasburg, and its very greatest value is in this terrible disease.

That eserine has the power of lessening intra-ocular tension has been demonstrated by many observers. In ulceration of the cornea the worst symptom is the photophobia, and the greatest danger is rupture of the eyeball from intra-ocular pressure. We thus have an agent which, while it contracts the pupil, and shuts out much of the annoying light, at the same time lessens pressure and the danger of rupture, keeping the eye in the best condition for the reparative process, and the patient in the most comfortable situation possible during this time. Thus, theoretically, eserine should be a valuable agent in corneal ulceration, and I think the cases reported below bear me out in thestatement that it really is.

There is one variety of corneal ulcer to which I have found it particularly adapted, namely, that following a blow from a piece of an oyster-shell, described first, I believe, by Dr. W. J. McDowell in 1879, under the name of "oyster-shucker's corneitis." My experience, however, extending over the last seven years, differs from that of Dr. McDowell in several particulars. First, he lays especial stress on the central location of the lesion, which he refers to as a "pearly opacity of interstitial exudation, appearing always near the centre of the cornea." The etiology he considers "a specific toxic element contained in the slime and dirt which coats the oyster shell," which, getting into the eye, starts the trouble; for, says he, "no trace of traumatism can, by the closest scrutiny, be detected." My notes of cases show that the spots occur anywhere on the surface of the cornea, often there is evidence of traumatism, and I have many times removed small pieces of shell. Still, in most cases, there is no break in the smooth corneal surface. For the first few days there is merely the perfectly circular white spot, accompanied by photophobia and congestion of the scleral zone of blood-vessels. A few such cases go on to get well with simple treatment and without complications. The majority do not, and after several days the opacity is very white and looks much like a foreign body. If any attempt be made to remove it as such, it will be found to be a slough of the outer layer of corneal tissue, free at the edges, and only attached at the very bottom. A day or two later this slough comes away, leaving an ulcer with sharply cut edges of about the size of the head of a large pin. Until I began to use eserine I found these ulcers often very intractable, entailing on the patient, in most instances, several weeks of suffering.

From my note-book I subjoin hasty notes of eighteen cases. These cases were all seen at the Presbyterian Eye, Ear, and Throat Charity Hospital, and a number were seen but once. These latter are only mentioned here to substantiate the statement above, that the ulcers from injuries by oyster-shells may occur anywhere on the cornea, and, of course, contribute little to our knowledge of the effect of treatment by eserine—though the presumption is that they did well, as those of us having experience with dispensary practice know that, as a rule, these people keep coming till they no longer suffer, and are able to return to work; and again, on the other hand, as soon as this is the case, they return to work and are seen no more. Of course there are exceptions to this; but, as a rule, when we lose sight of one of these patients after one or two visits, it is because there is no longer urgent necessity for treatment.

I have made no selection of cases, and those mentioned are all of this class, which came under my care between October 5 and October 29, 1887.

Case I.—W. H. J——, aged twenty-eight, came to me, October 5th, with the history of having been struck in the left eye three days previously with a piece of oyster-shell. Examination showed the usual scleral congestion, accompanying a small corneal ulcer, which was located near the inner border of the cornea. Another physician had put some "drops" in the eye the day before, presumably atropine, as the pupil was partially dilated. Since the use of these drops patient had found the light more painful. Eserine sulphate, gr. j. to ℥ j., was ordered to be dropped into the eye three times a day.

October 6th.—Congestion less; eye less painful, and stands light better.

October 8th.—Patient says eye "eases off," *i.e.*, sometimes better and sometimes not so well. The ulcer is much better. Patient did not again return.

Case II.—C. B——, aged twenty-five, October 5th. Patient reported having been struck in the left eye two days previously by shell while shucking oysters. Had ulcer, one line in diameter, at lower border of cornea. There was much congestion and photophobia, though he said the eye was then better than it had been the previous day. Eserine sulphate, gr. j. to ℥ j., was ordered, and patient was seen no more.

Case III.—J. B——, aged eighteen, applied for treatment October 6th. He had been struck in the left eye two weeks previously with an oyster-shell. Examination hsowed a central superficial corneal ulcer, and some pus in the anterior chamber. Much pain was felt on exposure to light, and there was the usual amount of congestion. A light-pressure bandage was applied, and eserine ordered to be used three times a day.

On October 7th the light was still annoying, but the ulcer was better, and there was only a trace of pus in the chamber.

October 8th.—Eye better in every way; very little pain on exposure to light, and the pus had entirely disappeared.

Case IV.—S. S——, aged forty-seven, struck in right eye three days before with oyster-shell. Large corneal abrasion, and small, central, deep ulcer; vision dim, but very little irritation or photophobia. Eserine was ordered, and patient seen no more.

Case V.—C. S——, aged sixty-eight. This patient had been under observation for about two years. During this time she had been suffering with granular lids, and had, as usual, been treated with nearly all the astringents and a number of the caustics, with the result of keeping her in fairly comfortable condition, until about three weeks previous to the time to which these notes refer. Her corneæ had always remained clear. About September 29th the corneæ were still all right, but when next seen, October 5th, a large ulcer, crescent-shaped, about two and a half lines long by a line broad, was seen at the upper border of the right cornea. Light was very painful, and there was a good deal of muco-purulent discharge from the eye. I have no note of the treatment used on this day.

On the next, October 6th, and from that time, eserine was used once a day on the occasion of her visits to the dispensary, and a solution of borax was given, to be used four or five times a day at home.

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[1] Read before the Baltimore Academy of Medicine, May 1, 1888.

October 8th.—Eye was less painful, and there was less irritation about the ulcer.

October 10th.—Condition same.

October 19th.—Eye much better; ulcer healing, and congestion and photophobia much less.

October 24th.—Ulcer healed, and eyes in same condition as before formation of ulcer. This was a remarkably favorable termination, when the constant irritation from the granular lids is taken into consideration.

Case VI.—A. S——, male, aged thirty-three. October 8th: This patient was struck in right eye the day before with piece of oyster-shell, and on examination presented a small, corneal ulcer, one line from the upper margin of the cornea. Light painful, and movements of eyeball gave pain. Eserine sulph., gr. j. to ℥ j., was ordered.

Case VII.—A. L——, male, aged twenty-two, was struck with piece of oyster-shell on October 7th, and on the 10th, when he came for treatment had a small, deep ulcer below the centre of the left cornea. Eserine sulphate was used, along with borax solution, and on the 13th the patient expressed himself as a "great deal better." Light was no longer painful, and the congestion was much less; ulcer healing rapidly; treatment continued.

Case VIII.—J. M——, male, aged twenty-seven. October 10th: Struck in left eye two days previously with piece of bone. Examination showed a narrow cut of cornea, one line from the upper margin; much congestion; light painful. Cornea was not perforated. Eserine was ordered to be used three times a day.

On the 14th the eye was much better. Pupil was closely contracted, and there was little or no pain.

Case IX.—P. G——, male, aged sixty-five, came under observation October 10th, his left eye having been sore eight or ten days. He had a superficial ulcer of upper and outer margin of cornea. There was not very much congestion. Eserine sulphate, gr. j. to ℥ j., was ordered to be used three times a day.

October 13th.—Light was still painful, and there was no change in size of ulcer, which had rather more the appearance of an abrasion. The pupil was closely contracted. Atropia was now used once, and pupil dilating under it, the eserine was continued at home.

October 15th.—Eye no better. Eserine was discontinued, and atropia was used at hospital and borax at home.

October 17th.—Eye in same condition. Pupil not dilated, and atropia was ordered to be used three times a day.

On the 18th the eye was more congested, and the corneal abrasion a little larger. Yellow oxide of mercury ointment was ordered, and the patient was seen no more till the 24th, when he came with the statement that he had been under the care of another oculist, and was using "drops" ordered by him. There was no change in the condition of the eye. Calomel powder was now dusted into the eye, and the "drops," which were found to be atropia, continued at home.

On October 27th the eye was no better, and I returned to the use of eserine, and from this time the patient was lost sight of. This is the only case of the series where eserine did not prove of positive benefit.

Case X.—M. H——, colored, male, aged thirty-two. October 12th: Patient was struck in right eye two days before by piece of oyster-shell; eye painful since the injury; much ciliary congestion; small spot of infiltration near the border of cornea. Eserine, gr. j. to ℥ j., was used, and on October 14th there was only small opacity left. No pain or redness, and patient was dismissed as cured.

Case XI.—D. M——, male, aged fifty-six, came for treatment October 14th. He reported that the right eye had been sore about five days, and was very painful, especially in the morning. He had an ulcer one line in diameter below the centre of the right cornea. The light was not painful except in the morning. Eserine was used at this visit, and patient was given borax drops to use at home, and he did not report for further treatment.

Case XII.—J. B——, male, aged thirty-six, was struck with oyster-shell four days before applying for treatment. He had an ulcer at outer margin of cornea, but not much congestion or photophobia. He said that the eye had been worse a few days before than at the time of his visit. He was ordered eserine sulphate, gr. j. to ℥ j., to be used three times a day, and did not again report.

Case XIII.—William T——, aged forty-three. Four days previous to applying for treatment, was struck in right eye with oyster-shell. He had central corneal ulcer, much congestion, and previous night the light was very painful. There was some pus in the anterior chamber. Eserine was ordered to be used every three hours.

Case XIV.—Noah B——, aged twenty-six, was struck by piece of shell in left eye, one week previous to date of his visit on October 16th. He had an ulcer in centre of cornea, one line in diameter; much congestion, but very little pain. Eserine, t.i.d.

October 17th.—He expressed himself as a "heap better;" pupil closely contracted, and still a good deal of congestion.

On the 18th he reported that the eye had been painful that morning. There was more congestion than on the previous day; pupil contracted, and ulcer plainly healing. I then used a single drop of atropia solution, and after a few minutes, under partial dilatation, the eye became painful.

Case XV.—Mr. McM——, thirty-five years of age, seen first time October 17th. His left eye had been sore ten days, and examination showed several superficial corneal ulcers. Eserine was used at hospital, and borax solution at home.

October 18th.—Pupil not contracted. Effects of eserine having passed off, eserine was again used once, and on the 19th eye was doing well, and patient said that it was much better after I put in the drops yesterday, *i.e.*, better after application of eserine.

October 22d.—Eye doing well, ulcers nearly healed. "Sees better, but is not sure that eye is so strong."

October 24th.—Eye much better, and patient is anxious to return to work.

November 1st.—Vision, a little dim from slight opacity of cornea, very little congestion, and patient was dismissed.

Case XVI.—William F. M——, aged thirty-eight, on October 17th and 18th was seen at the hospital by one of the other surgeons, and during this time was treated with a solution of borax.

On the 19th, when I saw him, he stated that his left eye had been sore three weeks, the conjunctiva was congested, and the upper border of the cornea was vascular, and at the inner border was a narrow ulcer. The light was annoying rather than painful. Eserine was instilled, and ordered for use at home. The next day he said that the eye had pained very much after the use of the drops the previous day. Since that time it had been more comfortable. The pupil was closely contracted, and the light less annoying.

Case XVII.—Mrs. D——, aged sixty-four. When first seen, October 29th, her left eye had been sore one week. She had a narrow, deep ulcer at the upper and inner quadrant. There was much congestion. A haziness of the pupils was also observed, which the ophthalmoscope showed to be incipient cataract in both eyes. Eserine sulphate, gr. j. to ℥ j., was ordered.

October 31st.—The eye was in the same condition, but the pupil was closely contracted.

November 1st.—The eye was much better, though, on account of the contracted pupil the vision was worse. Ulcer healing rapidly.

November 2d.—Ulcer was nearly well, and I discontinued the eserine on account of the dim vision produced by the contracted pupil in the cataractous eye.

Case XVIII.—William B——, aged forty-five, got a piece of oyster-shell in the right eye, October 28th, and on the 29th came for treatment, having a small central corneal ulcer, and much congestion of the eye, with intolerance of light; otherwise, not much pain. Eserine was ordered, and the patient did not again report.

To summarize briefly: Of the eighteen cases ten were surely and positively benefited, being under observation several days. Seven were seen but once, and from this fact it is a fair presumption that most of them required no further treatment.

One case only did not seem to be benefited. This patient was under observation for seventeen days, and during this time various remedies were used without avail. On his last visit he was directed to return to the use of the eserine. His case was not from injury by oyster-shell.

Finally, in the use of eserine two cautions are to be observed: First, not to make the solutions too strong. With many patients a solution stronger than gr. j. to ℥ j. gives a great deal of pain; and, second, to be very sure that the case you are treating is not complicated by iritis.

SUPPURATIVE PERITONITIS AND PLEURITIS FOLLOWING PARTURITION; DRAINAGE AND RECOVERY.

By W. FRANKLIN CHAPPELL, M.D., M.R.C.S.,

ENGLAND.

The following case was treated by me, some years ago, in London, and is now brought forward on account of the interest attached to cases of this kind:

January 28, 1884, I attended Mrs. M——, aged twenty-three, in her second confinement, with a healthy child. The labor was natural and the patient progressed favorably until the morning of the fourth day, when she was seized with a violent chill, which lasted twenty minutes, followed by free perspiration.

Three hours later the bowels were freely relieved and she complained of slight abdominal pain and tenderness. Uterus enlarged as compared with previous day. Temperature, 102°; pulse, 120; milk decreasing; lochia normal; tongue moist.

February 2d.—Temperature, 102°; pulse, 130; tongue sore at edges. Diarrhœa set in during the night, stools frequent and copious, dirty green in color, and very offensive; lochia decreased and offensive.

Complained of severe pain in right thoracic region, increased by inspiration, and of tenderness over the abdomen. Auscultation detected a friction sound over lower part of right thorax; percussion, slight dulness; pupils dilated; pale, anxious expression, with short and frequent respiration.

February 3d.—Temperature, 103°; pulse, 130; pupils widely dilated; eyes sunken. The pinched, anxious expression and diarrhœa continued. Vomiting everything taken into the stomach. Uterus more enlarged and tender. Thoracic dulness increased. Abdomen slightly enlarged.

February 4th.—General symptoms continue the same. Small patches of crepitation over the upper part of right lung, with cough.

February 5th.—Diarrhœa ceased. Mouth and tongue covered with small curd-like masses. Complains of feeling of oppression in the chest.

February 6th.—Mouth, tongue, and fauces very red, complains of their feeling very sore and dry, and has a great desire for cold fluids.

Patient remained in about the same condition until February 10th, when the temperature went up to 104°, and she complained of chilly sensations during the day, with perspirations at night. Diarrhœa returned and lasted twelve hours.

On the 15th she had a severe rigor, followed by extreme prostration and difficulty in respiration.

During the next four days the urgent symptoms subsided; other general condition improved.

On the 20th she had another severe rigor, followed, like the previous one, by great prostration. The apex-beat at this time was three inches to the left of left nipple, and there was complete dulness over right side of thorax. Abdomen very much distended, respiration 60 per minute, cough troublesome, expectoration *nil*. Patient very much emaciated, but perfectly conscious throughout the illness. Dr. Stephen Mackenzie, of the London Hospital, and Dr. Edmund K. Howchin, now saw her in consultation with me. We decided to draw off the fluid in the pleural cavity.

After administering brandy I introduced the needle of the aspirator near the angle of the scapula between the sixth and seventh ribs, and evacuated two quarts of thick, purulent fluid. The patient then fainted and the operation was discontinued.

The following day I put a trocar into the abdomen, and drew off six quarts of pus. The patient immediately expressed herself as feeling much better, and the temperature fell in twelve hours to 101°; respiration, 30; and all urgent symptoms subsided. This favorable condition continued for a few days, then the abdomen and thorax began to refill, rigor returned, and, in fact, a general recurrence of all the previous urgent symptoms. I now decided that a free opening into both cavities was the only hope for my patient, and for that end introduced a drainage-tube into the pleural cavity at the point where the aspirator had been introduced, also one in the median line into the lower part of the abdomen.

The wounds and openings of the tubes were kept as antiseptic as possible. The patient improved immediately. The discharge from the tubes grew less each day, and on March 10th I removed the tube from the abdomen, and on the 14th the one in the pleural cavity.

On the 15th the abdominal opening was healed, and on the 17th that in the pleura. In neither cavity was the washing-out process employed.

The patient was still very weak and emaciated, and some two months was passed before she was able to resume her usual duties.

I saw her one year after this illness; she expressed herself as being perfectly well. On examination of the chest, I found the right side flattened and some loss of expansion, and a thickened pleura, otherwise, as she said, in perfect health.

I have not given the medical treatment of the case, as it would unnecessarily lengthen the description. I treated the various symptoms as they arose, and gave the usual supporting remedies and nourishments, and disinfectant vaginal injections.

22 East Forty-second Street.

Strange, if True.—A curious case is reported in the Savannah *News* of a gentleman living in Atlanta. One of his eyes is dark blue in color, and the other is a light gray. In the daytime—from sunrise to sunset—he cannot see anything out of the blue eye, but sees distinctly and well with the gray eye; and from sunset to sunrise he cannot see anything with the gray one. His hearing is similarly affected. He can hear only on the blind side; thus he can hear with one ear during the daytime, and with the other ear during the night. He never discovered this until recently.—*Sanitary Era.*

Pulmonary Hysteria.—M. Petit reported, at a meeting of the Société de Médecine Pratique of April 5th, the case of a young woman who presented all the general symptoms of pulmonary phthisis, such as hæmoptysis, cough, hectic fever, etc. The physical signs consisted simply in the presence of a few mucous râles. Later the woman presented evident hysterical symptoms, and soon after the menstrual function was restored and the symptoms pointing to pulmonary phthisis entirely disappeared.

Progress of Medical Science.

The Mode of Entrance of Micro-organisms into Wounds.—In his interesting series of lectures on "Suppuration and Septic Diseases," Dr. Watson Cheyne (*The British Medical Journal*) alludes to this important subject as follows: As regards the entrance of these organisms into wounds, they may get in, during an operation, from the air, from the instruments and hands of the operator or his assistants, from surrounding objects, or from the skin in the neighborhood of the wound. We are now, however, sufficiently acquainted with the various precautions necessary to prevent the entrance of these organisms, and it is a comparatively easy matter to leave a wound made through a previously unbroken skin without any pyogenic organisms in it. In the after-treatment of wounds there are two situations where the battle with these parasites may take place; it may either occur outside the wound, the organisms never being allowed to enter it, or it may take place inside the wound after their entrance has been permitted. It is hardly necessary to remark that in case of war we try, if possible, to carry the war into the enemy's country; at all events, we do all we can, by guarding the passes and borders, to prevent the enemy from entering our own country; and in like manner, in the case of wounds, it seems to me that it is much better to keep these pyogenic organisms out of the wound and to do battle with them outside the body, than to let them enter and trust to the efficacy of the tissues to repel their attacks. For, once they have entered the wound, it is but little that we can do to aid the action of the body, and what little we do do has to be done with extreme cautions, for not uncommonly our efforts, instead of being of service, do a great deal of harm. As I have said, it is comparatively easy now to keep these pyogenic organisms out of a wound while it is being made, and to leave the wounds without any of these microbes in it; the problem is to prevent their entrance afterward. In this case, however, we have at any rate succeeded in transferring the field of battle from the interior of the wound to the surface of the body, and we have no longer to trust to the imperfect and but little understood action of the tissues; we can step in with vigorous action without any fear of doing harm. For it cannot be too much insisted on that antiseptic dressings are not, in their essence, applications to wounds; they are applications to the discharge which has come from the wound and to the skin around it. As to the mode of entrance of these pyogenic organisms after the operation, they may get in while the dressing is being changed, either by falling in from the air, though this must be of rare occurrence seeing that they are so rarely present in the air, or by contamination by the surgeon's hands, instruments, etc.; but this is also very easily avoided, and ought not to occur. Usually they spread in either through the dressing or beneath it during the interval between the change of dressings. In my opinion they most commonly spread in by growing in the discharge which is lying between the dressing and the skin, and in the superficial layers of the epidermis, more especially in the latter; for, as the result of the irritation of the antiseptic employed, there is hypertrophy of the epithelium, and thus a large number of dead epithelial cells are present, which, being soaked with the discharge, form a good nidus for the development of the bacteria, unless, indeed, enough of the antiseptic has been communicated to the discharge and the epithelium from the dressing to render it an unsuitable soil for the growth of organisms. If this is not the case, the organisms will go on growing in the substance of this dead epithelium, protected by the superficial layers from the action of the dressing, and thus they may, if a dressing is left on for too long a time, ultimately reach the wound. This is not a mere theoretical speculation, for I have been able to trace the development of the organisms beneath the dressings, from their margin toward the wound, the extent to which they spread varying with the length of time that the dressing has been applied. If these views as to the mode of entrance of bacteria into wounds are correct, it follows that it is very important when a dressing is changed to wash and thoroughly disinfect the skin around the wound as far as the dressing extended, and beyond it, with an antiseptic lotion, care being of course taken by covering up the wound not to infect it while so doing. If this is done, then at each change of dressing the field of battle is transferred from the neighborhood of the wound to the margin of the dressing, and in accordance with the size of the dressing this battlefield will be at a greater or less distance from the wound. We have now at our command a large number of antiseptics which more or less answer the purposes required, and it is only by careful attention to the exclusion of these organisms that we can obtain the best results. That we can completely exclude these bacteria from wounds—both at the operation and afterward—I have been able to ascertain by numerous experiments; and that, just in proportion as we are successful in so doing, we are to a like degree freed from the occurrence of suppuration and septic diseases, and can to a like degree reckon with confidence on rapid and painless healing of wounds with the least disturbance to the patient, is a matter now of every-day observation.

Oxygen as a Heart Food.—Under the title of "Heart Foods" Dr. L. C. Winsor speaks as follows concerning the utility of oxygen: It is a fact that tissue will absorb oxygen, and give off carbonic acid without the intervention of the circulation, and so we may believe that the appropriation of oxygen is due simply to the demand of the cells, and not to any peculiar form of the oxygen, or any combination of it in the blood. The sluggish circulation of the blood in organic heart disease does not supply sufficient oxygen to the body, and hence the symptoms—dyspnœa, headache, fainting spells, debility, etc.—which arise. The rational method of diet should not only include proper foods, but also an increased supply of oxygen. We can see no objection to classing oxygen as a food, and placing it pre-eminently as such. (It may be classed as a fuel food, but as a tissue food it has no equal.) It is the basis of all tissue building. An increased supply of oxygen rather than a stimulated circulation, a saturating of the blood with oxygen rather than an increased supply of poorly oxygenated blood, is the ultimatum of diet in heart diseases. The effect of this plan of diet will be to increase the supply of readily digestible tissue food, and to furnish an abundance of oxygen, the agent which of all is the most valuable for tissue building. This done, there will be but little left for drugs to accomplish. As to the administration of oxygen, it has become so well known, and the methods for administering it so improved, that it is at the command of every physician.—*The Dietetic Gazette*, April, 1888.

The Pathology of Icterus Neonatorum.—From a careful study of this subject, Dr. Liebermann has arrived at the following conclusions: 1. Icterus neonatorum is a reabsorption icterus, and therefore of hepatic origin. 2. The detention of the bile takes place in the intercellular gall-ducts and the interlobular gall-ducts, which are compressed by the distention of the arterioles and capillary blood-vessels within the liver. 3. This congestion is accomplished by an alteration of the blood circulation in the liver immediately after the birth of the child, which apparently is partially due to a complete change in the blood plasma. 4. This blood change is accompanied by a "fermentæmia." 5. The icterus is greater the weaker the new-born child is. 6. From the great number of red blood-corpuscles that are destroyed a rich store of material is prepared for the formation of bile pigment, and this material, coming under the action of the fermentæmia, produces a slowing and finally an engorgement of the hepatic blood-vessels.—*Archiv für Kinderheilkunde.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, June 23, 1888.

THE DIGESTION OF FATS.

SEVERAL years ago Dr. Dastre, of Paris, demonstrated that the presence of bile in the stomach did not disturb gastric digestion, and that it did not result in the precipitation of peptones, such as is seen in test-tube experiments. He claimed that it was a mistake to suppose, as some physicians and physiologists still do, that the entrance of bile into the stomach could produce vomiting or result in grave gastric disturbances. These facts were established by him by the artificial introduction of bile into the stomachs of dogs at various periods during the process of digestion. The method employed was either that of œsophageal introduction by the sound, or by establishing a gastric fistula. His assertions were confirmed by the elaborate researches of R. Oddi and Marcocci (of Sienna).

On July 16, 1887, Dr. Dastre exhibited before the Paris Society of Biology two dogs, in whom he had established a cholecysto-intestinal fistula. This operation had succeeded in deflecting the flow of bile from its natural direction, and allowing it to escape into the middle of the small intestine (jejunum), in place of the duodenum. In order to accomplish this result, he had removed by operation a sufficient piece of the bile duct, and then attached the gall-bladder directly to an opening made in the intestinal wall.

The establishment of fistulæ of this kind enabled him to study the problems of the digestion of fats and fatty substances, not outside of the body (as has been hitherto generally done by others), but within the living organism.

It is well known that since the investigations of Claude Bernard the digestion of fats has been attributed to the action of the pancreatic juice, rather than to that of the bile. In test-tube experiments, it is true, the pancreatic juice is capable of emulsifying and digesting this class of substances. Among living animals the rabbit furnishes an example which might be construed as a natural argument in favor of the same view; for in this animal it is found that the pancreatic duct opens into the intestine about fifteen inches lower down than the bile-duct. In the intervening space the ingested food, having left the stomach, is acted upon solely by the bile. If now some fatty matter be mixed with the food, it is easy to see (as Claude Bernard pointed out) that in this space the fats do not become emulsified, and are not digested. It appears that the fat-carrying lacteals do not assume the characteristic milky look before the pancreatic secretion has had an opportunity to act, namely, lower down in the course of the intestine.

It follows from Dr. Dastre's experiments on the dog, that this animal may furnish the opposite condition of that which has been described in the rabbit. That is to say, in the dog, after a successful operation, the bile-duct opens into the intestine much lower down than does the pancreatic duct. Consequently it so happens that, for this entire length, the fatty substances come in contact only with the pancreatic secretion.

This artificial arrangement in the dog offers the following advantages: In the first place, the field of observation is a more extended one than in other animals not submitted to operation; and, in the second place, the lacteals of the dog represent the best and most distinct type of these vessels.

In order to assure himself that dogs operated upon in the way described did not suffer from impaired digestion, he observed two animals with these fistulæ for four months, and found them to remain in perfect health.

These two animals were supplied with a copious meal, consisting of meat, fat, and milk. They were then killed during the process of most active digestion. An examination now showed, with remarkable distinctness, that the lacteals were quite transparent between the stomach and the fistula. That is to say, there had occurred no notable absorption of fat in that portion of the alimentary canal in which the pancreatic juice alone had acted. On the other hand, a few inches below the fistula, and after the intervention of the bile, the lacteals were found to be quite milky and opaque. The interpretation of these positive facts permits but a single doubt. It might be feared that the observation was made too slowly. In that case the network of lacteals first alluded to as being found empty would prove, not that no absorption had occurred, but rather that it had already terminated. Dr. Dastre believes that he has met this possible objection by assuring himself that, in these two animals, the stomach as well as the first part of the intestine still contained some of the ingested food.

It follows, therefore, that if our observations on the rabbit teach us that the bile alone, in the living animal, is impotent to effect the perfect digestion and absorption of fats, so, too, experiments on the dog demonstrate that the pancreatic juice alone is equally impotent to effect such a result. A mixture of these two secretions is quite indispensable. The bile is just as necessary as the pancreatic juice for the digestion of fatty substances.

Certain experience with regard to the total suppression of bile or the pancreatic juice, permits us to assign a more exact rôle to each of these secretions. Thus it would appear that the bile is intended more particularly to facilitate the absorption of fats in their natural state, whereas the pancreatic juice fulfils the office of splitting up compound fats into simpler bodies.

The stools of animals in which the bile is prevented from being poured out into the alimentary canal are found to contain forty or more per cent. of undigested fats (100 representing the total amount of fats ingested). In the normal condition of affairs, according to the researches of Bidder and Schmidt and Voit, scarcely one per cent. of the fats is evacuated unchanged. Analogous results are obtained in cases of complete suppression of the pancreatic secretion. That is to say, the absorption of fats is not altogether checked, but it is always considerably diminished.

The following observation will make this matter clear. A dog, having a biliary fistula, receives into his stomach a large quantity of fatty substances. Three hours later the animal is killed. An examination now shows the following condition of things: From the duodenum to about the middle of the large intestine the lacteals are turgescent with a milky fluid.

Nevertheless, this evidence of fatty absorption differs in several particulars from what is seen in the normal state during active digestion: 1. The receptaculum chyli is filled with a thickish-white substance, under the conditions above alluded to. This milky material appears to consist largely of fatty acids. 2. The lacteals appear tense, filiform in shape, and are found filled with the same whitish substance just mentioned. 3. The rare sight is seen, with remarkable distinctness, of nodosities or bulging pouches along the course of the lacteal vessels. These pouches occur at a distance from one another of about half an inch. They correspond to the valves of the chyliferous vessels. Their marked distention goes to prove with what difficulty this particular fatty substance circulates within those vessels.

These interesting observations by Dastre will go far toward elucidating a hitherto obscure chapter in human physiology. Whether the data furnished by this industrious French observer can be utilized so as to supply a basis for a more rational treatment of hepatic and pancreatic affections remains to be seen.

ALCOHOLIC AUTOMATISM.

MOST persons when intoxicated are maudlin, silly, quarrelsome, or brutal, more or less in accordance with their dominating natural instincts. They are rightly held responsible for their acts.

There are cases, however, in which small amounts of liquor send the person at once into a truly abnormal mental state. They are not drunk, but insane. They are known as cases of periodical inebriety and alcoholic automatism. The law does not yet recognize the distinction between the above classes.

An illustration, most probably of alcoholic insanity or automatism, has figured prominently in the city courts during the past week. The man has frequently been mixed up in drunken brawls, in all of which it appears that liquor, in not excessive amounts, produces rapid and extraordinary changes in his mental and moral condition.

MEDICINE AND CIVILIZATION.

A WRITER in the *Medical World* advises physicians to broaden their knowledge by studying sociology, and thinks that it is the tendency of our present civilization to lessen the average compensation of physicians, and to detract from their importance in the community. As one of the grounds for this opinion he refers to the fact that, where our civilization is most fully developed the compensation and social position of physicians are lowest, although in the same localities the standard of qualification which is applied to them is highest. The average compensation of physicians is lower in Germany than in England; lower in England than in the eastern part of the United States; lower in the Eastern States than in the Western.

This sort of reasoning, however, will hardly hold. The compensation of physicians is greater in Germany than in Russia; greater in Russia than in China; greater in China than in Timbuctoo. Physicians, on the average, are paid better, live better, and are more highly esteemed in this nineteenth century than they were in the seventeenth. The world is becoming more critical of medical service, but it pays better than ever for first-class work.

MR. DEPEW ON THE DOCTOR.

MR. CHAUNCEY M. DEPEW is not a believer in rules and maxims for guidance in life. He dropped a phrase, however, in his speech before the Syracuse Medical, College last week, which is likely to be perpetuated. Speaking of the importance to the physician of an agreeable and sympathetic manner, he said: "But when the cheerful and hopeful physician enters the room he brings in comfort and health. The sufferer knows that this man is able and skilful, that his brain and heart are full of the case, that his sympathies follow his efforts, and *the potentiality of his powders is intensified by the inspiring magnetism of his personality*."

We would say to this at once that the periphrasticity of Mr. Depew's eloquence greatly accentuates its aptness and profundity.

Mr. Depew is right about the importance of culture of mind and suavity of manner to the modern physician. He says:

"The rush and worry, the wear and tear, the rapid pace of our American life, irritate our nerves and render us peculiarly sensitive to impressions. The personality of the doctor, his disposition, his habits, and his character form a large part of his success or failure. The vain and pompous doctor who thinks so much of himself that he fails to appreciate the weakness and watchfulness of the sick, leaves behind him a sense of neglect and indifference which neutralizes his medicine. The discursive and argumentative doctor airs his opinions on politics or theology to aching bones and fevered brains until only weakness keeps the outraged victim from murder. The grossest injury to the helpless patient, absorbing with every breath the spirit of her environment, is the polluting presence of the doctor saturated with whiskey or tobacco."

With regard to the success of the doctor's life, Mr. Depew also says some wise things:

"I have no faith in mottoes, or maxims, or rule for success, and, though often asked, never have any to give. A young man who has good health and governs his conduct by a conscientious answer to the ever-present question, Would my mother approve? and gives tireless attention to his business, is certain to succeed. It is impossible for everyone to win fame or fortune, or both; but the man who earns a living, even in a very modest way, feels the inspiration of independence, and has safely passed the precipice of failure. Repinings for riches and angry envy of prosperity weaken the moral tone and mental fibre. They paralyze effort, and end in empty vaporings in the bar-room and empty larders at home. The opportunities for accumulating large fortunes rarely come to members of the liberal professions. Their compensations are in the position and influence accorded to their culture and training. With them self-support is success, and when the surplus surely comes, and with it home, larger comforts, and fair competence for declining years, they enjoy a measure of happiness and content rarely found with the use and care of great wealth."

We feel sure that Mr. Depew would have made a good and successful doctor, if he had not chosen a narrower field of usefulness in attending to the sordid details of railroad transportation.

JEFFERSON MEDICAL COLLEGE AND EDUCATIONAL PROGRESS.

It must be with some feeling of mortification that the New York physician hears again of the laggardness of his medical colleges in advancing the study of medicine. For years Harvard and the University of Pennsylvania have required a three years' course; now we learn that Jefferson Medical College has made a similar step in advance. Philadelphia's two oldest and largest colleges have thus put themselves in the van of educational progress. It is a state of affairs worthy of Philadelphia's reputation as a great medical centre.

Meanwhile, in this city efforts to carry out the same reform remain futile. Even our most richly endowed college, with a number of students so large as to strain the capacity of any single faculty successfully to teach them, fails to make the advance which the modern sentiment of the profession demands.

THE HOSPITAL AS A NUISANCE.

The question whether a hospital placed among private residences is a nuisance has recently been raised in the courts. An attempt was made last fall to establish a Babies' Hospital on Lexington Avenue, a street occupied entirely by private residences. An injunction was obtained on the ground that the proximity of the hospital to the private dwellings made it a danger and a nuisance.

Judge Beach, of the Supreme Court, granted the application for injunction, giving the following as his reasons:

"The hospital is not a nuisance *prima facie*. While not within that class, there are, nevertheless, general features inseparable from its maintenance proper for consideration, upon the contention of its being shown to be a nuisance from the way of mismanagement. In these are included noise of patients, their advent, removal, and death with its consequences. From evidence it appears that there is a reasonable probability of contagious diseases, provided for with a wise provision, although limited to cases which develop after reception. This makes an important factor. The locality was wholly devoted to private residences until the laudable undertaking selected the home for its accomplishment. To my mind, the hospital is not a reasonable use of property upon a consideration of the surrounding circumstances. The care of children in numbers brings danger to the youthful members of families living near. Then, too, this site was selected with full notice from a restrictive covenant in the deed. That, too, I think fatal to the defendant. I am inclined to think that there was an error on trial in excluding proof claimed to show a depreciating effect upon surrounding property. The court has invariably enforced such covenants, save when the character of the contiguous property was wholly changed in use from the original design. The hospital, even if not dangerous, injurious, and offensive in the same way as a tenement house, livery or other stable, still shows a similitude in the nature of the injury or offence, if not in the particular manner stated in the conveyance."

An appeal will be made from this decision.

THE NEW YORK ACADEMY OF MEDICINE AND MEDICAL SOCIETY ORGANIZATION.

At a recent meeting of the Chicago Medical Society, the retiring President, Dr. W. T. Belfield, urged that that Society imitate the plan of organization employed by the New York Academy of Medicine, viz., of having special sections organized for each subdivision of medical science.

This plan is spoken of as highly successful.

We feel disposed to caution our Chicago brethren against precipitate action in the matter. The plan adopted by the New York Academy is theoretically excellent, and has been in some respects admirably successful. We learn, however, that there is a feeling that subdivision has been carried too far, with the result of increasing excessively in this city the number of medical societies (thirty-four or five in all), and making too great demands upon the physician's time.

It is unquestionably true that the attendance at some of the Sections of the Academy has been very small, while the labors of the executive officers have been very great. The result of the experience of the past two or three years has, we venture to say, led to a decided feeling that the frequency of many of the section meetings should be lessened, and perhaps the number of the Sections be made smaller. The section method is not a failure, quite the reverse; but it needs important modifications. It would probably be more successful in cities which have not already a number of well-organized private, special, and general societies.

THE MODERN ANTIPYRETICS.

The antipyretics which have fallen into disuse after a good deal of temporary "booming" are now quite numerous. Some, while no longer employed in fevers, have found a field of usefulness elsewhere. One of the pioneer antipyretics was the tartrate of chinoline, which was synthetically made by Königs in 1880, and used as an antipyretic by Baeyer, Skraup, and others.

At about the same time Lichtheim, of Berne, showed that resorcin was an active antipyretic, resembling in many respects salicylic acid.

The first of the pure antipyretics was kairin, a substance prepared in 1882 by Drs. O. Fischer and W. Königs, and tested physiologically and clinically by Filehne. This drug, like antipyrine, was patented, and then advertised and extolled on true business principles. After considerable use it had to yield to more powerful successors.

Among them was thallin, a chinoline derivative, discovered by Dr. Skraup in 1884, and known chemically as sulphate of tetrahydropara-chinanisol. It was shown to be a very certain antipyretic, with the especial advantage, as claimed by some, of being rapidly eliminated from the system.

Antifebrine (acetanilide), discovered by Gerhardt in 1853, was found to be an active antipyretic by Professor Kussmaul in 1886.

Salol, a compound of about sixty per cent. salicylic acid and forty per cent. phenol, is a patented preparation, first recommended by Sahli in 1886, and since then industriously advertised. It has more reputation as an antirheumatic than as an antipyretic.

Antithermin, or phenyl hydrazinlevulic acid, discovered by Nicot, and acetyl-amido-phenol, are two new antipyretics of which as yet little is known.

Benzanilide is a substance much like antifebrine in its physiological and therapeutical effects. It has been tried and recommended by Cahn and Hepp.

The last candidate for antipyretic favor is phenacetine, a drug recently described in these columns. It has been used in this city with some success.

We have not made any mention of antipyrine, preferring to end our account of the antipyretics with a description of the way in which this remarkable drug has been handled by the business and medical gentlemen who put it on the market. The story is from Dr. Squibb's "Note on Antipyretics," in his *Ephemeris* of June, an article upon which we have drawn largely for the history above given of the other antipyretics.

"In the early part of 1884," says Dr. Squibb, "Dr. L. Knorr, of Erlangen, synthetically prepared an oxygenated alkaloid which he called antipyrine. This was investigated therapeutically by Professor Filehne, who reported that it was an active antipyretic. For some months nothing was published in regard to the character or composition of this substance, but when it had been patented and introduced into commerce by the color-makers above mentioned, Dr. Knorr published a paper stating that antipyrine was a derivative of a hypothetical base which he called chinizin, the systematic name being dimethyloxychinizin. Its antipyretic action was soon reported upon very favorably by many German observers of note, and it was made on a large scale and well advertised at a high price, but not so high as kairin. As it came into use the makers sought to patent it in other countries, and found no difficulty in extending the German patent to the United States. But in France there was difficulty. In the political economy of France, and to the great honor of the nation, it has long been held that the interests of suffering humanity are superior to the interests of inventors, and therefore, as a sanitary measure, patents upon medicines are not granted, and patented medicines from all sources are prohibited. The German patentees were part owners in a color-making company in France, and through this connection obtained a patent on the process for manufacturing dimethyloxychinizin as an aniline product. But as it was not used for any industrial purposes, and could not be sold as a patent medicine, the French patent could not be used; and as processes and articles patented in France but made elsewhere are absolutely prohibited, France seemed to be excluded from the use of antipyrine as well as kairin, unless it be admitted that any chemical manufacturer or pharmacist in France has the legal right to make and sell such articles when used only as medicines, without regard to the patent rights of other nations. This point is understood to be still unsettled, and every parcel of kairin and antipyrine bears on the label, 'Importation into France prohibited on account of the French Patent Laws.'"

Dr. Squibb gives a list of the antipyretic drugs which we have mentioned, with the price per ounce, and the statement as to whether or not it is patented:

Sulphate of quinine (best makers) about	$0 40
Tartrate of chinoline	70
Resorcin	30
Salicylic acid, patented	20
Kairin, patented	2 00
Antipyrine, patented	1 25
Sulphate of thallin, patented	1 75
Antifebrine, 30c. per oz., or as acetanilide	15
Salol, patented	40

News of the Week.

Dartmouth Medical College.—Dr. W. H. Parish, of Philadelphia, will deliver the lectures on obstetrics during the coming session, and Dr. Paul F. Mundé has accepted the invitation of the faculty to give the course on gynecology, the chair of which he resigned a year ago after occupying it for seven years. The late Dr. E. S. Dunster held the chair of obstetrics, and delivered the lectures on gynecology also, during the past year. His recent death has not permitted the faculty as yet to fill the vacancies, which it is expected will be done permanently next year.

The Building Fund of the New York Academy of Medicine.—Dr. Loomis, of the Building Fund Committee of the New York Academy of Medicine, announced at the meeting of the Academy, June 7th, that as a result of the distribution of a few circulars, appealing to the public for aid, nearly twelve thousand dollars had been subscribed. The members were urged to do all they might toward raising, as soon as possible, the further required amount. A portrait of Dr. Van Buren was received from Dr. Keyes, and one of Dr. Jewell, of Chicago, from the New York Neurological Society. Dr. T. Gaillard Thomas read a memorial of Dr. C. R. Agnew, being an eloquent and a warm tribute to one who had resolved in his youth to follow, as nearly as he could, the example of Jesus Christ.

Dr. Rachel L. Bodley, Dean of the Women's Medical College of Pennsylvania for twelve years, died suddenly on Friday of last week at Philadelphia. Dr. Bodley was about sixty years of age. She took a degree in Cincinnati, where she afterward was an instructor. She went to Philadelphia twenty-five years ago, and was for several years a professor in the college of which she became dean.

A Hospital for the treatment of diseases of the throat, nose, and lungs is to be built in Brooklyn.

It is Significant of the progress of American medicine, and of the greater attention which the labors of American physicians excite, that the proceedings of the American Medical Association and other national organizations now receive notice, not only in English and German, but in French periodicals. The Frenchman is the last one to pay attention to anything which occurs outside of his own country.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS holds its annual meeting at Washington, D. C., September 18, 19, and 20, 1888. The following programme is announced: The President's Annual Address, William H. Taylor, of Cincinnati. Discussion, Extrauterine Pregnancy. "The Relations of the Abdominal Surgeon to the Obstetrician and Gynecologist," by Dr. Albert Vander Veer; "Operation for an Unusual Case of Subserous Uterine Fibroid," by Dr. Hampton Eugene Hill; "Drainage in Abdominal and Pelvic Surgery," by Dr. Joseph Price; "Double Ovariotomy during Pregnancy; a Successful Case Going on to Full Term," by Dr. William Warren Potter; "The Indications for Artificial Aid in Labor," by Dr. Thomas Opie; "The Technique of Vaginal Hysterectomy," by Dr. James H. Etheridge; "The Surgical Treatment of the Perineum," by Dr. William H. Wathen; "Laparotomy in Peritonitis," by Dr. E. E. Montgomery; "Tumors of the Abdominal Wall," by Dr. Charles A. L. Reed; "Uterine Fibroids; their Diagnosis and Treatment," by Dr. Thomas J. Maxwell; "Desmoid (Fibroid) Tumors of the Abdominal Walls," by Dr. Edward J. Ill; "Ruptured Perineum," by Dr. J. Henry Carstens; "A Contribution to the Study of Pelvic Abscess," by Dr. Clinton Cushing; "The Female Perineum; its Anatomy, Physiological Function, and Methods of Restoration after Injury." This paper will be illustrated with lime-light and screen by Dr. Henry O. Marcy; "Heart Failure in the Puerperium," by Dr. Thomas Lothrop; "Treatment of Suppurative Peritonitis," by Dr. William H. Myers; "Operative Treatment in Uterine Carcinoma," by Dr. George R. Shepard; "The Reflexes Reflected; or, Some Things that Retard Progress in Gynecic Surgery," by Dr. Joseph Eastman; "Some Points in Relation to the Diagnosis of Pregnancy in the Early Months," by Dr. James P. Boyd; "Vaginal Tamponnement in the Treatment of Prolapsed Ovaries," by Dr. W. P. Manton. Mr. Lawson Tait, F.R.C.S.E., Birmingham, England, will also present a paper on "The Methods of Success in Abdominal Surgery."

THE BRITISH MEDICAL ASSOCIATION holds its fifth annual Meeting at Glasgow on August 7th, 8th, 9th, and 10th, under the presidency of Dr. John T. Banks. An address in medicine will be delivered by Thomas Clifford Allbutt, M.D., Consulting Physician, Leeds General Infirmary. An address in surgery will be delivered by Sir George H. B. Macleod, M.D., Surgeon in Ordinary to Her Majesty in Scotland. An address on his "Recent Investigations in Surgery" will be given by William Macewen, M.D., Lecturer on Clinical Surgery, Glasgow Royal Infirmary. An address in Physiology will be delivered by John Gray McKendrick, M.D., LL.D., F.R.S., Professor of Institutes of Medicine, University of Glasgow.

THE FRENCH HOSPITAL of this city is to be enlarged to double its present size.

A SUCCESSFUL OPERATION FOR PYLORIC STENOSIS.—Loreta's operation, or the digital divulsion of the pylorus for stenosis, with dilatation of the stomach, was performed, June 11th, by Dr. William T. Bull at St. Luke's Hospital. The patient, a man aged thirty-seven, had suffered for twenty months from daily vomiting, pain, acid eructations, and heartburn, and was much reduced in flesh, despite treatment by lavage of the stomach, careful diet, and internal remedies. He was made the subject of thorough investigation by testing chemically the fluids of the stomach, by Dr. F. P. Kinnicutt, and the diagnosis of stenosis from cicatricial contraction of an ulcer arrived at. The operation confirmed the diagnosis, the pyloric orifice being found so small as to admit only a bougie of a diameter of three-sixteenths of an inch. Through a wound two inches long near the pylorus the orifice was stretched gradually with bougies and the fingers till it was over two inches in diameter. No accident followed the operation, and the patient may be now (June 19th) considered out of danger. There has been neither pain nor vomiting, though for several days considerable quantities of liquid diet have been taken by the mouth. A full report of the case will be presented at the October meeting of the Practitioners' Society. This is the first successful case of this operation yet reported in this country.

FREE DOCTORS FOR THE SICK.—It is announced by the Health Department that no sick person need suffer for want of a doctor. In every police precinct there will be a physician ready at all times to minister to the sick, free of charge. By visiting the nearest station-house and presenting the case, a physician will be assigned. Medicine can be procured at any of the city dispensaries on a prescription from a physician of the summer corps.

WALDEYER VERSUS VIRCHOW ON THE NATURE OF CANCER.—Professor Virchow believes that alveolar structure is to be considered as cancer only if the nested cells are found in the mucous tissue itself, and that alveolar structure in the epithelium—that is, above the mucosa—has no malignant character. This, however, is not the opinion of Professor Waldeyer, whose researches on carcinoma are classical. Waldeyer believes that nests of epithelial cells arranged like an onion constitute cancer wherever they are found. Therefore, where Virchow only found "pachydermia laryngis" in the late Emperor of Germany's case, Waldeyer saw cancer. The event proves Waldeyer to have been right and Virchow wrong.

PROFESSOR L. M. POLITZER, of Vienna, well known for his numerous contributions to pædiatrics, died on May 23d, in the seventy-fourth year of his age.

A SECOND CASE OF TRANSPLANTATION OF THE CORNEA OF THE RABBIT to the human eye has been performed, this time in Baltimore. A full and fulsome account of the operation is given in the daily papers.

BICHLORIDE OF METHYLENE is an anæsthetic which Sir Spencer Wells has now used in over two thousand operations. He has never known it to fail, and he has never been alarmed or even made uneasy by its effects, in over two thousand cases in which he has used it.

A CURIOUS WAY TO ADVERTISE AN OBSTETRICIAN.—The following curious items appeared in the *Cincinnati Enquirer*, under the head of Births:

> "FLAMIN.—Saturday, the 9th inst., at 8.15 A.M., to the wife of D W. FLAMIN, of College Hill, a ten-pound boy. Thanks to Dr. Wallingford, of Cincinnati.
>
> "GALLION.—June 5th, to Mrs. NONA GALLION, of Liberty Street, a nine pound girl. Thanks to Dr. Wallingford."

One would suppose that Messrs. Flamin and Gallion would claim some thanks.

Society Reports.

MASSACHUSETTS MEDICAL SOCIETY.

One Hundred and Seventh Anniversary, held in Boston, Mass., Wednesday, June 13, 1888.

[Special Report for The Medical Record.]

On Tuesday, June 12th, preceding the day of the annual meeting, the Fellows of the Society visited, during the morning, the Massachusetts General and City Hospitals, where a large number of interesting operations were performed by the visiting surgeons. The Children's and Carney Hospitals were also open to the visiting Fellows.

In the afternoon the Fellows met in Huntington Hall, where the following papers were read: "Private Mental Sanitaria and the Inebriates," by Austin W. Thompson, M.D., of Northampton; "Therapeutic Nihilism," by Maurice D. Clarke, M.D., of Haverhill; "Uterine Displacements and their Influence on the General Nervous System," by Francis H. Davenport, M.D., of Boston; "The Modern Practice of Surgery," by Otis K. Newell, M.D., of Boston; "The Treatment of Hypertrophy of the Prostate with Especial Reference to Operative Measures," by Francis S. Watson, M.D., of Boston; "A Study of Phthisis and Pneumonia in Massachusetts; Statistical and Climatological," by W. Everett Smith, M.D., of Boston.

At the Institute of Technology, during both days of the meeting, there was an interesting exhibit of drugs, chemicals, pharmaceutical preparations, foods, surgical instruments and appliances, apparatus relating to hygiene, and medical books.

At the meeting of Councillors, held in the evening at 19 Boylston Place, the following officers were elected: President, David W. Cheever, Boston; Vice-President, George Jewett, Fitchburg; Treasurer, Frank W. Draper, Boston; Corresponding Secretary, Charles W. Swan, Boston; Recording Secretary, Francis W. Goss, Roxbury; Librarian, Edward H. Brigham, Boston; Orator for the next Annual Meeting, Henry P. Wolcott, Cambridge; Anniversary Chairman, James R. Chadwick, Boston.

On Wednesday, June 13th, the annual meeting was opened at 9 A.M., in Huntington Hall, Dr. Gage presiding.

The report of the Recording Secretary, Francis W. Goss, contained a list of the fellows admitted during the year, and also of those deceased. The report of the Treasurer, Dr. F. W. Draper, showed that the receipts for the year were $11,350, and the expenditures $8,789; also that the number of members in the Society was now 1,692. It was decided, in accordance with the recommendation of the Council, to amend the conditions of admission to the Society to the extent of making membership open to candidates of all schools, after passing an examination before the Board of Censors. Among communications read by President Gage was one from the State Medical Society of Georgia, asking the co-operation of the Society in an appeal to Congress to remove all import duty from medicines and surgical appliances; another from the State Medical Society of Arkansas, entering a protest against religious journals advertising proprietary medicines, and against clergymen recommending the same. A report was next read from the special committee appointed at the last annual meeting to investigate the subject of physical culture in schools. It called the attention of the Society, first, to the need of some method of physical culture, particularly for the children of large cities and towns; second, to what has already been done in some quarters toward providing this need; third, to a consideration of what seems to be practicable for schools, and particularly the public schools, to undertake for the physical training of their pupils.

The following papers were then read:

"Postural Treatment of Constipation," by Edward T. Williams, M.D., of Roxbury; "The Surgical Treatment of Malignant Growths," by Maurice H. Richardson, M.D., of Boston; "The Value of Corrosive Sublimate as a Practical Disinfectant," by William B. Hills, M.D., of Cambridge.

At one o'clock the fellows and guests, under the leadership of Dr. Swift, walked in procession to the Hotel Vendome, where, in the parlors of that establishment, which had been prettily embellished for the occasion with plants, grasses, and flowers, a reception took place and refreshments were served. The members of the Receiving Committee were His Excellency Governor Ames, Dr. Oliver Wendell Holmes, Rev. Phillips Brooks, Dr. Francis Minot, Rev. Eward E. Hale, Dr. G. C. Shattuck, Dr. B. E. Cotting, Dr. Cogswell, Alfred Hosmer, of Watertown, Dr. Henry I. Bowditch, Dr. Henry P. Bowditch, Dr. Henry W. Williams; Surgeon-General Holt, of the governor's staff; Rev. Philip Moxon, Dr. William N. Ingalls, Dr. George H. Lyman, Dr. William Cogswell, Dr. D. W. Cheever, Dr. Thomas H. Gage, of Worcester, Dr. Charles P. Porter, and Dr. B. Joy Jeffries. In addition to the above, there were among the guests Hon. G. H. Hale, Messrs. Causten Brown, William Endicott, Jr., Professor C. S. Minot, George A. Gordon, Professor G. G. Gardner, Passed Assistant Surgeon Stephenson, U. S. N.; Rev. M. G. Savage, Rev. Stopford Brooke, Medical Director R. C. Dean, of the Chelsea Naval Hospital, and many others. The entrance was in charge of Dr. Gannett, the dining-room was in charge of Dr. V. Y. Bowditch, and the parlors were in charge of Dr. Ernst. The Committee of Arrangements was made up of Drs. J. B. Swift, H. C. Ernst, W. W. Gannett, O. K. Newell, V. Y. Bowditch, and F. B. Harrington. The music was provided by Baldwin's Cadet Band and Orchestra.

OHIO STATE MEDICAL SOCIETY.

Forty-third Annual Session, held in Columbus, O., June 13, 14, *and* 15, 1888.

Dr. Samuel F. Forbes, of Toledo, President, in the Chair.

Secretary, Dr. G. A. Collamore.

(Special Report for The Medical Record.)

Mayor Bruck, of Columbus, made

THE ADDRESS OF WELCOME,

in which he said the art of curing disease was one of the most important subjects which could be brought before a community; referred to the well-known high esteem in which physicians are held by the sick, how this esteem vanishes when again well, and the labor so highly appreciated at the time is often grudgingly or not at all paid for at a later date. He thought the aims of the Society, the cultivation and the advancement of medical science and literature, and the advancement of the standard of medical education, the maintenance of union and harmony among its members, and the promotion of the character and usefulness of the profession, were truly commendable, and should attract to their body all physicians who have a proper appreciation of the honorableness and high standing of the profession. It is an old saying that the sun shines on their success, while the earth hides their blunders. But he was inclined to think that their success was as much greater than their mistakes as the sun was greater than the earth. He noticed on last Sunday morning one of their most prominent undertakers out walking with his whole family, a circumstance which had not happened before, he thought, in his whole professional experience—to be without a funeral on a Sunday morning. The alarmingly perfect state of the health of the community must be aggravating to them, but if they were there to unload an epidemic on it, he wished it given in homœopathic doses. He hoped the meeting would be of much profit to the members, and that they would bear with them pleasant recollections of their visit to Columbus. The address was heartily applauded.

REPORTS OF DELEGATES.

Reports of the Secretary, Treasurer, and various committees were made. Delegates to the American Medical Association made reports. Dr. E. S. McKee, delegate to the British Medical Association, reported that his visit to this association had been one of the most pleasant and one of the most instructive of his life. The mother association he found superior to our own in some respects, inferior in a few, and similar in many. The political doctor played quite as prominent a rôle in the British as in the American Association. Quarrels and sectional strife were as frequent and as bitter. The English doctor, as is perfectly natural for an Englishman, thinks himself superior to his Irish or Scotch brother. This shows itself in various ways; among others, in the advertisements of charitable institutions to fill vacancies in the staffs of said institutions. These advertisements read, "No Irish or Scotch need apply," or words to that effect. This the Irish and Scotch resent. This resentment took the form of a resolution at Dublin demanding that this practice on the part of English institutions be discontinued, and declaring the qualifications of the different branches of the United Kingdom to be on the same footing. This produced a bitter discussion, but, the meeting being on Irish territory, it was carried through with a cheer. The efforts of our Irish brethren, in the direction of legislation, seem to be about as persistent and as fruitless as with us. The reports of the various committees could be summed up as follows: "We have done everything possible; we have accomplished nothing." He was especially pleased with the efforts on the part of the committee to secure legal control of the habitual drunkard. The finances of the institution were in a solid condition. The Association now owns its premises on the Strand, in London, where are the permanent headquarters and the place of publication of the journal. The annual income exceeds the expenditures, and leaves a comfortable remainder each year. The membership is about 12,000, of whom about 1,200 were present. Their membership is different from ours, in that it includes the members of all of the auxiliary societies. In the sections there was quite an amount of good scientific work done. His time was spent almost exclusively in the Section on Obstetrics and Gynecology. Dr. A. V. Macan, Master of the Rotunda Lying-in Hospital at Dublin, was the President of the Section, and in a masterly address gave prominence to the practice of the obstetric art in the Rotunda. The doctor made a very good executive officer, cutting off the long-winded bore, and drawing out the man whose erudition was only measurable by his modesty. In calling for discussion he would not say, has any gentleman anything to say, but, has any gentleman anything *new* to say? Under his command very little time was lost and much work accomplished. This Section was highly favored by two papers by Dr. Apostoli, of Paris, on his method of treating fibroid tumors of the uterus and endometritis. The Section was treated to a demonstration, in the Rotunda, of Apostoli's method of applying electricity in the treatment of fibroid tumors of the uterus by that gentleman himself. In social matters the British far excel us. Their meeting was accompanied by a perfect round of social entertainments. Not only were they dined and wined, but were given suppers, luncheons, and even breakfasts, with garden-parties, soirées, receptions, balls, and sermons. There may be people starving in Ireland, but certainly not suffering for anything to drink; for he never saw as much as was put before them at Dublin. The Ohio State Medical Society can feel itself honored in the manner in which its delegate was received by the British Medical Association. His visit was made much more pleasant than had he gone there without his delegate's papers.

The election of officers resulted as follows: President, P. S. Connor, M.D., LLD., Cincinnati; First Vice-President, Dr. D. Halderman, of Columbus; Second Vice-President, Dr. B. M. Ricketts, of Cincinnati; Third Vice-President, Dr. A. H. Brundage, Xenia; Fourth Vice-President, Dr. A. M. Brown, Hillsborough; Secretary, Dr. G. A. Collamore, Toledo; Assistant Secretary, Dr. E. C. Brush, Zanesville; Treasurer and Librarian, Dr. T. W. Jones, Columbus. Various committeemen were also elected. So much time was occupied in the election of officers that, on motion of Dr. Dudley P. Allen, of Cleveland, in the future all officers, except the President, will be referred to a committee of five for nomination. The selection of a place of meeting for next year was rather difficult, on account of the number of invitations made. Put-in Bay, Columbus, Youngstown, Canton, Delaware, were presented, and their various qualifications urged by their champions. After much debate, the selection fell to Youngstown.

Socially, the Society was entertained with receptions at the residence of Dr. Starling Loving, Dr. J. W. Hamilton, Dr. W. D. Hamilton, and at the Central Ohio Lunatic Asylum, all of which were very highly enjoyed.

The President, DR. SAMUEL F. FORBES, of Toledo, made the usual address, in which he reviewed

THE HISTORY OF MEDICINE TO THE PRESENT DAY.

He gave the college faculties the usual going over. He recommended that students of medicine be compelled to pass the county examinations for school-teachers. We require this of the school-teacher, and why not of the doctor, with whom we trust our lives? He thought that the laws proposed so far had been too sweeping. They were not too radical to be right, but only for the tender feelings of the legislator. If we did not ask for so much, we would be more apt to succeed. He recommended that we endeavor to get a law passed requiring everyone practising medicine to have his diploma registered with the county recorder. We are all of us but students of older growth than those in our offices and colleges. If we give proper attention to our duties, then are we students for life. Professional fraternity, he thought, should be especially strong among physicians.

DR. R. HARVEY REED, of Mansfield, repeated the experiments performed by Professor N. Senn at the Cincinnati meeting of the American Medical Association, of

INJECTING HYDROGEN GAS INTO THE RECTUM OF A DOG, AND BURNING IT AS IT PASSED FROM A TUBE INSERTED INTO THE ŒSOPHAGUS.

The experiment was a success in every particular, and created a good deal of interest. He thus demonstrated the fact again that the ileo-cæcal valve is not impassable. He then cut in upon the ileo-cæcal valve and allowed the gas to escape from it.

DR. DUDLEY P. ALLEN, of Cleveland, read a paper upon

THE RADICAL CURE OF HERNIA,

presenting two cases upon which he had operated. The first was a child, upon whom the operation had been performed eighteen months since; the second case, a man, aged twenty-five years, with a hernia the size of a child's head, and an opening into the abdominal wall about four inches in length.

Both cases have resulted successfully, and were presented to illustrate the method of operation. This is to ligate the hernial sac as high up as possible and cut it off, then unite the pillars by interrupted sutures, leaving one end long. The wounds were dressed antiseptically for the first week, until all danger of infection of the abdominal cavity had ceased. After this the wound is allowed to granulate, and as the sutures separate they are pulled away. Though it is not claimed that this method of closing the ring is superior to that of closing it by first intention, still, the cases were presented to demonstrate the fact that cases operated upon by this method may be successful, even with an enormous abdominal cavity.

The patient with the large hernia has been a laborer in a rolling-mill for three years and has never worn a truss, and is perfectly cured.

Dr. A. W. Ridenour, of Massillon, read a paper on

THE RADICAL CURE OF HERNIA,

in which he discussed the different varieties of hernia and the manner of reduction, after which the two papers were discussed.

Dr. P. S. Connor, of Cincinnati, read a paper on malpractice suits. Having just passed through a suit, the doctor was specially qualified to speak. In the vast majority of instances, he said, malpractice suits are brought with an intention to rob—a species of blackmail. So long as rascally lawyers and scoundrelly doctors have an existence, malpractice suits would exist. There seemed to be an epidemic of them in the State at present. The doctor then read a bill which is in force in the State of New York, to protect physicians, surgeons, and dentists, and others from speculative malpractice suits. This bill requires that bond be given equal to twice the amount of the sum claimed as damages, and in case the suit be lost or dismissed, this sum be collected. With such a law as this on their statute-books they would have all they wanted. Persons would be more careful how they brought or encouraged malpractice suits. If one has been really injured, he can readily get the necessary support; if not, he will be more careful what he tries to do. The doctor then presented a resolution requesting that a special committee be appointed to present to the General Assembly of Ohio, at its next session, a bill similar to the one now on the statute-books of New York. The resolution was adopted.

CONTAGIOUSNESS OF DISEASE

was the subject of a paper by **Dr. H. J. Herrick**, of Cleveland. He did not believe much in the germ theory, especially in respect to consumption. The paper was discussed by Drs. R. Harvey Reed, of Mansfield, and J. F. Baldwin, of Columbus, both expressing themselves as disbelievers in the germ theory or contagiousness of consumption. The

THERAPY OF TUBERCULOSIS

was the subject of a paper by **Dr. J. T. Whittaker**, of Cincinnati. The doctor started with the statement that five-sevenths of mankind suffer at one time or another with tuberculosis. That many have tuberculosis in some form, and recover, is proven by post-mortems. One-seventh of the population of the globe die of one manifestation of this disease, tuberculosis pulmonum. Twelve died the day before in Cincinnati of consumption; others, of convulsions, meningitis, and other complaints really tubercular. Six years ago Koch announced his discovery, and it remains unbroken. The hope that practical results would obtain has not been realized, and pulmonary tuberculosis remains as intractable as before; yet to-day no treatment of tuberculosis is scientific which does not refer to the bacillus. Koch has made his discovery, and it is the duty of the clinicians to cure the disease on the basis of this discovery. Elevation, in its good effects, is probably due to increased lung-exercise. High altitudes require three times as much exercise as at the sea-level. Fresh-air gymnastics, as Sydenham said of horse-back riding, bears the bell. Cod-liver oil has done more for consumption than all other therapeutic remedies put together. The food of the highest force-value is alcohol. Four tablespoonfuls of cod-liver oil will only produce about one-half as much heat-force as a bottle of good wine, and four tablespoonfuls is about all that a patient can stand in a day. Alcohol, fresh air, and cod-liver oil are no new remedies in the therapy of tuberculosis. The bacillus is the smallest and the most difficult to destroy. Boiling for twenty minutes, or corrosive sublimate 1 to 1,000, is necessary to kill it. After experimenting for one year, he had come to the conclusion that no inhalation would kill the bacillus, and had entirely abandoned it. He had also tried corrosive sublimate by inhalation and parenchymatous injection, without success. He has had one year's experience with creosote, increasing it one drop per day until twenty-five or even forty drops were given a day. Guaiacol, he found, had no superiority over creosote. Aline sulphide, the essential principle of garlic, caused quicker results in his hands, but the scent of the garlic was unbearable. He has experimented with the oil of black mustard for a month past, and has had some very marked improvement in his patients, although the time is too short to allow of speaking with authority. He hoped some of his hearers would take up the subject and assist him.

Dr. Herrick, of Cleveland, said he was held up as a heretic, yesterday, and he believed he was. Dr. Whittaker holds up his hands and says he is as unable to cope with it as ever. I do not believe in the germ theory of tuberculosis. I think the bacillus is not the cause, but the result. The disease is only a disturbed nutrition. He took issue with Dr. Whittaker as to his notions of alcohol as a heat-producer in the body. Always, in tuberculosis, we find antecedent disturbance of the digestion.

Dr W. J. Scott, of Cleveland, had given the subject his very best attention, and he did not believe that healthy, well people are liable to contract tuberculosis. He thought that the bacillus had more endurance than the patient.

Dr. J. T. Whittaker, of Cincinnati, had heard with pleasure the remark of the first gentleman. It sounded as a chapter from history, a review of the pathology of Hippocrates, where we read so much of this humor which is in the blood. It comes over us like the wind from a bank of violets. Then he says, sweat it out, while another gentleman says too much sweat produces tuberculosis. Dyspepsia does occur frequently; in fact, in about one-third of the cases. Ninety per cent. of all cases show ulcer of the intestinal canal. The gentleman must ignore all cultivation-experiments. We can introduce the bacillus into the body of the healthy animal and produce tuberculosis. I think the time will come, and it is not more than a decade distant, when we will throw away the stethoscope and make our diagnosis of tuberculosis by an examination of the sputa. This is now so simplified that it can be made in fifteen minutes in the presence of the patient. This bacillus is a vegetable seed. How can an animal tissue cause a vegetable seed? It must be brought from without. This bacillus is a stumbling-block to the theory of inheritance. It is very questionable if tuberculosis is ever inherited. It must be made a crime not to disinfect the sputum. A man might as well walk about the streets firing a loaded revolver as expectorating tuberculous sputa right and left.

Dr. W. J. Scott, of Cleveland, reported four

CASES OF DIABETES MELLITUS

which he did not cure. They were cases on which he had tried the diet-method recommended by Dr. Pavy at the last International Medical Congress. He remarked that there were cases which could be cured by diet, and there were others which could not be cured by diet or by medication.

Dr. B. Merril Ricketts, of Cincinnati, read a paper on the

TREATMENT OF ACNE,

a subject which he thought neglected. He had found massage beneficial in some cases, especially the abdominal massage, which is given for constipation, and is well accompanied with Turkish baths. Fluid extract of ergot, given in half-drachm doses after each meal, is supposed to do good by contracting the superficial blood-vessels. Iron, arsenic, and strychnia are serviceable as tonics; gr. $\frac{1}{5}$ of arsenious acid given with the elixir of gentian, tr. ferri chloridi, with a few drops of hydrochloric acid after each meal, gradually increased till gr. $\frac{1}{2}$ or $\frac{3}{4}$ is taken daily, is by far the best I have given. External treatment: Apply hot water for fifteen or twenty minutes, then thoroughly remove all sebaceous matter. At the end of this time a stimulating paste, composed of ichthyol and wollin or lanolin, should be applied once or twice a day. Resorcin, with subnitrate of bismuth, zinc oxide, and mollin or lanolin, is also very good.

Dr. William T. Corlett, of Cleveland, read a paper on

DISEASES OF THE SKIN DUE TO DEFECTIVE ALIMENTATION.

He reported a number of cases and described the treatment, and deduced the following principles:

Those having an irritable skin should avoid the use of, in youth, rhubarb, the small seed fruits, apples, shell-fish, sugar, and acids sparingly, malt liquors and spirits; in old age, lean meat, eggs, beans, shell-fish, pastrics, malt liquors, and spirits. Wholesome foods may become unwholesome by improper cooking, as hot cakes, heavy puddings, etc.; by defective mastication, either by eating too rapidly, or from loss of teeth. Man is an omnivorous feeder and cannot thrive on bread alone, neither can he maintain a healthy skin on an exclusive diet of meat.

Dr. H. M. Brown, of Hillsborough, read on

PAINLESS TREATMENT OF RECTAL DISEASES.

His treatment consisted largely in the use of cocaine. He had watched with mingled wonder and curiosity the moneyed people of his community making haste to their specialist, their so-called rectal saviour, and thought to add to his exchequer by learning something of his ways. His investigations had proven quite beneficial, both to his patients and to himself.

INDIANA STATE MEDICAL SOCIETY.

Thirty-ninth Annual Session, held in Plymouth Church, Indianapolis, June 5, 6, *and* 7, 1888.

The Secretary, Dr. E. S. Elder, reported that special attention had been paid during the past year to the organization of new societies and the reorganization of old ones. There are now 74 county societies, and 1,200 contributing members; 53 auxiliary societies, with a membership of 764. There have been 19 deaths during the past year.

The Treasurer, Dr. C. B. Higgins, of Peru, reported receipts as $1,266.63; balance on hand, $270.36.

The President, Dr. S. H. Charlton, in his address, said that thirty-nine years ago this Society was organized with a membership of thirty, of whom only six are now living. These pioneers of medicine in Indiana suffered many privations, which he related; then went on to the subject of medical education. The medical student should have a preliminary education before he enters the study of medicine. Doctors ought to refuse to accept students who would not add to the dignity of the profession. There is, he said, no nobler work for the philanthropist than to look after the health of the State. This Society, after long effort, has finally secured a health board for this State. More stringent laws regarding quackery are needed. Recent discoveries with the microscope show that there has been greater activity in the medical profession during the last twenty years than ever before. He hoped that one of the triumphs of the profession would be that through their efforts the moral status of mankind would be heightened. Modern science is founded upon experience and observation, and is growing more practical every day. Within the range of history, science, and art, there is nothing which has advanced so rapidly in the last fifty years as medicine.

The banquet at the Dennison was a grand affair, over five hundred plates being laid. Governor Porter was present.

The number of members present at the meeting was about three hundred.

The Blind in Egypt.—It is stated that one person in every twenty in Cairo is blind.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE TUBERCLE BACILLUS AND ITS VALUE IN DIAGNOSIS AND PROGNOSIS—RECENT MEETING OF THE MEDICAL COUNCIL—A MODIFIED SYSTEM OF MEDICAL PUPILAGE—THE DEVELOPMENT OF ENGLISH HEALTH-RESORTS—METROPOLITAN SEWAGE—A REPRIEVE—COSMOPOLITAN MEDICINE—DR. FORDYCE BARKER IN LONDON—DISCUSSION ON INTUSSUSCEPTION AT THE CLINICAL SOCIETY—REPORT OF THE MYXŒDEMA COMMITTEE—DR. KÜHNE'S CROONIAN LECTURE ON THE CAUSATION OF VITAL MOVEMENTS—THE COLLEGE OF SURGEONS—LEGISLATION FOR HABITUAL DRUNKARDS.

London, June 2, 1888

The tubercle bacillus is not of much value in prognosis. Such, at least, is the verdict given by Dr. Percy Kidd and Mr. H. H. Taylor, in a joint paper by them read before the Medical and Chirurgical Society. Dr. Kidd said they had often found cases in which the disease was making rapid progress but the bacilli were scanty, and a chronic stationary case in which they were very abundant. As regards diagnosis they expressed a very different opinion, and it was to the value of the detection of the bacillus as an aid to diagnosis that their paper was mainly devoted. In over ninety cases in which other recognized methods of clinical investigation had failed to indicate a definite diagnosis, a positive result had been obtained by means of the sputum test. The detection of the tubercle bacilli in such cases was often extremely difficult, and repeated examinations might be needed where the bacilli were scanty. The time thus spent would, however, be well repaid when, as often happened, a positive diagnosis could be arrived at without delay, and without waiting for the progress of the case. Success depended largely on judiciously selecting the sample of sputum, on employing only the best methods of preparing and staining, and on examining with suitable appliances. The bacillus had been found useful for diagnosis in five groups of cases: (1) Those without physical signs of disease of the respiratory organs; (2) laryngeal disease of uncertain nature without definite pulmonary signs; (3) bronchitic cases, with or without emphysema; (4) in cases with signs of pleurisy; and (5) where only signs of doubtful import were present, such as (*a*) anomalous physical signs, (*b*) slight signs at the apex, and (*c*) signs confined to, or most marked at, the base.

Dr. Theodore Williams said it would be a pity if attention to the bacteriological part of the subject were to interfere with the careful examination of all previously available physical signs. He had had visits from Germans who had had bacilli found in their sputa by a pharmaceutical chemist, and whom the chemist had proposed to treat; that was a result not to be approved. He thought the examination of the sputa for bacilli was of great value in the diagnosis of laryngeal disease, and of even greater value in cases of bronchitis and emphysema, where the tubercular affection was masked by the other diseases. He thought that the examination for bacilli might also prove useful in cases of pyrexia and wasting without any pulmonary physical signs, and in senile cases where the tubercular disease was masked by bronchial catarrh. He did not agree with Dr. Kidd and Mr. Taylor that the bacillus was of little use in prognosis; the bacillus was sometimes important in cases of arrested phthisis which might come on again, and it might thus be of special importance in giving or refusing medical consent to marriage. Dr. Douglas Powell agreed with the authors of the paper that the bacillus was valuable in diagnosis, but not of much use in prognosis. In laryngeal cases it might show phthisis when the physical signs had been masked by an aneurism. He remarked that he had known physical signs to precede bacilli. Dr. J. K. Fowler bore testimony to the value of examining for bacilli in cases of spare men with bronchitis and some emphysema. Such cases were not infrequently cases of arrested phthisis.

The Medical Council have been meeting again during the past week. As usual, a large amount of time has been spent in mere routine business. In moving the adoption of the report of the Pharmacopœia Committee, Dr. Quain congratulated the council on the fact that there was a profit of twelve hundred pounds on the book. Referring to the question of the Pharmacopœia being the standard authority for the composition and preparation of the medicines therein described, he said it had been decided by a magistrate that there was no authority to make any work a standard of the strength of drugs, and it was therefore possible to sell laudanum containing only half the quantity of opium, and paregoric which did not contain any opium at all. If this were permitted fatal accidents might easily arise. Two additional examiners in surgery were appointed to the Society of Apothecaries, thereby still further confirming the status already accorded to the diploma of that body. An important discussion then took place on the report of the Education Committee. The committee seemed disposed to partially revert to the old system of pupilage. After some discussion their recommendation on this subject was adopted in the following modified form: "That in addition to the requirements at present in force with respect to hospital attendance and duties, all candidates for the final examination be required to produce evidence that they have attended, under proper supervision, for six months, the practice of a recognized public dispensary, including the visitation of patients at their own homes, or the outdoor practice of a recognized hospital, or have acted for six months as pupil to a registered practitioner, either holding such a public appointment or having such opportunities of imparting practical knowledge as shall be satisfactory to the examining bodies." The committee also recommended that all candidates be required to produce evidence of having practically studied the subject of fever. The subject of irregular practice also occupied the attention of the council. One medical man who acted as "cover" to an unqualified practitioner was let off with a caution, while a dentist had his dental diploma removed from the register.

A good deal has been done within recent years to develop the health-resorts of the United Kingdom. It has now been pretty generally recognized that in order to establish a spa on a good basis it is very desirable to obtain the hearty support of the profession. Where this has been done, as at some of the best known health-resorts, they have made rapid strides. At many places, also, a good deal has been done in the way of providing amusements of various kinds. Had all these measures been adopted years ago it cannot be doubted that many invalids would have found it more convenient to visit some of the spas of England instead of those on the Continent. These remarks occur to me apropos of the opening ceremony in connection with the new pump-room and baths at Woodhall Spa, which took place a few days since. A number of medical and other visitors were present. Dr. Burney Yeo remarked that those who desired to promote the prosperity of English spas must bring about developments in the way of amusements which few of them at present possessed. The invalid did not merely want water and baths, but means of amusement; if well amused he was half cured.

Sir Robert Rawlinson, the eminent sanitary engineer, has lately delivered himself strongly against the system of sludge precipitation for the London sewage being adopted by the Metropolitan Board of Works. The only way, he says, to deal with crude sewage is to irrigate land with it.

A Yorkshire medical man, Mr. Burke, who lately shot his daughter and was sentenced to be hung for the murder, has just been reprieved. Strong evidence has been adduced that he was not responsible for his actions, having, in fact, attempted his own life only a few months ago.

LONDON, June 2, 1888.

The increased facilities for locomotion afforded nowadays practically render the world smaller year by year. Our own profession consequently becomes more cosmopolitan and less hidebound by mere local traditions. A marked feature of the last few annual meetings of the British Medical Association has been the presence of several foreign medical men of eminence to take part in the discussions. One of these (Dr. Apostoli, who was present at the Dublin meeting of the British Medical Association) also took part in a recent meeting of the Brighton and Sussex Medico-chirurgical Society, and defended his method of electrical treatment for uterine diseases from the imputations made against it that it is dangerous. He admitted, though, that it might become so in inexperienced hands, if antiseptic precautions were not carried out, or if the rules he had laid down were not observed. Dr. Fordyce Barker, of New York, was present at the last meeting of the Clinical Society, and received a hearty welcome. He was invited by the President (Dr. Broadbent) to take part in a discussion on intussusception following the reading of a paper on the subject by Mr. R. W. Parker. Dr. Fordyce Barker said he had seen a number of these cases of acute intussusception in infants. Surgery, he remarked, did not seem to offer much chance of curing the condition. In early stages of the disease he would inject glycerine in small quantities, such as one or two drachms, with equal quantities of water, until toleration was established. He would then continue the injections until a large amount was used. Mr. Harrison Cripps concurred with Mr. Parker as to the danger of injecting water except in the early stage, and referred to a case of his own so treated which had ended fatally. He also mentioned another case in which considerable sloughing of the bowel occurred, but the child recovered. Eight months later, the child died from scarlet fever. At the autopsy the small intestine was found directly attached to the anus, the whole of the large intestine having sloughed away. The President referred to the value of gaseous injections. Mr. Parker said that, should another opportunity occur, he should remember Dr. Fordyce Barker's suggested plan of treatment. Early treatment, he thought, should consist of enemata of water, which was probably better than air, as one could easily calculate the quantity injected. Mr. Herbert Page then read a paper in which he described two fatal cases of rupture of the intestine occurring without external wound. Mr. Croft read notes of a similar case. Dr. Ward Cousins described a case of stone in which lithotomy was performed twice within two months. At the same meeting, which was the concluding one of the session, the report of the Myxœdema Committee was presented by the chairman of the committee, Dr. Ord. This, indeed, was one of the most important incidents of the meeting and preceded the other business. The conclusions (fifteen in number) arrived at by the committee, are too lengthy to quote here in full, but I may say that they confirm, on the whole, the current views on myxœdema. Its connection with destructive changes in (or removal of) the thyroid gland is fully recognized, and the committee express the opinion that the disease described under the name of "myxœdema," as seen in adults, is practically the same as that named "sporadic cretinism" when affecting children; that myxœdema is probably identical with cachexia strumipriva; and that a very close affinity exists between myxœdema and endemic cretinism. They state, in conclusion, "that while these several conditions appear, in the main, to depend on, or to be associated with, destruction or loss of the function of the thyroid gland, the ultimate cause of such destruction or loss is not at present evident."

The Royal Society's Croonian Lecture was delivered on Monday last by Dr. W. Kühne, Professor of Physiology in the University of Heidelberg. He took for his subject "The Causation of Vital Movements." He pointed out the functional as well as the morphological unity of all living matter. The cause or protoplasmic movement, he said, could only be internal, in the contractile substance itself, and could only consist of chemical processes taking place within the mass. Experimental researches showed that there was a striking agreement between the irritability of protoplasm and that of muscle. Dr. Kühne then traced the transition to the highly developed motor apparatus which distinguishes the animal kingdom from almost its lowest stages; viz., the bicellular apparatus, consisting of separate cells united together, one of these presenting the exciting nerve, the other the obedient muscle. Some specimens were exhibited, showing that the terminations of nerves in muscle are localized. Portions of muscle free from nerves were demonstrated to twitch when stimulated. The lecturer also showed experimentally that one muscle could excite another electrically.

The Central Committee of the Association of Members of the College of Surgeons have forwarded a petition to the Privy Council, praying for further consideration to their claims in connection with the charter about to be granted to the College.

The bill in reference to habitual drunkards has passed the second reading in the House of Commons, and there is therefore a chance of its becoming law this session.

ON THE REMOVAL OF OPACITIES OF THE CORNEA BY MEANS OF GALVANISM.

To the Editor of The Medical Record.

Sir: The purpose of this note is to call, or rather recall, the attention of the profession to the therapeutic value of the galvanic current in the treatment of opacities of the cornea. Some cases I have now under observation appear to show that this application of electricity has been allowed to fall into undeserved desuetude. I cannot offer yet complete results of treatment to support this claim, but the following statement may serve to show that it is worthy of some attention. In February last I began to use the galvanic current for the removal of an opacity of the cornea without knowledge that it had been so used before. The case was one of recent macula of both corneæ, visible at a distance of several feet. It has now wholly disappeared from one eye and is barely discernible in the other, from which I expect continued use of the remedy to remove all trace of blemish and defect of vision. Another case, taken up a few days later, a kidney-shaped macula about two and a half lines in length, is now represented by a thin speck-like spot which the patient and her friends no longer see. This, too, is steadily melting away. Of the seven other cases under treatment it will suffice here to say that they varied in size from that of a millet-seed to the whole circumference of the cornea, from a nebula to a dense white leucoma, and in duration from forty days to forty-eight years.

All of these cases are steadily improving, two of the most extensive maculæ being merely fragmentary remains of the original, while the corneæ elswhere are quite clear. The rate of disappearance seems to depend chiefly upon the size of the opacity, which, like a heap of snow, melts away from the periphery toward the centre, the oldest but little more slowly than the most recent.

The method I have employed is as follows: One pole of the battery in the palm of the hand, the other upon the closed eyelid, ordinary sponge-covered electrodes being used. If the eye is or becomes in the least congested or the seat of pain, the anode should be placed there; otherwise the cathode should be used as the therapeutic pole, its action being more rapid, apparently. The strength of the current should not exceed three milliampères, and with sensitive eyes a strength of two milliampères is better. The sitting should not extend beyond three minutes, unless the eye shows, after trial, unusual tolerance of the current; a five minutes' sitting sometimes irritates the organ. An application was made daily at first, but this was found to be too frequent—productive of irritation. Sittings are now held every other day without discomfort in any case.

A galvanometer and a smoothly working galvanic battery are indispensable in this treatment. I am using Barrett's milliampère-meter and chloride-of-silver battery.

Very respectfully,
C. H. H. Hall,
Passed Assistant Surgeon.

U. S. Naval Hospital, Yokohama, Japan,
May 16, 1888.

OXALATE OF CERIUM IN SEA-SICKNESS.

To the Editor of The Medical Record.

Sir: In The Medical Record for June 2d I have read with pleasure an article on the use of oxalate of cerium in sea-sickness. For the benefit of those who suffer from that malady, I wish to offer my testimony also.

The value of oxalate of cerium in sea sickness has been known to me for years. Its application to this condition suggested itself from its supposed physiological action. I had never heard of its use by any other physician until the reading of the article above mentioned. After repeated experiments on myself and others, I am satisfied that it will relieve more cases of sea-sickness than any remedy yet suggested. I have tested its efficacy both in coast and transatlantic voyages.

Last summer I crossed the ocean with a party of friends. One of the number proved perverse, and would not take the remedy I offered. As the passage was somewhat rough, she was rewarded by being confined to her state-room during nearly the entire voyage. Another member of the party, hitherto a hopeless victim of sea-sickness, who had, in crossing the ocean fourteen times, made use of every known remedy without benefit, obtained decided relief from the oxalate of cerium. Two others, not "good sailors," took it regularly, from the time of going on board until the motion of the steamer ceased to be unpleasantly suggestive, and were kept from any serious symptoms, omitting, in all the passage, but one meal on a stormy night.

The best results were obtained by fifteen-grain doses given every two hours. It can easily be taken dry, on the tongue, and I believe this mode of administration is most effective.

I am, sir, yours very truly,
M. M. Waldron, M.D.

Hampton, Va., June 6, 1888.

TEACHING THE DEAF IN THE PUBLIC SCHOOLS.

To the Editor of The Medical Record.

Sir: My attention has been called to an editorial on "Auxiliary Public Schools for Feeble-minded and Backward Children" in The Medical Record for May 26th. I read with interest that it was the writer's belief that it would be most humane and economical in the end for the State to undertake to educate the defective classes, as well as the healthy.

I am engaged in teaching children who are more or less hard of hearing, and I feel sure that class of pupils should receive more attention in the public schools. Time and money spent upon feeble-minded children may accomplish almost nothing; in contrast, hard-of-hearing children, properly educated, become very useful members of a community, thus fully repaying all efforts made in their behalf. There are many such children in New York. Dr. Samuel Sexton, in a pamphlet on the subject, expresses as his belief that there are no less than five hundred of school age, unprovided with educational facilities, and many more in the schools who could be helped by instruction at close range, or by means of some aid to hearing.

We cannot divide children into two general classes—those who hear well and those who do not hear at all. Hearing disabilities are of all degrees of deafness, ranging from slight defects to absolute incapacity. Frequently a mild form of deafness is not recognized by teachers, and it may be accompanied with defective vision; and, too often, children are unjustly pronounced dull and stupid. They are certainly in as great need of education as any others; they have too much hearing to be classed as deaf-mutes, and they are too deaf to progress in the ordinary schools. Parents who have the means to employ private teachers like myself, do so.

In what way, however, could matters be arranged so that all could be educated to advantage? By forming classes of not more than ten pupils, wholly or partially deaf, and having them instructed by specially trained teachers, the Board of Education could reach every case of deafness. Each child could receive its right to be educated at home, and parents would not have to endure the grief of placing their little ones at school at a distance.

Various day-schools for the deaf are prospering in Boston, Eric, Chicago, Cincinnati, Portland, St. Louis, and Milwaukee. There is every reason to think such schools or classes in the public schools in various parts of New York would do valuable work. The State pays $250 annually for every child in an asylum for deaf-mutes. At less than the cost of three such a teacher could be procured to instruct ten children; in this way the totally deaf and the partially deaf could be cared for at less expense than is now borne by the State in conducting deaf-mute institutions.

This is no new thought. Efforts were made in 1877 and in 1884 to persuade the Board of Education of this city to make some changes in regard to the defective in hearing. The matter was referred to the Committee on Course of Study; so far as is known, the committee has not made any report to the Board. It is hoped some steps may be taken in this matter.

Lillie E. Warren.

239 West Twenty-first Street.

THE JUICE OF THE CENTURY-PLANT IN BRIGHT'S DISEASE.

To the Editor of The Medical Record.

Sir: I desire to call the attention of the medical profession, through the columns of your journal, to the almost wonderful effects of the juice of the maguey or century-plant on all cases of albuminuria. This plant is a native of Mexico, and its juice or sap forms the principal drink of the natives of this republic. During my more than three years' residence in this country, I have never met with a case of Bright's disease among those who habitually use this product; and it is my universal treatment in all diseases of the kidneys where albumen is found in the urine.

I believe that it is being exported to the United States, and I earnestly recommend my professional brethren to avail themselves of its certain curative properties. It is not a disagreeable medicine to administer, and should be drunk with each meal.

The amount which I prescribe is a water-glassful, and it is to be taken three times daily.

I am, very truly yours,
A. W. Parsons, M.D.

City of Mexico, May 12, 1888.

[We believe that this substance has been used in this country, but not with the brilliant results claimed for it.—Ed.]

HAS A PERSON WHO IS NOT SUSCEPTIBLE TO VACCINIA IMMUNITY AGAINST SMALL-POX?

To the Editor of The Medical Record.

Sir: I would be greatly obliged to medical men who may be willing to furnish me with information concerning the following:

A. B—— has been vaccinated many times—once when an infant, again later, and several times after that, and before attaining the age of six years; again when seventeen years of age—at twenty-one, twenty-three, twenty-four, thirty-two, and thirty-four. *None of the vaccinations was successful.*

Now the question arises, is A. B—— secure against the poison of small-pox because he has not been able to have a successful vaccination, or is he entirely *unprotected*—just as one is who has never been vaccinated, and who can be successfully vaccinated?

I find a great difference of opinion on this subject among medical men, some affirming that if one cannot be successfully vaccinated they cannot contract small-pox. Others believe that unsuccessful vaccination merely demonstrates that the person is *unprotected*, and therefore liable upon exposure to contract variola vera.

Very truly yours,
W. Thornton Parker, M.D.

Newport, R. I., May 17, 1888.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from May 27 to June 16, 1888.

White, Robert H., Major and Surgeon. Will report to regimental commander, First Infantry, to accompany Headquarters Field Staff, Band, and Battalion of First Infantry to Santa Barbara, Cal., on or about June 15, 1888, to remain until about September 1, 1888. S. O. 25, Division of the Pacific, May 28, 1888.

Cowdrey, S. G., Captain and Assistant Surgeon. Ordered to accompany the troops of the Sixteenth Infantry from Fort Bliss, Tex., to Fort Douglas, U. T., as medical officer. Will return to his station upon the completion of said duty. S. O. 54, Department of Texas, May 19, 1888.

Appel, D. M., Captain and Assistant Surgeon. Upon arrival of Captain J. V. Lauderdale, Assistant Surgeon at Fort Davis, will proceed to Camp Pena Colorado, Tex., for temporary duty at that camp; and upon return of First Lieutenant H. S. T. Harris, Assistant Surgeon, to Camp Pena Colorado, Assistant Surgeon Appel will return to Fort Davis. S. O. 57, Department of Texas, May 28, 1888.

Kean, J. R., First Lieutenant and Assistant Surgeon. Will accompany Troop C, Ninth Cavalry, from Fort Robinson, Neb., to Fort DuChesne, Utah, and return with Troop B, Ninth Cavalry, to Fort Robinson. S. O. 39, Department of the Platte, May 19, 1888.

Morris, E. R., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 61, Department of Arizona, May 28, 1888.

Finley, James A., Captain and Assistant Surgeon. Granted leave of absence for six months on Surgeon's certificate of disability, with permission to leave the Division of the Missouri. S. O. 129, A. G. O., June 5, 1888.

Benham, Robert B., Captain and Assistant Surgeon. Is relieved from duty at Fort DuChesne, Utah, to take effect upon completion of the duty assigned him in Paragraph 2, S. O. 33, c. s., Department of the Platte, and will then proceed to Fort Laramie, Wyo., reporting to the commanding officer for duty at that post. S. O. 44, Department of the Platte, June 4, 1888.

Pilcher, James E., First Lieutenant and Assistant Surgeon. Detailed as member of Board of Medical Officers appointed by S. O. 108, A. G. O., May 10, 1888, to meet at United States Military Academy, West Point, N. Y., to examine candidates for admission to the Academy, etc., *vice* Major M. O'Reilly, Surgeon, relieved. S. O. 128, A. G. O., June 4, 1888.

CHERBONNIER, A. V., Captain and Medical Storekeeper. Granted leave of absence for four months, on Surgeon's certificate of disability. S. O. 133, A. G. O., June 9, 1888.

WATERS, WILLIAM E., Major and Surgeon. Granted leave of absence for twenty days, to take effect about June 15, 1888. S. O. 64, Department of Columbia, June 8, 1888.

DEWITT, CALVIN, Major and Surgeon. Granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 52, Department of Dakota, June 9, 1888.

BIRMINGHAM, HENRY P., Captain and Assistant Surgeon. Granted leave of absence for one month. S. O. 117, Division of the Atlantic, June 11. 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending June 16, 1888.

MCMURTRIE, DANIEL, Surgeon. Detached from Naval Hospital, Yokohama, Japan, and return home.

GRAVATT, C. U., Surgeon. Detached from U. S. S. Michigan, and to Hospital, Yokohama.

EDGAR, JOHN M., Passed Assistant Surgeon. Ordered to the U. S. S. Michigan.

MACKIE, B. S., Surgeon. Ordered to the U. S. S. Ossipee.

PARKER, J. B., Surgeon. Detached from U. S. S. Ossipee, and wait orders.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 16, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	3	2
Scarlet fever	158	31
Cerebro-spinal meningitis	5	4
Measles	204	18
Diphtheria	162	38
Small-pox	2	5
Yellow fever	0	0
Cholera	0	0

AMERICAN ASSOCIATION FOR THE CURE OF INEBRIATES.—The American Association for the Cure of Inebriates held its semi-annual session in Brooklyn last Wednesday. Several papers were presented. One, by Dr. T. L. Wright, of Bellefontaine, O., on "Points touching the Medical Jurisprudence of Alcoholic Inebriety," referred in large detail to the physical, mental, and moral disabilities caused by alcoholic indulgence, and asserted that these were only the advance-guard of pernicious results. Dr. C. C. Fite, of Knoxville, Tenn., offered a paper on "The Prohibition Question from a Medico-legal Standpoint," in which he predicted that long before prohibition becomes general, the vital issue—the prevention and cure of drunkenness—will be reached by society regarding habitual indulgence in alcohol as a disease, and denying the right of any individual to further a tendency, hereditary or acquired, toward the inevitable physical and mental damage which excess in drinking involves, insisting that he shall be protected—and with him those who, otherwise, might inherit the baneful effects of his excess—by treating and caring for him as for the insane, or the victims of other disease. The paper was a logical, forceful plea for the need of to-day—proper asylums where the alcoholic inebriate can have that rational, scientific treatment his case demands. Dr. J. B. Mattison, of Brooklyn, read two papers, "The Ethics of Opium Habitués," and "Antifebrin, *vice* Opium, as an Anodyne." In the former he asserted that the popular idea that all men who use opium are liars is a mistaken one. He argued that the prevalent opinion—uncharitable and untrue—of an opium habitué being merely the victim of a vicious indulgence was a leading factor in his desire to shield himself from censure, and claimed that a more rational and right appreciation of the situation—regarding such patients, with certain exceptions, as creatures of conditions beyond control—would be most helpful against the protective temptation to untruth. Besides, a more liberal and correct opinion on this score would have an important bearing on their medico-legal status and treatment. In his second paper, Dr. Mattison referred to the recent triumphs of analytical chemistry in giving the profession such valuable hypnotics as amylen hydrate and sulphonal, and, noting the far reaching value of any drug that will take the place of opium—which, while so great a blessing, is so often a bane—expressed his belief that the new anodyne, antifebrin, was the richest addition of modern times to the therapeutics of pain.

UNRIPE ORANGES IN METRORRHAGIA.—Dr. Justino Valdés Castro, of Havana, mentions in a therapeutical note published in the *Crónica Médico-Quirúrgica* that, having heard Dr. del Valle some years ago recommend the use of unripe oranges, boiled in their skins and well sweetened, in metrorrhagia when independent of organic disease, he has since that time employed this simple remedy largely in his practice, with excellent results. Indeed, he finds it more efficacious than more powerful drugs.—*Lancet*.

TO DISTINGUISH BETWEEN HUMAN AND ANIMAL BLOOD.—According to Dr. Peset y Cevera, writing in a Spanish journal, if blood be mixed with a little bile, small crystals are formed which are of different shapes in different species of animals. In man they are right-angled prisms, in the horse cubes, in pigs rhomboids, in sheep rhomboidal plates, in dogs right-angled prisms very similar to those seen in human blood, and in chickens more or less regular cubes.

A SPANISH MAGISTRATE, shocked and exasperated by repeated food adulteration, has issued a proclamation, aflame with righteous wrath, that "all wines, groceries, and provisions which, upon analysis, are proved to be injurious to health, will be confiscated forthwith and distributed to the different charitable institutions."—*Ex.*

A TEST FOR SEWER-GAS.—Dip a piece of blotting-paper in a solution of acetate of lead, 1 part; in water, 8 parts. If any sewer-air containing sulphuretted gases be present in the room, the paper will quickly turn black. As, however, sewer-air often contains no sulphur compounds, the test is by no means an infallible one.

A DOUBLE MONSTER.—It is reported in the Madagascar *Times* that a woman in Antanariva has given birth to a female infant having one trunk and one head, but four eyes, four ears, four arms, four legs, two noses, and two mouths. The monster died when two days old, having in the meantime frightened its mother into convulsions.

ON SOME CURIOUS RELATIONS OF GASTRIC ULCER.—At a late meeting of the Medical Society of London (*The British Medical Journal*), Dr. Ord read the notes of the case of an unmarried woman, who was admitted into St. Thomas' Hospital in December, 1887, with symptoms of gastric ulcer and extreme anæmia. After her admission, certain heart symptoms which were noticed on her admission underwent further development. Dr. Ord gave the grounds of his diagnosis of peri- and endocarditis. There was no pyrexia, nor any history of rheumatic fever. The coexistence of systems of gastric ulcer with those of peri- and endocarditis had already been noted by

Dr. Ord in three cases, and a remark by Dr. Buzzard elsewhere, to the effect that acute rheumatism might be the result of irritation of the medulla, had deeply impressed him. When, therefore, the coincidence of the signs of gastric ulcer with those of cardiac inflammation had been observed in at least four cases, the occurrence appeared to be worthy of serious thought. Several explanations were forthcoming: 1. Was it possible that, in an anæmic person with oversensitive pneumogastric centres, gastric irritation, well known to be capable of producing cardiac disturbance, could be capable of producing cardiac lesion? 2. Could pneumogastric irritation be the common cause of gastric ulcer and cardiac inflammation, the pneumogastric irritation being determined by excitation proceeding from the uterine organs, in a person already anæmic and prone to active reflex disturbance? 3. Was it possible that both sets of symptoms might be disorders of nutrition arising out of anæmia? Anæmia was known to have as an association optic neuritis; might both the ulcer and the cardiac inflammation be disturbances of nutrition similar to optic neuritis? Dr. Ord quoted a case at present under his care, in which the signs of gastric ulcer, of cardiac inflammation, and of optic neuritis were present in conjunction with extreme anæmia. He also quoted a case recently under his care in which myocarditis had been observed *post mortem* as one of the associations of pernicious anæmia. On the whole, Dr. Ord was inclined to regard the curious combinations of lesions noticed as disturbances of nutrition consequent on anæmia.

A CASE OF SLOW PULSE.—Dr. Czarkowski reports the case of a boy, five years of age, who had a pulse of 32 to the minute. The slow action of the heart was thought to be due to cerebral anæmia, and under treatment directed toward this condition, the pulse ascended gradually to 60, beyond which it could not be made to rise.—*Medi'sinskoye Obozreniye.*

TREATMENT OF EPILEPSY WITH THE ACTUAL CAUTERY.—At the meeting of the Société Médicale des Hôpitaux, March 23, 1888, M. Charles Féré called attention to an epileptic patient now under his care whom he had treated by applications of the actual cautery to the scalp. M. Féré has treated ten patients in his adult epileptic ward at Bicêtre. All the patients presented hemiplegia; some were affected with Jacksonian epilepsy, others with the common form. M. Féré applied the actual cautery every two or three days to the parts corresponding to the psychomotor zones of the brain, so as to prevent the possibility of suppuration. The attacks were remarkably diminished in frequency and violence in the cases thus treated.—*British Medical Journal.*

THE HEREDITARY DEGENERATIVE INFLUENCE OF ALCOHOL.—At the meeting of the Académie des Sciences, on March 5th, MM. A. Mairet and Combemale related their observations on the degenerative hereditary influence of alcohol. Twelve puppies were born of a dog submitted to chronic intoxication with alcohol, and a young, healthy bitch with no defect. Two were stillborn, three died accidentally; the seven others succumbed to various diseases—epileptic attacks, verminous enteritis, pulmonary and peritoneal tuberculosis. At the necropsy lesions, evidently arising from alcoholic degeneration, were found—thickening of the bones of the skull, premature closing of fontanelles, adhesion of the dura mater to the cranial bones, difference in weight of the cerebral hemispheres, fatty degeneration of the liver. A strong, intelligent bitch, during the last three weeks of gestation, was intoxicated with absinthe, and gave birth to six puppies, of which three were stillborn; two were well developed physically, but were not at all intelligent; the third—a bitch X—grew slowly, presenting defective intelligence and a remarkable degree of anosmia. X presenting symptoms of degeneration, more especially of the nervous system, was coupled with a strong, intelligent dog. She gave birth to three puppies, one of which had flat foot, atrophy of several of the toes, wolf's mouth; a second died of marasmus; the third was attacked with atrophy of the hind legs. From the latter case it would appear that the degenerative influence of alcohol is greater in the second than in the first generation.—*British Medical Journal.*

QUACKERY AND THE RELIGIOUS PRESS.—At the last meeting of the State Medical Society of Arkansas, the following resolutions were passed:

Resolved, That the members of the State Medical Society of Arkansas have for years observed with pain and mortification the patronage given to charlatanism in all its multifarious aspects by the religious press of our country.

Resolved further, and most specifically, That the appearance in religious papers, ostensibly published for the inculcation of truth and morality, of serious homilies on prayer and praise side by side with cures for consumption, cancer, Bright's disease, and other incurable ailments, to which an editorial endorsement is often given, as well as secret preparations under the cloak of remedies for disease, but really intended for purposes of fœticide and other immoral uses, largely tends to shake the confidence of the profession of medicine in the integrity and purpose of the managers and editors of such journals.

Resolved, further, That it has been the well-known custom of the profession to render services gratuitously to clergymen, which we do not regret nor do we propose to recall; yet we must assert that the frequent occurrence of endorsements and recommendations by the clergy of peripatetic doctors and advertising charlatans has in many instances been the only reward of our gratuitous services.

Resolved, further, That we are aware that the editors of religious newspapers admit the painful situation in which these advertisments place them, and attempt to excuse themselves by saying that it is necessary to take these advertisements in order to obtain means to conduct their papers; but, in the language of orthodox theology, we would say: "Put behind you that damnable doctrine that we must do evil that good may come."

Resolved, further, That, as a Society, we declare that the continued perpetration of the above offences by some of the clergy and religious press brings harm to the bodies of their constituency, and damages materially their influence upon the thinking class of the medical profession.

FOR WINTER ITCH.—A correspondent from Texas writes that he can cure "winter itch" in every instance by the application of a very strong solution of corrosive sublimate. The solution should be nearly strong enough to produce vesication, and should be applied with a sponge, over an area of about three inches square, two or three times a day, a new portion of the skin being moistened each time.

BLINDNESS FOLLOWING A LIGHTNING STROKE.—Dr. Shishkin has reported to the Medical Society of the Caucasus a case of a boy of eleven years who was struck by lightning. It was noticed that his sight was affected afterward, and examination revealed the presence of a traumatic cataract.

SALT IN MILK FOR CHILDREN—Dr. Jacobi says that the physiological effect of chloride of sodium is very important, no matter whether it is directly introduced through the mother's milk or vegetable diet. Both of the latter contain more potassium than sodium, and neither ought ever to be given, to the well or sick, without the addition of table salt. A portion of that which is introduced may be absorbed in solution; another part is, however, broken up into another sodium salt and hydrochloric acid. Thus it serves directly as an excitant to the secretion of the glands and facilitates digestion. Therefore during diseases in which the secretion of gastric juice is interfered with, or in the beginning of convalescence, when both the secreting faculties and the muscular power of the stomach are wanting, and the necessity of resorting to nitrogenous food is apparent, an ample supply of salt ought to be furnished. The excess of acid which may get into the intestinal canal unites with the sodium of the bile in the duodenum, and assists in producing a second combination of chloride of sodium, which again is dissolved in the intestines and absorbed. Its action in the circulation is well understood; it enhances the vital processes, mainly by accelerating tissue changes through the elimination of more urea and carbonic acid. A very important fact is also this: that the addition of chloride of sodium prevents the solid coagulation of milk by either rennet or gastric-juice. The cow's milk ought never to be given without table salt, and the latter ought to be added to a woman's milk when it behaves like cow's milk in regard to solid curdling and consequent indigestibility. Habitual constipation of children is also influenced beneficially, for two reasons: not only is the food made more digestible, but the secretions of the alimentary canal, both serous and glandular, are made more effective by its presence.—*Archives of Pediatrics.*

Hot Baths for Insomnia.—In an article on the treatment of sleeplessness Dr. Eccles (*The Practitioner*) says that in attempting to overcome the partial functional activity of the brain, which appears to exist with and account for the dream-laden unrefreshing form of sleep, one has employed wet-packing, abdominal compresses, cold bathing, elevation of the head by means of extra pillows, and the application of warmth to the extremities by means of hot bottles or bags, with very variable, and, generally speaking, little success; but a hot bath, taken immediately before the time at which one wishes the patient to settle quietly for the night, has proved most valuable in producing a dreamless sleep, although not usually of longer duration than four hours without intermission, and sometimes followed by a period of great wakefulness, relieved only by a short morning doze; still even where this somewhat uncomfortable vigil supervenes, the patient always feels more refreshed and happier the next day than after a long night of uneasy dreaming sleep. To effect the permanent restoration of refreshing sleep a method of treatment is needed which must break the chain of vicious circumstances under whose thraldom the patient has lost the power to sleep. The brain, in these cases, often found to have been overworked, must be allowed to lie fallow as far as possible; the stomach, which has generally suffered with the other organs of digestion from the most extraordinary maltreatment, must be coaxed back again to a regular performance of its duties; while the muscular system, which has become wasted and inert from long disuse, must be called upon to fulfil its digestive and excrementitious functions, so long left in abeyance. Under the combined influence of the recumbent position in a quiet room, away from the cares of domestic, social, or business life, carefully modified diet, and massage applied as a therapeutical agent, not without regard to the mode, duration, and extent of its administration, the method of treatment referred to may be carried out with the happiest result in the majority of cases.

Acute Dilatation of the Stomach.—At a recent meeting of the Leeds and West Riding Medico-Chirurgical Society Mr. Jessop communicated the following case: The patient, a lady, aged twenty-six, had, a month before, undergone excision of the hip-joint for disease of seventeen years' duration, originating in distinct traumatism, and which Mr. Jessop believed to be non-tubercular. Her general health and her family history were remarkably good. At the operation the disease was found to be limited to the head of the femur, the section being made through healthy bone, and the acetabulum intact. The wound was nearly closed, and she was rapidly improving, when one day, in the absence of the nurse, she obtained an apple, the whole of which she ate greedily. She was shortly afterward seized with severe continuous vomiting. An aperient was administered, and she was put on milk diet. On the following two days the vomiting was intermittent, and was associated with extreme thirst. On the third day it was observed that before vomiting the abdomen was tumid, and the outline of the stomach, much distended, was clearly visible. After vomiting, the abdomen became flaccid, and nothing abnormal could be made out either as regards resonance, resistance, or tumor. There was no tenderness, but the extreme thirst continued, and the patient was obviously rapidly sinking. On the fourth day, as a last resource, the abdominal cavity was explored by the usual median incision, when the stomach, duodenum, and the first six inches of the jejunum were found enormously distended, the whole of the remainder of the intestines being remarkably collapsed and small. The stomach was opened by a small incision near the pyloric end, and a finger introduced. The pylorus could not be distinguished, owing to its extreme dilatation, a condition which also affected the duodenum as far as the finger could reach. The patient died in a few hours. At the necropsy nothing more could be made out. There was no mechanical obstruetion anywhere. The intestine simply seemed to pass from a condition of extreme dilatation to one of extreme contraction at a point six inches below the duodenum.—*The British Medical Journal.*

Antipyrin in Nocturnal Emissions.—According to the Vienna correspondent of the *British Medical Journal*, Dr. Thör, of Bucharest, has given some particulars as to the effect of antipyrin in cases of nocturnal emissions. Lupulin and camphor have been abandoned in such cases. Curschmann states that the sedative effect of lupulin on the genital organs, in spite of all recommendations, was not proved. As to camphor, it has, according to his opinion, no better effect. Fürbringer (*Krankheiten der Harn- und Geschlechtsorgane*) is of the same opinion. Zeissl still recommends it, as do Purgsz and other writers. The effect of nux vomica, arsenic, and atropine is also often uncertain. Among all the remedies hitherto employed, bromide of potassium or bromide of sodium was the most useful. Diday recommends it to the exclusion of every other drug. Bromide of potassium, from two to five grammes in a glass of water, taken just before going to bed, will, according to his experience, exert a prompt effect and check the pollutions. The prolonged use of the preparations of bromide, however, as is well known, produced an acne-like eruption, and the use of the remedy had, for this reason, often to be discontinued. Dr. Thör states that he has found antipyrin an excellent substitute for the bromides. He gives it in doses of from eight to fifteen, grains to be taken by the patient a short time before going to bed. In seven cases it had proved very successful, and checked the pollutions. No disagreeable after-effects were observed. In "neuro-asthenia sexualis," in the sense of Beard, antipyrin could also be used with good results; but the dose had in these cases to be sometimes increased from fifteen to thirty grains a day.

Anecdote of Darwin's Father.—The father of the great naturalist was a physician, of whom the following story is related in his life, written by his son: "When a very young man he was called to consult with the family physician in the case of a gentleman of much distinction in Shropshire. The old doctor told the wife that the illness was of such a nature that it must end fatally. Dr. Darwin took a different view, and maintained that the gentleman would recover. He died nevertheless. An autopsy proved the young doctor quite wrong in all respects, and he acknowledged his error. Naturally, he never expected to be consulted again by this family; but a few months later the widow sent for him, having dismissed the old family doctor. Greatly surprised, he asked a friend of the widow to find out how he had come to be consulted. The widow answered the friend that she would never again see the odious old doctor who said from the first that her husband would die, while Dr. Darwin always maintained that he would recover."

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 33, No. 26 New York, June 30, 1888 **Whole No. 921**

Original Articles.

A CASE OF EXCISION OF A DISLOCATED SPLEEN, AND SUBSEQUENT EXPECTORATION OF THE LIGATURE OF THE PEDICLE.

By THEODORE A. McGRAW, M.D.,

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I RECORD the following case because I think that it is unique in medical literature.

Mrs. A. B——, of Windsor, Ontario, aged forty, came to my office in May, 1887, to consult me in regard to a tumor in the lower part and right side of the abdomen. As a child she had been healthy, and had suffered no serious illness until she was seventeen years of age, when she had a sharp attack of pneumonia. She did not, however, remember which side had been affected. She was married at the age of twenty, and had never borne any children. In 1870 she and her husband moved to Arkansas, and she there developed a malarial cachexia, and for two years suffered continually from malarial fever. During that time she had not noticed any enlargement in the region of the spleen, but had been troubled with a general bloating of the abdomen. As this was associated with complete suppression of the menses, she supposed herself to be pregnant, until, on her removal to Texas, in 1872, the bloating disappeared and the menses returned. In 1875 the couple went to London, Ontario, and obtained employment in the Insane Asylum. In 1876 she received a kick in the abdomen from an insane woman, from the effects of which she suffered a severe inflammation of the bowels, which confined her to bed for a period of three weeks. After recovering from the immediate effects of this injury she noticed a fulness in the lower part of the abdomen. She began also to suffer attacks of pain in the region of the right ovary. Her menstruation soon afterward became irregular, and a period ensued, of seven months' duration, in which the courses were altogether absent. She thought that she was pregnant and fancied that she could feel life. This belief was corroborated by the continuous growth of the abdominl swelling, which occupied from the first the right hypogastric region. This tumor was at first movable, and could be pushed across the median line to the left, and then caused *less* pain than when in its usual position. After each attack of colicky pain the tumor seemed to grow in size. At the end of seven months the menses returned, the paroxysmal attacks of pain ceased, and the tumor ceased to grow. From 1877 to 1886 she suffered but little inconvenience from the now stationary tumor. During all of this time her menses were regular. In 1886 she began again to suffer severe paroxysms of pain in the right hypogastric region, which finally cost her so much suffering as to make her determined to seek relief at any risk. When I first saw her she was somewhat anæmic and debilitated, and her skin had a slightly yellowish hue. There was a tumor of semi-solid consistency in the right hypogastric region, which filled the whole iliac fossa and extended about an inch over the median line to the left. Its upper margin was about an inch below a transverse line carried through the navel. It pressed the uterus and bladder far to the left, and filled up the right side of the true pelvis to within two inches of the outlet. It seemed attached to, and yet distinct from, the uterus, and had the feel of a tumor of semi-solid character lodged in the right broad ligament. The tumor was quite immovable, not yielding to pressure made by the surgeon, nor changing its position with that of the patient. The uterus was two and one-half inches in depth and lay far to the left. The urine was normal.

She entered St. Mary's Hospital on June 27, 1887. On June 28th I operated upon her, assisted by Drs. C. Henri Leonard, John Boice, William M. Donald, J. Henry Carstens, W. E. Clark, and Charles Davidson, all of Detroit. An exploratory incision two inches long, midway between the navel and pubes, enabled me to determine the fact that the soft pulpy tumor under my finger was not cystic, and that it was not attached to the uterus or ovary. Enlarging the incision and passing the hand down under the tumor, I found that it was nowhere adherent, and that it had been rendered immovable by the pressure of neighboring organs, as it lay wedged in between the bones of the pelvis and the other pelvic contents. As soon as it could be brought fairly into light, it was evident that the tumor was an enlarged and dislocated spleen with a very long pedicle. Turning it out on to the abdomen, I transfixed its pedicle with a needle armed with stout braided and aseptic silk, taking great care not to injure any of the immense blood-vessels which coursed to and from the tumor. The veins were especially large and numerous; some of them seemed as large as the little finger, and a previous experience in a like operation had taught me that they were thin-walled and very friable. The thread had been rendered aseptic by first boiling in a solution of bichloride of mercury, one to a thousand, and afterward boiling in clear water. They were taken out of the boiling water just before using. I tied first one-half of the transfixed pedicle, and then passing the needle back through the same opening, I tied the other half, and finally passed the ligature around the whole pedicle and tied it again. Immediately after the ligation one of the great veins became so enormously swollen that I feared it would burst. It became as large as a small hen's egg, and only collapsed when the pedicle had been cut and returned to the abdomen. It is probable that the position of the spleen on the outer abdominal wall caused some kinking in the pedicle, which prevented the free return of blood from the veins, and that the obstacle was removed by the retraction of the cut pedicle. The operation was finished by cleansing the abdomen and suturing the wound with silver wire. Every precaution had been taken to keep the abdominal cavity free from all septic taint. Immediately after its removal the spleen and its contained blood were found to weigh something over forty-six ounces. During the first week there was no rise of temperature, and the patient showed no bad symptoms excepting nausea and pain in the left shoulder.

Throughout the entire illness there was neither tympanites nor abdominal tenderness. On July 4th, however, there was discovered quite an amount of albumen in her urine. Her menses made their appearance a week too soon, on July 5th. On July 6th the sutures were removed, and the wound was found to have healed nearly, but not quite, by first intention. At two places there was a superficial suppuration. On the evening of July 10th the temperature suddenly rose to 100.5° F., and she began to complain of pain in the left side, just below the ribs. The pain in the left shoulder, which had been persistent ever since the operation, grew worse. On auscultation slight friction-sounds were heard at the base of the left lung.

For the next five days the temperature varied from 99° F. in the morning, to 100.5° in the evening. On the 15th the symptoms became suddenly aggravated, crepitant râles were heard in the base of the left lung, and the lower part of the lung evinced dulness on percussion. Patient had a dry hacking cough, without expectoration. During all this time the abdomen was quite free from pain and tenderness, except at a point just beneath the ribs on the left side, where pain could be produced by deep pressure. The symptoms gradually increased in severity. On the afternoon of the 18th her temperature rose to 102.5° F., and on July 25th reached its highest mark of 103° F. The pleuro-pneumonia involved, finally, the whole of the lower lobe, and was accompanied in its later stage with a profuse gray tenacious secretion. After July 25th the symptoms gradually subsided, but it was not until August 7th that the temperature fell to normal. She then became convalescent, and when she left the hospital, on August 13th, the lung had completely recovered, her appetite had returned, the albumen had disappeared from her urine, and only one troublesome symptom remained, and that was a persistent pain in front of the left shoulder, just above and outside of the coracoid process. On leaving the hospital the patient went to her home in Windsor, whence she came at intervals of three or four weeks to visit me at my office.

For a time she seemed to grow better, and even the pain in the shoulder gave less cause for complaint. In the course of three or four months, however, she began to complain of weakness, loss of appetite, and great irritability of temper, and a hacking cough and pain in the left side made me fearful lest some trouble were developing as a sequel to the old pneumonia. For a long time, however, there were no physical symptoms to corroborate this apprehension. On November 28th, after having lost sight of her for a time, I was called to see her in Windsor, on account of an abdominal swelling which had made its appearance rather suddenly at the side of the wound, and found to my chagrin that the scar had given way, and she had a large ventral hernia. For this I applied a truss, which has answered its purpose, and relieved that particular inconvenience; but, at the same time, I satisfied myself that she was failing in health, without being able to discover any organic lesion to account for it. In March, 1888, she began to suffer again in the left side, at a level corresponding to the base of the lung, and her cough became more pronounced. I could not find any dulness on percussion, but the lower part of the lung was filled with moist râles. On March 27th she came to my office in alarm, on account of an hæmoptysis. She had that morning coughed up several mouthfuls of bright-red blood. This spitting of blood continued until April 1st, when she had an unusually severe paroxysm of coughing, and finally expectorated a ligature, which could be no other than that with which I had tied the pedicle. I had used for that purpose a medium size of braided silk, and, as I have related, without cutting the silk I had tied the pedicle with three knots. I had first passed the needle through the pedicle and tied one half, and then again through the same opening to tie the other half, and finally passed it around the whole pedicle and fastened it with a secure knot. All this was, of course, unknown to the patient. The ligature which she brought to show me had three loops in it, fastened with three knots, two small loops and one large one, and the thread was the same braided surgeon's silk.

There could be no question of deception on the part of the patient, and the only possible doubt was whether it had been expectorated or vomited. I have myself no doubt of the correctness of her own statement that it had come from the lungs. She had had no symptoms whatever referable to the stomach, and had not suffered nausea since she had recovered from the effects of the chloroform. A ligature discharged into the stomach without causing any sensation of nausea would naturally pass down through the alimentary canal. I see no reason, therefore, to doubt her positive statement that the ligature was ejected by coughing. Almost immediately after the expulsion of the thread she began to get better. The moist râles could no longer be heard in the lungs, the cough ceased, and the pain in the shoulder vanished. Some of the improvement might, of course, be attributed to the mental effect produced by the event, but there can be little doubt that her system experienced an immediate benefit from the relief of a chronic irritation in a tissue so important as that of the lung. When examining the case before the operation, the position and shape of the tumor, so different from the splenic tumors I had seen, were such that I was completely misled in diagnosis. It never occurred to me that the tumor might be an enlarged spleen. I have not since then been able to find a case recorded in which the dislocation was so great as in this. I did not, therefore, examine the blood at all before the operation. For many days afterward the patient was exceedingly sensitive and irritable, and when I went to her with the view of getting a drop of her blood for microscopic examination, she made such a clamorous protest that I was obliged to desist. It was not until August 12th, and then against her will, that I accomplished the purpose. I then, and several times afterward, examined her blood, carefully comparing it with my own and other healthy persons'. For several months after the operation, whether as the result of the operation or the original disease, the number of white blood-corpuscles was considerably increased, the blood usually containing five or six times as many, in proportion to the red, as healthy blood.

During the last three months this disproportion has gradually disappeared, and the proportion of white to red corpuscles has become normal. In remarking upon the case, I will say, first of all, regarding the diagnosis, that I do not believe it could have been positively made out even though the true nature of the case had been suspected. The tumor was so jammed into the pelvis that its notched edge could not be felt. Its shape was round, rather than long and oval, and, as the normal spleen cannot always be certainly detected in its proper position, it would not have been possible to diagnosticate with absolute precision its absence from its proper position. I did not come to a positive decision as regards diagnosis, and the operation was at first exploratory. The opinion which seemed to me most plausible was that the case was one of old incapsuled extra-uterine pregnancy. The symptoms which pointed in this direction were the cessation of the menstruation for seven months and the simultaneous growth of the tumor, the occurrence of frequent colicky pains, the return of the menses and the simultaneous cessation of the growth of the tumor, the feeling of life, the long quiescence of the growth, then the tendency of the pain, when it recurred in 1886, to come chiefly at the menstrual period, and, finally, the consistency of the tumor.

My theory of the case is as follows: She contracted a malarial fever in Arkansas, and probably, as a result of the chronic malarial poisoning, her spleen became enlarged and dislocated downward by reason of its weight. During the struggle with the insane woman she received a kick directly on the top of the enlarged organ with such force as to completely rupture its ligaments and force it downward to the right. The weight of the organ, sustained only by its blood-vessels and the connective tissue which surrounded them, served still further to depress the tumor, until it finally became too firmly wedged in the right side of the pelvis to be easily moved. The interference with its blood-supply, or perhaps more with the return of its blood through the veins, caused by its abnormal position and surroundings, had the effect of causing still greater congestion and enlargement, and the pressure on the ovaries made the vascular disturbance more noticeable at the period of menstruation. It is difficult to explain the long period from 1877 to 1886 of comparative freedom from pain and trouble. Possibly the ovary may have assumed a position in which it escaped pressure, and the return of the pain may have been the result of a fall of the ovary between the tumor and the pelvic wall. The pleuro-pneumonia was the result, apparently, of a chill which she received by lying uncovered in the oppressively hot nights, which made life at that time a burden to everyone in the city. The diaphragmatic pleura was first affected and the lung became secondarily involved after a considerable interval. It cannot be assumed that these organs were secondarily involved by a process which began in the pedicle and extended through the diaphragm. The normal temperature of the patient on the days preceding the first onset of the pleural inflammation, the entire freedom of the abdomen from pain and tenderness, excepting only where the diaphragm could be made susceptible to pressure, and the brevity of time occupied by the whole course of the disease, combine to shut out that hypothesis. As the result of this inflammation the two pleural layers became glued together. The pedicle retracted immediately after the operation, and probably lodged above the intestines and liver, against the diaphragm. We may assume that the ligature became adherent to the diaphragm, and that, when the pedicle had sufficiently shrunk, the movements of respiration had gradually detached the thread from the remains of the blood-vessels which it had constricted. The pressure of the knot on the diaphragm caused an absorption of tissue, and the constant contraction and relaxation of fibre undoubtedly aided in working the thread through the muscle, pleura. and finally lung. The ligature came away as perfect as when it was put in. and the absence of all softening and erosion was an additional proof that its expulsion was to be ascribed to a process of absorption rather than of suppuration and abscess. The pain in the shoulder was probably due to the irritation of the phrenic nerve, conducted on to the communicating branch of the fifth cervical, or possibly on to the subclavian branch of the brachial plexus, which also communicates with the phrenic. It has completely ceased since the expulsion of the ligature.

The case is still too recent to have much weight in determining the question of the propriety of extirpating "ague cakes" which are intractable to treatment. It has been my fortune to see several cases in which death resulted from no other ascertainable cause than a malarial spleen. Whether such patients would do better without their diseased organs, is one of those problems which the after-histories of such cases as this will have to solve. I will say in conclusion that this is my second splenectomy. The first was performed on a man by the name of Charles S——, aged twenty-seven years, on May 24, 1881, on account of an enormous splenic tumor which filled up the abdomen to such an extent as to make breathing difficult, and to obliterate all those natural boundaries by which, on percussion, we determine the size and position of organs. Although the case did not promise much, yet the patient was so urgent for an operation, on account of his continual suffering, that I ventured to perform it. I did so in the presence and with the aid of Drs. Eugene Smith, Chapaton, Richards, Shurley, Boice, and others. I found the spleen enormously enlarged, and adherent both to the abdominal parietes and to the diaphragm. The separation of the spleen from the diaphragm was followed by great and persistent hemorrhage. When, finally, the tumor was lifted out on to the abdomen, and a ligature was passed through the pedicle and around each half of it, a vein in the pedicle was ruptured, and could only be secured by tying the pedicle a second time lower down.

The patient died two and a half hours after the operation. The immediate cause of death was the bleeding from the diaphragm, which could not be controlled. The liver, however, was found to be also much enlarged, and, like the spleen, the subject of waxy degeneration. The tumor weighed, after the loss of all of its contained blood, over nineteen pounds.

The German Public Health Society will hold its fourteenth meeting in Frankfort-on-the-Main on September 13 to 16, 1888.

TERPINE IN DISEASES OF THE LUNGS.[1]

By D. M. CAMMANN, M.D.,

NEW YORK.

Mr. Chairman and Gentlemen: Lately several drugs belonging to the group of the terebinthinates have been used in medicine with a more or less favorable result. Among them are terebene, terebinthene, terpine, and terpinol. Their effects are similar in a general way to those of turpentine, with individual differences in their action, or the relative amount of their action on various organs of the body. It is my purpose in this brief paper to consider the use of terpine in diseases of the lungs.

Terpine is a crystalline hydrate of the oil of turpentine. Crystals similar,[2] if not identical in character, have been found in the interior of an old pine-log, where they were, probably formed from the oil deposited in the wood. If oil of turpentine be allowed to stand for some time freely exposed to the air and to moisture, crystals of terpine will be deposited on the sides of the vessel. It is colorless, odorless, and almost tasteless, insoluble in water, soluble in alcohol, and melts at 100° C. It was first prescribed as an expectorant by Lépine,[3] of Lyons, who calls it "the best expectorant in existence." Its use in bronchial affections has been favorably mentioned by Vigier, Jeannel, Sée, and Boyland. New drugs are apt to be received with enthusiasm, to run a brief course, and then to drop out of use. Terpine has not escaped the usual fate at the outset of its career, but that it is a drug that deserves a permanent place seems probable. During the past year I have frequently used terpine in my class at the Demilt Dispensary and elsewhere, and a careful record of a number of cases has been kept by Dr. F. N. Patterson. I will give short histories of a few of the cases, and a synopsis of the rest:

Case I. *Bronchitis with pleuritic adhesions.*—Mrs. L——, aged forty, January 19, 1888. Family history good. The middle of December caught cold in the head and chest. Has had pain between the shoulders ever since. Very little cough; slight expectoration; some dyspnœa.

Physical examination: On percussion raised pitch under left clavicle, and on auscultation harsh respiration. In infrascapular regions harsh respiration, and coarse, dry superficial râles. ℞. Pil. terpin., gr. iv., q.i.d.

January 28th.—Coughed less. For three or four days spat up more, but since then less than at first. Dyspnœa much less; urine increased; a full feeling in the head after taking the pills; appetite improved.

February 2d.—Cough and dyspnœa less; expectoration less and thinner; urine increased.

Case II. *Bronchitis with pleuritic adhesions.*—B. L——, aged forty-five, hod-carrier, March 19, 1888. Family history good. Has had fistula in ano for ten years. Has had cough for ten years, but it was never troublesome until this winter, when he has had a feeling of tightness across the chest and fits of coughing with little expectoration. Three or four weeks ago he spat up some blood; has had dyspnœa; no night-sweats. Has lost twenty pounds in weight. In 1869 and 1870, and again in 1881, had chills and fever; none since. Present condition: Has dyspnœa; coughs for about fifteen minutes in the morning on rising; expectoration thick, white, and in considerable quantity; is anæmic; bowels regular; appetite poor.

Physical examination: Dulness on percussion under both clavicles, most marked under the left. Respiration feeble over both lungs in front, except at outer third of left infraclavicular region, where expiration is harsh; harsh expiration in right suprascapular region; feeble respiration over remainder of both lungs behind; coarse, dry. superficial râles over both lungs behind, especially over the left, and most abundant at left apex. ℞. Terpine, gr. iv., q.i.d.

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[1] Read before the Section on Materia Medica and Therapeutics of the New York Academy of Medicine, May 25, 1888.

[2] Wood & Bache: New York Dispensatory.

[3] Bul. Gén. de Thérapeutique and Journal de Thérapeutique for 1886.

March 22d.—Cough and dyspnœa less; expectoration the same in quantity and consistence, but comes easier; urine increased; appetite the same.

March 24th.—Has improved since last time.

CASE III. *Pleurisy.*—Miss M. L——, aged twenty-two, dress-maker. February 28, 1888. Family history good. Was well until one year ago; has had slight cough since. Says she has had night-sweats at times for past two weeks. Has a good deal of dyspnœa on exertion; no pain in the chest; has never spit any blood; has headache every afternoon. Nausea after eating. Is anæmic.

Physical examination: A shower of subcrepitant râles at the base of the right lung in front with each inspiration; a few subcrepitant râles at right base behind; coarse râles at left base behind; cog-wheel respiration under right clavicle at the beginning of the examination, but it disappeared before she went away. ℞. Terpine, gr. iv., q.i.d.

March 3d.—Cough the same; expectoration less and thinner; urine not increased.

March 10th.—Cough less; expectoration less and thinner; dyspnœa the same.

March 24.—Coughs only a little in the morning; expectoration less and thinner; dyspnœa less.

CASE IV. *Phthisis pulmonalis.*—J. K——, aged forty-three, miner, February 21, 1888. Family history good. He served for three years during the war, at which time he had typhoid fever. Was well until thirteen months ago; since then has had cough and shortness of breath. Had hæmoptysis three months ago. Has had night-sweats for twelve months, but not constantly.

Physical examination: Dulness on percussion at left base in front; harsh respiration over right lung in front; expiration prolonged under the clavicle; under the left clavicle harsh respiration; coarse râles over both sides in front; bronchial breathing and bronchophony at base of left lung behind. ℞. Terpine, gr. iv., q.i.d.

February 25th.—Cough and dyspnœa less; expectoration the same in amount, but thinner; urine not increased.

March 1st.—Thinks he has caught fresh cold and does not feel as well. The cough is less, but dyspnœa and expectoration about the same as before. Has been vomiting, but does not think it is due to the medicine.

An analysis of twenty-five cases shows that nineteen were cases of bronchitis, most of them chronic, some of long standing, with extensive pleuritic adhesions. Four cases were of phthisis, one of pleurisy, and one of emphysema. The shortest time that any of these cases were under treatment was two days, the longest time nine weeks. The average length of treatment was seventeen days. From four to eight grains of the terpine were given in pills, usually four times daily. Most of the cases took four grains four times daily, without any other drug. Twenty-four of the cases were improved, most of them markedly, and two only slightly. One case was unimproved. This was a case of bronchitis that had lasted a month, and four grains of the terpine were given three times daily for five days. The expectoration became thinner, but no other change was apparent. The cough was lessened in all the cases except the one just mentioned. In twenty of the twenty-five cases the expectoration was markedly diminished; in four it was not diminished, and in one it was increased. In several cases it was increased for the first day or two, and afterward decreased. The cases in which the expectoration is recorded as not diminished, and the one in which it was increased, were under observation only five or six days, and it is probable that if they had been treated longer a diminution might have been recorded in all. In eighteen it was thinner, becoming more watery and less purulent; in six it was no thinner. Of the cases that were troubled with dyspnœa the dyspnœa was diminished in sixteen; it was undiminished in three. The patients noticed an increase in the urine in eleven cases; in eleven cases no increase was noticed. In some of the cases the appetite improved; in one case slight nausea, and in another fulness of the head were experienced after taking the pills.

The mode of action of turpentine and its derivations needs further investigation. That they are cardiac stimulants has been asserted, probably on insufficient evidence. The experiments of Nothnagel and Rossbach[1] indicate that oil of turpentine in all cases diminishes the blood-pressure, and to a very slight degree, or not at all, the number of cardiac pulsations. Whether they enter into the circulation unchanged is uncertain. Whether the peroxide of hydrogen, which some of the terebinthinates, in common with many other substances, are capable of generating and then absorbing,[2] plays an important part in their action is a subject for further study. I have only endeavored in this paper to record a few facts, and to avoid theoretical explanations, which may be found in abundance in many books.

THE CHOLERA IN CHILI.

By JOHN TRUMBULL, M.D.,

VALPARAISO, CHILI.

THE subject of the cholera in Chili is one which, possessing a measure of interest for every medical man, becomes peculiarly interesting when regarded as a possible forerunner of the introduction of the disease into the United States. From Chili it will in all probability follow the line of travel up the western coast to Panama, from which point there will be two avenues of approach and danger—the Pacific and Atlantic seaboards, besides the Mexican frontier, which might possibly threaten later on. The disease has already obtained a foothold in some of the northern ports and towns of Chili (whither the boom in copper carried large numbers of miners and prospecters), and steadily advances northward, though its advance in that direction is not as rapid as in a southerly direction along the railroad lines. For the present we are cut off from Peru; but her isolated position, for the yellow fever in Panama and Guayaquil has led her to close also against vessels from the north, will compel a surrender. Even now she has had to admit a couple of steamers carrying coals from Southern Chili, and pretty soon the demand for wheat, etc., will force her to open her ports. And could this be overcome, still concealment and prevarication will doubtless lead to the resumption of travel long before the epidemic is stamped out. Were she able to interrupt all commercial relations with Chili, it would be an easy matter to check the march of the epidemic; but that is impossible, and, given steamer travel, I have not faith in the ability to check its entry into Peru or Central America. A quarantine that is one in reality, effective and unremitting, may then save from such a visitation, whereas a complete interruption of travel and business will certainly do so; yet, to the profit of general business, and steamer companies in particular, the health, happiness, and lives of thousands are sacrificed.

What has been the cost to Chili of failure in this regard? The loss by sickness, death, and interruption to work, estimated financially, together with the expenses of maintaining dispensaries, sanitary stations, and lazarettes, though social questions of importance, are not to be considered, for, as physicians, we are interested rather in what pertains to health and life. The registration of deaths is very faulty, in that the law allows a burial permit on certificate of death made out by a doctor, a justice of peace, or any person, accompanied by two witnesses. This last not only makes possible the perpetration and concealment of crime, but renders statistics almost worthless. Such friends almost invariably give as cause of death, "fever," or, now that cholera means, for the poor, burial in a common pit, "indigestion." Such causes tend to make the published statistics fall far below the mark, yet the official reports are serious enough. For instance: In Santiago, the capital, a city of 180,000 inhabitants, the first case occurred January 14, 1887, and within eleven weeks the lazarettes and ambulances alone had 6,279 cases of cholera, with 3,481 deaths; a mortality of fifty-five per cent., or a proportion of 19.3 deaths per 1,000 of population. The more probable figures would raise this to 28 per 1,000; and this is what the topography of Santiago, with its heat, abundance of water running all over the city in open water-ways of slight declivity, absence of other sewerage, and use of these waters for irrigation and even domestic purposes, would lead us to expect. Regarding the country as a whole, while last summer the disease did not extend outside of the Aconcagua Valley and along the railroad lines from Santiago south, or here, yet the official statistics for 1887, which only include a few days of this present epidemic, place the deaths from cholera at 22,000, or one per cent. of the entire population of the country.

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[1] Materia Medica, Trans., p. 492. New York, 1884.

[2] Day: Lancet, August 17, 1878.

During the first epidemic Valparaiso escaped rather easily, owing in part to the efficient measures taken, the improvements in sewerage, removal of garbage, etc., but principally because of the extreme dryness of the place. The past winter the rainfall was three times the amount of our average yearly fall, and, as a consequence, there is running water even now in the "quebradas," or ravines, which separate the hills on which the town is built. Besides, the numberless little wells in these ravines, so much used by washerwomen or watermen, have offered every chance for the spread of the disease through the sections supplied by these waters.

For the lower portions of the city the drinking-water comes from a deep well, sunk in the middle of a sandy valley, six miles out of town, which offers small chance of contamination; and it is this portion of the city that has had least sickness, whereas the residents on the hills have suffered greatly. December 5, 1887, a case of cholera was recorded, a couple of days later another, and so a few scattered cases appeared till the 15th, when a general epidemic was declared. After a fortnight, in which 522 deaths were recorded, it began to decline; though every Tuesday and Wednesday there has been a periodical rise in the number of new cases and deaths, due to the drinking and excesses which mark the mode of observance of the Sabbath by the common people. The civil registry offices give the following deaths as from cholera: Second half of December, 522; January, 569; first half of February, 158; total, 1,249; equal to one per cent. of our population.

While referring to statistics, it may be worth noting that during 1887 there were in Valparaiso 4,492 births, as against 6,456 deaths.

Throughout the entire country the cases this year have been more virulent, and the newly infected districts and towns have suffered greatly. The papers to-day state that in a township in the South, having a population of 1,500, the number of deaths caused by the epidemic have amounted to 616. In the Northern parts and mining towns it is very severe. Some days, out of 25 new cases, 20 prove fatal within twenty-four hours; and often whole families have been carried off.

The same is true of general practice. In my own private practice of 18 cases attended, I have lost 13, or seventy-two per cent. Of those 13, 11 lived, on an average, only fifteen hours from the very first symptoms noted, and these had medical attention, on an average, only seven hours after the first diarrhœa. The recoveries were first seen six hours from the commencement of the symptoms, so that recovery cannot be properly attributed to prompter attendance, but rather to a milder type of disease.

Not only of a more fatal type, but of an entirely different character, has the disease been. Last year many of the fatal cases had sanguinolent discharges; in others, vomiting was abundant, diarrhœa profuse, and cramps very severe. This year I have noticed less vomiting and diarrhœa, little pain from cramps in the extremities, but, on the other hand, epigastric pain, cardiac distress and oppression, profuse sweating, rapid and feeble, or imperceptible pulse, the case quickly developing the symptoms of profound collapse—coldness, lividity, aphonia, dyspnœa, and stupor.

With reference to treatment one must of necessity refer to the prevalence of bowel troubles which often make it hard to decide whether the symptoms are those of beginning cholera or not; and in view of such, one cannot but regret the general resort to opiates, and protest against the publishing of prescriptions, and indiscriminate dosing by Tom, Dick, and Harry, who tell us of their wonderful cures of cholera, but never know the harm they sometimes work. It is my plan to palpate and percuss the abdomen in every case of diarrhœa, and principally by such examination am I guided as to the use of opiates and astringents, or evacuants to be followed by them. If fulness or dulness show the presence of fecal matter, a purge is given, oil preferably, with a previous powder of calomel should the tongue be loaded and dirty; then opiates, acids, astringents, carminatives, etc., separately or in combination, as the case may require. The presence or absence of pain in this diarrhœa is of diagnostic value, a simple diarrhœa from indigestion often beginning with pain, whereas the diarrhœa unattended by pain merits suspicion; and of the numberless cases coming with abdominal pain and diarrhœa, because they feared they had cholera, in not one had I cause to regret assuring them to the contrary and treating them as indicated. The orthodox treatment with the native physicians is calomel, two grains, every one or two hours, in all stages of the disease. The reason of their treatment is theoretical, and based on the good results which follow its use in appropriate cases of simple diarrhœa.

In the first stage of the actual disease, if vomiting and diarrhœa are not very frequent or discharges profuse, and pulse of good strength, the drinking of hot infusions of aromatic herbs, camomile, with or without coca leaves, will in mild cases relieve the epigastric distress, check vomiting and diarrhœa, and aid in producing reaction. If more pronounced, opium and acids, as laudanum with acid arom. sulph., or opium, camphor, capsicum, and chloroform are of good service; while yet if discharges are profuse, morphine, and atropine in powder (tablet triturates are always handy), are given by mouth when retained or by subcutaneous injection when the vomiting is persistent.

If the heart begin to flag, caffeine and ether, subcutaneously or by the mouth; alcoholics, ether, or strophanthus with ether, have all been tried and proved serviceable; though when failure of circulation begins to manifest itself, the endeavor should be to try and establish reaction by external warmth and copious injections of hot liquids, one-half per cent. solutions of tannin or salicylic acid, or hot tea with brandy or ether. Last year the prevailing method was the injection of four or five litres of fluid to try and force the ileo-cæcal valve, wash and disinfect the small intestine, using solutions of tannin, hyposulphite of soda, salicylic acid, or even corrosive sublimate; but at present the more rational procedure holds, viz., to try and wash out the lower bowel, if evacuations are frequent and annoying. The temperature of the water, or solution, is from 38° to 42° C., and a litre of such fluid is injected. These failing, or in a case demanding more energetic measures, a large subcutaneous injection of a saline solution should be made. The following powders I have used, dissolved in one litre of warm water:

Sodæ chloridi	5.00 gm.
Sodæ phosph	0.30 "
Potass. chloridi	0.40 "
Sodæ carb	1.20 "

M. Ft. pulv.

The fluid is preferably thrown into the subcutaneous tissue in the lumbar region. In women as much as 750 c.c. can be injected in one spot, though usually 500 c.c. are enough for one place to receive, and as much more should then be injected on the other side. It is surprising how rapidly absorption takes place, and how certain it is to improve the condition of the patient, restore the pulse and voice, and relieve in every way. The benefit, however, is in too many cases only temporary, for the pulse again fails and then a second hypodermoclysis fails to cause such marked improvement; or, the pulse having gained steadily, reaction is set up, but goes on to a typhoidal state with high temperature, which generally terminates in death in the cases that called for this treatment. In the fulminating cases—cold, cyanotic, pulseless, shrunken, breathing with difficulty, and groaning with the pain in the back and shoulders—chloroform is a boon.

With pregnant women part of the treatment requires serious consideration of the question of interference with the course of gestation. The fœtus generally dies, but often the condition of the mother, even when reaction has set in, prevents one from removing it; and then when failure sets in with the typhoidal state, one is tempted to remove the dead fœtus for fear it may be the occasion of the general condition. The prognosis, where pregnancy complicates, is almost fatal. I have not heard of a recovery in such. In ordinary cases, the pulse I take to be of greatest prognostic value. If the pulse is of fair strength and not very rapid, the prognosis is good, reaction is probable, and recovery possible; while, if the pulse be feeble and rapid—130 to 150—or imperceptible, reaction is possible, but recovery is improbable.

Clinical Department.

THE DISASTROUS RESULTS OF A NEW ARTIFICIAL DRUM MEMBRANE.[1]

By FRANK W. RING, M.D.,

NEW YORK.

THE above title of the report of this case is misleading, but it would otherwise have been necessary to have extended it to undue length. Miss X—— consulted me June 14, 1887, in regard to poor vision. Complained of seeing less well with the left eye. I examined them both, and gave her a pair of cylindrics. During the conversation relative to the visit, I mentioned the fact that, as she was apparently deaf, I had better look at her ears. The lady was very much embarrassed at my suggestion, and remarked that there were reasons why she would prefer I should not examine them. My curiosity being excited, I at last elicited from her the following history:

She could not remember, from childhood, ever having heard as others, but was obliged to listen intently and watch the expression of those conversing with her. She became exceedingly sensitive, impressible, and despondent. Would shun society and associate only with her most intimate friends. It was at this time, when about twenty years of age, in 1879, that she chanced to meet a retired army surgeon, who was kind enough to assure her that all she needed was a new drum, and he highly recommended *larding pork*, which the young lady immediately began to use in this wise: She would get from the butcher a piece of salt pork for larding, cut a portion sufficient to fill the external auditory canal, and plug it. At first it was removed every few days, but after a few years of constant use it would not be necessary to change it oftener than once a week. She was confident she heard better. The difference was apparent immediately the pork was removed. And when I first saw her, June 14, 1887, she was continuing in her usual manner, changing the new drums once a week, but did not hear as well as formerly. I was extremely anxious to look into auditory canals which had been packed with larding pork for eight consecutive years, and upon representing to her the great danger she was incurring from the practice, she afforded me an opportunity of examining them the next day.

I found a suppuration of both middle ears, extending to the external meati. Both canals were filled with pus, detritus, and cheesy matter. The mucous membrane was raised in folds, like a washer-woman's fingers. The membranæ tympani were almost entirely destroyed, a ring-like edge only existing. The inferior extremity of the handle of the malleus was exposed in both ears. In the right the watch was heard at one inch; left, one-half of an inch. Right aërial conduction, nine seconds; left aërial conduction, five seconds; right bone conduction, fifteen seconds; left bone conduction, thirteen seconds. I only saw the patient twice at this period, as she immediately went away for the summer. It was with reluctance she discontinued the use of the pork—as her hearing was undoubtedly decreased without it. I gave her proper directions in regard to treatment during her absence, and did not see her again until September 15th, when the hearing distance was reduced to contact in the right, and one half-fortieths in the left. There was a discharge from both ears, no modification in the membranes, redness and swelling of adjacent parts.

After constant treatment from September 15th to December 3d, the left membrane closed with several cicatrices adherent to the inner wall of the tympanic cavity. During the final cicatrization of this membrane the patient had severe pain in the ear, located in the meatus and tragus. Hearing distance, contact with watch, the 24th of this month (December). The right membrane had healed by extensive cicatrices, adherent in several places to the inner tympanic wall. She had severe pain for several days during this period, so that I applied a blister to the mastoid, and hot-water injections to the canal, which gave her relief.

The suppuration in the left ear ceased December 3d, and there has been no further treatment applied to it, except inflation; but in the right a persistent oozing continued up to March 1st. I had exhausted all remedies in the pharmacopœia, including antiseptic, alcoholic, astringent, and caustic treatment, boracic acid, nitrate of silver from five to sixty grains to the ounce, peroxide of hydrogen, and merely cleanliness, until one day I was telling Dr. F. M. Wilson of my tribulations, and he suggested bichloride of mercury in solution. So I instructed the patient to lie down at stated intervals, for an hour at a time, and keep the ear filled with a one to four thousand solution of the drug mentioned. And in three weeks all signs of discharge had ceased.

The patient now hears better than she ever did before. By the watch, the right is $\frac{6}{40}$, the left $\frac{5}{40}$. Conversation easily heard near by, but not well at a distance. I think the history of this case goes to show the wonderful recuperative power of the ears, after a persistent abuse of their functions for a period of eight years. There may have been other instances of similar conditions, but I have been unable to find them.

THE DEATH OF CLEOPATRA.—Dr. Viaud Grand-Marais, of Nantes, has been holding an inquest on the sudden death of Cleopatra. He rejects the theory that her death was caused by the bite of a viper. She was accustomed to test the effects of various poisons on her slaves, in order to ascertain which caused the easiest death. Having shown that no viper was found in the room of the fair suicide, that her body presented no traces of bites, and that her two maid-servants were found dead or dying at the foot of her bed, he comes to the conclusion that her death was caused by carbonic oxide. —*Bulletin Général de Thérapeutique*, No. 14 1888.

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[1] Read before the New York Academy of Medicine, Ophthalmological Section.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY
WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, June 30, 1888.

EXPLORATORY CATHETERIZATION OF THE MALE URETER.

THE surgeon not rarely meets cases of pyelitis or destructive renal disorder in which he is puzzled to know with certainty which kidney is affected; or having found the diseased kidney, he may feel a doubt whether the patient has another one.

In order to settle these questions positively, it is necessary either to make an exploratory laparotomy, or to introduce a catheter into one of the ureters, and draw off the urine secreted by a single kidney. The expedient of compressing one ureter by means of instruments introduced into the bladder or rectum, has not been very satisfactory, and the catheterization of the ureter *via* the urethra is only possible in the female. The introduction of cystoscopes hardly helps the matter in the case of the male.

The well-known surgeon, Dr. Axel Iversen, of Copenhagen, describes in the *Centralblatt für Chirurgie*, April 21, 1888, a case in which he successfully catheterized the male ureters by means of a supra-pubic incision into the bladder.

The patient was an adult, who for some time had suffered from evidences of purulent inflammation of a kidney. No signs or symptoms were present, however, to tell with certainty which organ was affected. The bladder being opened by an epicystotomy after the method of Guyon, an electric light was introduced, and the ureters successfully catheterized. From the right was drawn off a fluid containing some blood-cells and casts, but no pus; from the left almost pure pus was obtained.

The wound healed without any trouble, and the diagnosis was made. Unfortunately the knowledge did not greatly profit the patient, except perhaps in preventing an experimental operation. The right kidney was thought to be too seriously diseased to justify nephrectomy or nephrotomy on the left. Dr. Iversen considers the exploratory epicystotomy perfectly safe, and believes that in some cases it may be of the most essential service in directing the work of the surgeon.

ACETONURIA IN CHILDREN.

THE presence of acetone in the urine has until quite lately been thought to indicate a serious pathological change. It had been observed most often in connection with diabetes, and in the later stages of that disease when coma was impending or present. Jaksch, Penzoldt, and others, however, have shown that acetonuria may occur in comparatively normal states; and Baginski has, in particular, studied this normal acetonuria in children (*La France Médicale*, August 20, 1887).

Baginski finds that acetonuria is very common in the febrile affections of childhood, and its amount is usually related to the intensity of the fever. His observations led him to believe that the acetone is in some way related to the decomposition of nitrogenous food, or to the action of such food upon the metabolism of the tissues. This is in accordance with the clinical fact that acetonuria in diabetics is most apt to develop when a pure meat diet has been studiously adhered to.

Baginski denies and disproves the theory of Jaksch, that acetone is formed in the process of lactic acid fermentation due to digestive disorder; for, on washing out the fermenting contents of the stomach, he found no trace of acetone.

The same observer states that acetone does not produce convulsive symptoms, and that it is not the result of chloral given in eclampsia, nor of the asphyxia of that state.

Exactly where and how acetone is formed is still unknown, but the fact that it often occurs in the urine of children, both during febrile and afebrile states, is one which the clinician should bear in mind. It leads to this practical deduction that the child is getting too much animal food.

THE PATHOLOGY OF PURPURA HÆMORRHAGICA.

THE pathology of purpura in its various forms furnishes a most obscure and puzzling problem. Naturally a great many classifications and theories of the disease have been put forward, and it has even been asserted that no such disease exists, purpuric spots being only a symptom of a dozen or more different conditions.

Leaving out, however, the manifestly symptomatic purpura of phosphorus and other poisons, of scurvy, ulcerative endocarditis, hæmophilia, and certain acute infectious fevers, we have remaining a disease which seems to be idiopathic, and which shows itself essentially in three forms, viz., that of purpura simplex, purpura hæmorrhagica of Werlhoff, and purpura rheumatica. These various types are not sharply divided from each other, and it is quite conceivable that they are the expressions of the same pathogenic agent.

It would be impossible that in this microbic age a microbe should not be found and looked upon as the existing cause. Such is in truth the case. M. Balzer has found micrococci in the blood of purpuric patients during life, and Petrone, Cheyne, Wickham Legg, Rebi Ceci, and Hlava have also all met with micro-organisms in the disease.

Unfortunately, the micro-organism has not always been the same, and the attempts heretofore made to study its life-history have not been very satisfactory.

Quite recently, M. Martin de Gimard (Thèse de Paris, 1888, *L'Union Médicale*, 1888, p. 683) has studied the subject from the bacteriological and clinical standpoint anew, and has obtained results that are apparently definite and conclusive.

M. Gimard observed twelve cases of purpura occurring in the Children's Hospital at Paris, under Professor Grancher. The disease appeared almost like an epidemic, so that there could be little doubt that all the patients suffered from the same disorder. Yet the types varied considerably, from the gangrenous or fulminating form described by Charron and Henoch, to the milder types resembling purpura simplex; some cases were pyretic, resembling the "angio-hæmatic" typhoid of M. Mathieu.

Gimard believes that his cases were illustrations of a primary infectious purpura, and he infers that true purpura is always a primary infectious disease.

He found a micrococcus in the blood during life, and the same micrococcus in the purpuric spots after death. These micrococci, taken from the living blood, were cultivated in different media and always found to possess the same characters. Cultures of these micro-organisms were injected beneath the skin, into the serous cavities and blood of guinea-pigs, with the result of producing hemorrhagic effusions in various parts of the animal. M. Gimard found that at the centre of the hemorrhagic spots there was an accumulation of micro-organisms, with consequent stasis and inflammatory changes, resulting in injury of the vessel-walls and sanguineous effusion.

If we accept the results of Gimard's studies, purpura hæmorrhagica is a primary infectious disease of microbic origin, and shows itself in types of varying severity.

LATIN IN PRESCRIPTIONS.

We hear occasionally some violent denunciations of the use of Latin in prescription-writing.

It is old-fashioned, a relic of mediævalism, the Latin employed is bad, and its employment in any event is useless; the doctor writes his prescriptions in Latin so as to conceal something from the patient and make a mystery of his art.

Such are the stock arguments against writing prescriptions in Latin. But none of them, we venture to say, should have any serious weight at present. If physicians write bad Latin, let the schools teach them better. It is only a matter of a few weeks' diligent study to master enough of this language for medical use.

There is no serious objection to the use of the Latin in prescriptions, while there is objection to English, or French, or German. Medicine is a cosmopolitan science, and its progress depends upon the united work of physicians in all nationalities. If each nation wrote its therapeutic treatises without the use of Latin, the difficulties of understanding and mastering foreign work would be much increased.

This is already very evident to those who read French medical literature and attempt to read French prescriptions. Many French physicians follow the new-fashioned plan and use French in prescription-writing. An illustration of the results of this method may be seen in a prescription taken at random from the popular French journal *L'Union Médicale*. It is called a *vin tonique*:

℞. Extrait de feuilles de noyer........ 30.
Phosphate de soude................ 15.
Vin de Malaga....................1,000.
M.

The first constituent one may find, after searching, to be walnut leaves; but whether *Juglans nigra*, or *J. cinerea*, or *J. fraxinifolia*, or *J. regia*, no one but the writer of the modernized prescription knows.

If the prescription has been written in Latin, according to the rules of our art, it would have been intelligible at once to French, Greek, German, or American, for it would have been written, for example:

℞. Extract. fol. juglant. nigræ.
Sodii phosphat., etc.

The study of French therapeutical literature is thus made unnecessarily difficult and inexact by the adoption of the vernacular in prescriptions, and it would be a serious retrogression if English, German, and other races each followed the French example.

STERILIZED MILK AS A FOOD.

In the April number of our esteemed contemporary *The Dietetic Gazette* is an article by Dr. A. Caille upon the mode of preparing sterilized milk for the use of infants. The fact that milk just as it comes from the breast of woman or the udder of the cow is aseptic, makes it *a priori* reasonable to believe that aseptic milk is the most natural and healthful form to use. The readiness with which milk becomes impregnated with germs and undergoes fermentation is well known. To rid it entirely of these germs, Dr. Soxhlet, of Munich, has devised a sterilizing apparatus which is easily used, comparatively inexpensive, and has been, we are told, extensively introduced into households at Munich. This apparatus consists essentially of a number of small (five-ounce) glass bottles, with rubber and glass stoppers combined. There is a tray for holding these, fitting in a tin pot for boiling the milk. The milk is raised to a boiling-point in the small bottles; these are then hermetically closed and kept at 212° F. for twenty minutes, when the milk is sterilized. The process is really, therefore, only one of prolonged boiling under pressure. Dr. Caille made a numbei of experiments with milk sterilized in Soxhlet's apparatus, and with milk boiled in the ordinary way. Results, as stated, were:

1. Milk sterilized in Soxhlet's apparatus, boiled thirty minutes, remained good eighteen days.

2. Milk boiled in small bottles for fifteen minutes; before removing from the boiling water the bottle was closed with a pledget of cotton. This milk remained good five days.

3. Milk boiled in small bottles for fifteen minutes; then taken from the water, and each bottle closed with a tight, non-perforated rubber stopper. This milk remained good five days.

4. Milk boiled in small bottles for fifteen minutes; then taken from the water and each bottle immediately closed with a good quality cork stopper. This milk remained good five days.

5. Milk boiled in a pot, and put into small bottles after cooling and closed with a cork stopper. Sour after four days.

6. Milk boiled in a pot, and put into small bottles after cooling and closed with non-perforated rubber stopper. Sour after four days. [This milk was kept in a spare room with temperature ranging from 50° to 70° F.]

7. Milk boiled in a pot in the usual manner, and left standing in an open dish in a room with a temperature of 75° F.: (*a*) ordinary store-milk had a distinct sour taste

and smell after *eight hours;* (*b*) good "bottle-milk" "turned" after fifteen hours.

8. Milk boiled in a pot in the usual manner and placed in the ice-box in an open dish: (*a*) ordinary store-milk "turned" after eighteen hours; good bottle-milk "turned" after twenty-six hours.

Dr. Caille further concludes that:

The boiling of milk for twenty to thirty minutes under slight pressure, in small bottles hermetically closed, is all that is necessary to practically carry out the principle involved in sterilization; *i.e.*, to destroy the germs of fermentation.

The essential materials are, small bottles with Soxhlet's stoppers and a tray.

Milk boiled in small bottles for twenty minutes and immediately closed by rubber, cork, or cotton stoppers, will keep sweet, if put on ice, for several days.

The boiling of milk in the ordinary way is faulty. All milk for infants' and children's use should be boiled in small bottles in a water-bath for twenty minutes, when it will keep much longer than if boiled in the ordinary way and the usual length of time.

The transportation of milk should take place in refrigerator-cars during the summer months. This should be secured by legal enactment.

The indications for the use of sterilized milk are believed to be the following:

1. Sterilized milk should be administered to all children deprived of the breast.

2. It may be given to children suffering from diarrhœa or convalescent from cholera infantum, when milk boiled in the ordinary way is not tolerated.

3. A supply of sterilized milk is of the utmost importance for children while travelling.

The fact that sterilized milk is sure not to ferment for a considerable period of time must recommend it strongly. On the other hand, it is believed by some that boiled milk has lost some of its more delicate properties as a food.; and as between fresh milk and sterilized milk, we think that no one will hesitate to prefer the former.

THE HEMI-LATERALITY OF RHEUMATISM.

THE theory that acute articular rheumatism has a nervous origin is an old one; and, although not yet accepted, there are, not infrequently, striking observations reported which show at least a close relation between the nervous centres and rheumatic manifestations. Some two years ago Dr. Cazalis made a communication to the Paris Académie de Médecine in which he asserted that in two-thirds of the cases of ordinary chronic rheumatism it was found that the manifestations, during a large part of the course of the disease, were mainly on one side of the body, and oftener on the right. He also asserted that the pulmonary and pleuritic complications of acute rheumatism were oftener on the right side. He further called attention to a symptom of chronic rheumatism which, he says, is little known, viz., a deformity of the great toe; and he asserted that this predominates on the side of the hemi-rheumatism.

The same author has recently cited two cases (*L'Union Médicale*) which still further support his view of the tendency of rheumatism to hemi-laterality. One of these was a patient of Professor Verneuil, who suffered for a long time from that peculiar form of rheumatism known as multiple ephemeral periostitis. During the whole course of the malady, which lasted several years, the shifting pains and nodes continued to be upon the right side. The patient was finally cured by an anti-rheumatic treatment.

The second is a case of a woman who during several years had manifestations of rheumatism only upon the left side.

The view of Dr. Cazalis is that rheumatism, like chorea and hysteria, has a tendency to develop chiefly on one side.; and this tendency is thought to be an important evidence of the dominating influence of the nervous system on the development of rheumatic symptoms.

News of the Week.

PROFESSOR WILLIAM H. WELCH delivered an address on medicine before the Yale Medical Society on June 26th.

DR. EGBERT H. GRANDIN has resigned from the Department of Gynecology at the New York Polyclinic.

AN INTERNATIONAL CONGRESS OF DERMATOLOGY AND SYPHILOGRAPHY is to be held in Paris, August 15 to 22, 1889. At this time will occur the official inauguration of the new Museum of the Hospital St. Louis.

THE VERMONT STATE MEDICAL SOCIETY holds its semi-annual meeting at St. Alban's, Vt., June 28th and 29th.

A COLLEGE WHOSE DIPLOMAS ARE SIGNED BY THE PRESIDENT OF THE UNITED STATES.—Professor Austin Flint says that there is a medical college [in Washington] which recently graduated a class of one: "This college has seven professors, one demonstrator, and one lecturer. For the convenience of students occupied in other pursuits during the day, all the lectures are given in the evening. The college requires a matriculating examination, and has a 'graded course' of three years. It is the medical department of a university, and, in addition to the clinical and other advantages enjoyed by its students, the diplomas from this school are signed by the President of the United States."

UNDER THE FOSTERING influence of the ethical rules laid down by the American Medical Association, there is growing in the West a practice of physicians advertising themselves as specialists in the medical journals. One gentleman who edits a journal takes half a page in his own and other journals to announce that he is professor of diseases of the mind and nervous system, with various peculiar qualifications for treating such diseases. "Terms reasonable—reduced rates, if necessary."

QUARANTINE AT SAN FRANCISCO.—The *Pacific Medical and Surgical Journal* says: "San Francisco claims a population of more than 300,000, and boasts of being the leading city of the Pacific coast of America. Its quarantine establishment consists of a steam-tugboat and one medical officer, now temporarily supplemented by an assistant, for whose compensation there is no legal provision! No apparatus for disinfection nor accommodation for people under detention has been provided, for the law-making powers have furnished no means. In their absence, the steamship companies employ hired vessels anchored in the bay, where these persons, sometimes numbering hundreds, are maintained at heavy expense, estimated at about $150,000 for the months of February, March, and April."

The American Neurological Association will hold its next annual session at Washington, September 18, 19, and 20, 1888. There will be discussions on "The Relation of Renal Diseases to Diseases of the Nervous System," "Cases of Trauma, with well-defined Lesions of the Central Nervous System," and on "Muscular Dystrophies." The following papers will also be read: "Post-hemiplegic Disturbances of Motion in Children," by Philip C. Knapp, M.D., of Boston; "Heat Centres in Man," by Isaac Ott, M.D., of Easton; "The 'Ape-fissure,' so called, in Man," by Burt G. Wilder, M.D., of Ithaca; "Clinical Report of Cases of Epilepsy following Cerebral Hemiplegia," by E. D. Fisher, M.D., of New York; "The Relation of Urinary Changes to Functional Nervous Diseases," by C. L. Dana, M.D., of New York; "The Differential Diagnosis between General Paresis, certain forms of Intracranial Syphilis, and the Cerebral Type of Disseminated Sclerosis," by Landon Carter Gray, M.D., of New York; "Report of a Case of Primary Lateral Sclerosis, with late Cerebral Symptoms, due to Cyst of the Floor of the Lateral Ventricle, with Microscopic Report," by Wharton Sinkler, M.D., of Philadelphia; "A Case of an Unusual Form of Myxœdema, illustrated by Photographs and Sections of Excised Tissues," by F. X. Dercum, M.D., of Philadelphia; "A Case of Alcoholic Multiple Neuritis, with Sections," by James Hendrie Lloyd, M.D., of Philadelphia; "Observations and Experiments respecting the Pathology of Neuritis," by James J. Putnam, M.D., of Boston. Dr. C. K. Mills and others will demonstrate specimens. "Myositis Subacuta Progressiva," by George W. Jacoby, M.D., of New York; "The Differential Diagnosis between Peripheral Neuritis and those Cerebral Affections with which it is most likely to be Confounded," by E. C. Spitzka, M.D., of New York; "Nervous Affections following Injury," by Philip C. Knapp, M.D., of Boston; "Hereditary Chorea," by Wharton Sinkler, M.D., of Philadelphia; "Aneurism of an Anomalous Artery causing Antero-posterior Division of the Optic Chiasm and Bitemporal Hemianopsia," by S. Weir Mitchell, M.D., of Philadelphia. To be read by F. X. Dercum, of Philadelphia, "A Case of Focal Epilepsy with Observations on Trephining," by James Hendrie Lloyd, M.D., of Philadelphia. The preliminary report of the Committee on Encephalic Nomenclature will be read by Burt G. Wilder, M.D., Chairman, of Ithaca.

James J. Putnam, M.D., *President*,
106 Marlboro Street, Boston, Mass.
Græme M. Hammond, M.D., *Secretary*,
58 West Forty-fifth Street, New York.

An Association of Undertakers held its annual meeting at Philadelphia recently. They were addressed by Dr. Joseph F. Edwards of the State Board of Health, who, we are told, created some consternation by asserting that the rising generation would make a nation of sanitarians.

"The American Dermatologist" is the name of a new journal published monthly at Indianapolis, and edited by Dr. Ralph J. Perry.

The "Schweninger" Treatment for Obesity is, as most physicians know, a treatment stolen by a quack, Schweninger, from the distinguished physician Oertel. It consists in a rigid limitation as to the amount and quality of the food, and the abstinence from water at meals. We are pleased to learn from the public press that Dr. J. W. Gibbs, a graduate of the Eclectic Medical College, and a politician, "was the man who brought the Schweninger system here, having gone over to Germany for the purpose of getting it, and purchased the knowledge of it from the originator."

Dr. Evander M. Ranney, of this city, died on June 22d, aged seventy-eight. Dr. Ranney was born in Vermont, and was a son of Lieutenant-Governor Ranney of that State. He was the eldest of a family of thirteen children, and one of the six of Lieutenant-Governor Ranney's sons who chose medicine for a profession. Two are still practising in this city.

Modern Electrical Science, in developing electrical lights and electric motors has also brought for consideration new problems in regard to the safety of human life. The electric arc lamps are supplied by currents of one or two thousand volts, and these are dangerous to life. It seems that in order to use milder currents which are effective, larger and more expensive cables are necessary. Hence it is, to some extent, the greed of money which makes electric lights dangerous. Very much the same thing can be said, probably, of electric motors. The cars run by storage batteries cannot be considered as at all dangerous.

The Kansas City Hospital College of Medicine, which, the *Kansas City Medical Index* says, was "the most disreputable medical college in the United States," after a period of apparent desuetude has been turned into a "pure homœopathic institution."

Narrow Escape of a Physician from Poisoning by a Cobra.—Dr. Vincent Richards, of Calcutta, an enthusiastic investigator in many different lines of medical research, had a narrow escape recently from poisoning by a cobra bite. He was holding a vigorous cobra in his right hand for the purpose of obtaining its venom. In pointing with his left forefinger to where some watch-glasses lay, he brought the part close to the animal's head. The snake made a sudden dart, and fastened its fangs just below the second joint. Retaining his presence of mind, Dr. Richards tore the reptile away and killed it. A tight ligature was at once placed on the proximal aspect of the wounds, which were sucked, enlarged by knife, allowed to bleed freely, and thoroughly mopped with a five per cent. solution of permanganate of potash; an India-rubber cord was bound around the wrist. A medical friend subsequently further enlarged the wounds, and applied strong nitric acid to them. The ligatures were cautiously removed after a time. No symptom of poisoning resulted except a slight tightness of breathing.

Vacation of Societies.—The various medical societies of New York take their usual recesses for two months.

Society Reports.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 28, 1888.

W. P. Northrup, M.D., President, in the Chair.

Dr. Eugene Hodenpyle presented a specimen of

EPITHELIOMA OF THE ŒSOPHAGUS,

with perforation into the posterior mediastinum, gangrene of the right lung, and acute pericarditis.

F. S——, aged thirty-six. Family and previous history negative. The patient stated that up to four weeks before his admission he was in good health. At that time he began to have difficulty in swallowing, and attempts to swallow solid food were frequently followed by regurgitation. When first seen he was able to swallow liquid food only, but a full-size bougie was passed into the stomach without detecting an obstruction. He rapidly became very much emaciated. The dysphagia became more and more marked, so that toward the close of the disease it was almost complete. Two days before his death it was noticed that the patient's breath was extremely offensive, and the presence of fluid in the right pleural cavity was made out. He died, January 27th, about two months after the first symptoms of his disease were noticed.

Autopsy.—The left lung was emphysematous, and the right lung had but two lobes. The pulmonary pleura was covered by a layer of dirty yellow fibrin, and in the pleural cavity there was about one quart of greenish-yellow serum, while at the base of the lung was a sacculated accumulation of clear serum. The lower lobe was consolidated, of a grayish-brown color, and granular on the cut surface. The upper lobe was collapsed. At the hilus of the lung was seen a large irregular cavity, with ragged edges, filled with a very offensive black fluid.

The pericardial sack contained two ounces of bloody serum, and both surfaces of the pericardium were coated with a thin layer of fibrin. The heart was otherwise normal.

At the cardiac end of the œsophagus was a large, raised, ulcerated mass, four inches in length, two inches and a half in width, and three-fourths of an inch in thickness.

It contained a slit-like perforation at its centre communicating with the posterior mediastinum. The calibre of the œsophagus was but little, if at all, constricted by the new-growth. In the posterior mediastinum the bronchial glands were enlarged and softened, and the surrounding structures were partially gangrenous.

Microscopical examination of the new-growth showed it to be an epithelioma containing a number of giant cells. The pneumonic area of the lung showed necrotic changes in places.

Dr. Hodenpyle also presented some specimens removed from the body of a man who was supposed to have been suffering from

PSEUDO-LEUKÆMIA.

The patient was sixty-two years of age. He was admitted into St. Francis Hospital on January 31, 1888, with a history of repeated attacks, during several years past, of diarrhœa, each attack lasting usually from one to three weeks. He had also had chronic bronchitis. He denied excessive drinking, and had never had rheumatism or malarial fever.

On admission to hospital he was examined for evidences of syphilis, with negative results. The inguinal, cervical, and epitrochlear glands were considerably enlarged and somewhat tender. The patient said that five weeks before his admission he had an attack of diarrhœa which had lasted up to the present time. He was now having about twenty loose passages a day, accompanied by some rectal tenesmus. Three weeks later his feet and legs became swollen. When first seen he was greatly emaciated and somewhat jaundiced. He complained of pain all over the abdomen, which was considerably distended with gas. No fluid was detected in it. The area of splenic dulness was increased. The liver was normal in size. The lungs showed lesions of general emphysema and bronchitis. The heart was normal. The urine contained albumen and casts. Pulse, 90 and small; respiration, 24; temperature, 99° F. Appetite good. No vomiting.

The patient became more and more emaciated, and finally died of pneumonia on February 16th.

Autopsy, eighteen hours after death. Lungs: There were slight adhesions of both lungs to the costal pleura, and one quart of clear serum was found in the left pleural cavity. On the pleura of both lungs were numerous white pin-head patches, not elevated and mostly in the centre of pigmented portions (multiple fibromata?). Lungs emphysematous, œdematous, and congested posteriorly; bronchi thickened and filled with muco-purulent fluid. There was little fluid in the pericardial sac. The heart-muscle was pale and flabby; the aorta was atheromatous.

There was no fluid in the abdominal cavity. The liver was somewhat enlarged, pale, and friable, and on cut section showed irregular yellowish-white, coarser, and finer mottling, and narrow irregular, whitish streaks.

The spleen was 16 ctm. long, 8 ctm. wide, and 7 ctm. thick; its surface roughened by patches of perisplenitis. The organ was hard, dark red in color, mottled with small irregular, whitish streaks and spots, and showed several dense, white, hard, irregular, wedge-shaped masses presenting the appearance of white infarctions. Some of these infarctions were red in the periphery and some were of reddish color throughout.

The pancreas was enlarged and hard.

The kidneys were of normal size and consistence. The left contained a small cyst. Cortex slightly thickened. Markings indistinct. Capsules adherent.

The supra-renal capsules were hard.

The solitary glands of the stomach, especially those about the pylorus, were swollen, and near this orifice was a soft tumor about two centimetres in diameter. The small intestine contained swollen solitary follicles and Peyer's patches.

In the large intestine, the solitary follicles were seen to be considerably swollen, the centres being depressed and blackened. Scattered about in the mucous membrane were a large number of spheroidal or more or less irregular nodules, occasionally pedunculated, varying from one-half c.c. to two or three c.c. in size.

The mesenteric glands were enlarged and soft.

Behind the peritoneum and surrounding, but not involving, the great vessels, was a large, hard, yellowish-white mass, extending from almost up to the diaphragm above into the pelvis below, where it had partially surrounded the sigmoid flexure of the colon, which was displaced toward the middle line.

The bladder was normal.

Microscopical examination.—The masses in the large intestine and those behind the peritoneum and in the stomach had essentially the same structure, being composed of large numbers of small spheroidal cells closely packed in a scanty connective-tissue reticulum, blood-vessels, etc. The enlarged mesenteric glands showed the lesions of hyperplasia.

The kidneys showed chronic diffuse nephritis, and the blood-vessels were partially filled with spheroidal cells.

The liver was thickly studded with masses similar in appearance to the tissue in the tumors of the intestine. Around the masses the liver-cells were flattened, pigmented, and fatty. The blood-vessels contained numbers of spheroidal cells. A similar condition was seen in the supra-renal capsules and the tissues surrounding them.

The spleen showed the usual appearances of white and red infarctions. There were enlarged Malpighian bodies and a great overcrowding of the cavernous veins with small spheroidal cells.

Dr. Prudden remarked upon the number and unusual size of the tumors in the large intestine. It was not known in this instance whether there was any increase in the number of the white blood-cells or not, and it could not be determined, therefore, with certainty whether the case was one of leukæmia or of pseudo-leukæmia.

Dr. Mendelson asked whether the spheroidal cells referred to were white blood-corpuscles or not.

Dr. Hodenpyle thought that they were.

Dr. H. M. Biggs presented a number of specimens illustrating

DISEASES OF THE CÆCUM AND VERMIFORM APPENDIX.

The first specimen was from a case of general peritonitis, following

SLOUGHING OF THE TIP OF THE VERMIFORM APPENDIX,

with the following history: The patient, a young man about thirty-three years of age, was seized at night with vomiting and diarrhœa, attended by marked abdominal pain. He had been well before this time. The physician who was called to see him supposed he had to deal with an ordinary case of gastro-enteritis, and treated him accordingly. Although he temporarily improved, he soon grew worse, the vomiting continued, and finally became fecal in character. Dr. Bryant was asked to see the case in consultation with Dr. Charles Simmons, the physician then in charge. At that time the abdomen was tensely distended and tympanitic. Patient had only a moderate elevation of temperature, a rather rapid pulse, fecal vomiting, and severe pain referred to the epigastrium. The tenderness was not very marked and was not localized. A diagnosis of general peritonitis, due probably to perforation of the vermiform, was made. The patient gradually sank and died.

At the autopsy a general peritonitis was found, with great matting together of the coils of intestines and considerable thick fibrino-purulent exudation. Scattered here and there between the coils of intestines were found numerous small pockets of pus. After a very careful search, the stump of the vermiform was found with its end sloughed off. In the peritoneal cavity was a small hard, fecal mass, which had evidently been the cause of the trouble. There was no apparent attempt at the incapsulation of the exudation around the cæcum or localization of the process. The vermiform projected from the inner side of the cæcum freely into the peritoneal cavity.

The second case, seen with Dr. L. M. Yale, was also one of vermiform sloughing, with

FECAL MASSES IN THE PERITONEUM.

The main points in the history were as follows: A boy, sixteen years of age, came home from school feeling unwell, and remained at home for this reason. He was first seen February 4th, but was taken sick two or three days before, at night, with severe abdominal pain. When first seen he had some elevation of temperature, abdominal tenderness, and slight tympanites. There were exaggerated nervous symptoms present at this time that rendered an immediate absolute diagnosis impossible. The patient was again seen at 6 P.M. on the same day, and a diagnosis of general peritonitis, probably following vermiform perforation, was made. Dr. Janeway saw him the same evening, and agreed with the diagnosis. There was no localized pain or tenderness. Dr. Sands saw the boy the following day, and made the same diagnosis. Patient died five days later. There was occasional vomiting during the sickness. Toward the end all abdominal tenderness disappeared.

At the autopsy, a general peritonitis was found. The coils of intestines were firmly matted together, and a moderate amount of fibrino-purulent exudation was found in the peritoneal cavity. The last four inches of the vermiform had sloughed off and lay loosely in the peritoneal cavity. This contained three small hard, fecal masses.

Lying near it in the abdominal cavity was another large hard, fecal mass, that had apparently been situated at the point of sloughing. The vermiform had evidently extended freely downward and inward. There was no apparent attempt at a localization of the process.

Dr. Biggs then presented a third specimen, showing

PERFORATION OF THE VERMIFORM APPENDIX.

The case was seen with Dr. W. T. Jenkins, Deputy Coroner. The death was reported by the physician in charge as having resulted from general peritonitis following the production of abortion. There was no history of an abortion, but the symptoms and condition aroused the suspicions of the physician in charge. The patient was a servant-girl, aged twenty-five. She was suddenly seized with severe abdominal pain during her menstrual period. The physician who was called to see her made a diagnosis of general peritonitis, and, from the presence of metrorrhagia, the fact that the girl was unmarried, and some evidence of a circumstantial character, concluded that the case was one of criminal abortion, and he so reported it to the Health Board. The autopsy revealed the presence of general peritonitis resulting from perforation of the vermiform appendix. A small mass of hard fecal matter was found in the peritoneal cavity. The vermiform extended freely out into the peritoneal cavity, and the point of ulceration, which was about one and a half inch from its origin, was only partially covered by peritoneal exudation.

Another specimen shown was one of a

LONG VERMIFORM APPENDIX,

measuring nearly nine inches in the fresh condition. It arose just below the ilio-cæcal valve, passed directly upward behind the iliac mesentery, being extra-peritoneal until just above the beginning of the mesentery, when it became intra-peritoneal, and continued its course up inside of the ascending colon as far as the under-surface of the liver, when it turned forward, lying underneath the liver.

In the next specimen there was

OBLITERATION OF THE OPENING OF THE VERMIFORM

just at its origin. Following this, an accumulation of the secretion from the mucous membrane lining occurred and produced an enormous dilatation. In the fresh condition it was considerably more than an inch in diameter and about four inches in length. There were no symptoms (so far as known) during life resulting from this condition.

The next specimen was one of

PERITYPHLITIS WITH PERFORATION INTO THE ASCENDING COLON.

The clinical history of the case was rather obscure. It was supposed to be a case of psoas abscess for some time. Pus was passed by the bowel. At the autopsy there was found a large abscess-cavity extending far up along the ascending colon and displacing it to the left, with extensive induration in the connective tissue. After a careful search, a communication between the cavity and the ascending colon was discovered. This was situated just below the pelvis of the right kidney.

Dr. Biggs then reported another case,

RUPTURE OF THE RECTUM,

the specimen of which he was unable to present at the time. The patient had suffered for a long time with symptoms of intestinal obstruction, supposed to be due to stricture situated at the upper portion of the rectum, or in the sigmoid flexure. Patient had not had a movement for about ten days when, after various means had been tried to move the bowels, a manual examination of the rectum was made under ether, and an enema of ox-gall was afterward given. The patient complained of severe abdominal pain after coming out from ether, soon went into collapse, and died twenty-four hours later.

At the autopsy a rupture through the anterior wall of the rectum was found, about four inches in length, and the ox-gall enema was mingled with the inflammatory exudation following a general peritonitis. At the junction of the descending colon with the sigmoid flexure was found a slight stricture with a large ulcer, the base of which was formed by the peritoneum. Surrounding it in the peritoneal cavity, loosely incapsulated by the agglutination of the coils of the intestines by the exudation, was a small pocket of pus. On the inner surface of the cæcum, just above the base of the vermiform appendix, was a second ulcer that had extended through the peritoneum, and which opened into a small intra-peritoneal pocket of pus, similarly incapsulated by the agglutination of the surfaces of the peritoneum. These two pockets of pus would probably both have opened soon into the abdominal cavity and produced a general peritonitis, had not the rupture of the rectum and the ox-gall enema earlier completed the clinical history of the case. The ulcers were apparently simple, and the remainder of the mucous membrane of the alimentary tract was entirely free from disease.

The last specimen was one of

IMPACTION OF A FOREIGN BODY IN THE VERMIFORM APPENDIX.

It was found accidentally at an autopsy when, so far as had been known, there had been no symptoms of any kind referable to this region. It was firmly fixed in the appendix, and the history of the other cases would have probably been repeated in this, had not an intercurrent disease cut short the life of the patient.

Dr. Biggs then concluded as follows: "During the last two years I have examined and noted, in the autopsy- and dissecting-room, the relation, condition, position, etc., of the vermiform appendix in nearly two hundred cases. I have also had a number of autopsies on other cases quite similar in all respects to those described, and, as a result of these examinations, I have come to the conclusion that, in a very large proportion of the cases of general peritonitis following ulceration and perforation of the vermiform appendix, the condition was the result of the impaction of a large foreign body in an appendix that extended freely into the peritoneal cavity, having a long mesentery and being easily movable. It is under such conditions that there are present the most favorable influences for the expulsion of any foreign matter that may make its way into the appendix. When thus situated the vermiform is moved about freely in the abdominal cavity by the peristaltic movement of the intestines, and through this constant change in position its own muscular walls are most favorably placed for expelling any matter that may make its way into its lumen. Consequently, impaction only occurs when a body of considerable size (so large that it cannot be expelled) is formed, or finds its way into the cavity. Thus the same conditions that at first made such a vermiform less liable to disease now place it under the most unfavorable conditions, so far as the patient is concerned. For the constant motion of the intestines prevents the formation of any adhesion around the appendix as the ulceration extends through its walls, and, finally, when perforation occurs, a direct communication with the abdominal cavity is at once established, and a general peritonitis is the result. I believe further that in most cases, at least where general peritonitis follows vermiform perforation, there is a direct communication with the peritoneal cavity from the first. It does not follow secondarily from rupture of an abscess into the cavity, and any operative interference, to be successful, must be early resorted to.

"As further evidence that this is the case, I would note that in cases where the vermiform is freely movable there are rarely evidences of disease or changes in its mucous membrane; while, on the other hand, when the appendix has a short mesentery, or no mesentery at all, or lies back of the cæcum coiled up and fixed in its position, or when the end is bound down at an angle with the body, there are very frequently evidences of disease in the mucous membrane. It is in such cases that there is the greatest difficulty in expelling any foreign matter that may make its way into it, and it is also in such cases that disease with ulceration, etc., is most frequent. But under these conditions the appendix is practically immovable, and before perforation occurs adhesions have formed that shut off the abdominal cavity, the process extends out into the peri-cæcal connective tissue, and perityphlitis results. Consequently this is a far more frequent result of disease of the appendix than general peritonitis. I would not, however, be understood as inferring that none of these cases result from disease of the cæcum, for some of both forms undoubtedly have their starting-point here.

"As an interesting point in the clinical history of the reported cases of general peritonitis following perforation of the appendix, I would call attention to the absence of local pain and tenderness, and the reflection of the pain to the epigastric region."

Dr. Biggs also showed a specimen of rupture of the left broad ligament, occurring in a case of criminal abortion. The greater part of the fœtus, which was at about the fourth month, lay between the layers of the broad ligament. The rupture of the uterus had begun about three-fourths of an inch above the external os.

Dr. Hamilton presented a specimen of

MULTIPLE DIVERTICULA OF THE SIGMOID FLEXURE,

removed from a man aged forty-five, who had died of chronic phthisis. The small intestine was normal. Lying on the outer surface of the sigmoid flexure, between the longitudinal muscular bands, were about a dozen spherical bodies, varying in diameter from one-sixteenth to one-half inch. On cutting into one of them it was seen to have a thin wall and to contain hard fecal matter; it communicated by a narrow channel with the interior of the intestine.

A microscopic examination of one of these diverticula showed that its wall was similar to that of the sigmoid flexure, but that the mucous membrane was compressed and flattened by the fecal contents, and the muscular layer was quite thin, and in places entirely wanting. It was evident that they were formed by a protrusion of the mucosa through the muscular coat. Diverticula in various portions of the intestines are recorded in pathological literature. Dr. Hamilton thought that the case was noteworthy for several reasons: First, the lesion was in the sigmoid flexure, where large fecal masses may accumulate. Second, a complete analogy existed between this lesion and diverticula of the bladder. Lastly, a possible result of such a lesion might be perforation, producing peritonitis and death.

Dr. Mary A. D. Jones presented two specimens of

TUMORS REMOVED FROM THE PELVIS.

The first patient gave a history of abdominal pain and distress extending over many years, and unrelieved by treatment. In fact, so much did the patient suffer that she said, the day before the operation, that if she was told that she had but one chance in twenty-five of recovery she would take that chance and have the operation. Examination showed the uterus pulled to the extreme right by shortening of the right broad ligament, and in the centre of the floor of the pelvis a soft tumor, exquisitely painful and evidently the seat of fluctuation. A diagnosis of an ovary enlarged by an abscess was made. The patient was successfully operated on by abdominal section, and both ovaries and tubes removed.

The specimen exhibited showed a portion of the left ovary to be of a hard, nodular, cheesy consistency, and the rest of it converted into a large pus-cavity, a portion of whose walls was almost of the thinness of paper; the danger of rupture, with possibly serious results, being obvious. Both tubes were in a state of chronic salpingitis. The right ovary was one-fourth of normal size and cirrhotic.

The second patient also had a fluctuating tumor in the pelvis adherent by strong adhesions. A first examination gave the impression of an enlarged and extremely retroflexed uterus, and so it had been diagnosed; but its softness and the sound passing into the uterus in the normal direction made the presence of an enlarged tube very probable. On operation the tube was found to be of the size of an orange, and completely adherent to the posterior part of the uterus and the wall of the pelvis. After separation of the adhesions, and as the mass was being lifted out of the abdominal cavity, it ruptured and quantities of dark clotted blood escaped. The patient made a good recovery.

The specimens showed the left tube to be closed at its distal end, and enlarged to three and a half inches in diameter and filled with blood; it was adherent to the left ovary. The right appendages were also bound down by adhesions, the tube adherent to the ovary and closed at its fimbriated extremity. Diagnosis, pyo-salpingitis.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 3, 1888.

Abraham Jacobi, M.D., President, in the Chair.

By vote the name of Dr. Cornelius R. Agnew was enrolled on the list of benefactors of the Academy.

At this and its last meeting the Academy came into possession of two portraits, one of Dr. John W. Francis, President of the Academy in 1848 and 1855, and the other of the late Dr. Samuel A. Purdy.

Dr. A. R. Robinson read a paper entitled

SOME STUDIES ON THE SWEAT-GLANDS.

The gland proper of the sweat-gland, which lay in the corium or subcutaneous tissue, consisted of the lower portion of the sweat-apparatus coiled upon itself, the tube terminating in a blind extremity. The duct included all that portion of the tube above the gland portion, and extended upward and opened on the surface. After further describing the structures composing the sweat-glands, and the different views of their functions, Dr. Robinson recorded some of his studies on the time and mode of development, origin, and arrangement of the structures composing the glands, their function, and certain pathological conditions observed by him.

With regard to the earliest period at which the sweat-glands commenced to develop, as in the case of the hair, bones, etc., it differed in different portions of the body; but it was probable that, in those regions where they attained their greatest development, and where present in greatest number (the palms of the hands and soles of the feet), they commenced to form first. According to Kölliker, the first sign of their development was found in the hands and feet in the fifth month of fœtal life. This was also the view of Ranvier, Klein, Biesiadecki, and others. Dr. Robinson, however, presented drawings from a section of the end of the finger of a fœtus of the eleventh week in which sweat-glands were forming, corresponding to the description of them given by Kölliker and others, *i.e.*, consisting of cones of epithelial cells, having their origin primarily from the lowest cells of the rete mucosum. There could be no mistake about the age of the fœtus. It could fairly be supposed that the sweat-glands commenced one week earlier than the abortion, or at the tenth week. He was unable to find any indication of their presence in the middle of the finger or palm. It was generally stated that the sixth month was the earliest period at which the coil part and lumen formed, while the majority of writers gave a much later period. According to the speaker's observations, at four and a half months of fœtal life the lumen already extended in some of the glands to the surface. Further, he had found that the sweat-glands opened on the ridges, where these were present, and on portions of the body deprived of them the sweat-duct was in a depression of the general surface.

Dr. Robinson thought the best division of the sweat-gland was not into the coiled part and duct part, but the secreting and the duct part, the division depending in the latter case not upon the course of the tube but upon its structure.

Regarding the formation of the lumen, different opinions prevailed. The earliest sign of preparation for lumen formation was found to be the presence of a deeply stained space between the epithelial cells about the neck portion of the retort-shaped extremity. A substance was evidently secreted which occupied the central part of the tube, and colored deeply with gold chloride. There were no signs whatever of any of the epithelial cells breaking down at this or any subsequent stage, notwithstanding such was the method of formation of the lumen, as claimed by some writers. The lumen did not always commence to form in exactly the central part of the tube, although never far from it.

Regarding the cuticula, Dr. Robinson said the excretory duct in the corium had a distinct cuticula its entire length, and this was continued very frequently within the epidermis to near the granular layer, when it ceased to exist, and the lumen was afterward lined with flattened epithelia. He had found a distinct cuticula in the rete in some cases and no trace of it in others. That the cuticula could not consist of endothelial cells, as claimed by Czerny, was evident from the fact that it developed after the lumen had attained a considerable size, and no cells were to be detected internal to the epithelial cells forming the lining, consequently their only source could be from the inner epithelium.

Regarding the epithelia, all agreed that the secreting part of the gland had a single layer, columnar or cuboidal in shape, but with regard to the duct part there was a difference of opinion, Heitzman and Biesiadecki describing only one layer of epithelial cells, while Ranvier, Klein, and others stated there were always two or more. The question was not easy to determine. Dr. Robinson, however, had found that where the tube was greatly distended only one layer existed, but that would not be positive proof of the normal condition. Transverse sections in many drawings showed two or three rows of cells, but he doubted whether the cell-section was a thin, absolutely transverse one.

Regarding the muscular layer, he said that in the well-developed glands it was not difficult to see the layer of muscle-fibre lying between the epithelium and the membrana propria, and running parallel or obliquely to the long axis of the tube. Regarding the origin of the muscle-fibres, he offered reasons for not accepting Ranvier's view that they had their origin in the epithelium.

The general view of the function of the coil, or sweat-gland, was that it secreted sweat, but this view had lately been strongly combated, especially by Unna. That they produced the fat necessary to keep the general surface oiled, instead of the sebaceous glands, seemed very probable. That being the case, the disease called seborrhœa oleosa—shining, oily skin—probably was not an affection of the sebaceous, but of the sweat-glands. But the question arose, did they produce sweat also? This question he considered in connection with the pathology of some diseases of the skin. Diversity of opinion existed with regard to the cause of the lesion in miliaria and sudamina. One thought the dewdrop-like eruption was an exudative disease, and called it malaria, while another thought it arose from retained sweat, and called it sudamina. One regarded miliaria rubra and miliaria alba as a form of eczema, the exudation coming from the sweat-glands and papillæ of the cutis; another considered it an inflammatory affection of the sweat-glands, and the contents of the lesions as sweat-products; while a third thought lichen tropicus a different disease from miliaria rubra or alba, and so on.

In a case of sudamina, or miliaria crystallina, the vesicles were always in the corneous layer, the roof and base being formed of cells from this layer, and the sweat-gland duct always opening into it at the base. The sweat-gland in the duct and coil part showed no abnormal condition. The lumen of the coil was small, and the epithelial cells normal. In both of the two cases which he described there were circulatory changes in the vessels of the corium, the lesion was situated in the corneous layer, and was in direct communication with a sweat-duct, but no changes were observed in the coil part. There were no signs of inflammation in the gland, or of a simple hyperidrosis. The vascular changes would show a vaso-motor paresis caused directly or indirectly by a neuro-paralytic dilatation, and the vesicle contents as arising probably from exudation from the blood-vessels through the rete into the sweat-duct. If the vesicles existed several days, the vascular change became more marked, and some active inflammation occurred. Miliaria rubra and alba, according to these observations, were later stages of sudamina, which latter was the result of vaso-motor paresis, and not of disease of the sweat-glands.

Lichen tropicus he regarded as a form of eczema situated around a sweat-duct, and associated with hyperidrosis. The changes showed active function, and the clinical symptoms confirmed it, for profuse sweating was always present. The exudation and the anatomical changes were similar to those in ordinary acute eczema, but occurred especially around the sweat-duct orifice instead of around a hair-follicle or non-follicular region. If his arguments as to the contents of the lesions being sweat were conclusive, then the sweat-glands furnished them, and they must be sweat-producing organs.

There was an adenitis sudoripara resembling somewhat an eczema or dysidrosis in clinical character. It consisted primarily in a hyperidrosis, with secondary cyst-formation of the duct within the corium, caused probably by stoppage of the duct lumen, either by detached epithelium or mucoid material. The affection was a special one, and as it consisted in retention of sweat, he called it, when he first described it, a form of sudamina. It showed to him decidedly that the sweat-glands were sweat-forming organs, for there was accompanying a hyperidrosis a cyst-formation of the sweat-duct, with clear neutral or acid contents, in a situation far removed from the papillary blood-vessels or juice channels of the rete. He further related a case of cystic disease of the sweat-ducts with distinct clinical characters, which he thought went to support the view that the sweat-glands secreted sweat.

DR. DANA thought with Dr. Robinson that the sweat-glands secreted sweat.

DR. CHARLES HEITZMAN thought it would be contrary to all that had been known regarding muscular fibres to suppose they passed to the epithelial layer. He did not think Unna or others had given sufficient proof of sudoriferous glands secreting fat.

THE PRESIDENT remarked that in the case of the blood-vessels, if the muscular fibres extended to the epithelia, there being no membrane between, aneurism would readily occur. The condition when present was abnormal.

Action on the proposed amendments to the constitution, to extend the area of membership, was postponed until the first Thursday in June.

A REMARKABLE CASE OF FECAL ACCUMULATION is reported by Dr. R. Worrall in the *Australasian Medical Gazette*. The patient was a girl, aged thirteen, of a cachectic appearance, who had a rapidly growing abdominal tumor. Aperients were given, and for several days a large quantity of very offensive fecal matter was discharged, but without any noticeable effect in reducing the volume of the tumor. As the child was evidently sinking, it was determined to make an exploratory laparotomy, the supposition being that the tumor was malignant. On opening the abdomen, however, the swelling was found to be an enormous accumulation of fæces in the cæcum and colon. The operation seemed to have had a stimulating effect upon the bowels, which acted almost continuously for a few days. In six days the tumor had entirely disappeared, and the child made a good recovery, her life having probably been saved by an error in diagnosis.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from June 17 to June 23, 1888.

WHITE, ROBERT H., Major and Surgeon. Ordered from Angel Island, Cal. to Fort Myer, Va. S. O. 142, A. G. O., June 20, 1888.

MUNN, CURTIS E., Captain and Assistant Surgeon. Ordered from Fort Klamath, Ore., to Angel Island, Cal. S. O. 142, A. G. O., June 20, 1888.

TORNEY, GEORGE H., Captain and Assistant Surgeon. Relieved from duty at Fort Monroe, Va., and ordered to Fort Randall, D. T. S. O. 142, A. G. O., June 20, 1888.

MCCREERY, GEORGE, Captain and Assistant Surgeon. Relieved from duty at Fort Meade, D. T., and ordered to Fort Monroe, Va., for duty. S. O. 142, A. G. O., June 20, 1888.

GORGAS, WILLIAM C., Captain and Assistant Surgeon, Relieved from duty at Fort Randall, D. T., and ordered to Fort Barrancas, Fla. S. O. 142, A. G. O., June 20, 1888.

MORRIS, EDWARD R., First Lieutenant and Assistan Surgeon. Leave of absence granted in S. O. 61, May 28 1888, Department of Arizona, extended one month. S. O 142, A. G. O., June 20, 1888.

POINDEXTER, J. D., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month. S. O. 55, Department of Dakota, June 18, 1888.

SWIFT, EUGENE L., First Lieutenant and Assistant Surgeon. Ordered from Fort Spokane, W. T., to Fort Klamath, Ore., for temporary duty. S. O. 142, A. G. O., June 20, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending June 23, 1888.

CRANDALL, R. P., Assistant Surgeon. From Minnesota and to the Saratoga.

SHIPPEN, EDWARD, Medical Director. Placed on retired list, June 18, 1888.

SAYRE, J. S., Assistant Surgeon. To the Navy Yard, New York.

BRADLEY, MICHAEL, Medical Inspector. Ordered to examination for promotion.

KERSHNER, EDWARD, Surgeon. Ordered to Marine Rendezvous, New York.

WHITE, C. H., Surgeon. Detached from Museum of Hygiene and wait orders.

TRYON, J. RUFUS, Surgeon. From Marine Rendezvous, New York, and special duty, New York.

MCCARTY, RUFUS, Passed Assistant Surgeon. From Naval Hospital, Chelsea, Mass., and to the Yantic.

HENNEBERGER, L. G., Passed Assistant Surgeon. From special duty, New York, and to the Minnesota.

KITE, I. W., Assistant Surgeon. From Yantic and to the Richmond.

WOOLVERTON, WHITE, WOODS, and DUBOIS, Surgeons. Ordered for examination, preliminary to promotion to the grade of Medical Inspector.

CREMATION IN BUENOS AYRES.—During the past year 993 bodies were cremated in that city, of which number 742 were of persons dead of cholera, small-pox, and other contagious diseases.

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THE

MEDICAL RECORD

A Weekly Journal of Medicine and Surgery

EDITED BY

GEORGE F. SHRADY, A.M., M.D.

SURGEON TO ST. FRANCIS HOSPITAL, NEW YORK; CONSULTING SURGEON TO THE NEW YORK CANCER HOSPITAL, TO THE HOSPITAL FOR RUPTURED AND CRIPPLED, NEW YORK; AND TO THE HOSPITALS OF THE HEALTH DEPARTMENT OF THE CITY OF NEW YORK.

Volume 34

JULY 7, 1888—DECEMBER 29, 1888

NEW YORK
WILLIAM WOOD & COMPANY
1888

Trow's
Printing and Bookbinding Company,
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New York.

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Societies from which Reports have been received.

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Society of German Physicians of New York.
Surgical Society of Paris.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 1 New York, July 7, 1888 Whole No. 922

Original Articles.

A STUDY OF THE ARTERIES AND VEINS IN BRIGHT'S DISEASE.[1]

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For some time past my clinical observations made annually in the wards of a large general hospital have led me to feel how unsatisfactory is our present understanding of the cause of many forms of heart disease, and of the mode of origin of Bright's disease, and at the same time how difficult it is to arrive at a satisfactory understanding of a case in which these two apparently far apart diseases are, as so commonly happens, coexistent. The intimate relation of disease of the two organs is so well known that for some years medical literature has been filled with various theories to explain how the one is dependent upon or caused by the other. As a result of the observations of Bright it soon became well known that hypertrophy of the heart—and it was said of the left ventricle in particular—was very commonly associated with disease of the kidney; and naturally enough it was thought, as the clinical history of such cases demonstrated the existence of kidney disease long before that of the heart became known, and often the heart disease was not suspected at all before the autopsy was made, that the heart disease was entirely dependent upon, and caused by, that of the kidney, and complicated theories were brought forward to explain how the train was set in motion, and the various steps from its inception to its final development. Soon clinical medicine demonstrated that in many cases in which the coexistence of heart and kidney disease was undeniable the history occasionally proved beyond peradventure that heart disease had existed before there was any suspicion, much less evidence, of disorder of the kidney. New theories were required to explain this condition, and they were soon found, principally in the results of congestion of the internal organs, and of the kidneys in particular it was assumed, which was a necessary result of disordered action of the heart. Another step was the observation that the two organs—heart and kidney—are connected by an immense vascular highway, the arterial system, which was found in many instances to partake in the disease; for atheroma of the arteries, more or less extensive, is a common accompaniment of combined heart and kidney disease. Parenthetically it may be observed here that it is curious that comparatively little is to be found in medical literature in regard to the state of the venous system, either in the form of study of its physical condition, or of theory in regard to what might be expected to happen to the veins, though the rest of the subject has been from many points of view somewhat overloaded with theories. This is strange, when it is recollected that the venous highway connecting the two organs is just as large and fully as important as the arterial. The observations of Dr. George Johnson of the hypertrophy of the muscular coat of the arteries of the kidney, and later of the same hypertrophy in various other tissues and organs in cases of red granular contracted kidney, and those of Virchow of the state of the arteries in amyloid disease, constitute important landmarks in the development of our knowledge of the whole subject, and this though there has been, and is, great difference of opinion in regard to the interpretation of the various facts observed. The paper of Gull and Sutton upon the so-called arterio-capillary fibrosis was the first systematic attempt to show that many cases which had previously been called Bright's disease of the kidney were, in truth, due solely to changes which had their origin in the arteries and capillaries, and in the connective tissue in which they lie. This was a bold step in advance, and has done much toward leading to a clearer comprehension of the complaint by ridding the minds of pathologists of the idea that the disease was Bright's disease of the *kidney*, and that in that organ alone must they dare to seek for the original source of the pathological train. The observations of Gull and Sutton, though of great value in thus clearing the atmosphere of this old doctrine, have not been borne out in other respects by subsequent and more extended observations. Their assertion that the origin of the vascular changes is to be looked for in the adventitia of the arteries and in the capillaries can hardly be considered to have been substantiated. With regard to capillaries our present means for their study are not satisfactory, and little has been even asserted, up to the present time, of their diseases, except that in some cases it has been considered that the walls of the Malpighian tufts of the kidneys were thickened, and again, that there was in various organs increase of the perivascular connective tissue. So far as the first assertion is concerned—that the walls of the Malpighian capillaries are thickened—it cannot be considered as having been proved, though it is exceedingly likely; and for the increase of connective tissue it yet remains to be demonstrated that this is a part of, or even due to, the capillaries, with regard to the real physical condition of the walls of which we are still somewhat in ignorance. No attempt to study the condition of the capillaries in dead tissues, further than to trace their course, has as yet yielded any conclusive results. Nor has it by any means been demonstrated that the changes so extensively found in the arteries and arterioles have their origin in the adventitia.

The present state of knowledge of the complaint seems to be about as follows: It has long been known that in cases of albuminuria certain physical changes take place in the kidney, and that very commonly there is enlargement of the heart, and further, often there is atheroma of the larger arteries, which is more or less extensive as the case may be. It has, besides, been demonstrated that other changes, chiefly of a degenerative or atrophic nature, are found in many of the various organs and tissues of the body—namely, disease of the cerebral arteries, and of the arteries and substance of the spinal cord,[1] emphysema and slow inflammatory processes in the lungs, calcareous and allied forms of disease of the heart valves, degenerations of the coronary arteries, and fibroid change of the muscular substance, and various forms of disease of the liver and spleen. Such being the case, quite a number of the medical minds that have bestowed attention upon the subject have been struck with the idea, and have enunciated the belief that this hydra-headed disease, or collection of related diseases, as the event may prove it to be, had its origin in the arteries or capillaries, or both, though no one has as yet shown what the mode of origin is; Dr. Johnson, and those of his school, believing it to be one of the so-called blood-diseases which produces its first physical change in the secreting cells of the kidney, while Gull and Sutton, and their following, equally strenuously uphold the opinion that the disease has its origin in the adventitia of the arterioles, and in the capillaries and perivascular connective tissue.

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[1] Read before the College of Physicians of Philadelphia, June 6, 1888.

[1] Gull and Sutton: On Changes in the Spinal Cord and its Vessels in Arterio-capillary Fibrosis, Trans. Path. Soc., London, vol. xxviii., 1877.

The utter inadequacy of a diagnosis of valvular disease of the heart, or Bright's disease of the kidney, in cases of this nature, as at all descriptive of the real conditions, has pushed itself upon me so forcibly of late years that I have been in the habit of saying, and recording in my clinical histories, that these cases were of vascular origin. Sometimes it seems like the natural result of the advance of years, the machinery wearing out simply because it is too old; or, again, it is as if premature old age came upon the patient, or perhaps he is worn out by dissipation, or because he has earned his livelihood by some physical labor so severe that it necessarily speedily exhausts his vital forces and produces the physical disorganization. The absurdity of the old practice of endeavoring to elicit a history of rheumatism, and then, if the slightest account of joint pains during the past life could be had, of attributing the disease to that, I have long looked upon as the weakest explanation. It is now well known that rheumatism, instead of being, as was formerly thought, almost the sole cause of valvular disease of the heart, is but one of many, all of which are equally capable of producing it. Dr. Allbutt[1] long ago, in an able article, expressed his opinion that, in the large manufacturing town in England in which he lived, heart diseases in hospital practice were much more common among young men as the result of overexertion of the body than of acute rheumatism.

As clinical study has seemed to do little for me in the direction of showing what is the original physical change or pathological basis of the disease, but has merely taught me to be able to predict, with a good deal of accuracy, that, in addition to the well-known lesions in the heart and kidneys, other very widely diffused changes will be found if sought for after death, I have turned from the wards to the post-mortem room in the hope that thus some light might be shed upon the subject. In this way I have been led to the observation of facts which, I trust, may be worthy of the consideration of the profession. It is with a profound sense of the wisdom of Sir James Paget's observation,[2] that "medicine and surgery are eminently a science of observation; deductions from facts are always unsafe; I believe that they have done far more harm than good; and, for the most part, when sufficient facts have been collected and arranged, the general conclusions that may justly be drawn from them are nearly manifest," that I attempt to describe what I have seen. If I should be led into making deductions, and few men can resist the inclination, which seems a natural one to thinking beings, the already quoted wise saying must be remembered, and a sharp line drawn between that which is a result of observation and therefore fact, and what is merely theory or deduction.

The first things that strike one who reflects upon this combination of heart and kidney disease is the intimate connection there is between the two organs by the vascular system, the arteries and veins, and that if the disease begins in one organ and extends to the other, this must be the channel of communication; or that perhaps it does not originate in either, but in the blood-vessels, and secondarily extends to the organs. This latter preconception is rendered still more probable when it is remembered that degenerative changes parallel to those found in the heart and kidneys exist in many other organs and tissues, and it therefore becomes much more easy to believe that the vascular change is the cause and not the consequence. In pathological investigation, therefore, with a view to further elucidation in regard to the original cause, my mind has been occupied with the preconceived idea that the search must be prosecuted by study of the physical conditions of the arteries and veins, and perhaps the capillaries. This statement is made with the knowledge that wherever blood-vessels go they are accompanied by nerves, and that it is possible, and from a purely theoretical stand-point as likely, that the pathological lesions under discussion originate in the nerves as in the blood-vessels. Drs. Da Costa and Longstreth[1] have asserted that in Bright's disease there is a constant lesion of the renal nerve plexus, and have expressed their opinion that this lesion is the cause of the kidney disease, and have further suggested that a similar lesion may exist in other ganglia producing parallel effects, as, for instance, in the cardiac plexus, causing the hypertrophy of the heart. Though this is of course an explanation which may be correct, it has been by no means proved, and even if extended investigation should show nerve-lesions to be as constant a feature as are the blood-vessel changes, it remains to be discovered which, if either, is the real original cause, for upon purely hypothetical grounds the two are perhaps equally acceptable.[2]

In making somewhat extended post-mortem investigations the lesion I have found to be most constant and most extensively distributed throughout the tissues is disease of the arteries and arterioles, a condition in which, so far as my observations have carried me up to the present time, though I confess that the study has not as yet been exhaustive, the veins seem to participate. In regard to the condition of the capillaries I have nothing to say, for, as already stated, there is no known satisfactory method of studying their physical condition in dead tissues. It is a commonly recognized fact that in cases of the so-called Bright's disease there is ordinarily present a greater or less amount of atheroma of the larger arteries; and Johnson upon the one hand, and Gull and Sutton on the other, and when these names are mentioned it must be understood that all other observers who have either preceded or followed them in the same lines of investigation are included, have made extensive observations in regard to the state of the minute arteries in many of the organs and tissues of the body. Their conclusions have been quite different from those reached by me, though in the course of my investigations I have fallen upon appearances similar to those they have described. I have made sections from the brain, spinal cord, lungs, heart, liver, spleen, kidneys, and of various of the larger arteries and veins, and in all of them—except the spinal cord, and with regard to its condition my examinations have not been sufficiently numerous to be conclusive—have found quite constantly present an irregular overgrowth and thickening of the intima of the arterioles. This thickening varies very much in its anatomical characters and its extent, and often when it is present in high degree there is involvement of the other coatings, though ordinarily they have undergone no change. The morbid appearances will be better understood from an examination of the plates than would be possible from any written description. The condition appears to be nothing but that which is described in text-books of pathology as the various forms and stages of atheromatous change, but observers do not seem to have connected its existence with this disease further than to have noted that it was commonly present in the larger arteries. The appearances found differ much in accordance with the size of the vessel in which they are observed, and in different organs. In larger-sized vessels the more commonly understood atheromatous changes will most usually be found—misshapen vessels, calcareous deposits, loss of substance of intima, thickened patches upon the inner surface (these being often so extensive as to cause great obstruction to the blood-current, sometimes the lumen of the vessel being a mere chink at one side; see plate, Fig. 5), and where the condition has progressed to its full development, more or less destruction or alteration of the entire thickness of the walls. In smaller ones the changes are most commonly confined to increased thickness of the intima, which is not usually so irregular in degree at different portions of the circle as is the case in large arteries, though it is seldom absolutely uniform. The intima in such vessels, when examined in cross section, often has a thickness which will be half as great as, or even equal to, that of the muscular coat, but it may vary to almost any extent. This tissue, when examined under the microscope, appears to be composed of fibrous material, the fibres of which, when the vessel is viewed in cross section, appear to be circular, and in longitudinal sections to run lengthwise; there are, therefore, probably abundant fibres running in all directions, thus giving the tissue considerable strength. Contrary to what is commonly stated, I have usually found this morbid tissue to contain here and there numerous nuclear elements. In the larger vessels in particular, and where the patches of atheromatous thickening are large, they are often composed of a well-organized tissue containing numerous cells, which in their appearance and arrangement resemble granulative tissue, seeming disposed to arrange themselves in nests, as is common in young and rapidly growing tissues.

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[1] The Effects of Overwork and Strain on the Heart and Great Blood-vessels, St. George's Hospital Reports, v., p. 23.

[2] Address at Owen's College, Lancet, October 15, 1887.

[1] Da Costa and Longstreth: Researches on the State of the Ganglionic Centres in Bright's Disease, American Journal of the Medical Sciences, July, 1880.

[2] Since the above was written Dr. Da Costa has published another paper upon this subject, giving the results of microscopic examination of the cardiac ganglia in cases of Bright's disease, and announcing that extensive organic changes were found—The Middleton Goldsmith Lecture on the Relation of the Diseases of the Kidney, especially the Bright's Diseases, to Diseases of the Heart—Medical News, May 5, 1888.

The well-organized cellular outgrowth of the intima in these cases is identical with that which has been most frequently described as syphilitic endarteritis, and yet I have seen it in a number of cases in which there was neither a history of syphilis nor reason to suspect the existence of that disease. Examination of the endocardium and valves of the left heart often shows a condition precisely parallel to, and seemingly a part of, the same process, the evidences of which exist so extensively in the arteries. It seems positive that the endocardial and endarterial changes are but part of the same disease, and that this is the cause of the valvular changes which so frequently arise, complicating the trouble, and, when they exist, much hastening the inevitably fatal result. In examining the thickened patches of endocardium, and in sections of aortic valve flaps, thickened and distorted by the disease, there were found the same nest-like arrangements of cells described as existing in the intima of the arteries.

While the above-described conditions are those I have usually seen as a result of examination of the arteries, I have not, as a common thing, found the increased thickness of the muscular coat which is described by Johnson, and called by him a hypertrophy, to be present in such degree as to render its existence undoubted. Arteries may often be found in which it could be said that the middle coat was unduly thick, and, again, others, in regard to the state of which there might be dispute, but in most instances I have failed to find an increase so great that its existence could be considered to be beyond doubt. It is a much easier matter to be sure that the appearances described of the intima are morbid; for, in the natural state, in small vessels certainly, it constitutes but a very thin layer, and besides, when it is seen to be many times thicker, as happens in many instances, upon one side of transverse section of an artery than upon the other, there cannot be a shadow of doubt that such an appearance is pathological. This is very different from what is found in regard to the muscular coat, which, if at all thickened by disease, is uniformly so, and there is, therefore, nothing to contrast it with, and its state can be merely estimated as a matter of judgment. It is curious that in one case in which I made many sections (case of J. K——) of different organs and vessels, the only artery in which there was undoubted thickening of the muscular layer was one of the primary branches of the renal. In this vessel the intima was thickened to a slight degree, but much more so at some parts of the circle than at others, and the plicated membrane very distinctly visible around the entire circuit; the muscular coat, however, which was probably of twice the ordinary thickness in a vessel of such size, did not present the appearances which could be called those of true hypertrophy; for, although the muscle bands and nuclei were present and numerous, there were also visible very many other cells which were exactly like those described as so commonly found in the overgrown intima. These cells were, so to speak, wedged in between the muscle elements, and many of them were undergoing pigmentary degeneration. Sections of the abdominal aorta in this case, and of the minute arterioles in the renal substance itself, did not show any indisputable increase of the muscular coat, though there was in both overgrowth of the intima. To anyone who would wish to advocate Dr. Johnson's view, that increased thickness of the muscular layer is a true hypertrophy, and that it increases what he calls the "stop-cock" power of the arterioles, does it not seem strange that the only artery that showed undoubted increased thickness of the middle layer in this case should, in that very layer, present the marked evidences of a degenerative process, and that the vessel affected should be a very large one, to which, ordinarily, is attributed elasticity and not much contractility, while the minute arterioles of the kidney, the very citadel of the supposed condition, should present none of it, and all the vessels in the neighborhood should have plainly thickened intimas?

Fig. 9 represents two views of a minute artery removed from a kidney under a dissecting microscope. The upper one is intended to produce the same effect as Johnson's ("Medical Lectures and Essays," by George Johnson, 1887) picture, from the appearances of which he makes his assertion of the existence of hypertrophy of the muscular coat. The vessel was carefully dissected out, then split open with scissors, and mounted with the inner side up, thus showing half of the internal surface of the vessel and the thickness of its walls at the cut edges. No fibrous coat is distinguishable, and the same holds good in Johnson's figures, but the muscular coat and intima are very well shown. Whether the muscular coat is increased or not I think might well be disputed, as this layer in the walls of an artery of such size is always a marked feature in a picture; that the intima is increased in amount, and, as represented in the picture, irregularly so, there can be no doubt, though it might be said that this is due to the crude method of preparing the object, to dissect it out and then cut it with scissors. That such is not the case, however, and that the intima is actually thickened, and irregularly so, is made very plain by the other picture. This is a bit of the same artery, and the section was prepared by cutting off from the end, before it was split open, as thin a section as could be made with a pair of scissors, and it very well shows the thickened intima lying within the plicated membrane, which latter is not distinguishable at all in the longitudinal section. To my mind it becomes evident from the contrast presented in these two pictures that the change of the intima is a much more positive and unmistakable one, and one which in the nature of things is capable of producing quite as grave effects as that of the muscular coat, upon the existence of which in this vessel doubt may be cast; a change also which, even if in other vessels its existence is undeniable, is accompanied by degenerative processes so extensive as to render its proper classification as a true hypertrophy uncertain.

So far as the "fibrosis and hyaline-fibroid" condition described by Gull and Sutton is concerned, I have failed to discover it in its full development. They declare their belief, and try to prove, that the vascular changes have their origin in the fibrous coat, and describe a high degree of thickening of the adventitia as being usually present. There can be no doubt that there is great increase of fibrous tissue, and it is found more extensively developed around the blood-vessels, the place in which connective tissue exists more abundantly than elsewhere in all organs; but its appearances are more those of a general increase of perivascular connective tissue than of the adventitia of arterioles alone. And for the matter of that, how is it possible to decide, in any section examined with the microscope, where the fibrous material lying outside the muscular coat of an artery ceases to be adventitia and becomes perivascular connective tissue? The two structures are identical and shade into each other without any defined boundary. Nothing that answered the description of hyaline-fibroid change of arterioles has come under my notice except certain appearances presented by the vessels in sections of the spinal cord; in the thoracic and abdominal viscera I have failed to find it, and cannot comprehend why this should be unless it is, as stated by Johnson ("Medico-chirurgical Transactions," vol. lvi.), that their methods were faulty and that the use of glycerine and camphor in mounting produced the appearances described. In the spinal cord I have found arteries with walls that looked entirely structureless except for a few nuclei lying at the edge of the lumen of the vessel, and answered exactly to the appearances described and figured by Gull and Sutton ("London Path. Soc. Trans.," *loc. cit.*). It might be well to mention here, as a matter of interest, though I have no explanation to offer, and do not know if it had any bearing upon the condition, that in this same case, which was one of marked Bright's disease, the olivary body, and nucleus dentatus within it upon the right side, was much larger than the left, though no morbid condition of the tissue itself could be discovered upon either side.

In two cases in which I made extensive microscopic examination of the tissues, and they are the two from which the vessels represented in the plates were taken, I found morbid changes in the veins as well as the arteries. Atheroma of veins so extensive as that of the femoral, which is shown in Figs. 7 and 8, is not usually described as being common, though the occasional occurrence of the disease in veins is sufficiently well known. After the section from which the picture is made was prepared, it was found impossible to determine with certainty, from the microscopic appearances alone, that the larger vessel of the two was really a vein, so great is the thickening of the intima and fibrous coats, and it was only by a careful examination of the piece of tissue from which the section was cut, and the discovery of a well-marked valve in the vein, that an absolute conclusion was reached. The two vessels, which were removed from the upper part of the thigh together, were found to be rigid, like bony tubes, and it was only after decalcification that sections of them could be cut. The process of disease in this vein appears to have been exactly the same as takes place in arteries, some thickening of all the coats, perhaps, for when considering the state of the muscular layer it must be remembered how thin it is in a natural condition in veins, and of the intima in particular. It is a noticeable fact that the thickening of the intima varies very much at different parts of the circle of the vessel, in this respect being precisely parallel to what has already been so much emphasized as occurring in arteries. The structure of the intima also appears to be similar in character to that found in arteries. How the two inner coats became loosened from the fibrous one, as appears in the plate, cannot of course be known; but it may be that the breakage occurred in removing the vessels from their position in the thigh, for so rigid were they that it required the exercise of some force to remove them.

Fig. 12 represents a portion of a vein lying in the adipose tissue covering the front of the heart, and presents a condition of which I have never seen any description. In most of it the walls are very thin and the tissue of a very loose texture, but in the intima there are two spots opposite each other in which marked cellular outgrowth has taken place and the cells have in the most distinct way arranged themselves in nests precisely like those described as existing in the arterial system. When this is examined with a higher power the arrangement of the cells can be still more plainly distinguished.

In most of the veins I have examined in this disease, what has struck me most forcibly in them has been the tenuity of their walls and the looseness of texture of the material of which they were formed. This can be seen to some extent with the naked eye as well as by the aid of the microscope. I have found that it is not uncommon, if a vein is cut open, spread out flat, and then held up to a strong light, for the walls to vary much in thickness at different parts, and in some places to be exceedingly thin. In the case of J. K——, sections were made transversely across a large branch of the renal vein, and the walls were found to be so thin that it seemed astonishing how it could have been at all an adequate container of blood.

In regard to the structural condition of the capillaries, for reasons already mentioned I do not even pretend to an opinion.

It may perhaps now be permissible to attempt to draw some contrast of the general features of the two cases from which my illustrations were taken. That of J. K—— was made the subject of a short paper read before the Philadelphia Pathological Society in the early part of 1888, and published in the "American Journal of the Medical Sciences" for June of the same year, and it will therefore not be well to do more than sketch the outlines of the case again. It was one of typical aortic regurgitation in a man fifty-four years of age. The heart disease came on late in life and without the occurrence of any attack of rheumatism more than some vague joint pains, which never confined him to bed, and he died gradually of heart failure, without dropsy or anything to point to involvement of the kidneys, except that when he first came under notice there was a trace of albumen in the urine, without casts, which, however, soon disappeared never to return. After death there were found brown atrophy of the heart, fibroid degeneration, thickening of the endocardium and of the aortic valves, and in both of these the existence of the peculiar cell-growth which has been described. The arteries and veins of the heart presented appearances already mentioned (Figs. 11 and 12). The lungs gave evidence of some catarrhal inflammation and their arteries of thickening of the intima. The liver-cells were much degenerated, and the arteries as in the other organs. The kidneys exhibited evidence of parenchymatous disease, there were casts in the tubules, and the arteries showed the same change as found in vessels elsewhere (Figs. 9 and 10). The condition of the renal artery and vein, and of the abdominal aorta, vena cava, and a small branch of the cava have already been mentioned. There were large inflammatory bands in one of the iliac veins, causing obstruction in that vessel.

The case of J. C—— presented in many respects a contrast. He was fifty-one years of age, and had suffered with some shortness of breath and palpitation for three years. When admitted to the hospital, about two months before his death, there was great dyspnœa, amounting to orthopnœa, and of this he never got rid. Dropsy and difficulty of breathing increased, and his sufferings became worse and worse; nothing seeming to afford him any relief until, finally, he died, having suffered what was almost agony. The conditions were in all respects those usually regarded as typical of Bright's disease, except that no casts were found in the urine, though albumen was always present. Post-mortem examination showed that the heart and all its openings were much enlarged, there was extensive brown atrophy of the muscular substance and calcareous deposit in the base of the aorta and valve-flaps. The minute veins exhibited irregular thickening of the intima, and the condition of one of the arterial branches is shown in Fig. 5. The pleura was thickened and the lungs adherent; there was emphysema and some catarrhal infiltration, and the condition of a minute arteriole is represented in Fig. 3. The liver was in a state of fatty and granular degeneration, and the hepatic arteries and portal veins were much thickened and diseased. There had been inflammation around the spleen, binding it to the surrounding organs, and on section it showed marked fibrosis, and the arteries were much thickened, the intima markedly so. There was parenchymatous disease of the kidneys, the capsules were thickened, and there were infarctions, and the arteries diseased (Fig. 4). The radial artery and femoral artery and vein were atheromatous and calcified (Figs. 6, 7, and 8). The abdominal aorta presented distinct irregular thickening of its intima. In the spinal cord there seemed to be some degeneration of the nerve-fibres, particularly of the peripheral nerves, and the arterioles presented the characters described and figured by Gull and Sutton ("London Path. Soc. Trans.," *loc. cit.*) as hyaline-fibroid degeneration. The walls were composed of a material which under the microscope appeared structureless, except that a few nuclei lay at the inner edge. In the medulla oblongata, as already mentioned, the right olivary body and its contained nucleus dentatus was much larger than the left. The large artery running along the front and that upon the posterior surface both presented in marked degree the irregular thickening of the intima. Figs. 1 and 2 show the condition of the intima of one of the middle cerebral arteries. Sections of this vessel higher up, or rather of its branches after it had divided into three, exhibited irregularly thickened intima in two of them, while the third presented an appearance quite natural.

In these two cases the mode of death and the picture presented by the history of the last few years of life were as dissimilar as could well be, though in many respects the pathological lesions found were singularly parallel. Though in the first case the man died what would commonly be considered a typical heart death, and in the second an equally typical kidney death, and there should have been, reasoning from analogy, a great difference in the pathological lesions, such was not the case. It would be difficult, if not impossible, for anyone, from a study of the pathological lesions alone in these two cases, to say that the modes of death would have been in anywise different. The most important of these lesions, perhaps, were the changes in the heart and kidneys, and in respect of these the two cases were not materially unlike, and in both were found besides extensive changes in the arterial and venous systems, which, though presenting many points of difference, were yet only varying features of what seems to be primarily the same disease.

The disease seems to be very wide-spread in its early effects even, and may first reveal itself clinically by a cough if it takes possession first of the lungs, or by the symptoms of apoplexy, if the brain arteries are the earliest to suffer injury, or by epistaxis perhaps, which has always seemed to me to betoken just as positively a physical change of the arterioles of the nares, though of this there is no pathological evidence as yet, as does the apoplexy show that the brain-arteries are diseased. Often have I found, by the most careful inquiry into the clinical history in cases of typical Bright's disease, that the first symptom with which the patient has suffered has been cough, and it is a fact well known how often persons dying of apoplexy are found to have had Bright's disease, and it is equally well known how often epistaxis is the first warning given of the existence of kidney trouble. There is, however, no reason, except that Bright first drew attention to the existence of changes in the kidneys (and this is no reason at all), to suppose that the diversified lesions were all caused by the changes in either the secreting substance or in the arteries of the kidneys.

The fact that cerebral hemorrhage and epistaxis are such common accompaniments or symptoms of chronic Bright's disease seems to me the strongest proof that it should not properly be considered to be one of the kidney, for there exists at the present time no evidence to show that the kidney disease which sometimes, but not always, exists in such cases, originated before the blood-vessel change which was their direct cause, nor is there even a very plausible theory to strengthen such a hypothesis.

In conclusion, it may be stated that my desire has been to make clear, by language and pictures, the view that in the so-called chronic Bright's disease, we have to deal with one which is wide-spread in its effects; that the most characteristic and probably most important changes, so far as at present known, are those of the intima of the arteries, in which probably the veins always participate; that changes in the muscular coat and adventitia, though often present, are by no means so important in their effects, and probably are secondary to those of the intima; that the process seems to be coextensive with, and probably is a part of, the change in the large arteries which is so common and so well known as atheroma; and finally, that it seems likely, in the absence of proof that changes in the nerve-substance are a necessary accompaniment, or even if such were proved to be the case, the lack of knowledge that they antedated the disease of the blood-vessels, that the earliest of the now known pathological lesions to make its appearance is the change in the intima of the blood-vessels.

My paper must not be closed without an acknowledgment of my great indebtedness to Dr. B. A. Randall for the beautiful illustrations I have been enabled, through his skill, to present.

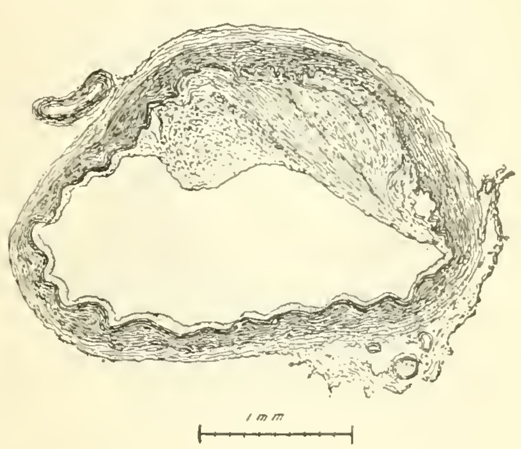

FIG. 1.—Case of J. C——. Middle cerebral artery, showing irregular outgrowth of intima. The accompanying vessels are somewhat enlarged; the adventitia and muscular coats are normal. The plicated membrane shows very distinctly around the entire circle. The intima is seen within the plicated membrane, and is thickened in the entire circuit: but at one side, and occupying about one-third of the circumference, the thickness is very great. At one portion of this mass there are numerous blood-corpuscles, entangled in the tissue, while at another there is distinct cellular structure. × 20 diameters.

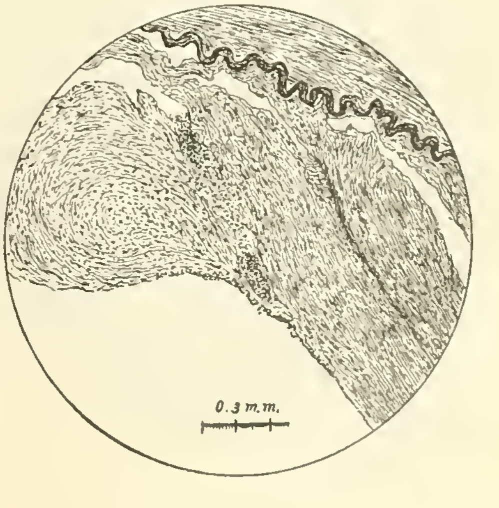

FIG. 2.—A portion of the same artery as Fig. 1, and showing the cell-growth and entangled blood-corpuscles, and that the general character of the structure of the most thickened portion of the intima is a fibrous material. The open spaces are probably due to tearing of the tissue in mounting. × 35 diameters.

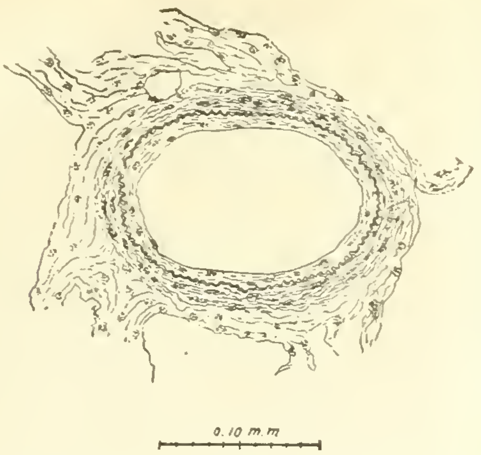

FIG. 3.—Case of J. C——. Minute arteriole from lung, showing great thickening of the intima, which contains a few scattered cells, though most of it consists of a homogeneous, structureless-looking material, quite different from the appearances seen in Figs. 1 and 2. The muscular coat and adventitia cannot be very satisfactorily differentiated, but they do not appear to be at all thickened. The plicated membrane is a marked feature of the picture. × 220 diameters.

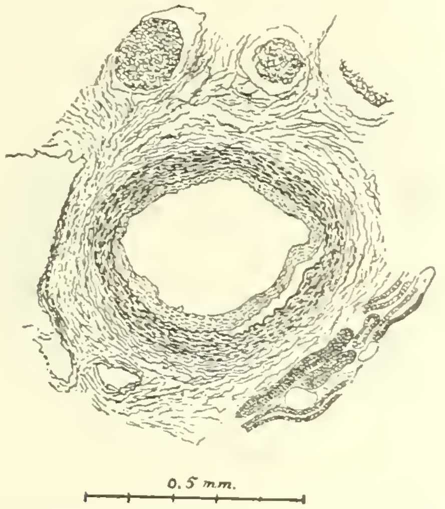

FIG. 4.—Case of J. C——. Minute arteriole from the kidney, showing great thickening of the intima, which is almost structureless, containing only a few scattered cells; there being in addition merely a few fibres running around the circle of the vessel. × 60 diameters.

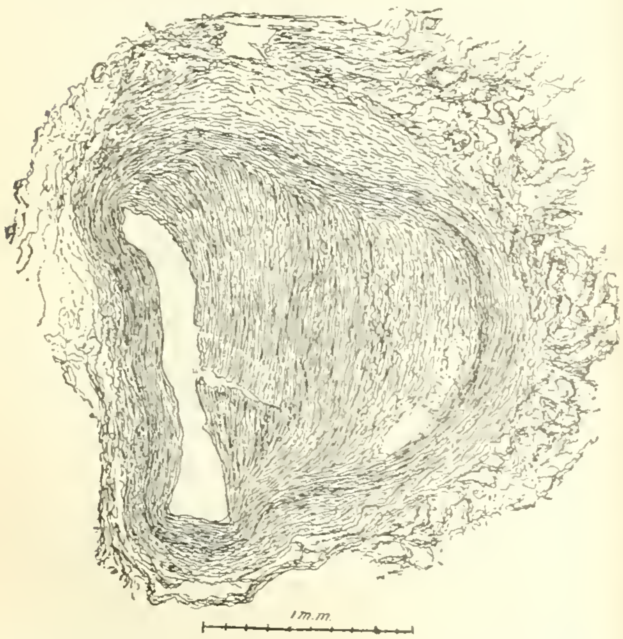

FIG. 5.—Case of J. C——. Branch of coronary artery from anterior surface of heart, showing almost the entire lumen of the vessel filled with an outgrowth, the opening being a mere chink. When seen with the amplifying power used in making the picture, this morbid material has, as represented, merely a fibrous appearance; more magnified, the deposit is seen to contain a great many cells and to be a well-organized fibrous growth. × 28 diameters.

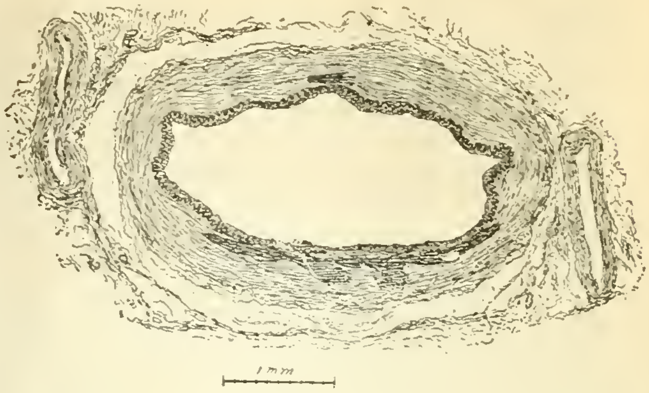

FIG. 6.—Case of J. C——. Radial with two accompanying arteries. It was so much hardened by mineral deposit that it had to be decalcified before sections could be cut. The differentiation of fibrous and muscular coats does not show well, perhaps owing to the soaking in acid to remove the salts, but more likely to the extensive atheromatous degeneration. The plicated membrane is a marked feature around the entire circuit, and the intima within it is much thickened. The atheromatous degeneration has extended deeply into the muscular layer. × 15 diameters.

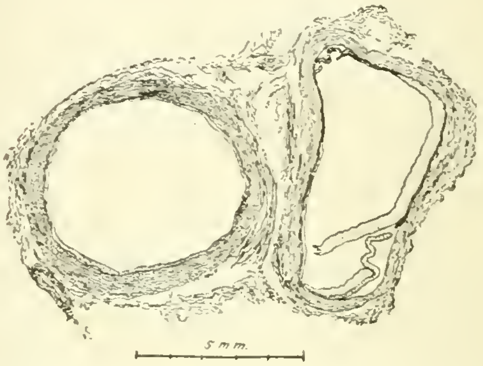

FIG. 7.—Case of J. C——. Femoral artery and vein. Both vessels were converted into rigid bony tubes by calcareous deposit and had to be treated with acid for its removal before sections could be cut. The artery shows ordinary atheromatous changes, the intima being irregularly thickened and spots of degeneration existing in the muscular coat. The vein shows an intima very greatly and irregularly thickened. At one place this coat and the muscular layer are broken loose from the adventitia. This probably occurred in removing the vessels from the thigh, for they were so rigid and firmly fixed in their position that some violence was necessarily used in cutting and tearing them loose. × 5 diameters.

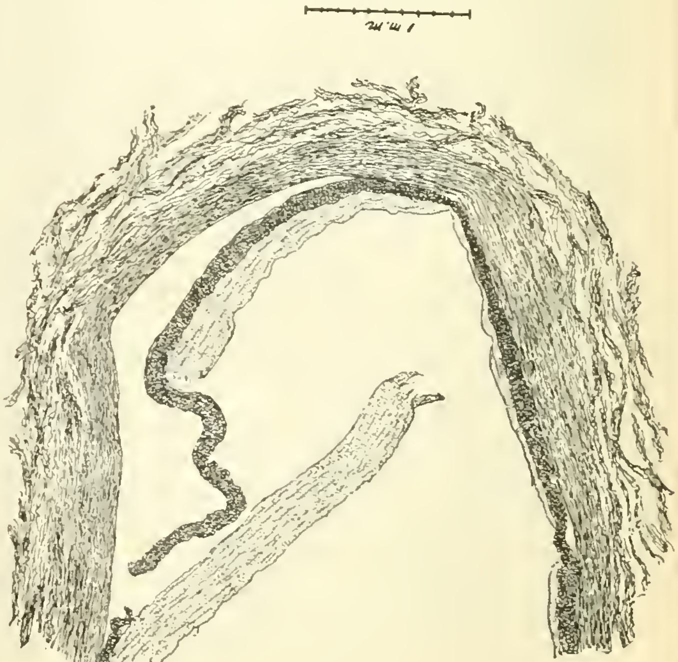

FIG. 8.—One-half of same vein as in Fig. 7, more highly magnified, and therefore better exhibiting the minute structure. × 22 diameters.

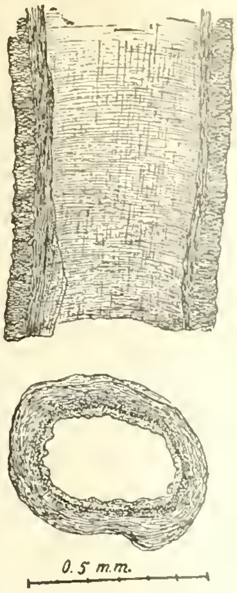

FIG. 9.—Case of J. K——. Views in longitudinal and transverse section of an artery from the kidney, which was removed under a dissecting microscope, and then split in half with scissors lengthwise, and mounted with the inner side upward in imitation of Dr. Johnson's pictures ("Medical Lectures and Essays," by George Johnson, 1887). There are visible the inner surface of the artery and the edge of the intima and muscular coats. The fibrous coat does not show at all, and this is the case in Johnson's figures also. The intima is thickened, and in various degrees at different areas; this might be said to be due to irregular cutting of the vessel, but is disproved by what is seen in the transverse section. The circular view is of the same vessel, but cut transversely with a pair of scissors. This shows marked thickening of the intima and its irregular distribution, and the plicated membrane is a marked feature of the picture, though not visible at all in the longitudinal section. The question whether the muscular layer was thickened in this vessel is one which might well be disputed, though there can be no doubt of the thickening of the intima and its difference in degree at different positions. × 68 diameters.

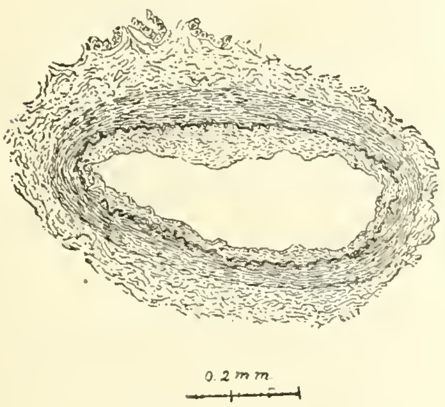

FIG. 10.—Case of J. K——. Minute arteriole from the kidney, showing marked irregular increased thickness of the intima. × 100 diameters.

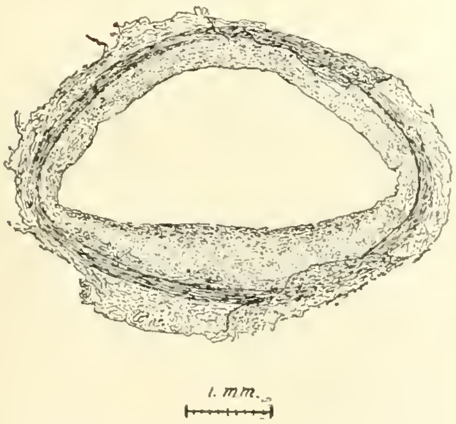

FIG. 11.—Case of J. K——. Third descending branch of left coronary artery (runs down front of heart in or near interventricular septum), exhibiting, most beautifully, extensive atheromatous degeneration. In two positions there is slight imperfection in the mounting, the outer portions of the section being folded over. There was no calcareous matter deposited in this vessel. The fibrous and muscular coats exhibit no extensive changes, there being merely slight invasion of the latter by the degenerative processes, and this is visible in the lower portions of the figure. The plicated membrane has been destroyed everywhere except in the portion of the artery figured at the right-hand side of the picture, and there it forms a marked boundary between the muscular coat and intima, which latter, throughout its entire area, is most markedly and irregularly thickened. In the lower part of the picture, at the junction of the intima and muscular coats, atheromatous degeneration and softening is shown to have taken place, and extended into both the layers. The state of the intima of this vessel is typically characteristic of the diseased condition which it has been desired to describe and represent. × 12 diameters.

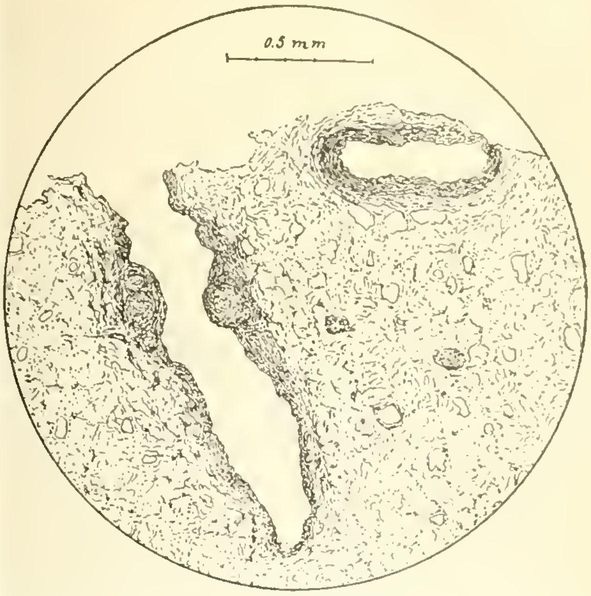

FIG. 12.—Case of J. K——. Of a vein and artery, contained in the adipose tissue, from the anterior surface of the heart, near the interventricular septum. The walls of the vein are generally thin and of loose texture, but there are two masses lying in the intima upon opposite sides of the vessel which are made up of tissue which evidently has a cell-like arrangement. More magnified, this is plainly seen to be composed of cells arranged in nests, and is precisely similar in structure to what is found in the intima of arteries, and in the endocardium and heart-valves. × 40 diameters.

NOTE.—These are from pen-drawings by Dr. B. A. Randall, and the plates were made by photographic process, and reduced from the original size by about one-quarter to one-half.

REMARKS ON EXERCISE WITHOUT FATIGUE IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

By JOHN RIDLON, A.M., M.D.,

ATTENDING ORTHOPEDIC SURGEON TO ST. LUKE'S HOSPITAL; ATTENDING SURGEON TO THE FIRST ORTHOPEDIC DIVISION, DEPARTMENT FOR THE OUT-DOOR POOR, BELLEVUE HOSPITAL; LATE INSTRUCTOR IN ORTHOPEDIC SURGERY, MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK; LATE SENIOR ASSISTANT AND OUT-DOOR VISITING SURGEON OF THE NEW YORK ORTHOPEDIC DISPENSARY AND HOSPITAL.

I THINK no one will deny that increased lung capacity, increased strength of the respiratory muscles, and increased general nutrition are greatly to be desired in patients suffering with pulmonary tuberculosis. Of the three, perhaps the last mentioned is most important, inasmuch as in very many cases the other two are impossible without it. The various methods of administering oxygen and compressed air that have been tried during the past few years seem to have for their aim and end chiefly the increasing of the lung capacity. Now, increased lung capacity without proportionate increase of power in the respiratory muscles is of no use; and increased lung capacity *with* increased power (which implies increased bulk) of the respiratory muscles, but *without* proportionate increase of the general nutrition, is simply a burden to be soon put aside. Increased general nutrition without increased lung capacity, and increased power of the respiratory muscles, is what we have aimed for, and in some measure gained, by proper attention to medication, diet, bathing, and life in the open air. That the gain is too often but temporary does not need to be said. The importance of the diet has come to be understood, and most physicians are quite as competent to prescribe the proper food as the proper medicine. Patients are no longer told, "You must feed up," any more than they are told, "You must take some medicine for that cough."

With the all-important subject of exercise, however, it is different, and patients are still told, "You had better use dumb-bells," or, "You had better swing clubs," and are left not only without instructions as to the weight of the bells or clubs to be chosen, but also in ignorance of the exercises most to be desired in their particular cases, and the length of time to be employed in each and in all of the exercises. It would be quite as safe to say to a patient: "Get some belladonna and take it for your night-sweats," for the use, or attempted use, of bells and clubs weighing from twelve to twenty-five pounds is not only inadvisable, but may be positively harmful. If bells are to be used at all, they should be from two to five pounds, and clubs from two and one-half to three and one-half pounds; I would not, however, recommend the use of either. The development of great muscular masses in a few locations is not desirable; rather let it be strength and suppleness of small muscular masses over the whole individual, and the increased vigor which that implies. Mountain-climbing is an exercise that has much to recommend it, and should be part of the treatment of every patient who has the strength to climb and the money to fully care for himself in the mountains. Unfortunately, in our latitude, mountain-climbing is limited to four, or at most five, months of the year, and many lose, during the remaining months, all or more than has been gained. Even during the summer months something is lost by rainy days, and something risked by unavoidable exposure; and many patients are not to be trusted to prescribe for themselves the proper dose of mountain-climbing. All things considered, the vast majority of phthisical patients must depend upon something else for their salvation; and this brings us to the consideration of the questions implied in the title of this paper. If the lung capacity can be increased from ten to thirty per cent., and the strength of the respiratory muscles proportionately, and the general nutrition and bodily strength be brought up to a par with these by exercises without fatigue, it would seem that such a course of treatment would be worthy of our earnest consideration.

My experience in the treatment of weak and nervous children, and patients having scoliosis, convinces me that this *can* be done. I beg leave, then, to suggest the following exercises, to be given daily, for from three to six months, in a large, sunny, well-ventilated room, *by the physician himself*, who must regulate, according to the condition of his patient, the duration of each exercise and the rests between, and must see to it that they are not carried to the point of fatigue. When the patient has gained sufficient strength to make exercise with resistance desirable, the physician must himself give that resistance, and no more delegate it to a nurse or a servant than he would the treatment of a hernia or a case of spinal curvature. When it is possible, it is a convenience to have a special table for the patient to rest upon; one about 34 inches high by 72 inches long and 12 inches broad will be found useful. This should be only moderately well-padded, and the head should *not* be supported upon a pillow. All clothing should be loose.

1st *Exercise.*—Lying, shoulder tips well down, hands supine with little fingers close to legs, breathe deeply, in through the mouth and out through the nose.

2d *Exercise.*—Lying, hands stretched outward at right angles to the body, and backward as far as possible; breathe as in first exercise.

3d *Exercise.*—Lying, hands stretched upward, arms parallel at the sides of the head; breathe as above.

4th *Exercise.*—In first position, flex and extend the toes, flex and extend the feet, abduct and adduct the feet.

5th *Exercise.*—Flex the legs on the thighs and the thighs on the pelvis, and extend the same.

6th *Exercise.*—Circumduct the legs, with the knees, ankles, and toes extended and held rigid.

7th *Exercise.*—In the second position, flex and extend the fingers, separate and bring together the same; flex and extend the hands, abduct and adduct the hands.

8th *Exercise.*—In the third position, flex the forearms on the arms and the arms on the trunk (bringing the elbows down at the sides and the palms forward); extend the same.

9th *Exercise.*—In the first position, circumduct the arms, upward (being parallel), backward, outward and downward to the first position, the elbows, wrists, and fingers being extended and rigid.

10th *Exercise.*—In the second position, rotate the head, twisting the neck on the long axis of the body.

11th *Exercise.*—In the third position, grasp a stick with the hands about eight inches apart, and carry it forward and downward to the thighs, then upward.

12th *Exercise.*—Backward bending while the physician lifts the head with locked hands.

13th *Exercise.*—Patient lying prone, circumduct the legs, outward, upward, inward and downward.

14th *Exercise.*—Same position, the legs being held down by the physician, the patient slowly raises the head and shoulders from the table; the hands may rest on the hips, or at the back of the head, or be stretched upward, according to the strength of the patient.

When sufficient strength has been gained No. 12 may be taken with the head and shoulders extending beyond the end of the table. Also let the patient, while lying on his back, flex the legs over the end of the table, and while they are held in that position by the physician, or locked around the legs of the table, flex the trunk on the thighs to the sitting position and then slowly let himself down again to the lying position. When the patient is still stronger he may lie prone, with the body above the hips extending beyond the end of the table, and, the legs being held down, he flexes the body downward, and raises it as high as possible, with the hands as in No. 14.

That these exercises should not all be given at once and in the order laid down would seem to be self-evident. The following is appended as a good prescription to commence with:

Number 1,	five times.	Number 9,	two times.
Number 4,	three times.	Number 1,	three times.
Number 2,	five times.	Number 5,	two times for each leg.
Number 7,	three times.		
Number 3,	five times.	Number 8,	two times.

Then let the patient rest for some time in the second and third positions. Ordinarily the rests are made in the first position. Care should be taken that each exercise be done vigorously but slowly. Let there be no throwing about of the arms and no shiftlessness. One movement properly executed is of more value than all carelessly performed.

337 West Fifty-seventh Street.

THE RECURRENT MACULAR SYPHILIDE.

By S. TYNBERG, A.B., M.D.,

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In the issue of The Medical Record for May 12, 1888, there appears an article by Dr. T. H. Rockwell, under the title "A Case of Recurrent Macular Syphilide," giving a detailed history of the same and accompanying it with the assertion of its extreme rarity.

The perusal of the article alluded to will undoubtedly impress the average busy practitioner that his observations of the manifestations of syphilis have been unrewarded by a similar case. The desire to dissipate this false impression, and the hope of encouraging a closer study of cases which deviate from the regular course, have prompted me to write these few lines.

There is no doubt that conclusions based upon false premises have primarily been the cause of the impression that any irregularity in the manifestations of syphilis are exceedingly rare and should be considered exceptional.

It is admitted by some of the highest authorities that if proper specific treatment be initiated upon the appearance of the chancre, the secondary, and certainly the tertiary lesions and symptoms may be averted.

On account of the great difficulty and liability to err in diagnosing the initial lesion, treatment, excepting local, is suspended until the appearance of positive lesions of syphilis, generally the roseola (macular syphilide). Specific treatment is now instituted, and, if energetically continued, all the other lesions of syphilis will in a great many cases be averted, the roseola also fading, leaving but the evidences of an eruption, the well-known ham-colored spots. If treatment be interrupted, the disease will, as a rule, continue its course, the papular syphilide and subsequent symptoms appearing in their order, or in some cases there will be a recurrence of the macular syphilide which will disappear on resuming treatment, or be followed by the subsequent lesions and symptoms if treatment be not again instituted.

Various conditions and circumstances will often modify the course of the disease. I have not infrequently seen, especially in hospital patients, who, as a rule, have not paid the greatest regard to hygienic or dietetic principles, an erythema appear after a debauch, after indulgence in certain articles of food, and especially after the ingestion of various medicaments. This resulting erythema is almost universally attributed to one of the various causes mentioned, the possibility of its being a recurrence of the roseola is, on account of popular impression, totally disregarded. It is the old fallacy of *post hoc ergo proctor hoc.*

That the causes alluded to will produce an erythema similar to the macular syphilide no one will deny; but that the erythema is often a recurrent macular syphilide, the supposed exciting agents being merely a coincidence, and bearing no influence whatever in the production of the subsequent erythema, should also be admitted.

Let it be borne in mind that during the prevalence of any of the above-mentioned causes, treatment proper is generally inhibited, it is consequently this inhibition of specific treatment directly, and the exciting causes indirectly, which allow the disease to continue its career. Errors in diet and disregard of the principles of hygiene, though treatment be continued, may so affect the tissues that the body is unable to resist the progress of the syphilitic virus, and in this way there often recurs a macular syphilide.

There are a great many other circumstances which may cause the symptoms to deviate from their regular course.

I have before me the histories of a few hospital patients which almost coincide with the case published in THE RECORD.

In order not to occupy too much space I will merely give a brief history of two cases, at present under my care in private practice.

CASE I.—Mr. C. F——, aged forty-five; married; German; merchant. Was the recipient of a chancre sixteen months ago. Treatment was not instituted until the appearance of definite symptoms, which came in about three weeks.

At this time there appeared a very slight roseola about the flanks, mucous patches in the mouth, especially the posterior part, induration of the cervical and inguinal lymphatic glands, and a marked rheumatic tendency. Having had malarial trouble before, I put him upon pills composed of massa hydrargyri and quiniæ sulphas, āā gr. ijss., t.i.d. The disease was checked under this treatment, all active symptoms disappearing and the patient making good progress.

At the end of five months. business necessitated his temporary absence from the city, during which time he neglected treatment, and upon his return, after a sojourn of six weeks, he applied for treatment for his throat. On examination it was found to be the seat of mucous patches; in other words, a recurrent macular syphilide on the mucous membranes, no other local evidences of the disease being present, and no symptoms, with the exception of slight rheumatic pains.

Cauterization of these patches and renewal of the treatment caused the disappearance of these symptoms.

Patient is now on the bichloride pill, gr. $\frac{1}{20}$, t.i.d., and any temporary discontinuance of treatment always results in the appearance of mucous patches unaccompanied by any other local manifestations of the disease.

CASE II.—Mr. V. H. K——, aged twenty-three; United States; single; traveller. A chancre appeared on the dorsum of the penis in December, 1886, which was cauterized and further treated by a druggist until he came under my care in January, 1887, complaining of a "sore throat."

His forehead was the seat of a well-marked erythema, presenting a splendid example of the "corona veneris."

On stripping the patient, I discovered that his back, thorax, part of the abdomen, and upper extremities presented a diffuse macular eruption, which the patient attributed to some blood-medicine the druggist had given him "to purify the blood and drive out the poisonous matter." Mucous patches were found upon the tonsils, tongue, and posterior wall of the pharynx; there was enlargement of the epitrochlear, inguinal, post-cervical, and submental glands, the latter being the seat of great tenderness. He complained of slight alopecia and rheumatic pains. The initial lesion itself was healed, presenting an exaggerated induration, probably due to the continued cauterization it had been subjected to. Otherwise the patient presented a healthy appearance. I immediately cauterized the mucous patches with sol. argenti nitratis, gr. xl. : ℥ j., and put him on the pil. protoiodide, gr. $\frac{1}{4}$, t.i.d., with syr. ferri iodi. as a tonic. He soon showed signs of improvement, the mucous patches subsiding in a few days, and the eruption and other symptoms gradually disappearing.

After a short time the patient was free from all visible signs of the disease. At the end of four months patient was compelled to resume his occupation, and consequently left the city for a long trip. He continued the same treatment for two months, during which time he remained well, when, without consulting me, he discontinued his pills.

A few days thereafter—that is, about six months from the first appearance of the macular syphilide—his face became the seat of an erythematous syphilide, similar to the one which previously existed, while now the body remained perfectly free and no other sign of the disease was present, except mucous patches in the mouth. He immediately came to the city when I observed what has just been narrated.

The old treatment was resumed, whereupon the symptoms gradually disappeared. This improvement continued until the end of the year, when, after a dissipation of three or four days, the same phenomena again recurred, only to disappear after being put upon the mixed treatment. Since then patient has been well, and shows no sign of the disease except inguinal glandular enlargement.

These are two cases which will come under the category of the title of this paper. There is no doubt that, as attention has been called to these cases, we will now hear of a great many which before were not at all considered peculiar.

That cases of recurrent macular syphilide are not very frequent, I will admit; but they do not occur so rarely as to be classed among the exceptions.

A more careful observation of syphilitic patients will undoubtedly develop a comparatively large number of these hitherto exceptional cases.

321 EAST FORTY-SECOND STREET.

ACETOPHENIDINE.—M. Guerorguiewsky has employed acetophenidine instead of antipyrine. It is a crystalline gray powder, insipid and inodorous, derived from phenol; it is soluble only in twenty parts of alcohol, and is eliminated by the urine, wherein it can be detected by the red coloration with perchloride of iron. In typhoid fever, tuerculosis, erysipelas, and pneumonia, in doses of from fifteen to thirty centigrammes, he found it to act as an antipyretic in from twenty to forty minutes after injection, the pulse and respiration diminishing in frequency, and sweating being induced. It also relieved pain, but doses of fifty or sixty centigrammes are required to effect this end, as in migraine, cephalalgia, and tabetic pains. It never upset the stomach, or modified any of the other functions of the body; in this respect it claims to be superior to antipyrine.—*The Lancet.*

INCIDENCE OF SCARLET FEVER IN RELATION TO EPIDEMIC OF SORE THROAT AT BETHERSDEN, ENGLAND, IN 1884, PRODUCED BY EXPOSURE TO MANURE DERIVED FROM CATTLE AFFLICTED WITH APHTHOUS FEVER.

By J. W. STICKLER, M.D.,

ORANGE, N. J.

No. of cases.	Age.	Scarlet fever previously.	Scarlet fever since.	Remarks.
1	8	0	0	Members of same family.
2	10	0	0	
3	18	0	0	
4	6	0	0	Members of same family. Four other members of this family, who had previously had scarlet fever, escaped epidemic of sore throat.
5	8	0	0	
6	5	0	0	Same family, cases 7 and 8, mild sore throat, probably modified by previous scarlet fever.
7	7	1	0	
8	9	1	0	
9	3	0	1	Very slight case of scarlet fever last year.
10	8	0	0	Same family.
11	2	0	0	
12	1	0	0	
13	9	1	0	Same family. No. 15, mild case of scarlet fever. No doctor employed.
14	7	0	0	
15	11	0	0	
16	9	1	0	Same family. No. 18, mild case of scarlet fever.
17	2	0	0	
18	12	0	0	Same family. Three other members of this family, who had previously had scarlet fever, escaped throat epidemic.
19	5	0	0	
20	4	0	0	
21	2	0	0	Same family. Case 24, throat case mild.
22	22	1	0	
23	6	0	0	
24	7	0	0	
25	7	1	0	
26	8	0	0	
27	6	0	0	
28	9	1	0	Scarlet fever? said to have been mild. No doctor.
29	9	1	0	Sore throat case, mild one.

The above facts were collected by Dr. M. K. Robinson, of Dover, England, at my request. Taken in connection with the statistics published in The Medical Record, December 10, 1887, they appear to strengthen the theory that a person who has had an attack of scarlet fever is rendered either wholly or partially insusceptible to the contagium of foot-and-mouth disease, and *vice versa.* Professor Law, of Cornell University, in discussing my first paper upon this subject, said: "Epizootic foot-and-mouth disease had at times attacked nearly all the cattle and people (of Europe), and, considering the fact that the disease was so frequently prevalent, there should be less scarlet fever in Great Britain than in America, where the foot-and-mouth disease was comparatively unknown." Professor Walley, of Edinburgh, says *very few people contract foot-and-mouth disease.* There is, therefore, a very manifest difference of opinion between these two gentlemen upon this point, and while the opinion of both should be carefully considered, it is quite evident that only one can be correct.

I have consulted considerable literature bearing upon this matter, and find comparatively few cases recorded. So far as the animals of Europe are concerned, it may be said the disease (eczema epizootica) is a very common one, occurring frequently among them as an epidemic. Another point, urged by L. McLean, is that one attack in the bovine species does not give immunity from the disease; but in the ovine species it does. Is not this fact suggestive? May it not be true that man may be protected by a single attack of the disease, as is true of sheep? It is undeniably true that natural physical conditions have much to do with the production or recurrence of any disease.

Swallowed a Pin.—An anxious patient who thought that he had swallowed a pin, telegraphed for advice to a well-known physician of Easton, and received in reply the reassuring injunction to "swallow a pin-cushion."

THE TREATMENT OF UTERINE FIBROIDS BY THE APOSTOLI METHOD.[1]

By A. B. CARPENTER, M.D.,

CLEVELAND, O.

The treatment of uterine fibroids by the Apostoli plan or method has come forward so prominently of late, and the claims for the success of this plan are so positive, that I desire to call attention to what is being done in this direction to ameliorate the sufferings of this class of cases without resort to the knife, and at the same time offer a few suggestions based upon practical observations.

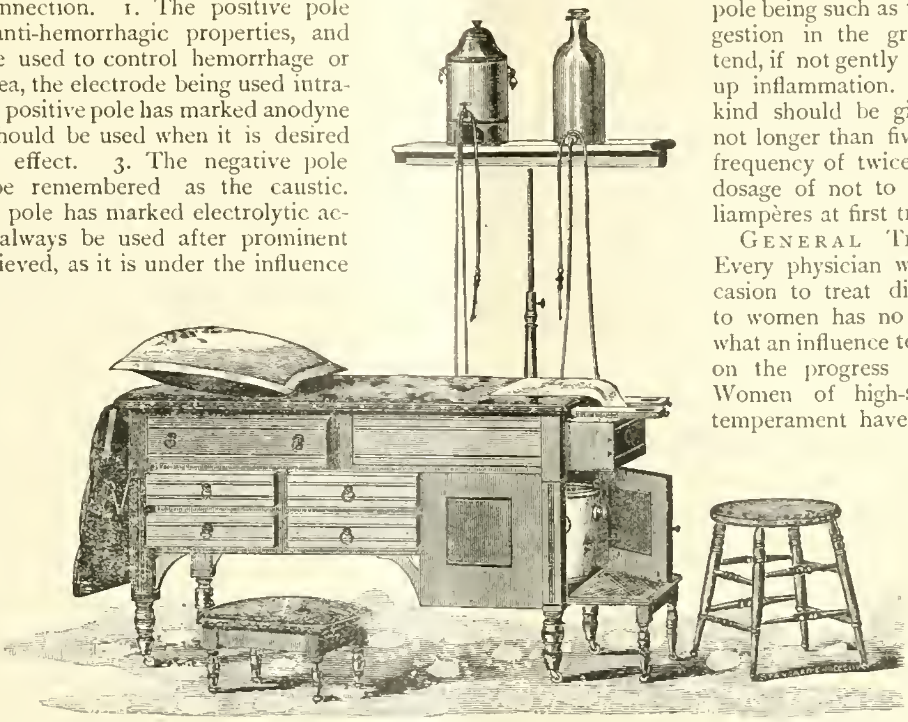
In 1885 Mr. Moore Madden, of the Rotunda Hospital, Dublin, read a paper before the British Gynecological Society of London, wherein he stated as his opinion, that if we could carry these fibroid cases on to the menopause, in a great majority of instances the troublesome symptoms will disappear, and a permanent relief be afforded; that during the menstrual life the tumor annoys, but, as a rule, does not kill, and that with cessation of ovarian activity the growth gradually reduces in size, the aches and sufferings pass away, and life again becomes worth living. He showed by statistics, which I take the liberty to quote, that the mortality arising from the operation for hysterectomy is from twenty-five to thirty-five per cent., in the hands of the best operators. He says: "Mr. Lawson Tait published in the same year (1885) an account of fifty-four hysterectomies, with nineteen deaths; Dr. Keith thirty-eight cases, with three deaths; while Dr. Bigelow collected from all available sources three hundred and fifty-nine cases, with one hundred and thirty-two deaths." At this time Mr. Lawson Tait was in the height of his glory, and was performing the operations for oöphorectomy and hysterectomy upon nearly every patient that came under his care afflicted with uterine myoma. The paper attracted a great deal of attention and discussion, and very emphatic opposition from Mr. Tait, as Mr. Madden declared that the mortality under the non-operative plan of management was so low as to be hardly worth recording. The paper can be found in the "Transactions of the British Gynecological Society," vol. i., page 139, and is well worth reading, as it marks the beginning of protest on the part of the conservative element in the profession against the indiscriminate use of the knife in the treatment of these cases. At about this time Apostoli began to advocate more strongly his method. It may be claimed that electrical treatment for the cure of uterine fibroids was in use, and by men in this country, long before Apostoli was known; this is granted, but how was it used? By some the continuous or galvanic current was applied, by others the faradic, and through the medium of machines that were as but mere toys in accomplishing electrolytic action; with little or no knowledge as to the therapeutics of the current, no positive or even well-defined idea of what they wished to accomplish, and an absolute ignorance of the strength of the current administered. The treatment was purely empirical, wholly unscientific, applied with the vague hope that by a certain something, they knew not what, beneficial results to the patient were to be obtained. Quacks and charlatans imposed upon an always credulous public with their toy batteries and claptrap apparatus, and it is not to be wondered that the subject of electricity became almost as a stench in the nostrils of the better class of practitioners.

To Apostoli is due in a great measure the credit of having come forward and lifted the subject from the quagmire and domain of quackery, and placed it before the profession on a plausible basis and in a scientific light: Plausible, because we can see our way to the establishment of electro-therapeutics prescribed on the basis of exact dosage. Scientific, because, by understanding the physiological action of the positive and negative poles, we are enabled to intelligently use them, and with a reasonable assurance of success.

What are the claims of Dr. Apostoli regarding the treatment of uterine fibroids by the electrolytic method?

I will quote him. 1. Hemorrhage is controlled. 2. The troubles of menstruation, dysmenorrhœa, and nervous disturbances are relieved. 3. The direct pains in the growth and pains arising from mechanical pressure are removed. 4. The harassing series of reflex pains, rectal and vesical, are destroyed. 5. The tumor is in a majority of instances made to entirely disappear. 6. The treatment is simple, anyone in possession of the required apparatus being able in a short time to administer it. 7. The mortality following this method is nil, providing the directions for operating be faithfully carried out. 8. Relief of symptoms in some cases must be accepted in lieu of cure.

Before going on to the consideration of important points in treatment, attention is called to the action of the positive and negative poles, familiar to many, yet pertinent in this connection. 1. The positive pole has styptic or anti-hemorrhagic properties, and should always be used to control hemorrhage or uterine leucorrhœa, the electrode being used intra-uterine. 2. The positive pole has marked anodyne properties, and should be used when it is desired to produce this effect. 3. The negative pole should always be remembered as the caustic. 4. The negative pole has marked electrolytic action, and should always be used after prominent symptoms are relieved, as it is under the influence of negative galvanism that the tumor is made to reduce in size.



Practical Observations.—1. Antiseptic precautions. 2. Evidence of pelvic inflammation. 3. Is the tumor very sensitive to pressure? 4. General temperament of the patient. 5. Electrical dosage. 6. Frequency of treatment. 7. Control of patient.

Antiseptic Precautions.—If antiseptic precautions are of any avail in the department of medicine or surgery, they should certainly be made use of here. Vaginal irrigation before and after treatment I believe imperative. For convenience in making this irrigation a table, devised by myself and here illustrated, will be found not only useful but very convenient; the working is readily understood by reference to the cut.

Sublimate 1-2,000 is used, and the vagina filled with dry antiseptic cotton for twelve hours.

Evidence of Pelvic Inflammation.—Should there be evidence of pelvic inflammation of acute or subacute form, great care must be observed in the beginning of the treatment; the electrode should be introduced with great care and gentleness, and a small number of milliampères of current given, otherwise we shall find ourselves with a case of cellulitis on hand, our patient discouraged, and worse than when she came. It is now my practice to give a few treatments by simply applying a sponge electrode through a glass speculum directly to the cervix, giving positive galvanism to the number of fifty or sixty milliampères. By this method a double purpose is accomplished. 1. The patient becomes accustomed to the current and to her new medical attendant, her fears become allayed, and she is in much better condition to endure the more heroic methods that are to follow. 2. Pelvic pains resulting from inflammatory disturbances, and the neuralgic, so called, are very much benefited by positive galvanism from a current of high tension applied as above described three times each week. It is my custom to give ten- to fifteen-minute sittings, of from forty to sixty milliampères, being governed by the patient's feelings; in no case, however, should a current be employed so strong as to produce an aching or burning pain in the pelvis.

After a fortnight an attempt is then made to introduce the platinum electrode into the uterine canal, and a small number of milliampères—five to ten—given. I gradually feel my way and increase the dosage according to the toleration of the patient.

Is the Tumor very Sensitive to Pressure?—If we find the tumor very sensitive to pressure upon examination, thus giving the patient considerable sharp pain, the duration and frequency of the treatment must be modified accordingly, the intervals between the sittings to begin with longer, and the dosage lighter, the action of the negative pole being such as to produce congestion in the growth, and thus tend, if not gently managed, to set up inflammation. Cases of this kind should be given sittings of not longer than five minutes, of a frequency of twice a week, and a dosage of not to exceed ten milliampères at first treatment.

General Temperament.—Every physician who has had occasion to treat diseases peculiar to women has no doubt noticed what an influence temperament has on the progress of these cases. Women of high-strung nervous temperament have to be handled with much gentleness, they have a horror of instruments, and their uteri bear the sound badly. In these cases galvanism must be proceeded with in a cautious manner, if we expect to gain the confidence of, and secure co-operation on the part of these patients.

Electrical Dosage.—*The system of electrical dosage, as advised by Apostoli, is, for the average American woman, in my opinion, too high.* This may appear as audacity on my part, but I wish to be distinctly understood as opposed to two hundred and fifty, or even two hundred milliampères, being confident that this enormous dosage is liable to do great harm, and also confident that equally good results will be obtained by a much smaller dosage.

It may require a little longer time to produce the desired results. The tumor may not shrink quite so rapidly, but the treatment will not cause nearly the pain, and the danger of complications of an inflammatory character are greatly lessened.

I believe that an apparatus capable of supplying a galvanic current of one hundred milliampères, *with the patient in the circuit*, is all that is required, and that the best possible results with this dosage can be obtained.

Frequency of Treatment.—As to frequency of treatment no positive rule can be given. The condition of the patient, her ability to tolerate, and the circumstances in a given case must be our guide. As a general rule, however, three sittings each week will be all that is required. This does not apply to profuse hemorrhages, which, if the case be urgent, may be treated daily. The sittings should be from five to fifteen minutes in duration, according to the dosage, a longer sitting for a smaller number of milliampères, in my opinion, accomplishing as good results.

Control of the Patient.—Although Apostoli claims that no special restrictions are necessary to be placed on the patients during a course of treatment, *it seems to me* *imperative that they should be on their feet as little as possible.* It is my experience that after a few weeks the cases improve, and as they improve they become correspondingly active, and unless they be held in check by a very firm hand, they are, before they are aware, going about and taking an amount of exercise that is certainly not conducive to rapid improvement; they return complaining of pain in the back, pelvis, and thighs, and upon inquiry admit of over-exercise to a degree that is sometimes extraordinary.

A rest of an hour in the office, providing an extra room is at our command, and of not less than half an hour, when the patient is receiving a high dosage, is imperative, together with absolute rest at home for a few hours following the treatment. This should be insisted on in every instance. These directions are entirely at variance with those of Apostoli, yet I cannot withhold calling attention to them and advise their observance in every case.

With the statistics quoted from Mr. Madden's paper before us, showing a mortality resulting from twenty-five to thirty-five per cent. in operations for hysterectomy, it seems to me that no man is justified in advising or performing this most terrible of all operations until he has given the patient a trial of the Apostoli method. Should electricity fail to give relief, we have not complicated matters; we shall always have laparotomy to fall back upon, providing our patient's condition becomes unbearable or hemorrhage threatens life, and with no less chance for recovery.

143 Euclid Avenue, June 5, 1888.

Clinical Department.

KING'S CLAMP IN THE TREATMENT OF VARICOCELE, WITH REPORT OF TWO CASES.

By C. H. RODI, M.D.,

RED JACKET, MICH.

In treating varicocele by excision of the scrotum, in which the scrotal clamp is used simply as a guide to the surgeon, there is always considerable hemorrhage after the clamp is removed, and great care must be taken to arrest all bleeding points before the scrotum is closed. Even after the utmost care, secondary hemorrhage often occurs, and it becomes necessary to reopen and secure the bleeding vessels. Generally there is suppuration, and the slow process of healing by granulation ensues. By the use of Dr. Ferdinand King's clamp, together with antiseptic precautions, all trouble, I think, can be avoided, and union by first intention obtained in nearly every case. By the use of this clamp there is absolutely no hemorrhage, and the operation is completed *before* the removal of the clamp, thus preventing the entrance of air or germs.

An illustration of the clamp is given in The Medical Record of November 13, 1886. It has a longitudinal groove to receive a fold of scrotum, which prevents slipping, and is perforated with small holes, about one-eighth of an inch apart, through which the sutures are passed, and it is so arranged that the clamp can be removed after the sutures are tied. A small Hagadorn needle, with fine catgut sutures is to be preferred. Union by first intention can be safely expected.

The two following cases, in which I assisted Dr. A. I. Lawbaugh, may be given as illustrations:

May 4, 1887, John D——, aged twenty-four, Osceola, Minn. Patient anæsthetized; parts washed with mercuric chloride solution, 1 to 1,000; King's clamp applied, and fixed by set screws; redundant scrotum excised. Fine carbolized catgut sutures were passed through the holes in the clamp, and tied, making interrupted sutures, one-eighth of an inch apart, the whole length of the incision. No hemorrhage followed the removal of the clamp. Union took place by first intention, without any unpleasant symptoms, and the patient was able to return to his work twelve days after the operation.

Case II.—James E——, Red Jacket, Mich., September 15, 1887. Anæsthetized; King's clamp applied. The redundant portion of scrotum was excised, and the wound was closed with fine catgut sutures. There was no hemorrhage. Union occurred by first intention, and the patient was out of bed and about the house on the second day. There was no swelling or inflammation at any time.

OXALATE OF CERIUM IN DYSMENORRHŒA.

By M. L. CHAMBERS, M.D.,

PORT JEFFERSON, L. I.

A number of years ago a young lady visiting in this locality applied to me for a remedy for the relief of dysmenorrhœa. She was of fine physique, in perfect health, and stated that she expected her "sickness" on the following day.

Looking into her ruddy face, I thought a little pain would do her less harm than a dose of morphine, the only thing I had at hand in which I had any confidence as a remedy; so I compromised with my professional conscience in order to please the expectation of my patient, and gave her, as I thought, a simple placebo, which should have the merit at least of being tasteless and harmless. This was oxalate of cerium, four powders of five grains each, one to be taken every hour until the pain should be relieved. To my surprise I received a note from the lady a short time after, asking for some more of those powders, and stating that three of them had given her entire relief. This was not sufficient to establish my belief in oxalate of cerium as a remedy for dysmenorrhœa, but I accepted the lady's statement as a hint for future experiment, and began giving the oxalate to all applicants for relief from this disorder. I soon learned that in certain forms of dysmenorrhœa it is as near a specific as the Materia Medica furnishes for any disease.

As dysmenorrhœa usually occurs in young unmarried women, I have seldom pursued my investigations for the purpose of diagnosis further than that of rational inquiry, and, in consequence, cannot state, except by symptoms, to which form of dysmenorrhœa the remedy is most applicable. It is in that kind, however, frequently occurring in fleshy and robust women with scanty discharge, in which the pain comes on before the flow, or at its commencement, is spasmodic or colicky, accompanied by a feeling of tenesmus, and is relieved when the flow is thoroughly established, that the remedy is most useful. I do not remember a failure when given in cases selected with reference to these symptoms. I give it in powders of six grains each, one to be taken every hour until the pain is relieved.

Sometimes the oxalate of cerium contains small quantities of arsenic as an impurity; in which case it will irritate a delicate stomach if given in sufficient quantities. When pure, I have never seen an ill effect from it whatever.

ANOMALOUS LOCATION OF THE KIDNEY.

Dr. E. W. Morgan, of Chicago, writes: "I believe the following anomalous location of the right kidney worthy of record. The subject, a female of about twenty-five years, was a college cadaver, of which I can find no life-history. The left kidney was normal in every respect. The right kidney was also normal as regards shape and structure, but lay, slightly curved, upon the left sacro-iliac synchondrosis, the hilus being directed to the vertebral line. The renal arteries were two in number, one arising from the abdominal aorta, one-half inch above its terminal division, the other from the uppermost portion of the right common iliac. The ureter accompanied its fellow to the bladder, where it turned aside to reach and open into that viscus at its usual location."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published by

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, July 7, 1888.

THE TREATMENT OF BRONCHITIS IN THE AGED.

Among the diseases to which old people are subject, one of the most common, and also the most fatal, is bronchitis. The report of the Collective Investigation Committee of the British Medical Association, prepared by Professor Humphrey, showed that, of living persons over eighty years of age, about twenty per cent. were suffering from bronchitis, and the affection is also assigned as the cause of death more often than any other malady. The unusual fatality attending the disease in the aged is due, in great measure, to the want of elasticity in the chest-walls. Expiration is thereby seriously impeded, and the expulsion of mucus from the air-passages is rendered more difficult. A continual source of irritation being thus present, exacerbations of the inflammation readily occur, and the disease is then prone to invade the smaller bronchial tubes. The treatment suggested by Professor Humphrey, as likely to afford the most relief, is some combination of sedative with stimulant remedies.

In an article in *Der Fortschritt* of January 20, 1888, Dr. Wyss reviews some of the more recent remedies employed in the treatment of bronchitis, with special reference to their use in the disease as it occurs in the aged.

Naphthaline possesses stimulating properties similar to those of camphor, and is at the same time an efficient expectorant. The remedy may be employed in the form of inhalations along with the vapor of water, or it may be given internally in capsules. For the latter, the writer prescribes a dose of 1½ to 3 grains two or three times a day. It is necessary, however, to watch the effects of the drug very carefully, for it has a tendency to irritate the kidneys, and also not infrequently interferes with the nutrition of the eye, leading to cataract, to which the aged are sufficiently prone without the added danger from naphthaline. It is further, when administered for long periods, apt to produce a noticeable degree of emaciation.

Terpine is another remedy which has acquired some reputation in the bronchitis of old people, and which, it is claimed, is free from these objectionable features of naphthaline. When given uninterruptedly for long periods, however, it is apt to excite gastro-intestinal disturbances. In order to prevent this as far as possible, the drug is given in doses of 1½ to 3 grains in pills, three times a day, during or immediately after meals.

The third remedy noticed by Dr. Wyss is terpinal, which possesses none of the disadvantages of the two preceding drugs. It is an excellent expectorant when given in doses of 4 grains, three or four times a day, in pill or capsule.

Lippia mexicana has also been recommended as one of the best expectorant and sedative remedies that we possess, being especially valuable in those cases of bronchitis in which the cough is frequent and exhausting.

Finally, the author refers to menthol, which, he says, has given him excellent results in the bronchitis of the aged when employed in the form of inhalations. It not only liquefies the mucus and facilitates its expulsion, but also acts as a sedative to quiet the violent attacks of coughing which so weaken these already debilitated patients. Dr. Wyss uses an inhaler, resembling somewhat a Turkish narghileh, by means of which, he claims, he is able to introduce the drug mixed with the vapor of water into the bronchi, and not simply as far as the larynx, as is the case with most inhalers.

THE AMERICAN MEDICAL STUDENT.

An address upon "The American Medical Student," recently delivered by Professor Austin Flint, before the Alumni Association of Jefferson Medical College, commands attention as coming from a gentleman who has had a long and successful experience as a medical educator.

Dr. Flint regards a preliminary education, including a good English education, a fair knowledge of mathematics, and a little Latin, as very nearly indispensable for the medical student. This is certainly not a very strained view of the case. He recognizes the fact, as does every educator, that the procrustean tests of fitness for being a medical practitioner are not satisfactory. There must always be different grades of students and doctors, with great divergence in natural aptitudes, social and educational qualifications. We have one examination and one degree for all. The French recognize this, and they license *officiers de santé*. The English also give the apothecaries' license. In this country colleges might give special diplomas, but it is not likely that the plan would become popular. The American people are learning, however, to recognize the fact that there are uneducated as well as educated physicians.

Professor Flint thinks that one of the most important changes to be made in college requirements is the abolition of the private instructor. He says: "Most students learn so little from their preceptors, so called, that the certificates of three years' study, as a general rule, actually represent nothing. A busy practitioner has no time to devote to his students, and rarely gives them any systematic instruction. In the great majority of instances, the country practitioner who takes students into his 'office' exacts of them little services not always of a professional kind, puts into their hands old editions of medical works, and tells them to read; this being the beginning and the end of the functions of the preceptor." Some statistics are given showing the higher marking of students who have spent one or more full years at a medical college, as compared with those who have studied under preceptors.

Instruction by lectures, Dr. Flint thinks, "is the ideal form of teaching."

This statement is made close upon his statistics showing the higher marks of students who take the recitation term! We believe it is a most misleading assertion. The lecture is most useful in some branches of didactic study; it is almost a nuisance in certain others, such as anatomy. We doubt if the didactic lecture will ever be entirely dispensed with, but it will certainly in time be made subsidiary to the recitation, and the practical laboratory and clinic work. There is not a medical graduate who has taken a good "quiz" course who will not admit having learned more from his quiz-master than from his professor.

Dr. Flint reiterates the view which his father always held, that the medical student should, from the very beginning, attend clinics, and see all of practical medicine possible. The positive opinion of these two distinguished educators upon a somewhat mooted point is of value.

Three years is thought sufficient to equip a student for the general practice of medicine. But it is not expected that a graduate, after a three years' course, will be proficient in the technique of the specialties.

"It is an error to attempt to teach, thoroughly and exhaustively, even the legitimate specialties, such as ophthalmology and otology, in the ordinary curriculum of a medical college. Nevertheless, students should receive such an amount of instruction in the so-called special subjects as will enable them to recognize the diseases of all organs of the body and make no blunders in diagnosis and treatment."

A chair devoted to the history of medicine is thought to be decidedly needed by the modern medical college.

Professor Flint expresses the natural opinion that "State medical boards, appointed to determine by actual examination the qualifications of applicants for license to practise medicine, can never be of any great practical benefit so long as it is deemed necessary to recognize, in their organization, certain so-called systems of practice, such as homœopathy and eclecticism."

This is an opinion which is purely an opinion, and is quite offset by the actual facts. There has been no single factor in promoting educational reform more potent than one of these same State medical boards. Eclecticism and homœopathy die out with the increased intelligence of the people, but we need not wait for the *rigor mortis* before attempting improvements in the regulation of medicine and status of the physician.

Professor Flint would like to see a new association of medical colleges formed, which should have for its objects:

1. The establishment of a uniform standard of preliminary education.

2. The requirement of a three full years' course of study, with abolition of the preceptors' certificates.

3. The abolition of medical colleges insufficiently equipped for purposes of medical teaching.

There are ninety regular medical schools in the country, but nearly one-half of the graduates come from only twelve of these. There are thirty colleges which graduate not over twelve students each.

Professor Flint's address, as will be seen, is a most suggestive one, and deserves the attention of all interested in educational progress. He is inclined, on the whole, to favor the view that reforms will come from within the colleges rather than from without. Those who have no personal interest in special colleges, while admitting that much can and will be initiated in this way, are also very confident of the value of outside influences. The past ten years have seen great progress in our medical schools, but it has been very largely due to the active exertions of the medical press and of non-educational organizations of medical men.

HOFMEISTER ON DIABETES.

A PHYSICIAN who practises at Carlsbad, and who concludes his article on the treatment of diabetes by saying that "strict diet and Carlsbad waters, drunk at the place, form the best method of dealing with the disease," lays himself open to the charge of personal bias. Nevertheless, the Carlsbad physicians undoubtedly have a very large personal experience in this treatment of diabetes, and the opinions of Dr. B. Hofmeister, who is a practitioner at this resort, will be read with interest. Dr. Hofmeister has some positive views regarding diabetes. First of all, he asserts that "we know nothing of its etiology." This is a somewhat radical statement, and while it may be true for the writer, is certainly not so for the profession in general. If he had said pathology instead of etiology, he might more easily have defied contradiction.

Another proposition of Dr. Hofmeister is more easily accepted. He does not think that the amount of sugar in the urine is necessarily an index of the seriousness of the case. He doubts the value of absolute diet and of the gum and gluten breads, which latter are always more or less indigestible. Finally, he has little to say of drugs, and nothing at all of arsenic, bromides, and jumbol. He formulates his views as follows:

1. The dietetic and hygienic regimen ought not to be totally changed in a sudden way. Sweet things must be at once forbidden; the amylaceous food should at first be confined to vegetables of all kinds, except the leguminous ones, and bread, 100 grammes of which may be allowed, this quantity being gradually reduced to 60 grammes, and so on.

2. Pure fat and fatty meats are highly to be recommended for their great efficacy against congenital predisposition to diabetes; 150 to 100 grammes may be allowed daily.

3. An exclusive meat diet (Banting treatment) is rather dangerous in diabetes, because it strongly promotes the disintegration of albumen, that is to say, emaciation.

4. All substitutes for bread are objectionable, partly because they contain a considerable amount of starch, and partly because they are all more or less indigestible. Fürbringer's gum bread (*Kleberbrot*), manufactured by Basserman, at Mannheim, seems to be the least injurious of these.

5. Diabetics ought to masticate perfectly each bit of food, eating slowly, in order to mix the food completely with the mucus of the mouth.

6. In all cases in which a somewhat larger indulgence with regard to the diet is admissible, all sorts of vegetables, including the sweet ones (turnips, carrots, cabbages, etc.), only excluding the leguminous (peas, beans, and lentils), are permitted, likewise raw kernel fruits and berries.

7. Milk and wine should be allowed only in small quantities, even in mild cases; half a pint of each daily should be looked upon as the maximum dose. All sorts of beer must be forbidden under all circumstances.

8. Exercise is much indicated, especially as long as farinaceous food is partly allowed. The best time for it is immediately after dinner, and it should be continued for at least two hours. Riding on horseback and hill climbing (if the ascent is not too steep) are certainly preferable to gymnastic movements indoors; but when outdoor exercise cannot be taken we are now in possession of a good substitute, I mean the "ergostat," recently invented by Professor Gärtner, of Vienna. Patients who, in any stage of the disease, are easily fatigued by the least muscular exertion, will derive great benefit from daily massage of the whole body for twenty minutes (Finkler).

9. Warm baths, as the best means of keeping the function of the skin in order, are very beneficial to sufferers from diabetes, provided that they are used at a temperature of 93° to 94° for fifteen minutes, not oftener than twice a week.

10. The mineral waters of Carlsbad are undoubtedly of the greatest use in the dietetic and medical treatment of diabetes; their effect is mostly due to the alkaline salts they contain.

11. Among the innumerable drugs recommended for diabetes, there are but few worth mentioning. In the first place, there is opium, the tolerance of which by diabetic patients is remarkable and inexplicable. Opium makes the sugar disappear; it diminishes abnormal tissue-waste, and consequently increases the weight of the body; it causes neither narcosis nor constipation in doses which would be positively dangerous if given in other diseases. Still more efficacious is morphine, in doses of from one to three grains daily. The beneficial effect of these drugs, however, does not last very long; after three or four months they lose their effect, and there is, moreover, the risk of the opium habit becoming confirmed. They should, therefore, be taken only at long intervals, and under strict medical supervision. Salicylic acid, phenol, and salicylate of sodium, are far less useful.

THE REMOVAL OF A TUMOR OF THE SPINAL CORD.

The case of successful removal of a tumor of the spinal dura by Mr. Horsley and Dr. Gowers, has already been referred to in these columns. At a recent meeting of the Royal Medical and Surgical Society, the case was reported in full. The patient had had for four years a nearly constant pain under his shoulder-blade, with long fits of agony that maddened him. Paralytic symptoms also developed. A diagnosis of spinal tumor in the neighborhood of the fifth dorsal vertebra was made by Dr. Gowers. The spinal column was laid bare, and the spinous processes removed by a bone-forceps from the third to the sixth, inclusive. The ligaments were cut through, the dura mater slit open, and a tumor shelled out. The wound healed by first intention, and the patient slowly but surely recovered. The operation was a difficult, brilliant, and epoch-making one. Mr. Horsley's researches into literature and museums showed that, of fifty-seven similar cases removal of the tumor was the only treatment, and that if it had been resorted to eighty per cent. should have recovered, instead of which all died.

A Monument to Cohnheim was recently unveiled at Leipzig.

News of the Week.

A New Method of Treating Diseases of the Respiratory Organs.—The Paris correspondent of the *Therapeutic Gazette* writes: "A new medication is now introduced. It consists in diffusing various gases or vapors in the atmosphere breathed by the patient. The apparatus is based on the principle, long known, of Davy's *glow-lamp*, whereby a coil of platinum tipped with spongy platinum, on being placed round the wick of a spirit-lamp, the alcohol set on fire till the wire becomes red-hot, and the flame then blown out, the wire and platinum black will continue to glow for a considerable period. The combustion thus produced is imperfect, and sets free quantities of ethereal and ozonized vapors, which it is now proposed to utilize for medical purposes. Dr. Onimus, an electrician of some note, has had the idea of using, besides plain alcohol, ether, petroleum, benzine, and various tinctures for feeding the lamp. The different liquids, when not medicated, sensibly afford similar combustion products—namely, aldehydes, ethereal and ozonized compounds—very useful for disinfecting purposes. But when advantage is taken of the solvent power of the feeding liquids, Dr. Onimus thinks many complaints may be relieved without chance injury to the stomach. For instance, with an alcoholic or ethereal tincture of terpine, terebene, eucalyptol, or aconite-root, coryza, bronchitis, hay-fever, etc., are rapidly benefited, and the mucous discharges will speedily cease. At the same time it must be confessed that, while the local symptoms improve, the general, such as fever, etc., are less amenable to the vapor treatment. Two consumptives experienced great relief from inhalations with an alcoholic solution of terpine and one per thousand of corrosive sublimate. Oil of thyme dissolved in benzine proved very effective for consumptives and also for asthmatics, although, for the last, tincture of belladonna afforded better results."

Mint as an Anæsthetic.—Peppermint water, the last new antiseptic, is said to be, like carbolic acid itself, a useful agent for producing anæsthesia, or, at any rate, diminishing hyper- or dys-æsthesia of the unbroken skin. Dr. Armand Routh reports very favorably on its use in pruritus pudendi, especially in the neurosal form observed frequently during pregnancy, or at the climacteric. He orders a teaspoonful of borax and five drops of ol. menth. pip. to be put into a pint bottle of hot water, and well shaken; the parts affected to be freely bathed with a soft sponge. The soothing effect often lasts for many hours.—*Philadelphia Medical Times.*

Calcium Sulphide, in Leucorrhœa of milder types not depending on ulceration, is a very potent drug, according to Dr. M. Wilson (*Therapeutic Gazette*). It is to be given in doses of gr. j. to gr. iij., night and morning.

Phenacetin as an Anodyne.—Phenacetin seems likely to prove a successful rival of antipyrin and antifebrin, not only as an antipyretic, but as an anodyne. Professor Rumpf, of Bonn, reports in the *Berlin. Klin. Wochen.* of June 4th, successful results from its use in vaso-motor neuroses, against the pains of tabes dorsalis, and in neuralgias and neuritis. He gives it to adults in doses of gr. viij., as an antipyretic, and in double that dose as an anodyne. It is not a narcotic.

HYDROPHOBINE.—It appears that we are likely to have in time the chemical virus of infectious diseases in accessible form for study, nomenclatural treatment, and pathological experiment. M. Peyraud, of Libourne, has discovered and isolated a substance which he calls "hydrophobine." This he has obtained from the brains of mad rabbits. MM. Charrin Roux and C. Cumberland have, it is said, discovered the chemical virus of several other infectious diseases.

DIAGNOSIS AND SUCCESSFUL REMOVAL OF A PANCREATIC CYST.—Professor Kocher has recently successfully removed a pancreatic cyst from a man aged thirty-seven (*Correspondenzblatt f. Schw. Aerzt*, May 1). This is the seventeenth case in which such a cyst has been operated upon, but only the third in which the disease was correctly diagnosticated before operation.

A PLEASANT COMPANY OF DOCTORS.—The doctors of Indianapolis, writes Dr. I. N. Love (*Weekly Medical Review*), are numerous but "evidently prosperous, nearly all having offices in the business centre of the city, which in their appointments and general aspect suggested thrift and plenty to do. They themselves had a uniformly well-fed, well-posted, well-to-do look; their pleasant countenances indicating good digestion, good bank accounts, and good consciences. An observation of the mutual good-will prevalent among them would in itself have been evidence that the majority are 'medical society men.' The doctor 'with the big round head,' who disbelieves in medical societies, was not apparent, and I am inclined to the opinion that he is not indigenous to Indiana soil."

THE SECOND SESSION OF THE INTERNATIONAL MEDICAL CONGRESS OF AUSTRALASIA will assemble at Melbourne, Victoria, on January 7, 1889, and the sittings will continue on the five following days. The President of the Congress is Mr. T. N. Fitzgerald, F.R.C.S.I.; the Treasurer, Dr. George Graham; the Honorary Secretary, Professor H. B. Allen; and the Associate Secretaries, Drs. J. W. Barrett and G. A. Syme.

THE RESULTS OF THE TREATMENT OF CANCER OF THE LARYNX.—Dr. Max Scheier, of Berlin, has made a tabular analysis of all the reports of cases of laryngeal cancer, one hundred and twenty-five in number, published since 1880 (*Deut. Med. Wochensch.*, June 7, 1888). There are six tables, each presenting the results of different modes of treatment. The first table comprises cases in which no operation was done—4 cases, all fatal; the second, cases in which tracheotomy alone was done—17, all fatal but 3; the third table gives the cases in which laryngotomy with extirpation of the tumor was performed, 9 in number—in 3 death ensued within fourteen days, in 3 there was relapse, 2 had shown no relapse within the first few weeks, and 1 remained well nearly three years afterward; the fourth table gives the partial extirpations of the larynx, 23 in number—2 died soon after operation, 3 about a month afterward, 5 survived operation but relapsed later on, 8 are reported as cured but not observed long enough as to relapse, and 5 remained well sixteen months and more after operation. One of the latter cases showed no relapse two years after operation, another three years, and another seven years. The fifth table gives the cases of total extirpation of the larynx, 68 in number. Of these, 18 died within a fortnight, and 5 more soon afterward; 17 survived the operation, but relapsed within a year (one excepted, but fatal in the second year); 6 died of intercurrent diseases; 13 are reported cured, but not observed a sufficiently long time to determine as to relapse; and 9 remained free from relapse sixteen months and longer. Lastly, the sixth table gives the cases in which an endo-laryngeal operation was performed, 4 in number. In one swallowing was painless eight days afterward, the second died in an epileptic fit five months afterward, the third case affords no data as to the operation, the fourth (B. Fränkel's case) underwent several operations, and remained quite well four years after the last, with a good voice. Dr. Scheier requests the various operators to favor him with the further results in the several cases mentioned in the tables, so far as known up to the present.

SEWING UP THE LIVER.—Recent exchanges chronicle the fact of successful removal of part of the pancreas, of a tumor from the spinal cord, and finally of a suturing of the liver. An Italian, aged twenty-eight, received a stab wound which made a cut just below the right costal margin, two inches long, extending into the left lobe of the liver to the depth of over an inch, and making a longitudinal cut in that organ of two and a half inches in length. Professor Postempski (*Riforma Med.*, June 9; *British Medical Journal*), who had satisfied himself so far back as 1885, by experiments on dogs, that the liver-substance could be stitched without giving way, determined to try that mode of treatment. He accordingly enlarged the wound in the skin by five centimetres, and made a second vertical incision in the middle line across the first. The wounded lobe was pushed forward as far as possible, and, while the pieces of sublimated gauze with which the wound had in the first instance been plugged were being withdrawn, six points of chromicized catgut suture were passed through the whole depth of the wound with extremely fine curved needles. The sutures were very carefully tightened as they were introduced, the edges of the wound being at the same time gently pressed together, so that the loop of catgut did not draw them into contact, but merely kept them in apposition. The sutures were tied in a simple knot, and there was not the slightest laceration of the liver-substance through which they were passed. Hemorrhage ceased at once, but the critical condition of the patient made it impossible to wash out the peritoneal cavity at all thoroughly, and Dr. Postempski believes that the greater part of the extravasated blood remained in the abdomen. There was no rise of temperature, however; but, on the second day after the operation there was very abundant albuminuria, which lasted for twenty-four hours, when it completely ceased. The patient got up on the eighteenth day, and he is now perfectly well, without any local pain, or any appreciable enlargement of the liver.

A POINT IN DIAGNOSIS—APPLICABLE ONLY TO BABIES.—Do you wish to ascertain the health of a baby, feel the condition of its buttocks. If these are firm and elastic, the baby is strong and well; if they are soft, as if they were boiled turnips in a bladder, the child is out of sorts.—*Texas Medical Journal.*

Society Reports.

THE MICHIGAN STATE MEDICAL SOCIETY.

Twenty-third Annual Meeting, held in Detroit, June 14 *and* 15, 1888.

THE Michigan State Medical Society was called to order at ten A.M., Thursday, June 14th, for its twenty-third annual meeting. After prayer by Rev. Dr. A. H. Kellogg, and the usual address of welcome by the mayor of the city, the Society proceeded to transact business.

The Secretary, **DR. GEORGE DUFFIELD**, reported the present membership of the Society at 275; that 810 copies of the "Transactions" of the last meeting had been prepared, and 500 distributed, at an average cost of seven cents per copy. He further stated that this is the first State Society to divide into sections.

The Treasurer, **DR. H. B. HEMENWAY**, showed gross receipts, $920.76, and expenditures, $848.82; leaving a balance on hand of $71.94.

The Committee on Necrology reported the deaths, during the year, of Dr. Douglas A. Joy, of Marshall, and Professors A. B. Palmer and E. S. Dunster, of Ann Arbor.

The afternoon was taken up with section work under the following chairmen: Practice of Medicine, Dr. A. W. Alvord, Battle Creek; Surgery, Professor Donald Maclean, Detroit; Obstetrics and Gynecology, Dr. George E. Ranney, Lansing.

BAD DRAINAGE AND PHTHISIS.

The discussion in the first section upon the general subject of phthisis was unanimously agreed to be one of the most profitable for many years. It was preceded by an illustrated paper by Dr. Samuel P. Duffield, health-officer of Detroit, upon the "True Principles of House Drainage."

PROFESSOR HENRY F. LYSTER, of Detroit, attempted next to show that

UNDRAINED LANDS PREDISPOSE TO PHTHISIS PULMONALIS,

the idea being that the damp and cool atmosphere of such sections increased the tendency to lung troubles, and especially to that called commonly consumption. He partially supported his views by some figures and histories of cases. On the other hand, various members of the Society reported a marked decrease in the quantity of phthisis since the land of their section had been drained.

THE TUBERCLE BACILLUS.

DR. J. FLINTERMANN, of Detroit, gave a long and carefully written compilation to show that Koch's tubercle bacillus is the cause of tuberculosis. In marked contrast came the paper of Professor Heneage Gibbes, the new member of the faculty of the Michigan University Medical School. His theme was

ACUTE MILIARY TUBERCULOSIS,

and his paper showed not only careful reading, but also thorough and unbiassed investigation and thought. He stated that in general the same reasoning would apply to phthisis and tuberculosis. The points discussed were: 1, The histology of the lesions and their bearing on the views held as to the unity of phthisis; and, 2, the relation of the tubercle bacillus to these morbid changes. He showed two specimens of lung taken from typical cases of acute miliary tuberculosis in children of about the same age, each specimen being injected with Berlin blue. Their gross appearances and the clinical history of the cases were very similar, indeed almost identical. With the microscope all resemblance ceases. [Here he showed micro-photographs, and he had also sections of the same lungs under the microscope.] In the first there is a nodule of disintegrated lung substance similar to a pyæmic abscess. In some of the nodules the process has continued longer and the central portion become caseous. All lesions in this lung were of the same character, and are similar to those of broncho-pneumonia. It is the catarrhal inflammation in which the walls of the air-vesicles and blood-vessels are included; there is interruption of blood-current and breaking down of the tissues. There is no new structural formation.

In the second specimen the whole nodule is made up of fibroid tissue containing one or more giant-cells. In the larger nodules the centre is often necrosed. The nodule is not, as some say, avascular, but the author found invariably that with the growth of new tissue new vesicles form; but in nodules with necrosed centres these exist only in the outer fibroid area, showing, he thinks, that the necrosis is due to defective nutrition. Though in the first form there is local inflammation, in the second there is no inflammation, but a formation of new tissue containing multinucleated cells of the epithelial type. Another point of difference is that in the tubercular form the disease is general throughout the body. In tuberculous meningitis, for example, true tubercle is found. In the acute caseous form the morbid process is chiefly confined to the lungs.

By other stains to bring out the tubercle bacillus it is found that the first lung contains large numbers of the characteristic bacilli, especially in the centre of the caseous nodules; and in the newer nodules, or in the edges of the caseous nodules, the bacilli are less abundant. In the second lung but a single bacillus could be found, after many hundred sections. In true tubercle he has sometimes found a few bacilli, but never in the caseous centre, always in the fibroid tissue.

The reasons for believing the bacillus to be the true virus of phthisis are:

1. It is found in persons suffering from the disease.
2. Pure cultivations reproduce the disease.
3. In the inoculated the bacillus is again found.

1. He has clearly shown that in true tubercle many cases contain no bacilli. He therefore concludes that in true tubercle the presence of the bacillus is accidental.

2. Taking the bacillus of jequirity for an example, the reproduction of the disease may be (as shown by Klein) due not to bacilli but to a chemical poison.

3. As the result of six years' experiments in inoculating and feeding various animals, he has been unable to find a bacillus in the commencement of tubercle.

He called attention to the fact that the description of Watson Cheyne's experiment showed that he was dealing with bovine tuberculosis, which greatly differs from human tuberculosis.

He concludes: 1. That phthisis and tuberculosis are distinct in their causation.

2. That the tubercle bacillus is not yet proved to have any causal relation to either, but rather seems to be a concomitant of the process of caseation.

At 7.30 P.M. the Opera House was well filled with citizens, as well as members of the Society.

PRESIDENT THEO. A. MCGRAW, of Detroit, gave an unusually clear address upon the

DEPENDENCE OF THE MEDICAL PROFESSION ON THE PEOPLE.

National peculiarities affect the professional life as much as the political. Our professional schools are distinctive, and must remain so. American medical education is a direct descendant from the English methods of a century ago. In discarding features objectionable to American institutions, we have in some cases preserved the features most objectionable to genuine education. The modern preceptor little concerns himself with preliminary qualifications, or with the actual progress of the student.

The State owes it to her citizens to provide the highest and best professional education. If she does not provide this in an institution under State control, she should make it possible for private individuals to support such a school. Colleges become useful largely in proportion to their age and to their endowment. In a State like Michigan, where the corporate life of an institution is limited, by the Constitution of the State, to thirty years, either age or sufficient endowment is impossible. It is the duty of the community to provide not only education in the schools, but also, what is of full as much importance, hospital training. Hospitals should bear a legitimate ratio to the population, and it is detrimental to the community to undertake, by public or private means, the support of more hospitals than are needed. No hospital is too well equipped. It would be far better to endow more fully hospitals already existing, than to increase their number.

Dr. George K. Johnson, of Grand Rapids, then gave the annual address in medicine, taking for his theme the

NATURAL HISTORY OF DISEASE.

Speaking generally, the natural course of a disease is toward recovery. We should discriminate closely between recovery and cure, and be careful how we use the latter word.

Professor George E. Frothingham, of Ann Arbor, next delivered the annual address in surgery, giving a history of

SURGERY AS AN ART AND A SCIENCE

to the present time, and making a plea for the extension of the course in the surgical school to four years, the first two being preparatory and the last two purely clinical.

Friday morning, the Society was called to order at nine o'clock.

THE FOLLOWING OFFICERS WERE THEN ELECTED FOR THE ENSUING YEAR:

President, S. S. French, Battle Creek; First Vice-President, Charles N. Lewis, Jackson; Second Vice-President, E. B. Ward, Lanigsburg; Third Vice-President, David Inglis, Detroit; Fourth Vice-President, Simeon Belknap, Niles; Secretary, George Duffield, Detroit; Treasurer, H. B. Hemenway, Kalamazoo; Members of Judicial Council, William Brodie, F. K. Owen, and J. H. Bennett; Delegates to British Medical Association, Theo. A. McGraw, H. A. Cleland, and C. J. Lundy; Delegates to Medical Society of Ontario, J. J. Mulheron, Donald Maclean, and C. George. Kalamazoo was selected as the next place of meeting, on the second Thursday in May, 1889.

Professor N. W. Webber, of Detroit, gave an annual address in gynecology on the subject of

UTERINE DISPLACEMENTS.

In the afternoon sectional work was resumed, and at that time the following officers were elected: In Section on Practice, Chairman, Dr. Hugh McColl, Lapeer; to give Annual Address, Professor H. F. Lyster, Detroit; Committee on Physiology, Dr. W. C. Wade, Holly; Committee on Hygiene and Climatology, E. L. Shurley, Detroit; Committee on Pathology, Heneage Gibbes, Ann Arbor; Committee on Materia Medica, C. George, Ann Arbor; Section on Obstetrics, Chairman, Dr. E. W. Jenks, Detroit, Address.

In the Section on Practice, among the papers read was one by **Dr. A. M. Hume**, of Owosso, upon

AN INORGANIC MITRAL BRUIT,

which he thinks is caused by irregular cardiac contraction, thus preventing exact apposition of the valves.

It was generally agreed that the time for the meeting was too short. The sectional work was well done. Harmony prevailed throughout the entire meeting, if we may overlook the persistent attempts of one of the old members to "'bolish this section nonsense."

Entertainments were provided, fine and interesting, but they were not permitted to interfere with scientific work. In all, over thirty papers were presented, and all of a high order.

ONTARIO MEDICAL ASSOCIATION.

Eighth Annual Meeting, held in Toronto, Canada, June 13 and 14, 1888.

(Reported by our Canadian Correspondent.)

The eighth annual meeting of the Ontario Medical Association opened in the theatre of the Normal School, Toronto, on Wednesday, June 13th, the President, **Dr. J. W. Rosebrugh**, of Hamilton, presiding. The attendance was about two hundred, and represented every portion of the Province of Ontario.

THE PROVINCIAL LIBRARY.

Dr. J. E. Graham, of Toronto, presented the report of the committee appointed to draft a scheme for the establishment of a provincial medical library. The committee had secured very suitable rooms in the new and elegant building of the Ontario Medical Council, and the Toronto Medical Society had donated a liberal sum to the library. They had considered it advantageous to form a joint stock company known as the Ontario Library Association, with shares at five dollars each, payable in five annual instalments, and had already subscriptions in stock amounting to four thousand dollars. Numerous gifts had been offered from friends in the United States, but these were cumbered by the duty on books, an unjust tax that the committee urged the members of the Association to agitate for removal. Although they had not canvassed for books, they had received eight hundred bound volumes and some seven thousand pamphlets and magazines. In closing, the report appealed to the Association, individually and collectively, for support.

On motion, it was resolved to donate one hundred and fifty dollars to the Ontario Medical Library.

RECEPTION OF DELEGATES.

Dr. G. H. Fox and Dr. C. C. Rice, of New York; Dr. A. W. Johnstone, of Danville, Ky., and Dr. Gardner, of Montreal, were introduced as delegates to the Association. They were each accorded a warm welcome, and, in short addresses, acknowledged the cordiality with which they were received.

PRESIDENT'S ADDRESS.

The President, **Dr. J. W. Rosebrugh**, of Hamilton, then delivered his address. After expressing his appreciation of the honor bestowed upon him in his election to the office, he reviewed the history of medicine and medical education in the Province of Ontario, and mentioned the names of several of the fathers of the profession to whose zeal and devotion too much praise could not be given. After congratulating the Association on the success which had attended it since its formation, he suggested that it might be well to consider the propriety of affiliating with the British Medical Association, which has now over twelve thousand members and forty-seven branches, and under whose auspices was published the *British Medical Journal*. He referred to the history of medical science, and said that science was still largely empirical, but that the truth was becoming more and more firmly established that all the modes and methods of nature must be studied and obeyed. In conclusion, he expressed his gratification at the continued improvements in medical education, and urged the co-operation of all in promoting the various schemes for perfecting the educational advantages now enjoyed by the Province. The higher the standard was raised, he concluded, the better would it be for the student and his patients.

SURGICAL SECTION.

Dr. Grassett, of Toronto, opened the discussion on Surgery by reading a paper on

URETHRAL DISCHARGES,

in which he referred to the various diseases of the urethra, their causes, pathology, and treatment. Regarding the treatment of gonorrhœa, he deprecated the use of injections, and spoke of the advantages gained in the use of bougies in those cases. He was followed by **Dr. McFarlane**, of Toronto, who considered that it was a shame that in our public schools the male pupils are not taught and warned of the baneful effects of masturbation. He strongly advocated the necessity of a plain explanation being given, so that our young people might learn how disastrous it was to their mental and physical welfare to indulge in vicious practices. Dr. Groves, of Fergus, Dr. Burt, of Paris, and Dr. Dupuis, of Kingston, continued the discussion.

SOFT MYOMA.

Dr. A. W. Johnstone, of Danville, Ky., then read a paper on "Soft Myoma," illustrating his subject by a drawing of a tumor of this kind which he had recently removed. The object of the paper was to show that this form of uterine tumor is not one of the secondary changes of the hard myoma, due to degeneration of the newly-formed muscular tissue comprising the ordinary fibroid, but is an entirely distinct tumor, springing from a different source, having a separate histological and clinical history, and a widely different termination.

BACTERIA.

The next paper was by **Dr. Charles Sheard**, of Toronto, on "Bacteria and their Influence on the Blood and Tissues." After reference to the importance of the part played by bacteria in disease, he proceeded to speak of typhoid fever, and expressed the opinion that too much stress was laid upon temperature in diagnosis. He questioned the soundness of the principle that increase of temperature meant fever, and that the lowering of it really meant a reduction of the fever. His conclusions were (1) that, save in those cases where death takes place from the action of the typhoid fever poison directly on the nervous system, there must be intestinal lesion to prove the existence of typhoid; (2) that with such intestinal lesion we will have distinct abdominal symptoms; (3) that acute tuberculosis and septicæmic states are often mistaken for ordinary typhoid; (4) that the evening rise and morning fall of temperature as a proof of the existence of typhoid is deceiving. An interesting discussion followed by Dr. Mullin, of Hamilton, Dr. Henderson, of Kingston, and Dr. Smith, of Tilsonburg.

EMPYEMA.

The next subject was Empyema, in the discussion of which Dr. Holmes, of Chatham, and Dr. Whiteman, of Shakespear, took part.

OTHER VISITORS INTRODUCED.

The President introduced several visitors to the Association.

The Hon. Charles Drury, Minister of Agriculture, said he always regarded medical men in politics as valuable friends and formidable opponents. He was glad to note the great advances made in medical science, and the evident disposition of the Government to deal liberally with the Profession.

The Hon. George W. Ross, Minister of Education, spoke of the good work done by the medical profession in securing for the country excellent sanitary conditions and laws, and also alluded, in high terms of praise, to the high standard required of those aiming at getting the diploma of the Ontario Medical Council, without which no one was allowed to practise medicine in this province. He would be willing to render all manner of assistance to the Council in effecting further reforms and substantial improvement. Young men were finding to their cost that Ontario was a country where superficiality is discarded, and where thoroughness is especially desired by those acting in the best interests of medical science.

Dr. J. H. Barns, President of the Medical Council of Ontario, was introduced, and said he was glad to note the prosperity of the Association, the members of which were all in accord with the efforts of the Medical Council, which was now recognized as doing its best to prevent the profession of medicine from being entered by incompetent men.

Sir James Grant was also introduced to the meeting as an old and highly-respected member of the Canadian profession.

THE PATHOLOGY OF 1887.

Dr. H. A. McCollum, of London, read an able paper on "Notes of Clinical Importance in the Physiological Researches of 1887," in which he presented a succinct and interesting account of some of the chief pathological discoveries of the year.

SURGICAL TREATMENT IN NASAL DISEASES.

Dr. C. C. Rice, of New York, read an interesting paper on "The Surgical Treatment of Catarrh and other Nasal Diseases," and illustrated the subject by exhibiting and explaining the latest instruments used in operations on the nasal tract.

MALARIAL DISEASES.

"Malaria as the Cause of Disease," was treated of in an able paper by **Dr. Mullin**, of Hamilton. He said that a great many cases are diagnosed as due to malaria, while a proper and painstaking examination would show that the cause of the disease was something else. He deprecated severely the indiscriminate and too liberal administration of anti-malarial remedies, which must not be considered harmless. The paper was discussed by Drs. Geikie and Workman, of Toronto.

THE CANADIAN ANATOMY ACT.

The following resolution was unanimously adopted: "That this Association would regard with great satisfaction the modifying of the Anatomy Act by the Legislature of Ontario as soon as possible, so as to make it more efficient in promoting the advancement of medical and surgical science by securing a more adequate supply of anatomical material; the study of anatomy being the basis of all sound medical education."

BANISHING THE IRREGULARS.

The report of the Committee on Credentials was presented and created considerable discussion. Three persons who had made application for membership in the Association were rejected, one on the ground of announcing his ability to detect disease by clairvoyancy, and two for advertising freely in public prints and thus bringing discredit on the profession.

Second Day—Thursday, June 14th.

The proceedings of the second day were marked by a large attendance, and a highly interesting programme of papers and discussions thereon.

IDIOPATHIC GLOSSITIS.

Dr. Hunt, of Clarksburg, read a paper on "Idiopathic Glossitis," in which he reported a case, the only one of the kind he had met with in a practice of twenty years, and during the same period he had rarely seen a case recorded in the current medical literature. A discussion followed, in which Dr. McPhedran, of Toronto, Dr. Brock, of Guelph, and Dr. Metherill, of Freelton, took part, and each advocated the use of ice in treatment.

FRACTURES OF THE HUMERUS.

Dr. C. M. Smith, of Orangeville, read a paper on "Fractures of the Humerus," and introduced a patient wearing a splint, the claims of which he advocated for the successful treatment of those cases. The splint was critically examined by the members, and favorably commented on by some who had tested its merits.

RUPTURED TUBAL FŒTATION.

Dr. Gardner, of Montreal, one of the guests of the Association, read a paper on the above subject, in which he referred to the recent advances made in the treatment of those cases by timely surgical interference, and described an interesting case which had recently come under his notice. **Dr. Johnstone**, of Danville, Ky., congratulated Dr. Gardner on the paper he had read, and thought that both Canada and the United States should be thankful for the advance made in the science of obstetrics by the careful study and investigation of men like Dr. Gardner. The speaker referred to the danger of using electricity in order to kill the fœtus, as it so frequently resulted fatally to the mother. The knife was the best remedy, and if the patient objected to its use, he (the speaker) would throw up the case. The whole system of applying electricity was, he thought, based on an erroneous idea.

Dr. Gardner replied to the remarks made by Dr. Johnstone, upholding the use of electricity in certain cases.

NEURASTHENIA.

Dr. Daniel Clark, Medical Superintendent of the Toronto Asylum, read an interesting paper with the above title. Fear had a great deal to do with neurasthenia, which must not be confounded with hysteria, hypochondria, or insanity. Patients suffering from neurasthenia are themselves aware of their vagaries, get rid of their fears at times, but, like the swinging pendulum, return to them. They conjure up mountains of woe, and the reserves of nervous force which all possess are consumed. Many of those suffering from neurasthenia are restless, capricious in their appetites, but look fairly well. A desire to shirk duties that once were a pleasure, restless nights followed by a low condition of thought, lack of self-control, timidity, and irresolution, are evidences of neurasthenia. Many medical men made the mistake of trying to lecture patients out of their forebodings. It was better to accept them, and picture brighter things. Fresh air was invaluable in the treatment of all nervous diseases, but the cure would necessarily be slow. A large stock of patience was necessary. The disease was often caused by indulgence of secret vice and by syphilis. In treatment we cannot expect any favorable result from opium, chloral, alcohol, or in fact any other drug. Leave medicine alone, and enforce thorough cleanliness with good food, and plenty of fresh air and exercise. Cheerful company is also absolutely necessary.

UTERINE HYDATIDS.

Dr. Bray, of Chatham, read a paper on "Uterine Hydatids," giving notes of a case coming under his notice. He dwelt with emphasis on the importance of making a careful diagnosis in any case suspected to be hydatids, and related a case where, through an error, premature labor had been induced where uterine hydatids had been diagnosed.

LEUCOCYTHÆMIA.

Dr. McPhedran, of Toronto, presented a case of "Leucocythæmia," in which the splenic enlargement was well marked.

A NEW OPERATING-TABLE.

Dr. Charles O'Reilly, of the Toronto General Hospital, exhibited an operating-table of which he was the inventor, and explained its advantages. One of them was the use of a screen which hid from view the features of the patient operated upon, and the doctor explained that by its use women regarded with much less horror the idea of submitting to local uterine treatment. Dr. O'Reilly also invited the members of the Association to inspect one of the new ambulances recently adopted for use by the city of Toronto.

LIFE INSURANCE.

At the afternoon session **Dr. J. Thorburn**, of Toronto, read an interesting paper on "Life Insurance, and the Relation of Medical Men Thereto." He said life insurance is now one of the principal institutions of the civilized world, and its history is instructive. Pascal was the first to introduce the study of probabilities, but the Breslau tables, formulated by Dr. Hally, were the first of any importance mentioned on the expectation of life. In 1697 a policy was issued on the life of Sir Robert Howard for one year, and exactly that day year Sir Robert died. The merchant refused to pay on the ground that the policy had expired, but the court ruled that "from" the day of date excluded the day itself. The growth of life insurance the last thirty years had been wonderful. The medical man has many important functions to perform in relation to life insurance, for on his skill and selection the success of a company mainly depends. Gross frauds have been perpetrated on life insurance companies. Personation, forgery, murder, have been employed, and medical men have to weigh carefully the statements of applicants. Many persons of intemperate habits conceal the fact. The position of medical examiner was one of great importance. At one time applicants appointed their own medical examiner, but this soon led to trouble. Now companies appoint their own examiners and greater satisfaction is given. No medical man should accept such a position unless prepared to give his time to it and perform his duty without fear or favor. Some examiners perform their duty by a simple thump on the chest, a feeling of the pulse, etc., and such an examiner was a disgrace to the profession. The surroundings of an applicant were important, as shown by the statistics of lying-in hospitals. The lives and habits of ancestors and parents should be considered. The occupation of an applicant often shortens life, as for instance, painters and plumbers. Professional men were the best lives to insure. In connection with life insurance medical men have high moral responsibilities. This interesting paper was freely discussed, and the opinion expressed that many life insurance companies seem unwilling to show their appreciation of the services of their medical examiners by paying a satisfactory fee for the services rendered.

LAPAROTOMY.

Dr. L. McFarlane, of Toronto, read an instructive paper on "Laparotomy for Acute Intestinal Obstruction," and Dr. Yeomans, of Mount Forest, Dr. Grassett, of Toronto, Dr. Hunt, of Clarksburg, Dr. Richardson, of Toronto, and the President, discussed the paper.

THE USE OF PESSARIES.

Dr. J. A. Temple, of Toronto, then read a paper on the above subject, in which he ably advocated careful discrimination in the use of all mechanical supports, and urged the importance of giving careful consideration to the pathological conditions present before recommending the use of a pessary.

APOSTOLI'S METHOD.

Dr. A. M. Rosebrugh exhibited the uterine electrolytic apparatus employed by Apostoli, of Paris, and briefly explained the latter's method of employing these instruments in the treatment of fibroid tumors.

PUERPERAL ECLAMPSIA.

Dr. Irving, of Kirkton, had a paper on the above subject, and **Dr. A. A. McDonald**, of Toronto, followed with a paper on

THE DIAGNOSIS OF OBSCURE PELVIC AILMENTS,

in which he urged the importance of (1) fixing the seat of the disease, and (2) endeavoring to remove the cause by removal of the uterine appendages, if such were considered necessary.

AN INTERESTING REPORT.

The Committee on Medical Ethics then presented their report, which concluded as follows:

"Your committee, after carefully considering the code of ethics, as at present adopted by this Association, and which code is really that of the American Medical Association, have come to the conclusion that the time has arrived when the Ontario Medical Association should frame a code of ethics of its own, taking special cognizance of the following points brought under their observation: 1. That of signs displayed outside of churches and other public places, with the name of any practitioner painted on them. 2. That the practitioners employed by the various clubs be remunerated in proportion to the work done. 3. To signs displayed by medical men outside their houses, and to advertisements in the daily papers. 4. To the posting of handbills about the city by practitioners on change of residence. 5. To the advertisements of a certain dispensary for diseases of women in this city, notifying the public that advice was free, and that students were not admitted. 6. Your committee beg to recommend the appointment of a committee to formulate a code of ethics and to report at the next annual meeting. The seventh clause recommended the expulsion from membership of a certain member for unprofessional conduct."

The report was read clause by clause, and provoked a great deal of discussion. The first six clauses being adopted, the secretary informed the meeting that the member whose expulsion had been recommended had tendered his resignation and withdrawn from the Association.

Dr. J. H. Richardson, of Toronto, presented a paper on

CORONERS' INQUESTS.

After a few preliminary remarks dealing with the gravity of the question, the speaker suggested that a committee of the Association should be appointed to elaborate some feasible scheme for conducting investigations, in suspected cases of death, more in accordance with the spirit and conditions of an advanced civilization. He believed that the true functions of the coroner ought to be confined to throwing all the light possible on the cause of death, leaving matters purely legal to gentlemen of the legal profession. As to the medical witness, the speaker was more emphatic, condemning the superficial character of the evidence sometimes given touching the cause of death. The usual practice is to entrust the *post-mortem* examination to some medical man known to have been acquainted with the deceased, or to have been in some way accidentally connected with him at the time of death. Too little time is allowed the witness to prepare an intelligent report, and consequently in many cases the ends of justice are frustrated. If he should afterward discover that his opinion as to the cause of death was erroneous, no opportunity of putting the case right may ever arrive. A medical witness should have a thorough knowledge of medical jurisprudence, so that it is not every medical man that can be an intelligent witness of the cause of death in cases involving intricate details. As to the coroner's jury, the speaker said he had not respect enough to give it serious attention. It is absurd to believe that twelve men, sometimes gathered from the most ignorant class, can advance the ends of justice. In the opinion of the speaker, the time has arrived when the coroner's jury should be dispensed with.

A spirited discussion followed, the concensus of opinion being that coroners' inquests are in nearly all cases defective.

A committee was appointed to take into consideration the whole subject of medico-legal investigations of violent or suspicious deaths, and to draft a bill embodying the proposed changes, which will be submitted to the Ontario government on the event of the bill receiving the endorsement of the Association at its next annual meeting.

OFFICERS ELECTED.

The report of the Nominating Committee was then presented, and the following officers elected for the ensuing year:

President—Dr. W. H. Henderson, Kingston.
First Vice-President—Dr. Geikie, Toronto.
Second Vice-President—Dr. Howitt, Guelph.
Third Vice-President—Dr. Day, Trenton.
Fourth Vice-President—Dr. Aikman, Collingwood.
Corresponding Secretaries—Dr. Lovitt, Ayr; Dr. Gillies, Teeswater; Dr. Trimble, Queenston; and Dr. Leonard, Napanee.
General Secretary—Dr. D. J. Gibb Wishart, Toronto.
Treasurer—Dr. N. A. Powell, Toronto.

After passing the usual resolutions, the new president was duly installed in office, and the Association adjourned to meet in Toronto in June, 1889.

SOCIETY OF GERMAN PHYSICIANS OF NEW YORK.[1]

Stated Meeting, April 27, 1888.

Dr. George W. Jacoby, President of the Evening, in the Chair.

MARKED HYPERTROPHY OF THE TONSIL OF THE TONGUE.

Dr. Gleitsmann showed a patient with hypertrophy of the lingual tonsil. The case concerned a woman, thirty-eight years of age, who for the past two years had suffered from a troublesome cough, accompanied by constant irritation of the throat and the sensation of a hair lodged in the fauces, compelling repeated efforts at deglutition. The cough was so severe as to disturb her night's rest. For about three months the sputum had been tinged with blood. The physical examination of the chest revealed the absence of pulmonary mischief.

Examination of the throat showed enormously hypertrophied follicles at the base of the tongue, which, on the left side, impinged upon the epiglottis. Apart from this, the respiratory passages appeared normal. Minute extravasations were seen at the tip of some of the most prominent follicular glands.

The speaker also referred to a somewhat similar case previously observed by him (The Medical Record, December 17, 1887).

HEMORRHAGES HAD NOT HITHERTO BEEN OBSERVED

in this affection. The origin of the bleeding was a mechanical one, due to friction of the enlarged follicles against the adjacent parts.

Destruction of some of these follicles by means of the galvano-cautery had already resulted in an improvement of the condition of the patient.

The speaker finally alluded to

A PRIORITY CLAIM

put forth by Lennox Browne, in The Medical Record, in regard to the dependence of certain morbid symptoms upon the condition under consideration. Dr. Browne evidently referred to enlargement of the circumvallate papillæ, and not to hypertrophy of the follicles. Hence his claims were not tenable.

Dr. C. Heitzmann observed that these bodies were erroneously called glands. They were, in fact, only lymph-follicles, and should be so designated, even by the laryngologists.

Dr. Toeplitz had seen a number of cases of this kind, but did not believe that "tonsil of the tongue" was a proper name for the structures in question. One of his cases had recovered under topical applications of tannin-glycerine.

COLLOID CANCER OF SUPERNUMERARY MAMMARY GLAND IN A YOUNG GIRL.

Dr. C. Heitzmann presented a specimen of the above, which had been sent to him from Utica. The tumor was removed from an apparently healthy girl, seventeen years of age. It was situated at the border of the pectoralis major muscle, about midway between the axilla and mammary gland.

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[1] This Society has been in existence since 1857. Monthly meetings are held on the fourth Friday of every month, except July and August, at the residence of Dr. A. Jacobi.

Microscopical examination revealed normal glandular tissue, in addition to cancer of the colloid variety.

Dr. Jacobi asked whether carcinomatous transformation was not a common occurrence in these accessory glands.

Dr. Willy Meyer believed that it was often seen in the supernumerary glands found in regions of the body more remote from the breast.

SUPRAPUBIC CYSTOTOMY FOR CANCER OF THE BLADDER.

Dr. W. Meyer exhibited fragments of a tumor of the bladder removed by the suprapubic method. The operation was done at the German Hospital, on a patient sixty-five years of age. The patient had suffered from vesical symptoms for six years. About one year ago hæmaturia was first observed. There was marked vesical tenesmus, and not infrequently small particles of the tumor were voided during an act of painful micturition. Rigors also came on. Vesical incontinence supervened two months ago; the patient was confined to his bed and because visibly emaciated.

On admission to the German Hospital, a large tumor of the bladder was readily detected by bimanual palpation. The patient had an afternoon temperature of about 102° F. The kidneys had apparently suffered but little, if at all. The capacity of the bladder was barely three ounces.

Cystoscopy was practised, but the field of vision remained dark, although the patient's abdominal structures were so thin that they appeared translucent from the electric light within the bladder. The speaker believed that

A NEGATIVE RESULT OF CYSTOSCOPY, PROVIDED THE FLUID IN THE BLADDER WAS CLEAR, SHOULD JUSTIFY THE DIAGNOSIS OF A GROWTH OF LARGE SIZE.

In the present case it proved to be so large as to fill almost the entire bladder.

Epicystotomy showed the size to be that of a man's fist. It was impossible to remove it otherwise than piecemeal. It was attached by a broad base near the opening of the left ureter. Resection of the wall of the bladder was not undertaken, owing to this broad attachment. The patient bore the operation well, and had developed no unfavorable symptoms. The operator intended to establish a permanent fistula of the bladder, in view of the probability of recurrence of the neoplasm.

COMPLETE CONGENITAL OCCLUSION OF THE RECTUM—DEATH FROM HEMORRHAGE AFTER OPERATION.

Dr. E. C. Wendt presented a specimen of complete congenital closure of the rectum, and gave the following history of the case: The infant was born at full term, after a normal labor, at the New York Infant Asylum. The anus was so well formed that the child was two days old before the atresia recti was discovered. The occluding membrane was about one-quarter of an inch above the anal opening.

Operative interference by means of puncture of the membrane, the introduction of probes for purposes of distention, and, finally, a crucial incision, gave some relief to the symptoms of incipient peritonitis. But uncontrollable hemorrhage occurred, and the infant died exhausted on the fifth day.

At the autopsy it was found that the entire colon was much distended, partly by gas and in part by a grumous substance. The latter proved to be blood mixed with meconium.

The septum which had produced the atresia was one-eighth of an inch thick. Mucous membrane was found both below and above it. The anus was well formed. There was incomplete hypospadias.

THE BONY PELVIS WAS EXTREMELY CONTRACTED;

so much so that the index-finger could barely be forced through, after removal of the soft parts. The bladder was filled with turbid urine and was very much distended, reaching half-way up to the umbilicus. The cæcal end of the rectum above the occluding septum formed a much distended pouch, and showed at one point a traumatic laceration, from which some of the hemorrhage had undoubtedly occurred. There was no other abnormality about the child, but it was poorly developed, and might easily have passed for a nine months' fœtus.

Dr. Adler was disposed to regard the case as one of imperforate anus, with more than the ordinary amount of depression of the external integument at the point corresponding to the anus.

Dr. Wendt replied that in view of the fact that the anus was quite normally developed and the occlusion concerned the rectum,

ATRESIA RECTI WAS THE PROPER DESIGNATION.

Dr. W. Meyer concurred in this opinion. He added that a study of the specimen would seem to show that an operation might have been successfully done. Certainly the septum was not uncommonly thick, and its low situation rendered it accessible to the knife.

In cases where the occlusion was situated higher up in the rectum, operative interference was quite difficult, and a regular

PROCTOPLASTY MUST BE PERFORMED.

In cases where this was impossible of accomplishment, an anus præternaturalis would have to be established. The sphincters of the anus were usually well developed in these cases. But if they were found in an opposite condition, the rectal incision would have to be more limited than otherwise.

The speaker also related

A SUCCESSFUL OPERATION

undertaken by him in a case of atresia of both rectum and anus. The occlusion of the rectum extended as high up as two inches from the anus. The infant was twenty-four hours old, and the final result of the operation was a satisfactory one.

ANEURISM OF ARCH OF AORTA—ABSENCE OF AUSCULTATORY SIGNS.

Dr. I. Adler presented a specimen of aortic aneurism, obtained from the body of a man who had died at the German Hospital. The peculiarity of the case consisted in the fact that no auscultatory evidence of aneurism could be obtained. Indeed, the diagnosis of retro-sternal or mediastinal tumor could not be excluded *intra vitam*. A short time before death the patient had developed rigors, followed by rapid rise of temperature up to 107° F., and sweats. Other

EVIDENCES OF SEPTIC INFECTION

were likewise present.

The autopsy showed that these symptoms were due to purulent softening in the interior of a thrombus situated in the aneurismal sac.

PHTHISIS OF ONE KIDNEY, WITH HYDRO-NEPHROSIS OF THE OTHER.

Dr. Adler also exhibited the kidneys and heart of a woman, aged twenty-four, who was admitted to the German Hospital in a dying condition. A clinical history was not obtained, although it was learned later that the patient had for many years presented the appearance of chloranæmia. Complete anuria was also alleged to have existed for several days before the woman's admission to the hospital.

At the autopsy the right kidney was found to be atrophic to the last degree. Even the microscope failed to reveal any remnant of healthy renal tissue. The ureter was completely obliterated. There were a number of cavities filled with a gritty substance, containing fat and lime salts. The right kidney presented the usual appearance of hydro-nephrosis with pyelo-nephrosis. The heart was very small, but the left ventricle was clearly hypertrophied.

PURPURA RHEUMATICA, ASSOCIATED WITH GASTRIC DISTURBANCES.

Dr. A. Seibert related a case of this kind occurring in a woman aged twenty-six. The rheumatic affection was held in check by salicylate of soda, given per rectum, on account of intolerance of the stomach. The attacks of vomiting accompanying the purpuric and rheumatic symptoms lasted for days. Washing out of the stomach often checked them. The speaker expressed the opinion that the mucous membrane of the stomach was probably affected by a process similar to the one observed in the integument, and which there produced the manifestations of purpura. An infectious element was possibly present in this case, since a change of domicile to more hygienic quarters resulted in recovery.

NON-FEBRILE PURULENT EFFUSION OF KNEE-JOINT IN AN INFANT, FOLLOWING OPHTHALMIA.

Dr. A. Jacobi related the following case: In one of the public institutions with which he was connected, and in which careful attention to cleanliness and disinfection was customary, a peculiar case of non-febrile purulent effusion into the knee-joint was observed. The infant was four weeks old and appeared healthy, barring an ophthalmo-blennorrhœa which had subsided at the time when the right knee-joint became affected. Aspiration showed purulent effusion, but fever never appeared. Antiseptic injection of the joint resulted in recovery. Other abscesses were not observed. The speaker believed this case to be one of atypical pyæmia, although he was aware that sepsis in infants might occur without rise of temperature.

Dr. Wendt stated that he had observed quite a number of cases of pronounced septicæmia in infants, in which the temperature had remained normal or subnormal throughout. He believed that the case related by Dr. Jacobi might be regarded as one of gonorrhœal metastasis.

Dr. A. Schapringer remarked that inasmuch as no search for gonococci had been made, the case might certainly be one of gonorrhœal infection, particularly as ophthalmia had existed in the institution in question.

Dr. W. Meyer was inclined to consider the case as an instance of cold abscess on a scrofulous basis. If the purulent effusion into the knee had had any relation to the blennorrhœa, a rise in temperature ought to have occurred.

The Origin of Diphtheria from Birds.—It has been known for some years that birds and poultry are subject to a disease which corresponds to what in the human being is known as diphtheria. Several foreign observers have gone a step further, and have endeavored to show that the disease is capable of transmission from animals to human beings. Last year Dr. Turner drew up an interesting report for the Local Government Board, bearing on this alleged transmissibility, and he adduced a large number of observations which seemed to indicate a connection between a diphtheritic affection, not only in fowls, but in rabbits and cats, and a similar affection in man. The report comprised several instances in which the "strangles" in horses appeared to give rise to a like train of symptoms. In a thesis by Dr. Menzies, the transmission of the disease from animals to man is attributed to the dejections of the former. Diphtheritic affections among fowls are very common in Italy, and he quotes an instance in which four out of the five children of a medical man were attacked and died. In this case he incriminates the thatched roof, which was inhabited by colonies of fowls, geese, pigeons, etc. The dejections of these animals, washed off by the rain, found their way into the cistern or well from which the supply of drinking-water was drawn.—*Medical Press and Circular.*

NEW YORK ACADEMY OF MEDICINE.

SECTION IN SURGERY.

Stated Meeting, May 14, 1888.

Robert F. Weir, M.D., Chairman.

Dr. B. Farquhar Curtis read a brief paper, and described, first, a case of small lipoma of the thigh, containing a carcinomatous lymphatic gland, and, second, a case of chronic mastitis with beginning carcinoma.

The Chairman would impress upon the minds of the laity, and also of the profession, the necessity for treating such cases early. The small size of the tumor and its short duration were favorable facts in prognosis. The point which the author had laid stress upon, that continued irritation was often present at the seat of the cancer, was true, and had been known even before the days of what might be called the germ theory of disease. The word irritation is, after all, only a cloak to hide some of our ignorance, and we know little more at present, further than that unhealthy or weakened structures were more likely to be attacked by germs than were healthy, or, in other words, that normal tissues resist the invasion of germs to a marked degree.

Dr. C. A. Powers then read a contribution to the treatment of fracture of the lower end of the humerus, with exhibition of cases (which will be published in a future issue).

The Chairman remarked upon the great variety of fractures and the excellent results obtained by Dr. Powers. His own custom was, like that of Dr. Powers, to give an anæsthetic whenever there was any doubt about the diagnosis, and for the purpose of obtaining as thorough a knowledge of the condition present as well as for his own protection. He joined himself to those who did not resort to early passive motion. When, however, the splint was changed, it was permissible for the surgeon to make slight motion to see that all was correct. Dr. Weir called attention to the condition called diastasis, but which more commonly was associated with fracture, and said that in certain forms of this there was impaction or locking, with decided displacement anteriorly of the upper fragment, and that, unless the surgeon were on the look out for it, the real condition would escape his notice. An endeavor should be made to forcibly crowd the upper fragment backward sufficiently to allow the arm to be thoroughly flexed. In one instance, he had to repeat his manipulations under ether a second time to accomplish this end.

Dr. J. D. Bryant said he had used plaster-of-Paris in the treatment of the class of fractures under consideration since he was interne in Bellevue Hospital, and he had nothing new to add, but would only make a stricture upon the manner of applying it. He had on two or three occasions seen undue pressure exerted upon the front part of the arm, from repeated foldings of the bandage as it crossed the elbow; but, if ordinary precautions were taken, no evil results need follow its use. He thought the results obtained by Dr. Powers were remarkably good. Dr. Bryant related a case of fracture of the external condyle of the humerus which occurred at the age of seven years in a person who, when he consulted him over a year ago, was twenty-six years of age. He had well-marked external deformity when he saw him. There was also swelling, pain, and tenderness at times; and crepitus, due evidently to structural changes in the cartilage. Passive movements caused pain, which was greatest when the articular surfaces were pressed together. Crepitus was particularly noticeable when the radius was brought in firm contact with the external condyle. His business required him to use a scroll saw, which, on account of causing pressure of the radius upon its articulating surface at the humerus, was attended by much pain. At his advice, the patient stopped work as long as his circumstances would permit, and was free from pain, but after going to work again he returned after three months for treatment. He then found that pain and crepitus did not occur when flexing and extending the arm, provided traction were made at the same time, tending to separate the articular surfaces at the elbow. Acting on this suggestion, he devised an instrument for application to the arm and forearm with a hinge at the elbow, permitting of flexion and extension, but tending to separate the articular surfaces and prevent concussion between them. It was fastened with adhesive plaster. While wearing it the patient was able to follow his occupation without pain or injurious effects upon the elbow.

Dr. Robert Abbe said the question of passive motion had been frequently discussed the past three or four years, and the opinion had been growing that, if the bones were placed in correct position soon after the accident, nature would take care of the fibrous anchylosis which attended reparative action. The important lesson to be learned was the true nature of the condition present, and etherization was absolutely necessary to get at the truth in the large majority of cases. The general practitioner was not likely to see the patients as soon after the accident as had Dr. Powell in most of his cases, and when swelling had taken place diagnosis was very difficult. Dr. Abbe had seen three cases in rapid succession about three years ago, in children from five to twelve years, who had transverse fracture. He did not see them until two, three, and five weeks after the accident. The deformity from fracture was still present in each of the cases, and flexion was stopped abruptly short of a right angle or at a right angle. He had to use considerable violence to unlock the fragments. Dr. Weir had spoken of crowding back the upper and prominent fragment. This was not possible in Dr. Abbe's experience, until after forcible lateral rocking motion, unlocking them. In applying the plaster-of-Paris splint, he overcame the objection spoken of by Dr. Bryant by making it much thicker on the posterior aspect of the elbow.

Dr. Powers closed the discussion, and said the impression seemed to prevail among general practitioners that the plaster-of-Paris splint was a very dangerous thing. It was, if applied too tightly, but when put on properly he thought it was superior to anything else. The diagnosis should be made when the patient was first seen. The majority of his cases did not come under observation until after twenty-four or thirty-six hours.

Dr. Weir approved of the use of the plaster-of-Paris splint, but he remarked upon the necessity of not applying it so as to make compression. Cotton might be placed beneath to allow of further swelling.

Dr. Bryant remarked that he would apply the splint firmly if the patient were where it could be removed at once should it prove necessary.

Dr. George B. Phelps presented a case of

COMPOUND DISLOCATION OF THE FOOT INWARD WITHOUT FRACTURE OF THE BONES.

There was rupture of the skin and ligaments. Three sutures were inserted, a Volkmann's splint applied, and drainage established. The patient had perfect use of the foot twenty-three days after the accident, and walked without a support.

Dr. F. Tilden Brown read a paper

ON THE LIMITATIONS OF ELECTROLYSIS AS A THERAPEUTIC AGENT IN ORGANIC AND SPASMODIC STRICTURE OF THE URETHRA.

The author cited the clinical experience of Dr. Robert Newman, of this country, of Dr. Stephenson, of England, and many others, with the treatment of urethral stricture by electrolysis, and showed the inconsistencies and conflict with one another in the theories advanced to account for the claimed results. He also gave the results of the treatment in six cases of stricture at his own hands, and of experiments testing the effect of electrolysis upon animal tissues. He claimed that the experiments demonstrated that the current had no effect in producing absorption in an organic stricture, and that his clinical observations, and analysis of those of others, as far as it could be accurately made from the records, went to prove that the benefit obtained in practice was due to several facts: To its influence on the terminal nerves, overcoming their irritability and consequent muscular spasm; if the stricture were purely spasmodic, the relief thus obtained might be complete; if it were partly spasmodic and partly organic, it could be only partial; the passage of instruments was made easier by the lubricating fluid which the electrical current caused to be thrown out; there was slightly increased rate of exfoliation of hypertrophied epithelial masses; in certain cases there was more or less permanent relief from symptoms of an obscure origin, as frequent and painful micturition. He denied that cases of true organic stricture gradually enlarged by absorption, caused by the electric current, so as to permit the introduction of larger instruments.

Dr. Robert Newman opened the discussion, and said that his own experience had been different from that of the author of the paper. Ten thousand negatives could not contradict one affirmative fact. He quoted from a recent paper by a former skeptic, Mr. Edwards, F.R.C.S., of London, who commenced the treatment on hospital patients with the aid of his friend Dr. Stephenson. Only severe cases had been selected; the location, size, and calibre of the stricture had been given, together with the result of treatment. The only disadvantage attached to electrolysis which this surgeon had found was the time required, while its advantages were many. A permanent cure might follow, which was the rarest occurrence under any other method.

He said Dr. Phelps had undertaken to show that electrolysis overcame only a spasmodic stricture, and did not cure organic stricture; but the truth was that it tended to excite spasm, not to overcome it. Again, no person of experience would confound an organic with a spasmodic stricture. They behaved quite differently. He mentioned the case of a man who had a stricture of small calibre, and a surgeon of much experience failed to pass an instrument at seven consecutive sessions. The patient fell into the hands of a physician in a New Jersey village, who used electrolysis and entered the bladder at the first sitting without difficulty. Dr. Newman said he could not answer a lengthy paper founded on theoretical objections to the method, without preparation, but he did not think it was necessary, for he had advanced facts, and if his explanation of those facts should not prove the correct one it would be of little importance.

Dr. L. B. Bangs said that when the treatment of stricture by electrolysis was first introduced he had hoped it might prove a method by which we could obtain a permanent cure, and without risks. He therefore made some experiments, perhaps less elaborate than those of Dr. Brown, and the conclusions which he had reached were that in some cases he had dilated the stricture, in others he had relieved the spasm, and in still others he had caused condensation of the stricture and rendered the patient's condition worse. Perhaps, however, that was the fault of the technique. Within the past year some patients had come to him who had received treatment by electrolysis, and in some there had been, from the first application of the battery, chordee or retention of urine. He would infer, from Dr. Newman's remarks, that the treatment in those cases had not been properly carried out. In one case there had resulted such condensation of strictured tissue that the patient was in danger of retention of urine. He did not wish to stand in the way of a method which offered such brilliant results as had been pictured by Dr. Newman, yet he was unwilling, personally, to go further with it without more light.

Dr. J. Blake White sent a letter in which he expressed the belief that in proportion to the spasmodic element in the urethral stricture was electrolysis likely to do good. He had reason to doubt whether it had any effect upon organic strictures.

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE RELATIONS OF DIABETES MELLITUS WITH THE ALTERATIONS OF THE PANCREAS—MICROBES IN MINERAL WATERS—GUNSHOT WOUNDS OF THE ABDOMEN.

PARIS, June 25, 1888.

AT a recent meeting of the Academy of Medicine Dr. Lancereaux made an important communication on the relations of diabetes mellitus with the alterations of the pancreas. The eminent physician of La Pitié Hospital had commenced a series of researches more than ten years ago, and he has arrived at the following conclusions: Diabetes mellitus, or glycosuria, such as it is understood in the present day, is not a univocal malady; this denomination serves to express divers morbid forms. Among these forms there is one which, by its sudden appearance, its accentuated symptomatic manifestations, its rapid evolution, and, above all, the emaciation which it determines and the pancreatic lesion which accompanies it, constitutes a definite type. It is this type which the author designates under the name of "diabète maigre" (lean diabetes), or pancreatic diabetes. Besides this type there is another, not less distinct, much more common than the preceding. This, which is essentially hereditary, manifests itself in the first place by *embonpoint*, which generally persists, and is not accompanied by pancreatic lesions. Its symptoms are much less marked than those of lean diabetes, its progress is slow, its duration is undetermined, it is a syndrome which is added to other pathological states, and, for the greater part, to articular chronic manifestations. This he terms fatty or constitutional diabetes. A third type sometimes shows itself after a perturbation of the nervous system, a traumatism, or a severe cerebral shock. It is purely accidental, and is distinguished by symptoms relatively slight, by an evolution and a duration very variable, then by a certain tendency to cure. This traumatic or nervous diabetes is the form the least grave.

Apropos of the pathogeny of diabetes, Dr. Quinquaud read a note at the last meeting of the Société de Biologie on the organic alterations consecutive to neuritis of the nervous vagus. These alterations affect the greater part of the viscera—intestines, pancreas, stomach, liver, kidneys, etc. They are of the same nature as those which are observed in diabetes, and are accompanied by functional troubles which characterize this malady.

At a subsequent meeting of the Academy, Dr. Percepied, of Mont d'Or, read a note on the microbes found in the waters of that station, of which the following are the conclusions: 1. The mineral waters of Mont d'Or contain microbes, some of which are found in an unusual manner in many of the waters non-mineralized. 2. These micro-organisms appear to be the same in all the springs. 3. The number of these microbes appear to diminish according as one approaches the point of emergence of the water, while at the same time their variety diminishes. 4. Experiments have demonstrated that they were not pathogenic.

In a note, at a recent meeting of the Société de Chirurgie, on wounds of the abdomen, Dr. Le Fort remarked that it is of importance to distinguish exactly the spot through which a projectile had penetrated; thus, for instance, wounds of the upper part of the abdomen, and consequently of the stomach, are much less grave. Dr. Bailly, who at Dr. Le Fort's instigation wrote a thesis on this subject, made out that of 88 cases of wounds of the stomach there were 75 cures, and 52 were cured without any intervention. In the other cases the intervention consisted in suturing the stomach. On one occasion, Larrey, the father of the present surgeon of that name, enlarged the incision to evacuate the effusion of blood into the abdomen. For wounds by fire-arms, it is admitted that all the wounds of the abdomen which were cured in these cases were not penetrating wounds. Dr. Le Fort, however, observed that many of these wounds are penetrating, in support of which he cited the experiments of N. Cooper, performed on dead bodies with the blade of a sword of 16 mm. He performed 95 experiments. Of these 95, twenty times the intestine was not wounded, but fourteen times different viscera of the abdomen were wounded. Of the 75 cases in which the intestine was wounded, it was so once in several places. Above the umbilicus the intestine was not wounded in thirty-seven per cent. of the cases; on a level with the umbilicus, in sixteen per cent. of the cases, the intestine was not wounded; below the umbilicus there has always been wound of the intestine. Wounds may be made in the abdomen without the intestine being wounded, particularly above the umbilicus, but in the great majority of cases it is. Care must be taken to distinguish wounds effected by bullets of small calibre from those of large calibre. The obliteration of the wounded intestine with wounds by bullets of small calibre is possible, which makes Dr. Le Fort think that, in these cases, abstention should be the rule. It has been said at that very Société de Chirurgie that, when a bullet had penetrated by the anterior portion, and made its exit by the posterior, this bullet had not traversed the abdomen. Dr. Le Fort's experience could not confirm this assertion, and he did not believe that bullets were so easily deviated. He differed in opinion from Dr. Trélat, who thinks that intervention is necessary in all cases of wounds of the abdomen, whereas Dr. Le Fort asserts that the rule in wounds of the abdomen by bullets of small calibre should be non-intervention. A discussion followed which showed that intervention was necessary only in the cases where it was manifest that the accidents were complicated with lesions, but certain members declared that it was necessary to intervene in all cases, or that at any rate an exploratory laparotomy should be practised. They based their theory on certain considerations: 1, On the gravity of intestinal wounds; 2, on the innocuousness and the efficacy of intervention. No one can contest the gravity of wounds of the intestine; there are, however, observations to prove that these wounds, as well as those of the stomach, get cured spontaneously. With reference to the second point, Dr. Berger observed that intervention would be innocuous only when it is limited to practise an incision, but when exploratory researches are made, the operation becomes much more grave, as they will be made to bear on all the viscera of the abdomen. Dr. Berger concluded that laparotomy should not be altogether rejected, as it alone permits a cure in the cases where complications are developed, but that in the absence of these he would not consider himself justified in intervening.

PURIFIED WOOL-FAT.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Will you allow me to correct a statement which I made on page 517 of your issue for May 12th, that "there is, so far as I am aware, no patent or trade-mark right connected with *lanoline* as a title or as a substance?" I have since ascertained that a patent was obtained in the United States by Otto Braun and Oscar Liebreich, of Berlin, on January 23, 1883 (No. 271,192), for a "Method of Treating Wool-oil to produce Lanolin," and that on July 27, 1886, the following trade-marks were granted:

13,527.—TOILET-SOAP, CREAM, MILK, PASTE, AND POMATUM.—*Benno Jaffé and Darmstædter*, Charlottenburg, near Berlin, Germany. Application filed February 13, 1886. Used since October, 1885.
The word "LANOLINE."

13,528.—SALVES AND PLASTERS.—Benno Jaffé and Darmstædter, Charlottenburg, near Berlin, Germany. Application filed April 23, 1886. Used since October, 1885.
The word "LANOLINE."

The trade-mark "Agnine" is numbered 13,433 and dated June 22, 1886. It therefore precedes the ones issued to the German manufacturers, and thus removes any ground for a presumption that Messrs. Metcalfe & Co. were not acting fairly in the manner of introducing their product.

The fact is that the common name for the fat of sheep's-wool is *suint*. As such it has long been known in the arts. As a medicinal agent it is by no means novel. The "National Dispensatory" (edition of 1886, p. 1662) has the following statement:

> "Pliny says that its uses are numberless, and he describes the manner of procuring it from the wool between the fore-legs and the thighs of the animal by boiling the wool in water and skimming off the floating fat ("Hist. Nat.," xxix., 10). These directions were rehearsed from age to age. In the seventeenth century they were repeated by Culpepper. More recently, according to Strumpf ("Handbuch," i., 128), this fat had a place in the Spanish Pharmacopœia, and uncleansed wool was employed as a dressing for scrofulous and other swellings, and also in gout and rheumatism."

It mitigates, somewhat, my sense of chagrin at having made so erroneous a statement as the one here referred to, to find that the authors of the "National Dispensatory" are, to a certain extent, in the same dilemma in their definition of "Lanolin" (the trade-mark has a final *e*), which, they say, is "the fat prepared from sheep's wool," when, in fact, *lanoline* is the trade-mark of a mixture of purified suint and water, made by a patented process. Their definition would apply much better to *Agnine*, which, according to the manufacturers' statement, contains *no* water; but, to be consistent, the authors of the "Dispensatory" should have used the title "Purified Suint," and *Lanoline*, *Agnine*, or any other form in which it may be offered for sale, should have been treated in the same way that vaseline, cosmoline, and similar trade-mark preparations have been under the general title of "Petrolatum."

Very respectfully,
F. A. CASTLE.

55 EAST FIFTY-SECOND STREET,
NEW YORK, June 15, 1888.

DERMOID CYST OF THE MEDIASTINUM.—At a recent meeting of the Berlin Medical Society, Dr. Loewenmyer brought forward a tumor of this kind, rather larger than a child's head. It was removed from the body of a man who had been shown to the Society four years previously, his symptoms being then difficult to interpret. Apart from hæmoptysis and a moderate degree of pleuritic effusion on the left side, the attention was chiefly drawn at that time to a projection of the left side of the thorax, with loss of resonance, reaching from the clavicle to the sixth rib. The apex-beat could not be felt over the cardiac region, but a thrill was noticed to the right of the sternum, also epigastric pulsation. A precise diagnosis was not made. The patient improved somewhat in hospital, and then went out and worked for a few years regularly, but no symptoms of pressure came on till quite recently, when severe recurring attacks of dyspnœa and cyanosis quickly induced a fatal result. The necropsy revealed a tumor occupying the greater part of the left half of the thorax. Anteriorly it was in contact with the chest-wall, having pushed the heart entirely over to the right. Professor Virchow had examined the tumor, which contained in its interior cysts lined with epithelium and filled with soft substance of gelatinous consistency, but the outer and firmer portion of the tumor was composed of dermoid products, namely, epidermis, hair, fat. Cartilaginous plates were also found. Evidently there had existed abnormality of the chest-wall in the embryonal stage of existence of the patient, so that part of the integument had been displaced inward, and part of the respiratory apparatus outward, at the time of closure of the thorax.—*The British Medical Journal.*

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from June 24 to June 30, 1888.

McPARLIN, T. A., Colonel and Surgeon. Granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 52, Department of the Platte, June 20, 1888.

BROWN, J. M. Major and Surgeon. Will take charge of the office and duties of the Medical Director, Department of the Platte, during temporary absence of Colonel McParlin. S. O., 52 Department of the Platte, June 20, 1888.

OWEN, WILLIAM O., Jr., Captain and Assistant Surgeon. Ordered to Fort Leavenworth, Kan., for duty. S. O. 148, A. G. O., June 27, 1888.

. WOODHULL, A. A., Major and Surgeon. Granted leave of absence for three months, to take effect about July 10, 1888. S. O. 148, A. G. O., June 27, 1888.

So much of Par. 3, S. O. 142, A. G. O., June 20, 1888, as relates to Captains GEORGE H. TORNEY and GEORGE McCREERY, Assistant Surgeons, is revoked S. O. 147, A. G. O., June 26, 1888.

WOOD, MARSHAL W., Captain and Assistant Surgeon. Ordered to Fort Randall, D. T., for duty. S. O. 147, A. G. O., June 26, 1888.

SHANNON, WILLIAM C., Captain and Assistant Surgeon. Ordered to Fort Meade, D. T., for duty. S. O. 147, A. G. O., June 26, 1888.

McCREERY, GEORGE, Captain and Assistant Surgeon. Ordered to Fort Warren, Mass., for duty. S. O., 147, A. G. O., June 26, 1888.

JOHNSON, RICHARD W., Captain and Assistant Surgeon. Designated as Medical Officer for a camp of instruction in rifle practice, to be established at Fisher's Island, N. Y. (near New London, Conn.), on July 2, 1888, and to continue during the months of July, August, and September; and ordered to proceed to Fisher's Island in proper season, and report to the commanding officer for duty. S. O. 131, Division of the Atlantic, June, 28, 1888.

GANDY, CHARLES M., First Lieutenant and Assistant Surgeon. Granted leave of absence for three months, to take effect on or after July 5, 1888. S. O. 145, A. G. O., June 23, 1888.

CLENDENIN, PAUL, First Lieutenant and Assistant Surgeon. Leave of absence granted in S. O. 59, Department of Texas, June 4, 1888, extended one month. S. O. 149, A. G. O., June 28, 1888.

CARBOLATE OF MERCURY.—Dr. de Luca has made a number of experiments with the phenate (carbolate) of mercury in the treatment of syphilis (*La Riforma Medica*, May 4, 1888). He gave the remedy in pills of three-tenths of a grain each, from three to six being taken in the twenty-four hours. The results were very good, but no better than would have been obtained with other mercurial preparations, the mode of action of the drug being very similar to that of the tannate. The author does not, however, believe that any useful purpose will be served by retaining this preparation in practice, for it answers no special indication that cannot be better filled by some other salt of mercury. It is difficult to prepare, and it often causes very severe diarrhœa and intestinal pains which necessitate its withdrawal.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 30, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	9	2
Scarlet fever	149	29
Cerebro-spinal meningitis	4	5
Measles	234	25
Diphtheria	117	35
Small-pox	3	1
Yellow fever	0	0
Cholera	0	0

DEATHS FROM MERCURIAL INUNCTIONS.—Dr. Braus has reported two fatal cases of dysentery following an inordinate use of gray ointment, one patient having consumed over a drachm and the other four and a half drachms each day in inunctions.

A NEW ALKALOID has been extracted by Dr. Domingos Freire from the fruit of a plant indigenous in Brazil, and known to the natives under the name of wolf-fruit. It belongs to the species *Solanum grandiflorum*, and possesses very poisonous properties, its name being derived from the fact, it is stated, that sheep which eat of it die very speedily. The physiological properties of the alkaloid, named by Dr. Freire grandiflorine, have not yet been ascertained.

TREATMENT OF GALL-STONES BY OLIVE-OIL.—Dr. Rosenberg related his experiences in the treatment of gall-stones by olive-oil. A patient suffering from marked biliary colic, that had continued for five years, and had proved refractory in spite of all treatment, including a "Trinkkur" in Carlsbad, and in whom the pain was very acute, was given a dose of 100 grammes of olive-oil (about 3 oz.) at night. In the morning there were found in the stool three concretions, one the size of a grain of linseed, the other two smaller. Some days later a second dose was given of 180 grammes, and in the stool that followed 180 concretions were found, varying in size from a pinhead to a hazel-nut, and after a third dose 243 stones. The patient's troubles soon after this began to diminish, but they did not entirely disappear. She took in all, in five doses, 820 grammes. of olive-oil, and 629 stones were counted in the evacuations that followed. The gall-bladder, which before was the size of the fist, and projected beyond the edge of the liver, diminished so far that it could be no longer palpated. It was assumed that the oil did not act by exciting peristalsis of the intestines, but by passing directly into the gall-bladder and softening the contents. Vomiting only once resulted from the administration.

THE NATURE OF MYXŒDEMA.—The Myxœdema Committee of the Clinical Society of London, Dr. Ord, chairman, has presented the results of its four years of laborious investigation. The report makes a small volume, but their conclusions, which are most interesting, are summed up as follows: 1. That myxœdema is a well-defined disease. 2. That the disease affects women much more frequently than men, and that the subjects are, for the most part, of middle age. 3. That clinical and pathological observations respectively indicate, in a decisive way, that the one condition, common to all cases, is destructive change of the thyroid gland. 4. That the most common form of destructive change of the thyroid gland consists in the substitution of a delicate fibrous tissue for the proper glandular structure. 5. That interstitial development of fibrous tissue is also observed very frequently in the skin and with much less frequency in the viscera, the appearances presented by this tissue being suggestive of an irritative or inflammatory process. 6. That pathological observation, while showing cause for the changes in the skin during life, for the falling off of the hair and the loss of the teeth, for the increased bulk of the body as due to the excess of subcutaneous fat, affords no explanation of the affections of speech, movement, sensation, consciousness, and intellect, which form a large part of the symptoms of the disease. 7. That chemical examination of the comparatively few available cases fails to show the general existence of an excess of mucin in the tissues adequately corresponding to the amount recorded in the first observations, but that this discrepancy may be in part attributed to the fact that tumefaction of the integuments, although generally characteristic of myxœdema, varies considerably throughout the course of the disease, and often disappears shortly before death. 8. That in experiments made upon animals, particularly on monkeys, symptoms resembling, in a very close and remarkable way, those of myxœdema, have followed complete removal of the thyroid gland, performed under antiseptic precautions, and with, as far as could be ascertained, no injury to the adjacent nerves, or to the trachea. 9. That, in such experimental cases, a large excess of mucin has been found to be present in the skin, fibrous tissues, blood, and salivary glands; in particular the parotid gland, normally containing no mucin, has presented that substance in quantities corresponding to what would be ordinarily found in the submaxillary gland. 10. That the full analysis of the results of the removal of the thyroid gland in man demonstrates, in an important proportion of the cases, the fact of the subsequent development of symptoms exactly corresponding with those of myxœdema. 11. That, in no inconsiderable number of cases, the operation has not been followed by such symptoms, the apparent immunity being in many cases probably due to the presence and subsequent development of accessory thyroid glands, or to accidentally incomplete removal, or to insufficiently long observation of the patients after operation. 12. That whereas injury to the trachea, atrophy of the trachea, injury of the recurrent laryngeal nerves, injury of the cervical sympathetic, and endemic influences have been, by various observers, supposed to be the true causes of experimental or of operative myxœdema (cachexia strumipriva), there is, in the first place, no evidence to show that, of the numerous and various surgical operations performed on the neck and throat, involving various organs and tissues, none, save those in which the thyroid gland has been removed, have been followed by the symptoms under consideration; that in many of the operations on men, and in most, if not all, of the experimental operations done by Professor Horsley on monkeys and other animals, the procedure avoided all injury of surrounding parts, and was perfectly aseptic; that myxœdema has followed removal of the thyroid gland in persons neither living in, nor having lived in, localities the seat of endemic cretinism; that, therefore, the positive evidence on this point outweighs vastly the negative, and that it appears strongly proved that myxœdema is frequently produced by the removal, as well as by the pathological destruction, of the thyroid gland. 13. That whereas, according to Clause 2, in myxœdema women are much more numerously affected than men, in the operative form of myxœdema no important difference of the same kind is observed. 14. That a general review of symptoms and pathology leads to the belief that the disease described under the name of myxœdema, as observed in adults, is practically the same disease as that named sporadic cretinism, when affecting children; that myxœdema is probably identical with cachexia strumipriva; and that a very close affinity exists between myxœdema and endemic cretinism. 15. That while these several conditions appear, in the main, to depend on, or to be associated with, destruction or loss of the function of the thyroid gland, the ultimate cause of such destruction or loss is at present not evident.

FORMULÆ FOR RHEUMATISM.—Dr. Chaplin recommends the following for acute rheumatism :

Salicylic acid	℥ ss.
Sodium bicarbonate	℥ x.
Potassium citrate	ʒ jss.
Wine of colchicum seeds	℥ ss.
Simple syrup	℥ j.
Peppermint-water	ad ℥ viij.

Sig. A tablespoonful every three or four hours.

For chronic rheumatism he gives :

Potassium citrate	℥ ss.
Tincture of the chloride of iron	℥ x.
Essence of lemon	ʒ j.
Simple syrup	℥ ij.
Water	ad ℥ iij.

Sig. A teaspoonful every four hours.

A MEDICAL CLUB has been established in St. Petersburg, the objects of which are purely social. Any physician in good standing is eligible to membership, the only dues being the payment of two roubles each evening of meeting. The entertainment consists of music, dancing, card-playing, and tea-drinking. It is hoped shortly to secure a club-house, and then a permanent organization will be effected.

A NEW REMEDY FOR GRAVEL.—Dr. Frochard, writing in the *Gazette des Hôpitaux*, No. 26, 1888, speaks very highly of the leaves of orthosyphon stamineus, a plant growing in the island of Java, in the treatment of gravel and nephritic colic. The natives of Java have long employed the remedy in affections of the kidneys and bladder, using the dried leaves, known in commerce as Java tea. The author has given this tea, and also pills made of one and one-half grain each of the powdered leaves and extract of orthosyphon stamineus, to several patients suffering from gravel, and reports most satisfactory results. After the patients had taken the remedy for a few days the gravel disappeared often for long periods; and if they resumed the drug upon the first symptoms indicating a return of the affection, they were able to keep themselves free from the trouble entirely.

LEFT-HANDEDNESS.—Considerable discussion has arisen of late concerning the causes of left-handedness, some attributing it to education, some to the manner in which the infant is carried in its nurse's arms, and others even regarding it as at times an indication of mental depravity. Dr. Galippe, in a recent memoir, adheres to the theory of heredity as opposed to that of education, asserting that many left-handed individuals have a decidedly neurotic family history. He deplores the fact that all men are not ambidextrous, and looks upon even right-handedness as one of the evils of advanced development. The latter, he says, is the result of atavism; left-handedness, of a morbid heredity.

TREATMENT OF EPIDERMAL HYPERTROPHIES.—Dr. Roesen recommends very highly the following treatment of corns, warts, and other epidermal growths: After moistening the part with some antiseptic solution, boric or salicylic acid, a thick layer (about one-fifth of an inch) of salicylic acid in powder is applied, and retained in place by several layers of lint wet with a boric acid solution, and a piece of gutta-percha tissue. At the end of five days the dressing is removed, when the epidermal thickening will be found to be loosened, the skin underneath being thin, but not broken. If the growth is a very thick one it may be necessary to apply a fresh dressing for a few days longer. —*St. Petersburger Medicinische Wochenschrift.*

CARCINOMA AND SYPHILIS.—Dr. Edward Lang, of Vienna, reports four cases in which cancer and the lesions of syphilis coexisted in the same individual. He believes that the cancer was developed upon a syphilitic foundation, and that the latter is therefore to be regarded as one of the possible, though very rare, exciting causes of carcinoma.—*Wiener Medizinische Blatter*, No. 10, 1888.

PSEUDO-KEPHIR.—The following is recommended as a pleasant drink, and one that is usually retained by the most delicate stomach: Freshly soured milk is thoroughly shaken, and to it is added two per cent. of simple syrup. The milk is then put into a soda-water bottle tightly corked, and set aside to stand in a warm place for three or four days. At the end of this time, on opening the bottle, there is found a foaming and very pleasant-tasting liquid, which contains about two per cent. of alcohol. The milk so prepared is said to taste very much like kephir, whence the name pseudo-kephir has been given to it.

ANTIFEBRIN IN EPILEPSY.—Dr. B. Borosnyói has used antifebrin in a number of cases of epilepsy (*Orvosi Hetilap*), and comes to the conclusion that its value in this affection has been greatly overrated. He found it to be much inferior to potassium bromide. When given in small doses it had no effect, and although in large doses it controlled somewhat the number of the epileptic attacks, it produced such marked cyanosis that it was necessary to discontinue it after a very short trial.

A RETURN TO LATIN.—Dr. Fabriani publishes in *Il Raccoglitore Medico* a letter addressed to the physicians of the whole earth, urging them to return to the mother-tongue of science, the Latin. He thinks that the period at which it was abandoned as a scientific medium of communication is comparatively so recent that there is yet hope of reinstating the language. Unfortunately, Dr. Fabriani has made the mistake of writing his appeal in Latin, so that the letter must remain as a sealed book to most of those into whose hands it may fall, thereby also furnishing one of the strongest arguments against the carrying out of the author's suggestion.

SUPPRESSION OF MEDICAL SOCIETIES IN ALSACE.—The German government has undertaken to suppress some of the Alsacian medical societies, and to change the others in such a way that they shall no longer preserve their French character. It has withdrawn its authorization from the Medical Society of Strasburg, and has ordered the members to hold no more meetings, under pain of two hundred dollars fine and one year's imprisonment. A mutual aid society has been ordered, under penalty of dissolution, to admit German physicians and pharmacists as well as those born in Alsace, and to conduct the business of its meetings henceforth in German instead of in French. Similar measures have been taken against other medical associations formed of Alsacians who prefer the French to the German tongue.

SACCHARINE.—In a communication made to the Paris Academy of Medicine, M. Worms reported some cases in which serious digestive troubles were caused apparently by the administration of saccharine. M. Dujardin-Beaumetz had never seen any bad effects from the use of this substance, but thought it might possibly interfere with the fermentation of alimentary substances during the process of normal digestion. At its present price, however, it might profitably be substituted for sugar in the manufacture of certain alimentary substances, and thus give rise to another form of adulteration against which society would be obliged to protect itself.

ANALGESINE is the new name proposed for antipyrine in France, where it has been learned that the German manufacturers enjoy a monopoly of the name only, and that the drug may be freely made under some other designation.

STRYCHNINE IN DIPHTHERITIC PARALYSIS.—Dr. Gerasimoff reports a case of marked diphtheritic paralysis treated successfully with subcutaneous injections of sulphate of strychnine in the nucha. A perfect cure was obtained within the course of a month, during which the child, six years of age, received a grain and a half of the salt.—*Gaceta Médica Catalana*, May 15, 1888.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 2 NEW YORK, JULY 14, 1888 Whole No. 923

Original Articles.

REMARKS (I.) ON WHITEHEAD'S OPERATION FOR HÆMORRHOIDS, AND (II.) ON THE SCRAPING OUT OR ERASION OF CARBUNCLE.[1]

BY ROBERT F. WEIR, M.D.,

SURGEON TO THE NEW YORK HOSPITAL, ETC.

I. WHITEHEAD'S OPERATION FOR HÆMORRHOIDS.—Last year,[2] in giving my experience of four months' operative work at the New York Hospital, I reported that after trying Mr. Whitehead's plan of operation for hæmorrhoids I had become dissatisfied with the procedure and had abandoned it in favor of the older and more extensively tried ligation method of Allingham. I beg again to report that after having tried Whitehead's method according to his more recently elaborated plan, I now desire to reverse my judgment, and to speak in favorable terms of the operation.

Mr. Whitehead's first paper on "The Surgical Treatment of Hæmorrhoids" (published in the *British Medical Journal*, February 4, 1882) describes the operation, which he had then practised for nearly five years, somewhat as follows: After stretching thoroughly the sphincter, the hæmorrhoidal masses, involving the whole circumference of the lower bowel, were mapped out into four irregular and unequal lobes. These were divided into four segments by longitudinal sections in the axis of the bowel and in the furrows marking the intervals between the several lobes. This was accomplished without the loss of any blood. Each portion was then grasped in succession by a ring-forceps and dissected with scissors, at first transversely from the anal margin, and then the dissection was continued upward in the cellular plane to the highest limits of the hæmorrhoidal growths, in some cases to a distance of an inch and a half. Each segment was thus converted into a quadrilateral, wedge-shaped mass, the base below consisting of the hæmorrhoid, and the apex above of the healthy mucous membrane of the bowel. The mucous membrane at the highest point was next transversely divided, leaving the hæmorrhoids simply attached by loose cellular tissue, and the vessels proceeding from above and supplying the mass below. The forceps containing the hæmorrhoids was then twisted until this connection was severed, and the hæmorrhoids then removed. The divided surface of mucous membrane was next drawn down and attached by several fine silk sutures to the skin border at the verge of the anus.

The other portions having been treated in the same manner, the operation was completed.

My first series of operations were undertaken after perusal of the above directions. I did not find that it was easy or at all satisfactory to attach the divided mucous membrane to the verge of the anus, and perhaps from my defective appreciation of this operation I did not fairly carry out its details into thorough effect. It was, therefore, not until Mr. Whitehead had published in the *British Medical Journal* of February 26, 1887, an article entitled "Three Hundred Consecutive Cases of Hæmorrhoids cured by Excision," that I learned better how to operate according to his method, which he then more completely detailed in the following words: "After the sphincters have been thoroughly paralyzed by digital stretching, by the use of the scissors and dissecting forceps the mucous membrane is divided a short distance from its junction to the skin, for it is very important," he says, "that no skin should be sacrificed, however redundant it may appear to be.' In this second paper it will also be observed that the quadrilateral section of the hæmorrhoidal masses has been abandoned, and exsection of the lower portion of the rectum is accomplished *en masse*. The further steps of the operation are thus conducted:

The external, and commencement of the internal, sphincters are, after the liberating cut about the anus, exposed by a rapid dissection, and the mucous membrane and attached hæmorrhoids, thus separated from the submucous bed upon which they rested, are pulled bodily down, any divided points of resistance being snipped across, until they are brought below the margin of the skin at the anus. The mucous membrane above the hæmorrhoids is now divided transversely in successive stages, and the free margin of the severed membrane above is attached, as soon as divided, to the free margin of the skin below by a suitable number of sutures. The complete ring of pile-bearing mucous membrane is thus removed in successive snips. The bleeding vessels throughout the operation are twisted when divided. The operation is done as is usual in the lithotomy position. Before the wound is closed iodoform is blown in between the raw surfaces. For the stitches carbolized silk is used. These are not taken out. They are allowed to come away of themselves without further interference. In the three hundred cases reported by Mr. Whitehead not a single death or instance of secondary hemorrhage, or any complication, such as ulceration, abscess, stricture, or incontinence of fæces has occurred.

Since last October I have had occasion to resort to this operation in six severe cases of hæmorrhoids. The first occurred in a man, aged thirty-two, who had had hemorrhage from the rectum, to a greater or less extent, for nearly ten years, with occasional intervals of freedom from this loss of blood. On October 28th an operation according to Whitehead's method (see Figs. 1 and 2) was done, with the removal of nearly three-quarters of an inch of the entire circumference of the rectum, which contained throughout evidences of hæmorrhoidal changes, marked in four places by swellings, which, prior to the removal, were as large as a hickory-nut, and in other parts by numerous varicose veins of varying size. At first there was some difficulty in dissecting up the mucous membrane from the protruding pile, and, in fact, this cannot be done, as the hæmorrhoid involves the mucous and submucous tissues. It is necessary to go somewhat through the pile, looking out carefully for muscular tissue, and keeping to the inside of this until the mucous membrane, recognized by its lighter color, is reached above the pile region. After this latter membrane has been found its separation from the muscular tissues is very easy, only an occasional snip of the scissors being required to detach adhesions, muscular or otherwise. Much less pain was experienced after this operation than is often observed after the operation of ligating piles.

On the eighth day the line of suture was entirely healed. The stitches were not removed, but were allowed to come away of themselves. A week later he was discharged from the hospital perfectly well, with a clean and well-shaped anus, only one or two stitches being still found attached to the skin. These, however, were not troubling the patient. He was seen several months later, and the anus presented a perfectly satisfactory appearance.

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[1] Read at a meeting of the Practitioners' Society, held May 5, 1888.

[2] A Hospital Experience, etc., New York Medical Journal, Saturday, March 12, 1887.

The second case was met with in a man, aged thirty, whose hæmorrhoidal protrusions occurred one year ago after straining at stool. They have continued at times to bleed. Associated with these was a painful sensation in the rectum. By examination a circle of moderate-sized hæmorrhoids was seen extending all around the lower edge of the rectum, two of which were ulcerated.

On November 5th Whitehead's operation was performed according to the manner above described.

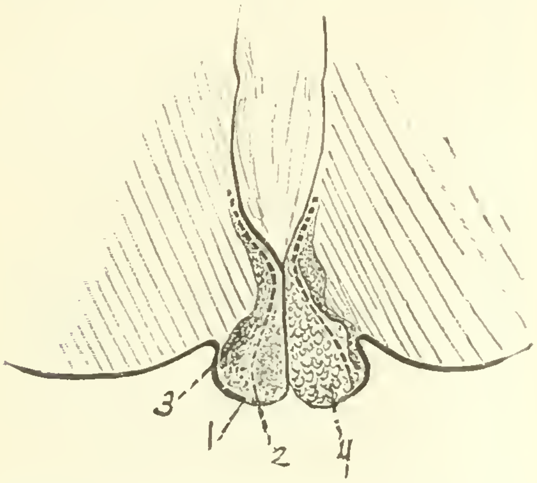

Fig. 1.—1, Muco-cutaneous junction, exaggerated; 2, line of incision, a short distance from muco-cutaneous junction; 3, external sphincter muscle; 4, protruding pile.

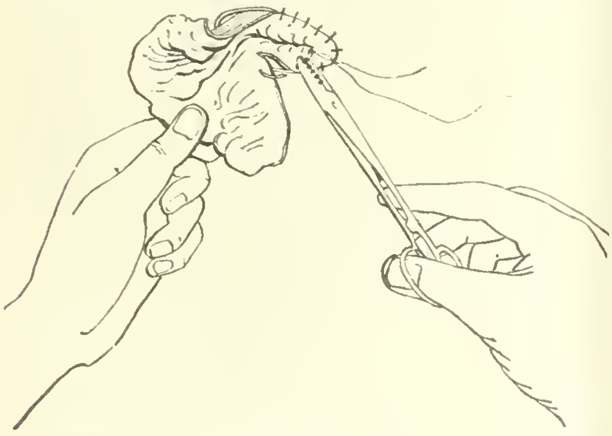

Fig. 2.—Mode of cutting off pile-bearing mucous membrane and stitching it in repeated sections.

Nearly an inch of the rectal mucous membrane was removed. Bleeding vessels to the number of two or three only required to be twisted. The mucous membrane was cut away half an inch at a time, and stitched to the skin by interrupted fine black silk sutures, and so on until the whole circumference of the bowel was removed. The patient progressed to recovery without any special pain or reaction; urination voluntarily accomplished throughout. On the seventh day after the operation the bowels moved without pain, and on the twelfth he was out of bed and walking about. The stitches were removed as the wound was entirely healed, and he was discharged from the hospital on November 23d.

The third case was a man, aged forty-eight, who, in addition to his having hæmorrhoidal swellings of considerable size, just within the sphincter, which protruded and gave rise to frequent hemorrhages, and to a certain amount of pain, had also sensations of uneasiness higher up toward the top of the pelvis, with discharges at stool of rather small tape-like fæces. He complained also of occasional attacks of constipation and colicky pains, with distention of the abdomen, which were relieved by medicine or by spontaneous diarrhœa. Being unable to satisfy myself by digital exploration whether or not a stricture of the rectum somewhat higher up existed, the patient was etherized, and nothing having been felt by palpation in the abdomen, a manual exploration of the rectum was made. By the gradual stretching of the sphincter and of the bowel the hand was introduced up to the knuckles, and slightly beyond them, though the thumb was not passed within the intestine. By this insertion the promontory of the sacrum was recognized, and with the other hand on the abdominal wall nothing was felt in this region. Believing, therefore, to have excluded the suspected stricture, the removal of the hæmorrhoids was undertaken after Whitehead's method. A certain amount of vertical laceration had occurred from the excessive distention of the anus, so that the operative procedure was conducted more after the original plan of Whitehead than after his later procedure. About one inch of the rectum was removed in this way. A longitudinal slit having run up beyond this point, it was sewn together by sutures. Only one suture was required to a bleeding vessel; the others, three in number, were secured by torsion. A plug of iodoform gauze was introduced into the rectum, and an antiseptic compress and bandage applied. The patient suffered a good deal of pain after the operation, and required once to have the urine drawn. The seventh day he had a movement of the bowels, with but little pain. On the eighth day the wound was found to have united primarily, with the exception of an area of one-third of an inch in diameter, which had been caused by a stitch giving way. On the thirteenth day he was up and about. The sutures came away spontaneously.

Case IV.—A man, aged forty-five, had been troubled for several years with bleeding hæmorrhoids of large size. When protruding they resembled in size and appearance a small tomato. The operation was done as in the previous case. Nearly an inch of the lower end of the rectum was removed. The line of junction was effected by more numerous sutures than had been used in the preceding cases. No reaction whatever followed. The patient urinated voluntarily, and no pain was felt. On the third day he was sitting up in bed, writing, and on the sixth day was about. The majority of the sutures were removed by me before the tenth day. Primary union took place, with a very well-shaped anus and smooth bowel beyond the point.

Case V.—A burly, strong man, with large hæmorrhoidal protrusions, bleeding freely, which had lasted for several years. In this instance a departure was made from the ordinary stage of the operation in this, that instead of cutting off the mucous membrane in small segments, and then suturing the same to the skin, the whole circumference of the detached rectum was removed and then the sutures applied. This necessitated the use of clamps to seize and draw down the otherwise retracting mucous membrane, and thereby giving rise by its pressure to a certain amount of damage to the mucous membrane. The procedure, however, rendered a trifle more rapid the operation, which in itself is somewhat a tedious one.

Case VI.—Was a man, aged forty-seven, who had been troubled by large piles coming down and being caught in the sphincter, thereby giving rise to a great deal of annoyance, though not complicated by much bleeding. It was supposed that Allingham's operation might have sufficed for this case. After stretching, however, the sphincter by gradual pressure in various directions, the hæmorrhoidal mass was seen, consisting of three very large piles and one small one, and further, that the whole zone of the rectum was in a varicose condition. Whitehead's operation was thereupon resorted to, and was accomplished with a little more difficulty than usual, from the oozing of blood from the numerous divided veins. This patient was catheterized during the first twenty-four hours, though, I believe, with a little more effort, assisted by the kneeling posture, he could have emptied his bladder without this assistance. The subsequent progress was free from pain. The patient was able to sit up in bed squarely upon the affected part at the end of the third day. He was out of bed and dressed within a week from the operation. The stitches were not removed. They discharged themselves spontaneously.

While for the less severe cases of hæmorrhoids the operation of injection with carbolic acid (and preferably with the 1 to 20 solution) is to be first thought of, and while for the more decided form of this disease Allingham's method yet stands unequalled, yet for the extensive conditions of hæmorrhoidal disease met with in the preceding cases, and which have been hitherto treated by tying off three, four, and sometimes more masses, I believe that greater efficacy and greater permanence of cure will be accomplished by the resort to Whitehead's method, and that less after-discomfort to the patient will be felt than by the well-known method of ligature as practised by Mr. Allingham. It is true, with this rather brief experience, the admission is to be made that the operation of Whitehead has taken me much longer time to accomplish than the older operation of tying and removing hæmorrhoids. Increased experience has, however, taught me that greater rapidity of execution can perhaps be accomplished by a manœuvre which doubtless Mr. Whitehead practises, as it is so self-evident, but which he does not mention. It is this: after separating the mucous membrane at the anus by scissors, all around, then at one limited place conduct the dissection deeper, and in an upward direction, until the normal mucous membrane of the bowel is reached. From that point, by means of the finger nail, or by the end of a blunt-curved scissors, the mucous membrane can be stripped from the external tissues down close to the circumferential initial incision about the anus, when any intervening tissues can be cut through quickly with the scissors. In this way, proceeding right and left, the separation of the bowel in the last two instances has been brought about with decidedly increased rapidity and certainty.

I have been surprised to find how small, after dividing the mucous membrane, the arteries entering the piles become. Palpation of the same through the rectum, prior to their section, had led me to expect them to be of a decidedly increased volume; but with the open section they have not only shown themselves quite small, but they will often spontaneously cease to bleed. It is seldom that they require to be twisted or tied with catgut; certainly not more than one or two in the course of the operation, and these have, in one or two instances, been closed permanently by the pressure of a clamp for a few minutes.

After quite an extensive separation of the rectum, even to some distance above the line of section, it has been found unnecessary to introduce any drainage. In none of my cases have I dusted them with iodoform, as Mr. Whitehead has suggested, and when placed in position prompt union occurred, though the parts were bathed with the usual sublimate solutions—1 to 5,000. The tabs of skin that have been preserved for the final union of their edges to the mucous membrane often remain swollen for a week or ten days after the operation, and may excite some apprehension on the part of the surgeon for the patient that a mass of external reminiscences of the sufferer's past troubles might remain. In three cases where this condition has been watched they have in time disappeared.

As to the possibility of the formation of a stricture, especially where, as in one of my cases, a certain failure of primary union occurred in two spots in the circumference of the wound, I felt some apprehension; especially as this is a condition of affairs that I have encountered a number of times in patients who had been operated upon by surgeons of a past era, by the older method of ligation, so zealously carried out that no mucous membrane was left between the various hæmorrhoidal tied-off bunches. But Mr. Whitehead's positive statement must be kept in mind that this has not been observed in any of his large number of cases. He, however, lays stress upon the necessity of making the primary incision in the mucous membrane near to the skin of the anus, and not in the skin itself, since he believes, and I should think with justice, that undue contractions are more apt to take place when the annular cicatrix is formed at the expense of the integument.

A slight caution I may give, based upon an experience in rectal operations generally, that the bowels should not be moved by any purgative the day of the operation, as is commonly advised. This had better be done the day previously, if at all. Should this error have been brought about, as sometimes it has occurred to me, from a too zealous nurse, it is better to thrust a sponge some distance up the bowel at the beginning of the operation. This preserves the wound from infection, and the surgeon perhaps from profanity.

II. The Erasion of Carbuncles.—Two articles have recently appeared in the *British Medical Journal*, March 24 and 31, 1888, by Mr. Page, Surgeon to St. Mary's Hospital, London, and by Mr. Rushton Parker, of Liverpool, on the subject of the excision and scraping of carbuncles.

The former surgeon presented three cases of carbuncle treated by scraping; and Mr. Parker, so well known to us, reported five cases. The extirpation of the carbuncle was accomplished by the latter surgeon, however, more by excision than by the scraping process. In all these cases the improvement was prompt and marked. But it is my wish rather to speak upon the latter method of treatment than to comment upon other recognized procedures. While it is true, as in the days prior to the use of antiseptics, that the majority of carbuncles do well under the "let-alone" treatment, yet it is fully in accordance with our modern belief in the bacteric origin of such diseases that they should be opened, and, if possible, the irritating masses of germ-laden tissue be removed. Animated with this view I have since 1884, when I first began to resort to this method, so treated five cases of carbuncle which were sufficiently severe to demand surgical interference. They all, save one, occurred in men, and in persons from forty to seventy years of age. They were all situated, except one, on the back part of the neck, the exception occurring between the shoulders. They were also all of considerable size, none in their cribriform area being less than two and one-half inches in diameter, and all were surrounded by the brawny, red swelling which is so often associated with this form of disease. In three of them there was considerable constitutional disturbance; in all there was great pain. The treatment pursued in all the cases was alike and can be briefly described.

An anæsthetic was used in four of the cases; in one cocaine was tried, and succeeded tolerably well, though a great deal of difficulty was experienced in introducing the needle of the hypodermic syringe, on account of the tough character of the skin of the neck, which was rendered apparently much more resistant by the inflammatory process going on. The slough was exposed either by the use of the scalpel or by Volkmann's sharp spoon tearing through the bridge of perforated skin until the yellow infiltrated tissues were reached. The affected parts were scraped out in a very elaborate manner, and their yellow prolongations, which were found in most of the cases to run up under the thick skin, toward the skull, were followed up and scraped out with smaller spoons as far as possible. Whether a mass of such character was found in the skin or among the muscles it was scraped out in like manner. The bleeding is apt to be quite profuse, though easily checked by pressure. After washing out the parts with a sublimate solution (1 to 1,000) the whole cavity, and especially those prolongations referred to above, are carefully packed with strips of a thirty per cent. iodoform gauze, and iodoform freely dusted over. A sublimate dressing is placed over the wound and secured with a four-tailed bandage, two ends of which are wound around the forehead, the other around the neck and under the arms to the back, to secure everything in proper position.

The immediate effect of the treatment is to change nearly at once the character of the pain from that of a burning type to the smarting of an ordinary wound, which speedily passes away, with or without the use of anodynes. The temperature, if previously elevated, also falls, and the other constitutional symptoms ameliorate. At the end of forty-eight hours, or later, according to the amount of discharge, the dressings may be changed, and little sloughs, produced by the tearing process of the operation or by the pre-existent inflammation, will be found to be separated, or in course of separation, and in a few days the wound will assume the character of an ordinary granulating sore.

In one instance I have supplemented this treatment, and with advantage apparently, by injecting into the reddened, inflamed tissue, beyond the reach of my sharp spoon, a solution of 1 to 20 carbolic acid, covering by these injections an area more or less completely surrounding the carbuncle. In this way an equivalent of eight to ten drops of the pure carbolic acid was used without giving rise to any constitutional effect.

It is unnecessary to give in detail the further particulars of the cases of carbuncle cured by me with this mode of treatment. I have only desired to corroborate the good results that have been obtained, particularly by Mr. Page, who has carried out the method more exactly than Mr. Parker, and I believe, with him, that the risks of pyæmia, septicæmia, and exhaustion are very much lessened by this process, as well as being fully convinced that the immediate constitutional effects of pain and fever are promptly checked by this mode of treatment, and that repair is more rapidly established when it is resorted to.

HAY FEVER AS A DISEASE OF CENTRAL NERVOUS ORIGIN,

With a few Cases successfully Treated in accordance with the Hypcthesis set forth.

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While much has been written upon the causes of this disease, no very satisfactory evidence has been advanced demonstrating the actual factors inducing the acute daily exacerbation; or, considering hay fever as belonging among the neuroses, any acceptable effort made to establish a pathological condition in those groups of nervous cells, or gray matter composing the centres from which the nerves spring, to supply the apparent, but, according to the following view, not real, primary seat of the disease.

The object of this paper is to present an hypothesis in which the effort or attempt is made to show that hay fever, in its immediate symptoms, may be accounted for by an abnormal condition of central nerve-cells.

To begin, let me draw attention to a few recognized natural facts, which will lead up to the ultimate argument.

Grief causes the tears to flow, the muscles of the face to contort, and often a great and rapid failure of muscular strength.

Fear frequently induces tremor of the muscles, a cold surface to the body, and yet a profuse but cold perspiration.

Mental excitement acts immediately, in many, on the secretion of the kidneys, causing a large discharge of urine. Diarrhœa is frequently the result of sudden mental disturbance. Nausea and vomiting are often violent from a disgusting sight or smell. On the contrary, the first results of both joy and anger are to flush the face and invigorate the action of both the mind and body. Lastly, long-continued anxiety produces loss of appetite, a failure of mental powers, and a decrease in the normal nutrition of the whole body.

Here, then, are emotions or psychical causes acting on the brain, or great nervous centre, effecting, through its medium, unusual, and, in most instances, abnormal results, in different parts of the physical economy. The brain can only act upon the physical framework through the nervous system; therefore, it would follow that the resulting abnormal effects must be by the issue of abnormal nervous force.

If this be true, then the brain, through what are understood as natural causes, can give rise to excessive action of glands—as in the lachrymal, tears; the mucous, diarrhœa on sudden shock; fear, the sweat-glands; mental excitement, the kidneys; and the salivary, I may add, at the thought of some delicious dish. Upon the muscular system, in depressant form through fear or shock; in additional strength, by a joyful impression. Upon the arterial system, by a contraction of the blood-vessels, with a cold surface of the body, through fear or shock; an expansion of blood-vessels, from joy or anger; and a failure in general nutrition, with loss of appetite, by anxiety of long duration.

Now, anatomy has demonstrated that almost every nerve may be traced to a group of cells, as its centre, in the spinal cord, the medulla oblongata, or some portion of the gray matter of the brain, before connection is made with the cerebral cortex; while physiology has clearly proven that these centres may act upon distant parts of the body independent of consciousness or of the will-power. If the pneumogastric nerve be stimulated, there is a slowing of the heart's action; if the accelerator nerve of the heart, a more rapid systole and diastole; if the chorda tympani be electrically stimulated, an excessive flow takes place from the submaxillary gland; if the sympathetic nerve supplying this gland be stimulated, the salivary supply from it almost ceases; if the chorda tympani be cut, the discharge almost or quite ceases; and if the sympathetic is severed, increases. If the sympathetic supplying the face be cut, the face flushes, the temperature is raised, and nutrition is increased. If the cut end nearest the face be electrically stimulated, the face becomes pale, nutrition is decreased, and the temperature is lower than normal. When a certain portion of the floor of the fourth ventricle is irritated, diabetes results.

Such illustrations prove that there are automatic centres independent in action of the cerebral cortex, though acted upon by these higher centres under certain conditions.

When these nerve-centres are excited, then, at the terminal ends of the nerves issuing from them we have excited or abnormal action in the distant parts supplied. If nerves to glands, hypersecretion; to blood-vessels, contraction of their muscular coats; to muscles, from the twitching of a muscle to tonic or chronic contraction.

If trophic nerve-centres are involved, skin diseases hypertrophies, and perhaps tumors of various kinds, according to the tissues involved.

If sensory centres, from hyperæsthesia to the most frightful agony may be the result.

Microscopically, cerebro-spinal nerves have been traced directly to the nuclei of the gland cells in the salivary glands by Pflüger[1] and Boll; by Letzench, to the gland cells in the testicle. They have also been traced to the cells in the sweat-glands[2] and kidneys, justifying the view that all glands are innervated in the same manner.

Dr. Klein has traced sympathetic nerve-fibres to the capillary blood-vessels. Drs. Brown-Séquard and Claude Bernard have very conclusively shown that the chief function of the sympathetic nervous system is to regulate the contraction of blood-vessels.

All glands, then, are poised between two forces. The cerebro-spinal nerve-centre being excited, stronger nervous currents flow to the gland cells, which, being stimulated excessively, overcome the contractile force of the sympathetic nerve, the blood-vessels dilate in the gland, and a larger amount of secretion is withdrawn from them (the cells), and discharged through the glandular ducts.

Oppositely, the sympathetic ganglia being stimulated, nervous currents of greater force speed to the nerve-terminals in the muscular coat of the smaller arteries (or the elastic coat of the arterioles?) causing a powerful contraction of the vessels; and, overcoming the normal regulating nerve-current flowing through the cerebro-spinal nerve, ending in the gland cell, the secretion from the gland either ceases or is much diminished.

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[1] Pflüger: Arch. f. Mik. Anat., Bd. v., S. 193.
[2] Cayne: Compt. Rend., May 20, 1878.

Nerves have also been traced to the skin and connective-tissue cells, adding testimony to the opinion that secretion and nutrition, in all parts of the body, are poised between these two nervous forces, and in health thus normally regulated. In many diseased conditions, either the cerebro-spinal or sympathetic centres are acting with undue energy, thereby destroying the physiological equilibrium. To Dr. John Chapman, of Paris, is the honor of this discovery due, if it be true, as I indeed believe it is.

Having arrived by a process of progressive reasoning to a conclusion which would seem to determine that nervous central excitement induces a changed condition, viz., from health to disease, at the terminal distribution of the nerves, the next point is to demonstrate, if possible, what causes excitement in the automatic nervous centres, and a distribution of more energetic nervous currents, now proceeding in the course of nerves having one function, now another. The answer is, excessive *circulation* in nervous centres, by giving rise to excessive *nutrition*, creates a larger supply of nervous fluid speeding to the nerve-terminals.

If a sensory nerve-centre be hyperæmic, then pain is experienced in the region where the nerves from this centre are distributed.[1]

If glandular centres be hyperæmic, then the glands supplied discharge more freely than in health.[2]

If sympathetic ganglia, then the blood-vessels under their control contract. If muscular nervous centres, contraction of muscles, etc.

Upon the hypothesis that the masses of gray matter composing the roots or centres of the fifth, the glosso-pharyngeal, and the facial nerves, and of some of the cells of the pneumogastric nerves are hyperæmic, and therefore functioning excessively, I have successfully treated several cases of hay fever.

To continue the argument, it is necessary to give the distribution of these nerves to the regions involved in the disease. The ophthalmic branch of the fifth supplies the lachrymal and parotid glands; the facial, the submaxillary gland. It is interesting to observe that while the facial is chiefly a motor nerve in the usual sense, it has motor influence of another kind when its nerves end in the glandular cells, as they do in the submaxillary gland, viz., when excited inducing increased glandular discharge.

In nearly all the ramifications of the fifth to the skin of the face and head and nasal mucous membrane, it is joined, before its final distribution, by filaments from the facial, which would seem to imply from the foregoing that the fifth supplied sensation to these membranes, while the facial terminals were directed to the skin cells, mucous membrane cells, and cells of the mucous glands, regulating nutrition to the skin and mucous membrane, and the discharge from the mucous glands. The third division of the fifth is motor as well as sensory, supplying the parotid gland cells, probably by its motor fibres, and the mucous membrane and glands of the mouth by the same.

The glosso-pharyngeal nerve is sensory-motor, and, with branches from the pneumogastric, supplies sensation as well as nerves of nutrition to the mucous glands and membrane of the pharynx. I say nerves of nutrition, because trophic is the only name which will properly apply to nerves which, when electrically excited, cause an increase of discharge from a gland, as in the case of the chorda tympani, etc.

The sympathetic is now generally recognized as supplying certainly, and probably chiefly, the arterial system.

Anterior and posterior pulmonary branches from the pneumogastric follow all the ramifications of the bronchi.[1]

To fulfil the argument intended, viz., to endeavor to prove that all the immediate symptoms of hay fever may be explained upon the hypothesis that the nervous centres furnishing nerves to the *apparent* seat of the disease are in an abnormal condition, and really, therefore, the primary disease itself, it was necessary to manifest as plainly as possible that the visibly diseased surfaces were supplied by sensory, trophic, and sympathetic nerves. This, I hope, has been done.

The next and most important point is to enumerate the symptoms of the disease, and exhibit, if practicable, how they may be explained without absurdity, upon the hypothesis advanced. In the first place, I consider that there are two forms of hay fever. The first, in which the central cells, composing the roots of the facial, glosso-pharyngeal, and fifth nerves are hyperæmic, giving rise to an excessive discharge from the nasal and pharyngeal mucous membrane, and from the lachrymal gland. The eyes are sensitive to light, and the mucous nasal membrane to the usual irritants, causing sneezing and an acute exacerbation. The skin of the face is not often hyperæsthetic in this form, but is without color, as also the mucous membrane of the mouth and pharynx, on examination, are discovered to be paler than normal, and apparently lacking in a sufficient blood-supply. To the physician's hand the head and face feel cool, the patient is drowsy, and mental action is languid. All of these symptoms denote a strong contraction of blood-vessels in the cerebrum, the head and face, and in the mucous membrane.

There is only a hyperæmia of the lachrymal gland, and the nasal and pharyngeal mucous glandular systems, due to vehement nervous currents speeded from the hyperæmic trophic (?) motor *centres* to the gland cells, overcoming the regulating sympathetic nerve-current and thus dilating the arterioles in the glands, with, as a result, the excessive discharge. If the hypothesis be true, the nervous current flowing to the gland cells must be exceedingly strong, for the evidences as to diminished circulation external to, as well as within, the skull, demonstrate a hyperæmia also of the cervical sympathetic ganglia. There is hyperæmia of the central cells of the fifth, sending sensory nerves to the iris, and to the nasal mucous membrane.

To cure the hyperæsthesia and the mucous discharge, the aim is to drive the blood from the hyperæmic centres, that normal circulation may succeed present congestion within them. This may be done by one of two methods.

If the patient has a feeble general circulation in the extremities, as may be inferred from cold extremities in cool or cold weather, then a Chapman ice-bag, filled with small pieces of ice, applied from the fourth cervical to the second or third lumbar vertebra, two or three times a day, according to the requirements of the case, will cause a dilatation of arterioles throughout the whole body, evenly distributing the circulation, and withdrawing from the excited centres their excess of blood; thus repressing the vehement nervous currents proceeding to the gland cells, with a resulting cessation of the attack.

If the patient gives no evidences of contracted arterioles in the extremities of the body, then a ten-inch ice-bag, used over the cilio-spinal region, will dilate the blood-vessels of the whole head, and thus render the circulation in the previously hyperæmic centres normal.

The first form of hay fever, which might very well be named "contractile," from the general abnormal closure of arteries in the head, with the one exception of those of mucous and lachrymal glandular circulation, is comparatively easily managed by Chapman's system, and may be considered light and uncomplicated when contrasted with the second form, or "expansile," from the general dilatation of blood-vessels throughout the head, face, and brain accompanying the hyperæmia at the roots of the cerebro-spinal nerves mentioned. To arrive at a proper understanding of this assertion in respect to the circulation in the second form of the disease, I will give a list of the principal symptoms connected with the circulation, striving to make it evident that many of them can only be accounted for by the view of a general cephalic and encephalic hyperæmia. In the second form, then, there is often a distinctly hot head over the occipital, vertical, and frontal regions. The face and nose are flushed, and the conjunctivæ injected. There is mental depression, sleeplessness, and blurring of sight; a sense of pressure and fulness and weight in the whole head. The mouth and throat are often dry, and the mucous membrane red and swollen. There is difficulty of breathing and sense of suffocation, independent of the asthmatic attacks, commencing often, however, at the same period as the asthma, about the end of the second or during the third week.

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[1] Chapman, Dr. John: Neuralgia and Kindred Diseases, page 23.

[2] Chapin, C. V., M.D.: The Sympathetic Nerve, page 20. Vulpian found that irritation of Meckle's ganglion was followed by an increased secretion on the corresponding side of the nose from the nasal mucous membrane.

[1] Gray's Anatomy.

These signs speak for themselves and seem to certainly denote hyperæmia. The difficulty of breathing I am inclined to believe to be due to an extension of the tumidity and redness of the mucous membrane lining the bronchi, occluding partially the air-cells, and so interfering with normal respiration and the oxidation of the blood.

Added to the signs significant of general hyperæmia of the whole head, and therefore *anæmia* of cervical sympathetic ganglia, are those denoting hyperæsthesia of the iris, the skin of the face and cranium, and of the nasal and bronchial mucous membranes; while, lastly, the muscular system becomes directly involved if asthma be owing to contraction of the muscular fibres surrounding the bronchioles supplied by branches from the pneumogastric nerve. I have treated several severe cases of asthma upon this hypothesis, by Dr. Chapman's method, curing some and greatly relieving all but one of those who placed themselves under my care. This patient became discouraged at the end of six weeks' treatment, and stopped the use of the bag against my judgment. He died some months after, in a sudden and violent seizure.

I will further add that the swelling of the dermis of the face, the puffiness and swelling about the eyes, and the swollen and red condition of the naso-pharyngeal and bronchial mucous membranes, together with that of the mouth, would imply, in the views advanced, that trophic-motor cells were hyperæmic in all four of the cerebro-spinal nerve-centres understood to be hyperæmic.

The sneezing and cough involve muscular action, but seem to be, for the most part, reflex. No doubt the sneezing is a powerful and constant factor, producing the general cephalic hyperæmia, and by so continually dilating the arteries gradually renders the sympathetic ganglia *anæmic*, and weakens their contractile power, already weakened by stronger nervous currents flowing along the trophic, sensory, and motor nerves. This fact, if it be one, accounts for a longer seizure each year or two for a certain period, as happens to some individuals, or for a perennial form of the disease, as was the result in one of the cases to be reported.

Hyperæmia of the cerebro-spinal centres as the cause of hay fever also simply and clearly accounts for the severe night attacks, in the small hours of the night, and in the following manner: That "during sleep respiration, oxygenation, and circulation are lessened, while the temperature falls to an appreciable degree," and there is a diminution of circulation in the brain and upon the surface of the body. The blood therefore goes to the internal organs, including the sympathetic ganglia, certainly, if their function is to contract blood-vessels; and, probably, to cerebro-spinal centres as well, particularly if those centres are already hyperæmic through the day. If this be so, then, when the superficial circulation has reached its extreme ebb, which we find to be the case in health at two, three, or four o'clock in the morning, and in exhausting disease at the same hours, at this time the hyperæmia of the centres involved in hay fever will have reached its maximum, and the patient will be awakened by an acute exacerberation of sneezing and discharge, or a severe asthmatic attack. The same reasoning applies to night attacks of simple asthma, neuralgia, or epilepsy, if these diseases are frequently due to nervous central hyperæmia. All the symptoms of this worst and most common form of hay fever can be accounted for upon the hypothesis set forth—hyperæmia at the roots of the nerves supplying the visible seats of the disease; and the successful results obtained by the proper use of the Chapman ice-bag, though few in number thus far, it will be seen, bear witness to the apparent truth of the hypothesis.

The effort, in this virulent form of hay fever, to effect relief or cure, consists in withdrawing the excess of circulation not only from the nervous centres but also in relieving the whole head of its congestion.

This may be done, in most cases, by *gradually* dilating the blood-vessels in the body and lower extremities, thereby allowing the blood to flow in normal amount to this region, thus removing from the hyperæmic head, brain, and centres the superfluity of blood within them. A dilatation of blood-vessels in the legs and feet may be effected by the dorso-lumbar Chapman ice-bag, as I have done over and over again in patients suffering from cold legs and feet; in many cases the parts rapidly become warm, especially if the sufferer be of vigorous constitution. In persons who have been long troubled, or who are of weaker physique, the same results may be obtained, but, of course, more slowly.

The treatment may be accelerated in its action by using ice or ice-water in a rubber-bag, over the base of the brain, expelling from the hyperæmic centres the excess of circulation by the local action of the cold.

According to this hypothesis the sensory centres are hyperæmic, as shown by sensitiveness to light, itching of the skin of the face, the effect of a harsh wind producing a reflex paroxysm, and the frequent and painful paroxysms caused by smoke, dust, ipecac powder, etc., when brought in contact with the nasal mucous membrane, as well as the pollen of plants, and the odors of roses and other flowers. All of the aggravating causes give rise to suffering by reflex action; the impression being carried to the sensory cells, continued to the motor and trophic central cells, and by them reflected to the apparent seat of the disease. Excessively hot days give rise to worse paroxysms, and these I believe to be due to the direct influence of the heat upon the already hyperæmic centres, and upon the already congested brain and head, causing a still further dilatation of blood-vessels, and thus an aggravated expression of the disease.

In persons subject to the disease I believe the originating factor of the hyperæmia of the nervous centres to be summer heat, and that the pollen of plants, smoke, dust, etc., are only aggravating causes, inducing reflex severe attacks.

But whether the heat of summer be the original cause of the disease, the main object to be attained is a successful treatment, unless we can discover and abort, or destroy, the originating cause. If future results of this treatment corroborate the present demonstration, then, so far as treatment is concerned, a remedy has been found which will give relief in almost all cases, and which will abolish the disease in many, if skilfully used by the physician, and faithfully applied by the patient.

The hypothesis advanced seems not unreasonable when we consider that the blood carries nutrition to all parts of the body; that, therefore, the function of any organ may be increased by an increased supply of blood circulating in it. The function of a nervous centre is to supply nervous currents; if, then, this function be increased, it is reasonable to suppose that the centre is hyperæmic, causing more rapid chemical changes, which result in the evolution of an abnormal amount of nervous force.

It is also reasonable because microscopic anatomy traces microscopic nerves to almost all the tissue cells of the body, while physiology assures us that by stimulating nerves with electricity, thus simulating the nervous currents, we may induce active changes in the parts supplied by them.

Once more: it seems reasonable and probable because, by the use of Dr. Chapman's method circulation can certainly be withdrawn from the parts where it is in excess, and sent to regions where it is insufficient.

And, lastly, because it is self-evident to the eye of the physician, when using the dorso-lumbar ice bag of Dr. Chapman, in cases of the second or "expansile" form of the disease, that the excess of blood is being withdrawn from the whole head by the *relief* to all those visible symptoms denoting hyperæmia.

That this paper is crude, and that the evidence adduced is not entirely confirmatory of the views propounded, I am well aware; but feeling that from a small amount of truth a greater may result, I present this hypothesis to the profession, with the following cases in corroboration of the supposition:

CASE I.—Mr. S. G. S——, a gentleman, aged fifty, consulted me in August, 1883. He had been a victim of hay fever thirteen years.

At first he was attacked every August, the disease lasting in severe form until the cool weather commenced. After a few years the seizure did not pass away with the advent of frost, but every ensuing season was later in departure until it had now become perennial. He was comparatively comfortable between midday and midnight, but for three months previous to his consultation with me he had suffered from a violent exacerbation every night. He would suddenly wake at midnight and begin sneezing exceedingly loud and violent. The sneezing was extraordinarily loud and forcible, and the patient correspondingly shaken. It lasted until 2 A.M., at intervals of a few minutes.

There was a tremendous discharge of watery mucus from the nostrils and posterior nares; the latter in such quantity as almost to choke him, and he always soiled from twenty to thirty handkerchiefs. At 2 A.M. the attack would subside, but he would lie awake until morning, and on rising was regularly attacked by cranial neuralgia, which did not cease until noon.

These exhausting seizures, the loss of sleep, and the pain were so seriously affecting his mental powers that he had decided to give up his business if I did not help him.

His complexion was muddy looking, and the skin apparently thickened. The conjunctivæ were constantly red, and the head was abnormally hot all the time. There were semi-unconscious seizures, intense mental depression, and a decided loss of memory, especially in regard to small affairs. The patient was naturally intelligent, and of nervo-sanguine temperament. He had for several years suffered from bilious attacks and constipation. The circulation in the legs and feet was less than normal, and the ventral digestion weak.

He was treated almost entirely by the full-length Chapman ice-bag, viz., from the fourth cervical to the fourth lumbar vertebra. The bag was used three times a day, from one hour to an hour and a half at a time, with the result that the nightly exacerbations almost immediately ceased.

He was only attacked twice after beginning the treatment, although during the first three weeks he would have acute paroxysms, lasting only a few moments, and chiefly in the daytime. The sleep was at once improved, and became quite normal in two weeks. The neuralgia entirely disappeared at the termination of five weeks, and the patient was, both to my observation and his own feelings, practically well. The complexion became clear, the eyes were bright, and the brain recovered its normal action. Memory returned, depression vanished, and the attacks of partial unconsciousness no longer troubled him. The action of the bowels was improved, the bilious attacks became less frequent, and the circulation in the legs and feet normal.

As the patient improved the use of the bag was lessened, and at the end of five weeks he was applying it once a day.

He was advised to continue it once daily for two months more, and then to gradually cease using it.

During the summer of 1884 he was attacked again with the disease. It was immediately checked by the use of the dorso-lumbar ice-bag, and since that time he has remained perfectly free from it. He has continued in business ever since, with no mental trouble to interfere.

This was a remarkably severe case, and in the serious nightly exacerbation during the three months previous to treatment we see a corroboration of the view brought forward in the article that the hyperæmia of the centres involved is probably greatest during the small hours of the night. At the time I treated this gentleman I had not fully worked out the views advanced, and were I to treat another person afflicted in the same manner I should not apply the ice-bag over the cervical region at all, for fear of less rapid relief, owing to its dilating action upon the cerebral blood-vessels when placed over the cervical sympathetic ganglia.

CASE II.—Mr. A. H——, twenty-six years of age, living in Philadelphia, was treated during the summer of 1886. He had suffered for twenty years with a severe type of the second form of the disease. His symptoms were sneezing, much discharge from the nose and eyes, red eyes, red nose, flushed cheeks (especially during an acute paroxysm), hot head, loss of mental activity, and dry mouth. He had attacks of asthma. There was poor appetite, sluggish action of the liver, and constipation; heat and pain in the small of the back, cool legs and feet, and general physical prostration. He was treated by the dorso-lumbar ice-bag of Chapman exclusively, with great relief to all his symptoms, although spending the hot term almost wholly in Philadelphia. He had found great difficulty in former years in regard to brain-work, but passed through the season comfortably in this respect.

The result of the treatment, written by himself in a letter addressed to me, October 21, 1886, will best show what was done:

"It seems to me a great success. When my *liver* was right, I was better than I can remember being at my hay-fever periods; when my liver was *not* in order, I was about as well as I used to be in my *good* days. My sneezing and nose-running, though violent for parts of days, never lasted through whole days, as they used.

"In general I had a large number of days which were much better than I ever had in former years, while my *bad* days this year were about the same as what I used to consider my good ones, with the exception that the reaction in the evening, which I used to have, was not constant this year, and often my evenings were worse than my days. And during all this I was working much harder than I had ever before done during the time.

"It must be said, however, that I was troubled with asthmatic cough and difficulty in breathing about as many nights as is usual."

He was also relieved of the pain and heat in the lumbar region, the legs and feet became warm, the appetite improved, and the physical and mental strength were largely increased. He was advised to continue using the method a short time daily through the winter, and to apply it every summer, as before, in the hope of entirely curing the disease.

The favorable results attained, while the patient was working hard through the heated term and his hay-fever period, show how much more might have been done had he been able to have had rest and recreation in a cooler region during this time. I have not since heard from him.

CASE III.—Miss G. A——, dressmaker, and of exceedingly delicate physique, between thirty and forty years of age, has been more or less of an invalid for ten years, suffering from fainting fits, cold extremities, feeble digestion, constant and severe leucorrhœa, etc. She has been treated during the last five years carefully, by the full length ice-bag, as her symptoms denote only a severe type of the first form mentioned. Her face and head are flushed and hot, but only during a paroxysm of the disease; at other times the head and face are cool, and the skin of the face pale. There is severe itching of the face when attacked acutely. She has been much relieved every summer, and during one comparatively cool season escaped almost wholly. That this patient will quite recover, I believe to be impossible, unless she can retire from her exhausting work for at least two years—exhausting on account of her naturally feeble constitution.

Case IV.—Miss J——, a young lady, living near Boston, consulted me in 1882. She suffered through the whole hot season from the contractile form of the disease, and presented the symptoms as already set forth in the preceding paper. She was treated by cold to the neck alone, that is, over the last four cervical and first four dorsal vertebræ, one hour per day, and in the early morning. She received such benefit through this summer that her suffering was very slight, and since that time, whenever she feels an attack beginning, uses the bag as before, with immediate relief. The disease makes one or two attempts every summer to assert itself, but a few cold applications stop it at once, and this effect is secured independent of heat or the place of residence.

Case V.—In May, 1885, Dr. G—— brought his son to me for treatment, a lad of twelve years of age. For the five previous years he had developed hay fever or rose cold toward the end of May, lasting well into August. He had been taken early each year to Canada, and then to the Franconia Mountains, returning home about August 25th. The patient was brought to me before the disease had developed, but after quite a long investigation by inquiry I decided that the hay fever was a mild type of the severer form, and advised the dorso-lumbar bag, adapted in width to the age of the boy, to be applied to the dorso-lumbar region whenever the attack developed. This was done, and it was not found necessary to take him away from his home during the summer. He has remained almost free from the disease ever since; whenever symptoms were noted the bag was applied, with a complete and immediate cessation of the attack.

Case VI.—I was myself attacked most violently with hay fever in August, 1886, during some very hot weather. I began sneezing steadily and violently, my nose and eyes kept up a constant running; the mouth was dry and hot, and there was intense itching of the eyelids, the skin of the face, and the anterior nasal mucous membrane. The head was not exceedingly hot, and the general health was good, so that it was decided to use the full-length Chapman ice-bag. This was done, with immediate relief. It was applied three times a day, for one hour and a half at a time, for three days, a complete cure resulting. There was no return of the disease last year.

In conclusion, I would say that each case requires a careful examination, not only in respect to the particular form of hay fever to be treated, and the application of the system to secure the most immediately beneficial effect, as well as permanent relief or entire cure; but also, to attain the desired success, the condition of the stomach, the state of action of the liver, and the regularity of the intestinal action must also be inquired into and treated as factors which assist to develop and retain the hyperæmia in the brain and nervous centres. A contracted condition of arterioles in the legs and feet, as shown by cool or cold extremities, also tends to produce congestion in other parts of the body.

I will close in the words of Dr. John Chapman, viz., "The remedial efficacy of the ice is largely dependent upon the care and correctness with which it is applied."

18 Fairfield Street, Boston, June, 1888.

Paris is suffering again, as in most previous summers, from a short water supply.

MALARIAL RETINAL HEMORRHAGE.[1]

BY HENRY DICKSON BRUNT, M.D.,

NEW ORLEANS, LA.

If the question, What effect has the malarial poison upon the eye? were asked, of all the practitioners of our country we of New Orleans should be qualified to make answer. We live in a great city surrounded by low-lying malarial suburbs, the commercial centre of a large area where the disease is endemic. Here stands the Charity Hospital, a great, free, sick-house of three hundred and fifty beds, whither flock the afflicted poor of all the lower Mississippi Valley—the home of the "swamp and rice fevers," of the dusky "bilious remittents," of the fatal "malarial hæmaturias," of the deadly "algid forms"—"congestive chills"—of the pallid "toxæmias," wretched, intractable.

And yet were I to depend upon my own experience I should say that the malarial poison seldom expends its force upon the eye. Indeed the experience of others seems to confirm this view; for though in an excellent paper ("On Eye Affections from Malarial Poisoning") read before the Medical Society of New Jersey, Dr. Charles J. Kipp, of Newark, has brought together instances of the affection of almost every portion of the eye by this poison, these appear to have been for the most part isolated cases occurring in the practice of a limited number of observers of extended experience.

To this one exception must be noted. In a paper read before the American Ophthalmological Society, in 1880, and published in the "Transactions of the Society," Dr. Kipp described for the first time a peculiar superficial keratitis, following and apparently caused by malarial fevers, which, under the best local treatment—the bandage, warm fomentations, and atropia—runs a protracted course, but recovers promptly enough when quinine and arsenic are administered while these applications are made. The observations of Dr. Kipp are confirmed by those of Dr. F. C. Hotz, published in the *Chicago Medical Journal and Examiner* for December, 1881. I have never seen an example of this affection, so far as I am aware. Once I saw extensive sloughing of both corneæ, destroying the left eye, take place during a low, protracted, malarial intermittent. This, however, as is well known, is not uncommon during the course of low fevers.

In the "Transactions of the American Ophthalmological Society" (1882, p. 345, and 1885, p. 64) Dr. W. W. Seeley describes two cases of suddenly occurring and recurring, quickly and completely vanishing, total opacity of the vitreous. These, he thinks, were due to serous effusion into this humor, the effect of malarial poisoning; and a short time ago I saw a similar case, which I am inclined to ascribe to the same cause. My patient lived in a malarial region, and had long suffered, and from time to time still suffered, from chills and fever. Suddenly he noticed decided though slight dimness of vision of his left eye, unaccompanied by any other symptoms. Accurately measured, the vision of this eye was found to be somewhat less than that of its fellow, and examination with the ophthalmoscope, using a plus 16 D glass, showed fine, dust-like opacities of the vitreous. These disappeared completely in twelve days, while the patient was taking sixty grains of iodide of potassium a day, and vision became equal to that of the fellow-eye. All probable causes, save the influence of the malarial poison, could be excluded.

Thus, though I have practised in the centre of a very malarious region, and notwithstanding I have kept watch for these affections, I have seen but one condition of the eye which could without doubt be ascribed to the influence of the malarial poison.

Malarial Retinal Hemorrhage.—The condition seems but little known, and no reference to it can be found in the text-books of Carter (Green, 1876), De Wecker ("Ocular Therapeutics," 1879), Schweiger (1878), Noyes

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[1] Read before the Louisiana State Medical Society, at its Tenth Annual Meeting, at Monroe, La., April 25, 1888.

(1881), Wells (Bull, 1883), Alt (1884), Swanzy (1884), or Juler (1884). W. R. Gowers refers to it briefly. Dr. Kipp cites Morell Mackenzie (London *Lancet*, October 6, 1877), Kries (V. Gräfe's "Archiv für Ophthalmologie," Band 1., xxiv.), and Karpinsky (*Aertzliche Blätter*, No. 373, 1879; abstract published in Hirschberg's *Centralblat*, March, 1880, p. 84), and says that he himself has seen a number of cases of retinal hemorrhage in patients who had long suffered from malarial fever and were cachectic. The hemorrhages presented nothing characteristic, were small, situated at the periphery of the retina, and caused but slight impairment of vision. Recovery took place, under quinine and ergot, in all cases which could be kept under observation several months. I saw my first case in my clinic at the Charity Hospital, in this city, in the winter of 1882. At that time I was not aware that the condition had ever been noted and described, but the history of the case and a knowledge of the almost identical condition often found in cases of pernicious anæmia made the diagnosis easy. Accounts of this case, and of another which had come under observation, were published in the *New Orleans Medical and Surgical Journal* (December, 1883). Dr. E. W. Jones, of New Orleans, formerly my clinical assistant, and now one of the visiting oculists to the Charity Hospital, whose attention I had called to the matter, published in THE MEDICAL RECORD of June 27, 1885, a short article containing the report of five cases.[1]

Including the two cases which I published in 1883, an examination of the "history books" of the Hospital Eye Clinic shows that six indubitable and two doubtful cases have been recorded during the five years 1882–87.

CASE I.[2]—H. H——, forty-four years of age; laborer. Comes from another ward of the Hospital, November 2, 1882. Large and well-made man, but very anæmic. General health was good until about two months ago, when he had an attack of malarial fever, consisting of five paroxysms (tertian type). Has had no fever for six weeks. A few days ago, "suddenly discovered a dimness to come over sight as though objects were blurred." No pain. Eyes present nothing abnormal on inspection. V. (atropia), R. E. = $\frac{15}{\mathrm{C}}$; L. E. = $\frac{20}{\mathrm{C}}$.

Ophthalmoscopic examination: Media clear; outlines of both discs indistinct—woolly, and there are some fine specks of blood dotted over them. A general view of each fundus shows numerous hemorrhages in the retina. These hemorrhages are situated in every direction, and are of various sizes. In the left eye the most conspicuous one, about two disc diameters square, is about half a diameter below the nerve. In the right eye, the largest one, situated in the region of the yellow spot, is about two diameters square.

November 9th.—Hemorrhages (specks) upon the right disc have disappeared, and its temporal side seems bluer than it was. Absorption is beginning at the centre of the large hemorrhage. Its border presents an unbroken band of dark red, while the centre is buff, mottled with dark brown. There are some shining white points scattered here and there about this central area.

November 13th.—Spleen not much enlarged; might be about 7 × 9 inches, but not more.

November 21st.—V. (without atropia), R. E. = $\frac{20}{\mathrm{C}}$; L. E. = $\frac{20}{\mathrm{L}}$. The papillæ are undoubtedly swollen, and hazy around margins. This is so of right disc, with the exception of a flat and bluish segment at temporal end of the horizontal meridian. All the hemorrhages have decreased in size, and many have disappeared. The large spot near right macula has now assumed a rhomboidal shape; the border is a bright orange-red, the centre stippled with black dots and shining points. The large hemorrhage near the left nerve has a similar border, but the stippling is done in dark red dots on a pale orange ground.

November 26th.—V., R. E. = $\frac{20}{\mathrm{C}}$; L. E. = $\frac{20}{\mathrm{XL}}$ (almost all).

December 4th.—V., R. E. = $\frac{16}{\mathrm{LXX}}$; L. E. = $\frac{20}{\mathrm{XXX}}$. Hemorrhages nearly all gone, especially in left eye.

December 9th.—V., R. E. = $\frac{20}{\mathrm{LXX}}$; L. E. = $\frac{20}{\mathrm{XX}}$ (a few letters). Nearly all the hemorrhages have disappeared. The outlines of the discs are woolly and indistinct.

December 14th.—Pupils dilated with atropia. In the right eye four spots still remain; two small ones are northwest of the disc; the large one at the macula is now about half-a-disc's-breadth wide; toward the nerve it is bordered by a red crescent; for the rest it is composed of black and of shining dots. In the left eye there are two spots; one just below the nerve, about two disc diameters long, is a bright reddish orange color, stippled with pale yellow; the other, a small one, is southwest of the nerve. Both papillæ are woolly, especially the right, which is somewhat bluish at the temporal side.

CASE II.[1]—D. K——, thirty-eight years of age, an Irish laborer, applied at the clinic January 5, 1883. His general health has always been good up to one month ago, when he had a malarial attack. Right eye squints, and he says that he has not seen with it for years. No pain, but the sight of the left eye has become dim. V., R. E. = fingers at six feet; L. E. = $\frac{20}{\mathrm{CC}}$; with + $\frac{1}{30}$s = $\frac{20}{\mathrm{LXX}}$. Nothing abnormal to be noted on inspection. Ophthalmoscopic examination—L. E.: Outlines of disc and details of fundus around it are hazy; the vessels are tortuous; above, and to the nasal side of the disc are two spots of blood overlying the retinal vessels; at the yellow spot is a hemorrhage shaped like a meat-chopper, or the head of an ancient battle-axe (a semilunar figure with a small, roundish projection from the centre of the diameter or chord) the handle (rounded projection) of which covers the fovea.

January 6th.—Right disc and neighboring retina present the same appearances as the left, but I can discover no hemorrhages. In the left eye are three extravasations, which are accurately located to-day—one small one immediately below the nerve, overlying the larger artery and vein as they run downward; another small one on the same vein, lying close along it and scarcely broader than the vein itself, as it runs straight out below the yellow spot; the large meat-chopper-shaped spot at the macula.

January (about the) 10th.—The first of the hemorrhages above mentioned is much smaller; the second has disappeared; the third has lost its "handle" (roundish projection). On the night of January 4th the patient was delirious and bled profusely from the nose during a malarial paroxysm.

CASE III.—J. H——, aged thirty-five, a Swedish laborer, was sent to the clinic December 8, 1883. Had malarial fever last August, and was in bed two weeks. Another attack followed five weeks later, when he was very ill. Once he was delirious all night, and when he woke next morning he discovered that his vision was clouded—there appeared to be a fog before his eyes. At first his eyes gave him a good deal of pain; there is none now, but his vision is worse and the trouble seems to be increasing. He states that he was perfectly healthy and his vision good before these attacks of malaria. Right eye: Outlines of disc sharply defined and somewhat irregular; the disc itself being a bluish-white, decidedly paler than normal, especially on the temporal side, and presenting a deep physiological cup. At the macula is a circular, dark-colored blood-spot, of smooth but sinuous outline, about half-a-disc's breadth in diameter. Exactly in its centre is a bright, white, shining spot. I take it that the hemorrhage is undergoing absorption at its centre, exposing the fovea, and thus giving rise to this appearance. Left eye: Appearance of the papilla much the same as in the right eye; at the macula is a hemorrhage about half the size of the one in the right eye, but lighter in color, and not displaying the central shining spot and stippling. V., R. E. and L. E. = $\frac{20}{C}$.

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[1] This article directed me to the passage in Gowers above mentioned.

[2] Reported in the New Orleans Medical and Surgical Journal, December, 1883.

[1] Reported in the New Orleans Medical and Surgical Journal, December, 1883.

December 26th.—V., R. E. and L. E. = $\frac{20}{L}$.

Case IV.—R. D——, aged forty, an Irish laborer, was sent to the clinic from Ward 17, April 1, 1884. Has malarial toxæmia; sight is rather dim; no pain of any consequence, though at times he has slight pain across the forehead. L. E.: In the region of the macula is a meat-chopper-shaped hemorrhage, a little over a disc's diameter long and about half as broad. R. E.: There are three small circular hemorrhages in the neighborhood of a rather large artery, near, but not at, the macula, and two small, round extravasations, a little above and to the temporal side of the disc. V., R. E. = $\frac{20}{XX}$; L. E = $\frac{20}{L}$.

Case V.—J. W——, twenty-seven years of age, American, laborer, is suffering from chills and fever; he is very anæmic; his gait is staggering, and his vision has become very obscure.

February 20, 1885.—In the right eye is one large, triangular, thick, smooth-edged hemorrhage, about the diameter of the papilla, situated just at the yellow spot. Several small feathery hemorrhages are scattered about in the neighborhood. L. E.: A small, round, pin-head-sized hemorrhage at the fovea; one or two very small feathery hemorrhages near by. V., R. E. = $\frac{20}{LXX}$; L. E. = $\frac{20}{LX}$.

February 27th.—L. E.: Small hemorrhage at fovea gone. R. E.: The central hemorrhage has diminished in size and become half-moon shaped; the feathery hemorrhages have all disappeared. V., R. E. = $\frac{20}{XXX}$; L. E. = $\frac{20}{XX}$.

March 7th.—L. E.: Papilla swollen and outlines indistinct; several new small hemorrhages on the disk; the vessels are tortuous and the retina cloudy. R. E.: The large hemorrhage at the yellow spot is being absorbed; the fovea shines in this dark blood-spot like a little silver crescent. Patient had a chill two days ago.

Case VI.—C. McK——, an American, iron-worker, aged twenty-nine. "Two weeks ago, during the burning of Colon, the smoke affected his eyes to such an extent that they have not yet recovered." He has suffered severely from malarial fever contracted on the Isthmus, for which he is now in the hospital.

April 13, 1885.—Anæmic. R. E.: Nothing abnormal on inspection. L.E.: There has been perforation of the cornea upward and inward, with the formation of anterior synechia. Pupils dilated. Ophthalmoscopic examination: Each eye presents a large hemorrhage at the region of the macula lutea, and many small hemorrhages scattered about the fundus; the papillæ are pale, and the finer blood-vessels very tortuous. V., R. E. = $\frac{20}{CC}$; L. E. = $\frac{20}{C}$.

April 20th.—Nearly all the small hemorrhages have disappeared; those at the macula have become much smaller.

In the study of these cases the following points are worthy of consideration:

1. Hemorrhage into the retina seems to be a rare effect of the malarial poison. During the years 1882-86 eleven thousand one hundred and ninety-two cases of malarial fever and toxæmia were treated in the wards of the Charity Hospital; but during the same time only six indubitable cases of malarial retinal hemorrhage are recorded in the books of the Eye Clinic. This apparent rarity, however, may be due to the fact that only patients whose vision was much impaired would seek, or be sent to, the Eye Clinic; for Dr. Kipp speaks of several patients whose sight was only slightly impaired by small hemorrhages at the periphery of the retina.

2. All six persons were males, adults, neither very young nor aged. No case of this malady has ever been recorded in the books of the Eye Department for Women and Children. I ascribe their immunity entirely to the fact that they seldom contract, as men often do, by reason of their occupations (wood-cutting, ditching, railroad building, hunting and fishing in swamps), those severe (pernicious) forms of malaria which are prone gravely to derange the blood-producing function, and linger long as malarial toxæmia or cachexia.

3. These six hospital patients were all, of course, in the humbler walks of life. I have never seen a case in private practice, though Dr. Jones and another colleague have. This beyond doubt is due to reasons given under 2.

4. All of my patients were victims of the malarial toxæmia or cachexia, Case V. being a typical example. Referring to his cases Dr. Kipp says: "All of these patients had enlarged spleens, and were of decidedly cachectic appearance." The point is not noted in Dr. Jones' paper. I regret that I have never had an opportunity to examine the eyes of patients suffering from malarial hæmaturia.

5. The hemorrhages are in the retina. The small peripheral hemorrhages are situated in the nerve-fibre layer, as is shown by their being striated or feathery, and lying between the eye of the observer and the retinal vessels. That the large central hemorrhages occupy the deeper layers, we know by their rounded outlines, their dark color, and by the fact that they at times bring out by contrast, at other times obscure, the reflection from the fovea centralis (Case V.).

6. Both eyes are affected in five out of the six cases. We should expect this to be the rule in an ocular affection dependent upon a dyscrasia. It is not improbable that there had been small hemorrhages in the right eye of Case II., which had disappeared at the time of examination. The extravasations being of small size and the eye amblyopic, they would remain unnoticed. However, Dr. Jones states that in several of his cases only one eye was affected.

7. The hemorrhages are commonly multiple. Out of the twelve eyes there were multiple hemorrhages in eight; single hemorrhages in three (none in one). It is to be noted that in eyes presenting but a single hemorrhage this was large and situated at the yellow spot; it seems to me highly probable, especially in considering Case III., that in every case there were other small peripherally situated hemorrhages which were absorbed before the patient came under observation.

8. The onset of the attack is sudden, and, if no complication exists, painless.

9. A slight degree of retinitis, characterized by "woolliness" of the papella, together with haziness of the retina in its neighborhood and tortuosity of the smaller blood-vessels is often observed. This is probably secondary, the result of the violence done the retina by extravasation into its substance.

10. No other parts of the eye are, of necessity, affected.

11. Vision is greatly impaired in all cases in which the hemorrhage is at the macula. In the right eye of Case IV., where the hemorrhages were near, but not at the yellow spot, vision was not at all affected. Drs. Kipp and Jones report cases in which vision was but slightly impaired by multiple peripheral hemorrhages.

12. The tendency is toward recovery, *pari passu*, with the malarial affection, and if the hemorrhages be small, peripheral, and situated in the nerve-fibre layer, recovery is probably prompt and complete; but when extravasation takes place into the deep layers at the yellow spot, recovery is slow, and I doubt if vision is ever perfectly restored. Case I. was watched for forty-three days, but at the end of that time the large hemorrhages were far from being completely absorbed. In the right eye, where the hemorrhage was central, the vision was still seriously impaired; while in the left, where the hemorrhage was near, but not at the fovea, vision had become normal again. Note also vision of the right eye of Case IV. Pallor of the disc, especially of its temporal half, also persists for a long time, and Dr. Jones (*loc. cit.*) describes a case in which the nerve underwent atrophy.

The treatment, of course, is that of the malarial disease; while attacks of chill and fever occur, quinine, arsenic, iron, and strychnine to dispel the cachexia. Perhaps ergot may be useful.

I have had no opportunity to examine, microscopically, eyes containing these hemorrhages, but there is every reason to believe the pathology identical with that of the similar condition in pernicious anæmia. These malarial hemorrhages are due to no special morbid process, but simply to the poverty of the blood induced by the malarial poison. By reason of these blood-changes the capillary walls are ill-nourished and the osmotic currents deranged. Extravasations of blood are seen in the retina in states of anæmia from loss of blood, and "Stephen Mackenzie has pointed out that when the corpuscular richness of the blood falls below fifty per cent., whatever the cause of the anæmia, the tendency to retinal hemorrhage is present" (Swanzy).

NOTE.—May 29, 1888. With De Wecker, we may suppose the light striated hemorrhages to be due to diapedesis; the larger, denser hemorrhages are undoubtedly due to rupture of the finer vessels of the retina, the blood penetrating among the deeper (outer) layers. In an article entitled "Apoplexie générale du Corps vitré chez les Adolescents," in the *Recueil d'Ophthalmologie* for January, 1888, p. 26 *et seq.*, Dr. Ziewinski says that an examination of the blood of his patients showed a diminution of the red in proportion to the white globules (oligocythæmia). He suggests that the presence of an excess of white globules would lead to a blocking by them of the capillaries and subsequent rupture. This phenomenon would explain Mackenzie's observation. We know that whenever the white cells largely exceed in number the red, the former have a tendency to collect along the capillary walls (the local condition in inflammation), and in this position they must further interfere with the nutrition of the walls and the osmotic ebb and flow, and tend to obstruct the blood-current. Perhaps veritable white-cell emboli may be formed, and every condition favoring rupture of the minute vessels and extravasation of their contents be brought about.

NEW ORLEANS, June 13, 1887.

HYPOGASTRIC LITHOTOMY.—At a recent meeting of the Société de Chirurgie Professor Guyon read a paper on the therapeutic value of hypogastric lithotomy, the advantage of which, over the perineal operation, is becoming more and more confirmed. The author divides this operation into several parts: exposure of the subperitoneal region, pushing back of the peritoneum, entrance into the bladder by punctures on account of the presence of the venous plexus engorged with blood. It is when the surgeon has penetrated into the bladder, and when he wishes to act, that it is necessary to fix the organ. To effect this Dr. Guyon suspends and fixes it with two threads running parallel, which serve to keep it open, whence the impossibility of infecting the subperitoneal cellular tissue. The fixation and the suspension are the more necessary at this moment, as the bulging of the rectum produces a deformity of the bladder. The procedure adopted by other surgeons, which consists in not applying sutures, is, according to the author, defective, as these are necessary to prevent the swelling which forms when they are not applied, particularly above and below. As for the tubes, they should always have a fixed and invariable bend. The recti muscles should be sutured, in order to have a firm and deep cicatrice. The partial suture of the bladder with drainage is the practice which is now recommended, as this operation causes a remarkable facility of absorption, so much so that the smallest quantity of carbolic acid or of iodoform produces toxic effects. Consequently Dr. Guyon recommends that antiseptics should be employed but very moderately, asepsis being preferable to antisepsis.

BINIODIDE OF MERCURY IN SURGICAL DRESSINGS.—Dr. Rogée uses the biniodide of mercury in antiseptic dressings, and thinks that it possesses many advantages over other substances employed for the same purpose. It is not irritating to raw surfaces, is a very powerful antiseptic, and is much cheaper than most of the dressings used.

Clinical Department.

PARTIAL CALCIFICATION OF THE MEMBRANA TYMPANI.

By S. MITCHELL, Jr., M.D.,

HORNELLSVILLE, N. Y.

CALCIFIC spots in the membrana tympani are, I think, quite rare. Wilde mentions several cases of this sort, one in particular, in which these spots were seen in the membrane of a patient who became deaf as a consequence of parturition. Pomeroy cites this case, besides several others. The case above referred to bears a striking resemblance to one I now have in charge, and the particulars of which I herewith relate. Mrs. F——, forty years of age, married at the age of thirty-eight. Previous to confinement, three months ago, she had been in good health. There was no history of any previous ear disease. I first saw her May 9th, when she called upon me seeking relief from a constant and distressing tinnitus in the right ear. Her general health was now poor, she was pale and anæmic, the circulation was feeble, and the bowels were constipated. The hearing was as follows: H.D.R. $\frac{2}{60}$, H.D.L. $\frac{25}{60}$, O.C. better in both. By inflation the hearing was increased to $\frac{12}{60}$ in R., there being no improvement in L. The membrane of the left ear presented a dull, lustreless appearance; that of the right ear was normal, except that there was a dense white crescent in the lower and posterior part of the membrane, about two lines broad and four or five long. At my first examination I was unable to account for this appearance of the membrane, but made a diagnosis of chronic catarrh of the left middle ear, and mixed trouble in the right; being somewhat mixed myself by the rather unusual appearance of this membrane. The next day the hearing was H.D.R. $\frac{10}{60}$, H.D.L. $\frac{30}{60}$, which was improved by inflation to $\frac{26}{60}$ in R. and $\frac{40}{60}$ in L., and remains the same at the present time, as also does the tinnitus, which troublesome symptom resists all treatment, and constitutes the whole burden of my patient's complainings. At my second examination, thinking that the unusual appearance of the right membrane might be due to an accumulation of fluid in the tympanum, I determined to puncture the membrane and thus evacuate it of a collection which I suspected was there, causing the tinnitus by pressure on the stapes. I found, to my surprise, when the point of my paracentesis knife came in contact with the membrane, in the centre of the white crescent, that there was a feeling imparted to it as if striking bone. I desisted from any further surgical measures, concluding that the peculiar appearance of the membrane was due to a calcific condition, and doubtless associated with a deposit of the same material in the tympanum, thus explaining the cause of the incurable tinnitus aurium.

HYSTERIA IN THE NEGRO.

By PHILIP S. RAY, M.D.,

WASHINGTON, D. C.

I SUPPOSE no affection of the nervous system has been more variously defined than hysteria. To the physician in every-day practice the affection clinically resolves itself into a functional nerve trouble, the whole nervous system, during the attack, being excessively sensitive, the principal cerebral trouble being a weakening of the will. Hammond tells us that he has been informed that hysteria was almost an unknown disease among negroes during the slave period. I think the observer who informed him must have been mistaken, for we find the most typical cases of hysteria in the negro during religious excitement, and these scenes were certainly common during "slave times." The disease in all its forms is certainly very common now with the negro. Their low form of intelligence and their emotional nature are both favorable to the disease. Hammond says want of work among women is a great cause of hysteria. This may be true in the homes of wealth, but it *oftenest* comes from overwork in those who labor in factories, shops, and private houses. It is essentially, says Suckling, a disease of failing health, worry, and mental strain. The negro woman of to-day attempts to imitate her American white sister in dress, and at the same time do hard work; for they do all the work for the men, particularly in cities. Instead of the negro children being allowed to run (as God intended them) in the open air until they become strong enough to work, they are placed in an unhealthy school where they are made to absorb a little from books, which they do quite rapidly, not taking one idea as regards the real merit of the subject. This is kept up until they are about fifteen years of age, when they are put to work, either at home or in some house, in modern dress. These changes in their mode of life, I think, account for the number of hysterical negro women of this day. The hysteria of men (or neurasthenia, as it is called) comes usually from mental strain, which, of course, does not occur in the negro, so we do not see this trouble in men. I will cite two cases of hysteria, as I found it in the modern negro. I was called, a few days ago, to see a girl twenty years of age. She had been to school until fifteen years of age, and then put at housework with a tight dress on. When I saw her she had been in bed for a week; said she thought while asleep someone had "*stood* on her stomach." Complained of great pain on touching the abdomen or chest, would cry, and then become unconscious for five or ten minutes; thought she was going to die. I told her it was a nervous trouble, and if she would help me she would be well in a few days. I made her get up and dress, and gave her a prescription of bromide and tinct. cannabis indica, also a tonic. In a few days the nervous symptoms passed away, and she was going about; there had been no return of the symptoms.

I saw last week a very similar case, except more severe. All the bad symptoms disappeared under treatment. Hammond also states the disease is almost unknown with the savage nations. This I doubt. Indeed, I think it is certain all classes of beings have what we commonly call hysteria, and I think the lower animals can also have it, due to their cerebral emotions.

1005 Ninth Street.

KING'S POCKET OPERATING AND AMPUTATING CASE.

Dr. E. S. Fowler, of Springfield, Ill., writes: "I desire to call the attention of the profession to this case, which is free from the cumbersome features of the cases in common use, its size being the smallest possible in keeping with completeness and effectiveness. It contains all that is requisite for ordinary amputations, yet can be carried in the pocket. It is 7½ inches long, 2¾ inches wide, and 1 inch thick, and contains one 6½-inch Liston knife with removable handle, one short knife for circular operations, one pair artery forceps, four artery clamps, one tenaculum, serres-fines, one 6½-inch folding saw with adjustable handle that can be set at any angle, the blade being reversible for use in resections, etc., and one suture-carrier and needle-holder. The latter is the most important feature of the case, being so constructed that any of the sutures in ordinary use can be made with it. In one end of the handle are three bobbins, holding forty yards of suture material, and the other end contains the needles and wire. The needles can be placed at any angle. The case, I understand, has recently been adopted by the medical departments of the U. S. Army and Navy, and by the Marine Hospital Service."

SWALLOWING A THERMOMETER.

Dr. M. Singer, of Galveston, Tex., writes: "The account in The Medical Record of the chewing and swallowing of a thermometer by a patient, leads me to report a similar experience in my practice. The patient, a German, who understood but little English, was admitted to the hospital for a fever, not yet diagnosed. As soon as he was seated by his bedside, I introduced the thermometer into his mouth, enjoining him at the same time not to bite or swallow it. Standing in front of my patient I saw the thermometer disappear in his mouth, while at the same time a motion, as of deglutition, was performed by the man. When I recovered from the shock such a sight gave me, I requested my patient to open his mouth. Sure enough the instrument was there no longer, and when I asked the man in German what he had done with the thermometer, he answered that he had understood me to say that he should swallow it, and, of course, he had obeyed orders. I snatched a blanket from the bed and spread it on the floor, then making the man lie flat on his stomach on the bed, with the head hanging down over the edge of it, I told him that unless he wished to die he should introduce his fingers as far down the throat as possible and make one supreme effort to vomit. This was quickly and efficiently done, for in less time than it takes me to relate it, the thermometer was regurgitated, and fell safe and sound on the blanket. I took the precaution of tying a thread to my instrument whenever afterward it became necessary to take the temperature of this or any other such bright-minded patient."

SUDDEN DEATH FROM DISTENTION OF THE STOMACH.

Dr. M. A. Veeder, of Lyons, N. Y., writes: "A case that recently came under the observation of the writer affords an example of sudden death from a cause that is probably quite uncommon. The patient, a woman in middle life, was subject to dyspeptic symptoms, at times suffering greatly from gastralgia. Otherwise her health was good. On the day of her death she was apparently as well as usual, and ate a very hearty dinner. Rising from the table she went into the garden to feed some chickens. In less than three minutes she was found by her husband, who followed her, sitting upon a step, pulseless and dead. At the post-mortem examination, within twenty-four hours, it was found that the stomach was very large, and had been distended, not only by the hearty meal, but also by a considerable volume of gas. The heart was compressed so effectually by the distended stomach that its walls were in contact with each other, and it did not contain more than a few drops of blood. Careful examination failed to reveal any other cause of death than this stoppage of the circulation, which must have been instantaneous and complete."

Persistent Diarrhœa in Locomotor Ataxia.—The diarrhœa which is met with during the progress of locomotor ataxia is of rare occurrence. Charcot, Vulpian, Fournier, and others, have paid some attention to the subject, and a new case is recorded by Dr. Mathieu. The case was that of a man, aged fifty-five, in whom diarrhœa commenced as long ago as 1867, after an attack of cholera. Despite various and numerous methods of treatment, the symptoms had persisted up to the present time. There were six, eight, or ten stools daily, without any pain or tenesmus. The motions were yellowish in color and liquid, and almost free from mucus. This continuous diarrhœa had been a source of great inconvenience to the patient. The diarrhœa had continued for twenty years, and no appreciable change had been noted in its character during the whole of that period. It may be added that the tabetic phenomena exhibited by the patient were quite typical, and were well marked. These were, absence of the patella reflex, anæsthesia of the lower limbs, Romberg's sign, Argyll Robertson pupil, lancinating pains, etc. No treatment had been of any avail. —*Le Progrès Médical.*

Progress of Medical Science.

Hæmoglobinuria in Rheumatism.—At a recent meeting of the Société des Hôpitaux, M. Hayem made a communication on hæmoglobinuria in rheumatism. The patient, a woman, aged thirty-seven, was attacked with rheumatmatism in 1886, and again in 1887. She was then suckling her sixth child. Six days after the second attack came on she entered the hospital. The urine was completely red; there was pain, adynamia, rheumatic œdema in the arms and hands, copious perspiration, rheumatic pneumonia of the right lung, followed by symptoms of pericarditis. The urine, which was scanty at first, became abundant, and the patient recovered. She did not lose her milk, and began to suckle her child again. The urine presented the characteristics of hæmoglobinuria; it contained no red corpuscles, but a large proportion of albumen and white corpuscles. The blood was normal. This case shows that hæmoglobinuria may appear during an attack of acute rheumatism. It differs from hæmaturia in that the urine contains neither red corpuscles nor stroma. Rheumatic nephritis evidently existed in the case described by M. Hayem. The serum of the blood was not modified during the attack of hæmoglobinuria, and the red corpuscles were not dissolved by the urine. M. Hayem ascribes the hæmoglobinuria to the existence of renal mischief. M. Bucquoy cited a case which he had observed twenty years before of paroxysmal hæmoglobinuria *a frigore*. The patient passed black urine when he was out of doors. The urine became normal when he was indoors. The patient was rheumatic, but not albuminuric. At the time paroxysmal hæmoglobinuria *a frigore* was not properly known. M. Hayem observed that such patients must be regarded as suffering from the effects of cold. The renal lesion, which undoubtedly exists, is not persistent; it is only during the attacks of hæmoglobinuria that albumen is observed in the urine. M. Albert Robin cited two cases of hæmoglobinuria. In the first the patient had a genuine attack of acute rheumatism. The urine became red; there were no traces of red corpuscles; there was considerable albuminuria. Symptoms of inflammatory nephritis soon showed themselves. In the second case hæmoglobinuria appeared before rheumatism. In both cases there were unmistakable signs of severe inflammatory nephritis.—*The British Medical Journal.*

The New Test for Free Hydrochloric Acid in the stomach has been shown by MM. Faucher and Paul not to be infallible. They have found that when a hard-boiled egg is used for the the test meal, if the egg is not perfectly fresh the red color will appear upon the addition of phloroglycine-vanilline. This is owing to the presence of a minute quantity of sulphuretted hydrogen. This source of error may, however, be easily avoided by excluding eggs from the test meal.

Anthrarobin as a Substitute for Chrysarobin and Pyrogallic Acid.—Anthrarobin, a substance discovered and described by Professor Liebermann, has been used by Dr. Behrend, of Berlin, as a substitute for chrysarobin. Anthrarobin is a yellowish-white powder, of a rather coarse description. It is soluble in a small quantity of water; also soluble in ten parts of glycerine at a temperature of 100° C. Soluble also in ten parts of alcohol when cold, and in five parts of alcohol when the latter is boiling. When rubbed up with oil it may be easily made into a salve. In the experiments of Dr. Behrend, a ten per cent. salve was used, and occasionally even a twenty per cent. salve, a ten per cent. tincture, and also a ten per cent. solution in glycerine. In all these different forms it was borne remarkably well, no symptoms of inflammation or irritation being caused. The drug was used by Dr. Behrend in those diseases in which the application of chrysarobin could possibly have been attended with good results, and in all such cuticular affections in which chrysarobin is generally used, viz., psoriasis, herpes tonsurans, pityriasis versicolor, and erythrasma. The salve or tincture was well rubbed into the skin, the loose flakes of epidermis having been previously removed. The action was considerably augmented if the affected parts had been previously washed with soap or saponaceous spirits of potash. The action of anthrarobin is slower than that of chrysarobin, but much more intensive, however, than that of pyrogallic acid, which is so often used to replace chrysarobin, and the disagreeable accompanying symptoms of the latter render its use impossible in certain cases.—*Ther. Gazette.*

The Premonitory Signs and Treatment of Hepatic Disease.—Dr. Myrtle makes the following statements on this subject: He has observed an almost constant metallic taste, and with this coppery taste the patients very commonly noticed that their linen was dyed orange color by their urine. A common sensation was an unnatural craving for food, when there should have been no such desire, shortly after a meal. This was so intense that it amounted to gnawing and must be satisfied. Everyone knows how the temper is affected by the state of the liver, but the mental faculty which is most inconvenienced is the memory, as regards matters important and trivial. The last symptom is a sense of weariness and weakness in the muscles of the lower extremities; they feel quite unequal to the most moderate work, and after it ache as if they had been overstrained the day before. As regards treatment, he pins his faith to mercurials, saline purgatives, diet, and warmth. Of all purgatives he prefers natural mineral waters, and while admitting the power and value of many of the foreign springs, after much experience of their use, he can, with perfect good faith, affirm that the strong sulphurous springs and baths of Harrowgate are administered in the great majority of functional disorders of the liver and digestive organs with quite as much success and lasting benefit as are those of any country.—*The Provincial Medical Journal.*

The Therapeutic Uses of Boric Acid.—Dr. Gaucher has put to test the toxic powers of boric acid by administering it to guinea-pigs. To these animals, of the weight of about ten ounces, he gave, daily, fifty centigrammes during fourteen days, without any injurious effects. It is not caustic, is tasteless, colorless, and inodorous. It has been found an efficacious infectious impetigo application, in the form of ointment, after poulticing. In tuberculous ulcerations, also, Gaucher has found this remedy very useful—and has, moreover, employed it with advantage, internally, in phthisis. Boric acid passes rapidly into the urine, and hence is of service in vesical maladies, as chronic cystitis and enlargement of the prostate.—*Provincial Medical Journal.*

Displacement of the Testicle.—At a meeting of the St. Petersburg Society of Russian Practitioners, Professor Popoff showed a unique case of ectopia of the testicle in a patient, aged twenty-four. The scrotum was found to be normally developed, with the right testicle in its usual situation; but the left half of the scrotum was empty, while exactly at the root of the penis there was a swelling of the size of a walnut, covered with normal skin and containing an oval body which measured about four-fifths of the normal testicle, but felt somewhat softer. The patient said the swelling had been there since birth. He had, however, suffered in early childhood from an inguinal hernia, and Professor Popoff thinks it more likely that the displacement of the testicle developed under the influence of the rupture. The man's sexual power was formerly quite normal, but for about six months he had been impotent. Dr. Popoff could find no similar case in medical literature. Professor Wenzeslaw L. Gruber, the great Russian anatomist, who takes special interest in anomalies, considered the case unique.—*The British Medical Journal.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, July 14, 1888.

EXPERIMENTS IN THE STUDY OF FEVER AND OF THE HEAT-REGULATING APPARATUS.

DR. OTTO POSPISCHIL, has made some excellent calorimetrical studies under the direction of Professor William Winternitz, of Vienna. His method consisted in measuring the amount of heat given off from certain parts of the body under various conditions. The apparatus used was a box-shaped calorimeter of 50 c.c. volume, with one of its six sides open, this open side being applied to the part experimented upon.

Over fifty experiments were made under various conditions, and the results are recorded in tabulated form. The author gives the following summary of his work:

1. Exsanguination of an extremity, with stoppage of the circulation, as by Esmarch's bandage, lessens the heat-loss, or expenditure, by about 70.6 per cent.

2. Stoppage of the circulation, with passive hyperæmia, as with a tight bandage, lessens the heat-loss by about 46.2 per cent.

3. Mechanical irritation, as by friction and rubbing of the skin, increases the heat-loss by about ninety-five per cent.

Hence the value of rubbing and friction of the skin in fever with excessive heat-retention.

4. Feeble chemical irritation causes an increase in the heat-expenditure of about forty per cent. Strong chemical irritations, on the other hand, lessen the heat-loss by about eight per cent.

5. Thermic applications which produce cutis anserina lessen the heat-loss by about 44.5 per cent.

6. A warm douche can, by exciting cutis anserina, lessen the heat-loss as much as 38.7 per cent.

7. Moist cold applications can increase the heat-loss up to eighty per cent.

8. Cold shower-baths, followed by bodily rest, cause a slight temporary decrease in heat-expenditure, followed by an increase amounting to about twenty-three per cent.

9. Cold shower-baths, followed by active bodily movement, increase the heat-loss by about 66.6 per cent.

10. Warm shower-baths, followed by resting in a cool apartment, increase the heat-loss about sixteen per cent.

Dr. Pospischil notes that in two cases of typhoid fever the ascent of the fever was followed by a lessening of the heat-expenditure by about 25.4 per cent. This corresponds with Winternitz's view of the great importance of heat-retention as a factor in producing fever-curves.

If one were to look for some practical application of Pospischil's experiments to the present warm season he must find that particular measure which tends to increase the heat-expenditure without at the same time stimulating the heat-generating apparatus. Sufficient data are evidently not furnished us by our experimenter. Cool wet packs and cool douches apparently promise the most, though warm douches followed by rest in a cool room should give satisfactory results.

THE REPORT OF THE GERMAN SURGEONS.

THE report of the German physicians on the case of the late emperor Frederick is a performance altogether childish and unfortunate. Without doing any good to the dead or the living, it starts a personal controversy that will accomplish nothing but the lowering the profession in the eyes of the world.

The documents submitted by Drs. Gerhardt, Bergmann, and Schroetter say in the main only, "I told you so." The idea that Mackenzie removed a healthy piece of the larynx, and that Virchow diagnosticated this as pachydermia laryngis, is incomprehensible.

Dr. Mackenzie has as yet published a brief account only of the case, which may be assumed, however, to outline a more complete report. This report says:

"In my opinion the disease from which the Emperor died was cancer. The morbid process probably commenced in the deepest tissues of the cartilaginous structures of the larynx, and they became affected at a very early date. A small growth, which was present when I first examined the late Emperor, was removed by me by several operations, and all the portions taken away were submitted to Professor Virchow. He was unable to detect in them any evidence of the existence of cancer. Examinations made at the beginning of March by Professor Waldeyer, however, led to the belief that cancer was then present. Whether the disease was originally cancerous, or assumed a malignant character some months after its first appearance, it is impossible to state. The fact that perichondritis and caries of the cartilages played an active and important part in the development of the disease, no doubt largely contributed to make it impossible to form a decided opinion as to its nature till quite a recent date."

GOUT AND TUBERCULOSIS.

IT has frequently been remarked by clinicians that gouty subjects enjoy an apparent immunity from pulmonary phthisis, or, in the rare cases in which they do suffer from tubercular troubles, the latter run a sluggish course, and often seem to die out like a fire which has no fuel to feed upon.

In a communication made to the Lyons Medical Society (*Le Bulletin Médical*, No. 18, 1888) Dr. Humbert Mollière offers an explanation of this fact, which may be accepted as satisfactory, at least until a better one is offered. He has observed, he says, that suppuration is rare in gouty subjects. For example, when ulceration of the skin follows the formation of tophi on the fingers or external ear, the process is a dry one, and not attended with the formation of pus. In patients of a gouty diathesis, who have commencing pulmonary phthisis, the author has also observed that expectoration is very scanty or absent, showing that there is little or no pus formation. It would seem, therefore, that urates and uric acid are antagonistic to the pyogenic micro-organisms.

Now, ordinarily, when the tubercular bacillus attacks the organs of an individual, it opens the way for the microbes of suppuration, which crowd into the open door, and establish the suppurative process which saps the life of the individual. It is to this pus formation that a great part of the evil effects of the tubercular process is to be attributed, and if this is prevented, as it is in gouty patients, the tubercular bacillus has to struggle for an existence, and is not potent for harm.

Such is the explanation offered by M. Mollière of the immunity from tubercular troubles enjoyed by gouty subjects. It is ingenious, and, as far as it goes, satisfactory.

THE CONSEQUENCES OF GONORRHŒA IN WOMEN.

THE list of diseases which are believed to be caused by gonorrhœa in women is as follows: Chronic discharges, metritis and endometritis, salpingitis and pyo-salpingitis, ovaritis, peritonitis, menstrual irregularities, sterility, possibly puerperal septicæmia. This is a formidable list, and it throws a heavy burden of responsibility upon the man who marries while suffering from an uncured, and, perhaps, contagious gleet.

The serious ills which may follow gonorrhœal infection in woman are now being more generally recognized, and especial attention has been recently called to the matter by the work of Dr. Sinclair on "Gonorrhœa in Woman." The old idea, that man is the worst sufferer from the effects of gonorrhœa, cannot be accepted as unreservedly as used to be done.

Fortunately, prophylaxis is possible in many cases. It is admitted that if the gleety discharge contains the gonococcus, it is contagious, and a careful examination of such discharge ought always to be made by the patient before he takes any chances of inflicting suffering upon others. Years of illness, with all its attendant misery, may ensue from the neglect of such precaution.

THE TREATMENT OF BOILS.

AMONG the minor ills that afflict mankind there are few that cause greater discomfort than boils, and not many of which the results of treatment are more unsatisfactory. The poultice and the knife are the two means which have been relied upon chiefly; but while they possibly mitigate and shorten the suffering, they do not effect a cure of the furunculosis. A second boil follows the first, another succeeds that, and the patient becomes worn out in body and mind before his "crop of boils" is harvested.

It has long been known that certain micro-organisms are present in the pus of a furuncle, and it has been assumed by Pasteur and others that the successive eruptions were owing to the transportation of these micro-organisms, through the medium of the blood, to other parts of the body. In a communication made to the Academy of Medicine of Paris (*Revue Générale de Clinique et de Thérapeutique*, No. 10, 1888), Dr. Loewenberg opposes this view of the generalization of tuberculosis and recalls the theory offered by him in a brochure published in 1881. He holds that the multiplication of boils is effected in two distinct ways. In the more grave and fatal cases he believes that the micro-organisms may become diffused through the medium of the circulation, but in the milder cases the process is rather one of auto-inoculation. The staphylococci (of which he recognizes three varieties—aureus, albus, and citreus—as agents in the production of furuncles) escape with the pus and are carried by the fingers or dressings to other portions of the skin, where they penetrate the follicles and give rise to new centres of inflammation. This he regards as the more usual mode of the perpetuation of the disease.

The author's treatment, which, he maintains, has given him entire satisfaction, is based upon this theory of auto-inoculation, and consists in the simple application of antiseptics. The remedy which he uses and prefers is a solution of boric acid in absolute alcohol. This, he claims, will often abort a furuncle, and will, furthermore, prevent a continued formation of boils. Other antiseptics would give the same results, but he prefers the boric acid on account of its freedom from irritating qualities, such as many of the other substances of this class possess.

Dr. Loewenberg insists more particularly upon the use of alcohol, instead of water, as a menstruum, on account of the greater facility with which it penetrates into the follicles, carrying with it the antiseptic substance held in solution. If a "head" has formed on the boil, he opens it with a heated needle or a fine galvano-cautery point, thereby facilitating the entrance of the remedy into the furuncle.

The treatment of boils by the external application of antiseptics is not new. The author himself, has used boric acid for a number of years, and others have employed various mercurial ointments for the same purpose. But in view of the generally unsatisfactory results of the ordinary modes of treatment it would not be amiss to make a more thorough trial of those recent methods in the hope of removing one of the opprobria of medical practice.

THE SIMULATION OF DISEASE BY CHILDREN.

THERE is a good deal of nonsense written and spoken about the innocence of children, their candor, and absence of all simulation. They are innocent, for the most part, simply because they are ignorant, and they are candid, usually, because they see no occasion for deceit. So generally is this poetic idea held that even physicians, who are usually ready to agree with the teacher of old that "all men are liars," are at times led astray by their faith in the innocence of childhood.

Dr. L. Dufestel has recently published a monograph on "The Simulated Diseases of Childhood" (Thèse de Paris, 1888), in which he reviews the already somewhat extensive literature of the subject, and adds several observations of his own.

Simulation of disease, the author maintains, is very common in asylums, schools, and all places where many children are gathered together. Sometimes they feign disease in order to escape from some disagreeable duty, as an excuse for a lesson not learned, or to attract sympathy; at other times they seem to have no special object, but lie apparently for the sake of lying. Dr. Dufestel divides these children into three classes: First, those who feign some simple indisposition with a definite object, and who are otherwise normally constituted; second, children who pretend to be suffering from more complicated diseases, who present, usually, an hereditary history of nervous affections, and who are not well balanced mentally; and third, hysterical malingerers. It is in dealing with the second class of cases that the physician is most liable to be led astray in his diagnosis, and to believe that he has a real malady to contend with. These children, as before stated, have a neuropathic family history, and they have also been badly brought up, their every whim being yielded to by over-indulgent parents.

These precocious malingerers are more often girls than boys, in the proportion of nearly two to one. They are more frequently from eleven to fifteen years of age, though cases are not uncommon in children of more tender years. The author was unable to learn of any recorded instance of simulation in children under four years of age.

In the diagnosis of simulated diseases in children, the author calls attention especially to two points: The physician should be on his guard whenever the little patient's story of his illness is too monotonous. One who is really ill tells a different tale from day to day, his pain and his feelings being modified by passing circumstances. The malingerer, on the other hand, has his story learned by heart, and repeats it always without any modifications. Another thing that should excite suspicion in the physician's mind is the long duration of the simulated malady, and a want of proportion between the physical signs and the degree of pain or discomfort of which the child complains.

The treatment of the little malingerer should consist rather in the treatment of the parents. The physician should not at once announce that the child is shamming, for the only result of such a course will ordinarily be that the child will pass from under his care. But he should so manage the case that the deception will become apparent to the attendants. Then, M. Dufesnel thinks, and probably very justly, when the parents are once persuaded that the child is deceiving them, there will not be much time wasted in completing the cure. Parental discipline is the most potent remedy for infantile malingering.

THE TREATMENT OF HYDROCELE.

After one has had a large number of successes in the management of any particular disease, especially if these occur without a break, he is led to regard the method of treatment employed as one of peculiar value. This is what has induced Dr. C. H. Bedford to publish in the May number of the *Edinburgh Medical Journal* his manner of treatment of hydrocele.

The treatment which he has found almost universally applicable and successful is the tapping and thorough evacuation of the sac, injection of two drachms each of tincture of iodine and water, thorough shaking up of this injection so that all parts of the secreting surface may be brought in contact with the fluid, and the subsequent careful and efficient strapping of the testicle of the affected side, or, if the affection is bilateral, of each testicle separately. The puncture should be closed by cotton-wool, fixed by flexible collodion.

When there coexists a chronic orchitis or epididymitis, no injection should be made, but the tapping should be followed at once by thorough strapping. The latter should be renewed every fourth day, and continued for three weeks or a month. The main point, after the evacuation of the fluid, is the strapping of the testicle. This furnishes support to the part, affording great comfort to the patient, and prevents in great measure the reactionary swelling after an irritating injection has been used.

THE HARMLESSNESS OF LACERATIONS OF THE CERVIX.

It is many years since the views of Dr. Emil Noeggerath upon the malignant influence of gonorrhœa in women were received with scepticism and indifference. Time, or the tide of fashion, has now brought out evidence in a measure justifying his views.

Dr. Noeggerath has recently presented another radical and somewhat startling series of conclusions. This time he has attacked the fetich of the lacerated cervix. Under the tuition of leaders in operative gynecology, it has come about that no doctor can now look at a torn cervix and not be consumed with the holy fire for tailoring the tear. To intimate that such an operation is not useful and imperative is indeed heresy. Dr. Noeggerath, however, lays down the following propositions:

1. Women with uterine disease conceive more easily if the cervix is lacerated than if it is intact. They abort less often in the first condition than in the second.
2. The position of the uterus is not influenced by cervical laceration.
3. The uterine axis is not lengthened by cervical laceration.
4. Erosions and ulcerations are equally frequent in lacerated and in intact cervices.
5. Erosions of the lips are never the direct result of cervical laceration.
6. Diseases of the tissues of the cervix are not more frequent in lacerated than in uninjured cervices.
7. Cervical tears have no influence on the development of uterine disease either as to intensity or frequency.

In his concluding remarks he recommends that lacerations and tears be left alone.

Naturally, such statements draw out a great deal of criticism. Gynecology would be crippled indeed, if its young devotees could not begin by stitching at the neck. Noeggerath bases his conclusions on an examination of one hundred cases of uterine disease, fifty with intact and fifty with lacerated cervices. Several other writers have of late advocated temperance in the matter of sewing up the neck of the womb. The practice of doing the operation as a routine measure after pregnancy is, we believe, abandoned by most gynecologists. The plan of doing trachelorrhaphy as a preventive of possible future disease has still some advocates, but it is unlikely to become popular.

The truth is that there is a vast deal of unwise surgical interference with the uterine organ and its appendages. While Dr. Noeggerath's views may prove to be too radical, they will have, we trust, a good effect in awakening a conservative feeling toward the lacerated womb.

Medical Education in New York.—We are glad to learn, through receipt of the last annual announcement of the College of Physicians and Surgeons of this city, that a three years compulsory course has now been decided upon by the Faculty. A preliminary examination will also be required before matriculation.

News of the Week.

The New York Polyclinic will open a hospital in connection with the college building in October next.

A Sanitary Convention in Canada.—A sanitary convention and meeting of the Executive Association of Health Officers will be held, by invitation of the Mayor and Council, at Lindsay, on Tuesday, Wednesday, and Thursday, August 14, 15, and 16, 1888.

The Eighth Annual Meeting of the Lehigh Valley Medical Association will be held at Paxinosa Inn, near Easton, Pa., on Wednesday, August 15th.

The Thirty-seventh Meeting of the American Association for the Advancement of Science will be held at Cleveland, O., from Wednesday morning, August 15, until Tuesday evening, August 21, 1888.

By a Will lately made, the Boston Medical Library Association will receive a bequest of $10,000 at some future time.

Dr. Hiram Corson.—In honor of his sixtieth year of practice, Dr. Hiram Corson, of Conshohocken, was tendered a reception in the Bellevue Hotel, Philadelphia, June 6, 1888. The doctor is in his eighty-fourth year, and is the oldest living graduate in medicine of the University of Pennsylvania.

General Sheridan's Case has, it is universally admitted, been brilliantly managed by his attending physicians. There is some satisfaction in finding that a case which has been so conspicuously before the public is one that illustrates the resources of our art. Certainly, if it were not for medical skill, including not only careful nursing but the use of powerful drugs, General Sheridan would not have lived so long as he has done.

The Sudden Death of Dr. J. Milner Fothergill is announced. Dr. Fothergill was one of the most popular and prolific medical writers of the present day. He commanded an unusual degree of literary skill, a large amount of practical knowledge, and a deft way of putting things which made his writings always suggestive and interesting. He had a large number of American readers and admirers.

The University of Bologna, on the occasion of the eight hundredth anniversary of its foundation, conferred its honorary degree upon Dr. S. Weir Mitchell, of Philadelphia, and Sir Spencer Wells, of London.

A Dispensary for the Rich.—In the most beautiful part of Madison Avenue is situated a new dispensary, elegant and beautiful, but there is not a poor person within a mile of it, and when it is open they will have to go into another ward to get their first case, just as that very healthy town out West had to go into the next county for a corpse to start a graveyard. It is said that some wealthy lady contributors in the neighborhood of this new dispensary wanted a place to send their servants.—*N. Y. Cor. Courier of Medicine.*

Acute Peritonitis treated by Abdominal Section.—Mr. Lawson Tait reports eight cases of acute suppurative peritonitis, of various origin, treated by laparotomy and drainage. Of these six recovered.

A New Medical Journal, called the *Medical and Surgical Reporter*, published at Toledo, O., reaches us. The editor should at once change the name of his journal to something other than that already borne for so many years by an esteemed Philadelphia contemporary.

The German Surgeons on the Case of the Late Emperor Frederick.—Dr. Gerhardt, acting under the direction of the other German doctors who attended the late Emperor Frederick, has drawn up a report stating that, early in 1887, the German physicians pronounced the disease from which he was suffering to be of a cancerous nature. They decided to open the larynx, and preparations were made to perform the operation on May 20th, when Dr. Mackenzie saw Frederick and declared that the disease was not cancer, and opposed an operation. Dr. Mackenzie removed a portion of the growth, which Professor Virchow examined, but there was no proof that the piece was taken from the actually affected part. Dr. Gerhardt examined Frederick's throat after this piece had been removed, and accused Dr. Mackenzie of removing a piece from the unaffected part of the throat instead of from the diseased part. Dr. Mackenzie replied that it was possible he had done so. The German doctors protested against Dr. Mackenzie's treatment throughout. Dr. Bergmann, in his report on the case, says that as early as May, 1887, he wanted to open the patient's larynx and excise the growth on the left vocal chord. A small operation promised the best results. Of seven such operations which he performed in Berlin, all were successful. There was then no question of the total extirpation of the larynx. The operation would neither have endangered the life of the patient nor would it have destroyed his voice, although it would have left it hoarse. At that time, in an intelligible voice, Frederick said: "Dr. Bergmann, this tumor must be removed. If it cannot be done on the inside, cut from the outside." Everything was ready for the operation, when the plan was vetoed by Dr. Mackenzie, who repeated his assurance that, after a few weeks of his mild treatment, the patient would recover his voice and be able to command the autumn military manœuvres. Dr. Bergmann censures Dr. Mackenzie for defective manipulation of the larynx, for affording no guarantee that he ever reached the growth, and for trying to shift the responsibility upon Professor Virchow. He also blames Dr. Mackenzie for influencing the press through communications about the details of the Emperor's illness. In his report on Emperor Frederick's illness, Dr. Schroetter says that he first examined the patient's throat in November, 1887, and decided that he was suffering from a cancer so far developed as to make it necessary to extirpate the larynx. Dr. Mackenzie, he says, then admitted that the growth looked like a cancer, but Frederick rejected the plan of extirpation because of the risks attaching to it. The German doctors thereupon signed a declaration placing the responsibility of the case upon the physician who overlooked the growth, even contesting its existence till too late. Dr. Mackenzie is reported to say that the report of the German physicians on Emperor Frederick's malady is a tissue of falsehoods, and that any specialist in laryngeal diseases would see that the review of the case is ridiculous. He will make a report himself later.

The Late Dr. C. R. Agnew.—At a meeting of the Medical Board of the New York Foundling Asylum, held on June 1, 1888, the following resolutions were unanimously adopted:

Whereas, In the vicissitudes and uncertainties of life, death comes to call those whose lives are sometimes of the most value, because most useful to their fellow-men. Such was the case in the person of a member of the consulting staff of this asylum, Dr. C. R. Agnew. Dr. Agnew was a man of uncommon ability, and of urbane and accomplished manner, and his life was largely devoted to the performance of good works. He was identified with many of our public charities, either on the Consulting Staff or as one of the Board of Directors or Governors. He was large-minded, and of a varied and rare executive ability, which he exercised freely on all occasions for the public weal. His colleagues deplore his untimely death, when his mind was brightest and his life most active, useful, and fruitful for good. Be it, therefore,

Resolved. That for the sorrow which has befallen his family we offer our respectful condolence and sympathy. As a further token of our esteem and respect, the Secretary is requested to enter as a minute in the records of this Board, this preamble and resolutions.

Resolved, That a copy of these resolutions be sent to his family, and published in The Medical Record and *New York Medical Journal*.

Charles Carroll Lee, M.D.,
George F. Carey, M.D.,
Committee.

The Balbivalier Prize in Medico-chirurgical Science has this year been awarded to Professor Sangalli, of Pavia, for his essay "La Scienza e l' Arte dell' Anatomia Patologica," a work which is said to have involved immense original study and research. The value of the prize is about $1,200.

The Famous "Christian Science" Case at Medford, with the facts of which our readers are familiar, has reached the end which we believe lawyers predicted, and the woman Cornêr, who permitted the death of her daughter and grandchild by neglect, is released. It will be remembered that the woman was arrested on a charge of manslaughter in causing the death of her daughter, Mrs. Lottie A. James, of West Medford, by neglecting to provide proper medical assistance at the time of her confinement, on April 18th. The case was heard before Judge Pettingill, of Malden, who decided that Mrs. Corner was "probably" guilty, and he held her in $5,000 for trial in the Superior Court at Cambridge. Judge Pettingill's decision was not maintained, however, by the grand jury, which has reported "no bill" against Mrs. Corner.—*Boston Medical and Surgical Journal*.

Quack Advertisements in Religious Journals.—The agitation upon the subject of quack advertisements in religious journals was systematically undertaken by The Medical Record several years ago, with the result, we believe, of establishing some decided improvement in many of our religious contemporaries. Recently, the *Medical and Surgical Reporter* has been discussing the subject. It has brought out, among other things, the following curious letter: "Buffalo, N. Y., February 4, 1888. Editor *Medical and Surgical Reporter:* Sir—I beg to differ with you. I consider that religious journals are precisely the ones that should publish these advertisements. This is the proper place for them; religion is nothing but quackery. The class of papers that they should be kept out of is the scientific and free-thought papers, that advocate what is known to be true. There should be nothing but quack advertisements in the religious newspapers. Yours truly. H. L. Green, Editor and Publisher."

The National Conference of Charities and Correction held its fifteenth annual meeting in Buffalo last week. Among the subjects discussed were: "Industrial Training in Juvenile Reformatories;" "The Commitment and Detention and the Treatment and Care of the Insane;" "The Training and Care of the Feeble-minded;" "Reformation as an End in Prison Discipline;" "Charity Organization;" "Immigration;" "Out-door Relief and Hospitals;" "Municipal Charities and Corrections;" "Care and Disposal of Dependent Children."

Unfavorable View of Apostoli's Method of Treating Uterine Affections by Powerful Galvanic Currents.—Dr. Léon Danion, of Paris, an electrician of some experience, has presented to the Académie de Médecine the following conclusions, based, it must be remembered, largely on theoretical and experimental grounds: 1. Numerous and varied experiments on animals have demonstrated that high galvano-caustic intensities determine congestions often of a violent character, frequently followed by inflammation of the organs interested. 2. The clinical results obtained in the treatment of uterine affections confirm in a very distinct manner these experimental electro-chemico-caustic effects. These high intensities may, in this case, determine grave inflammatory phenomena, the issue of which it is impossible to foresee. 3. There does not exist any physiological datum, any empirical result—in a word, absolutely nothing—which would plead in favor of the substitution of high intensities for low and medium intensities, the latter being completely inoffensive; whence it follows that the method of high intensities is not only dangerous, but absolutely useless. 4. The high voltaic intensities (non-caustic) appear inoffensive, but new experiments are necessary to confirm this conclusion.

The Whooping-cough Bacillus of Afanassjew has been shown, by quite good evidence, to be a specific micro-organism. Additional testimony has been recently furnished by Dr. D. G. Ssemtschenko (*St. Petersburger Med. Wochensch.*, 1888, No. 23.). He asserts that this bacterium is found in the sputum from the fourth day of the disease. It increases as the disease progresses, but disappears before the entire disappearance of the cough. Dr. S. thinks that the pneumonia of whooping-cough is of a peculiar type.

The Increase in Deaths from Bright's Disease in Massachusetts is very striking. In 1850 the mortality-rate was 1.1 per 1,000 of total deaths. In 1860 the ratio was 2.9 per 1,000; in 1870, 10.5; in 1880, 19.7; and in 1886, 30.5. The Massachusetts kidney seems to be losing its resistive power.

Cascara Sagrada, in doses of ♏xv. to xx., t.i.d., is said by Dr. H. T. Goodwin to be very effective in rheumatism.—*N. Y. Med. Journal*.

Society Reports.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, May 4, 1888.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. BEVERLEY ROBINSON presented a patient with

CHRONIC GOUT,

who also had some symptoms suggestive of arthritis deformans and chronic rheumatism.

The history of the case, furnished by Dr. John S. Wilson, House Physician of Charity Hospital, was as follows: Henry H——, aged forty-nine, born in Switzerland, a cook by occupation. The family history was good, and the patient denied ever having suffered from venereal disease. Six years ago he had acute articular rheumatism in his feet, ankles, knees, and wrists. This troubled him more or less for eighteen months by its frequent recurrence. Three years ago the patient noticed a small nodule on the posterior surface of each ulna, immediately below the olecranon process. These nodules increased in size until at present they are considerably larger than hazel-nuts. When they first appeared they were quite soft, and the overlying integument was red. On several occasions these nodules have broken down and have discharged a pinkish, semi-solid substance, and also serum and blood. After discharging four or five days they would again heal. At the same time there was a similar deposit at the distal phalangeal joint of the right index-finger. This swelling went through the same phases as the nodules at the elbows.

Upon incising the smaller deposits about the elbow, they were seen to contain a pinkish, musty substance, which, the patient stated, was similar to that spontaneously discharged a few years ago. Upon incising one of these smaller tubercles a mucilaginous fluid was ejected with great force—leading one to suspect that the synovial sac may have been opened. When the largest nodules were incised, the substance contained in them was found to be hard and stony, and could not be pressed out.

Three years ago patient noticed that his hands were assuming the characteristic deformity of arthritis deformans. At present there is extension of the right radio-carpal joint; the first phalanx of the right index- and of the right ring-fingers is flexed, the second phalanges of these members are extended, while the distal phalanges are flexed. The fingers are deviated toward the ulnar border of the hand. The left hand was involved at a later date, and the changes are not so extensive nor so characteristic as those in the right hand. There is an enlargement of the base of each of the second phalanges of the left hand. Upon the extensor tendon of the left ring-finger or upon its sheath, there is a small, hard nodule about the size of a small pea. The toes are but slightly involved. Flexion and extension of the hands and fingers are not painful, nor can crepitus be elicited.

There is more or less anchylosis of all the minor joints of the left foot. This member seems to be thickened, and is the seat of *pes planus*. There is a thickening of the fibrous tissues about the first metatarso-phalangeal joint, but there is no deposit here such as is seen about the elbows. No deformity about the ankles. Patient denies having had an attack of acute gout. There is no deposit of urates in his urine, and he has no endocardial trouble. The pain in his ankles is not influenced by atmospheric conditions.

From the above history we see that the patient has had acute and chronic rheumatism, and at present he has symptoms pointing to chronic gout and arthritis deformans.

The deposit removed from the nodules was examined by Dr. Maurice N. Miller, who reported that it consisted of urate of soda almost exclusively. "The major part appears in the form of minute needles, detached and in clusters. I was also able to make out aggregations of these spiculæ resembling very closely the wheat-sheaf masses often found in urinary deposits. The material was of a pasty or clayey nature when removed—as it was—through an opening made by the scalpel, but was examined by myself only after it had become dry. The sheaves would undoubtedly have been more characteristic, had the matter been examined while yet moistened with its own fluid, instead of with water, which I was obliged to add."

DR. A. BRAYTON BALL thought that there was no doubt that the man had gout, but the question was whether he had also rheumatoid arthritis. The occurrence of this deformity of the hand with gout was not, he thought, unusual, and he saw no symptoms present in the case which could not be accounted for on the theory of chronic gout.

DR. C. L. DANA had seen cases of typical rheumatoid arthritis in which deposits were present.

DR. A. H. SMITH remarked that there was in this case an absence of the distinctive enlargement of the ends of the bones seen in rheumatoid arthritis.

DR. PEABODY said that, judging merely by the present symptoms, and not by the previous history, the case would seem to be one of chronic gout.

DR. ROBINSON said that his object in presenting the case was the atypical and confusing nature of the symptoms. He could not conceive that the patient had three distinct morbid conditions in his system, and he had inclined to the opinion that the man was suffering from gout, although he had never seen an exactly similar case. The ulnar deformity of the hands here present was stated in the books to be characteristic of arthritis deformans.

DR. ROBERT F. WEIR then read a paper (see p. 29) on

WHITEHEAD'S OPERATION FOR HÆMORRHOIDS.

DR. JAMES B. HUNTER said that he had performed this operation several times, and had been more than pleased with the results, even when he had done the older operation. He had occasionally had some trouble with hemorrhage, but had used torsion, as Whitehead advises, and had been able to control the bleeding without any difficulty. One great advantage was the absence of pain after the operation. Whitehead uses silk, but the speaker had employed catgut in one case with good results.

DR. A. H. SMITH referred to a palliative method of treating hemorrhoids when the patients refused operation. This was to give an enema daily of water at a temperature of about 115°, and not to allow the bowels to move without this injection. He had found this plan to give great relief in a number of cases.

DR. PEABODY asked whether the reader of the paper was in favor of injections of carbolic acid.

DR. WEIR replied that there were two methods of making these injections. In the first, pure carbolic acid was used, and in the second, a $\frac{1}{20}$ solution. He preferred the latter, using very pure acid, and injecting only a few drops of the $\frac{1}{20}$ solution. The patients are generally able to attend to their business as usual, complaining only of a little soreness. Pyæmia has been known to follow the injection of the pure acid, or of a $\frac{1}{3}$ solution.

DR. HUNTER said that nitrate of silver had been recommended as being painless, but he had seen it employed in one case, and the patient was in agony during the entire night following the operation.

DR. ROBINSON asked whether, in case of a recurrent and rather painful pile, Dr. Weir would inject the tumor or lay it open?

DR. WEIR replied that if a clot of blood were present he would make an incision and remove it. In the case of an internal pile which had prolapsed and become strangulated, he would give the patient ether, stretch the sphincter, and return the tumor. He had never tried repeated slight stretchings. The plan that he preferred was to dilate the anus gradually by moving the finger about in all directions, and then, after a certain amount of dilatation had been effected by this means, to introduce the thumbs and stretch the sphincter fully. In reply to a question by Dr. Smith, whether he had ever seen any bad results from severe stretching, the thumbs being separated so as to touch the tuber ischii on each side, he said that he had seen incontinence so produced. As regards Whitehead's operation, another advantage that it possessed was, that it seldom gives rise to any bladder symptoms, such as are occasionally seen after other operations.

Dr. Weir also read a second paper (see p.31) on the

TREATMENT OF CARBUNCLES BY SCRAPING OUT.

Dr. Hunter had tried injections of carbolic acid in the treatment of carbuncle, but had not met with any great success.

Dr. Smith referred to a case which had been treated in the manner described by Dr. Weir, in which the results were excellent. He had seen a carbuncle cured by injections of pure carbolic acid. The operation was done by Dr. Chappelle, who had seen the method used in England. A glass pipette was passed into the small openings in the carbuncle and a few drops were allowed to fall into each one.

Dr. Weir thought that the sloughs would prevent any extensive action of the carbolic acid in such a case. Russian surgeons were now treating malignant pustule by corrosive sublimate in powder. A large quantity (several grams) was strewn over the tumor. Here there is a more acute process, and there is not so much sloughing tissue present as in the case of a carbuncle.

Dr. Kinnicutt presented a communication on the

METHODS OF TESTING THE STOMACH-ACIDS,

with a practical demonstration.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN OBSTETRICS AND GYNECOLOGY.

Stated Meeting, May 24, 1888.

Charles Jewett, M.D., in the Chair.

A new needle-holder, devised by Dr. H. T. Hanks, was presented in his absence by Dr. George E. Abbott. It was suitable for holding either the Hagedorn or the straight-needle.

DEMONSTRATION OF MR. TAIT'S METHOD OF FLAP SPLITTING.

Dr. H. T. Hanks sent the paper, which was read by Dr. Abbott. The patient being placed in the Sims position, he proceeded to repair the vesico-vaginal fistula by enlarging the lower angle of the fistula, cutting down fully one-third of an inch to the bladder tissue, then at the farther angle he dissected with the scissors the mucous membrane of the vagina away from the vesical wall one-fourth to one-third of an inch entirely around the whole fistula. Then with his finger-nail he separated the tissues, going over the same locality he had already cut up with the scissors, making sure by the sense of touch that the tissues were evenly separated and dissected up all around the opening. He then inserted a Peaslee needle at the lower angle of the fistula, carefully passed it around in a direction toward the upper angle, and, by the feeling of the finger, making sure that it passed deep in the tissue beyond the angle of the flap. He never allowed the point of the needle to pierce the bladder or vaginal wall. This was done entirely by the sense of touch. The needle was brought out at the upper angle. He then threaded it and withdrew to the lower angle of the fistula, and went over the opposite side in exactly the same manner, pushing the needle to the upper angle, there attached the wire, and pulled it down through on the other side of the tissue, thus making a bag string. He then pushed down the mucous membrane of the vesical wall, drew up the wire, and twisted it. Thus the denuded surfaces were brought together in the vagina, and the vesical part of the fistula was puckered in the bladder, so that what had been the weakest place had become the strongest.

In umbilical hernia the operation was the same, except that the tissue to be manipulated was different. If by accident the peritoneum were pierced, it was only necessary to use the antiseptics and precautions employed in laparotomy.

In lacerations of the sphincter and perineum the operation was essentially the same. Dr. Hanks believed it was impossible, by Mr. Tait's method, to make a large perineum which would exactly correspond with the original tissue torn, but, so far as the sphincter itself was concerned, it was left stronger and better than by any other method.

Dr. Buckmaster had never seen the operation done, but he had from the first looked upon it as dangerous, and this belief had been confirmed by the death of one of Dr. Mundé's patients.

Dr. Jones said some incredulity had been expressed with regard to the statement that Mr. Tait performed the operation on vesico-vaginal fistula entirely by the sense of touch. Having been an eye-witness of the operation, he could testify that it was done by the sense of touch alone. He used the Sims speculum in the Sims position.

The speculum was removed when he came to pass the suture, consisting of silver wire threaded on a tubular needle. Dr. Hanks had described only the purse-string suture. This Mr. Tait used only in small fistulæ. In larger fistulæ the flap was split in the same way but the suture was passed from side to side in the long axis as in the perineal operation. In the perineal operation the flap was split as described, following the line of cicatrix, extending from the inferior margin of the labia minora on each side around the recto-vaginal septum. The tissues were separated and brought together by from three to four sutures of silk-worm gut.

A PLEA FOR THE PRIMARY OPERATION ON THE PERINEUM.

Dr. Hanks' second paper, bearing this title, was read by Dr. Goffe. After twenty years' experience as an obstetrician and fifteen years as a gynecologist, Dr. Hanks had finally become convinced that it was utterly impossible to prevent laceration of the perineum in all cases. He thought that in ten per cent. at least of all primiparæ the laceration took place. The liability to sepsis and a tedious convalescence, with serious after-results if the rupture were not repaired at once, were pictured.

Speaking of the technique of the operation, he said the patient should be brought to the edge of the bed, lying across it on a rubber cloth arranged to drain into a bucket on the floor. An assistant should be at each knee. Irrigation by a weak bichloride solution should be continued ten or fifteen minutes. The knees should not be kept flexed all the time, thus avoiding engorgement of the tissues with blood. The fewest instruments with which one could do the operation were a pair of pocket scissors, a long, slender, but strong Peaslee needle, with a Hagedorn point, devised by himself, was preferred; a suitable thread, as of a silkworm gut, horse-hair, or silver wire. A few whiffs of chloroform should be given, although a local application of cocaine might deaden sensibility. After a thorough douching, the limbs should be straightened and again flexed; a towel should be wrung out of hot water and pressed against the perineum fully five minutes to thoroughly unload the capillaries. A tampon was placed in the vagina to prevent blood running over the wound. Then, under as strong a light as could be obtained, a thorough examination was made to ascertain the exact character of the laceration. The sutures were then passed, three being usually sufficient. The great necessity was to insert the sutures sufficiently deep to hold the parts. He dusted the parts with iode, or other antiseptic; the tampon was removed, a bichloride pad was applied and renewed every two hours; the knees were kept together; the urine was drawn every five hours; the dressing was removed the second day.

It was possible for cases to occur in which the patient was too exhausted to justify the operation; but, as a rule, it should be performed, as it was easily done, and could be done quickly. He thought, with our present knowledge of sepsis and germicides, the dangers of the operation were reduced to a minimum. No septic material need ever be left in the wound when the sutures were tightened. The use of catgut or silkworm gut did away with the pain which formerly constituted an objection to silver wire. Dr. Hanks thought the operation rendered the patient far better able to go through the puerperal state.

Dr. R. A. Murray fully agreed with the author of the paper regarding the importance of the primary operation on the perineum, and he thought the method of operating had been graphically described. He did not approve of so prolonged irrigation of the wound either with the bichloride or carbolic-acid solution. If the injection were kept up fifteen minutes, there would probably be marked relaxation of the uterus, interfering with the operation. If there was anything to render the condition of the parturient woman a serious one, it was a laceration of the perineum over which the lochia were constantly flowing. In the Maternity Hospital, the rule had been in force at least the past four years to repair all lacerated perinei at once. If there was but the slightest tear, they inserted only one suture. If the rupture was in the second degree, the operation was made thorough. He thought we made too light of laceration of the perineum as a factor in the production of subinvolution. Probably the physician too often left the case, intending to operate the next morning, when it became impossible because of the swollen condition of the tissues, etc., and then puerperal diphtheria developed. He thought the primary operation was not oftener unsuccessful than the secondary when performed by the same hands. He did not think laceration took place in ten per cent. of primiparæ. He thought the Goodell method of lifting the child's head forward during delivery would do much to prevent rupture. Regarding Dr. Hanks's preference for the Hagedorn needle, he had found the shank too thick, leaving a hole not completely filled by the suture, and which did not heal readily. An ordinary needle would do. He used silver wire. One reason why the operation was less frequently successful than it should be was failure to place the anterior suture far enough forward. It should be placed on a line with the tear.

Dr. H. J. Garrigues had been accustomed to repair at once the lacerated perineum during the past twelve years, and he had observed that in this country the leaders in the profession had come generally to express themselves in favor of the operation. He further emphasized the objection made by Dr. Murray to using the intrauterine douche ten or fifteen minutes, whether bichloride or carbolized solution were employed. He had been induced, by the report of fatal cases, to reduce the strength of the bichloride solution to one in four thousand, and he thought it might be even still weaker. He thought the advantages attending the use of the injection more than offset the slight dangers. Formerly they employed three or four quarts. Now, at the Maternity Hospital, they injected only a quart in ordinary cases. As to the frequency of the accident, it was rare in the Maternity Hospital, but the young physicians there had been taking so much pains to guard against rupture that it had led, in his opinion, to an unusual number of stillbirths. The accident which they sought to prevent in retarding the birth of the head, was trifling compared with the death of the child. By two or three sutures the laceration could readily be repaired. He used wire, and had not found much pain from their being touched. The bichloride pad was considered sufficient without injections after the operation, and they almost invariably got union. In reply to a question whether in private practice he employed anæsthetics, he said he did not, or only as little as possible.

Dr. Clement Cleveland endorsed all that had been said with regard to the necessity for the immediate operation. He now used catgut suture. It would not dissolve before the ninth day. He used only hot water as a douche. He used the small darning-needle. The patient was placed on the left side, with the knees drawn up. Two sutures were inserted, if the rupture were not through the sphincter; one placed above would protect the others.

Dr. Goelet agreed as to the necessity for the immediate operation and thorough cleansing of the wound. But inasmuch as the vaginal tear and the perineal tear were not in the same line, the latter alone being median, he sewed up the vaginal line first, and the perineal line separately, using catgut in interrupted sutures.

Dr. Dudley endorsed Dr. Cleveland's method of operating with the patient on the side. The nurse lifted the buttock and exposed the whole line of laceration, when it was easily repaired. He used catgut directly out of the juniper. Dr. Goelet's remarks on the double tear were opportune. The pain attending the passage of the needle was trifling, but, if considered necessary, cocaine could be applied locally.

Dr. S. Baruch thought the tear was frequently due to the passage of the shoulders, and consequently the Goodell manœuvre in delivering the head should also be applied to the shoulders. He thought laceration of the perineum occurred in more than ten per cent. of primiparæ. He stated to the patient in advance that there would probably be a tear which would require a suture or two, so that after the birth of the child no objection would be made to the operation. The sutures should not be drawn so tight as in the secondary operation. He gave anæsthetics. The operation was one of the most successful in surgery.

Dr. Goffe had found the tear due not infrequently to the shoulders, or both the head and shoulders, and its taking place in different lines in the vaginal and perineal portions might be accounted for by the rotary motion in expulsion. He invariably gave chloroform, as the pain of the operation was great without it.

Dr. A. H. Buckmaster then read a paper,

A CASE OF EXTRA-UTERINE FŒTATION; DESTRUCTION OF THE FŒTUS BY THE GALVANIC CURRENT WITHOUT INTERRUPTIONS.

The patient had menstruated last in October, 1887. On December 26th she was seized with violent pain in the stomach, ringing in the ears, and faintness. Her physician supposed the internal hemorrhage which was evidently present had resulted from rupture of the fœtal sac in extra-uterine gestation. Similar attacks, but less violent, occurred subsequently. Dr. Buckmaster applied the electric current in February, when there was present an ill-defined mass, elastic to the touch, on the right side in the lower abdomen, the uterus being somewhat enlarged and crowded upward behind the pubes. A fluctuating elastic mass occupied Douglas's pouch, not unlike a small ovarian cyst, seemingly connected with the mass felt in the right iliac region. The uterus seemed to be free from it. Normal uterine pregnancy was readily excluded, and the diagnosis lay between an ovarian cyst fixed in the right side and extra-uterine pregnancy. The patient had increased in size considerably, lately. He applied one electrode covered with cotton against the floor of the tumor, and over the abdomen was placed a large mass of clay with sixty-four square inches contact for the other electrode; a Barrett battery of sixty chloride of silver cells was connected with the electrodes. The current was gradually increased and afterward decreased, the maximum being twenty milliampères, the duration being over twenty minutes. The patient was much relieved of pain. He saw her six days after the treatment, when there had been a decided change for the better; the appetite had returned, the circumference of the abdomen had decreased, the pain did not return for several weeks, the cyst had lost much of its watery contents. The second treatment was about six days later. The patient menstruated about

March 1st. The cyst could still be felt, and although much smaller, there was considerable tenderness.

The questions of interest in the case related to the diagnosis, whether the child was living at the time of the electric application, and whether the uninterrupted current was best for destroying the fœtus. He thought the child was living until the treatment was applied. There were three ways of using electricity for the destruction of the fœtus—the primary faradic current, the galvanic current with interruptions, and the galvanic current without interruptions, as it had been employed in this instance. The galvanic current with interruptions was considered liable to produce rupture of the sac. He preferred the uninterrupted current as used for fibroid tumors, and thought from twenty to one hundred milliampères, which could readily be employed, sufficiently strong to kill the fœtus. He thought it was best to apply the positive electrode within the vagina, and it should be brought in as close proximity with the fœtus as possible.

Dr. John S. Hawley then read a paper on

PRIMARY LAPAROTOMY FOR EXTRA-UTERINE FŒTATION,

in which he narrated a case and justified the operation in certain conditions. He had been able to find recorded but one other case in which laparotomy had been performed in the early weeks of extra-uterine gestation, before rupture of the sac, it being a recent one in the hands of Dr. Price, of Philadelphia. It was successful. The fœtus was of the seventh week.

His own case occurred in a woman who last menstruated in January, 1888, and who, as was altogether probable, aborted in March. Dr. Hawley did not see the patient again until April 27th, when he was informed that she had hemorrhage when on her feet, and that she had had an attack of pelvic pain a few days before. He was surprised to find a small, smooth, cystic, ovoid tumor, occupying the cul-de-sac to the left of the uterus. His diagnosis was immediately and positively made, based on the position and character of the enlargement, its recent development, and his knowledge of the former history of the patient. It was evidently a tubal pregnancy. The next day the tension of the tumor had perceptibly increased, and as rupture was threatened he thought it not advisable to trust to electricity, but that laparotomy should be done as soon as possible. April 29th, forty eight hours after the diagnosis, he removed the cyst intact by abdominal section. It occupied the left tube, and the floor of Douglas's pouch. The patient recovered without untoward symptoms. The fœtus was not more than of six weeks' growth.

The symptoms indicated impending rupture; the cyst was rapidly growing, having increased perceptibly in tension of its walls during a single day. Being thoroughly convinced that no time was to be lost, he advised the immediate operation. There were cases in which electricity was appropriate, but he thought its advocates made a mistake in condemning every other method and recommending this under all circumstances. The dangers of an operation after rupture had taken place were well known, but the risks incurred before rupture were not to be judged of by those known to exist after that accident.

Dr. Garrigues would repeat that in his opinion electricity was *the* remedy for extra-uterine pregnancy, especially during the first four months. He was surprised to hear from Dr. Hawley that there were only two cases on record in which the fœtus had been removed by laparotomy before rupture of the sac in the early period of extra-uterine pregnancy. He had inferred from the remarks of Dr. Martin, of Berlin, that it was not infrequently done in that city.

Electricity had been used in this country in between thirty and forty cases, without the loss of one, and with suppuration in but two, one of which should be excluded, as there was also puncture of the cyst, which under no circumstances should be made. Treatment by electricity was pre-eminently an American method. In the earlier case in Italy there was puncture by the electrode, an objectionable procedure.

As to the kind of current, he agreed with Dr. Buckmaster that the interrupted galvanic current was most objectionable, particularly as it might possibly cause rupture, but he preferred the faradic current to the galvanic without interruptions. There was not a single case on record in which faradization had caused any trouble. The strength of the current was increased very gradually.

Dr. Garrigues then recited a case very recently seen by him in consultation. The diagnosis of right tubal pregnancy between the third and fourth months was beyond a doubt. The woman was seized with severe pain in the abdomen ; the condition of the tumor was such as to make the case one in which Dr. Hawley had said no time should be lost in other treatment than by laparotomy. Yet the faradic current was employed, and the effect was immediate. The pain disappeared, and the next day, where there had been a tense globular tumor, he could feel a diminished hard mass, and ballottement had disappeared, as had also the peculiar areola around the nipples. He was fully convinced that the fœtus was killed at the first sitting, although the applications were repeated five days.

Further discussion was postponed until the fall meeting.

THE NATIONAL ASSOCIATION OF RAILWAY SURGEONS.

Preliminary Meeting, held at Chicago, Ill., June 28, 1888.

Morning Session.

This Association held its preliminary meeting at the Palmer House, Chicago. Ill., June 28th, and was called to order by the Chairman of the Committee, Dr. C. W. Stemen, of Fort Wayne, Ind., at 9.30 a.m., who said the sole object of the meeting was to effect permanent organization, after which the surgeons of the different railroads would meet annually to develop this special and rapidly growing branch of surgery, to report cases, to exchange views, and to discuss the best means of treating railway injuries. The meeting was very largely attended, nearly all the distinguished railway surgeons of the country being present. Sixty-three railroads were represented. The Association starts out with a membership of six hundred, and promises to be one of the most active surgical associations in the United States, numbering as it does among its members some of the ablest and most eminent surgical lights of America.

Afternoon Session.

Dr. W. B. Outten, of St. Louis, made a few remarks on

POINTS IN RAILWAY SURGERY,

and said that out of one hundred and three railway injuries, caused by the passage of locomotives and cars over the parts, attended by him, involving the superior and inferior extremities, excluding injuries of hands or feet, more than one-third died from shock, and one-tenth died from shock without operative interference.

Dr. Outten then dwelt upon the subject of amputation, in which he leaned toward the secondary operation.

Dr. J. B. Murdock, of Pittsburg, in opening the discussion, said the main question was, whether we should adopt primary amputation, or, as a rule, resort to secondary amputation. If he correctly understood Dr. Outten, he advocated the secondary operation in crushing railway injuries. The time at which amputation should be performed was divided by some authors into the primary, intermediate, and secondary. Still further divisions were made by some. Dr. Hamilton makes what he calls the immediate operation, then the primary, intermediate, and secondary. The primary amputation is made within twenty-four hours of the accident ; the intermediate during the inflammatory period, and the secondary after suppuration sets in. Military surgeons contend that the mortality in primary amputation is much less than in the secondary. When a patient has sufficiently reacted from shock, Dr. Murdock performs amputation, and the sooner done the greater are the chances for recovery of the patient. We are more apt to have blood-poisoning by delaying the operation. As a rule, he would put himself on record as favoring the immediate operation.

Dr. W. P. King, of Sedalia, Mo., had been doing surgical work for railroads for twelve years; he had charge of a large railroad hospital, and had treated a great many men. It was an unfortunate circumstance for those who were injured on railroads to have to undergo amputation. While it was true of other accidents to which men are subjected, that limbs were saved when seriously injured, it was not so in cases where car-wheels had passed over an arm or leg; such members invariably had to come off. He had seen one case in which two car-wheels passed over the arm of a man, leaving their imprints behind. The limb was saved. The man carried a bundle of old clothes under his arm at the time, which Dr. King maintained saved the limb. He would not for a moment arrogate to himself that he saved the limb, nor, in fact, the limb of any man over which car-wheels had gone.

Dr. J. H. Bennett, of Wauseon, O., had practised his profession twenty-five years, during which time he had done considerable railroad surgery; and, since there had been so much said about antiseptic surgery, he would say he had never used carbolic acid or bichloride of mercury in the treatment of wounds—in short, he would go further, and assert that he had never used a drainage-tube. By using either of the antiseptic agents mentioned he held he would be adding to a wound a material or agent that would set up an inflammation.

Dr. C. B. Stemen, of Indiana, said the points set forth in Dr. Outten's paper showed that the author has had a large experience in railway surgery. He could not, however, let the remarks of Dr. Bennett pass without entering his protest against any man who opposed modern antiseptic surgery. Being in a position, as railway surgeon upon the Pennsylvania road, where accidents occurred now and then, and where sometimes little or no attention had been paid to antiseptics in the dressing of wounds and sending the patients on to him, he had experienced serious difficulty. With the rapid advances that have been, and are being, made in surgery, and from the testimony we have in this country and across the water, the day is passed when any man can consistently oppose antiseptic surgery. Sir Joseph Lister in his teachings had been the greatest benefactor of the present age in advocating it. Dr. Stemen could demonstrate to anyone the benefits resulting from an adherence to antiseptics in the practice of surgery. Although Lawson Tait, of Birmingham, Bantock, and others did not directly advocate it, yet all the necessary antiseptic precautions were carried out by them in their operating rooms.

Dr. J. H. Murphy, of St. Paul, said he had been a railway surgeon for twenty-five years, and the cases that most annoyed him were injuries of the spine. He had a case at present under his care of fracture of the spine, with paralysis of the lower limbs. Most patients with spinal trouble died. He would like to ask any member of the Association whether there was any manner or means by which spinal injuries could be relieved. He had resorted to every known form of treatment, but had failed. If anyone had met with success in the treatment of such cases he would like to know it—the methods they adopted, etc.

Dr. Outten closed the discussion by saying he did not wish Dr. Murdock to understand him as favoring secondary amputation. It depended upon the nature and extent of the injury. In some cases he would resort to primary amputation; in others he would not, but would endeavor to meet the indications at all times.

Dr. Murphy moved that when the Association reassembled it discuss injuries of the spine. It was in a large number of such cases that the railway surgeon was called upon to testify in court, and lawyers were better posted on this subject than anything else. *In short, they all read Erichsen.*

Adjourned till 8 P.M.

The Association reassembled at 8 P.M. First Vice-President, Dr. J. H. Murphy, in the Chair.

DISCUSSION ON SPINAL INJURIES.

Dr. Stemen, of Fort Wayne, opened the discussion by saying that, in 1874, a man working in a gravel pit in Illinois sustained a fracture of the eleventh dorsal vertebra with compression of the cord, and complete paralysis of the lower extremities. The patient was brought to his town in a pitiable condition. A short time after the injury he made the operation of trephining—cut down and removed an arch of the vertebra, with good results. Sensation was restored, and the bedsores healed kindly within two weeks after the operation. The man is alive to-day; but there is still slight paralysis of the lower extremities. He has since done the operation four times without benefit to patients. Notwithstanding what Ashhurst and others had said in regard to the unjustifiability of the operation, he would cut down and elevate the depressed bone, and if there was not serious injury of the cord he believed the operation would prove successful. He would advocate it.

Dr. David Prince, of Jacksonville, reported the case of a man who was thrown out of a wagon by a runaway team, so that the end of the wagon fell across his back, paralyzing the lower extremities and bladder. The tenth dorsal vertebra projected considerably beyond the eleventh. The patient never recovered the use of the lower extremities, and died about a year afterward. In view of what had been said by Dr. Stemen, he would not hesitate to cut down and remove an arch or two arches of bone to see what the results would be.

Dr. J. Harvey Reed, of Mansfield, O., said it seemed to him that we have to consider spinal injuries under two general heads: *First*, pseudo-spinal injuries; and, *second*, true spinal injuries. The worst class he had to treat, and which gave him the greatest amount of annoyance, was the pseudo class, which lawyers usually "trumped up." For instance, a fellow is hurt; he, perhaps, does not report to the surgeon at all, and in the course of six months sues the company; the surgeon is called upon to defend the company. The question the surgeon has to decide is whether that man really has spinal injury, or whether he has not. It is an important question—one that embraces finance and morality. The railway surgeon is morally bound to give that man the benefit of the injury he has sustained; at the same time, he is compelled to support the company if the patient plays the part of an impostor. He had found in his experience that this class of cases was the hardest for him to positively decide as to diagnosis, and to discharge what he considered his faithful, conscientious duty to the road to which he belonged.

As to true spinal injury, there was no question about the diagnosis.

He would agree with Dr. Stemen that, where there is fracture with compression of the cord, the proper thing to do is to cut down and relieve the pressure, just as we would relieve pressure upon the brain from a depressed fracture of the skull. These fractures may be slight; the pressure may be slight; yet grave results sometimes follow them, just as they do slight injuries of the brain which result fatally in six, seven, or ten years afterward. He was satisfied that surgeons had been too conservative in the matter of operating upon the spine. Dr. A. W. Ridenour, to his knowledge, had trephined the spine in a few cases with favorable results, and he could not see any tangible reason, nor, in fact, any more danger, attached to trephining the spine than the skull for lesions of the brain. If we can do it with immunity on the skull, why can we not do likewise on the spinal cord.

Dr. Reed then reported a case of fracture of the atlas. The man recovered. The accident occurred five or six years ago; the man came very near dying last week. The injury the fractured vertebra is producing on the spinal cord, in his judgment, would sooner or later terminate fatally.

Dr. Murdock, of Pittsburg, had only met with two cases of fracture of the spine which terminated fatally. He thought if any surgeon could instruct the Association how to treat fractures of the spine with a reasonable degree of success, he would confer a great benefit upon the members—whether by suspension, jury-mast, plaster-of-Paris, wiring, trephining, or what not.

He had recently read of a case of a new-born child in which the spinal cord was said to have protruded, or separation taken place, a few days before birth, in which the attending physician cut down, returned the cord, and wired all vertebræ separated together, and the child is still living.

What should be said of those cases in which we have supposed spinal injury without lesion? He would hold that there is no such thing as a serious injury of the spinal cord without a lesion. He did not believe there could be such a thing as a paralysis or any serious disturbance of the nervous system without some kind of change in the structure of the cord itself.

Dr. W. A. Ward, of Conneaut, O., fully agreed with Dr. Reed in regard to diagnosis. Although he had not had much experience with injuries of the spine, yet the remarks made vividly called to mind a circumstance in which he was placed. A lady in a wagon, attempting to cross a track, was struck by a gravel train that was backing up. She claimed to be seriously injured, and commenced suit for recovery of damages. The case ran along, and was finally set for trial. He had received a communication from the counsel of the railway, requesting him to examine the case and make a report of it. He examined the case carefully, and said that while he believed the woman may have been injured at the time, she was suffering from hysteria, and he would not be surprised to see her make a rapid recovery as soon as the case was settled and out of the way. The lady sued for $25,000, but the claim was adjusted for less than $2,000. A year or so afterward he inquired about the lady, and was informed of her death. He was unable to obtain any facts in the case, and while the question occurred to him whether he had erred in diagnosis, he was fully convinced that her death had no direct connection with the injury. Had the woman died before the case went to trial, he had no doubt the lawyers would have attempted to make the jury believe that death was directly attributable to the injury.

Dr. U. P. Gibney, of New York, being called upon to address the Association, said that while he was deeply interested in the subject of spinal concussion, or Erichsen's spine, his practice had been limited in that direction. He would like to have someone tell him how to differentiate between the pseudo and true cases of spinal trouble. This was not an easy matter to do. He thought that if we looked to neurology we would be able to discover, at all events, whether there be any lesion or not.

Dr. W. A. McCandles, of St. Louis, said that something over six months ago a brakeman was setting a brake, and the rod broke, throwing him back upon the car. He was brought to the hospital with lower extremities paralyzed. After being there some weeks, making no exhibition of feeling or sensibility in the lower extremities, he became suddenly blind in one eye, and described the sensation as if a sharp body had pierced his temple. About the same time he lost his voice, so that for months whispering conversations were held with him. He was very much interested in the case, because he thought the man was honest. Dr. McCandles consulted a neurologist, ophthalmologist, and laryngologist, which constituted a part of the consulting and examining board of the railroad to which he belonged. It was some time before a consultation was held with these specialists, however, as he believed the conditions were genuine. The man lay in bed five months without moving his limbs. First the laryngologist was called, who, after examining his throat, said there was no reason why the man could not speak and articulate distinctly, as the cords opposite came in contact with each other. Next, the ophthalmologist was called, who subjected the patient to the prism test, and said there was nothing to prevent him from seeing. Different tests were made to determine whether he could, by any possibility, be compelled to move his limbs. Pins and needles were thrust into him without avail. His legs were œdematous, cold, death-like. Shortly afterward, it is said, he met one of his comrades and joined him in a drink, and if the reports were authentic, the man proved to be a malingerer.

Dr. T. M. McIlvaine, of Peoria, Ill., said that some five years ago he was sent forty or fifty miles to see a woman who had, fourteen months previously, received a railway accident. She was thrown from her seat on to the floor, striking on her shoulders. She immediately got up; made no complaint. Her clothing was torn somewhat, for which she received $20 on account, and signed a release as part of the damages from the company. She went home, resumed her usual vocation, and for five months made no complaint whatever. Shortly after this she complained of a tender spot in the spine, which seemed to increase. Various reflex symptoms came on—vomiting, urinary troubles, etc.—until the woman was totally disabled. Suit was brought against the company for $5,000. Dr. McIlvaine was unable to find any lesion, and the surgeon who examined her at the time of the accident said there was no redness of the parts, and no pain. The case was traced; a detective put to watch the woman two or three months—she at the time was living forty miles from the railroad, in a small country-town. The case proceeded to trial; she won it. It was appealed, and she won it again. Dr. McIlvaine had kept track of the woman for four or five years, and he knew she was absolutely helpless. Whether there was a palpable lesion or not he was unable to say, but he thought there were a number of such cases that could not be controverted, and the railway surgeon may as well "face the music." The best way to do is to follow them up to find out whether they are malingerers or not.

The Association elected the following officers for 1889:

President—Dr. J. W. Jackson, Kansas City, Mo.

First Vice-President—Dr. J. H. Murphy, St. Paul, Minn.

Second Vice President—Dr. J. B. Murdock, Pittsburg, Pa.

Third Vice-President—Dr. A. W. Ridenour, Massillon, O.

Fourth Vice-President—Dr. B. L. Hovey, Rochester, N. Y.

Permanent Secretary—Dr. C. B. Stemen, Fort Wayne, Ind.

Assistant Secretary—Dr. J. H. Tressel, Alliance, O.

Corresponding Secretary—Dr. E. R. Lewis, Kansas City, Mo.

Treasurer—Dr. Harvey J. Reed, Mansfield, O.

Next place of meeting, St. Louis, Mo.

Lactic Acid as a Caustic has been greatly praised by Mosetig, Moorhof, and others, but Spitzer and Hermann from their experience conclude that: (1) The pain produced by the cauterization with lactic acid is at least as great as that caused by any other caustic. (2) The patients prefer invariably any caustic to lactic acid. (3) The action of lactic acid resembles that of other caustics, but is less energetic. (4) Healthy tissues are not spared by this any more than by any other caustic. (5) Lactic acid has to be employed for a much longer time than chloride of zinc and other energetic caustics.—*Boston Medical and Surgical Journal.*

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

A TOUR THROUGH THE RIVIERA.

Paris, May 23, 1888.

Sir: I have lately returned from a hasty tour along the Riviera, where I spent the whole month of March. I commenced my journey in the North of Italy, visiting Turin, Milan, Genoa, etc. These places are certainly well enough known and require no further description from me. I wish, however, to say a few words about the new Cemetery of Milan, which lies to the northwest of the city. It has a magnificent façade, is enclosed by colonnades, and is said to be one of the finest Campi Santi in Italy. A section of the cemetery, which covers an area of five hundred acres, is appropriated to the "Tempio Crematorio" for the burning of dead bodies, which was presented to the town in 1876 by a Mr. Keller, of Zurich. On visiting the Crematoria, the guardian of the place showed me some calcinated substance, which he said weighed two kilogrammes, and which was the remnants of the body of a man who had died in a hospital ten years ago, and who weighed at the time of his death one hundred kilogrammes. This, he said, was the first experiment tried in Milan in the way of cremation. The body was burnt by wood fire. Specimens of cremated bones of Romans were also shown me, and were supposed to date from before the Christian era. Bodies are now burnt by gas instead of wood, as being more expeditious, for by this mode it takes from fifty minutes to one hour to incinerate the body of an adult, whereas by wood it takes two hours. The gas is produced by the burning of wood in preference to coal, as the latter procedure blackens the bones. On questioning some of the inhabitants as to what they thought would be the future of cremation in their country, they replied that it was not likely to take, as most people, whether from deep-rooted superstitious prejudice or religious motives, appear to have a decided objection to it, as they have yet to learn the advantage it has over inhumation. In any case, cremation seems to be making very slow progress in Milan, as I was informed that scarcely a hundred bodies per year are submitted to the process. The structure of the Crematoria is of marble, and the architecture is a modification of a Greek temple. There are two ovens in the building, so that two bodies can be cremated at the same time. The ashes are preserved in urns, some of which are arranged in niches of the building, while others are placed in detached monuments erected for the purpose.

Genoa is singularly constructed around a small bay, on shelving ground, rising rapidly from the water's edge to the height of from five hundred to six hundred feet. The old part of the town is a labyrinth of crooked and narrow streets, and frequently so steep that steps have to be cut in them, the general aspect of which is that of an Oriental city. Besides the old palaces and churches, there is nothing of much interest in the place. The new hospital, however, deserves a passing notice. The existence of this hospital is due to the ducal house of Galliera, whose philanthropy is well known. It is called the Saint-André Hospital. It was begun about two years ago, and opened on March 14th last. It is situated on Mount Carignano, and built on a magnificent scale, on the pavilion system, two stories high, and capable of containing four hundred beds, sixty of which are for paying patients. Two-thirds of the hospital are intended for the natives, and the other third for foreigners. The wards are lofty and well ventilated, and are not to contain more than twenty beds each. The furniture and bedding are comfortable, and the general appliances of the rooms are composed principally of iron and glass. Such a hospital is certainly a great boon, and the foundress of the same deserves the gratitude of the inhabitants. The municipality of Genoa, in recognition of the Duchess of Galliera's munificence, have presented her with a beautiful commemorative medal, coined at the Roman mint, bearing her portrait with a suitable inscription in honor of the event.

At Genoa we enter the Western Riviera, which extends along the coast of the Mediterranean and ends at Hyères, being two hundred and three miles long. The climate along this strip of land is about the same throughout, and if there be any difference it may be said to be imperceptible. Yet each station has some peculiarity which suits some people better than others, this peculiarity being more frequently accidental and social, such as the general surroundings of the place, and many other little things which exercise a powerful influence upon the health and well-being of the mind and body, even more than the mere fractional difference of temperature. None of the protecting mountains of any of the stations are sufficiently high, precipitous, and united to ward off the cold winds when the higher mountains behind are covered with snow. All the ridges have deep indentations through which the cold air, as well as the streams, descend to the plains. Hence no station is, properly speaking, exempt from cold winds, and all delicate persons must ever be on their guard against them. All the stations suffer more or less from the famous mistral, a northwest wind. The mean winter temperature of the Riviera is 47.4° F. for Hyères, which is at the western extremity, and 48.89° F. for San Remo, at the eastern. But of all the stations, none can be compared to Monte Carlo or Monaco, whether as a resort for health or only for pleasure. The towns of Monaco and Monte Carlo are most picturesquely situated on high promontories which bound a bay on either side, having as a connecting link the Condamine, which is considerably lower, and forming with Monaco and Monte Carlo the background of an amphitheatre. The position of Monaco certainly justifies the title of the "beauty spot of the Riviera," given to it by Dr. T. H. Pickering in a work published by him about six years ago. The houses are situated from about two hundred to three hundred feet above the sea, amid the beautifully olive-clad hills which are blended with the mountains at the back, rising several thousand feet high, and forming a barrier which completely shelters it from the north winds. Dr. Pickering observes that, as there is neither break nor gap in this mountain-screen, the dreaded mistral or northwest wind is never felt, while the northeast and northerly winds pass over the mountains and the town into the sea. The air, according to this author, who has been in practice at Monte Carlo for several years, is drier, more fresh and exhilarating than at any health-resort on the Riviera. Almost all chronic affections, including scrofula and consumption in its earlier stages, may be advantageously treated in the Principality, and even in summer the place need not be deserted, as, judging from the meteorological observations published, the climate is equable and dry; but even when hot it is tempered by cool sea-breezes. To my mind it is also well suited for a sea-bathing station, and would be a desirable resort for debilitated constitutions from whatever cause, for the old as well as for the young, for those who have resided many years in tropical countries—in short, for anyone requiring absolute rest, change of scenery, and change of climate. Its proximity to the other stations on the Riviera, whether on the French or Italian side, renders it convenient for excursions to those places in winter or summer, and those wishing to lead a quiet and retired life would find ample accommodation at the Condamine or in the town of Monaco. I was much struck with the luxuriant vegetation at Monaco, particularly the semi-tropical plants and trees, such as the lemon, orange, eucalyptus, and aloes, the latter growing to a height not known out of the tropics.

Mentone is charmingly situated round a large bay, called the Bay of Mentone, which is divided into two smaller bays, viz., the eastern and western, by a rocky promontory one hundred and thirty feet high, on which the old town is built. Mentone is protected on the north by a girdle of rocky mountains, and is considered one of the most favorable spots on the Riviera for a winter residence. The eastern bay in particular is thoroughly sheltered, and has a mean temperature in winter of 50° F. The streets are narrow, dirty, and even slippery, and most of the roads are badly paved. The new town, however, which stretches out a great way along the beach, is in better condition. Several small brooks empty themselves into the western bay. The vegetation is luxuriant, consisting chiefly of orange and lemon groves interspersed with gnarled carob-trees (Ceratoria siliqua), figs, olives, etc.

Nice, which is 9½ miles west from Monaco, has all the advantages and drawbacks of a large town. In winter it is the rendezvous of invalids, as well as of persons in robust health, from all parts of Europe, especially from England, Russia, and Germany, and even from America, who assemble here to escape from the rigors of a northern winter. In summer the town, like all the others on the Riviera, is deserted. It is most beautifully situated, facing the south and looking on to the Mediterranean; it occupies a plain bounded by the limestone summits of the Maritime Alps, whence descend fertile wooded ridges composed of a reddish conglomerate and a gray-blue clay of the Pleiocene period. The climate is rather colder in winter than that of the neighboring stations, especially if the mountains are much covered with snow. The want of altitude of the nearest mountains, their great distance, and the wide gaps between them, render Nice the most exposed of all the Riviera stations. The mistral is here well known, and to this must be added the northeast wind, which is colder here than elsewhere, as it reaches the town immediately after passing over the snow-clad Alps, and this renders it unsuited as a safe winter resort for consumptive patients.

Cannes is picturesquely situated on the Gulf of Napoule, and is 19¼ miles from Nice. It consists chiefly of a main street, parallel with which along the coast runs the Boulevard. The remainder of the town is composed of hotels and villas, which are situated on the hills and are principally occupied by English families. Some of the best French society is also well represented here. The climate, though dry and sunny, is said to be at times treacherous, and Dr. Hassall writes that, while Cannes possesses a winter climate well suited for children, elderly people, and many classes of invalids, especially those who require a stimulating atmosphere, it is not so well adapted for the majority of those suffering from affections of the respiratory organs. On the other hand, we find in Madden's "Resorts" that the electrical condition of the climate of Cannes, as well as its equable warmth and dryness, together with the stimulating properties of the atmosphere, indicate its fitness for scrofulous and lymphatic temperaments.

Hyères is rather off the line and is about three miles inland. It has long been frequented as a winter residence by persons suffering from pulmonary complaints. It is situated on the southern slope of a spur of lofty mountains, and, being at some distance from the sea, it has the advantage over the other stations of the Riviera in that from this circumstance it is more favorable for cases of consumption and other diseases than the stations in the immediate proximity of the sea. It is, however, not sufficiently protected from the mistral, which in fact is more or less the bane of the Riviera. It contains beautiful gardens and a fine avenue of palm-trees, which here flourish most luxuriantly. The climate of Hyeres is said to be less stimulating and exciting than at Cannes and Nice, and although it is not so gay as the other stations of the Riviera, it is well suited as a winter residence, and generally it is said to be fitted for old people and for children, or young persons of lymphatic temperament or of a scrofulous diathesis. Even persons in health would find enjoyment in the place, as the beauty of its environs and its rural character render it a most agreeable place of winter abode. Hyères is the first station of the Riviera in passing from Marseilles and Toulon. It is the nearest to England, and only 18¼ hours from Paris. Marseilles and Toulon maintain their reputation as being the filthiest towns in the South of France. The old port of Marseilles is simply a cesspool, and the new one is nothing better, but the environs of both these towns are all that can be desired.

FLORIDA AS A RESORT FOR CONSUMPTIVES.

To the Editor of The Medical Record.

Sir: In the issue of The Medical Record dated June 16th, in your editorial on "The Selection of Climate for Cases of Pulmonary Phthisis," is an excerpt from the article by Dr. Frederick I. Knight, giving certain conclusions with regard to the selection of climate for cases of phthisis. Among the conclusions I notice the 4th: "Cases of advanced disease with cavities or severe hectic symptoms. These should remain at home. But sometimes the moist, warm climate of Florida is beneficial." I scarcely feel that I am prepared to enter fully into this subject just now with statistics or meteorologcial data, but feel that, for suffering humanity, it is proper that those of us who have had practical experience in this matter should not hesitate to relate it. Every thinking man must know how very unsettled is the question as to what climate will be best for his consumptive patient, and we can scarcely doubt that a climate which will benefit a given case of catarrhal phthisis will injure another, or at least will not benefit it. I do not feel that I would do wrong were I to enter an absolute protest as to the doctor's fourth conclusion, as I have seen many such cases come to Florida—I mean advanced cases of phthisis with cavities and severe hectic symptoms, and do not believe that they are benefited by the climate. I have had occasion often to regret that such cases had not remained to enjoy the kindness and comfort of home, and I believe the experience of other physicians tends to the same conclusions. I have felt conscientiously obliged at times to advise the return home of such cases. As to what cases it is best to send to Florida, is a discussion into which, as I have said before, I feel scarcely prepared just now to enter. This may be said, however, that the business population of Jacksonville contains a considerable percentage of intelligent active gentlemen who have moved into the State from North and West on account of catarrhal affections of some portion of the respiratory tract; many of them are in good health here, and can live nowhere else; some of them positively assert that they have recovered from phthisis since coming to Florida. I believe the most reasonable conclusion to be reached is, that in the severe climates of the North and West there are many who by inheritance or exposure develop bronchial catarrh or incipient pulmonary phthisis, and who, were they to remain in the same climate, would die of that disease, but who, upon removal to a warmer climate, recover, or their disease remains dormant. It is probably this class of cases that are benefited by coming to Florida.

Respectfully,

C. Drew, M.D.

Jacksonville, Fla., June 21, 1888.

THE MEDICAL SERVICE ON THE DUTCH STEAMSHIP LINE (ROYAL MAIL TO THE NETHERLANDS.)

To the Editor of The Medical Record.

Sir: Wherein lies the attraction of the seafaring life may be difficult to explain. Certain it is that at some period of his life almost every young man has a desire to be a sailor; with some it is the love of adventure, with others it is the desire to see new sights in strange lands, but there are charms apart from these. The ever-changing sea in its restless activity is a never-ending source of enjoyment. To-day calm, to-night ruffled, to-morrow raging with the storm. One never wearies watching the infinity of variety of the waves, from the long "ground-swell" to the short, "choppy" sea.

Barring seasickness, an ocean voyage is a very enjoyable affair.

The vessels of the Netherlands American Steamship Company ply between Holland (Amsterdam and Rotterdam) and New York. The fleet consists of seven steamers, built with a view to safety and carrying capacity rather than speed, although some of the ships are quite fast. They are first-class iron or steel, varying in length from two hundred and fifty to three hundred feet. They are controlled by a Dutch stock company and sail under the flag of Holland.

Ship surgeons are appointed by the agent in New York, subject to the approval of the Board of Directors in Holland.

Applications are filed in the order in which they are received, but appointments are made in the order that suits the agent. No examination is required, but applicants are required to show their diplomas. References are always necessary.

The number of applications for these positions is indicative of the overcrowded condition of the profession, there being fifty or seventy-five sometimes on file. The doctors, as a rule, are young men just out of college or having filled hospital appointments, preference being given to the latter class in making appointments. The ships are now carrying American surgeons; why, is not apparent, as no true Hollander would acknowledge that anything produced out of his country was as good as the home products.

There is a general idea that ship surgeons, as a rule, are incompetent, and there is reason for this. In England and some other countries men are allowed to ship who could not legally practise on land. It is a lazy life. There is little incentive to study, so that the tendency to get into a rut is greater than on land. At present the *personnel* of the service is excellent, most of the surgeons having held hospital appointments.

In rank the doctor is next the captain, being on an equality with the first officer and chief engineer. These are the only officers who eat in the first cabin, the captain sitting at the head of the first table and the doctor generally at the head of the second.

The surgeon's quarters are above deck on most of the ships, although sometimes below, perhaps about eight by ten feet, with the door on the inside and a port-hole a foot in diameter toward the sea. The bed consists of a bunk three feet wide, which is wide enough when the ship is rolling. There is a bench on one end, with drawers and closet on the other. The furniture consists of one camp-stool. Some of the rooms are carpeted. The doctor's room serves as a pharmacy, and contains all of his supplies, for he must put up his own medicines. A reasonable supply of medicines is allowed on his requisition. All medicines are bought in Holland. The preparations are rather crude, the Dutch being strangers to the elegance in pharmaceutics to which the Americans are accustomed. Scales and all necessary appliances are supplied. Each ship has an amputating case, also a pocket case, obstetrical forceps, etc. In addition to medicines special diet may be ordered for steerage passengers or any member of the crew, and this is often done—beef-tea, eggs, soups, etc., being supplied in cases of real sickness.

There are two hospitals in connection with the steerage on each ship, one for men and one for women; but, as a rule, one of these is used for other purposes, and sometimes, if the ship is crowded, passengers are put in the other. Medicines are furnished by the company free to all passengers and crew.

The wages are eighty guldens ($32) per month, and twenty-five cents per head for each passenger carried—the salary and head-money averaging perhaps $40 a month. Fees are not allowed, even in venereal cases. While in Holland he must pay for his meals. Occasionally a grateful patient will favor him with an honorarium; but this source of profit, which is considerable in some transatlantic lines, amounts to very little here.

When on duty, and especially going out and coming into port, the doctor, in common with the other officers, is required to wear a uniform consisting of a suit of blue and a cap. The latter has a blue velvet band, with the company's flag in front, surrounded by a gold wreath. There is also a sack-coat, with the word "Doctor," in gold script letters, on each lapel. The company's buttons, in brass or gold, are used on the coat and vest.

Voyages are from Holland and return. Two or three days before sailing, articles are signed that are binding for the round voyage to New York and return. The surgeon ships as "scribe," to evade some law of Holland. He cannot leave in New York without deserting, nor can he be discharged here except by special agreement.

On the day of sailing the doctor must inspect the steerage passengers. He is held responsible for admitting any affected with contagious diseases, or any that, by reason of sickness, age, or imbecility, are incapable of earning a living in this country, as all such would be returned at the expense of the ship. This inspection is rather hurried. The passengers simply pass in review before the doctor, who stands at the end of the gang-plank as they go aboard.

All over sixty years of age, all sick or debilitated, must be reported to the captain, or to the agent of the company. Inspection over, the doctor's duties are done, so far as embarkation is concerned.

The ship leaves port on Saturday. About three days later steerage passengers are again inspected at the time the tickets are taken up. All who do not show a scar are vaccinated. As a matter of fact, from ninety to ninety-five per cent. show evidence of previous vaccination. Further, it is very rare for the vaccinations to take. All steerage passengers are furnished a card bearing the legend "protected," with the name of the ship and signed by the surgeon on one side, while the reverse bears the inscription: "Keep this until you reach your destination," in English, Dutch, German, and French.

The daily routine is as follows: Breakfast, 7 to 8 A.M.; visit to steerage, 9 A.M.; daily report to captain; lunch, 11 A.M.; coffee, 1 P.M.; visit to steerage, 4 P.M.; dinner, 5 P.M.; supper, 9 P.M.

All sickness is to be reported to the captain, whether among passengers or crew. It remains with the doctor to relieve any of the crew from duty; but there is not much red tape about the matter. He generally informs the head of the department if any of his men are unable to attend to regular duty.

Sunday is much as any other day. No religious services are held, and, were it not that some of the passengers put an extra touch to their toilets, one would scarcely know the day from the rest, save that the dinner is perhaps a trifle better than on other days.

It is regarded as part of the doctor's duty to entertain the passengers, especially the lady passengers. Having more leisure than any of the rest of the officers this duty naturally devolves on him, so that he gets the reputation of being a ladies' man.

This routine is unbroken until the arrival at quarantine. The doctor must always be ready to see anyone on board the ship who may wish to consult him.

The practice is not extensive, consisting mainly of minor ailments, with some venereal cases, and an occasional fracture or obstetrical case. It is said that steerage passengers will time their voyage so as to be confined on board, thus saving an obstetrical fee. The forced relation to patients is sometimes unpleasant; many annoy the surgeon by coming in season and out of season with every little ache.

The doctor is not busy, as the vessels of this line do not carry the large number of passengers some other lines do. Generally there are from one hundred to three hundred in the steerage westward, and perhaps one-third as many going back. In the season the cabin is crowded from New York to Holland in the spring, and the other way in the fall. The capacity of the ships averages about fifty first and second class, and five hundred to one thousand steerage. The number of passengers varies from fifty to five hundred, counting all classes. The number of the crew is from fifty to sixty.

The passage westward from Amsterdam or Rotterdam takes from twelve to fifteen days, according to wind and weather. The course lies directly across the North Sea, then skirting the southern coast of England, passing in sight of Dover, Dungeness, Isle of Wight, Eddystone Lighthouse, and finally Lizard Head and the Scilly Islands. From the Lizard passing steamers signal their name and destination, and are reported by telegraph. After passing these places the ship is out of sight of land. Vessels become scarce. A week may pass with nothing in sight but sea and sky. On some voyages a number of vessels may be sighted, often so far away that they cannot be recognized. In the spring the monotony may be broken by the sight of an iceberg. Occasionally a whale will be seen, sometimes schools of other fish. The gambols of porpoises around the ship always afford passengers much amusement. At night the phosphorescence produced in the wake of these fish is really beautiful.

On board, passengers begin to appear one by one as they recover from the *mal de mer*. Time is variously spent; some read, some play; all sleep, all eat—some more, some less, according to inclination. The course of the vessel takes her within a hundred miles of Newfoundland. During certain seasons of the year hundreds of fishing vessels are sighted. A little later a pilot is taken on board, often two or three days before arriving at port.

Finally the shores of Long Island are sighted, and everyone is on the lookout for the lighthouse on Fire Island; passing this, Sandy Hook is soon reached. From this point the arrival of the ship is telegraphed to New York. This is sixteen miles from the city, but it takes at least two hours to travel that distance, with the inspection at quarantine by the port doctor, and after this the Custom-House officials. No one is allowed to leave or board the ship until after the doctor's inspection.

Arriving at quarantine, the health officer inspects all the steerage passengers, requiring them to show their vaccination cards. The inspection is conducted on deck, each passenger passing in review before the health officer. If any are sick, they are visited in the hospital. Cases that have refused vaccination are not detained unless suspicious. Under certain circumstances the cabin passengers may be inspected, but this is rare. The ship surgeon is required to report all sickness, deaths, and births occurring during the voyage to the health officer. The doctor has nothing further to do with the ship's papers, the bills of health being attended to by the captain or purser.

The ship is required to have a bill of health from the United States Consul at the port from which she sailed, said bill must state the number of deaths from contagious diseases in the last weekly report previous to the date of sailing. Among the clearance papers from the Custom-House is another bill of health. These are both inspected by the health officer. If the bills are "clean," and there is no contagious sickness on board, a written permit is given to land; if the bills are "foul," the vessel may be detained at quarantine.

Proceeding up the lower bay, the United States Custom-House officers next board the ship. Receiving copies of passenger, baggage, and freight lists, and other papers, they allow the vessel to proceed to the dock. Arriving there, the doctor is not permitted to leave the ship until all the passengers are landed.

The ship remains nearly a week in New York. The surgeon is required to be on board an hour every morning and an hour in the afternoon. He must report to the officer in charge on leaving and coming on board. On the return voyage his duties are not so arduous. There is no vaccinating, no inspecting, no health officer. The espionage over immigration is more strict here than in Holland.

The route on the return voyage is more to the south, and the distance somewhat greater than on the outward voyage. The Gulf Stream flowing eastward produces a stronger current than in the higher latitude. The return trip is made in eleven to thirteen days. Arriving in Holland the vessels to Rotterdam sail up the river Maas fourteen miles before reaching their destination; vessels for Amsterdam go through the North Sea Canal, fifteen miles long, the waters of which are in some places as high as the second story of the houses inside the dykes.

The requisition for medicines should be given to the captain before landing. It must have his approval. Arriving in port the crew is paid off. Cooking on the ship is stopped. The officers and most of the crew are kept under wages, getting their meals on shore. It is customary for ships to allow shore money for this purpose, but here an exception is made in the case of the doctor. Other officers are allowed a dollar a day, the crew fifty cents.

The surgeon has this time much to himself. When in the city he is required to report once a day. Often he can get away for a week or ten days. This gives an opportunity to visit England and the Continent. In about two weeks the ship is ready for another voyage. The surgeon is required to be on hand a few days before sailing, to sign articles, attend to medicines, vaccination points, etc.

The life has its peculiar charms. The ever-changing scenes, the turmoil at embarkation and debarkation, the change of faces and scenery every few weeks, all tend to make one contented and happy, but it is a lazy life. Reading and study are almost out of the question. It is said that the sea will spoil any doctor in three years.

FRANK TRESTER SMITH, M.D.

CHATTANOOGA, TENN.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 1 to July 7, 1888.

BAXTER, J. H., Colonel and Chief Medical Purveyor. Will proceed to New York City on public business connected with the Medical Department, and on completion thereof will return to his station in Washington City. S. O. 150, A. G. O., June 29, 1888.

BENTLEY, EDWIN, Major and Surgeon. Retired from active service, July 3, 1888, by operation of law. S. O. 153, A. G. O., July 3, 1888.

JOHNSON, RICHARD W., Captain and Assistant Surgeon. Designated as medical officer for a camp of instruction in rifle practice to be established at Fisher's Island, N. Y. (near New London, Conn.), on July 2, 1888, and to continue during the months of July, August, and September; and ordered to proceed to Fisher's Island in proper season and report to the commanding officer for duty. S. O. 131, Division of the Atlantic, June 28, 1888.

CROSBY, WILLIAM D., First Lieutenant and Assistant Surgeon. Leave of absence extended one month. Par. 8, S. O. 151, A. G. O., June 30, 1888.

CLENDENIN, PAUL, First Lieutenant and Assistant Surgeon. Leave of absence granted in S. O. 59, Department of Texas, June 4, 1888, extended one month. S. O. 149, A. G. O., June 28, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending July 7, 1888.

MOORE, A. M., Surgeon. Ordered to Naval Station, New London.

AUSTIN, A. A., Passed Assistant Surgeon. Detached from Gedney, and wait orders.

PECK, GEORGE, Medical Director. Placed on retired list, 7th instant.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 3 NEW YORK, JULY 21, 1888 Whole No. 924

Original Articles.

TWO DEATHS FROM POISONING BY CHLORATE OF POTASH, WITH AUTOPSIES.[1]

By GEORGE L. PEABODY, M.D.,

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS, COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK CITY; ATTENDING PHYSICIAN, NEW YORK AND BELLEVUE HOSPITALS.

I DO not present these cases as embodying anything new in their symptoms or lesions, or in the conclusions to which a consideration of them will lead; but only because it seems to me that it might interest the Society to see the lesions which this poison produces, and because it seems right to add my warning to those of others that have preceded me. Of all the evidence which has been adduced touching the dangers attending the use of this drug in large doses, none has been more emphatic than that of Jacobi[2]; and to one familiar with his writings, it would seem superfluous for others to echo his warning cry. Yet before Jacobi's classic work, the literature of this subject was by no means scanty. Marchand[3] had given an accurate and systematic account of the lesions produced by chlorates of potassium and sodium, as shown by clinical and experimental studies. Fountain,[4] of Iowa, had written his panegyric on the potassium salt, and in his endeavors to prove its harmlessness had killed himself by taking an ounce, after repeatedly having taken doses of half of that amount. For periods of six consecutive weeks he had given it in daily amounts of half an ounce to several patients, and thought that he had thus cured their pulmonary troubles. Tacke had shown its poisonous effects in 1878, and others, as shown by Jacobi, had published isolated cases of death brought about in this way.

Notwithstanding all these witnesses to the serious dangers attending the use of this drug, it is still freely sold in the shops, and freely used by the people in large quantities, and considered by the laity and by many doctors as belonging among the harmless or indifferent drugs. It is still looked upon as an agent that in a given case *may* do good, and *certainly will not do harm.*

It is somehat remarkable that in the recent text-books on materia medica and therapeutics but little reference is made to the dangers attending its habitual use. Binz[5] gives in full an account of these dangers, and Nothnagel[6] and Rossbach do also; but most of the books generally accessible in this country make only passing allusion to them.

I have brought here this evening for demonstration to the Society pieces of liver, kidney, and spleen which still show the peculiar chocolate color well, and I have placed under these microscopes sections which show admirably the kidney lesions, to which I shall make specific reference in a few minutes.

In my cases death seemed to be the result of the effects of several conjoined lesions. The potassium element in the compound seemed to produce the usual heart-depressing effect of the potassium salts, and very great feebleness and frequency of the pulse resulted. The specific effect upon the hæmoglobin, in consequence of which it was largely changed to methæmoglobin, was very distinctly manifested in the dyspnœa and the altered color of the victims. Methæmoglobin is incapable of assimilating and transmitting oxygen, and hence, though respirations be full and frequent, the evidences of defective oxidation become manifest. One of these, in my cases, was fatty degeneration of the heart-muscle; another, cyanosis. Another, and a very prominent lesion, consists in the more or less complete blocking up of the renal tubules with masses of disorganized blood-cells and methæmoglobin, in consequence of which complete suppression of urine results, with the usual clinical picture of uræmia. This latter is commonly, but incorrectly, regarded as the result of an acute nephritis. There is no nephritis produced by this poison; but suppression, which is often complete, is brought about by the mechanical obstacle to the egress of urine rather than by a structural lesion of the kidney.

Death seems to result, then, from these combined causes; namely, feebleness of the heart, dyspnœa, and suppression of urine.

If I should be called upon to treat a bad case of poisoning by this agent early enough to warrant it, I think I should proceed as in a bad case of poisoning by coal gas, *i.e.*, I should free the blood of as much of its offending contents as possible by copious venesection, and immediately replace the damaged blood by healthy human blood. It is plain that infusion of salt solution, under such circumstances, would be useless.

I will not detain the Society further, but will proceed with my cases and the demonstration of the lesions which are to be seen in their organs.

CASE I.—Catharine M——, aged twenty, Ireland, single, servant, was admitted to the New York Hospital, service of Dr. E. L. Partridge, on April 10, 1888, at 4 P.M. She had taken on the previous evening two tablespoonfuls of chlorate of potash by mistake, having intended to take a dose of Rochelle salts. She was in a condition of such very profound prostration on her admission that it was not deemed advisable to subject her to any questioning as to her previous history or her family history. Her temperature at the time of her admission was 99° F., her pulse was 136, and her respiration was 32. Her surface was very cyanotic, her face being nearly purple in hue. No attempt was made to wash out the stomach, inasmuch as fourteen hours had elapsed since she had taken the poison, and she had vomited freely. Her breathing, though rapid, was not labored, and there was apparently no subjective dyspnœa. After she had been put to bed she lay usually quiet, but at times she would become quite restless, tossing about in the bed and rolling from side to side. After a short period of restlessness she would again subside into a quiescent condition. Her pulse, though not very rapid, was very feeble, and it was thought necessary to resort to pretty active stimulation.

She was given whiskey, fluid extract of digitalis, and tincture of strophanthus, by the stomach; and, later, the two former were given subcutaneously. She had vomited much prior to her admission to the hospital and was nauseated when she was brought there, and vomited abundantly a bile-stained fluid after her arrival. As anti emetics there were given ammonia, with cracked ice, sodium bicarbonate, and cerium oxalate. Mustard-paste was applied to the epigastrium, and her feet were soaked in hot mustard-water. The success attending these procedures was not very great.

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[1] Read at a meeting of the Practitioners' Society on May 18, 1888.

[2] A Treatise on Diphtheria, New York, 1880.

[3] Virchow's Archiv, Bd. 77, s. 455.

[4] On the Treatment of Phthisis by the Chlorate of Potash, with Observations on Oxygen and Ozone as Therapeutic Agents, by E. J. Fountain, of Davenport, Ia., American Medical Monthly, September, 1860.

[5] Vorlesungen über Pharmakologie, Berlin, 1886.

[6] Arzneimittellehre, Berlin, 1887.

At 6 P.M. her temperature had risen to 104°; her pulse and respirations were not materially changed. During the night, attempt was systematically made to stimulate her heart with whiskey and digitalis, both internally and subcutaneously, and, as her extremities became cold, hot bottles were applied to her feet. During the night her bowels moved three times, the fæces being always of a dark-brown color and of semi-solid consistency. Urine was passed involuntarily; this also had a very dark chocolate color. A few ounces of urine were obtained by catheter. It presented a similar appearance. It was found to contain many blood-cells and large masses of altered hæmoglobin, and much albumen.

The next morning her temperature had fallen to 99.4°; her respiration and pulse had diminished in frequency and improved somewhat in character. By noon, however, this apparent improvement in pulse had disappeared and the heart was again profoundly weak. In the afternoon her temperature again rose, and reached 101.2° at three o'clock. At this time oxygen gas was given freely, without any improvement resulting either in her color, pulse, or general condition.

I saw her at this time, and was impressed by the very extraordinary color of her skin and conjunctivæ and lips, as well as by the very great restlessness which she manifested. The combined effects of intense anæmia with a cyanotic hue apparently beneath the surface, together with a very distinct sepia-brown or chocolate tint where the epidermis was thin, produced a most remarkable and unusual effect. She was at this time very restless, and constantly tossing about the bed. Her pulse was perceptible at the wrist, but was so feeble that it could with difficulty be counted.

She grew rapidly weaker, her respirations increased in frequency, and, though they were deep and full, and though she was allowed to inhale pure oxygen, as might be expected from the physiological action of this poison there was no relief of the dyspnœa and no improvement in the patient's color. She slept steadily after this time, and died quietly at 3.35 P.M., thirty-seven and a half hours after she had taken the poisonous dose.

I made the autopsy twenty-five minutes after death. Her body presented the appearance of a well-nourished young woman. Rigor mortis was absent. There was some œdema of the legs. The color of the body was not materially changed by death, except that the cyanosis of the surface was less marked, and with the subsidence of the blood from the surface there appeared a slight hue of jaundice added to the anæmia and chocolate-color.

The site of the application of the mustard-paste, the epigastrium, was exactly marked out by subcutaneous hemorrhage. Instead of being merely bluish, it was of bluish-brown color.

The abdominal and thoracic muscles were of very dark-red color. The blood in the vessels of the neck and in the great vessels was all liquid, and of a very dark chocolate color. The clots in the heart were very soft and friable and of the same color as the blood in the vessels. The heart was soft and flabby. There was slight dilatation of the left ventricle, and fat was to be seen in the papillary muscles which control the mitral valve. The valves were competent, and the size of the heart was normal. The lungs were structurally normal, but their cut surfaces were very brown in color. The spleen was large, firm in consistency, and of a very distinct chocolate color. Exposure to atmospheric air caused no change in the color of the cut surface of this or any other of the organs. The kidneys were large, their capsules not adherent, their surfaces smooth, and of chocolate color. Both kidneys were found to be diffusely stained with the same chocolate-colored blood, and consequently the markings, on cutting them open, were not found to be distinct. The blood in the brain was found to present the same peculiar discoloration as the blood elswhere; but the brain and membranes were structurally normal. The stomach contained a pint and a half of a thick, dark-colored fluid, with a distinct admixture of bile; but in structure this viscus was normal. The solitary follicles were large, and Peyer's patches were pigmented; but otherwise the intestines were normal. The liver was normal in size; it was chocolate-colored, but not quite so dark-colored as some of the other organs. The bladder contained three ounces of urine, which was of a dark, brownish-black color, and very untranslucent.

There was a recent corpus luteum in the left ovary. Both ovaries were somewhat large. The uterus was normal; its mucous membrane was thick, soft, and velvety in appearance.

By microscopic examination the chief lesions of importance were found in the heart and kidneys. Very extensive fatty degeneration was evident in the heart, especially in the papillary muscles of the left ventricle. Many of the straight tubes in the pyramids of the kidneys were found filled, even to being distended, with broken-down blood-cells and methæmoglobin. This distention was often so great as to flatten the epithelium beyond recognition; elsewhere the epithelium was not altered in appearance.

A spectroscopic examination of the blood revealed the spectrum of methæmoglobin with great distinctness.

CASE II.—The second case was one which I did not see during life. On April 27th of this year, I made the autopsy of this patient at the request of his physician, Dr. W. A. Bartlett, of this city. To Dr. Bartlett I am indebted for the following history:

The patient was a strong, well-developed man, in active business, aged fifty-three. He considered himself in fair health until April 22d, although his family say that for several months he had not been quite well. He had complained of being easily fatigued, had had vague muscular pains, and had "looked badly." His face, they say, had been pale and waxy in appearance, and he had suffered from a "chronic throat trouble," for which he had long been using chlorate of potash. This he had used both as a gargle and as an internal medication. After his death his servant stated that he had been in the habit, for at least two years, of buying the drug "by the pound," and "that he had used a dozen of those pound-cans during the past year." The last can was purchased only a few days previous to his death, and of it only a little had been used. He was also in the habit of carrying in his pocket a small box of lozenges made of this drug, and it was usual with him to allow them to dissolve slowly in his mouth.

On April 22d, on which day he became really ill, so that he was unable to attend to his business, he felt chilly and feverish all day. He complained especially of sore throat and pain in the back, and is known to have used more chlorate of potash than usual. He passed a very restless night.

On April 23d he was first seen by his physician. Then his pharynx was slightly congested, and swallowing was painful. His temperature was 102°; his pulse, 100. There was very decided jaundice of skin and conjunctivæ. In the afternoon of the same day he vomited, and had several movements from his bowels. The matters vomited and passed per anum were not kept for the inspection of his physician, but were described by his family as having been of a very dark-green color, and as having contained blood. On the same day he passed about a half-pint of urine, which was black in color and untranslucent. His pulse then was imperceptible, he was restless, tossing about the bed, showing most of the symptoms manifested by a person who had suffered from a severe hemorrhage. At this time his color was a most peculiar and almost indescribable yellowish-gray, and he appeared like a man who was dying in collapse from loss of blood. The vomiting continued at intervals during the next twelve hours.

On April 24th he passed no urine at all, but his general condition seemed somewhat better. His temperature was normal, his pulse was of better character, and his strength somewhat restored. There was no more vomiting. His jaundice deepened somewhat. The mucous membrane of his mouth and pharynx was generally very pale, but here and there were to be seen areas of black discoloration. Suppression of urine continued till his death.

On April 25th he was very feeble. His pulse had become weak and thready. His temperature was normal. Vomiting did not recur. As he passed no urine, an attempt to purge him was made by giving him twenty grains of calomel, and subsequently one-fifth of a grain of elaterin. This medication did not cause his bowels to move.

On the next day, April 26th, he became steadily weaker, and decidedly drowsy. He could be easily roused during the early morning, however. His feebleness passed gradually into a condition of collapse, and he died comatose at 8 A.M.

I made the autopsy twenty-six hours after death.

The body was very decidedly jaundiced, and there was slight œdema of both lower extremities. Both pleural cavities contained very dark-colored serum. It was almost black in color, not transparent, and half a pint on each side. The pericardium contained the usual quantity of serum, but it was stained like that of the thorax. The heart was pale and flabby, and contained a large amount of fat in its muscular fibres; this was most distinct in the papillary muscles of the left ventricle. Besides these changes, it presented nothing of interest beyond the various degenerative changes of middle life. The lungs were moderately congested, and there was mucus in the bronchi. The spleen was large, at least six times as large as normal, and it was of firm consistency. Its cut surface was of very dark chocolate color, and it did not become lighter or arterial in hue on exposure to air. The kidneys had a granular surface, but were not distinctly atrophic. The markings of their cortices were not distinct. Their color throughout was of a dark chocolate hue, like that of the spleen. The stomach presented a somewhat thickened mucous membrane, but was otherwise unchanged. The intestines contained a large quantity of thick, dark-green material, which was of the consistency of a thick gruel. The liver was somewhat darkly stained, but less so than the kidneys. It was of normal size. The gall-bladder was filled with thick, very dark-green bile. The urinary bladder contained two ounces of urine, which was almost black in color, and closely resembled the dark-colored, untranslucent fluid which was found in the pleural cavities. The blood of the great vessels and heart was darker red than normal, and did not become at all arterial in color on exposure to air. It was in great part fluid. The microscopic examination of the organs was especially interesting. The kidneys showed very marked changes. The convoluted and straight tubules were very generally filled with dark-colored masses of altered hæmoglobin and broken-down red blood-cells. These masses were of irregular outline, and often appeared to overfill or distend the tubes, and in these situations the flattening of the epithelium was as plainly visible as in the other case. Occasionally tubes were seen only partially filled with similar material. The tubes often contained hyaline casts, but the changes seen in the parenchyma generally were but slight and of chronic character, and not related to his recent illness. The liver and spleen contained much altered hæmoglobin; in the former it was distinctly seen in the capillaries. The heart contained much fat in its muscle-cells. It was deposited in the form of fine granules, and very generally obscured their transverse striation, especially in the papillary muscles of the left ventricle.

MEDICINE AND MONEY.—Withal be good to the poor. You have them always with you. It is often cruel to accept pay from them. Be systematic in business, so that you will be able to give when and where it is required.—*St. Louis Med. Journal.*

CHOLERA INFANTUM AND THE WEATHER.

By T. CLARK MILLER, M.D.,
MASSILLON, O.

UNDER the head of cholera infantum it is becoming more and more the habit of physicians to group the diseases occurring in young children, during the season of high temperatures, which are characterized by impairment of digestion and assimilation and varying degrees of gastro-intestinal irritation.

The disease seems to be most prevalent in a belt running from east to west, between the thirty-eighth and forty-second parallels. The cholera type or phase of the disease is of short duration, but the disease proper, having been once established, is not likely to be fully recovered from so long as high temperatures prevail. After this new cases cease to appear, and the children affected begin to recover. They do not all, by any means, recover, for some have gone beyond that point from which complete recovery is possible; while others, in their debilitated and poorly nourished condition, succumb to the malign operation of other agencies and influences on constitutions which have lost, to a great extent, their powers of resistance, as well as those of recuperation.

This is not intended as an opinion, but as a statement of the general impression made on the minds of careful observers. Observation also justifies the belief that a continuance of high temperature, for a more or less definite period of six to ten days, is necessary to the development of the disease, in an epidemic form, in the early part of the hot season; while, as the season advances, the number of days of continued high temperature necessary to inaugurate new epidemic outbreaks becomes less.

This being true, it is not at all strange that unprofessional grandmothers, as well as physicians, have associated the disease with the continued high temperature as effect and cause, not ignoring the existence of co-operating causes, nor the varying degrees of susceptibility in children.

The painstaking and elaborate study of this disease, presented to the New York Academy of Medicine by Dr. A. Seibert, and published in THE MEDICAL RECORD of March 24, 1888, is a very valuable addition to the literature of the subject, and is especially interesting to me from the fact that for the past twenty years this summer disease has been a field of study in which I have bestowed considerable labor.

About ten years ago I made a somewhat careful statistical study of this disease on about the same line as Dr. Seibert's paper, only, however, using *mortality* statistics; the doctor's observations show that the morbidity curve is parallel to the mortality curve, so that one substantiates the other. My investigations took a somewhat wider range, geographically, including Boston, Philadelphia, Baltimore, Cincinnati, and Chicago as well as the metropolis. A part of the results of this work was presented, in the form of a paper, to the Northeastern Ohio Medical Association, at its meeting in August, 1878, and was published in the *American Journal of Obstetrics and Diseases of Women and Children*, April, 1879. From this paper I shall feel at liberty to quote at some length as I go along, such quotations being indicated by inverted commas.

I have been led to question very seriously whether the gastro-intestinal trouble is really the disease, and to incline very strongly to the opinion that the general system is profoundly affected, aside from, and independent of, the exhausting effects of the discharges from the stomach and bowels and the subsequent more or less active inflammatory conditions. "The disease is usually developed gradually, the child loses its vivacity, ceases to perspire, loses the desire for food, heat rash disappears, the skin becomes dry and hot, and the little sufferer is restless and irritable. The attack in its choleraic phase is often sudden, explosive, and may be fatal in a few hours; doubtless in many instances the organism is so profoundly affected that death comes speedily on, even without the occurrence of serious vomiting or purging. Recovery is also slow, and generally not complete until the summer ends. Although, of course, all choleraic features have disappeared from the case, yet to control the vomiting and purging is not, by any means, to restore the patient to health. This, of itself, suggests that the serous discharges are merely symptomatic, or at least not at all to be considered the sum-total of the disease.

"A second attack of the choleraic symptoms is to be looked for under much less provocation than the first; that is, those children who have passed through one attack yield much more readily to the influence of a recurrence of continued high temperature than does a healthy child, or one who has so far escaped, so that, whereas the first attack did not occur until after from six to ten days of continued high temperature, three to six days will be sufficient to precipitate a second attack, showing that the system had not regained its normal power of resistance, and that the disease was not fully recovered from, though the choleraic symptoms had subsided."

As to what constitutes *hot weather*, there would be all shades of opinion, no doubt; but it is generally believed, I think, by sanitarians, that during the winter an indoor temperature above, say, 72° F., is too high. If 75° or 80° be too high in the winter, in a hygienic sense, we may assume that it is a high temperature in the summer.

The air we breathe ought not to be above 72°; the demand of the surface of the body for a higher temperature must be met by clothing. However, the fact that the thermometer indicates 80° or 90° for a moment, or a few minutes, does not make a *hot day* so surely as when the mercury takes a long rest at a much lower point.

The all-important source of terrestrial heat is the sun. As its rays approach the perpendicular the ice disappears, the frost comes out of the ground, the grasses spring up, tender vegetable growths can live overnight out of doors, fruits mature, the earth becomes warm, in short, the heat of the sun is *cumulative*; it reaches into the night, through the night, over into the next day, and the climax of its power and effect is not reached for some days after its rays have begun to recede from the perpendicular.

This accounts for the high minimum temperatures of July. In the first week in August the rays strike the earth at such an angle that the residual heat begins to be lost, and the hot nights, or at least successive hot nights, cease to appear. I do not insist on calling these nights *hot*, but they are not cool enough. The child which passes the first week in August in vigorous health may be said to be, substantially, safe from the disease in question, because he is pretty sure of a chance to cool off. "The condition under which cholera infantum appears, and the only condition necessary to its development, is continued high temperature day and night—a mean thermometer above 75°, with small daily range. This high and slightly varying temperature, continued from six to ten days, will invariably, in our climate, bring cholera infantum (together with other bowel troubles, symptomatically more or less distinct, but pathologically akin), and the longer this condition of things continues the more numerous and the more intractable the cases become. This is as true in the country as in the city, though we are led to think, as we read the books, that this is a disease of the city especially. Deaths are registered, to be sure, and the books are made in the cities; but if the conditions above mentioned exist in the country, the disease appears there. Of course, not a great many cases, for the susceptible babies furnished by a single block in the city would outnumber those of two or three square miles in the country. Yet I am glad to admit that the conditions, for obvious reasons, are not so

Year.	May.					June.					July.					August.					September.					October.				
			Thermometer.					Thermometer.					Thermometer.					Thermometer.					Thermometer.					Thermometer.		
	Week ending—	Mortality.	Mean of daily values.	Maximum mean.	Minimum mean.	Week ending—	Mortality.	Mean of daily values.	Maximum mean.	Minimum mean.	Week ending—	Mortality.	Mean of daily values.	Maximum mean.	Minimum mean.	Week ending—	Mortality.	Mean of daily values.	Maximum mean.	Minimum mean.	Week ending	Mortality.	Mean of daily values.	Maximum mean.	Minimum mean.	Week ending—	Mortality.	Mean of daily values.	Maximum mean.	Minimum mean.
1879	3	..	58.3	66.8	49.1	7	6	72.2	82.0	64.4	5	63	77.5	87.4	66.9	2	28	79.6	86.8	82.7	6	9	74.8	82.5	67.0	4	2	67.8	71.3	55.1
	10	..	60.9	69.1	50.8	14	17	74.1	84.5	61.0	12	51	77.4	86.9	67.7	9	24	78.5	86.4	71.8	13	13	65.7	74.0	57.3	11	4	79.4	79.5	63.8
	17	..	68.7	77.1	60.0	21	36	70.8	79.4	60.4	19	[illegible]	80.5	89.1	69.8	16	18	72.8	81.8	63.0	20	2	63.0	71.3	55.1	18	4	70.3	76.5	62.3
	24	..	67.1	75.8	59.0	28	62	77.2	85.5	[illegible]	26	34	77.6	84.6	68.7	23	22	73.2	81.7	64.1	27	2	58.9	65.1	49.4	25	5	54.1	61.1	46.1
	31	1	70.3	79.1	[illegible]	..	..	....	..	..	..		....	....	....	30	20	70.9	78.7	65.1	..	..	....	....	....	..	..	....	....	...
1880	8	..	67.9	78.0	50.8	5	36	68.8	77.7	54.7	3	50	78.1	87.7	70.7	7	24	74.0	81.8	67.7	4	9	75.2	83.0	69.0	2	1	62.1	61.0	47.0
	15	3	67.7	77.7	58.5	12	31	74.3	82.0	67.4	10	31	80.4	89.0	71.1	14	17	75.7	85.7	67.7	11	10	68.7	75.7	63.1	9	3	59.4	69.3	50.8
	22	9	74.3	84.8	62.3	19	47	72.9	81.7	64.8	17	40	82.3	92.5	74.7	21	13	74.0	81.1	66.8	18	6	66.6	76.7	57.8	16	..	62.7	70.1	52.5
	29	33	76.8	85.0	69.1	26	54	81.1	91.2	71.4	24	[illegible]	74.5	81.5	67.0	28	11	76.5	84.4	70.4	25	1	67.7	75.7	57.4	23	2	52.5	59.8	45.3
	..	..	....	....	...	..	..		.	.	31	19	75.2	83.8	67.2	..	..	...	....	....	..	..	....	....	....	30	1	49.6	55.7	43.0
1881	7	1	59.1	67.2	50.4	4	2	[illegible]	79.1	63.5	2	49	76.5	85.4	68.4	6	31	80.4	90.1	71.5	3	28	78.0	87.8	74.7	1	14	79.7	89.0	72.4
	14	2	75.5	85.5	65.4	11	2	65.7	71.8	[illegible]	9	81	81.9	91.4	73.4	13	35	78.7	88.5	69.8	10	20	81.0	89.0	72.2	8	8	66.2	76.7	59.1
	21	..	62.9	68.3	57.1	18	6	74.8	84.4	64.5	16	58	81.1	89.7	73.4	20	32	72.6	80.2	65.2	17	14	72.9	79.4	67.1	15	9	60.9	70.2	52.5
	28	.	70.2	79.4	59.8	25	27	72.1	79.7	62.2	23	49	76.2	85.8	68.1	27	21	75.9	85.2	66.7	24	8	73.5	82.2	66.0	22	4	62.8	74.4	54.5
	..	..	....	....	....	..	..	....	.	...	30	42	76.6	85.8	68.7	..	..	....	....	...	..	..	....	....	....	29	5	59.4	65.5	52.4
1882	6	..	55.9	65.0	47.2	3	..	68.5	70.0	58.2	1	62	79.1	88.4	72.0	5	25	74.5	80.1	69.4	2	6	71.5	77.2	64.7	7	5	64.6	72.4	57.2
	13	1	55.1	60.5	33.5	10	2	76.0	82.1	[illegible]	8	50	70.1	78.2	62.8	12	23	75.9	84.1	69.7	9	14	73.1	80.2	67.2	14	..	63.2	69.7	57.8
	20	1	56.6	62.4	40.4	17	9	73.3	82.5	[illegible]	15	43	79.1	87.8	72.0	19	14	76.2	84.0	69.4	16	6	68.4	75.2	62.0	21	4	58.2	67.8	56.2
	27	1	64.2	72.4	55.8	24	17	75.8	85.8	67.1	22	37	77.0	84.5	70.1	26	10	73.2	80.0	66.1	23	12	72.4	79.5	65.8	28	1	55.8	67.5	49.8
	..	..	....	....	....	..		....	..	.	29	35	80.0	90.4	71.7	..	..	....	....	....	30	4	59.9	65.0	54.7	..	..	....	....	....
1883	5	1	56.0	64.7	47.7	2	1	69.7	78.7	61.5	7	83	80.7	89.8	71.5	4	44	73.3	82.4	65.8	1	13	68.4	75.7	61.7	6	3	58.7	64.8	53.1
	12	..	66.8	76.0	55.5	9	3	75.5	84.4	67.5	14	71	75.4	83.1	64.5	11	24	71.5	79.8	62.4	8	11	66.1	72.4	58.5	13	3	68.0	69.0	56.2
	19	..	60.4	68.7	51.1	16	6	73.0	82.1	65.7	21	60	75.8	84.4	67.8	18	17	71.6	78.5	63.8	15	6	63.5	79.2	57.7	20	2	57.2	64.8	49.2
	26	1	63.1	71.4	54.2	23	8	76.4	83.8	67.5	28	50	77.0	86.0	69.1	25	22	78.3	87.2	70.2	22	8	66.9	74.1	60.1	27	..	51.6	56.1	46.8
	..	..	....	....	...	30	32	75.2	82.1	68.1	..	..	....	....	....	..	..	....	...	....	29	2	62.7	69.4	56.2	..	..	....	....	....
1884	3	..	64.4	74.5	54.5	7	4	72.5	80.8	62.0	5	78	77.1	84.7	70.2	2	21	73.7	81.2	67.4	6	13	75.0	84.8	66.4	4	7	72.1	78.4	65.1
	10	..	61.2	67.5	55.1	14	8	69.7	77.5	64.0	12	57	74.2	82.2	65.8	9	12	74.6	81.5	68.8	13	10	77.2	86.2	70.4	11	6	67.0	78.4	57.4
	17	..	61.9	70.7	54.1	21	35	75.4	86.8	77.6	19	45	73.5	80.4	65.1	16	13	73.6	81.5	65.8	20	12	65.8	75.5	56.1	18	4	58.0	68.5	51.8
	24	1	71.8	81.1	61.9	28	79	74.8	83.4	67.7	26	44	77.1	86.0	68.8	23	22	77.5	87.8	71.7	27	6	69.0	80.4	60.8	25	2	55.2	65.8	46.1
	31	4	67.2	70.1	56.1		..	....	....	....	..	..	....	....	....	30	8	73.9	81.4	67.2	..	..	....	....	....	..	..	....	...	....
1885	2	..	59.0	69.4	49.4	6	1	70.2	81.8	61.5	4	36	71.3	80.2	60.8	1	48	79.2	87.4	73.8	5	14	69.4	77.7	61.5	3	4	65.7	75.5	59.7
	9	1	59.5	67.7	51.5	13	2	70.4	79.7	61.2	11	64	79.8	89.0	73.0	8	28	74.5	79.7	64.7	12	9	65.3	72.8	59.8	10	4	52.1	60.4	46.2
	16	1	60.4	69.8	51.5	20	26	77.3	87.1	68.2	18	58	78.9	87.1	69.7	15	24	76.4	86.0	70.2	19	9	70.6	80.7	60.1	17	2	58.1	67.4	50.2
	23	1	68.1	79.5	61.4	27	41	72.7	80.5	65.1	25	77	85.2	94.7	77.1	22	12	75.2	84.2	67.0	26	4	62.4	70.0	55.8	24	1	55.6	65.4	47.8
	30	1	60.4	72.1	60.7	..	..	....	....	....	.	..	....	....	....	29	22	71.4	80.4	63.0	.	.	....	....	....	..	..	....	...	....
1886	8	..	62.2	71.5	54.4	5	4	62.9	71.5	54.8	3	42	70.0	77.5	63.2	7	40	70.7	78.8	64.2	4	20	69.7	79.7	62.5	2	8	65.2	77.0	56.5
	15	1	60.0	67.7	53.7	12	5	71.2	79.7	63.8	10	77	75.8	86.8	69.4	14	20	75.9	84.1	69.0	11	14	73.4	81.5	66.7	9	3	59.0	71.8	48.7
	22	..	61.6	69.5	53.8	19	19	71.2	80.1	61.5	17	57	72.8	80.0	66.7	21	20	70.9	80.4	64.0	18	11	70.5	79.0	62.7	16	2	63.0	72.0	65.5
	29	..	63.5	73.2	54.2	26	39	69.3	77.2	[illegible]	24	41	72.5	81.4	64.7	28	22	75.1	84.2	67.7	25	9	66.6	74.7	58.0	23	3	59.0	70.0	49.5
	..	..	....	....	....	..	..	....	..		31	25	74.5	85.8	69.7	.	..	....	....	....	..	..	....	....	....	30	..	54.7	61.0	48.6
1887	7	..	68.5	77.7	58.7	4	5	67.4	75.7	58.2	2	83	75.9	86.4	65.7	6	45	79.0	86.5	73.8	3	13	67.4	77.4	57.5	1	5	60.6	67.5	53.8
	14	..	[illegible]	73.8	59.8	11	3	67.5	75.1	61.4	9	[illegible]	78.4	86.1	72.5	13	36	73.6	83.2	65.5	10	5	68.0	78.8	59.2	8	2	62.7	73.1	53.4
	21	.	69.5	79.5	58.5	18	15	74.7	85.2	61.9	16	61	82.5	92.7	72.7	20	21	73.6	82.4	66.8	17	8	65.9	72.4	60.5	15	5	57.4	69.1	50.2
	28	1	67.1	77.0	60.2	25	33	73.9	82.1	66.4	23	72	80.0	88.2	73.2	27	22	72.4	80.1	65.5	24	10	62.3	70.4	56.0	22	..	55.0	62.1	47.5
			..						.		[illegible]	[illegible]	81.1	88.7	74.8				...			.	....	...	....	29	..	50.4	56.0	44.7

likely to be present in the country; the contrast in point of green grass, shade, cool water, and moving air, is no less marked than is that in the percentage of mortality; and it is no more marked. Few, if any, recoveries will take place until the temperature falls; this fall is often attended by rain, but this does not seem to be essential, the fall of temperature alone being sufficient to bring about a better state of things (there being, apparently, no constant relation between barometric and hygrometric fluctuations and the rise and fall of the death-rate from this class of diseases). When the temperature falls cases improve and new cases cease to appear."

Infants may be affected at all seasons of the year by diseases having choleraic features; but it is very clear that these troubles, occurring in the cool or cold months, are not at all related, pathologically, to the summer disease under consideration.

In estimating the agency of milk, or any other single article of food, in the production or aggravation of this disease, or, in fact, of any disease, unless in an individual case, it would be interesting to know what percentage of the sufferers subsisted on the particular article of food in question. It is well known that milk will readily change at 60°, and certainly it will change no less readily at higher climatic temperatures. It will very often encounter a temperature much above 60° before it reaches the consumer, or, at any rate, before it is consumed, even when the minimum daily temperature is below 60°; yet summer complaint does not become epidemic.

"After all these considerations have been given their proper weight (and we do not wish to evade this), unless there is a succession of days of high temperature and small daily range, there is no cholera infantum; while, on the other hand, with a continued high temperature for several successive days, with but slight fall during the night, there is cholera infantum, and, in the natural course of things, there are no recoveries unless the temperature falls."

In the paper referred to above a number of tables were given to illustrate the constant relation which exists between thermal fluctuations and the mortality from the diseases under consideration. These are omitted here to avoid repetition, and I will add only one table showing the mortality from cholera infantum in the city of Baltimore, for each week, in the months from May to October inclusive, in the years 1879–87, with the mean of daily values of the thermometer for each week, and the maximum and minimum means of temperature for each week.

"In order to the construction of perfectly satisfactory tables for the illustration of this subject, it would be necessary, not only to have definite and uniform reports, naming disease and age of decedent, but a *daily* record of mean, maximum, and minimum thermometer. Weekly records are not altogether satisfactory, because the mean may be high for the week, and yet a low minimum may have been reached once or more, and even without this the time is short for the development of cholera infantum, and the following week may be more marked for its high mortality, though it may have so many *days* of low mean as to show a low *weekly* mean.

"A *monthly* record does not satisfy the requirements, from the fact that there may be two or even three weeks of low temperature, giving the month a low mean, and yet enough of days of high temperature to give the month a high mortality record from cholera infantum, or from a succession of hot days at the end of the month the cumulative effects show on the mortality records of the following month of perhaps low mean."

I am very sorry to seem to place myself in antagonism to high authority, and I certainly do not wish to provoke controversy. I do not think I fail in appreciation of the painstaking and admirable work of Dr. Seibert, but it is tremendously important to the profession and to humanity that we should arrive at correct views regarding a disease which, in our northern cities, causes, inside of four or five months, from three to eight per cent. of the total annual mortality.

I am thankful to Dr. Seibert for his valuable addition to tabulated facts bearing on this disease; but I believe his reasoning from these facts to be utterly fallacious and misleading, and, it seems to me, many of his conclusions are squarely in the teeth of his data. It is a subject of annually recurring and profound interest and importance. The learned discussion of the paper referred to, in the Academy of Medicine, is ample evidence that the subject is not exhausted, and it certainly cannot be said to be even threadbare, so long as it is possible for a great authority to call in question the superior mortality, from this disease, in July as compared with August.

ELECTRICITY IN GYNECOLOGY.

By F. E. BUNTS, M.D.,

CLEVELAND, O.

At a time when electricity is occupying such a prominent position in gynecology, it may not, perhaps, be out of place to make a few remarks concerning its use and practical application to gynecological diseases. In order to understand the application of electricity, it is absolutely essential that a knowledge of its rudimentary principles should first be obtained; and in order that confusion may not exist concerning the meaning of the various terms used, this knowledge should be obtained from some standard non-medical text-book.

It is seldom that physicians can converse upon electrical subjects without finding themselves at variance upon the significance of such terms as ohms, volts, electromotive force, resistance, quantity, strength, etc., and I shall venture to give a definition of some of these terms in order to make clear what I have to say.

An ohm is the unit of resistance.

A volt is the unit of electromotive force, and is a little less than the electromotive force of one Daniell cell.

An ampère is the unit of current, and is that current furnished by an electromotive force of one volt through one ohm of resistance.

Electromotive force is employed to denote that which moves or tends to move electricity from one place to another. It is usually abbreviated E. M. F. It is proportional to the difference of potential. "Just as in water-pipes a difference of level produces a pressure, and the pressure produces a flow so soon as the trap is turned on, so difference of potential produces electromotive force, and electromotive force sets up a current so soon as a circuit is completed for the electricity to flow through."

A milliampère is a thousandth of an ampère, and is the ordinary measure of current in gynecological electricity. It is not unusual to hear the strength of a current spoken of in volts or fractions of a volt, but by our definition this is manifestly incorrect.

It is, however, upon such terms as "strong," "great," and "intense" that we are most often stranded. Much confusion has arisen from the improper interpretation of these words, and it may lift a great weight from the minds of many if I quote, from such an excellent authority as Sylvanus P. Thompson, that these terms mean precisely the same thing; and further, "Formerly, before Ohm's law was properly understood, electricians used to talk about 'quantity currents,' or 'intensity currents,' . . . the terms were convenient, but should be avoided as misleading."

An understanding of Ohm's law will enable us to talk of currents without reference to quantity or intensity, and bring us to a realization of the fact that it is the *strength* and duration of the current upon which its electrolytic action depends, and not upon whether it is an "intensity current" or a "quantity current." Ohm's law is expressed by the formula current $\frac{(c) = \text{E. M. F. (in volts).}}{\text{Internal resistance in ohms} = \text{External resistance in ohms.}}$ Now, to determine our current, we must substitute the electromotive of our cells and their resistance, as well as the resistance of the conducting wires and the body. Practically, the resistance of the conducting wires, being usually very small, may be ignored. Suppose, for instance, we have a battery of 50 Daniell cells connected in circuit. The E. M. F. of one cell equals about 1.08 volts; internal resistance of each cell equals about 2 ohms. Amory gives the resistance of the body as from 1,000 to 12,000 ohms, depending upon the locality of the electrodes, their nature and size, and the condition of the skin. This estimate is obviously very vague, and, in my estimation, much larger than that met with in Apostoli's treatment of uterine fibroids. Suppose it to be 200 ohms, then we have for our current from 50 cells, current $= \frac{1.08 \times 50}{2 \times 50 + 200} = \frac{54}{300}$ ampères, or $\frac{54000}{300}$ milliampères $= 180$ milliampères, which is, in fact, the highest current which, under ordinary circumstances, I can get from my battery of fifty cells in the treatment of uterine fibroids.

I trust that this demonstration will not prove out of place, but be of service in shedding light upon the strength of currents we use.

I know that I am not orthodox when I say that, in my estimation, it does not make one particle of difference whether a "quantity current" or "intensity current," a "high-tension current" or a "low-tension current" be used, so long as our milliampère mètre shows us that we have registered the same number of milliampères in each case; and taking the invaluable milliampère mètre in connection with a clear comprehension of Ohm's law, we have a means of ridding ourselves forever of the incubus of an unintelligible nomenclature of currents.

It is easy to see how, before we had our milliampère mètre, we had such different effects from so-called "quantity currents" and "intensity currents;" but I apprehend it was due more to their capability of overcoming the resistance offered by the body than to any actual difference in their *quality;* and that, could we have registered their strengths, we should have found them producing exactly the same conditions in the human body when equal strengths were used.

It is an established fact that the quantity of any electrolyte decomposed by a current is directly proportional to the strength of the current, and also to its duration. Amory goes so far as to claim that we can obtain the same electrolytic result in human tissues from a weak current, employed for a long time, as we can from a strong current employed for a proportionately shorter time. If this be true, the application of electricity in Apostoli's method may be greatly modified; for, if the electrolytic action of 300 milliampères for five minutes was desired, and our battery furnished us with a current of but 100 milliampères, all that would be necessary would be to use this current for fifteen minutes instead of five, producing thus the same result with much less pain and much less inflammatory action which "may stimulate abnormal growths or cause dangerous inflammation of serous membranes."

According to Amory, there are four methods by which electricity may interfere with interstitial nutrition and destroy the life of the cells:

"1. By producing a true decomposition of the chemical compounds upon whose combination the integrity of the living structure depends.

"2. By interfering with the natural process of cell-segmentation. . . .

"3. By promoting a movement of the mass of fluid in the living tissues toward the negative electrode, and thus interfering with constructive metabolism. . . .

"4. The acid and alkaline reactions at the positive and negative electrode, respectively, from which a caustic action upon the tissues is effected through contact of these two different chemical reactions."

It is reasonable to suppose, arguing from analogy, in the action of electricity upon chemical compounds, that 1, 3, and 4 will vary directly as the strength and duration of the current; but as for 2, we must hesitate before we accept it, since, if we do, we can at once do away with our high currents, clay electrodes, pain, and danger. It is important, therefore, that further observations should be made concerning the comparative effects of high currents for short periods and low currents for long periods. While admitting the advantage which the establishment of this principle would give us in all cases where electrolytic action was desired, I am not prepared to accept it without further demonstration by means of actual measurement with the milliampère mètre. At the same time I have made it a rule, in such cases as have not been able to tolerate a strong current for a given time, to use a weaker one for such a length of time as will, in theory at least, give me the same electrolytic action as I desired to produce by my stronger current.

I desire to call attention to the value of galvanic currents of 20 milliampères strength in the treatment of cervical stenosis, by means of a graduated series of sounds fitted to screw into an insulated handle. In the few cases in which I have recently used it, I have met with very gratifying success. The treatment should be repeated twice a week, and last from five to ten minutes.

In membranous dysmenorrhœa strong galvanic currents are destined to hold a high position in uterine therapeutics. In a case of this character which came under my care, and in which an almost complete membrane was cast off at each menstrual period, accompanied by excruciating pain, I made use of a current of from 40 to 60 milliampères, using a platinum sound for the negative electrode. The treatment was continued twice a week for five weeks, and resulted in a complete and permanent cure of a diseased condition of which Dr. W. G. Wylie says, "A well-marked case usually continues as long as the patient menstruates."

The relief of uterine flexions by the combined use of tonics and intra-uterine applications of electricity is probably too well established to need any illustrative cases.

While the number of cures of fibroid tumors by Apostoli's method of treatment is not as great as had been hoped for, yet the relief from the distressing symptoms so frequently accompanying these tumors is sufficient of itself to establish it at once as an invaluable agent in their treatment.

I wish to allude to but one case in detail. The patient was suffering from a large fibroid, accompanied by profuse hemorrhage, retention of urine, constipation, and neuralgia of the lower extremities. I had not at that time become acquainted with Apostoli's method, but decided to use galvanism upon her, and selected the *negative* pole for the uterine electrode—for no better reason than that the positive pole would pain the abdomen less, and from a belief that there would be "a movement of the mass of fluid in the living tissue toward the negative electrode." Having at that time no milliampère mètre, I made the current as strong as the patient could possibly tolerate it, with the result of completely checking the hemorrhage by the third treatment, and in a short time her other uncomfortable symptoms entirely disappeared. Three months after she had ceased treatment she applied to me again, with a return of her hemorrhages so profuse as to be alarming. I had during this time read Apostoli's work, secured an Edelmann's milliampère mètre, and Apostoli's platinum sound. Imbued with the idea that the *positive* pole was the antihemorrhagic pole, I assured her I could check the flow without any trouble, and gave her 180 milliampères for six minutes, with the positive electrode in the uterus. This I repeated at intervals of three days, for four treatments, without any perceptible effect. The patient becoming discouraged, I decided to return to my former line of treatment, and used the negative pole for the uterus with a current of 150 milliampères. When she came to my office the following week the flow had ceased entirely, and there has thus far been no recurrence, a period of about five months.

It may be a "post hoc" argument to say that the negative pole was the proper one to have used, but the relief was so marked in both instances that I relate the case in hopes that it may prove of interest, if not of use.

Before closing, I should like to consider, briefly, the technique of Apostoli's method. The greatest obstacle is the obtaining of an abdominal electrode which shall diffuse the current equably over a large surface; and, after trying various means, I have succeeded best by using a flexible copper plate, 10 x 9 inches, rounded at the corners, and covered with gauze and clay kept moistened, and laid upon ten or twelve layers of lint moistened in warm water and spread over the abdomen. I also have a smaller plate made which is more convenient when weaker currents are to be used. In regard to the uterine electrode, I think that the platinum sound is by far the best for general use. One great advantage is that we can use it in connection with the positive pole without its becoming oxidized and lacerating the lining of the uterus during its removal. In my estimation the insulator for this sound should be, preferably, a simple glass tube slightly tapering at its end, and sufficiently larger than the sound to allow of the free escape of the products of decomposition, which are particularly abundant when the negative pole is used. This free escape not only lessens the possible risk of septic absorption, but, in my observation, lessens to a considerable extent the pains which sometimes supervene upon this treatment, and which, I imagine, may, to a greater or less extent, be attributed to the efforts of the uterus to rid itself of the foreign substance within its cavity.

ABDOMINAL NEUROSIS AND EXPLORATORY LAPAROTOMY IN THE MALE, WITH CASES.

By B. E. HADRA, M.D.,

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One of the great gains of modern surgery is, as is well known, safety and ease of access to the abdominal organs by laparotomy, not only as a curative, but also as a diagnostic procedure. But it seems to me that the gynecologist makes a bolder and more extensive use of exploratory laparotomy than the general surgeon. Is it due to the greater readiness with which women submit to surgical treatment? Considering even that from the nature of things there must oftener be a good cause to open the abdominal cavity in the female, because her generative organs are, to a great extent, situated therein, still, giving to this fact its full due, the disproportion between laparotomies in females and those in males seems to be remarkably great. Perhaps the gynecologist is more inclined to undertake the operation, even without absolute necessity, because laparotomies represent the roses and camellias in his surgical bouquet, and because his standing in the profession and before the laity is greatly dependent upon the number of such operations performed. On the other hand, the general surgeon observes stricter indications and acts less on mere suppositions and probabilities. His fame, too, has so many other fields in which it can be sown and harvested, that he is not so much dependent upon this limited crop. Yet there is no good reason for him to be altogether outdone by the gynecologist. Before all, he should do away with the vague diagnosis of abdominal neurosis.

I venture to say that only an extremely small percentage of such ailments will turn out to be purely functional; that is, not showing palpable alterations of the tissues. The great majority will be caused by visible changes, and of them again a great number will be amenable to surgical adjustment. The inference, then, to be drawn, if these premises are correct, is, that to exploratory laparotomy will have to be given a wider range by the general surgeon than it has at present. Persistent, chronic, undiagnosticable abdominal troubles should be subjected to the operation, and no surgeon should feel that he had arrived at a diagnostic terminus by pronouncing a case to be neurosis of the plexus solaris, or of any other nervous structure, by general outward signs. It is from such considerations that I offer three cases, of whom only the last was subjected to laparotomy, while the two others were equally proper subjects, and most probably would have been benefited by more accurate information, obtained by anatomical diagnosis and corresponding operation.

Case I.—A German tinsmith, about twenty-five years of age, consulted me in 1870 on account of the most fearful neuralgic attacks, starting about two inches above the right Poupart's ligament, deep down in the abdominal cavity. They came on daily, and even several times a day, when the unfortunate man would roll on the ground from pain while perfectly conscious. Nothing could be made out to throw the least light upon his case. It was plainly not epilepsy. The condition of the bowels, testicles, and all neighboring organs was seemingly normal.

The patient, an extraordinarily intelligent man, had for several years wandered, making his way by working, from one centre of medical wisdom to the other; he had consulted all German, French, and English authorities; was finally sent to the United States, and from the North to the South, expecting relief from climatic changes. He had a book, and quite a thick one, with notes, opinions, and prescriptions, collected from all over the world. There was no anti-neuralgia remedy untried. I, of course, could not do more for him than all the combined science of four nations. He, though, was always promptly relieved by the hypodermic use of morphine. After some months he passed from my observation, and I cannot say what has become of him. In such a case it would not only be proper, but our duty, "to go in and see."

Case II.—T——, a German, very intelligent, began complaining occasionally of indefinite acute pain in the abdomen, when at the age of thirty-four. In 1876 he partook, during a protracted excursion, very hastily, of a couple of glasses of ice-cold beer, and swallowed with avidity a large quantity of meat. A few hours later he was taken with severe colic.

He slowly improved, though from time to time exacerbations of colicky pain ensued. Some weeks afterward, a lump of undigested food—meat, as proven by the microscope—as large as a small fist, was passed per anum. He recovered to such an extent that he considered himself cured. Then indistinct pain set in again, originating in the vicinity of the navel and ranging up into the thorax, "taking the breath from him." The attacks seemed to have some connection with meals and intestinal movements, though there was no constant and definite dependency. Laxatives, stomachics, digestives, etc., were useless, hypodermic injections of morphine affording the only relief. There was vomiting occasionally, mostly after abuse of morphine, which was gradually raised to eight grains a day. Blood was never vomited or passed per anum. There were intervals of perfect rest, lasting even for two months, but growing shorter. The patient was in the hands of an eminent practitioner, who considered the case purely neurotic. In 1879 I saw the patient the first time. Nothing could be made out objectively, though everything pointed to intestinal trouble.

I thought of an invagination, healed with circular stricture, but the statement in regard to the lump which had passed from him was too definitely adverse to such an assumption. T—— grew gradually worse, partly from the excessive suffering, but mostly from morphinism.

Laparotomy was proposed, but refused; the former attendant, who was still in consultation, insisting upon the neurotic nature of the disease. T—— finally died in 1882, having suffered fully six years from his most deplorable condition.

Post-mortem examination: Very emaciated body, covered with abscesses and marks of hypodermic injections. All organs seemingly healthy. An examination of the duodenum revealed, finally, the cause of the suffering. It was twisted about one-half of its circumference around its long axis, and fastened by fresh-looking inflammatory adhesions to the pancreas, so that it could, to some extent, be untwisted, but not entirely so. (I will mention that due attention was given to the physiological attachment of the duodenum to the pancreas.) Obviously the passing chyme had always to overcome this valve-like impediment before it could pass, and had to drag on the adhesions.

Case III.—T. G. M——, American, inmate of Confederate Home at Austin, fifty years of age, recollects having had spells of spasmodic pain, situated on the left side of the abdomen, near, and a little below, the umbilicus, since his sixteenth year, for which he knew no cause. The attacks were best relieved by a bent position, steady pressure, and warm applications.

He suffered in his twenty-fourth year from chills and fever, and severe attacks of pain following each chill. He suffered occasionally from indigestion. He served in the Civil War, and felt relatively well until a spell of dysentery set in, when the attacks became as severe as ever before. He then got steadily worse, the attacks becoming more frequent and uncontrollable, until he was rendered a perfect invalid, not able to support himself. In 1880, without any obvious cause, he had for nearly six months a painless interval. In January, 1888, when I saw him the first time, he presented the facies of protracted suffering: a sallow complexion, much like a cancerous subject; complained of pain, coming on several times a day, not periodical, but worse in the morning and daytime than in the evening, and worse in wet and hot weather. The pain was situated to the left of the umbilicus, radiating thence through the whole abdomen. He was not able to be up except for a short time. There was no fever; the bowels were sluggish, but easily regulated, and the appetite was fair. On pressure over the seat of pain, the patient perhaps was more sensitive than he would be under natural conditions. Repeated palpations sometimes seemed to reveal a tumor; at other times I could not detect anything. In short, there was nothing upon which to base a positive diagnosis. The patient, believing that internal and local medication had been exhausted by the many physicians who had tended to him, and having already been prepared by some of them to an exploratory laparotomy, asked to have it performed. There was, of course, no reason to refuse his request. I may state that this case had also been diagnosticated as neurosis.

On February 18th, in the presence and with the assistance of Drs. Bennett, F. McLaughlin, Swearingen, and Tyner, all of Austin, the abdomen was opened, beginning the incision about two inches below the umbilicus, and carrying it around on the left side, upward, for a distance of about four inches in all.

Nothing abnormal could be detected, even after examining the omentum and the bowels outside of the wound. I was going to close the opening, when I discovered a sharp transverse ridge in the parietal peritoneum, about one inch above the upper end of the incision, and on closer examination it was found that the omentum was adherent to this ridge over a surface about equal to that of a silver dime. The adhesion was broken up and the ridge incised twice, so as to undo the contraction, in case it should be the cause of the trouble. This band was so tense that it took considerable force to sever it, and its giving way could be heard as a loud crack by the by-standers. There was little or nothing remarkable about the other features of the operation. The patient made an uninterrupted recovery, and for two weeks was perfectly free from pain. After this time he began to suffer slightly. I was afraid the old adhesions would form again, and censured myself for not having exsected the ulcerated spot in the omentum and then sewn it up. But whether it was due to antipyrine, which was taken in five-grain doses three times a day, or not, the pain never exceeded a kind of burning, and at present the patient is able to walk two or three miles at a time, feeling pleased with his condition. His complexion and general health have greatly improved.

"The American Dematologist" is the name of a new journal published in Indianapolis, the object of which is sufficiently indicated by its title.

Clinical Department.

REPORT OF A CASE IN WHICH AN ATOMIZER-TIP WAS FORCED DOWN A PATIENT'S THROAT, DISLODGED AND SWALLOWED, AND FINALLY PASSED PER RECTUM.

By J. F. HOFHEIMER, M.D.,

NEW YORK.

Having occasion recently to order a patient of mine to use a hand ball-atomizer in his throat, he purchased one of his druggist. A few evenings later, while spraying his throat, he noticed something "give way," and felt a choking sensation. He immediately threw himself over a chair, head downward, and succeeded in "coughing it out of his windpipe," but "before he could get it out of his mouth it went down into his stomach, and he could feel it all the way down." Becoming much alarmed, he immediately came to my office, where, on examining his throat with the laryngoscope, I detected a denuded surface in the pharynx, which, when I touched it, the patient said felt like the place where the spray-tip had struck. There being no signs of a foreign body having found lodgement in either the larynx or œsophagus, the patient was advised to eat plenty of solid food, and indulge but sparingly in liquids, and to keep the bowels constipated for a few days. Two days afterward the young man passed a large lump of fecal matter, in the midst of which the tip was found. The tip was one intended for the nose, but my patient used it for his throat, and he was no doubt lucky in his choice, for the other two tips were much smaller and could easily have lodged in his larynx.

There are a few lessons to be drawn from this case. The majority of atomizers sold by druggists and instrument-dealers are defective, inasmuch as the tips slip, instead of screwing, on the tube. These tips are of various sizes and shapes, and have a minute opening at the distal end. Now, if this opening is obstructed, one of three things is liable to happen: The cork is forced out of the bottle, the rubber-tube becomes forced from its connection to the spray, or the small tip is blown off with considerable force. I have experimented with an atomizer, and found the force was sufficient to blow the tip across a small room with great velocity.

On examining the tips of various forms of sprays, it was found that only one maker of spray-apparatuses with hard rubber fittings had tips which screwed on. It seems an easy matter for a screw thread to be placed upon the tip and stem of a spray-tube, yet the absence of such a small item may cost a life or necessitate a severe operation. Indeed, the tip used by this patient was rather larger than usual, and to that partly I attribute the fact that it did not enter the trachea.

POISONING BY KEROSENE.

By. K. A. NORDERLING, M.D.,

ROCKFORD, ILL.

I was called on June 29th to see a child, eleven months old, who had swallowed an unknown quantity of kerosene. I arrived about ten minutes after the accident had occurred, and found the little patient in the following condition: There was drowsiness, which was on the increase; and she was feverish; pulse, 150, weak; respiration, 40; face and neck covered with perspiration, extremities cold. Her mother, when the accident occurred, hearing her cry, ran to her help, and found her in a very cyanotic condition, with kerosene vapor coming from her mouth; all she did was to sprinkle water in her face. Upon my arrival I immediately administered all the milk she could drink, and then wine of ipecac, which in five minutes brought on vomiting. On the vomited matter could be easily seen the kerosene floating on the top like fat globules in a soup-dish. Before leaving, I told the mother to give her all the milk she could drink, and also to give her castor-oil. Next morning the mother told me that the child had had one movement of the bowels in the morning, but neither that nor the urine which was passed all right had any odor of kerosene. She had been very restless during the night, coughed some, and moaning between times. At noon the fever was high, 104° F. in the axilla; pulse weak, 150; still in a drowsy condition. In the evening of the same day the patient was nearly without fever, and looking bright, and the next morning she was perfectly well. I think this is worthy of being recorded, as I have never heard nor read of a case of kerosene-poisoning in so young a child.

NERVOUSNESS PRODUCED BY OBSTRUCTION OF THE NARES, WITH REPORTS OF CASES.

By E. HARRISON GRIFFIN, M.D.,

ATTENDING SURGEON OF THROAT AND NOSE DEPARTMENT OF BELLEVUE HOSPITAL OUT-DOOR POOR, NEW YORK.

THREE years ago A——, aged fifteen, female, applied to me, complaining of an obstruction of her nose. The left side had been closed for years, and through the other she could breathe at times, but never freely. The left nostril was considerably swollen; she complained of attacks of pain on this side, and there was a constant and copious discharge of pus from both portions of the nose. Her mother told me that the patient snored loudly during the night, and at times, once or twice a week, would have a slight convulsion. The convulsions she had as long as she had the nose trouble. From the description of the attacks I diagnosed them as epileptic. At this time I saw no distinct connection between the occlusion of the nose and the convulsions. The examination of the left nostril showed it to be almost completely closed, while the septum was greatly deflected toward the right side. In passing the probe through the left nose the end struck against something hard and grating. I gave the patient a few whiffs of chloroform, and with a slender pair of forceps dislodged a shoe-button, which had become encrusted with the saline portions of the serum, and formed the nucleus of a rhinolith. The calculus was the size of a hazelnut.

Further inquiry elicited the fact that she had put the button in her nose six years previous, and had been afraid to tell her parents about it. She had tried to get it out, but had been unsuccessful. The month previous to the operation she had had five convulsions. After the removal of the button, the convulsions ceased entirely. I watched the case six months, and gave no medicine whatever.

CASE II.—Lately I have operated on a case of total obstruction of both nares, which had existed for twenty years, by gelatinous polypi. The patient is a large-framed Englishman, and one whose appearance would indicate that he was free from nervousness. He told me that, up to the age of twenty-five years, he did not know what it was to be nervous. He had lived an out-door life, and had always enjoyed the best health. At this period the polypi had made their appearance. They grew until the nose was completely closed, and in damp weather one or two could be seen below the lower margin of the nose. He had now a bad memory, although previous to the growth of the polypi his memory had been excellent. At times, when compelled to wait in my receiving-room, while I was busy with another patient, he would grow exceedingly nervous, and when I was ready to see him, his hands would be covered with a profuse perspiration. He knew that the operation was painless, but he could not control his feelings. The same thing had occurred to him again and again under different circumstances. The least little change from the daily routine of his life would make him nervous. I operated upon the polypi, and removed fully a hundred. Two days after I had freed the nose so that the patient could breathe through it, the nervousness had diminished perceptibly, although I was working upon smaller polypi higher up in the organ. When I discharged him, the nervousness had almost completely disappeared. He could now meet friends without feeling the extreme reserve that he had had previous to the operation.

CASE III.—C——, female, married, aged thirty-four, has been troubled with polypi for the last ten years. She had been operated upon repeatedly by different surgeons before she applied to me, four years ago. During this time I have removed fully three hundred polypi at different sittings. When her nose is free, to use her own expression, she feels happy, and can go to see her friends, but when her nose becomes stopped up she is nervous and dejected, and wants to keep away from everybody. An operation makes the greatest change in this person's disposition. She is naturally of a lively temperament, but when her nose gets obstructed she is blue and nervous. These symptoms disappear entirely after her nose is freed, but return the moment the nostril is again obstructed.

I do not think that every case of occlusion of the nares will give rise to nervousness, yet there are cases where a foreign body in this organ sets up a reflex action, and a cure of the trouble is only obtained by an examination of the nose and the removal of the obstructing element.

DEATH FROM FRIGHT (?).

By F. H. LESTER, M.D.,

SKANEATELES, N. Y.

THE following case, to me obscure and remarkable, occurred in my practice, and was observed by an able physician from an adjoining city, who expressed as doubtful an opinion I had previously entertained. A young man, nineteen years of age, had croupous pneumonia, which ran a regular course, giving typical symptoms and terminating by crisis on the evening of the seventh day from the initial chill. For two days the temperature remained normal, the appetite had returned, and the pulse was full and soft at eighty beats per minute. The young man I left in this condition forty-eight hours after the termination of the crisis. Twelve hours later I was summoned in haste, the messenger declaring my patient was choking to death. I lost no time in going to his home, where I found a large number of excited friends and relatives congregated. The patient, much excited, was gasping and struggling, his face turgid, his eyes staring, while his body was covered with a profuse perspiration. His temperature I found still normal, but his pulse was 120. After suppressing the noise and excitement, and clearing the room of unduly demonstrative persons, I essayed to quiet the patient, and so far succeeded that in a few moments from my arrival he breathed naturally, and his pulse soon fell to its natural condition, when, feeling reassured myself, I encouraged the patient not to become again so needlessly alarmed, and left the house. The next morning, however, I was again summoned, and the previously described scene was re-enacted. Succeeding this attack there was a rise of temperature to the extent of one degree, and the pulse beat one hundred and twenty-five times a minute. This time the patient declared his inability to swallow. Thoroughly aroused I instituted the most careful examination, but could find no adequate cause for such formidable symptoms. The patient expressed himself as suffering no pain, while his appearance gave indication of his suffering intensely from fright and apprehension, as he trembled violently. I succeeded again in calming his fears to the extent that I induced him to drink a glass of milk and eat a dry cracker, both of which he swallowed without marked voluntary effort, though he immediately afterward positively declared his inability to swallow anything, his father and mother curiously concurring with him in his statements, and exhibiting the greatest alarm. Thus the case proceeded, the patient taking food when I made my visits, sometimes without effort, at other times after more or less trouble; but very rarely could his father or mother, who were his constant attendants, induce him to take the least food or drink, and always seemed to alarm him by their entreaties. His temperature gradually rose, in spite of liberal doses of antifebrine, his pulse keeping pace with the rise of temperature. He secured no sleep, sweat profusely, and became delirious at the end of the seventh day; his pupils were dilated, his facial muscles twitched convulsively, he tossed restlessly about the bed, and finally died on the ninth day from the crisis of the pneumonia, his temperature having reached 106° F., his pulse 200, his pupils being widely dilated, and the whole muscular system in excessive jactitation.

I am confident the pneumonia resolved. I am sure there was was no empyema. The bowels and kidneys performed their functions naturally and fully. The patient did not complain of pain in the head. There was no disturbance of vision or of speech. There was no evidence of pharyngeal paralysis by ocular inspection. I always succeeded in inducing him to swallow after his parents had utterly failed. With me he seemed composed; alone with his parents, highly excited. I was unable to secure sleep or to reduce his temperature with medicine, given to the fullest extent consistent with safety. I have no definite conception of the primary cause of these formidable symptoms which resulted in death. But were it not for the fear of being considered foolishly credulous in the theory of the great mastery of the emotions over the body, and especially of the powerfully depressing and dangerous effects of fear, I should ascribe the death of this young man to mental causes acting upon an already susceptible and debilitated physical organism. I would add, in extenuation of my credulity, that a brother of my patient had died some time previously of croup, and that to this brother my patient often referred during his sickness.

A CURIOUS PHENOMENON OCCURRING DURING THE AMPUTATION OF AN ARM UNDER PROFOUND ANÆSTHESIA.

By W. G. M. SEIPLE, M.D.,

LEHIGHTON, PA.

William S——, aged forty-eight, railroad employé, was thrown while stepping from a moving train, and had his left arm, above the elbow, crushed to a pulp, necessitating amputation at the junction of the upper and middle third of the humerus, which was immediately performed by me, assisted by Dr. C. T. Horn and Dr. Sittler. After having removed the arm, and while taking up the arteries, I noticed a protrusion of the internal cutaneous nerve, about three-fourths of an inch, and as I always remove an extra portion of the nerves, which I may notice protruding, to prevent the liability of their being involved in the cicatrix, I grasped the nerve with forceps. As quick as a flash there was contraction of the portions of the muscles remaining, drawing them all up tightly into the axilla, leaving the bare bone protruding about three inches. The contractions were so firm and so quick that my tourniquet dropped off and left me without any protection as to hemorrhage. But after hastily examining the stump, I found the contractions so firm that not a drop of blood escaped. And now, how to get all this in position again. After a moment's hesitation, I had an assistant compress the subclavian, while I firmly grasped the shoulder with both hands, and by powerful pressure backward and suddenly bringing both hands forward, the parts sprang back into their proper position again. I immediately looked for the brachial artery to tie. I did not find it in its usual position; while looking, it gave a great spurt, when I found it on the under and outer side of the stump. After it had spurted the second time I succeeded in catching it with an artery clamp, and had an assistant tie it. No further trouble followed, and the wound healed kindly in about ten days under strict antisepsis. My impression and teachings so far have been that sensation being deadened by anæsthesia (in this case under thorough anæsthesia), reflex motion was also held in abeyance. Yet this case seems to prove the contrary. I would be pleased to have some of my professional brethren enlighten me concerning this peculiar condition. In all my researches I have not found a similar case on record.

HYSTERICAL SPASM OF THE ŒSOPHAGUS IN A YOUNG CHILD.

Dr. B. D. Foster, of Chicago, sends the following communication: "I was called one day in great haste to see Mary C——, ten years of age, who was said to be choking to death, and found her complaining of great pain in her throat, which she was grasping and begging her mother to rub for her. The mother, attributing the trouble to "a worm in her throat," was vainly endeavoring to pour down a dose of Jayne's vermifuge. The child was unable to swallow, the fluid regurgitating into a handkerchief held in front of her mouth. I immediately administered an hypodermic injection of morphinæ sulph., gr. one-sixteenth. Although complaining bitterly of the pain induced by the fluid being forced beneath the skin, her face immediately assumed a happy expression, and she laughingly declared she was cured the instant the needle was withdrawn, and, obviously, before the solution could have been absorbed. In a few minutes she was laughing and playing in her usual health. The history showed that her mother had been subject to various neuroses (supposed to be hysterical), and that two other relatives were idiotic or imbecile. I diagnosed hysterical spasm of the œsophagus. The youthfulness of this subject, and the immediate relief afforded by the prick of a needle, are not entirely devoid of interest."

Polyuria following Fracture of the Base of the Skull.—A man, aged thirty-six years, from a fall down stairs sustained fracture of the base of the skull. At the end of a fortnight he was so far recovered that the original symptoms were no longer noticed. The only complaints of the patient were deafness on the left side and occasional pain on the right side of the occiput. Polyuria was now noticed. Sp. gr. 1.010; no sugar or albumen. In the course of the following week the quantity of urine gradually fell to the normal quantity. The patient died of pulmonary disease about ten weeks later. The only noticeable lesion of the bones was a darkish line of from three to four lines in length in the posterior cranial fossa. Corresponding to this the dura mater was covered with a thin yellow deposit which, to the extent of the mark, was adherent to the nervous substance. Nothing abnormal besides this was seen on the brain, nor in any other organ.—*Provincial Medical Journal.*

Typhoid Fever has, upon the whole, diminished both relatively and absolutely. In 1886 the percentage of deaths from typhoid fever to deaths from all causes was 2.15; in the year of greatest prevalence, within a period of twenty years—1872—the percentage of deaths from typhoid to deaths from all causes was 4.86 and the death-rate per 10,000 living was 11.1. The diminution in the death-rate from this disease has been especially marked in cities with new water-supplies and good systems of sewers. The death-rate from this cause is substantially unchanged in the small country-towns. The death-rates from typhoid fever per 10,000 living, in census years 1865–1885, have been for the State: 1865, 13.4; 1870, 9.1; 1875, 6.4; 1880, 4.9; 1885, 3.9.—*Dr. Henry P. Walcott.*

Progress of Medical Science.

The Guiding Principles of Treatment in Excessive Corpulence.—Dr. George H. Rohe has published a paper in which he says that the corpulency of alcohol and beer drinkers is well known. It is likely that the depression of nervous excitability, due to the constant use of alcohol, is partly responsible for the fat-accumulation, although the alcohol in ardent spirits, and in the case of beer the carbo-hydrates additionally present, acting as respiratory food, save a portion of the fat in the food from oxidation and permit its deposit as fat-tissue. The Banting diet consists in a large excess of proteids, and great diminution, almost to extinction from the bill of fare, of fat and carbo-hydrates. On the theory that proteids alone are muscle-builders, while fats and carbohydrates are fat-forming foods, the Banting diet was correct; but the evils of a strict adherence to it were manifest before the recent physiological researches demonstrated the fallacies of the theory. There can be no doubt that Bantingism will reduce excessive fatness, but it also decreases the proteid constituents of the tissues, and may thus cause dangerous and even fatal consequences. It is frequently impossible to arrest the rapid waste of muscular tissue under the Banting diet, and the individual rapidly declines in health, even if the diet is withdrawn and the patient put on liberal allowance.

On account of the evil results which were frequently noticed as following the strict Banting diet, this has been modified in various ways. Vogel, who introduced the method in Germany, allowed a larger proportion of carbohydrates, while Immermann proposes to interrupt the treatment occasionally, and allow the patients to resume their habitual diet for a period. On the other hand, Cantani, the eminent Italian clinician, insists even more strongly than Banting upon the rigid exclusion of fats and carbohydrates. Beer, spirits, and the stronger wines are restricted or excluded from all dietaries for corpulence. Light acid wines are alone allowed.

In the last five years, two new methods, deviating in a rational direction from Bantingism, have attracted the attention of the profession. The first is that of Professor Ebstein, of Göttingen, who proposes a reduction of proteids and carbo-hydrates and an increase of fat. The philosophical reasoning of Ebstein claims careful consideration, since he bases it upon acknowledged physiological facts. He claims that less fat is deposited if there is much fat in the food than if the food contained an equivalent quantity of carbo-hydrates. Practical experience sustains this claim, as well as the further one that a smaller proportion of proteids suffices than is generally assumed. But an important point insisted upon by Ebstein is usually overlooked by his followers, namely, that active muscular exercise assists in the destruction of fats.

Oertel's method, which has also many earnest advocates, approaches, in its dietetic prescriptions, very closely the Banting system, as will be shown presently by a comparison of the different classes of food-materials in the various plans; but an important element in Oertel's regimen is the extremely small quantity of fluids permitted. This is not original with Oertel, as Dancel had already, in 1863, insisted upon its importance.

Professor Kisch, of Prague, who is resident physician at the famous sulphate-of-soda springs of Marienbad, has had a very large experience in the treatment of corpulence. He prescribes the waters (which act as a purgative), advises active exercise, and regulates the diet. Doubtless, good results follow this treatment, for it is based upon rational principles. The treatment by cold baths and exercise is also successfully applied for the relief of this condition by Winternitz, of Vienna.

Directly contrary to the advice of Oertel to reduce the fluid allowance of corpulent patients, Sée, of Paris, largely increases it. "Let your patients drink—drink all the time," is the advice he gives. He thinks tea is the best beverage, and that it should be consumed in large quantities. This practice is based upon the fact that free drinking of water promotes tissue-metabolism, and hence increases the oxidation of the fat, as pointed out by Landois.

There is abundant testimony that all these methods are efficient for the reduction of corpulence. For comparison, the following calculations of the amounts of the various food-stuffs in the Banting, Ebstein, and Oertel diets are given :

	Banting.	Ebstein.	Oertel.
	Grms.	Grms.	Grms.
Proteids....................	170–180	105	156–170
Fats........................	7.5	60–100	22–43
Carbo-hydrates............	80–85	45–50	71–114

Landois recommends a gradual and equable reduction of the entire bill of fare, with active exercise in the open air, purgation, cool bathing, stimulation of the skin, restricted hours of sleep, light clothing, and free consumption of liquids. There is reason to believe that such a regimen is more efficient and safer, even if not so rapid in its action, than a plan which depends principally upon the withdrawal of one or other class of food-materials.—*Philadelphia Medical Times.*

Syphilitic Conjunctivitis.—The Vienna correspondent of *The British Medical Journal* writes that at a recent meeting of the Royal Society of Physicians of Buda-Pesth, Dr. Goldzieher made a communication on conjunctivitis syphilitica. Syphilitic affections of the eyelids had to be divided into three classes, namely, primary lesion (initial sclerosis), exanthem, and gumma. Discussing the various pathological conditions in syphilis of the eyelids, he said that the symptoms of diffuse syphilitic conjunctivitis had not yet been described as a whole. He related two cases which showed that there really existed a sort of granular ophthalmia which was due to syphilis. The first case was that of a man, aged thirty-two, who had contracted syphilis six years before, and had suffered from chronic iritis since that date, so that iridectomy had to be performed. For the last few months an inflammation of the conjunctiva had supervened, which had been treated for a long time. On his admission into the hospital, erythema and diffuse swelling of the eyelids, with the formation of granulations in the mucous membrane, were found; besides this, there was swelling of the lymphatic glands in the region of the ear and the neck. After energetic treatment by mercurial inunctions for four weeks, the conjunctiva regained its normal appearance, and the patient was discharged cured. The second case was that of a man, aged twenty-six, who had contracted syphilis two years previously. Six months before his admission into the hospital he was attacked with conjunctivitis in the left eye, and was, like the first patient, treated without success by applications of the nitrate of silver, sulphate of copper, etc. He presented exactly the same changes in the conjunctiva as the first case, and, moreover, keratitis profunda, iridochoroditis, and lymphadenitis universalis. After an anti-syphilitic course of treatment, he was also quite cured. Dr. Goldzieher remarked that similar changes of the conjunctiva were observed in syphilitic inflammation of the tarsal cartilage. As the conjunctiva possessed a layer of adenoid tissue, and the infiltration referred to above was only to be looked upon as a follicular vegetation of this layer, the morbid process above described had, therefore, from the anatomo-pathological standpoint, to be considered as being identical with syphilitic lymphadenitis.

Empyema of the Gall-bladder and its Surgical Treatment.—Dr. Hirschberg has recorded a case of empyema of the gall-bladder occurring in a female, aged forty four. The patient was operated upon with successful result. In the remarks on the case the author finds that in most cases of empyema, or dropsy of the gall-bladder, the appearance of any tumor has been preceded for years by attacks resembling biliary colic, but in most cases there was absence of jaundice. This absence of jaundice is explained by the fact that the cystic is narrower than the common duct, and the most severe attacks of colic point to a stone fixed in the cystic duct. The milder attacks, with jaundice, point to a stone fixed in the common duct, or its passage through the same. Patients complain for a long time of a dull pain in the right hypochondrium. Fever may be entirely absent. The urine is free from pus, if pyonephrosis does not also exist. Physical examination of the abdomen discovers a smooth, tense, elastic tumor, movable from side to side, diminishing in size toward the liver. It is not connected with the abdominal parietes. A coil of intestine may lie over the tumor, which is painful to pressure. The patients complain of pain in the left shoulder. Puncture gives a purulent fluid containing biliary constituents. Particularly is the diagnosis to be made from pyonephrosis. It has been most often mistaken for the latter condition. Inasmuch as operative interference is indicated in both diseases, we will perhaps find our way best by an exploratory incision made, according to the author, in a transverse direction. Operative procedure is indicated in (*a*) chronic lithiasis, and (*b*) retention cysts of the gall-bladder, due to stoppage of the cystic duct by a stone. Especially is empyema included here. Operation is not advisable at a time when a calculus is supposed to be passing the common duct; the time should be chosen when it has passed into the intestine. The continued menace to life by a lasting closure of the common duct by stone may be warded off by a fistula of the gall-bladder. If in the latter case the constant loss of bile should so affect the economy as to threaten life, cholecystoenterostomy is a justifiable operation. Cholecystectomy is indicated in long-standing formation of biliary calculi. It here stands as a rival to cystotomy.—*Annals of Surgery.*

EXTROVERSION OF THE BLADDER.—At a recent meeting of the Royal Medical and Chirurgical Society (*The Lancet*) Mr. G. H. Makins contributed a paper on "Extroversion of the Bladder treated by Preliminary Division of the Sacro-iliac Synchondroses." The following is an abstract: The patient was a male child, aged five. An attempt to raise a flap after Thiersch's method had failed three years previously. On the second admission a cicatrix on the left side of the extroverted bladder marked the position of the unsuccessful flap, and prevented any considerable shifting of the skin on that side. On November 29, 1886, the sacro-iliac synchondroses were divided on each side, with the result of allowing approximation of the anterior superior iliac spines to the extent of one inch, with corresponding diminution of the gap existing in the situation of the symphysis pubis. This gain was maintained by means of continuous extension. On January 22, 1887, an attempt was made to unite the opposite boundaries of the bladder, which failed, presumedly, in great part, in consequence of the tension due to the old cicatrix. The bladder was then covered by means of a single lateral Thiersch's flap at a later date, the exposed surface having been reduced in area from $3\frac{1}{4}$ by $3\frac{1}{4}$ inches to $1\frac{1}{2}$ by $1\frac{1}{2}$ inches, by the closure of the symphysial gap. The special features of the case were discussed, and some of the possible objections to the method considered, the following advantages being claimed for it: 1. Saving of time. In one of Trendelenburg's cases the whole procedure, excepting the closure of a small fistula, occupied eight weeks only. 2. A perfect mucous lining to the new bladder, interrupted only by a median cicatrix, is attained. 3. Failure of the primary operation in no way prejudices subsequent measures. 4. Should primary union fail, much smaller flaps are needed than in the usual operations. 5. The superficial area is not merely lessened, but a gradual backward sinking of the bladder wall accompanies the decrease in diameter. 6. The last two points are of special importance in cases like the one related, where cicatrices interfere with the ready fashioning of flaps. 7. The closure of the symphysial gap offers a better support for the abdominal viscera.

LUMBAR COLOTOMY.—At a recent meeting of the London Medical Society (*The Lancet*) Mr. Herbert Allingham read a paper on the "Causes of Failure to find the Colon in Lumbar Colotomy and the Manner of Obviating them." After some prefatory remarks on the frequency of failure in performing this operation, Mr. Allingham proceeded to discuss the anatomical structure of the large intestine. He said that the discovery of longitudinal muscular bands was the only sure sign of importance that the large and not the small intestine had been reached; these bands were detected more easily when covered by peritoneum, and therefore to insure the discovery of them, and the consequent reaching of the large intestine, the peritoneum should generally be opened. From the experience of himself and his father, he concluded that the best incision was one with its centre between the anterior and posterior superior spines of the ilium, and midway between the last rib and the iliac crest; it should be between two and three inches in length. He then discussed the various positions which the right and left colon might occupy with regard to their peritoneal covering. These fell under three heads: 1. When the peritoneum left the posterior part of the gut uncovered; according to his statistics this only occurred in 18.3 per cent. of cases on the right side, and in 16.6 per cent. on the left; in this case, if no longitudinal bands could be seen, the peritoneum should be intentionally opened. 2. When the colon was entirely surrounded by peritoneum, and possessed rather a short mesentery. Here the longitudinal bands could be neither seen nor reached without opening the peritoneal cavity, and, according to him, this occurred in 81.6 per cent. of cases on the right side, and in 83.3 per cent. on the left. 3. When the mesentery was much longer, so that the large intestine was liable to slip to the side of the abdomen opposite to that in which the incision was made. This condition had heretofore been the *crux* of operators. In both the latter cases it was indispensable to ascertain that the gut had longitudinal bands before opening it, and in both it was necessary to introduce the finger or the hand; the methods of so doing were demonstrated by diagrams.

ORGANIC POISONS IN RESPIRED AIR.—In a paper read before the *Académie des Sciences*, by Dr. Brown-Séquard, as the joint communication of himself and M. d'Arsonval, there are detailed the results of a study of respired air. It appears that in the air respired by all air-breathing animals, in addition to the poisonous carbonic-acid gas, there are other poisons, of an organic nature, and possessing properties akin to certain organic alkaloids. Among the experiments detailed were a series of intravenous injections of distilled water through which a current of expired air had been forced. In every instance the injection was followed by an enlargement of the pupil, marked slowing and irregularity of the respiratory movements, paralytic weakness of the hinder parts, especially the legs, and a rapid lowering of temperature. The action on the heart, at first feeble, with a tendency to lowering the number of beats, was, after a day or two, very strongly marked in the opposite direction, viz., great rapidity of beat. When more concentrated injections were given the foregoing symptoms were intensified, and to them was added a choleraic diarrhœa. The liquid which produced these effects was neutral in reaction, even to the most delicate tests. A further report is promised by the authors.

THE UTILITY OF LARGE AND LONG-CONTINUED DOSES OF PILOCARPINE IN BRIGHT'S DISEASE.—Drs. D. Benezúr and S. Csatáry, assistants to Professor Wagner in the medical faculty of Buda-Pesth, give the following summary of a series of articles on the effect of pilocarpine chloride in Bright's disease: 1. The patients become accustomed to the pilocarpine, and even large doses, such as six centigrammes, do not at a later period produce such disagreeable after-effects as doses of one centigramme at the beginning of the treatment. The injections of pilocarpine should not be discontinued in consequence of symptoms which had been considered as being dangerous. 2. The effect of pilocarpine on the daily secretion of saliva, sweat, and urine, as well as on the daily oscillations of the amount of hæmoglobin in the blood, is in most cases regulated by the stage of the disease and by the quantity of liquid which had been taken. 3. The œdema disappeared the more rapidly the larger the dose of pilocarpine given, and the less the quantity of liquid which the patient has taken. 4. Pilocarpine considerably increases the density of the blood, for from four to five hours. 5. The hydræmia in Bright's disease does not depend on the amount of the œdema. 6. The quantity of hæmoglobin in the blood diminishes, that is to say, the hydræmia increases when the general condition of the patient becomes impaired during the course of the disease. 7. When used according to the above-mentioned principles, pilocarpine will be found in most cases of Bright's disease, even when hot baths and other diaphoretics prove useless, always to diminish dropsy to such an extent that the patient is more or less protected against dangerous uræmic suffocative attacks. In this way it may be possible to obtain a relative cure; that is, in secondary granular contracted kidney.—*The British Medical Journal.*

ARTERIAL AUSCULTATION.—Apart from aneurismal bruits and the conduction of murmurs generated at the aortic orifice, the practice of auscultation of the arteries is not of much service. Yet the subject has often received attention, with comparatively little profit. Perhaps the chief difficulty toward a clear distinction of the sounds audible over the larger arteries lies in the fallacies due to the pressure produced on the vessel, and other conditions of which we are ignorant (*The Lancet*). Where, for example, is to be found a satisfactory explanation of the "subclavian murmur," at one time wrongly held to be distinctive of commencing tubercular deposit in the apex of the lung? Dr. Hockhaus has made a number of observations upon auscultation of the femoral artery in health and disease, in which he somewhat extends the conclusions arrived at by Weil in his work on auscultation of arteries and veins (Leipsic, 1875). The results obtained by Dr. Hockhaus are thus stated: 1. Pressure murmur and pressure tone are usually perceived in normal as well as in pathological cases; it is only where there is marked atheroma that the pressure tone cannot be produced, owing to the loss of elasticity of the arterial wall. 2. A spontaneous tone is heard (*a*) always in aortic incompetence, because the diastolic expansion of the artery is notably increased by the action of the hypertrophied left ventricle; (*b*) nearly always in uncompensated mitral regurgitation, in anæmia, and in febrile diseases, because in these affections the initial tension in the arterial system is lowered, while the maximum tension (during diastolic expansion of the vessel) remains, so that a marked difference is caused between them. 3. The double tone noted by Traube was seldom observed in cases of aortic regurgitation; but a diastolic double tone, due to irregular contraction of the ventricle, was more common. 4. The diastolic and systolic murmur (double souffle of Durosiez) is heard in all well-marked cases of aortic regurgitation, often also in combined aortic incompetence and stenosis; for the former it is pathognomonic, although it has in isolated instances been met with in typhoid fever, anæmia, and atheroma. Both murmurs are due to narrowing of the vessel. 5. With the exception of aortic regurgitation, ausculation of the femoral artery is of no prognostic or diagnostic value in disease.

THE MICROBES OF THE ALIMENTARY CANAL.—The importance of micro-organisms is daily assuming greater proportions. The part they play in the pathological processes of inflammation, and its consequences, suppuration and necrosis, have been already clearly pointed out. A fresh contribution has just appeared from the pen of M. Vignol, recording the results of experiments that have been for some time past carried on in the Laboratoire d'Histologie du Collége de France on the micro-organisms that are to be found in the alimentary canal (*The Lancet*). In the first place, M. Vignol made a careful investigation of the various forms of micro-organisms that are to be found in the mouth in health. Before commencing it, however, he naturally asked himself the question, What is the normal or healthy state? and the reply was fraught with so many difficulties, and was so immediately dependent upon the period of life, the food, and other conditions, that he found himself at last reduced to the examination of his own mouth and its secretions, after he had spent three months in the country. For the isolation and recognition of the different forms of microbes he obtained from the mouth, M. Vignol adopted the usual methods of procedure with sterilized gelatine, gelose, and agar-agar, in both sterilized air and in hydrogen gas. The results of his experiments give the astonishing number of eighteen distinct microbes, apart from ferments and the spores of moulds, which are only accidentally or occasionally present. Among these eighteen microbes six proved to be already well known—namely, the staphylococcus pyogenes aureus and albus, the leptothrix buccalis, the bacterium termo, the bacillus subtilis, and the vibrio rugula. Of the others, though some might have been seen by Rasmussen, Miller, and others, their descriptions were not sufficiently exact to enable them to be identified. Of the remaining twelve, only one, named the spirochete denticula, could not be artificially cultivated, and M. Vignol has commenced a fresh series of experiments with the hope of better success in this direction. The rest he distinguishes by italic letters, as bacillus *a*, bacillus *b*, and so on, giving their mode of growth and dimensions. M. Vignol has further endeavored to follow the action of the microbes on the food by inoculating milk and other fluids with pure cultures. By proceeding in this way he has found that the staphylococcus aureus and albus and the leptothrix buccalis (the very poisonous action of the former of which through the skin is now well known and was described by Professor Watson Cheyne in the lectures he has just given at the Royal College of Surgeons), while incapable of attacking or effecting the solution of albumen, fibrin, or gluten, and ineffective in converting potato-starch into sugar, yet when milk was inoculated with them coagulation took place, apparently from the development of various acids, among which lactic acid was the most conspicuous. On the contrary, the bacillus subtilis, the bacterium termo, and the vibrio rugula, with the several bacilli M. Vignol has discovered, all, or almost all, render albumen transparent and dissolve albumen and fibrin, though they appear to have little action on gluten and starch. The microbes found in the mouth seem to be capable of resisting the action of the gastric, biliary, and pancreatic juices, for several hours at least. The general conclusions at which M. Vignol arrives are that many microbes enter the economy with the food and are carried on by the saliva into the stomach. Here their activity may perhaps be temporarily lowered or arrested, while some may perhaps be destroyed, but the majority enter the small intestine and contribute by their action to render ingested substances soluble—that is to say, assimilable by the lacteals; their number, which rises to more than twenty millions per decigramme in the fæces, shows the intestinal media are favorable to their growth, and renders it probable that the part they play in the process of digestion and the transformation of food is not inconsiderable—conclusions that are quite in accordance with the views of Pasteur.

VIEWING THE CIRCULATION OF THE BLOOD IN THE CORNEA.—"At Professor Hirschberg's clinic, in Berlin," writes a correspondent of the *Kansas Medical Index*, "my attention was called to the fact that the circulation of blood in the blood-vessels of the cornea affected with pannus can be seen. If one could not see this in America it might almost be worth a trip across the ocean. By the aid of a strong lens one sees the circulation here almost as well as in the web of a frog's foot or in a fish's tail."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, July 21, 1888.

THE CAUSE OF DEATH IN HYPERPYREXIA.

IT is, of course, well known that the temperature of the body varies within comparatively narrow limits, and that when these limits are passed, on one side or the other, death inevitably follows. Claude Bernard placed the upper limit at about 115° F., but a much lower temperature than this is usually regarded as fatal, and it is seldom that an individual recovers from a temperature of 108°, maintained for any length of time. But though we know the fact that hyperpyrexia kills, we have never learned in what way it kills.

Bernard suggested that death, in these cases, was due to a coagulation of the fluid portions of the muscles, especially of those of the heart; but this explanation has never been accepted, since death often occurs before this rigor caloris takes place, and furthermore, the heart often continues to beat after respiration has ceased. An excessive bodily temperature undoubtedly weakens the heart, and this possibly contributes to the lethal issue, but in the light of clinical facts it cannot be regarded as the sole, or even as the most potent, cause of death. Another theory, even more unsatisfactory, is that the high temperature causes an expansion of the gases contained in the blood. Chaussat thought that death was due to an inspissation of the blood produced by an excessive evaporation through the skin and lungs, but if this were all, saline transfusions would suffice to prolong life indefinitely.

Dr. H. Vincent, of Paris, in a recent thesis, reviews the various theories hitherto offered, and shows that they are all equally untenable, and then proposes one of his own, which seems to him to be more reasonable and more in accord with the known facts. He has studied carefully the various symptoms, on the part of the circulation, the secretions, the respiration, etc., presented by those dying of hyperpyrexia, and also the lesions found post mortem, and concludes that death is due to an auto-intoxication caused by an accumulation in the blood of various waste products. The excessive temperature causes increased waste of the tissues, and also interferes with the speedy elimination of the poisonous products resulting therefrom. These poisons accumulate in the blood and act upon the central nervous system, more especially upon the respiratory centres. Death results, therefore, from an arrest of the respiratory functions.

It cannot be said that Dr. Vincent has solved the problem presented, but he has at least offered a more plausible explanation of the cause of death in hyperpyrexia than his predecessors in this line of reasoning. And his work will be not without value if it serves to awaken an interest in this subject, which seems to have been neglected since the death of Claude Bernard. The question is an important one, for, even with the new means of lowering the temperature of the human body which modern synthetic chemistry has given us, it is not always possible to prevent hyperpyrexia. If we but knew how death was brought about in these cases, we might be able to devise means of averting it for a time, until nature could reassert herself and bring the patient back within the lines of safety.

THE GOAT *versus* THE COW.

THE *British Medical Journal* advocates a wider use of goat's milk and a more systematic attempt to cultivate the lacteal resources of *Capra ægagrus*. Our contemporary's editorial ought to send joy to the hearts of the citizens of our now decadent Shantytown. Its arguments are that the cow's milk in cities is never free from the suspicion of infection or adulteration. The goat, on the other hand, does not have or very rarely has tuberculosis, is easily kept clean, and is a vigorous and healthy animal, thriving under almost any conditions; and, lastly, the goat's milk itself, as is well known, is more easily digested by infants than cow's milk.

The analysis of Gorup Besanez stands thus: The quantity of water contained in 100 parts of human, cow's, and goat's milk, respectively, is 88.9, 85.7, 86.35; of solids generally, 11.1, 14.3, 13.6; of casein, 3.9, 4.8, 3.36; of albumen, a trace, 0.5, 1.29; of fat, 2.66, 4.3, 4.3; of milk-sugar, 4.36, 4, 4; of salts, 0.13, 0.54, 0.62. Professor Fleischmann compares cow's with goat's milk as follows: There are of water 83.6 to 90 and 85 parts in cow's and goat's milk respectively; of fat, 2.8 to 4.5 and 4.8; of casein, 3.0 to 5.0 and 3.8; of milk-sugar, 3.0 to 5.5 and 4; of albumen, 0.2 to 0.6 and 1.2; of ashy salts, 0.4 to 0.8 and 0.7. These analyses agree in the main, and thus goat's milk, holding more albumen, is cheaper, bulk for bulk, than that of the cow. Taking everything into consideration, goat's milk might be provided at less cost than cow's milk. The chief advantage of the former lies in its ready assimilation by the digestive organs of the infant, owing to its relatively small proportion of casein, less than that of human, and much less than that of cow's milk.

THE RELATION OF THE EXCRETION OF URIC ACID TO DISEASE.

DR. A. HAIG, as the result of a series of observations and experiments upon the relation of the excretion of uric acid to disease (*Journal of Physiology*, vol. viii., Nos. 3 and 4), thinks that he has shown: 1. That the excretion of uric acid can be controlled by drugs and foods in a way and to an extent not previously known; that, whatever the amount excreted to-day, it may, within certain limits, be made either greater or less to-morrow.

2. That, when uric-acid excretion is diminished relatively to the urea, the diminution is due to retention in the liver and spleen, and possibly in some other organs and tissues, of part of the uric acid which was formed; and, conversely, when uric-acid excretion is increased rel-

atively to the urea, such increase is due to a washing out of a store previously accumulated in the above organs and tissues.

3. That the formation of uric acid bears an almost constant relation to that of urea, though its excretion can be varied by food and drugs to a considerable extent.

4. That uric acid is probably never in excess in the blood, except when alkalies or other solvents wash it out in considerable quantities from the stores which have gradually accumulated in the above-mentioned organs.

5. That excess of uric acid in the blood, brought about in this manner, is a sufficient cause of many of the symptoms of the diseases I have mentioned, and probably of others also.

6. That drugs and foods which diminish the solubility of uric acid diminish its excretion and lead to retention and accumulation; and, conversely, foods and drugs which increase its solubility facilitate its excretion and prevent retention.

7. That drugs which diminish the solubility and excretion of uric acid are harmful in the diseases connected with it, while drugs which increase its solubility and excretion are useful in these same diseases.

Dr. Haig found that his attacks of migraine could be produced at will by increasing the acidity of the urine and thereby favoring the retention of uric acid. He prefers to call migraine a uric-acid headache. Attacks of gout and many attacks of epilepsy he traces to a similar cause.

Referring to the effect of diet on uric-acid excretion, the table of Lehmann is given:

	Urea.	Uric acid.
Mixed diet..........................	32.4	1.1
Animal diet..........................	53.1	1.4
Vegetable diet..........................	22.4	1.0
Non-nitrogeneous diet................	15.4	0.7

This shows that, in fact, an animal diet increases the absolute amount of uric acid, though diet evidently affects much more decidedly the amount of urea. But Dr. Haig claims that the real significance lies in the fact that the uric acid is relatively diminished by an animal diet. Thus:

	Urea.	Uric acid.	Relation.
Mixed diet................	32.4	1.1	1-29
Animal diet...............	53.1	1.4	1-38
Vegetable diet............	22.4	1.0	1-22
Non-nitrogeneous diet.....	15.4	0.7	1-22

His view is that the amount of uric acid manufactured daily is in a fairly constant ratio to urea, viz., 1 to 33, Thus, he says: "It will be seen that on mixed diet there was slightly excessive excretion of uric acid; on animal diet considerably diminished excretion (retention), and on vegetable diet excessive excretion, some of the previous retention being washed out. And a continuance of the animal diet would obviously soon produce a store of uric acid sufficient to account for anything from a 'bilious' to a gouty attack. The results in these tables are similar to those I have obtained with various diets, and the relation of uric acid to urea are just those I meet with in my every-day work.

"I have been led to infer from all these facts, that while the formation of uric acid alters but little from its relation to urea of 1 to 33 (subject, I have no doubt, to some small variations) its excretion is subject to frequent and great fluctuations, which account for its action in the production of disease."

The effects of drugs are as follows:

Iodide of potassium has, in five-grain doses, but little action on the excretion of uric acid; in larger doses it acts apparently merely as an alkali. Iodine taken as the tincture has little or no direct effect.

Phosphate of sodium is a well-known solvent of uric acid, and it does, just as one would expect, greatly increase its excretion; it is probably the chief solvent of uric acid which is naturally present in the body.

Salicylates have the very important action of rendering the excretion of uric acid independent of acidity, that is, a rise in acidity does not cause retention while salicylates are present in the blood; and this fact may explain much of the value of these salts in diseases connected with uric acid.

Lead and iron.—The urates of these metals are very insoluble, and they cause, as one would expect, retention of uric acid, which, as we shall see, may explain their action in several diseases.

Colchicum.—This indirectly lowers acidity and facilitates the excretion of uric acid. It may also have a direct action on the nerves in relieving the pains of gouty arthritis.

PROFESSIONAL COURTESY.

ONE hears so much about the jealousy of physicians, of their mutual backbiting, quarrelling, and generally splenetic state toward each other, that it is really somewhat refreshing to learn that we are not in reality a disunited body. Our esteemed contemporary *The Journalist*, for example, has recently celebrated our united state in the following somewhat ferocious terms:

"There is not in this world to-day a more powerful, more monstrous, more unjust, and iniquitous organization in existence than that mysterious bond which fetters the medical profession as with links of steel, which is known as 'Professional Courtesy.' Professional courtesy is an excuse for neglect, for procrastination, for carelessness which is in too many cases tantamount to murder. It is no rash statement to assert that there are hundreds of cases known to physicians who are in other respects reputable men, where patients have died through the criminal neglect and stupidity of the attendant physician. Yet you could not worm an admission of that sort out of them in a court of law—they are bound by 'professional courtesy' to allow their ignorant, incapable fellow practitioner to go on murdering without a word of remonstrance."

Thus it seems that physicians do stand by each other after all. This is not very surprising, when one considers the difficulties and limitations of our art. When an architect miscalculates in building a bridge, his incompetency can be demonstrated mathematically, but when a chronic invalid with some obscure malady receives a series of prescriptions under which he or she gets no better, the incompetency of the physician is hard to prove. The malady may itself be impossible of recognition and of cure. Doctors know this. It compels them, if they have any sense of justice, to charity toward their fellows. We follow a difficult and laborious calling. There are black sheep everywhere, and sometimes, perhaps, "professional courtesy" has been made to shield them. But we do not think that harm often comes from its exercise, and, indeed, medicine could not be practised without it.

In one respect our contemporary signally errs. He says: "If you employ a physician to patch up the health of a member of your family, and you find after a reasonable trial that instead of building up he is tearing down, you can dismiss him and get another? Not much. Go and ask another physician to take the case and he will tell you blandly that 'professional courtesy' will not allow him to take another doctor's case, without the first doctor giving his permission, and if number one chooses to be ugly you have a boycott beside which the boycotts of the labor organizations are mere child's play."

A patient who is dissatisfied with a physician has only to say, in as amiable terms as possible, that he has no further need of the latter's services. He can then engage any other physician that he wishes.

News of the Week.

The Southern Surgical and Gynecological Association holds its annual session at Birmingham, Ala., on September 11, 12, and 13, 1888. Papers have been promised by a large number of the leading surgeons and gynecologists of the South. Dr. W. D. Haggard, of Nashville, Tenn., is President, and Dr. W. E. B. Davis, of Birmingham, Ala., Secretary.

The Texas Medical College.—We are glad to learn, with reference to this newly established college, that though not endowed, it has funds guaranteed which enable it to require three years' study and three full courses of lectures of its graduates. It gives a twenty-two weeks course. No new medical college should be opened, however, which does not require also a preliminary examination. We have three times as many colleges and twice as many doctors in this country as are really needed. There is only room for first-class colleges and first-class doctors, now. We trust the Texas Medical College will become the one and make the other.

Professor Virchow has been awarded the gold Boerhaave medal for Anthropology by the Scientific Society of Haarlem.

Common Slag is said to be a remarkably efficient material for deodorizing and absorbing fecal matter and urine.

Of the Much-advertised Operations for transplantation of the cornea, *The Lancet* says: "This operation has been frequently performed, but hitherto without permanent success. Various cases have been recorded by Messrs. Power, Sellerbeck, and others, in which the new cornea taken from cat or dog, the eye of which is preferable to that of the rabbit, has formed adhesions and retained its transparency for some days or weeks, but sooner or later the new cornea becomes hazy, contracts to a button, and is finally absorbed or sloughs out, and the patient remains unimproved."

The Sticking-plaster treatment of erysipelas is highly recommended by Professor Wölfler, of Grätz. Strips of isinglass plaster about the breadth of the thumb are applied over the affected surface.

A Cancer Quack, it is reported, has been told to be in readiness to attend Mr. Jay Gould.

Dr. T. M. Cheesman, of this city, died last week.

Dr. H. L. Burritt, of Bridgeport, Conn., died on July 11th. He graduated from Yale in 1844, and was a surgeon during the war of the Rebellion.

The Attempts to find a Microbe which will kill the Australian rabbits are being vigorously prosecuted. Pasteur's pupils, Drs. Hinds, Loir and Garmont, have arrived at Sidney and begun cultivating their chicken-cholera germs. They have also discovered the existence of charbon in Australia, and possibly the charbon bacilli may be used.

Science and Sentiment.—That the unswerving pursuit of science, *i.e.*, the study of natural phenomena, the weighing of evidence, and groping for facts and laws, dwarfs the æsthetic element in a person's character, there can be no doubt. No better illustration of this can be found than that of Mr. Darwin. He says in his autobiography: "Up to the age of thirty, or beyond it, poetry of many kinds, such as the works of Milton, Byron, Wordsworth, Coleridge, and Shelley, gave me great delight, and even as a schoolboy I took intense delight in Shakespeare. I have also said that formerly pictures gave me considerable, and music very great, delight. But now, for many years, I cannot endure to read a line of poetry. I have also almost lost my taste for pictures or music." Fortunately, the doctor has to deal not only with science but with human nature in every possible phase. His practical work tends to cultivate the better and kinder side of his character, and he is rarely in danger of the æsthetic atrophy which befell Darwin.

Billroth and Mackenzie.—Professor Billroth has sent the following letter to a German paper, in response to a request for his opinion upon the case of Emperor Frederick: "With reference to your request for my opinion on Mackenzie, I can only reply that I have always warned people against passing a judgment on a man who, as a physician, occupies so difficult a position. I have never doubted the correctness of the diagnosis of my Berlin colleagues, but I have also never been able to understand what political reasons had made it necessary to communicate this diagnosis to the whole world. It cannot be admitted that Mackenzie with his vast experience has ever doubted the correctness of this diagnosis. If he behaved in such a way as to imply that he had some doubt about the correctness of this diagnosis, this could only be owing to pressure from above or from motives of humanity. I know such situations from my own experience. One is not inclined to disapprove the statement of one's *confrères*, but at the same time one is not inclined to tell the patient that his malady is incurable, for the known want of infallibility in medical diagnosis is almost the sole ray of hope to the unfortunate incurables. Falsehood in such cases becomes a moral act. The entire behavior of Mackenzie must, no doubt, be judged from this point of view. He did as a man and physician what was still possible to be done when the unfortunate word 'cancer' had already been pronounced. In much the same terms as these I have on different occasions expressed myself as to Mackenzie's conduct. I ask you to consider this as a private communication, at least until the sad catastrophe has occurred in Berlin.—Yours most respectfully, Dr. Th. Billroth."

THE LATE DR. MILNER FOTHERGILL.—The turn of a physician's thoughts, writings and work is often affected by his own personal ailments. This was the case with the late Dr. Fothergill, who, during the last years of his life, suffered from diabetes and gout, and who wrote constantly on nutritional disorders. The *British Medical Journal* says of him: "Dr. Fothergill had for many years suffered from diabetes, of which the symptoms recently became much aggravated, and have now proved fatal, gangrene of the foot having set in followed by fatal coma. Dr. Fothergill's career was in many respects a remarkable one. Without friends, without official position, and never having been elected a Fellow of his College, Dr. Fothergill nevertheless attained a position of considerable influence in medical literature, and was justly esteemed as an authority of no little weight in a great variety of diseases, especially those connected with nutrition. His writings, which were numerous and voluminous, were vigorous in style, interesting in matter, and original in thought. Though his strongly pronounced personal characteristics may have interfered in many respects with his success in life, they made him a very marked and interesting personality. He was by birth and characteristics a Westmoreland dalesman, witty, humorous, though somewhat unpolished in speech and rough in manner. A certain sense of personal grievance, under which he labored during a large part of his life, made him often unduly aggressive, and thus interfered in some degree with his social and professional advancement; but his power, vigor, and genial humor brought him deservedly a very wide circle of friends who esteemed his independence of character and his intellectual power, and who will greatly regret his premature death." In some of Dr. Fothergill's later writings he had made a somewhat fanciful classification of persons who in this day suffer from gout and other nutritional diseases into the Norse and the Arab type; he himself was a pronounced example of the former type, which is unfortunately little adapted to the cramped physical surroundings of city life.

ARTIFICIAL CARLSBAD SALTS.—The fulsome advertisements of these salts in various ways may have tended to obscure the fact that very cheap and effective artificial preparations can be made. One of these is that suggested by Ziemssen: Sulphate of sodium, 40 parts; carbonate of sodium, 6 parts; chloride of sodium, 1 part. This should be dissolved in hot water, then the latter evaporated, the remaining salt powdered, and a proper dose of this (one-half teaspoonful) taken in hot or carbonated water.

THE PARADISE OF QUACKS.—It is stated in *La Voz de Hipocrates* that in the City of Mexico, containing some three hundred and fifty thousand inhabitants, the quack practitioners, male and female, are more than twenty-three times as numerous as qualified men, of whom about four hundred only have been recognized by the faculty of medicine. The irregular practitioners are thus classed: 1,800 so-called homœopathic doctors, 200 so-called dosimetric doctors, 3,000 male herbalists, 1,000 female herbalists, 100 female dosimetricians, 8,000 compounders, 300 male and female sorcerers.—*Lancet.*

PHYSIOLOGICAL MANIKINS IN THE PRACTICE OF MEDICINE.—The *Medical Press and Circular* makes the following extraordinary statement: "A 'Physiological Manikin' has just been introduced to the profession of this country which bids fair to revolutionize the teaching in medical schools; and as 'explanatory therapeutics' is becoming the order of the day, we may expect to hear that it has found its way into the consulting-room of many of our leading physicians. Already we learn that the example set by the profession in France, of explaining by models to patients the seat of their ailments and the *rationale* of proposed treatment, which has been found to impart the confidence so necessary to successful treatment, has lighted on congenial soil in America, where upward of five thousand copies of this said manikin are said to be already in the hands of the profession. Whether the same results will follow in this country remains to be seen. Certainly the manikin is a wonderful work of art, and we can readily believe that in the teaching of physiology in schools it will at once supersede the flat surfaces of pictures and diagrams hitherto in use." We very much doubt the statement that five thousand manikins, or even five of the kind above described, have been introduced into this country. A physiological manikin, to be worth anything, must represent so much work as to make it very expensive.

WE ARE GREATLY pleased to find so many of our readers familiar with the Scriptures. We have received from several esteemed correspondents statements of the book, chapter, and verse in Scripture which says that he who does not provide for his own is worse than an infidel—1 Timothy, chap. v., verse 8. That the verse furnishes no justification to the sordid advice of "keeping the eye on the fee, first, last, and all the time." is apparent.

DR. STEWART, OF LONDON, is to marry a sister of the Duke of Norfolk. This item of news is considered of sufficient importance to be cabled across the Atlantic. We venture to congratulate the Norfolk family on the prospective alliance, and meanwhile we await with impatience the column leader which the *Lancet* will write upon the important social event.

A MILLION DOLLARS FOR A SPANISH MEDICAL COLLEGE.—The first stone of a new medical faculty and clinical hospital for Barcelona was laid on May 28th. There was a great ceremony, the Minister of Education and all the municipal and university authorities being present. The government has assigned a million dollars for the buildings, and the local authorities have given the site.

A SIGNIFICANT ACT.—"Perhaps the most significant action on the part of the American Medical Association was the abolition, and upon motion of Dr. N. S. Davis, too, of the rule which compels all members to sign the code of ethics. Just what this vote portends is at present not apparent, but there must be some kind of a fish beneath the troubled waters."—*Kansas City Medical Index.*

ANTISEPSIS IN TYPHOID.—Intestinal antisepsis in typhoid-fever cases seems to be in a good way of becoming of the highest importance. In the treatment of such patients, Professor Bouchard first introduced naphthol, and Dr. Legroux is at present applying it in his service at the Children's Hospital with great success. As soon as a child is brought in suffering with symptoms of typhoid, the intestines are at once cleared out with calomel. given in doses of 0.30 to 0.60 centigrammes, depending on the child's age. The next day the intestinal antiseptic treatment is commenced as follows:

℞. Naphthol beta,
Bismuth salicylate, āā 2.50 grammes.

M. Divide into ten powders, and give one every hour in a wafer, or mixed with a little milk or brandy.

If the diarrhœa is not important, the bismuth may be left out and only the naphthol given, and if, on the contrary, there is constipation, then the following if used:

℞ Naphthol beta	2.50 grammes.
Magnesia salicylate	2.50 to 5 grammes.

M. Divide in ten powders, and give one every hour until the bowels are free, and then continue with the naphthol only, as before.

It will be found that there will be a diminution or entire suppression of intestinal meteorism, and that the stools are disinfected, no longer giving the fetid smell of typhoid, and also the mouth and tongue will clear up, the general state will improve, and the disease will run a short course.—Paris cor. *Phil. Med. Times.*

PRIORITY IN NEPHRORRHAPHY.—Texas is a great State, with a virile and progressive medical population, and a *Daniels' Texas Medical Journal* to see that the giant young republic gets its due. The said journal's latest claim for the Lone Star is that the late Dr. Dowell performed the first nephrorrhaphy for floating kidney. What Dr. Dowell really did, was to pass a seton through a movable tumor of the kidney and out of the abdominal wall. The patient subsequently went crazy. Dr. Smyth removed the kidney, which was found to have a scar in it caused by the seton. Dr. Hahn, in 1881, was the first to conceive and carry out the operation of nephrorrhaphy.

DOM PEDRO'S TREATMENT.—Some attention has been paid to the recent treatment by which the old Emperor of Brazil was brought out of his illness at Milan, and is now fast recovering at Aix-les-Bains. It was hypodermic injections of caffeine that saved him, and in this connection it should be remembered that caffeine is an uncertain drug, that has to be given in sufficient quantity in heart failure, and yet if too much is given it may prove fatal. It is also very insoluble in most or all of its salts, such as the citrate, etc., and it may be well in this connection to give Dr. Huchard's formula:

℞. Caffeine	2 grammes.
Benzoate of soda	3 "
Distilled water	6 "

M. (Make the solution while it is warm.)

From four to six injections per day, the usual syringeful used each time of this solution, is the proper dose. It will be found to act as a general tonic, a cardiac tonic, and above all as a *diuretic*, being perhaps the best of all for this last purpose. The salts of caffeine are not used here now at all, but the drug itself combined with benzoate of soda to make it soluble.—Paris cor. *Phila. Med. Times.*

SUGAR-STICKS FOR INEBRIETY.—M. Jean Desbouvrie, of Roubaix, has recently proposed to the Paris Academy of Medicine a novel remedy. From experiments made upon himself he is satisfied all the noxious effects of alcohol can be avoided if the drinker will take the precaution of fortifying his stomach beforehand with an appropriate food containing an adequate proportion of albuminous and fatty substances. M. Desbouvrie, thererefore, has invented a chocolate containing a certain proportion of albumen, specimens of which were sent to the Academy, together with the memoir. Those who feel like going on a spree will only have to munch a stick of the chocolate, and they may have a good time of it without fear of the to-morrow's headache.

URINE AS A VACCINE.—M. Bouchard claimed in 1884 that the urine of cholera patients contained the specific virus of the disease. He now, in a communication to the Académie des Sciences, announces that the urine in the "maladie pyocyanique," filtered and injected into animals, produces some of the symptoms of the original disease, and renders the animals refractory to subsequent inoculations of pure virus.

PENGAWAR DJAMBI, A NEW HÆMOSTATIC.—The *Therapeutic Gazette*, April, 1888, says editorially of this drug: "We have long used it in the physiological laboratory of the University of Pennsylvania as a hæmostatic. It was originally brought to us by Dr. Lautenbach, who had learned the value of it while working in the laboratory of Professor Schiff, at Geneva. To the physiological surgeon it is extremely valuable on account of its power of rapidly coagulating blood and forming a plug, which for the time being will stop hemorrhage even from large venous vessels. Thus, in opening up the spinal cord there is usually an excessive outpouring of blood from the torn sinuses, an outpouring which may be at once arrested by stuffing pengawar djambi into the wound. It is free from irritant properties, and we see no reason why it could not be made the bearer of antiseptic substances. Under its influences we believe that any cut surface would rapidly dry, and we trust some of our surgical readers will make a practical test and report the results in our columns."

Obituary.

DR. A. Y. P. GARNETT.

DR. A. Y. P. GARNETT, of Washington, D. C., ex-President of the American Medical Association and ex-Surgeon-General of the Confederate Army, died at Rehoboth Beach, Del., on July 11th, of heart failure. He had been severely ill for several days and was believed to be slowly convalescing. He left Washington for the seashore for the purpose of recruiting his failing health. He was born in Virginia in 1820, was graduated in medicine at the University of Pennsylvania in 1841, entered the United States Navy as Assistant-Surgeon the same year, was promoted Surgeon in 1848, and resigned in 1850 in order to accept the Professorship of Clinical Medicine in the National Medical College of this city. He married the eldest daughter of Henry A. Wise. At the breaking out of the war he left Washington and became Surgeon-General of the Confederate Army. He was the family physician of Jefferson Davis and of all his Cabinet officers, and accompanied Mr. Davis after the evacuation of Richmond. At the close of the war he returned to Washington, and was again elected a Professor in the Medical College. He was elected President of the American Medical Association in June, 1887.

Society Reports.

NEW YORK PATHOLOGICAL SOCIETY.

Statea Meeting, April 11, 1888.

W. P. Northrup, M.D., President, in the Chair.

The President presented, on behalf of candidates, a specimen of *Acute Suppurative Arthritis following Scarlatina*, and one of *Supernumerary Finger*.

Dr. Hodenpyle presented specimens showing

CARCINOMA OF THE PERITONEUM

and carcinomatous nodules in the liver, spleen, and body of the uterus.

Mrs. O——, aged forty, widow two years. Family history negative. She was married at the age of seventeen. up to which time she had always been healthy. She had had two children, the last thirteen years ago. No miscarriages. Menstruation was regular up to the age of thirty-four years. when it ceased. Since then she suffered for a considerable time, in place of her regular monthly periods, with difficult, painful, and frequent micturition, severe pain in the back, and slight swelling of the abdomen. In July, 1887, she was taken with pretty severe pains in the hypogastrium, coming on in attacks lasting about twenty minutes. In September of the same year she noticed a "lump" in the right iliac fossa which gradually grew in size, and was accompanied by swelling of the abdomen. She was then admitted into the New York Hospital, where she says she was examined under ether, that when she came out from the ether her abdomen was tightly bandaged, and when this was removed there was seen a small, nodular, soft, painful growth protruding from the umbilicus. She was a good deal emaciated, and a microscopical examination of the growth at the umbilicus showed it to be an epithelioma. Abdomen moderately distended. Liver normal in size. No splenic dulness. There was a semi-fluctuating mass in the right iliac fossa, three inches in diameter. There was also a large flat mass in the centre of the abdomen, to which the growth at the umbilicus seemed to be connected. The inguinal glands were enlarged. Upon examination per vaginam, the body of the uterus and the ovaries were found to be converted into a large, hard, dense mass. The patient died exhausted April 8, 1888.

Autopsy.—Rigor mortis not well developed. Emaciation extreme. Moderate anæmia of left leg. The right pleural cavity contained a small amount of clear fluid. The right lung was large and œdematous, and contained three grayish nodules about two cubic centimetres in size. The left lung was small, being compressed toward the vertebral column by an accumulation of clear serum, inclosed by a thick, rather soft, capsule. The fluid within was contained in a number of thin-walled sacs. Bronchial glands enlarged and very soft. The adjacent pericardium was greatly thickened. Heart was very small, otherwise did not appear to be abnormal. The abdomen contained a small amount of clear fluid. The growth at the umbilicus was continuous with a large irregular mass beneath the peritoneum, to which were attached the greater omentum and portions of the intestine. The diaphragm covering the liver was greatly thickened, and the liver immediately beneath was converted into a zone of yellowish-white tissue, about one centimetre in thickness, and considerably softer than the surrounding liver tissue. Scattered through the viscus were several large whitish masses, and the rest of the organ was moderately fatty. The spleen was soft, and contained a large tumor-mass. Pancreas, suprarenals, and kidneys showed no lesions. On the external surface of the gall-bladder, mesentery, intestines, and parietal layer of the peritoneum were a very great number of larger and smaller spherical or irregular masses. In the pelvic cavity was a large mass, partly cystic, on both sides of the uterus, the body of which was greatly enlarged, the cervix and endometrium being fairly normal. The bladder was normal. The ovaries could not be made out from the tumor-mass. The inguinal glands were greatly enlarged and thickened.

Dr. Lewis Hall Sayre presented a specimen of

ROUND CELL SARCOMA

of the arm, removed from a child the day before. The child had always been in perfect health until six years ago, when the mother noticed a small painless swelling on the anterior aspect of the forearm. Various diagnoses were made, and the treatment varied accordingly. Finally, an elastic armlet was applied and worn for four years, but was then discarded because of the discomfort which it caused. For the past two years there had been no treatment. The arm gradually increased in size, more rapidly during the past eight weeks, and measured, when Dr. Sayre saw the case, nine and one-half inches in its greatest circumference. It was distended cylindrically, and was moderately hard to the touch. There were no nodules to be detected, and there had never been any pain from the commencement.

An incision was first made, but it was seen to be impossible to remove the tumor, and the arm was therefore amputated. The new growth, which was attached to the periosteum of both radius and ulna, seemed to be a round-cell sarcoma. Dr. Sayre requested that the specimen be referred to the Microscopical Committee.

Dr. James E. Newcomb presented the spleen and liver removed from a patient dead of

SPLENIC LEUCOCYTHÆMIA,

with the following history: "Mrs. M——, aged forty-three, born in New York City, of Scotch parentage. One brother died of visceral cancer; family history otherwise negative. The patient was always in good health till the commencement of her fatal illness. Had been married twenty years, and had had three children, all of whom are living and healthy.

"In May, 1885, she had an acute malarial attack, and was in bed six or seven weeks. The disease was intermittent; at first quotidian, but later tertian. There was marked enlargement of the spleen. On getting up in July, the patient noticed this splenic tumor in the left side. At times it was painful, and she had great distress in the epigastric and right hypochondriac regions. There was no stomach disturbance and no other glands were enlarged. She came under my care in July, 1886. She was markedly emaciated, though free from any definite cachectic appearance. She had had considerable epistaxis in the previous few weeks. Menstruation had ceased at the time of the first malarial onset in 1885, and was thereafter present only irregularly. At no time was there hemorrhage from any mucous membrane other than the nasal. No urinary symptoms.

"At this time the abdomen was distended with a mass, hard at some points and fluctuating at others, and resembling on palpation an ovarian fibro-cyst. No distinct areas of splenic or hepatic dulness could be obtained. She continued to emaciate. The fluid in the abdomen was mostly absorbed. About November, 1887, an examination of the blood was made by Dr. W. B. James, who reported that it presented the appearances characteristic of leucocythæmia. At this time it was possible to map out the spleen with great distinctness; it commenced posteriorly at the usual line, and projected forward somewhat across the median abdominal line. and was considerably more than a hand's-breadth in width. The liver flatness ran down to the level of the umbilicus. There was no evidence of fluid in the abdomen.

"These, then, were the four features of the case: The splenic and hepatic enlargements, the blood changes, the emaciation, and the usual symptoms of anæmia. On February 11, 1888, the patient had a fresh epistaxis, continuing at intervals till her death. She complained greatly of præcordial pain. Was seen on the 13th, and an attempt made to plug the nares with styptic cotton. Only temporary relief was afforded. At noon, on February 14th, she suddenly died.

"As soon as a definite diagnosis was made, she was placed upon Fowler's solution in addition to her previous tonics. None of the remedies employed seemed to be of the slightest service in retarding the progress of the disease.

"*Autopsy*, five hours after death, Dr. James assisting.—Permission was given only to open the abdomen and remove the 'tumors.' The liver measurements were as follows: Transverse, 31 ctm. ($12\frac{1}{2}$ inches); antero-posterior, 16 ctm. ($6\frac{1}{2}$ inches). In thickness (back part, right lobe), $7\frac{1}{2}$ ctm. (3 inches). Weight, 2,624 gms. (5 lbs. 2 oz.). The measurements of the spleen were: Length, 26 ctm. ($10\frac{1}{2}$ inches); breadth, $13\frac{1}{2}$ ctm. ($5\frac{1}{2}$ inches); thickness, 6 ctm. ($2\frac{1}{2}$ inches); weight, 1,888 gms. (3 lbs. 11 oz.). The liver seemed rather soft in consistency, and the spleen was very hard. There was no enlargement of the retro-peritoneal or mesenteric glands. No evidences of peritonitis; no fluid; kidneys apparently normal."

Dr. Van Gieson showed some specimens illustrating

ACUTE LOCALIZED MENINGITIS, PYLORIC CARCINOMA, AND HYDRO-NEPHROSIS.

The specimens were taken from a strong man, aged thirty-five. Sixteen months before death the man began to have symptoms of gastric and hepatic disturbances, apparently due to the protracted ingestion of alcohol. There was morning vomiting, general emaciation, jaundice, and inability to take food well at times; but severe gastric pain was absent, and carcinoma of the stomach was not decided upon until after a physical examination, three months before death. Five days before death symptoms of meningitis occurred, with violent mania and continuous muscular tremor confined to the legs.

At the autopsy the surface of the pia was dry; on either side of the longitudinal incision there were two nearly symmetrically situated, raised yellow pellicles ($3\frac{1}{2}$ by 2 ctm. in diameter), involving the para-central lobules. Nearly surrounding the pylorus, involving diffusely all of the coats of the stomach, was a dense, whitish mass, about 4 ctm. in diameter and 1 ctm. thick. The left hepatic lobe contained several small, hard, white nodules. The left kidney was large and white. The pelvis of the right kidney was dilated, containing 240 c.c. of acid, turbid albuminous fluid, in which were many pus-cells and a few large granular, polymorphous, nucleated cells.

Dr. H. J. Boldt presented specimens showing a

SUPPURATING OVARIAN CYST IN A CHILD,

complicated by acute meningitis. The patient was aged four years. Eight months ago the parents noticed a tumor in the lower part of the abdomen, which gradually increased in size. There was no pain up to within three weeks, when the tumor became very tender on pressure, and the child seemed to suffer pain in the abdomen. One week ago the child suddenly grew worse, became feverish and restless. When first seen by Dr. Boldt it had a temperature of 103.4° F., the restlessness had given way to apathy, and the general picture was that of meningitis. The introduction of an exploring needle into the tumor, which extended above the umbilicus, showed the contents to be pus. It now became a question whether the cerebral symptoms were due to meningitis, or whether they were to be attributed to the presence of the suppurating tumor. In view of the possibility that the latter was the case, an operation was done without delay. The tumor was found to be a simple ovarian cyst, springing from the left side, and containing from one and a half to two quarts of pus. The sac was adherent to such an extent that removal was out of the question, so the walls were stitched to the abdominal wound, the cavity was washed out, and drainage was provided for. The patient did not improve after the operation, making it clear that the meningitis was the main complication, and this was borne out by the condition found at the autopsy. Death occurred two days after the operation. The interesting features of the case were the age of the patient with a suppurating cyst of the ovary, and the complicating meningitis.

Dr. Myers presented some specimens removed from the body of a child nine years of age, who had died from

STRANGULATED INGUINAL HERNIA.

The points in the history of the case, for which he was indebted to Dr. F. T. Hopkins, were as follows: The child had a congenital hernia. One evening the nurse noticed a dark-colored swelling in the groin, but did not think it had any significance and said nothing about it. The child soon after began to show evidences of intestinal obstruction; there were no movements from the bowels, the temperature was high, and there were a rapid pulse and shallow respiration. The child was seen at this time, and the question now was whether there was gangrene or not. It was thought that there was probably no gangrene, as the symptoms of strangulation had existed for so short a time, and it was therefore decided not to operate. Taxis was tried and the tumor was readily reduced. The child at first improved, but in about four hours symptoms of collapse appeared, and death supervened.

At the autopsy there was seen to be gangrene of the parts involved in the strangulation. The hernia was on the right side, and included a small part of the ileum, the cæcum, and the vermiform appendix. The case was particularly interesting from the fact that gangrene of the gut had occurred in a child in so short a time after the strangulation.

Dr. Frank H. Hopkins presented some sections of a

SUPERNUMERARY FINGER.

The specimen, from which the section was taken, was removed from a mulatto child, a female, at the age of three weeks. The fifth finger grew from the soft parts on the outer aspect of the first phalanx of the little finger of the right hand. It was attached by a slender pedicle, which allowed free movement. The pedicle was tied and the body snipped off. The finger thus removed was one centimetre long, half a centimetre thick, and had a well-developed nail and a joint. The microscope slide herewith presented showed a longitudinal section through the pedicle, through the cartilages, new bone, and joint. The points of interest were: 1. The intra-cartilaginous ossification in the distal extremity of the terminal phalanx. The specimen shows the new bone, new vessels tunnelling into the cartilage, osteoblasts, columnar arrangement of cartilage-cells in the region of the advancing vessels. 2. The joint in early life. 3. Vertical section of nail in its entire length. 4. Pacinian bodies.

The Society then went into executive session.

Stated Meeting, April 25, 1888.

W. P. Northrup, M.D., President, in the Chair.

Dr. H. M. Biggs presented, on behalf of a candidate, specimens of *Carcinoma of the Stomach* with secondary growths in other organs.

The President presented, on behalf of candidates, a specimen of *Lupus Vulgaris Nasi*, and one of *Fluctuating Mammæ in a boy* aged seven days. The glands contained milk.

Dr. Biggs reported from the Microscopical Committee that the specimen shown at the last meeting by Dr. Lewis Hall Sayre was one of round-cell sarcoma growing from the periosteum.

Dr. C. R. Hexamer presented a specimen of

ANEURISM INVOLVING THE THORACIC AND ABDOMINAL AORTA,

removed from the body of a man seventy-three years of age, who had entered St. Francis' Hospital a few days after the blizzard of March 12th, complaining only of exhaustion from exposure, and seeking rest for a few days to recuperate. He was remarkably robust-looking for his age, and was in good physical condition. He said he had not been sick a day for forty years. The heart action was very feeble, and a bruit was heard both anteriorly and posteriorly. One day, without any premonitory symptoms, the man suddenly had an attack of syncope, went into collapse, and died in about twenty minutes. At the autopsy an aneurism was found of the arch of the aorta, and another of very large size on the abdominal aorta. The latter filled one-half of the abdominal cavity, the sac being eight or nine inches in length by four inches in diameter. The interesting points were the large size of the sac, the double lesion, and absence of all symptoms pointing to the presence of aneurism.

Dr. Mary A. Dixon Jones presented a microscopical specimen of

SARCOMA OF THE CERVIX UTERI.

The specimen was presented not so much to demonstrate the sarcoma as to show that the cervical portion of the uterus was hyperplastic before the invasion of the sarcoma, and that the protoplasm of the sarcoma first invaded the newly formed fibrous connective tissue. This verified the assertion of Thomas Addis Emmet, that cervical lacerations may be the cause of, or invite, malignant growths.

Dr. Jones presented a second specimen, showing an

OVARIAN CYST AND CIRRHOTIC OVARY,

removed by operation from the body of a woman, twenty-two years of age, who had been sick for the last five years, during the whole of which time she said she had not had a well day or one free from pain. She had been under the care of several physicians, and apparently the trouble was an extreme retroversion of the uterus, the organ being so extremely sensitive that it resisted all efforts at replacement. By manual examination a large sensitive mass could be detected in front of the uterus and adherent. She was under treatment for some time in the Woman's Hospital of Brooklyn, but without obtaining any relief. Four days ago an abdominal section was made, and a growing ovarian cyst, three inches in diameter, was found in front of the uterus, and bound down by many adhesions. During removal it burst, and a straw-colored fluid escaped. The left ovary was atrophied and dragged far up on the left side, and ensheathed by firm adhesions.

Dr. Jones also presented some microscopical specimens, showing the uterine appendages in a case of

UTERINE MYOMA.

The right tube, measuring ten inches in length, was coiled upon itself and filled with bloody serum. The closed fimbriated extremity was four and three-fourths inches in circumference.

The muscles of the walls of the tube had almost entirely disappeared, being replaced by fibrous connective tissue. A few remnants of the muscle-fibres had become waxy, and these were breaking down into inflammatory corpuscles. The epithelia of the mucosa had entirely disappeared, no remnants of them were left; and there were only a few remains of the folds of the mucosa left, and these were entirely changed to fibrous connective tissue, almost cicatricial. There were many newly formed blood-vessels with thick walls, and the newly formed fibrous connective tissue was crowded with inflammatory corpuscles.

The left tube was five inches in length and filled with pus. Almost the entire muscular structure of this tube also had disappeared, or was changed to fibrous connective tissue, and this new tissue was crowded with inflammatory corpuscles which, in many places, formed abscesses. The few scattered bundles of smooth muscle left were in a state of intense inflammation and beginning ulceration.

Also, in the left tube, the epithelia of the mucosa were entirely destroyed, and the mucosa was crowded with inflammatory corpuscles. Only a few blunt remnants of the folds of the mucosa were left, and these were in a state of intense inflammation. Amid these thickly crowded inflammatory corpuscles were seen in every part coarse bundles of fibrous connective tissue, showing that the mucosa had previously been invaded by a plastic inflammation, of which, probably, there had been repeated attacks. Also in the mucosa, or in the previously formed tissue, there were seen many newly formed blood-vessels.

The ovaries also gave evidences of extensive changes from long-existing disease; only a vestige of normal ovarian structure was seen, nor could an ovum be found in either ovary. Though the pathological changes showed long-existing chronic disease, yet portions of the ovary were in a state of acute inflammation; thus it would be properly diagnosed

SUBACUTE OÖPHORITIS.

When it was remembered that the disease of the appendages had been existing a long time, most probably antedating the formation of the myoma, Dr. Jones thought that the question might fairly be raised whether the diseased appendages had not produced the myoma.

Dr. H. M. Biggs presented a number of specimens illustrating a series of aneurisms. The first was one of

ANEURISM OF THE ARCH OF THE AORTA,

situated at the junction of the transverse with the descending portion, removed from the body of a negro dying in the penitentiary. The man presented signs of lobar pneumonia, but had no symptoms suggesting an aneurism. He was suddenly taken with syncope while at stool, and died in a few minutes. At the autopsy an aneurism of the arch of the aorta was found, which had caused erosion of the vertebræ, and had ruptured into the œsophagus. The lesion in the left lung was a very striking one, and its exact nature had not yet been ascertained. There was a very distinct and sharply defined red and white mottling, which at first sight seemed to be caused by multiple lympho-sarcomata. The microscopical examination had not been completed, but it had gone far enough, however, to show that this was not the lesion.[1]

The President said that the gross appearances in the lung were similar to those seen in the lungs of children who had died of lobular pneumonia, especially when the disease occurred secondarily to diphtheria.

The second specimen was one of

DISSECTING ANEURISM OF THE AORTA.

In this, the starting-point for the separation of the coats of the aorta was in its first part, just above the valves, and the dissection had proceeded up over the arch, and then down, involving the entire length of the thoracic aorta, passing through the diaphragm, and terminating in the abdomen. The man had died suddenly. No history of the case was obtainable.

Dr. Biggs also presented a third specimen showing

MULTIPLE ANEURISM OF THE AORTA.

First, there was a dilatation of the aorta just above the valves. Then, upon the transverse portion of the arch, immediately before its termination in the descending portion, there was a saccular dilatation, and from this arose a second sac. Finally, there was another aneurism on the descending aorta. The woman from whom the specimen was taken was an inmate of the workhouse, and had died of pneumonia. During life a small pulsating tumor had been noticed, but there were no other signs indicative of the condition found after death.

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[1] At a meeting of the Society, held on May 23d, Dr. Biggs reported that he had completed the microscopical examination of the lung, and had found that the peculiar mottling was caused by a combined lobar and broncho-pneumonia. The red color was due to the lobar pneumonia, and the white areas showing through the red were the infiltrated walls of the bronchi.

Dr. H. P. Loomis presented a specimen of

ABSCESS OF THE LIVER, WITH PERFORATION OF THE DIAPHRAGM,

sudden death occurring under ether. The patient, a man about thirty-eight years of age, came under observation on March 2d. His family history was good. He acknowledged having had syphilis, and said he was accustomed to go on periodical sprees. He had enjoyed perfect health up to four years ago, at which time, during a period of eight months, while residing in Kansas City, he had severe attacks of malarial fever, accompanied by diarrhœa and bloody stools. After leaving Kansas City he recovered his accustomed health until a year ago, when, after taking cold, he was seized with an attack of dysentery. The patient gradually recovered from his dysentery, but found now that any indiscretion in eating or in the use of stimulants would bring back a diarrhœa, accompanied by tenesmus and the passage of blood. Last Christmas the patient went on a spree, and after that he was much worse, having on an average as many as seven bloody movements daily, accompanied by tenesmus. Lately he complained at times of intense pain over the region of the liver, and was slightly jaundiced.

On examination all the organs were found in apparently healthy condition, with the exception of the liver, which was enlarged, the left lobe projecting about two inches below the free border of the ribs. The organ was tender on pressure. The patient's general condition improved during March, although the dysenteric movements continued, and percussion showed that the liver was increasing in size. He had no fever nor chills at any time. On April 2d the patient began to grow worse, the signs of subacute pleurisy on the right side developed, and the dysenteric movements increased up to about twelve a day. On April 6th the fluid in the right pleural cavity had increased to such an extent that an aspirating needle was introduced at the level of the sixth rib, two and a half inches from the median line, and twenty ounces of amber-colored serum, containing some flocculi of lymph, were withdrawn.

A few days after, when the needle of a hypodermic syringe was introduced one inch below and one and a half inch to the outer side of the point where the aspirating needle was previously introduced, a reddish purulent fluid was withdrawn, which, on microscopical examination, presented the appearance of fluid from an abscess of the liver. About two inches above the point whence the purulent fluid was withdrawn, a needle was introduced and clear serum was obtained. The case was diagnosed "an abscess of the liver," and an exploratory opening was advised.

On April 14th the patient was placed on the operating table and ether administered. Suddenly he became cyanosed and stopped breathing. All means to restore him failed, and he died without a cut being made.

Autopsy, made thirty-six hours after death: The right pleural cavity, for its upper three-fourths, was filled with serum in which were shreds of fibrin. At the lower fourth was a pus-cavity, enclosed by adhesions, which communicated, by an opening in the diaphragm close to the ribs, with an abscess of the liver. The opening in the diaphragm would barely admit the index-finger.

The abscess of the liver was a small superficial abscess, situated in the back portion of the right lobe, four and a half by four inches in diameter, and about two inches in depth. The weight of the liver was six pounds, and its structure was normal. The left lung was normal. The right lung was compressed against the vertebral column by the fluid in the right pleural cavity.

The heart weighed 250 grammes, and showed marked dilatation of the left ventricle, with thinning of the walls. The thickest part of the right ventricle was hardly half an inch thick. There was no valvular lesion, but quite extensive atheroma of the aorta and of the coronary arteries. A microscopical examination of the cardiac muscle showed very extensive interstitial myocarditis.

The other organs were normal, with the exception of eight or ten dysenteric ulcers involving the cæcum.

The two interesting points of the case were: 1st, the peculiar encysted condition of the pus from the abscess after it had perforated the diaphragm, together with the serum in the upper portion of the pleural cavity; 2d, the sudden death from only a few whiffs of the ether, due, no doubt, to the extensive myocarditis which was not recognized during life, although the patient had been examined by some of the best diagnosticians in the city.

The President reported the case of a young man who had a history of gall-stones and an affection of the liver. He was expectorating a very foul-smelling, purulent fluid. Paracentesis was performed without ether, as it was feared that the other lung might become infected by the passage into it of this purulent matter during narcosis. The chest being opened, a sound was passed down through the diaphragm into the liver. The patient was at death's door for three days, but then began to rally, and is now a strong and healthy man.

Dr. H. J. Boldt presented a specimen of

EXTRA-UTERINE PREGNANCY.

The patient was referred to him, on account of a tumor in the abdomen, by Dr. Krollpfeiffer. She had recently passed through an attack of acute peritonitis, and, at the time Dr. Boldt first saw her, had a temperature of 102° F. in the axilla, and presented the appearance of one suffering from pyæmia. The tumor extended as high as the umbilicus, and the first thought was that it was a gravid uterus, especially as the menses had stopped seven months before. Examination, however, showed that the uterus was empty, and that the tumor lay to the left of this organ. The case was then diagnosticated to be one of abdominal pregnancy, and an operation was advised and agreed to by the patient. The operation was one of unusual difficulty, as the intestines were very strongly adherent to the sac. The right tube could be traced, but the corresponding ovary could nowhere be found. The walls of the sac were very thick, and an attempt was made to suture them to the abdominal wound; but this was only partially successful. The patient did well for about twenty-four hours, but then began to sink, and died in a few days. The fœtus had died at about the sixth month.

Dr. Frank Ferguson presented a specimen showing an

ANEURISM OF THE ASCENDING PORTION OF THE ARCH OF THE AORTA OPENING INTO THE PULMONARY ARTERY.

The specimen was taken from the body of a man, forty-five years of age, who was admitted to St. Luke's Hospital, in the service of Dr. F. P. Kinnicutt, on February 17, 1888.

He entered the hospital at 5 P.M., suffering from extreme dyspnœa. His face and hands were cyanotic. The heart action was very rapid, and there were murmurs which were masked by the presence of numerous moist sounds over the chest during respiration. He could not lie down, and suffered intensely from dyspnœa. He became more and more cyanotic, his pulse was imperceptible at the wrist, and after a slight exertion he suddenly died.

The *autopsy* was made twelve hours after death. The heart was found increased in size; the ventricles were dilated, and there was fat in the muscular tissue. The aortic and mitral valves were competent. There was an aneurism as large as an ordinary hen's egg in the anterior wall of the ascending portion of the aortic arch. There was found a rupture of the wall of the sac and an erosion of the posterior wall of the pulmonary artery, establishing a free communication between the aorta and the pulmonary artery by a circular orifice one-half inch in diameter. This orifice was situated just above the pulmonary valve. One of the cusps of the pulmonary valve was adherent to the wall of the artery for a distance of one-fourth of an inch, which must have rendered the valve incompetent.

A second specimen was also one of

ANEURISM OF THE ARCH OF THE AORTA,

taken from the body of a man, fifty-three years of age, who was admitted to the New York Hospital, in the service of Dr. E. L. Partridge, on April 5, 1888. Nine months previous to his admission he had malarial fever, and eight months later he had a slight attack of rheumatism.

For the past few months he had had muscæ volitantes, headache, dyspnœa on exertion, slight palpitation, morning nausea, and vomiting. During the three weeks preceding his admission into the hospital he passed a diminished quantity of urine of high color, but showed no other nephritic symptoms.

He had a well-marked alcoholic habit. For some years he had been subject to a slight cough, which. during the five months preceding his residence in the hospital, was accompanied by a whitish expectoration. During the last three or four weeks of this time his abdomen became distended, the distention increasing his dyspnœa. On admission his appetite was poor, and his bowels were constipated, but his chief complaints were weakness, cough, distention of the abdomen, and dyspnœa.

Percussion revealed dulness from the second rib, on the left side, to the left apex, but below the second rib the percussion note was normal. The expiration was prolonged and low-pitched, and there were sonorous rhonchi on inspiration, and on expiration many sibilant râles and sonorous rhonchi, with an occasional coarse, moist râle.

Posteriorly, over both sides, the physical signs were similar, but more marked in degree. The superficial cardiac area could not be determined, owing to pulmonary resonance. The aortic sounds were normal. At the apex the cardiac sounds could not be heard. The pulse was small and wiry, and the legs were markedly œdematous.

His case was diagnosticated as chronic diffuse nephritis and cirrhosis of the liver. Under appropriate treatment he improved considerably until April 15th, when he felt pain in his left chest, his respiration became gasping, and he suddenly died. The autopsy revealed 3,000 c.c. of pure blood in the left pleural cavity. There was an aneurism of the transverse portion of the arch of the aorta, ovoidal in shape, 14 ctm. in length and 10 ctm. in diameter. The sac was almost filled with laminated fibrine. The orifice of communication with the aorta was oval in shape, and 5 by 4 ctm. in size. The sac had ruptured on the left side, giving rise to the escape of the blood into the left pleural cavity by a slit-like opening, 2 ctm. in length. The aorta was very atheromatous and dilated. The great vessels arising from the arch were to the left of the opening in the aortic wall, and the blood in the aorta entered freely into these vessels. The left subclavian vein contained a small thrombus. The valves of the heart seemed competent, and the heart was normal in size, while the muscular tissue was anæmic. The kidneys were found in a state of chronic diffuse nephritis. There was much fibrous tissue in the liver; the lungs were normally supplied with blood and well distended with air, and they covered in the aneurism completely. The heart was displaced downward slightly. The œsophagus and trachea were apparently free from pressure.

Dr. Ferguson then presented another specimen showing an

ANEURISM OF THE THORACIC AORTA OPENING INTO THE ŒSOPHAGUS.

It was taken from the body of a man, fifty years of age, who was admitted to the New York Hospital, under the care of Dr. George L. Peabody, on September 22, 1887. Three years previous to admission he began to have pain in the left shoulder, which gradually grew worse, and one year later he developed a cough, accompanied by a white expectoration. Ten days before his admission he suffered from dyspnœa and dysphagia. His appetite was poor, and the bowels were constipated, but his pain was his chief complaint.

The cardiac area was found diminished in extent, and the cardiac sounds were faint, but otherwise normal. The pulse was of fair tension, and the arteries were tortuous and atheromatous. He was poorly nourished. There was no œdema. On the back, occupying the inter-scapular region, and extending to the left side, there was a large tumor measuring twelve inches in vertical diameter and eight inches horizontally. Over this swelling expansile pulsation was felt, but no murmur could be heard. Over the entire extent of the swelling there was flatness. During his residence in the hospital he suffered considerable pain, which was always, however, relieved by morphine. About ten minutes before he died he suffered intensely from dyspnœa, and had also a severe attack of coughing and vomiting of blood.

At the autopsy there was found a large aneurism, occupying the posterior half of the left pleural cavity, above the seventh rib, and extending four inches beyond the median line on the right side.

The aneurism was filled with laminated fibrine and partially coagulated blood. When the sac was removed, with a portion of the vertebral column, it was found to measure nine inches transversely and seven and one-half vertically. The third and the seventh ribs were partially eroded, and those between them completely severed. The sac communicated with the aorta by an opening one inch in diameter, and located three inches below the origin of the left subclavian artery. On the median line, in the posterior wall of the œsophagus, on a level with the bifurcation of the trachea, was a small opening through which blood escaped from the aneurismal sac. This opening was one-fourth of an inch in diameter. Several of the dorsal vertebræ were very deeply eroded. The heart was normal in size, and the valves were competent.

Dr. West Roosevelt presented two specimens of

SARCOMA OF THE MEDIASTINUM.

Case I.—Anne S——, aged thirty-eight years, was admitted to Roosevelt Hospital on July 26, 1883. Mother died of phthisis. Seems to have had no important sickness till last March. Then had "pleurisy" lasting three weeks. About April 15th returned to work. Soon had dyspnœa on exertion, cough in the morning, with whitish sputa; occasional pain in back. Six weeks ago a swelling appeared in the right arm and wrist, and soon spread up the arm and involved the shoulders, head, and neck. During the last few weeks the patient had suffered from darting præcordial pains. The urine was acid, sp. gr. 1.027, contained a trace of albumin, but no casts—there were abundant urates. Diagnosis: Signs of pressure on the trachea or bronchi, most on right side. May have aneurism pressing on cava descendens and trachea. Œdema due to thrombosis. Both radials are very feeble. right possibly a little more than the left, but no marked difference. Sibilant rhonchus takes the place of the respiratory murmur on the right side in front, on the left side front exaggerated respiratory murmur. Marked dulness in the right chest in front and behind. Absent vocal fremitus on right side. No heart murmurs.

Several severe attacks of dyspnœa, without spasm of glottis, occurred on August 14th, and the following day the patient died.

Autopsy, August 16, 1883.—The heart was of normal size. Ante-mortem clot in right ventricle and auricle, and running into pulmonary artery. In the thorax was a new growth occupying the entire mediastinal space, surrounding the main bronchi of the right lung, causing almost complete obliteration of the superior vena cava, in which was a firm thrombus. The tumor extended upward in front of the trachea as far as the thyroid, sending projections upon each side of the larynx. It was adherent to the last cervical and first dorsal vertebra, and extended forward to the first rib, to which it adhered on the right side. It extended downward to about an inch above the diaphragm. A large part seemed to be composed of enlarged and adherent lymphatic glands. The tumor on section was white and pinkish-white in different places. Some portions contained a good deal of "cancer juice" and some were quite dry. The jugular, innominate, and subclavian veins on the right side all contained thrombi, where they entered the tumor. The walls of the jugular on the right were completely infiltrated, and the lumen of the vessel was almost obliterated.

The tumor, under the microscope, was found to be formed of a fibrous tissue stroma, which had embedded in it large and small round cells. It was very vascular. The lymphatic glands in the neighborhood were enfiltrated with similar growth. The walls of the bronchi and of the large veins near the tumor were similarly infiltrated.

Case II.—William H——, aged eleven years, admitted August 25, 1883. The patient was moribund on admission. Child had been sick for only two months. He had œdema of the face and a cough. About six weeks ago a swelling as large as a goose egg appeared in the axilla. It was not painful and soon disappeared. Dyspnœa had been present for six weeks, worse at night. The child had lost flesh, especially during the last two weeks. On admission there was marked orthopnœa and considerable œdema of the upper extremities was noted. The patient died the day following admission.

Autopsy.—On opening the thorax a new growth was seen occupying the entire mediastinum, sending a process up along the left of the trachea as far as the larynx. It compressed the trachea to about one-half its normal size, and compressed and almost obliterated the descending cava and right jugular and innominate veins, also the right carotid and subclavian arteries, and slightly the transverse arch of the aorta. The left carotid and subclavian veins were also compressed. The left jugular and innominate and subclavian veins could not be found. The growth infiltrated the walls of these vessels. The bronchi of the left lung, for a distance of about an inch and a half from their entrance into the lung, were infiltrated and compressed. The upper lobe of the left lung was in great part converted into tumor-tissue, with a few masses of compressed lung-substance between. Numerous patches of gray lobular pneumonia were seen in the remaining portion of this lung. The upper lobe adhered throughout to the chest-wall. The left chest was nearly full of clear serum, but there was none in the right. Pericardium was distended with liquid blood. The valves, as well as the myocardium, seemed normal. The tumor resembled the other in microscopic structures.

Tumors of the mediastinum are rather rare, and they are of interest on account of this comparative rarity. In the first case the diagnosis became pretty clear. The physical signs indicating pressure on a large bronchus, and the symptoms pointing to the obstructed superior cava, were very pronounced. From the histological structure of the neoplasms it seems probable that they had their origin in the bronchial or mediastinal glands.

The Society then went into executive session.

Small and Pleasant Doses.—"Why," asks the editor of the *Kansas City Medical Index*, "give nasty tincture of digitalis when a triturate of digitaline, tasteless, will accomplish the same end? Why give castor-oil or Epsom salts (ye gods! no wonder children cry! Doctor, did you ever take a tablespoonful of castor-oil?) when a fourth or half grain of the officinal triturate of elaterine, perfectly tasteless in a little sugar of milk, will cause free and painless evacuations? Why give bromide of potassium in simple water—nauseous, disagreeable—when by the aid of modern pharmacy its taste may be disguised, as in the elixir of bromide of potassium? Why give large doses of quinine to control the fever following indiscretions in eating, so often met in children, when a light purge followed by a half-drop of aconite every hour or two in water will attain the same result in less time?"

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE CROONIAN LECTURES AT THE COLLEGE OF PHYSICIANS —NEW FACTS AS TO HEAT RADIATION—PYREXIA IN RELATION TO EVOLUTION—IS PYREXIA SALUTARY?—RECENT DEATHS—DR. HARRINGTON TUKE AND DR. MILNER FOTHERGILL—THE COLLEGE OF SURGEONS.

London, June 30, 1888.

Dr. Donald Macalister's recent lectures at the College of Physicians on "Antipyretics" have been, to some extent, complementary to the Gulstonian Lectures delivered by him last year at the same institution. In the latter he had intentionally passed over the treatment of fever. In his present course he did not propose, he said, to limit himself to the antipyretic drugs and their pharmacology, but would discuss rather the light thrown on the nature of fever by the means employed successfully for its treatment, and also the lessons in the treatment of fever which flowed from a right understanding of its nature. He briefly recalled the outlines of the theory he presented last year, and spoke of the nervous mechanisms of heat-loss or thermolysis, of heat-production or thermogenesis, and of heat-balance or thermotaxis. These mechanisms constituted the thermal nervous system, and were in an ascending order of complexity and of evolution. Fever was a dissolution, beginning with thermotaxis and extending to the inhibitory mechanism of thermogenesis; hyperpyrexia was a still deeper dissolution, and extended to thermolysis. The lecturer then went on to call attention to some recently acquired anatomical and physiological facts which had not, in his opinion, received as yet sufficient attention. Some valuable experiments on the physiology of thermolysis had been made recently by Dr. Masje, under Professor Eichhorst, of Zürich. These experiments involved high skill in physics and in mathematics, and had therefore possibly been overlooked. They related to the radiating power of the skin. Dr. Macalister said that probably sixty per cent. of the heat leaving the body did so by radiation. It had been assumed that this loss was regulated by the known physical laws of radiation. The physical law was that a hot body radiated less as its temperature fell. This, however, was not the physiological law. At the Zürich hospital, by the aid of an instrument of great delicacy and precision, on the principle of Langley's holometer, the true laws of skin radiation had been worked out. A part of the skin suddenly uncovered naturally became cooler, but it was found that its radiation increased steadily as the temperature fell until a certain limit was reached. Radiation was found to be more intense in men than in women, in boys than in girls, in young persons than in old, and in the vigorously healthy than in the feeble, or those convalescing from illness. There were reasons for believing that the radiating power of the skin, which depended upon its physical and chemical constitution, was subject to nervous control; what was apparently the most purely physical of all the thermolytic processes was thus not outside the domain of the thermal nervous system. I have referred to the abstruse nature of the researches of Dr. Masje. I may say, *en passant*, that in Dr. Donald Macalister the audience had a lecturer well fitted to interpret to them the results of experiments involving a knowledge of the higher branches of mathematics and physics. Dr. Macalister is not only a scientific and painstaking physician, but a mathematical scholar in no mean degree, having graduated at Cambridge as senior wrangler in the Mathematical Tripos of 1877. He then turned his attention to medicine, and having graduated in medicine also, became physician to Addenbrooke's Hospital, Cambridge, and Lecturer on Medicine at the University.

The lecturer then went on to speak of the connection between peripheral and central temperatures. Referring to the apparent lawlessness of surface temperatures as taken by any of the ordinary methods, he said that recent inquiries carried out at Zürich, under Professor Eichhorst, had shown that the difficulty lay chiefly in an erroneous method of procedure. When peripheral temperatures were taken continuously for eight or ten hours, the curves obtained consisted of two portions both in health and disease. During the first hour or two ("ambiguous stage") the temperature was highly irregular, and different from the central temperature. The second period ("continuous stage") was marked by much greater uniformity and by nearness to the central temperature; like the latter, it tended to be constant and stable. Some valuable contributions to the anatomy and physiology of the nervous system were then referred to by the lecturer. He said that new points (he would not call them centres) in the thermogenic tract had been made out by Ott and others in America, using the methods and working under the inspiration of Professor Wood. In the rabbit four points in the cerebral axis were known, the stimulation of which gave rise to increased heat-production, not merely rise of temperature. Two were at the anterior and median borders of the corpus striatum, one between that body and the thalamus, and a fourth at the anterior end of the thalamus. Dr. Hale White had, in part, verified the localization as regarded the anterior striate centre, and had made out that unilateral irritation gave rise to bilateral pyrexia. The question was then discussed of whether these points were on excitor or inhibitory tracts, and the experiments of Girard in Geneva, and Baginsky and Lehmann in Berlin, were adduced. They were apparently contradictory, but Dr. Macalister pointed out in detail how they might be reconciled.

In his second lecture, Dr. Macalister dealt with what he said might be termed the teleological pathology of fever. In all ages some had maintained, and the proposition was now being revived, that fever was not wholly nor in itself injurious. It was regarded as a wholesome reaction against a materies morbi, a manifestation of the vis medicatrix. Cohnheim had said that it might plausibly be maintained that in febrile heat we should recognize a sanative power, by which the body consumed and destroyed a virus it could not directly eliminate. Hilton Fagge was inclined to take a like view. After the long prevalence, especially on the Continent, of the idea that the dangers of fever were primarily due to the high temperature, and that to reduce the latter was the chief end of treatment, the reaction was remarkable. It was due partly to disappointment with the effects of vigorous antipyretic treatment on the course of the specific fevers. Another factor in the reaction was the growth of the germ theory. It had been maintained that the specific fevers were due to the intrusion into the body of certain microphytes, which engaged in a struggle for subsistence with the tissue-cells. Pyrexia might thus be regarded as a reaction brought about by natural selection to favor the latter in the struggle, and to hamper or disable the former. The result was, or should be, that the microphytes were overcome, consumed, and thus through the fever the body was restored to health. It was true that some of the best known microphytes were checked in their growth or multiplication by high temperatures, but such facts were not really relevant. A body temperature of 107° to 109° F., kept up for days or weeks, was too powerful a remedy. The body would be consumed before its parasite. A less direct explanation was suggested in a recent lecture by Von Ziemssen, viz., that the pyrexia so altered the constitution of the tissues that the microphytes no longer found in them a suitable soil and so perished. But against this was the fact that the exanthemata tended strongly to run a definite course, whether the fever were high or low. The lecturer then discussed the cases cited by Fagge and others, in which the febrile paroxysm seemed to have a destructive effect on the living virus of relapsing and intermittent fevers. These cases were shown to admit of a simpler explanation, one applicable to all the diseases attributed to micro-parasites. Like other living creatures, these parasites had a definite life-period which was independent of pyrexia, of antipyretic treatment, and of external influences. It had been shrewdly asked by Goldscheider, why, if pyrexial temperatures were not in themselves dangerous, they should in ordinary cases be confined within such narrow limits? Reverting to the question of evolution as bearing on the subject, Dr. Macalister remarked that the reasoning of the germ-theorists was two-edged, and might be turned against themselves. Were not the bacterial plants engaged in a struggle for existence? Might not the fever they induce be salutary to the bacteria? He would not lay stress on that argument. In concluding his lecture, he observed that high temperature in itself was not proven to be salutary, nor was it in itself the efficient cause of all the morbid phenomena commonly described as febrile.

Two figures of note have recently disappeared from the midst of us, viz., Dr. Harrington Tuke and Dr. Milner Fothergill. The former was an alienist physician of note, and practised as such for many years at the west end of London. He also, during the last forty-two years, had medical charge of a large lunatic asylum at Chiswick. He contributed to medical literature many papers on insanity and cognate subjects. Dr. Milner Fothergill is probably well known through his writings to many of your readers. He was indeed a voluminous writer, both of books and of papers in the periodical press. His style was easy and flowing, and helped greatly in gaining readers for him. Not, indeed, that he was deficient in originality, but the special charm of his writings lay in his style. If, at times, a want of exactitude might be detected and details omitted for the sake of effect, it was easy to condone trivial omissions when the bulk of what he wrote was so eminently interesting and instructive. As a profession we do not excel as *littérateurs*. It is therefore a pleasure to point to one who does us honor in that respect. Dr. Fothergill had long been an invalid, though he continued to practise as a physician till quite recently. He was extremely corpulent, but although his figure made him noteworthy wherever he appeared, he was very cheerful about his misfortune, and would make jokes at his own expense. He died only two days ago, aged forty-seven.

The Council of the College of Surgeons are, it appears, not to have their own way without further question. The night before last, in the House of Commons, Lord Randolph Churchill gave notice that he would on an early day move an address to Her Majesty the Queen, praying that a supplemental charter be not granted until a full inquiry has been made into the constitution of the College.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE MARRIAGE OF YOUNG PEOPLE WITH ORGANIC HEART-TROUBLES—ALCOHOLISM AND CRIMINALITY—EMOTIVE PHENOMENA IN HYPNOTISM.

PARIS, June 29, 1888.

THE physician is often consulted on the propriety of marriage of young persons of either sex affected with cardiac lesions. The question is rather a grave one to resolve and should not be lightly treated. According to some authors, all the lesions of the heart in women should be a barrier to their marriage. Professor Jaccoud is not so absolute in his opinion on that point, and he distinguishes two groups of lesions of the heart which should more particularly have an influence on the settlement of the question. In a lecture on the subject the author stated that, in the first group the valvular lesion, duly demonstrated by physical signs, has never produced any accidents. In these conditions, Dr. Jaccoud sees no valid reason to interdict the marriage, if the person interested desire it. In the second group, the lesion of the heart has already produced serious accidents. being confined more or less to the condition termed asystolic. Even then, there is no absolute rule. In a case like this, the physician must take into consideration the nature of the accidents caused anteriorly by the cardiopathy. If these accidents are pulmonary, he must be more severe than if it were simply an œdema or hepatic congestion. Moreover, he must consider how these accidents were borne by the patient, and how she recovered. One must also take into account the effect which the interdiction may produce on the person interested as to her desire or indifference to contract marriage. There is here a complex consideration, of which the non-medical elements should be taken into serious account. Finally, the conditions in which the woman would go through her pregnancy should be equally attended to. If she is obliged to work for her living, marriage in such case should be interdicted; if, on the contrary, she is in a position to avoid all fatigue and to rest as completely as it is necessary, she may be authorized to marry.

In a recent communication to the Academy of Medicine on alcoholism and criminality, M. Maramhat endeavored to establish the pernicious influence of alcohol on individuals and on society in general. In examining the history of three thousand condemned persons he found that, of vagabonds and beggars there were seventy-nine per cent. who were confirmed drunkards; that of assassins and incendiaries there were from fifty to fifty-seven per cent.; those convicted of indecent assault, fifty-three per cent.; thieves, swindlers, etc., seventy-one per cent., and, finally, in acts of violence on persons there were eighty-eight per cent. drunkards and seventy-nine per cent. in acts of violence on property. Among youths under twenty years of age, drunkards are nearly in as great number as adults, the difference being only ten per cent. The author observes that there is here an indication of the starting-point of the passion for drinking, and as of a hundred young persons not having as yet attained the age of twenty years, sixty-four per cent. are already given to drink, it is evident that it is on the side of the child by an education and by special measures that the evil must be attacked. The classification by departments, as given by M. Maramhat, confirms the assertions of the late Dr. Lunier on the great number of drunkards which exist in the departments where, owing to the absence of the cultivation of the vine, alcohols of industry are consumed in much greater quantity.

At a recent meeting of the Academy of Medicine, Dr. Dujardin-Beaumetz read the report of the commission charged to examine and verify the statements related by Dr. Luys in his essay "On the Experimental Solicitation of Emotive Phenomena in Subjects in a State of Hypnotism." The reading of this report gave rise to a discussion which promised to be most instructive, but I shall, for the present, only transcribe the last two paragraphs:

"Faithful to the task which was confided to the Commission, the members have thought that their mission was here terminated, and that in acknowledging the extreme good faith of Dr. Luys, it was sufficient for them to show that the effects produced by medicaments placed at a distance in hypnotizable subjects appeared to depend more on the caprices of fancy, and of the remembrance of the subject of experiment, than on the medicamentous substances contained in the tubes in this case." Hence the members of the Commission unanimously adopted as a conclusion the following resolution: "The Commission named by the Academy of Medicine to examine the facts advanced by Dr. Luys, at its meeting of August 30, 1887, on the subject of the action of medicaments at a distance on hypnotizable subjects, express the opinion that none of the effects established by the Commission were in relation to the nature of the substances experimented with, and that, consequently, neither therapeutics nor medical jurisprudence need take into account such effects." This decision is looked upon as a great blow to hypnotism; but Dr. Luys, who has been anxiously expected since March last to respond to the above judgment, has not yet presented himself at the Academy.

Apropos of hypnotism, the *Medical Press* has reproduced a letter addressed by Professor Charcot to Dr. Melotti, an Italian physician. In this letter, Dr. Charcot exposes the real dangers to which morality and health are subjected by the public exhibitions of hypnotism. The author states that "hypnotization is not as inoffensive as some would pretend it to be. The state of hypnotism so nearly approaches that of hysterical neurosis, that, in certain circumstances, it may, like this latter, become really contagious. If medicine, in the name of science and of art, has taken possession of hypnotism, it ought to retain it within the strict limits of its domain, to use it as a powerful therapeutic agent, and never to deliver it to profane hands, capable of abusing it to the detriment of the general health."

In his inaugural thesis for the doctorate, Dr. Renard, of Nancy, wrote on the "Parallel between the Operation of Cataract by Simple Extraction, and by Extraction combined with Iridectomy." The author makes the statement that the operation by extraction, according to the method of Von Graefe, after having been received with so much enthusiasm a quarter of a century ago, now counts very few partisans. It is the French method—that which is due to Daviel—which is again in favor. The author remarks that, thanks to antisepsis and to eserine, the same reproach cannot be applied to simple extraction as formerly. Extraction combined with iridectomy exposes to grave complications. Simple extraction has for advantage to leave to the eye its normal aspect, to give a better visual acuity, to attenuate the size of the circles of diffusion during the exercise of vision, to permit the patient to distinguish more easily, without changing glasses, the objects placed at different distances, to give to the eye operated on a greater tolerance for the variations of light, to less expose the organ to the dazzling of an intense light, also to erythropsia (vision in red). Extraction combined with iridectomy should be reserved for complicated cataracts. The author concludes that as many cases of success are obtained with Daviel's method as with that of Von Graefe.

The Douche as Affecting Blood-pressure.—Dr. Vishegorodski has published his researches on the effects of the general douche at different temperatures on the blood-pressure, pulse, respiration, and temperature. The experiments were conducted in a military hospital, the eleven subjects being hospital orderlies. The reservoir from which the water for the douches was supplied was about fifteen feet above the floor of the bath-room. From the reservoir two tubes, each about three-quarters of an inch in diameter, conveyed the water to the vicinity of the subject; one of these delivered the water in the form of rain; the other delivered three jets directed to the liver, the spleen, and the back. The duration of the douche was two minutes. The blood-pressure was estimated by means of Basch's sphygmo-manometer, an instrument which consists of an elastic pad filled with liquid placed over the radial artery, and communicating with a mercurial or aneroid manometer. Dr. Vishegorodski found that with douches of from 63° to 90° F. the blood-pressure was considerably increased, but that douches of from 100 to 114° F. diminished it. The increase of pressure in the former case was found to persist for some time, not returning to its normal amount for more than an hour after the douche. The variations in the blood-pressure occurred simultaneously with corresponding variations in the cardiac beats, the latter becoming slower as the blood-pressure increased and more rapid as it diminished. This appears to be contrary to the results obtained by Delmas, who, however, judged of the pressure merely by sphymographic observations. Douches of a little over 90° F. produced scarcely any effect on the blood pressure, the pulse, or the respiration.—*The Lancet.*

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 15 to July 21, 1888.

De Witt, Calvin, Major and Surgeon, U. S. Army. Leave of absence extended one month. S. O. 159, A. G. O., July 11, 1888.

Banister, William B., Lieutenant and Assistant Surgeon. Leave of absence extended twenty-seven days. S. O. 157, A. G. O., July 9, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending July 14, 1888.

Owens, Thomas, Assistant Surgeon. Detached from Naval Station, New London, and to Coast Survey Steamer Gedney.

Crandall, R. P., Assistant Surgeon. Detached from the U. S. S. Saratoga, and to the U. S. S. Galena.

Martin, William, Assistant Surgeon. Ordered to Marine Rendezvous, San Francisco, Cal., and to attend officers of the Navy and Marine Corps not otherwise provided with medical aid.

Auzal, E. W., Assistant Surgeon. Detached from duty at Marine Rendezvous, San Francisco, Cal., and special duty there, and ordered to the Naval Academy.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 14, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	15	1
Scarlet fever	91	14
Cerebro-spinal meningitis	5	4
Measles	217	19
Diphtheria	127	42
Small-pox	3	0
Yellow fever	0	0
Cholera	0	0

The Cancer Bacillus.—The recent alleged discovery by Scheurlen of a "cancer bacillus" has not received much confirmation as yet. Indeed, in this country the failure of Messrs. Ballance and Shattock, in their carefully conducted experiments, to obtain any such microbe by cultivation of morbid growths has sufficed to make us extremely sceptical of the results declared by Scheurlen. The subject has been again discussed in Germany, for at a recent meeting of the Berlin Clinical Society a paper was read by Dr. Emil Senger, in which much the same ground was traversed as that covered by the above observers. Dr. Senger pointed out that the arguments in favor of cancer being infectious were based upon the mode of its dissemination through the body, the occurrence of cases of acute miliary carcinoma, the supervention of cancer on chronic cutaneour irritation, and, less convincingly, upon the occasional occurrence of "cancer by contact." At the same time, the fact that the secondary growths reproduce the characters of the primary within tissues of wholly different nature formed a marked distinction from those infective tumors that are ascribed to the action of bacterial organisms. In tuberculosis and actinomycosis (he might have added syphilis) the tumor is composed of indifferent cells, which are homologous with the elements (connective tissue) in which they occur. In fact, there is no instance known of a bacterium giving rise to heteroplastic growths—*i.e.*, composed of cells dissimilar to those occurring at the seat of infection. The cancer microbe, if such there be, must then be intimately associated with the cancer cell or its nucleus, a relation which would therein differ from what is ordinarily believed to exist between the cell and the microbe. The problem is rendered more difficult from the fact that hitherto cancer has never been successfully inoculated upon the lower animals. We all know how the inoculability of tubercle was proved long before the bacillus tuberculosis was discovered; and the failure of such experiments with respect to cancer (which Dr. Senger himself has repeated with equal non-success), affords additional evidence of the difference between tubercle and cancer as regards their respective degrees of infectivity. It may be that the failures depend on the inability to select an appropriate locality in the body for inoculation of cancer, or to employ cancer of a special histological kind or in a special stage of growth, as being more virulent in the one than the other, or, what is very probable, upon the animals selected being insusceptible to cancer. These and other explanations may be proffered to explain the very limited infectivity that cancer seems to possess. As to Scheurlen's bacillus, Dr. Senger repeated the experiments upon which that discovery was based, making numerous cultures of portions of cancerous tumors upon various media (gelatine, agar, blood serum, and ascitic fluid), without obtaining a micro-organism which could be recognized as specific; and although in one instance he did encounter a bacillus having characters similar to those described by Scheurlen, he proved satisfactorily that this bacillus was due to the potato upon which the culture was made. He did not think the question would be solved until new methods of cultivation were introduced, and he discountenanced bacteriological study before the transmissibility of cancer was proved.—*The Lancet.*

Angioma of the Epiglottis causing Hæmoptysis.—Dr. Desvernine describes a case of repeated hemorrhage from the mouth occurring in a healthy man, aged fifty-three, the cause of which was for some time obscure. On making a laryngoscopic examination, an ovoid tumor measuring two centimetres by one was found attached by a peduncle to the laryngeal aspect of the epiglottis. The tumor appeared to be lobulated, and was of a violet color. From the history of the hemorrhages, taken together with the color and general appearance of the tumor, Dr. Desvernine diagnosed it as an angioma, and decided to remove it by means of the galvano-cautery. This was accomplished without difficulty, the pharynx and larynx having been previously anæsthetized by means of a strong solution of cocaine. An examination of the tumor showed it to be a pedunculated and encapsuled angioma. —*The Lancet.*

Complicated Operation on the Intestines.—Professor Hofmokl recently brought before a Vienna Medical society a moman, aged twenty-nine, from whom he had, owing to the presence of carcinoma, removed a part of the colon ascendens, the cæcum, and the appendix vermiformis. He immediately united the intestine and closed the abdominal wound. The operation which had recently been recommended for such cases consisted in the resection of the intestine, the application of an artificial anus, and the union of the resected parts of the intestine at a later period. As to the patient under consideration, she noticed, two years ago, the presence of a tumor in the right abdominal region. As the tumor was movable, the attending physician diagnosed a movable kidney, and directed the patient to wear a pelote. The pains from which the patient suffered, however, gradually increased, so that the pelote had to be removed. Disturbances of digestion and severe diarrhœa also supervened. The, patient on her admission into the clinic of Professor Hofmokl, was somewhat emaciated; her abdomen was non-distended, and a movable tumor of the size of a fist could be felt in the hypochondriac region.

The irrigation of water into the colon could not facilitate the diagnosis, as a stricture of the intestine was absent, the injected water finding its way through the diseased part. As the patient suffered from fever, and the tumor showed a high degree of mobility, it was suggested that they had either to do with a movable kidney or with carcinoma of the colon. The tumor was found to be covered with a part of the epiploon, and the mesocolon was rather long. A part of the colon, as well as the cæcum and the processus vermiformis, were removed, and were afterward closed with a threefold series of sutures. The temperature rose to 100.4° F. during the first days, and the patient passed at that time fetid and liquid stools. Injection of a solution of the salicylate of sodium removed the fetor at once. The patient speedily recovered, and was completely cured. The mesenteric glands were not enlarged, and the disease present was adeno-sarcoma.—*Medical Press.*

Summary of Recent Methods of Testing for Sugar.—1. *Fehling's Method Modified by Seegen.*—The urine is filtered through a thick layer of animal charcoal (of blood), which absorbs the whole of the sugar; the charcoal is washed out with distilled water, which dissolves out the sugar, which may be tested with Fehling's solution; traces of sugar will be found in the second, and even in the third and fourth washing. This method is mostly used by the chemists of Carlsbad.

2. *Penzoldt's Method.*—Some drops of a solution of acetate of lead, mixed with some drops of ammonia, are poured into a testing-tube half filled with urine. If sugar be present, the precipitate will be rose-colored; if not, white. This is a pretty good and sensitive test.

3. *Johnson's Method.*—Some drops of picric acid are added to the urine, which is then mixed with a solution of potash slightly heated. A light red color appears in normal urine; the presence of sugar makes the color deep red. As the difference between the two is only a difference in shade and not in color, the observer is naturally exposed to optical mistakes, a matter which impairs the value of the test. It can, nevertheless, be recommended for its other good qualities.

4. *E. Fischer's Method Modified by Jaksch.*—This method is highly to be recommended in every respect. It is based on the power of phenylhydrazine to unite with grape-sugar and form characteristic crystals. To a measuring beaker half full of water two drachms of hydrochloric phenylhydrazine and three of sodium acetate are added; the compound having been heated a little, the same quantity of urine is added, and placed in a vessel of boiling water for fifteen minutes; it is then quickly put in very cold water. After standing for some minutes a yellow sediment slowly falls, in which crystals of phenylglucosazon are always to be found if the least quantity of grape-sugar be present in the urine. These yellow crystals have the shape of long rods, terminating at each end in round balls or bunches.

5. *Molisch's Method.*—The recently invented double method of Molisch ([1] α napthol and [2] thymol, both with sulphuric acid) is worthy of mention, as it will detect the presence of even 0.0001 per cent. of grape-sugar; it is, however, entirely useless for our purpose, as it produces exactly the same reaction with cane-sugar, maltone, and all dissolved albuminates.—*British Medical Journal.*

To this should be added perhaps the best of all, viz., 6. *The Fermentation Test.*

Zittmann's Decoction in Syphilis is a preparation used considerably in Germany, and to some extent in this country. Dr. I. Tscherniavsky, of Warsaw says that he "does not entertain any doubt that its action must be attributed to its powerful diaphoretic and laxative properties, which cause a considerable increase and acceleration of the systemic metabolism, and, in virtue of this, promote rapid resorption and elimination of syphilitic products, the effect being intensified by a specific remedial action of mercury present in the decoction (*fortius*)."

Dr. Idelson, of Berne, commenting on this in the *Provincial Medical Journal*, says: "Modern practitioners are far from being unanimous in their opinions in regard to the therapeutic value of the old remedy under consideration. Thus, Professor Zeisse, of Vienna, thinks that all decoctions generally manifest but an exceedingly trifling influence on the involution of the morbid process. Professor E. L. Lanceraux, of Paris, similarly relegates Zittmann's decoction to the category of insignificant auxiliary resources." Meanwhile, Professor Veniamin M. Tarnovsky, of St. Petersburg, in his translation of Lanceraux's text-book, adduces (p. 713) a striking instance of extremely severe syphilis cured by the remedy after all other means in vogue have failed. Again, Professor Alexander H. G. Gay, of Kazan, most decidedly raises his authoritative voice in favor of the decoction: "The action of Zittmann's decoction," he says, in his "Course of Venereal Disease" (third edition, 1888, p. 555), "is sometimes strikingly beneficial. Under its appropriate administration the patients show a rapid improvement, regain a good appetite and a healthy complexion, and commence to increase in their weight, while their seemingly intractable ulcers, which have been previously resisting all possible means, become cleaner and generally more healthy, and soon heal altogether." The use of the remedy is said to be indicated mainly in late forms of syphilis, especially in patients gravely exhausted, both by the disease itself (ulcers) and a prolonged (and possibly irregular, or wrong) treatment. Dr. Gay advises to use the strong decoction (*d. fortius*), commencing with ten or twelve fluid ounces (divided into three equal portions, two of which are to be taken warm in the morning, in the course of fifteen or twenty minutes, and the third in the evening), and ascending gradually to one and a half or two fluid pounds, provided the patient tolerates it well. The patient's diet is to be light, easily digestible, and nutritious. The treatment must not last less than one or two months. The beneficial action of the preparation is ascribed by Dr. Gay partly to its favorable influence on the patient's digestion and nutrition, and partly to its containing mercury. In what chemical state mercury is present therein, remains yet undetermined. At all events, it exists in the decoction in some combination which is easily tolerated by the stomach, and rapidly passes into the blood current, since Vajda and Paschkis were able to detect mercury in the patient's urine on the second day of the use of Zittmann's remedy. That the latter does contain mercury has been proved beyond any doubt also by Schneider and Zantl, who, on one side, observed mercurial stomatitis after the use of the decoction alone, and, on the other, obtained mercury in a direct way from the decoction. Thus, according to Zantl, 720 grammes of the strong decoction contain 0.0125 gramme of mercury in the shape of corrosive sublimate. Professor Kaposi, of Vienna, also finds (*Sprimon's Meditzina in* 1886, vol. ii., p. 989) Zittmann's decoction "a very effective means in late forms of syphilis."

The Sensitive Rectum.—Painful hysterical spasm of the rectum is a most common neurosis, says Dr. Wm. Godell in *The Medical Standard.* Another rectal neurosis is the "jealous" rectum, which puts a veto on social intercourse. One lady was in a perfectly comfortable condition until she put on her bonnet, when this unruly organ would remonstrate audibly and continue until the unfortunate possessor would be compelled to take off her bonnet and make up her mind to stay home. After this everything would become quiet. Another lady always began to have an evacuation from the bowels as soon as she received a letter from her husband, and was obliged to delay reading it until the rectal demands had been satisfied. A third would soil her bed after any violent mental emotion. All were kept prisoners at home, and had to abandon social intercourse. A third form is "follicular colitis," or "membranous enteritis," which is often a hysterical neurosis.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 4 NEW YORK, JULY 28, 1888 Whole No. 925

Original Articles.

THE ETIOLOGY AND PATHOLOGY OF INCREASED BODILY HEAT IN RELATION TO DISEASE AND THE USE OF ANTIPYRETICS.[1]

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MR. PRESIDENT AND GENTLEMEN: We find a large number of articles in our medical journals devoted to the subjects of increased body-heat as recorded by the clinical thermometer. We likewise find a still larger number of articles lauding the efficiency of the various new antipyretics as they are announced. At the same time, there is a conspicuous absence of articles devoted to the study of the etiological factors which excite the increased bodily temperature.

The first question naturally suggested is, What is a true conception of increased bodily heat? Does it simply mean that the body is too hot, as recorded by the clinical thermometer, and that this increased heat must be subdued or death will result? Or is this increased temperature to be looked upon as a single symptom only, which indicates a grave disturbance of the chemico-physiological processes of the animal economy, a continued disturbance of which process must necessarily be followed by a continued fever, or a continued rise in the temperature?

It appears to me that too much stress has been laid upon the high temperature *per se*, as recorded by the thermometer, and far too little attention devoted to the physiological disturbances.

The numerous medical books and standard works on medicine give very little satisfactory information in regard to the etiology and pathology of fever, for fever by them is only treated of in connection with the various diseases in which it exists as a symptom, and even then the discussion of the subject is purely from a clinical stand-point. Everyone undoubtedly appreciates the fact that the various causes of increased bodily heat cannot be accurately followed step by step from cause to effect. But a careful study of the laws which govern the normal production, with the pathological changes that occur in all those diseases in which an abnormally high temperature has been a characteristic symptom, tends to throw much light upon this obscure subject; a condition which for a long time has been treated empirically, and with little or no thought of the disturbed chemico-physiological and pathological laws governing the same.

Physiologically speaking, animal heat is produced by the motor forces or the kinetic energy being converted into heat; that is to say, the molecular friction of the microscopic elements of the body. The largest amount of heat, however, is probably produced by the transformation of the chemical elements of the food, which are endowed with a large amount of potential energy that is given off in the form of heat as they are being converted into more stable products having little or no energy. At the same time the physiological economy is so constructed that while it is producing heat it can both store up and excrete heat. These phenomena are chiefly effected by the condition of the skin and other excretory organs, and in this way the body-temperature is normally maintained at a mean standard, namely, that of 37.6° C., or 98.5° F. Further than this, some have claimed that there exists a special cerebral heat-centre, which has for its function the property of maintaining this uniform standard of body-heat. But as yet it has not been located with any degree of positiveness, and, so long as we have no accurate knowledge of its location, or of any drugs acting upon it, no practical value can be derived from its existence. That the chemico-physiological production, storage, and excretion of heat are without any connection with the nervous mechanism is impossible to maintain, but what the working of that connection is remains an unsolved problem.

From what has already been said it appears that under all circumstances the increased body-heat above the normal standard can be attributed to one of two causes: First, to an increase in the molecular friction of the body without a disturbance of the chemico-physiological processes, and one in which the body-nutrition is still maintained at the normal standard. A typical illustration of this class was reported by Dr. J. W. Teal[1] at the Clinical Society of London, in which a temperature ranging from 108° F. to 122° F., and upward, had been maintained for a period of nearly nine weeks. Numerous cases of a similar nature have been reported. These cases plainly demonstrate the fact that the body can withstand a very high temperature and yet suffer no serious damage. For this reason it is clear that we should not consider the increased heat *per se* as the damaging element, and it further points to the necessity of discriminating between the two different kinds of increased bodily temperature when treating the same.

The second form of increased body-heat is due to a disturbance of the chemico-physiological processes, with a decrease in the nutritive activity of the protoplasmic elements of the body; this change in nutrition being primarily most marked in the liver, kidneys, heart, and visceral organs, until finally every tissue in the body becomes impaired. With this there is an increased storage, and a decreased excretion of heat. These conditions will also increase the frictional irritation, which now acts as one of the minor elements in producing the rise in temperature. In this light the increased body-heat, as recorded by the clinical thermometer, is only a symptom, pointing in the one case to an increased molecular friction and storage of heat without impairment of nutrition. In the other case, to a grave disturbance of the chemico-physiological processes, with marked impairment of nutrition, increased storage, and decreased radiation of heat, and associated with extensive retrograde changes in the body, which are most marked in the visceral organs.

The question naturally raised by this conception of the subject is, What is the cause of the increased temperature? In all the acute and infectious diseases there is unquestionably something introduced into the system, either a micro-organism, a ptomaine, or some impalpable substance. The first effect of this poison, if we may term it such, upon the system is to disturb the normal functional activity of the liver. This assertion is supported by clinical, pathological, and experimental evidence. Clinically we know that the liver is at fault by the following symptoms: The marked tendency to nausea and vomiting of "bilious" matter, primary constipation, and clay-colored stools.

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[1] Read, by invitation, before the Ontario Medical Association, at Toronto, June 9, 1887.

[1] Medical Times and Gazette, March 20, 1875.

The urine, also, is decreased in quantity, high colored, strongly acid, and often loaded with uric acid and urates, both indicating incomplete or partial tissue-metabolism.

Pathologically we know that the liver is among, if not the first organ to suffer, for the hepatic cells in all acute diseases become enlarged, softened, and abnormally granular, and ultimately their protoplasm undergoes a complete granular and fatty metamorphosis, the extent of these retrograde changes depending upon the severity and duration of the chemico-physiological disturbances.

It has further been proven by the experimental observations upon animals, by Dr. G. Pisenti, that there is a diminution in the quantity and quality of bile secreted directly in proportion to the intensity of the fever. He, however, considered the change in the biliary flow as purely functional, and not resulting from any structural change in the liver-cells. But it is hardly possible to conceive of an abnormal glandular secretion without some abnormality in the protoplasmic elements composing the organ implicated. Further than this, careful pathological study and microscopic examination of the protoplasm of the liver-cells, in all the diseases in which an increased temperature was a marked clinical feature, has shown a granular and fatty metamorphosis, and argues strongly against the purely functional view, and supports an organic change as the cause of the disturbed biliary secretion. Following the retrograde changes in the liver, the kidneys, heart, and various organs of the body undergo a similar granular and fatty metamorphosis, either in the order of their physiological importance or their nutritive condition, at the time of the attack.

As a natural sequence of these observations it becomes apparent that whatever the etiological factor may be, its first deleterious effects are to produce a disturbance of the normal activity of the liver, which is manifested by a diminution in the quantity and quality of bile secreted. This at first functional disturbance is speedily followed by a marked granular, and later a true fatty, metamorphosis of the liver-cells.

As a result of this functional and organic disturbance of the hepatic function, the intestines are deprived of their requisite quantity of biliary secretion, which acts as their normal disinfectant and peristaltic excitant; consequently the intestinal digestion and absorption is incompletely performed. The nutritive materials absorbed and taken to the liver being in a very imperfect state of transformation, they likewise carry with them considerable effete material, which has resulted from the increased decomposition constantly going on in the intestinal tract. This further interferes with the hepatic function and decreases the nutritive supply of the liver-cells, and has a marked tendency to cause a progressive metamorphosis of their protoplasm.

Under these circumstances the work to be performed by the liver is greatly increased, its biliary secretion and nutritive supply decreased, and its epithelial protoplasm impaired. Naturally in this condition the nutritive substances leaving the liver for general distribution to the tissues of the body are in an imperfect and irritating condition, and the general nutrition is imperfectly accomplished. The effete material now resulting from tissue-waste that is to be eliminated is unusually large and very irritating. The nutrition of the excretory organs is diminished, and their power of excreting heat, especially that of the skin, is impaired, while the storage of heat is increased by the inability of the kidneys to rid the system of the rapidly accumulating effete matter. There is now an abnormally large amount of effete and unduly irritating material constantly circulating in the blood, which, together with the original poison and the increased intestinal irritation, causes an increased production and storage of heat, with a decreased excretion of the same, and explains the high temperature. At the same time the cerebral centres are kept in a state of irritation, which accounts for many of the nervous manifestations associated with the increased temperature.

If the skin, kidneys, alimentary tract, and excretory organs can eliminate this effete and unduly irritating material as rapidly as it is produced, then there will be little or no retrograde change in the protoplasmic elements of the body, and the temperature will rise but little, if any, above the normal standard. But when the opposite is true, the temperature will continue to rise until the fatal end is reached, or until the vital centres are suddenly paralyzed and the patient passes into a state of collapse with a falling or subnormal temperature.

Taking this view of the subject, the chemico-physiological disturbances and parenchymatous changes of the visceral organs are the cause of, and not the result of, the increased bodily heat.

Assuming that this functional and organic derangement of the liver and excretory organs is the chief pathological factor in producing and maintaining an abnormally high temperature—that the original poison of the disease is the chief etiological factor—we are in a position to study the comparative merits of the various antipyretic remedies, and ascertain if they have a tendency to interrupt these abnormal physiological processes, and aid nature in reestablishing the normal standard.

First, is quinine a general antipyretic? That quinine is a positive antidote to the malarial miasm introduced into the system no one can deny. It destroys or removes from the system the exciting cause of the disease, after which nature immediately restores the functional activity of the liver and excretory organs, when the normal temperature is regained and maintained. But in all the cases where there is no malarial miasmatic poison associated with the infectious disease, quinine has little or no effect in reducing the temperature. Many individuals, however, are all the time more or less poisoned with malarial miasm, and in them the development of any acute or infectious disease enables the malarial poison to become a more active agent and one of the factors in exciting an increase in the bodily temperature. In these instances the quinine antidotes whatever influence the malarial element may have in exciting and maintaining the body-heat above the normal standard. But when the cases are carefully studied those in which the malarial element is absent are found to be unaffected by the administration of cinchona or its alkaloids. Consequently we are not justified in regarding quinine, in any form, as a general antipyretic. From this peculiar and specific property of quinine in malarial pyrexia Professor Andrew H. Smith, of New York, has suggested that, in all infectious diseases in which there is an abnormal rise in temperature, a different and specific cause exists, and for each there may be a special antipyretic, as quinine is for malaria. If we could isolate each separate cause, and discover the drug or remedy that would antidote it, then this theory would be fully confirmed.

Second. Salicylic acid acts as an antipyretic by its property to decrease fermentation in the alimentary canal, thus shutting out one of the elements which help in destroying the nutritive and functional activity of the liver, and which, secondarily, cause a general disturbance of the system at large. It also increases the heat-excreting power of the body by its pronounced diaphoretic action. This naturally favors the surface radiation and prevents to a certain degree any increased storage of heat by the system, and consequently the abnormally high temperature is lowered.

Third. We will consider a group of so-called antipyretics which includes antipyrine, antifebrine, thallin, kearnin, resorcin, etc.

They will be treated in common, as their action is quite similar. What their physiological actions are in reducing temperature has not been satisfactorily demonstrated. Experimental study, however, shows that in large doses they produce a rapid and marked parenchymatous metamorphosis of the liver and kidneys, which is followed by albumin and casts in the urine. They are also thought to have a direct depressing effect upon the medullary and spinal centres. This being true, is not their antipyretic action due to their causing a further increase in the functional and organic metamorphosis of the protoplasmic elements of the body, which disturbs still more the physiological processes of the liver, kidneys, and excretory organs, and thus causes a greater accumulation of effete and toxic matter in the blood, until the accumulation becomes so large that a state of general depression is produced, which throws the system into a condition strongly simulating that known as collapse, during which the temperature falls? As the system recovers from the shock, if it does, this large amount of waste material continues to increase the irritation and general disturbance to the system, and causes the temperature to rise to a higher degree than that attained prior to the administration of the drug. This view finds considerable support in the clinical course of the diseases in which these drugs have been given, and still more in the pathological conditions found at the necropsies.

Clinically it has been frequently noted that the patient died suddenly from heart-failure after a dose from this group of remedies. Another very noticeable fact is the very high temperature that follows their administration, patients frequently dying with a rapidly rising temperature, which almost invariably succeeds the fall produced by their action. Before the introduction of this group, death with a temperature above 105° or 107° F. was a rare occurrence, while since their introduction death with the temperature rapidly rising to 108° F., 109° F., or 110° F., and higher, is quite common.

Many a hospital interne has asked, are not the high temperatures of to-day due to the new and free use of these coal-tar products?

Pathologically we find at the present time more marked and destructive parenchymatous changes in the liver and kidneys than was the case before the introduction and use of this group. In many instances the examination of the liver and kidneys has revealed a condition of granular and fatty metamorphosis equally as bad as that found in acute yellow atrophy of the liver, or in connection with acute phosphorus-poisoning.

Experimental research with this group has taught us that their full or toxic action is to produce a parenchymatous transformation of the liver and kidneys, with the development of albumin and casts in the urine. If they are capable of producing this effect in normal organs, is it not reasonable to suppose that in diseased conditions, when the general tendency is to parenchymatous changes, they will produce this same transformation more rapidly and in much smaller doses?

Dr. Frederico Vananzio, after a clinical study of the use of antipyrine in scarlet fever, reaches the following conclusions:

1. Antipyrine certainly reduces the temperature in scarlet fever for a length of time and to an extent which varies with the dose and individual; but the fever, on the cessation of the drug, returns with renewed intensity, even when by the careful and diligent use of the remedy it has been possible to suppress it for many hours in succession.

2. During the hypothermia produced by the administration of antipyrine, no appreciable improvement, either subjective or objective, is manifested by the patient, aside from the simple reduction of the fever.

Indeed, the ordinary syndromes and complications of the disease are neither prevented nor modified. In the toxic form, when it is desirable to re-enforce the "cardiovascular tone," the antipyrine does not in the least oppose the advance of the collapse.

3. Antipyrine prolongs rather than shortens the duration of the disease.

4. In some it produces cerebral congestion, persistent vomiting, and prostration.

Dr. Jacubowitsch, after using antipyrine in various diseases in children, comes to the following conclusions: Antipyrine lowers the temperature in all cases, but to a very slight degree in healthy children. The amount of the fall did not always depend on the dose. The temperature did not remain at the lowest point for more than twenty hours. The greatest fall occurred about midnight, after which the temperature gradually rose. In healthy children even large doses failed to lower the temperature to the same extent as in the feverish; young children take large doses well for from one to two days. In most of the cases the quantity of urine was diminished to the extent of nearly one-half; it was concentrated, and the specific gravity was increased. The quantity of urea, uric acid, sodium chloride, phosphoric and sulphuric acid was notably diminished during the use of antipyrine. Forty-eight hours after the last dose the daily quantity of all these urinary constituents was greater than before the drug was given. The author feels some hesitation in recommending the use of antipyrine in fever cases, because, in spite of its antipyretic power, it could not safely be used for any length of time if the remarkable retention of the products of oxidization is confirmed.

Professor Ehrlich reports a case (*Münchener med. Wochenschr.*, No. 8.) which ended fatally under repeated progressive doses, namely, 0.08 up to 0.58 gramme (one and one-quarter to nine grains), of thallin tartrate. The necropsy showed the lesions of typhoid fever in the healing stage, cardiac hypertrophy and dilatation, and hemorrhagic infarctions of the renal papillæ, the last mentioned being, as shown by experiment, a characteristic sign of thallin-poisoning. He further assumes that the danger may be completely avoided by fixing the minimum dose for hourly administration at 0.2 gramme (three grains) of the tartrate of thallin.

Professor William H. Draper, in a paper read before the Academy of Medicine of New York, reported twenty cases treated with antipyrine, with a death-rate of five in twenty, or a mortality of twenty five-per cent.

Dr. Götze, in the *Berlin. klin. Wochenschr.* of March 9, 1885, gives as the results of his experience with antipyrine the following conclusions: That in no case has he observed the course of the disease shortened by the use of antipyrine, and that in the severe general infection not only the fever but the remaining symptoms fail to be influenced by the drug.

Professor Ehrlich, in the *Münch. med. Woehenschr.*, No. 47, commenting upon the action of thallin in typhoid fever, makes the following statement: Of twenty-eight cases treated by bathing, the average stay in the hospital was thirty-seven days; of seven cases treated by thallin (minimum doses) the duration of treatment was forty-seven days, and cases on a scale of progressive doses thirty-eight days.

The result of cases treated with antifebrine is even less favorable.

The preceding observations necessitate the following conclusions and queries:

First. That this group of antipyretics will lower temperature, but at the same time they will cause a retardation of the excretory functions of the body, and a retention of the waste, or effete products of the system.

Second. They do not modify the intensity nor shorten the duration of the disease, but tend to prolong the symptoms.

Third. The fall of temperature is only temporary at best, and is generally followed by a higher temperature than that existing prior to their administration.

Fourth. Their use gives a high death-rate, and in some instances they appear to be the direct exciting cause of the fatal issue.

Summing up this experimental, clinical, and pathological proof naturally leads one to argue strongly against the use of any of this group of drugs as antipyretic remedies; and raises the question, Are they in any sense, from a physiological and pathological basis, true and safe antipyretics?

Again, have they increased or decreased the mortality in connection with the acute infectious and contagious diseases? Unless it can be absolutely proved that they decrease mortality, and tend to prolong life, we are not justified in using them, even if they do lower bodily temperature.

Although many articles have appeared praising the usefulness of this class of remedies, we have the above plain facts in opposition to their use. This much can be said, it has not been proven that they in any way antidote the poison, neither have they shortened the duration of the diseases in which they have been administered, or decreased the mortality, while there is much proof to the contrary.

They may possibly decrease intestinal fermentation to a slight degree, and thus aid in cutting off one source of irritation; but if, following this, they cause increased parenchymatous metamorphosis, with retention of the excrementitious products, and impaired nutrition in general, they certainly destroy the physiological vitality of the body, which more than overbalances any good effect that can be credited to their action.

Fourth. The cold bath or pack deserves a word. The physiologists teach that in case the body-heat has been increased by active exercise, which necessitates greater oxidization, exposures to cold or draughts are dangerous, for they tend to arrest the function of the skin, and cause a retention of the excretory products of the body, which gives rise to the condition commonly termed a cold, while in some instances grave visceral disturbances or true inflammatory processes are developed.

When the human body is suffering from a fever the increased heat is the result of this increased work of chemico-physiological oxidization, and the greatest excretory activity is necessary to rid the system of the rapidly accumulating excrementitious products. To subject the surface of the body at this time to the cold pack or bath arrests the functional activity of the skin and tends to produce internal congestion, and causes increased excretory work for the kidneys and intestines, which is often followed by increased parenchymatous changes in the liver and kidneys, followed by the sudden appearance of albumin and casts in the urine, uræmic toxæmia, and death. There are, of course, a certain number who can subject themselves to cold after violent physical exercise without apparent ill effects; likewise some patients can withstand the ill effects of the cold pack or bath without apparent damage and ultimately throw off the effects of both the disease and the treatment. This, however, is no guarantee that the majority can. It is further a well-known fact that many practitioners have abandoned the cold pack and bath, because observation has taught them that under their influence the mortality was unusually high.

The following is often noted after their use: Instead of the temperature remaining down after their application, it will again rapidly rise, the cerebral symptoms will become more active, albumin and casts will appear in the urine, and death follow from uræmia in a few hours.

All cold packs ultimately act as hot packs, and in this way excite the skin to increased excretory activity, provided the patient has the inherent vitality to rally from the primary shock and physiological disturbance. In this way we have an explanation for the favorable cases credited to the use of severe cold applications.

Fifth. Diaphoretics: Of them all it may be said that they are true physiological antipyretics, for they assist the skin to excrete more heat by keeping a larger volume of blood near the surface of the body, and thus keep up a more active evaporation. They also aid in the elimination of the effete material from the system.

Sixth. Diuretics, like diaphoretics, are positive antipyretics, aiding as they do the system to rid itself of one of the chief elements in maintaining the abnormally high temperature. The kidneys being the chief organs by which the system excretes the waste material resulting from proteid metabolism, special attention should be devoted to these organs from the very inception of every acute or infectious disease, as their nutrition is apt to be impaired, while at the same time the work required of them is increased, until finally they are unable to accomplish their task. The urine becomes more scanty, high colored, strongly acid, of a high specific gravity, and often loaded with uric acid, urates, etc. This change in the urine is soon followed by albumin and casts, uræmic or toxic symptoms are developed, which are made evident by an aggravation of all the symptoms of the disease, but especially the cerebral, and death speedily ensues.

Seventh. Alcohol also acts as a serviceable antipyretic by diminishing body-oxidization, and at the time supplying to the system a hydrocarbon that it can utilize. In this way more water is produced, diaphoresis and diuresis increased, and the heat-radiating power augmented. At the same time it improves the general nutritive condition of the body and aids in preventing heart-failure.

Eighth. Sponging with tepid water and alcohol is one of our most efficient means for reducing temperature, provided it is properly employed. It causes a rapid excretion of heat, and acts as a stimuli to the skin and renders it more active—one great object to be obtained.

In bathing the sick one rule should be rigidly enforced. After sponging a portion of the body the nurse should rub the skin of that part perfectly dry with the bare hands before another portion is bathed. There is nothing more uncomfortable than to be left wet and clammy. On the other hand, nothing is more refreshing and soothing to a patient than such a bath, provided the skin is dried in the way suggested.

Ninth. But the remedy which strikes strongest at one of the main sources of the increased temperature is the pure ox bile, or the fel bovis inspissatum. The administration of bile causes the milk to curdle in fine flakes and be more perfectly digested. It prevents intestinal decomposition and stimulates a gentle peristalsis, which favors the capillary circulation of the intestine and increases the rapidity of absorption. The fel bovis also increases the perfection of the intestinal digestion, which, together with a more rapid circulation and peristalsis, causes absorption to be most perfectly accomplished. At the same time these favorable conditions decrease the amount of effete and irritating substances that can be drawn up into the system with the nutritious elements. As a result the liver receives a much larger quantity of pure nutritive substances and a smaller amount of irritating and deleterious matter; consequently the work required of the hepatic cells is lessened, and the nutritive pabulum reaching the system at large is better in quality, and the nutrition in general is kept at a higher standard. The resulting excretory products are necessarily more perfectly formed and are less irritating to the excretory organs.

We now find the abnormal heat-producing power reduced to the minimum, less stored up, and the excretory organs better able to eliminate whatever increased heat is developed.

In this way a nearer approach to the normal standard is maintained, the original poison is given less chance to injure the system, and it is easily and rapidly eliminated.

These statements are especially true in connection with typhoid fever, and it has been a noticeable fact, both in my own cases and those of others who have followed this line of treatment, that the patients had less tympanites, less cerebral disturbances, and the temperature was maintained at a moderately low degree throughout the disease. Albumin and casts in the urine were rarely found, and when they did appear they were in small quantities.

In pneumonia, where the temperature is largely due to continued absorption of the rapidly liquefying inflammatory exudation, increased storage and decreased radiation of heat, the fel bovis inspissatum does not reduce the temperature to so marked an extent. But in so far as it improves digestion, absorption, and assimilation in general, it decreases the storage power and increases the excretion of heat, and thus brings down the temperature to a certain degree. Also by improving nutrition it increases the eliminating power of the excretory organs and often prevents a fatal renal complication or a sudden failure of the heart's action. The accomplishment of even this is of great advantage in all pyrexial states.

"The Strathmore," Broadway and Fifty-second Street.

A CASE OF CEREBRAL TUMOR.

Epileptiform Attacks for Two Years—Temporary Aphasia and Right Hemiparesis—Absence of Severe Headache and Vomiting—Tumor between the Fourth (Lobulus Fusiformis) and Fifth Occipito-temporal Convolutions and the Posterior Horn of the Lateral Ventricle—Secondary Changes in the Temporal Lobe and the Insula.

By ROBERT T. EDES, M.D.,

WASHINGTON, D. C.

A lady, aged fifty-eight, had been deaf from girlhood. For some time previous to 1886 she had had severe attacks of what she called neuralgia in the head, which had disappeared, or nearly so, after the use of massage. She thought herself of a gouty constitution, and considered these neuralgias or headaches to be connected with that diathesis, and to have nothing in particular to do with her later trouble.

After the summer of 1886 she had only occasional headaches, which, though appearing somewhat severe at the time, she made light of afterward, and sometimes spoke as if she hardly knew what headache was. They seemed to be in the forehead.

On December 12, 1886, she had an attack of epileptiform character and considerable severity, which was repeated at longer or shorter intervals through the succeeding year until I saw her, and until she died. As these attacks did not vary essentially in symptoms, although somewhat in severity, they may be described once for all.

There was, first, a period of unconsciousness, the face becoming livid, then of mental confusion with amnesic aphasia, involving not only the names of things, but the words to express action and relation (chiefly, but not solely, nouns). This condition lasted one or more hours. With these greater attacks, though, I think, increasing in frequency as the more severe ones grew more rare, there were also slighter attacks of incoherency and aphasia lasting a few moments and occurring quite frequently. The exact amount of mental confusion in these could not be ascertained, owing to her deafness, her reticence, and her dislike to being watched. She was fully aware of these lesser attacks herself, and was annoyed by them. She said she had short and slight ones which no one noticed but herself. Her appearance during them was not much changed; of the severer fits she knew but little, but was aware that something had been the matter.

On February 22, 1887, she was heard to be breathing heavily, and found with her arms twitching and unable to talk intelligibly. Before the end of my visit she could make part of a sentence, but not finish it. The lower facial nerve on the right side was distinctly paralyzed, but not the upper. Her servant stated that on former occasions, when she had fallen, it had been upon the right side. This attack was followed by some headache; she complained of doors banging and of the nurse walking heavily. On the 25th it was noted, "she speaks well and intelligence is perfect." The headaches did not seem to have made much impression on her memory, although she says she was never subject to them, a statement not sustained by the earlier part of the history. In March she had an attack, beginning with a cry, which did not last a great while.

During the spring of 1887 she had many of the slight vertiginous attacks, but not many of the more severe ones.

May 23d.—Attack of aphasia lasting some minutes. No other symptoms except dilatation of the pupils. She complained of pain in the back of the neck.

During the summer she was away, returning in October, and considering herself much better, although she said she had not had a comfortable or agreeable summer.

On October 13th she had a short but severe fit, the convulsions occurring on the right side. She was forgetful, and repeated questions; thought that she had just returned and had not seen me since. This condition lasted a number of hours. During the next month, on one occasion, when out walking, she seemed dazed and her hand shook.

About the middle of December I received a somewhat peculiar note from her, with the address repeated in an awkward way, and the writing unnecessarily crowded and uneven, but no misspelling or wrong word. When I called to see her she spoke of the note as written in a hurry, and seemed to have an idea that it was not quite right. Another one, some days later, although incoherent and vague in places, informed me clearly of her wish, and showed that she retained a full recollection of our conversation some hours previously. Her notes and memoranda on household and business matters about this time were much confused by the omission and wrong combination of words, and at times unintelligible.

The aphasia became constant and much more marked; she could not get the words for things, nor form phrases to express her ideas. She seemed to realize this fully, and to be much annoyed, though apparently not alarmed, by it. She constantly forgot words in conversation, and would say with impatient expression and gestures, "Why! you know what I mean." There was no indistinctness of pronunciation. This condition was attributed by her to the medicine she was taking (iodide of potassium and bromide of sodium), and she expressed great gratification at having it stopped, although I could not make out whether what pleased her most was giving up the medicine or the cessation of the attacks of vertigo (or petit mal), of which she had much less for some time.

The following circumstance will serve to illustrate the form of aphasia, which seemed to be purely amnesic: In order to test her, I told her that a lady, a former townswoman, whose name I purposely omitted, had come to reside in a house in the neighborhood. She seemed to understand me, and to be annoyed that she could not tell me the name. She walked into the next room, got the right card from the table, read the name to me with perfect distinctness, and said the lady and her daughter had called on her a short time previously, and added that she (the patient) had always known her. As I was going away she said "hot" for "cold," and indicated by gestures and detached words that she thought I was imprudent to be without an overcoat, the name of which garment, however, she could not recall.

This aphasia increased without changing its character. The paresis of the right side became distinct and permanent, though never complete. The patient dropped things from her right hand; this hand was noticed to tremble, but she continued to use it for gesticulation, especially when she could not get the word she wanted.

During her walks she began to act more strangely, appearing forgetful, taking the wrong street, dropping things without noticing it, and once or twice making a sudden run after someone in the street. She became wilful and uncontrollable. At the table she acted strangely, forgetting the usual proprieties, as to which she was ordinarily very punctilious, using the wrong dishes, trying to cut meat with a spoon, etc. On the day before her death she walked out, but was very difficult to manage. It was noticed that she constantly tended to turn to the right, and on stepping on to the curbstone her right foot was raised with difficulty.

On the morning of January 11th she could not take her accustomed beef-tea, but went through the motions with her fingers as if she had held, and was using, a spoon, and said she had had enough. When I saw her she was very drowsy, supporting her head on her right hand. This hand shook much, the other a little. Her stupor rapidly deepened and she died at 6 P.M. Her pulse became quite slow, but continued to beat strongly some moments after she had apparently ceased to breathe. There were no convulsions. A few hours before her death the right pupil was widely dilated, and the left of medium size.

During her sickness the urine was repeatedly examined without important results. At times there was considerable swelling of the feet. On more than one occasion there was said to be a great tumefaction of the lips and face, which, however, owing to her peculiarities of disposition, I was not allowed to see. She used to say that she had always been subject to swellings of the kind on various parts of her body, and seemed to regard the swelling of her feet as of the same character with them, and of no great importance. The swelling of the feet, however, was distinctly anasarcous, while the others I considered, from the description, to have been of the kind recently called angioparalytic œdema. The condition of the eyes has not been hitherto alluded to. The fundus was examined in the summer of 1886, and again in February, 1887, with negative results. Unfortunately this was the last examination. There was no defect of vision except myopia. She used to read the paper every evening, and no such phenomenon as hemianopsia could have escaped her own observation.

As to more general symptoms, it may be said that there were none sufficiently decisive to be of value. When she first came under my care she complained of weakness, but was always in the habit of walking out. At first she carried a cane, but afterward discarded it. During her illness she gave up drawing and the reading of foreign languages, of which she had formerly been fond, and read little but the newspaper. There was no marked change of disposition, and the only appearance of a delusion was when she told me circumstantially about a friend who was coming to live with her, when, in reality, all the arrangement that had been made was her having requested the lady to do so.

At the autopsy, which was confined to the head, the scalp and calvaria were found moderately rich in blood, the dura tense but otherwise normal, the convolutions flattened and dry. On opening the fissure of Sylvius, on the left side, the convolutions of the island of Reil seemed to be swollen and pale, apparently œdematous, as if some growth lay immediately underneath. The whole anterior of the extremity of the temporal lobe was softened.

On the lower surface of the occipito-temporal lobe a small spot of discoloration was found, connected with a tumor lying in the interior of the lobe and covered with a thin layer of cerebral substance. It was situated chiefly between the fourth occipito-temporal convolution, which, with the two neighboring convolutions, was distended over it, and the posterior horn of the lateral ventricle, into the cavity of which it had not actually made its way, although very nearly doing so. It was about four centimetres in diameter, from upward and inward toward downward and outward, three thick, and about three antero-posteriorly. It was of soft and somewhat friable consistence, yellow and reddish in color, as if some small hemorrhages had taken place into its substance. It was quite clearly defined from the surrounding tissue, though not having any distinct capsule. In structure it was a spindle-celled sarcoma.

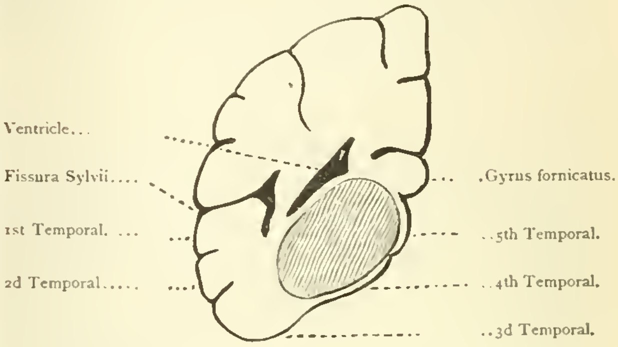
The position is more accurately defined by the accompanying diagrams, of which one represents a section corresponding very nearly to Dalton's Plate XVII., that is, a little posterior to the extremity of the corpus callosum, and anterior to the point of the cuneus. It extended backward from this section perhaps one centimetre or more, and forward so that the point just appeared in another section corresponding to Dalton's Plate XIV., a distance of a centimetre and a half.

In the other diagram is represented, on the lower surface of the cerebrum, the position of the tumor, which was only a short distance below the surface, covered with a thin layer of the normal color except in one dark-brown spot.

The softening portion of the temporal lobe was not examined microscopically except in the fresh condition, when it seemed to contain nothing but the normal elements of brain tissue.

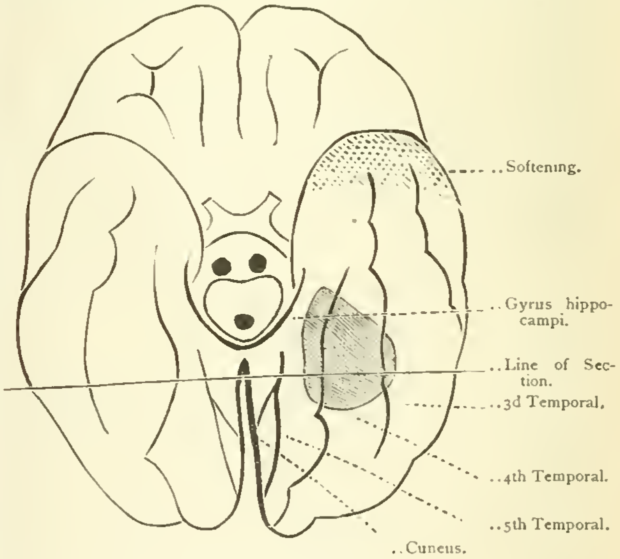
Of a piece comprehending the third frontal convolution and the island of Reil, on the left side, sections were very kindly made for me by Dr. W. M. Gray, of the Army Medical Museum, with his usual skill. The island showed, in comparison with the frontal, a proliferation of the elements of the neuroglia in the two outer layers, and possibly in the deeper ones.

In the deeper layers the nerve-cells were surrounded by a larger space between themselves and the neuroglia than on the third frontal, or rather there were a larger number of cells so surrounded. Both of the above-named convolutions showed these changes more markedly, as compared with a section from a frontal convolution of the opposite hemisphere. I was not sure that I could make out any alteration in the cells themselves.



Section of Left Lobe of Cerebrum at Line marked in the other Diagram.

These changes would perhaps indicate little more than an œdema, somewhat dissociating the deeper elements, with a frequently recurring congestion, giving rise to proliferation of the connective tissue in the periphery. Tumors in the region where this one was found are rare, and I have been able to find not a single one which corresponds very nearly to it. Tumors of the occipital lobe are not so rare; but by far the greater number of them are situated in the space between the ventricle and convexity, or in the convex cortex itself. A similar statement may be made as to the temporal convolutions.



Inferior Surface of Cerebrum.

The following cases concern tumors not very remote from the location of that described :

Burney-Yeo (*Brain*, 1878, vol. i., p. 273): A lady, aged sixty-nine. General loss of power, chiefly in lower part of body; right foot lifted with difficulty and slowly;

toe dragged; right hand a little weaker; mental faculties obscured; difficulty in finding words; memory impaired; severe headache in left side and back of head; double optic neuritis.

There was a large oblong glioma, the size of a goose's egg, weighing nearly six ounces, chiefly in the white substance of the posterior lobe, not extending beyond the posterior half of the hemisphere, nor to upper surface so as to reach convolutions, nor to interior surface so as to interfere with structures at base or floor of ventricles.

Langmore ("Trans. Path. Soc. Lond.," 1851–52, iii., p. 240): For four months frequent headache; pains down right arm in paroxysms; last two days delirium in attacks, but consciousness perfect between them; no previous paralysis.

Tumor in the interior portion of posterior lobe of the right side, the size of a pullet's egg, soft, embedded in the substance, and approaching within few lines of the surface.

Mitchell (*Edinb. Med. Journ.*, 1883–84, xxix., 430): Sudden unconsciousness; no convulsion; another attack, then dementia; sensory and motor functions impaired on left side.

Hemorrhages in left corpus striatum. Under the posterior part of the floor of the left lateral ventricle a tumor, three-fourths of an inch in diameter, globular, firm, and resistant; in right corpus striatum old hemorrhages.

I have thought this case worth putting on record as a contribution to cerebral localization, on account of the unusual situation of the primary lesion, and have to remark upon the following points:

Hemiparesis is so common a symptom with cerebral tumors in a great number of situations that it has little value for regional diagnosis. It may probably be produced by any tumor of sufficient size to exercise, either directly or by secondary congestion, a general compression of one hemisphere, as well as of the motor region alone. In such a case as this, where, for a long period, it was present only for a few hours, or usually only a few minutes at a time after a fit, it is to be attributed with much the most probability to the pressure of a temporary congestion which rapidly subsided. At a later period its permanent presence to a slight degree might have coincided either with the changes in the insula and its subjacent ganglia, or to the increase in general pressure.

As to the epileptiform attacks, not of a strictly localized character, a similar remark may be made. The present case might have been considered as supporting the view that connects epilepsy with invasion of the gyrus hippocampi, had it not been that an epileptiform attack was the earliest distinct symptom, while the gyrus hippocampi was barely touched by the anterior extremity of the tumor, and was hence, presumably, only recently invaded.

Another point of interest is the absence of hemianopsia, which, according to recent observation, seems to be quite clearly connected with lesions of a part of the occipital lobe, that is, the cuneus, or a part of the convexity or white matter corresponding thereto. Here it was probably the unusually low situation of the tumor, clearing the cuneus and the fibres which pass forward from it, or from the convexity, that prevented it from interfering with vision.

Taste and smell were unfortunately not carefully tested. The softened condition of the point of the temporal lobe might have given rise to abolition or diminution of the acuteness of these senses.

The aphasia, of a purely amnesic character, both as regards speaking and writing, and having so little to do with any motor disturbance, is interesting in connection with the limitation of the lesion of the motor region to the island of Reil. The third frontal convolution, which contains the centres for the movements of the lips and tongue, as in articulation, was, to the naked eye, apparently free from any lesion, and showing only rather doubtful ones under the microscope. It is, however, not going far to assume that the loss of memory for words was connected not with the lesion of these convolutions alone, but with a more widespread and less defined pressure effect.

The most definite studies of aphasia are naturally those which involve the connection of a sensory *im*pression—sight, hearing, or touch—with a motor *ex*pression—speaking or writing—and they have not as yet enabled us to locate memory, or stored up impressions, as distinguished from those immediately present.

The slight amount of headache during the time that the disease was actively progressing is a noticeable and important point in diagnosis, since so much stress is usually and correctly laid upon severe and localized headache to prove the presence of a cerebral tumor. Digestive disturbances, also, with the exception of a somewhat diminished appetite at various times, were conspicuous by their absence.

THE RELATION OF SPASMODIC ASTHMA TO CHRONIC HYPERTROPHIC RHINITIS.

By J. E. SCHADLE, M.D.,

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It is my desire in the presentation of this subject to invite especially the attention of the general practitioner to an infrequent form of asthma, which, it would seem, is still left to the specialist for recognition.

There is, without doubt, an intimate connection between spasmodic asthma and a chronic thickening of the mucous membrane covering the posterior portions of the inferior turbinated bodies and the septum narium immediately opposite.

It is to this especial etiological feature of the affection that I want to draw attention.

Four illustrative cases will be given, proving the correctness of the statement that an hypertrophy of the parts mentioned contributes in a great measure to the development of this form of asthma.

But before entering into a discussion of this fact it may be important to briefly review the theories advanced regarding the mechanism of spasmodic asthma when due to the presence of nasal polypi.

Since Voltolini made known his remarkable observation that polypi of the nose are a contributory factor to the production of reflex asthmatic symptoms, more recent writers have noted the same phenomenon. As to how a polypus in the nasal fossæ gives rise to paroxysms of dyspnœa, there is still, among authors, a difference of opinion.

On the one hand, it is presumed that its presence in a nasal cavity produces a stenosis, whereby a perfect interchange of the gases of the lungs is interfered with and asthma results. On the other hand, it is maintained, by authority equally eminent, that the polypus comes in contact with a sensitive part of the intranasal mucous membrane, sets up an irritation, followed by congestion and engorgement of the cavernous tissue, and creates by reflex action symptoms of difficult breathing.

The latter theory appears correct when it is remembered that certain portions of the membrane lining the nasal cavities are richly endowed with sensitive nervous filaments coming from the trigeminus, whose centre lies in close proximity to that of the vagus in the floor of the fourth ventricle, between which centres there undoubtedly exists an intimate sympathetic relation. If this physiological statement be true, then there is little difficulty in understanding how an irritant, when introduced into the nose, or generated therein by a diseased condition, can superinduce paroxysms of the disease in one asthmatically inclined.

The practical experiments of Mackenzie, revealing and establishing the existence of intranasal sensitive areas, are certainly invaluable in forming a reliable basis from which a minute and accurate study of nasal reflexes can be made.

According to his description, he found that the areas occupy a position on the mucous membrane clothing the posterior third of the inferior turbinated bodies and the septum narium directly opposite. He states that by irritating an area with a probe, or any other foreign substance, reflex phenomena follow, such as cough, sneezing, or dyspnœa ("Wood's Reference Handbook," vol. v.). I myself have observed the same truth enunciated by Mackenzie, when examining patients whose organization was of the nervous kind.

If, then, an irritant introduced from without is applied to one of the so-called sensitive spots, and gives expression to a phenomenon whose nature is entirely reflex, is it not reasonable to believe that a morbid process embracing an area, such as is the case, for example, of chronic hypertrophy of the mucous membrane, can in like manner produce a similar effect?

The pathological change of the tissues having gone on at an indefinite rate, in time alters the nervous as well as the vascular supply of the part. The individual in whose nasal passages such a change occurs, and on whose constitution the asthmatic predisposition is indelibly impressed, becomes, I believe, a fertile subject for a full development of symptomatic asthma.

I apprehend, further, that there are not a few cases of reflex asthma whose cause is seated in an intranasal affection when no other cause is manifest.

Dr. Clinton Wagner, of New York City, in his book on "Diseases of the Nose," refers to chronic hypertrophic rhinitis as a cause of asthma. He reports a case in which a cure was performed by a direction of appropriate treatment to the nasal disease. Dr. Wagner is not specific in his remarks with respect to the locality of the hypertrophy. He does not state what part of the mucous membrane had undergone a hypertrophic change during the progress of the rhinal disorder of his patient.

Woaks, in his excellent work—"Post-nasal Catarrh"—goes so far as to say, "there can be no doubt that some forms of chronic asthma have their origin in post-nasal affections, and are cured when these are got rid of." The following typical cases of nasal asthma came under my notice and treatment more than a year ago:

CASE I.—Mrs. L——, aged forty-years, the mother of three children, consulted me concerning violent paroxysms of asthma, from which she had been an intense sufferer for more than five years. During the first three years of her affliction the spells came on at irregular intervals. But for two years prior to consulting me they were marked distinctly by an entirely nocturnal appearance, occurring principally awhile after midnight, and as frequently as once in twenty-four hours. When an attack was unusually severe, it was a common thing for her the day following to be utterly unfitted to attend to the cares of her household. Atmospheric changes exerted an influence in regulating the severity of the seizures.

The family history indicated a decidedly neurotic temperament, the asthmatic tendency having prevailed among her antecedents. A physical examination of the chest showed no signs of lung disease. There was a slight bronchitis; a cough, too, accompanied the violent attacks of difficult breathing. The heart's action was normal; digestion good; bowels regular; uterine and urinary functions natural. The nervous system was sensitive and easily excited. A rhinoscopic examination revealed, anteriorly, the nasal cavities to be in a reasonably healthy condition; posteriorly, there were brought into view two large masses of hypertrophic mucous membrane arising from the posterior extremities of the inferior turbinated bodies and extending into the post-nasal space. On account of the great size of the growths the posterior nares were completely obstructed. In consequence of the stenosis thus produced, respiration was performed entirely through the mouth. The parts diseased were quite sensitive; a slight touch of the probe induced dyspnœa. Explaining to my patient the nature and situation of the hypertrophies, and also telling her that in my opinion they were solely at the bottom of her trouble, she willingly consented to an operation. Using a Jarvis cold wire-snare, I removed them at one sitting. The result was satisfactory; an immediate subsidence of the asthmatic tendency and a restoration of free nasal respiration took place. No trace of the disease has since appeared. Her general health, too, has improved in every way.

The last two years of her illness having been characterized by intensity of suffering, she was reduced in general health, anæmia and loss of flesh being conspicuous.

CASE II.—John M——, drug clerk, aged eighteen years, forms the subject of my second case. He complained of periodic attacks of asthma, appearing at longer or shorter intervals, and confining him to his room for several days at a time. The day he visited me he was just recovering from a bad attack. Aside from his asthmatic trouble he seemed in good health. There were no evidences present leading to the belief that his asthma was of bronchitic, peptic, or cardiac origin. On examining the posterior part of his nasal cavities, I discovered on the end of each inferior turbinated body a large growth of redundant tissue impinging against the septum and producing partial closure, which rendered nasal respiration quite difficult. I cut them both off with the cold snare. He at once experienced relief and a perfect cure followed.

CASE III.—Mrs. M——, aged fifty-five years, mother of John M——, came to see me regarding treatment for herself soon after her son's recovery. The commencement of her sickness dated back many years, paroxysms of asthma occurring periodically. Loud wheezing was a pronounced symptom when in the midst of a seizure. The suffering she endured was considerable, breathing being difficult and labored. Post-nasal inspection revealed an excessive thickening of the mucous membrane clothing each side of the septum narium. The redundant tissue was immense, and extended almost entirely across the posterior opening of each cavity to the turbinated body immediately opposite. When the parts were irritated a reflex effect occurred. The turbinated structures, as far as could be determined, were in a normal condition. I used the galvano-cautery to destroy the hypertrophy, employing the flat knife at a cherry-red heat. Three sittings, ten days apart, were necessary to effect complete destruction. No other measures were instituted in the management of her case. No symptoms of the malady have since appeared, and she has been in the enjoyment of good health ever since the last application of the cautery was made.

I have repeated these three cases for whatever interest and information from a clinical point of view they may contain. They certainly fortify the opinions of a few other observers in the fact that there is a *rhinal*, as well as a "bronchitic," a "peptic," or a "cardiac" cause of spasmodic asthma. In them, too, we find demonstrated the truth that it is necessary for that portion of the nasal mucous membrane engaged in a pathological process leading to an hypertrophy to include a sensitive area in order to produce reflex asthma.

In a personal communication to the writer, Dr. John N. Mackenzie, of Baltimore, relates a significant case strongly substantiating the view expressed above. By his permission I quote the case as follows:

"A man consulted me for violent attacks of asthma which compelled him to give up work entirely. Irritation of the sensitive area invariably produced an attack. He had two large posterior hypertrophies, both of which I removed with the cold wire-snare. *At each revolution of the nut and tightening of the wire he was seized with a violent paroxysm, so threatening that I was fearful that the operation would have to be suspended.* [Italics are his.] Seeing, however, that he came out of each attack with safety, I screwed the loop slowly home at long intervals and finally cut through the masses. Relief was immediate, and that night he slept without his asthma for the first time in several years. No other treatment was used beyond the ordinary spray. Two years or more have passed and the patient has not returned.

"This is, I think," he continues, "a fine case of so-called nasal asthma."

104 EAST THIRD STREET.

A SYNOPSIS OF TREATMENT IN TWENTY-SIX CASES OF PNEUMONIA OCCURRING CONSECUTIVELY IN A MISCELLANEOUS PRACTICE.

By HARRIS FISCHER, M.D.,

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No. 1. Negro laborer, aged forty, spare habit, general health indifferent; seizure abrupt and violent; prolonged chill followed by high fever and severe pain in the left side, with copious bloody expectoration. Croupous pneumonia.

Treatment.—Hot mush poultices, with oleum terebinth, applied to the painful part, with a hypodermic of morphia sulphas $\frac{1}{4}$ gr. Quinia sulphas, gr. v. to viij., every four hours during entire sickness. Tinct. aconiti rad., gtt. ij., every two hours. Carb. ammonia, gr. iij., every two hours. At night, usually, he had also $\frac{1}{4}$ gr. morphia sulphate, and if there was much elevation of temperature, antifebrine, gr. v. Convalescent in fourteen days.

No. 2. Mulatto boy, six years of age. Catarrhal pneumonia; began with catarrhal fever and diarrhœa; has been sick several days. When first seen had intense pain right side, much aggravated during the daily exacerbation; fever 103° F.; some mucous râles and hacking cough. Percussion signs negative; sputa, occasionally coughed up, confirms the diagnosis.

Treatment.—The same as No. 1, with appropriate reduction in dosage. Convalescent at tenth daily visit.

N.B.—In these two cases a troublesome typhoidal diarrhœa required the following every four hours:

℞. Sub. nit. bismuth	gr. v.
Oleum terebinth	gtt. v.
Emulsion gum acacia	q. s.,

with paregoric for boy and morphine for the man every six hours. Wine, whiskey, beef-tea, and milk throughout the cases.

No. 3. Mulatto boy, seven years of age. Croupous pneumonia, right side; sick four days when first seen.

Treatment.—The same, substantially, as No. 2. Bowels loose, but not obstinately so. Pleuritic pain persistent, and not completely relieved by treatment. I applied a blister on the fifth day of attendance. Sulphate quinia was given in five-grain doses, when the temperature was as high as 103° F. in the afternoon, and in smaller doses when the average pyrexia was lower. Convalescent one week from first visit.

No. 4. Negro girl, five years of age. Catarrhal pneumonia; highest temperature reached 104° F.

Treatment.—Poultice of mush and turpentine. Comp. tinct. opii. camph., every six hours. Quinia sulphas., gr. iv., every four hours. Tinct. aconiti rad., gt. j. Carb. ammonia, gr. ij., Water, q. s. S.—Every two hours.

This case (No. 4), as all the others, received a dose of antifebrine or antipyrine at bedtime, if the opiate seemed not sufficient to procure rest, or if there was a temperature noticeable at that time. Convalescent in five days.

No. 5. Twelve years of age; sister to No. 4. Case very much the same. Range of fever a little higher.

Treatment.—The same, with slight increase in the dosage. Convalescent in five days.

No. 6. Stout white child, male, four years of age. Sick three days when first seen. Catarrhal pneumonia.

No. 7. Brother to No. 6. Catarrhal pneumonia.

Treatment.—Mush poultices greased with lard next to the body. Tinct. opii, or paregoric, every six hours. The main treatment was quinia sulphas, gr. iij. to v., every four hours. Tinct. aconiti rad., gt. ss. to j., and carb. ammonia, gr. ij. to iij., every two hours. Convalescence, in both cases, tenth day.

No. 8. Stout country girl, white, aged eighteen.

No. 9. Sister of No. 8; more delicate, aged sixteen. These sisters nursed two preceding cases. Were taken with the same characteristic catarrhal prodroma, and developed in their turn unmistakable catarrhal pneumonia. They had for treatment the same as Nos. 6 and 7, with proper increase in dosage. The pleuritic pain was more intense, and hypodermics of morphine were used, with antifebrine, gr. v. to viij. per orem, for relief. Notwithstanding these girls took quinine in doses of gr. viij. every four hours much of the time, the temperature frequently reached 104° or 105° F. Antifebrine or antipyrine were used in this emergency, and sometimes morphine, and always with signal relief. They both had blisters. Recovery in eight days.

No. 10. Anæmic white girl, aged eight. Catarrhal pneumonia. Same treatment, with modified dose. Less pleuritic pain. Temperature, though high, did not seem to distress this girl so much; though she had a dose of paregoric or tinct. opii at bedtime, and sometimes antipyrine. Convalescent in five days.

No. 11. Precocious white boy, aged eight. Croupous pneumonia, third attack. Diagnostic points emphatic.

Treatment.—Mush and turpentine poultice. Paregoric to procure rest. Antifebrine when fever is 103° F. or more. Daily prescription, quinia sulphate, gr. v. S.—Every four hours.

℞. Carb. ammonia	gr. ij.
Tinct. aconiti rad	gt. j.
Water	q. s.

S.—Every two hours.

Diet—eggs, milk, whiskey. Convalescent in five days.

No. 12. White man, aged sixty-five; frail habit; history of twenty years' hard drinking; abstinent last five years. History of chronic intermittent fever four years; exempt for last five years. Has had several severe surgical injuries. Croupous pneumonia. Attacks sudden and violent, right side; seen early; reaction very imperfect.

Treatment.—Sulph. morph., gr. $\frac{1}{4}$, hypodermatically. Mush and turpentine poultices; later on, blister. Quinia sulphas, gr. v. to viij., every four hours.

℞. Carb. ammonia	gr. iv.
Tinct. aconiti rad	gtt. ij.
Water	q. s.

S.—Every two hours.

Third day responds to treatment well. Takes milk and whiskey freely. Expectoration abundant and easy. Distress is intense when pyrexia shows 103° F., and much relieved by antifebrine, gr. v. Fifth day case seems well in hand. Makes ineffectual efforts to stool; has had no evacuation in two days, and takes an aperient dose of calomel. Very copious typhoid-looking motions produced, with threatened heart-failure.

℞. Bis. sub. nit	gr. x.
Oleum terebinth	gtt. v.
Morph. sulph	gr. $\frac{1}{4}$,

in emulsion of acacia for diarrhœa, with whiskey, digitalis, and beef-tea to meet the cardiac depression. Patient rallied well. Now appears heavy; slightly delirious. Seventh day—expectoration, still easy, assumes a bright yellow tinge, with offensive breath. Then large dark evacuations, and an easy death on the eighth day.

No. 13. Married white woman, aged thirty-five years, mother of six children. Environment exceptionally bad. Sick three days. Pleuro-pneumonia. Passing the house was called in. Case desperate. Respiration rapid and jerky. Pulse 120, feeble.

Treatment.—Mush and turpentine poultice. Hypodermic of morphine.

℞. Carb. ammonia	gr. iv.
Tinct. digitalis	gtt. v.
Water	q. s.

S.—Every two hours.

Quinia sulphas, gr. vj., every four hours. As I was hurriedly leaving, husband informed me that she had missed two months and now had a moderate flow. Half teaspoonful of fl. ext. ergot was given in one dose. The environment absolutely forbade any manual examination or appliance for relief of this complication. Patient had profuse uterine hemorrhage following day, and died.

No. 14. Infirm woman, with history of asthmatic trouble, aged seventy-five years. Came several miles on a very cold day to take charge of the household just bereaved. Day following seized with violent pleuro-pneumonia. Seen at once.

Treatment.—Quinine, whiskey, and carb. ammonia in large and frequent doses. Hot mush and turpentine poultices, with opiates cautiously given, to procure rest and assuage pain. This was the main course of treatment, which resulted in recovery in fourteen days.

No. 15. Married white woman; has two children. Appears strong, although has occasional intermittent fever, contracted recently in Flordia. Pleuro-pneumonia. Has been sick six days. Remarkable tympanitic resonance of the entire affected left side.

No. 16. Father to No. 15. Cases, excepting the tympanites, wonderfully similar. Aged forty-eight years. General health bad. Pleuro-pneumonia. The advent of these cases was sudden, violent, and intensely distressing.

Treatment.—Mush and turpentine poultices. Later on blisters. Hypodermics of morphine when pleuritic pain was very severe. Quinia sulphas, gr. v. to viij., every four hours.

℞. Carb. ammonia	gr. iij. to v.
Tinct. aconiti rad	gtt. ij.
Water	q. s.

S.—Every two hours.

Dry cups, with tumblers, to back part of chest. Diet —whiskey, milk, eggs, beef-extract, and wine.

These cases were very severe, and for the pleuritic distress during exacerbation required various expedients. Morphine hypodermics, with antifebrine, met these indications best. At the end of the third week they each had morning temperatures nearly normal, appetite slightly improved; evening temperature 102 to 104° F.; profuse expectoration, abundant moist râles all over affected side, apex and all, with exhausting night-sweats and marked emaciation. At this period, also, No. 15 developed a large scrofulous abscess of the elbow-joint. Her brother died at fourteen of cervical scrofula. Her father (No. 16) at this period, while in the same general condition, was threatened with hepatic abscess. The consumptive tendency being well established they both now received the following treatment: Scott's emulsion, milk and whiskey, t.i.d., with rich kitchen diet. Aromatic sulph. acid and belladonna for night-sweats, and quinia sulphas, gr. viij., every four hours. Three weeks later they came out of their bedrooms, and finally made a perfect recovery on this last prescription.

No. 17. Negro woman, aged forty, mother of six children. Croupous pneumonia.

Treatment.—Quinine, carb. ammonia, comp. p. ipecac. et opii brought her to recovery in eight days.

No. 18. Negro man, age thirty-five. Treatment the same, with blister on the fifth day; morphine and antifebrine at night. Convalescent in fourteen days.

No. 19. White boy, aged thirteen. Croupous pneumonia.

Treatment.—Quinia sulphas, carb. ammonia. tinct. aconiti rad. Poultices at first, blisters later; antifebrine to procure sleep and reduce temperature. Recovery in eight days. Visited five days.

No. 20. Delicate white boy, aged six years. Croupous pneumonia, right side.

Treatment.—Sulphate quinia, gr. v., every four hours.

R. Tinct. aconiti rad	gt. j.
Carb. ammonia,	gr. ij.
Water	q. s.

S.—Every two hours.

Antifebrine, gr. v., was given every six hours for four days before sweating appeared. Convalescence was established in one week. Appetite and strength slowly returned in course of another week.

No. 21. Vigorous white girl, aged eight. Croupous pneumonia; physical signs very marked. This child expectorates.

Treatment.—Quinine, carb. ammonia, opiates, and poultices. Defervescence and recovery abrupt on fifth day.

No. 22. White, married, mother of ten children, aged forty-five. Croupous pneumonia.

Treatment.—Poultices in early stages, blisters later. Heavy dosing with quinine all the time in bed. Moderate continual use of aconite and carb. ammonia. Recovery in eight days.

No. 23. White female child, daughter of No. 22. Catarrhal pneumonia following measles. Quinia sulphas, gr. v., every four hours; tinct. aconiti, gt. j.; carb. ammonia, gr. ij. S.—Every two hours in water. Recovery in eight days.

No. 24. White boy, aged eight, brother of No. 23. Catarrhal pneumonia following measles. Treatment same as No. 23, only doses larger. In these two cases the quinine was given on some days of temperature 104° F. every two hours. Convalescent at the fifth daily visit.

No. 25. Stout laboring man, aged fifty five. Opium habit. Croupous pneumonia. Had a severe chill, followed by pain in right side and copious bloody expectoration. Temperature 100° F.

Treatment.—Quinia sulphas, gr. v., every four hours. Carb. ammonia, gr. iij., every two hours. Poultice to seat of pain. Recovery in five days.

No. 26. Athletic negro man, aged thirty. Croupous pneumonia.

Treatment.—Tr. aconiti rad., gtt. ij., every two hours. Hot mush and turpentine poultices over affected lung. Quinia sulphas, gr. viij., every four hours. Carb. ammonia, gr. iv., every two hours. Fifth day of attendance daily exacerbation increasing. Temperature at noon daily is 104 F., with great distress to patient. Increase the dosage of quinine at this hour to gr. xv. Apply tumbler dry cups to back over affected lung. Convalescent in ten days.

A detail of these cases exhibits the fact that, under the circumstances, the resources of the remedial art could hardly have done better, at least in point of ultimate recovery. The case of No. 12, who had full attention, from the day of attack made a wonderful fight, but with such a history, at such an age, it would have been a refutation of medical science if he had recovered. No. 13 was cited because her case was one of the twenty-six taken as they came up in ordinary practice, but truly she could scarcely be said to have had attention at all. The environment in the other cases was good, bad, and indifferent; and much more of the two latter than the first. Only one of them was seen more than once daily. Some of them not so often. The diagnosis was palpable and emphatic. Any possible case of capillary bronchitis was excluded.

Why produce this list of cases, and a treatment which has at least no novelty in it? Well, this synopsis shows, first, how "statistics are misleading." The reader sees the statement that, for instance, in this report, with this treatment, there was a mortality of two in twenty-six, or nearly eight in one hundred cases. It goes out that to this extent remedial effort failed and death resulted because of its inefficiency. When we know the facts we realize that there was no failure, and medication did all that it should be expected to do. Again it is urged that the too entire abandonment of venesection in the relief of pneumonia has changed the death-rate figures adversely. Now, according to the views of the bleeders, the chances are, in ordinary practice, that you will not see more than one in twenty cases early enough for the practice of that radical treatment. I saw only one of these twenty-six cases within six hours of the attack. This case was the old man—a physical wreck—No. 12. The last case, No. 26, was a model in physique for venesection, but his case had run on several days before I saw him, and was in its initiative distinctly malarial. Then, if blood-letting—given a proper case for its exhibition—could do no more than quinine and carb. ammonia, aided by an occasional dose of antifebrine, on the other hand, how much harm might come of it if one failed in that nice discretion in the when, and the how much, to use it. Once at least I have known a free blood-letting abort a pneumonia. More than once I have known a well-marked case getting well in twenty-four hours without it. In this argument I recognize the fact that there is no allowance for want of skill. Still, with this in view, I hold that he who bleeds to abort pneumonia must do it with a bold hand, or it is folly to do it at all. Such a one is like a general who puts in his whole force in one grand onslaught; if he succeeds, well and good, but if the pathological changes do not disperse, alas, for him, where are his reserves?

Ever and anon this must be the hapless luck of the doctor who bleeds for pneumonia.

I wish to emphasize another fact not yet mentioned. Ten of these cases occurring under circumstances so unusual, without history of exposure to bad weather or rigor of climate, and in groups, with other facts I have not space to mention, is well calculated to impress one that they were etiologically germinal and infectious. This, with the happy effect of giving quinine unceasingly, and in double doses when the pyrexia was distressing, all corroborates the present drift of scientific medicine, and from the standpoint of statistics even rebukes the idea of *going back* to venesection.

Progress of Medical Science.

THE INEFFICIENCY OF ZALESKI'S CHEMICAL LUNG TEST.—Dr. Blumenstock has published some observations on Dr. Zaleski's proposed chemical lung test, which depends on the larger quantity of blood, and therefore of iron, in lungs that have breathed than in those that have not. Only seven cases were examined by Dr. Zaleski, and the difference between the iron in the two classes of cases was not very great, and might well have been less if a more numerous series of experiments had been made. Apart from this and those faults of the method which Dr. Zaleski himself has admitted, there are, according to Dr. Blumenstock, the following objections to consider from the point of view of criminal investigations: 1. It is necessary to subject the whole of the lungs to a chemical analysis which would prevent other examinations being resorted to—as, for instance, by incisions; and a very useful means of diagnosis is thus cut off. 2. Zaleski in his method starts with the assumption that lungs which have not yet breathed contain less iron than those which have already performed their functions. But in the cases of most stillborn children, the lungs make respiratory attempts during birth, when the placental respiration ceases, and meconium, sebaceous matters, etc., get into the air-passages, death by asphyxia resulting. According to the theory of Donders, the lungs of those who die by drowning or asphyxia contain more blood when the occlusion of the respiratory passages takes place after expiration than in cases where this occurs at the end of inspiration; also the less liquid is taken into the lungs the more blood is found in them. Consequently, we find in such children, besides general venous stasis, the lungs, although free from air, are yet very hyperæmic, and ecchymoses usually exist in the pleura. Therefore, Zaleski's test could only be applied in the cases of children who had made no attempt at intra-uterine respiration; but such cases are so rare that this method can scarcely come into any practical use. Blumenstock prophesies that this test will be found as impracticable as the tests of Daniel and Ploucquet, which also depended on the increased blood contents of the lungs in children born alive.—*The Lancet.*

ATHETOSIS IN AN INFANT.—Athetosis of a genuine sort is a clinical rarity in infancy. MM. Comby and Féréol have recently described cases at the Société Médicale des Hôpitaux. Comby's case occurred in a female child aged twenty months, badly fed and rachitic. Various movements were noticed in the toes of the right foot, also in the fingers of the right hand, flexion and extension, abduction and adduction going on incessantly, slowly, without jerkiness, but in exaggerated fashion. The hemiathetosis did not involve the face. General sensibility was intact, and the eyes exhibited no sign of squinting or nystagmus. There was no muscular wasting. The movements began at eight months, were preceded by generalized severe convulsions, which lasted many days. The convulsions left behind them right-sided hemiplegia with athetosis. Cases in which infantile hemiplegia with hemispasm are after several years followed by choreic movements, are by no means rare.—*The Lancet.*

IPECACUANHA SPRAY IN THE TREATMENT OF DISEASES OF THE RESPIRATORY PASSAGES.—From his experience with the use of ipecacuanha spray Dr. William Murrell has published the following remarks: Most successful results are obtained from the employment of the ipecacuanha spray in cases of chronic bronchitis and bronchial catarrh. In fibroid phthisis there is often a marked improvement, even when no constitutional treatment is adopted. A single inhalation will sometimes restore the voice in cases of hoarseness due to congestion of the vocal cords. It is a matter of little importance whether the spray be given with a handball spray apparatus or with a small steam vaporizor. In either case the spray must be warm and the patient should not go out for some minutes after inhaling. Care should be taken to see that the spray really enters the chest and is not stopped by the arching of the tongue against the wall of the mouth. The best results are obtained by using the spray for about ten minutes three or four times a day. In the majority of cases of winter cough relief will be obtained in ten days.—*The Medical Press.*

EVIDENCE OF THE CURABILITY OF PHTHISIS.—Dr. Vibert, who is connected with the Paris Morgue, has stated that among two hundred necropsies which he made on persons who died a violent death, he has in as many as twenty per cent. found evidence of old tubercular lesions in the lungs, which had healed.

COMPLICATED CASE OF OCCLUSION OF THE VAGINA.—An instance of the rare cases in which a woman in labor is found to have complete occlusion of the vagina has been recorded by Dr. Zinsstag, of the Basle Gynecological Clinic. The patient, a young primipara, being in labor, on being examined by her family doctor, was found to have an occluded vagina. He, thinking this arose from stenosis, sent her to the clinic. When first examined there, the finger felt a narrow canal, at the end of which a sharp-edged circular fold separated it from a somewhat more extensive cavity; behind this latter cavity the fœtal head was felt through a thick septum. On inspection, it was discovered that the canal was not the vagina, but a dilated urethra, and the sharp-edged fold the sphincter of the bladder; the cavity was the bladder, and the membrane separating the finger from the fœtal head the posterior vesical wall. From the orifice of the urethra to the fourchette there stretched a strong bluish membrane, across which several veins ran. No opening capable of admitting the finest probe could be found. A somewhat similar case of persistence of the sinus urogenitalis is described by C. Von Braun in his text-book. Coition must have taken place through the urethra, and some opening in the hymen must have existed, permitting the escape of the menses, which had been normal, and also allowing of the introduction of the seminal fluid. This orifice must have become closed up during pregnancy. Incisions were made in the hymen and in the perineum, and the labor was satisfactorily concluded.—*The Lancet.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY
WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, July 28, 1888.

QUININE AND THE TARIFF.

IN 1878, when there was a twenty per cent. *ad valorem* duty on quinine, 196,475 ounces were imported, for which the price was about $2.83 per ounce, and for which consequently we paid about half a million dollars. Last year we imported nearly five million ounces, for which we paid foreign manufacturers only about 73⅓ cents per ounce, or in all about $4,000,000. The decrease in price is due in part, of course, to the increase in supply from the increased culture of cinchona trees.

We are not so sure that cheap quinine is such an unalloyed blessing. It has come about that nearly every family now has its quinine bottle, that it is sold at many general stores, and that the doctor rarely meets an invalid who has not been thoroughly dosed with quinine.

The drug, when taken continuously or excessively, is an injurious one; and its therapeutic value is greatly exaggerated in the popular mind. The value of quinine in "colds," bronchitis, ephemeral fevers, anorexia, general malaise, and various other minor ills, is most problematical.

THE TOXIC DOSE OF OIL OF GAULTHERIA.

SINCE the demonstration that oil of wintergreen is nine-tenths a salicylate and resembles therapeutically the artificially made salicylates, its use in medicine has become quite extended. Although it is a powerful drug, very few cases of serious poisoning by it have been reported, and hence a case recently coming under the observation of Dr. J. G. Pinkham ("Transactions of the Massachusetts Medico-Legal Society," vol. i., No. 10) is of interest.

In Dr. Pinkham's case, the patient, a young woman, took an ounce of the oil for the purpose, probably, of producing abortion. Death occurred in fifteen hours. The symptoms were distress in the head, profuse perspiration, pain in the stomach and bowels, purging, diuresis, with frequent, painful, and, at the last, involuntary micturition, abolition of sight and hearing, general convulsions, tonic spasms of the flexors of hands and feet, great depression of the heart's action, and rapid respiration. *Post-mortem* there was found persistent spasm of hands and feet, great irritation of the gastro-intestinal mucosa, a black, fluid state of the blood, and congested kidneys.

Dr. Pinkham was able to find accounts of only four other cases of poisoning by oil of gaultheria, two of which were fatal. In the three cases which were reported in detail, the amount taken was about half an ounce; and, as in two of these the patients recovered, it may be said, therefore, that the fatal dose of oil of wintergreen is from half an ounce to an ounce.

The symptoms are in many respects like those of salicylic acid. It is possible that the hydro-carbon gaultherilene, which makes up one-tenth of the drug, produces some modifications in the train of toxic phenomena.

It is pretty well established, by the cases so far observed, that at least two drachms of oil of gaultheria could be given without fatal result. As the ordinary dose is ♏x. to ♏xv., every few hours, the drug may be looked upon as a reasonably safe one.

THE LOUISIANA MEDICAL SOCIETY.

THERE are several of our State Societies that are in sad need of some vitalizing influences. Among them, according to the *New Orleans Medical and Surgical Journal*, is the Louisiana State Medical Society.

"A meeting of the Louisiana Medical Society is," says our contemporary, "the straggling together, in some locality, of a dozen or so of languid, inconsequent, unprepared medical men, bent for the most part upon a few days of rest, cigar-smoking, and story-telling."

Other, more specific, criticisms are made. We have at various times perused the somewhat arid records of the Louisiana Medical Society, and are forced to believe that the *Journal* is not far wrong in its strictures. A State with as good a medical school and clinical opportunities as Louisiana possesses, ought to make a creditable showing once a year.

THE HOT-WATER CLYSTER AS A DIURETIC.

DR. M. HOEFLER, of Munich, has made some observations upon the therapeutic value of hot-water enemata which appear to show that they have a special and novel therapeutic value. Dr. Edgar Kurz (*Memorabilien*, xxvii., 9, 1882) has already called attention to the value of such injections in pelvic exudates, and Dr. Dugas (THE MEDICAL RECORD, January 1, 1884) has observed their utility in metrorrhagia and dysmenorrhœa. Their usefulness in constipation and in congested and irritable conditions of the bladder, prostate, and rectum, has long been known.

But Dr. Hoefler's observation is, so far as we can learn, a new one. He finds that hot clysters produce a rapid increase in the urinary secretion. Within three hours the amount is increased three-fold, and after this there is still an increase for the remaining twenty-four hours. One of the recorded experiments is the following:

	Without hot water.	With hot water.
Amount of urine passed from 8 A.M. to 12 M.	213 c.c.	280 c.c.
From 12 M. to 7 P.M.	385 c.c.	1,025 c.c.
From 7 P.M. to 8 A.M.	796 c.c.	995 c.c.

In other words, the daily amount of urine without the clysters was 1,394 c.c.; with the clysters, 2,300 c.c.

The use of medicinal mineral waters containing chlorides and carbonates of sodium had a much less effect.

A series of careful experiments was made in order to determine whether the clysters caused an increase in the amount of urea excreted. The results showed that no especial change occurred, and that the only effect was a lessening of the specific gravity of the urine. On the other hand, it was found that there was an increase in the rapidity of the heart-beat and a lowering of arterial tension, a condition favorable, it is thought, to the removal of congestions and exudation products.

Dr. Hoefler gives the following cautions in the use of the hot-water clysters:

1. The temperature should not be over 45° C. or under 40° C.
2. The injection should be made slowly and carefully.
3. And is best made directly after a movement of the bowels.
4. The patient should lie down for ten minutes or more after the injection, and try to retain it all.
5. The injection-tube should be long enough to be introduced at least ten centimetres.
6. The amount of water should not exceed one litre.

THE MEDICINES THAT CAN BE SAFELY GIVEN NURSING MOTHERS.

A very useful series of experiments has been made by Professor Fehling (*Medical Press*, May 9, 1888; *Therapeutic Gazette*), in order to determine the drugs that may safely be given to nursing mothers. His first conclusion is the very sweeping one, that "all soluble agents, when ingested, may pass into the circulation and be excreted in the milk." An apparent exception to this rule, however, exists in the case of the ferrocyanide of potassium. Among the drugs tested were:

1. Salicylate of sodium, which was found dangerous to the infant in doses (to the nurse) of 45 grains daily.
2. Iodide of potassium, a drug slow in its excretion, and one that may be safely given in doses of 3 grains daily. Such a dose may, however, we are sure, be greatly exceeded in many cases.
3. Iodoform is gotten into the system of the child more easily through the nurse than by giving it directly to the child. Even when the wounds of the mother were dressed with iodoform, the drug was observed in the urine of the child.
4. An important statement, if true, is that mercurial salts given to the mother do no affect the infant at all, or at least very slightly.
5. Experiments with opium and morphine convinced Professor Fehling that 25 drops of tinct. opii (German Pharmacopœia), and gr. $\frac{1}{10}$ to $\frac{3}{10}$ of morphine, could be given safely to the mother.
6. Chloral he found could be given in doses of 23 to 45 grains.
7. Atropine very easily affects the child, even in small doses.

Other points were studied by Professor Fehling, among these the question of the influence of a fever, affecting the mother, upon a child. He found that milk from a fevered mother had no bad influence over the child within certain limits. If the temperature of the mother were very high and long-sustained at 104° F., a corresponding fever curve would soon appear in the child.

He explains this fact by the experiments of Bumm, who found mastitis micrococci in the cellular tissue of the mamma. These microbes were also found in the milk and alimentary canal of the child.

In the septic conditions after confinement, and in erysipelas and scarlatina, the specific micrococci were to be found extensively distributed. In these cases he advises the separation of the child from the mother, and artificial means or a nurse employed to nourish the child. But in the case of any other fevers he thinks the child should be kept to the breast as long as the milk is present, and simple means applied to reduce the fever. Where fever is high and the milk becomes injurious to the child. the milk soon disappears.

In the concluding portion of his paper he discusses the relationship that exists between the nurse and the child, and thinks that it is improbable that a nurse can impart her disposition or character to the child by the medium of the milk alone, though many diseases are likely to be transmitted, he admits, by this means. He thinks, however, that mothers with any tendency to mental disorders or epilepsy should not suckle their own offspring. It is condemned as a false notion, however, to suppose that the temperament or corrupt disposition of a nurse can be transmitted to the child in the same manner that disease can be communicated.

It is hard to conceive how a mother's milk can carry with it any specific epileptic or psychopathic taint, though it might easily be poor stuff to nourish a child, just as is the milk of any sick animal. Still experience must decide whether it is wise to let an epileptic or neurotic mother nurse her child, and experience is rather against the practice.

With regard to the general diet of the mother, Dr. Fehling thinks that the practitioner should correct the public notion of prohibiting certain food-stuffs, such as acids or salads. He conducted his experiments with citric acid, mineral acids, and vinegar. As might be expected, no proof of their transmission to the child could be proved, and no disturbance in the general condition of the child was observed. The child during the experiments rested as well before as after the experiments were performed; its functions of secretion and excretion were normal; while the mother's milk remained alkaline during all the experiments.

PROPRIETARY MEDICINES AND ADVERTISING DRUGGISTS.

A drug firm in this city, which has been well supported by the medical profession, is sending out advertisements of "——'s Remedy for Gout, Neuralgia, etc." No description of its constituents is given in the circular, which is worded so that the public can independently buy and use the remedy. We can see very little difference between thus foisting some secret "remedy" on the public, and deliberately assuming the agency for a patent medicine. Remedies for gout, neuralgia, and rheumatism, if efficient. can never be very safe in the hands of laymen. The practice of advertising a drug as a "remedy," not as a drug, is in accordance with the methods of the quack; and firms which strive to put "six-fold" remedies on the public can hardly deserve the confidence of the profession. The circular we refer to states that ninety-nine per cent. of cases of organic disease of the heart are due to the use of liniments and external applications! The sending of circulars and agents with such statements to educated physicians, is a piece of the rankest impertinence.

We trust that our readers will remember this quack remedy for gout, and the methods of its proprietors.

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It is not often that literary degrees are conferred on account of distinguished surgical services, but at the Commencement exercises of Union College, June, 1888, the honorary degree of LL.D. was conferred upon Mr. Lawson Tait, of Birmingham, England.

Dr. George H. Mitchell died at Los Angeles, Cal., on June 17th, in the fifty-first year of his age. Dr. Mitchell at one time practised medicine in this city, and was connected with the Board of Health. He was an army surgeon during the war.

Dr. Hermann Knapp has been appointed Professor of Ophthalmology in the New York College of Physicians and Surgeons, as successor to the late Dr. C. R. Agnew.

The Brinkerhoff Treatment.—A correspondent asks for the especial points of merit in the Brinkerhoff treatment, and we shall be glad to publish any experiences in this line.

The Oldest living Graduate of the University of Pennsylvania is not, as we stated, Dr. Hiram Corson, but Dr. John T. Huddleson, of Delaware County, Pa., who graduated in 1824.

Mr. Daniel A. Jones has contributed $100,000 for the erection of a wing to the Presbyterian Hospital of Chicago.

A Clinical School at Detroit.—The matter of establishing a clinical school in Detroit, as a department of the University of Michigan, has finally taken definite form. The new movement is to raise $200,000, to be placed in the hands of the regents, to be used for the establishment of such a clinical department. About sixty thousand dollars has already been raised.

Mackenzie and the German Physicians.—An esteemed correspondent, of Lincolnville, Kan., takes exception to the criticisms made by us upon the report of the German surgeons concerning the case of the late Emperor. He says: "If the German physicians were right and Dr. Mackenzie wrong, why should not the world, at least the medical portion of it, know it? The subjects of the lamented dead Emperor have a right to know the truth. Are not the professional reputations of the eminent German physicians entitled to this statement of vindication? Aside from a question of absolute justice and beneficial results of the report, where is the human being who, in the situation of those physicians who diagnosticated cancer, would not desire, nay claim, a right to have the correctness of his diagnosis made known to the world? Thousands outside the medical ranks wish to know who was right. Is there any *wrong* in that they should know the *right!*" Our correspondent mistakes the ground which we took in criticizing the report. We quite agree with him in wanting to have the truth known. But the report was a partisan and personal one, inspired by political influences, and not signed by Virchow, Leyden, Bardeleben, Senator, or Krause of the attending physicians and surgeons. It was given to the public press, not to the profession, and was intended to serve personal rather than scientific ends. Such is the view which, without any bias, we have felt compelled to take of the matter. This view is further supported by demonstrable inaccuracies in statements made in the report, such as that Dr. Mackenzie injured the right vocal cord, and that the impairment of the motion in the left vocal cord was not observed early in the disease.

The Jay Gould Medical College has been recently organized in Memphis, Tenn.—*South-Western Medical Gazette.*

The Indiana State Medical Society carries off the honors this year among successful annual meetings. We are not quite so certain about its scientific work, but the social features, and especially the banquet given by the Marion County Society, showed that our Hoosier friends possess wit, poetry, and oratorical powers of a superior order. There were two good poems, many bright speeches, a kind of spook-letter from the long-dead Daniel Drake, and a telegram from Bill Nye, as follows:

"Sorry I cannot be there. May you and associates continue to take life easily, as heretofore.

"Bill Nye."

This was received with great applause, which commenced as a murmur and increased to a roar.

Electric Light produces, as is well known, disturbances of vision among the workmen who are exposed to it. We refer, of course, to the large arc lights. The injuries that result have been described in The Medical Record. Recently a new pathological result of working in intense light has been reported to the Paris Surgical Society. The cases were those of workmen at Creusot, where an electric furnace is used for quickly melting metals. The men suffer greatly from the effects of the intense light, which exceeds a hundred thousand candle-power. After one or two hours the workers have a painful sensation in the throat, face, and temples, while the skin becomes copper-red in hue, and an eye-irritation lasts forty-eight hours, the discharge of tears being copious. After five days the skin peels off. All these effects are produced by light alone, no heat being felt. Dark-colored glass mitigates the effects somewhat, but does not entirely prevent them.

The Binghamton Asylum in this State has had a curious history. Originally it was started as an Inebriate Asylum (in 1854). It was built by a stock company as a private undertaking, and received its charter from the State. Drs. John W. Francis, Valentine Mott, and Willard Parker were among the presidents of the Managing Board. In 1867 there was a reorganization of the Board, and the institution was deeded to New York State for the sum of one dollar. This was done, according to the *Journal of Inebriety*, by the managers without the advice or consent of the stockholders. In 1879 the State turned the Inebriate Asylum into an Insane Asylum. The *Quarterly Journal of Inebriety* says that the action of the Board was illegal, and that the question of title is now to be decided in the courts.

This is a Warm Season for both the soma and the psyche; the summer solstice disturbs the one, the presidential campaign the other. It behooves, therefore, the man of philosophic mind, and such the true physician must ever be, to keep as cool as possible. He will remember that, tariff-reform or not, the death-rate continues at 18 per 1,000, and (*pro bono medico*) the sick-rate 400 per 1,000 annually. We disinterestedly advise all Republicans to vote for Mr. Harrison, all Democrats to vote for Mr. Cleveland, and both parties to read The Medical Record, which will continue to present the latest and most practical observations made as the Torch of Science advances.

The Transplantation of the Rabbit's Cornea.—*A propos* of the recently hastily reported case of this kind at Baltimore, Dr. F. E. Holtz writes to the *Journal of the American Medical Association*: "If those who imitate Prof. von Hippel's operation would only imitate also his patience and conscientiousness, and wait for the final results of their operations, their reports would be of more scientific value. For ten years Professor von Hippel had been trying to find a method of preserving the transparency of the transplanted cornea, and at last he succeeded in two cases which he reported last year at the meeting of the German Ophthalmological Society. But to feel warranted in reporting the result as a lasting success, he had been watching the one case twenty-one months and the other case three months after the operation. He did not operate one week before the expected meeting and then hurry there to have the success of this 'wonderful' operation heralded all over the country.

"There is another thing that the reporter of Dr. Chisolm's case might learn from the German professor, to wit, modesty and moderation in stating the possibilities of the operation. Hippel himself pronounced the usefulness of his operation in its present form to be very limited, because it was applicable to those cases only in which the opacity (leucoma) covered the cornea so far that an iridectomy could not improve the sight, but where at the same time the opacity did not extend through the *entire* thickness of the cornea. But, he said, these conditions are very rarely found: and by far the larger majority of cases in which we would like to employ corneal grafting, are *total leucomata*, where the *whole* thickness of the cornea has been transformed into opaque, cicatricial tissue; and besides, in most of these cases the iris is adherent to the posterior surface of the leucoma."

The Tariff on Microscopical Apparatus and Scien-

[illegible] pharyngeal catarrh in young girls fifteen to twenty years of age, who are decidedly anæmic and chlorotic and who suffer with constipation, and I have found that this was the cause of the catarrhal symptoms.

Dr. S. D. Risley, of Philadelphia: It is pretty generally admitted that nasal and pharyngeal diseases are especially liable to occur in persons of a gouty diathesis. Naso-pharyngeal disease is one of the most uniform manifestations of lithæmia. From the symptoms detailed in regard to the first case of Dr. Buck, I should suggest that the digestive disturbance was probably associated with a lithæmic condition.

Dr. C. H. Burnett, of Philadelphia: The use of nitrate of silver has been referred to. While this may be of service in other locations, I think that it is the worst application that can be made to the nose or the naso-pharynx.

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Dr. Charles J. Kipp, of Newark: I agree with Dr. Theobald as to the value of nitrate of silver. I rarely use it in a stronger solution than twenty grains to the ounce, and neutralize it afterward by salt water.

Dr. A. H. Buck, of New York, then read

A CONTRIBUTION TO THE ANATOMY OF THE ELEPHANT'S EAR.

The ear was exhibited, and the interesting points indicated. The external auditory canal is embedded in air-containing cells, and is six and a half inches long. The canal at the time of examination was filled with desquamated material. In the middle ear, the handle of the hammer seems to lie in a horizontal plane; it is not vertical, as in the human being. The anterior part of the drum-cavity is completely cut off from the posterior part. The Eustachian tube comes up through a system

Dr. George Hay states, in the *Pittsburg Medical Review*, that having been poisoned several times by canned lobster and canned salmon, he investigated the character of the tin cans and found them to consist of about one-fifth tin, four-fifths lead, with a little iron.

Menthol and Saffrol, the so-called camphors of peppermint and sassafras oil, respectively, are said by Dr. C. L. Dana (*Therapeutic Gazette*) to possess decided anodyne properties, given internally. Menthol (gr. v. to x. in hot water) relieves migraine and neuralgic pains. Saffrol, ℳ xx. to xxx., is also effective in acute and subacute rheumatism.

A Summer Drink for Children, proposed by Dr. Duchesne, of Paris, is the following: Glycyrrhizin, gr. xvi.; powdered sugar, gr. xvi.; bicarbonate of sodium, gr. xii.; crystallized quassine, gr. $\frac{1}{200}$; oil of anise, gt. $\frac{2}{3}$. M. For one powder. This quantity is to be dissolved in one quart of water when wanted for use. The beverage costs about half a cent a quart.

A Correspondent desires to know if the claims for "lithiated hydrangea" have any grounds in the actual experience of physicians. We can only say that it has been spoken of with a fair degree of commendation.

Another Heart Tonic has apparently been found in neriatin, the active principle of nerium odorum, or oleander. Under the control of Dujardin-Beaumetz, Dr. Pouloux has, says the *Therapeutic Gazette*, made a few studies of the influence of oleander in cases of heart-disease. He affirms that under its action the beat of the failing heart has become regular, and the filiform, imperceptible pulse full and hard. In several of the cases there has been marked increase of the urinary secretion, and in some the disappearance of wide-spread œdema. He administered the extract in pill form in doses of five centigrammes.

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THE BRINKERHOFF TREATMENT.—A correspondent asks for the especial points of merit in the Brinkerhoff treatment, and we shall be glad to publish any experiences in

The next paper was by DR. C. H. BURNETT, of Philadelphia, entitled

A CASE OF AURAL VERTIGO (MENIÈRE'S DISEASE) RELIEVED BY EXCISION OF THE MEMBRANA TYMPANI AND MALLEUS.

The patient was a young unmarried woman, thirty-seven years of age, who six years previous had been under treatment for chronic naso-pharyngeal catarrh, and chronic catarrh of the left middle ear, accompanied with hardness of hearing, tinnitus aurium, and a sense of fulness in the affected organ. Treatment of the catarrhal disease of the ear produced no benefit. After the lapse of six years, the symptoms already named grew worse, and there was superadded marked aural vertigo. The membrana tympani in the line of the malleus handle was found adherent to the promontory, and the consequent retraction of the entire chain of bones was held to be the cause of the aural vertigo and the sense of fulness, and of the tinnitus.

The operation of excision of the membrana tympani and the malleus was performed under ether, May 21st last, with entire and immediate relief to the aural vertigo (which before had often been sufficient to cause the patient to hold to a lamp-post for support) and to the sense of pressure and tinnitus, which good result has been maintained to the present time. The hearing was practically unaffected by the operation. The incus was detached from the stapes but could not be removed, as it slipped into the attic, and grappling for it is not advisable on account of the risk of irritation. Its removal, furthermore, would have no effect on the result of the operation.

DISCUSSION.

DR. J. O. TANSLEY, of New York: I have now under my observation a girl on whom the operation was performed some eighteen months ago. When she came to me the whole internal canal was filled with polypi, and she presented serious brain symptoms. I took out all the polypi and found a portion of the drum remaining, and above a localized necrosis into which a probe passed at least one-fourth of an inch. The patient has been under observation every day for two months. The local necrosis is healed, and she is doing well. There are still some brain symptoms. It seems to me that this is a very serious operation, and I should hesitate some time before performing it, on account of the results that might occur. In this case the result seems directly traceable to the operation.

DR. C. H. BURNETT, of Philadelphia: My patient did not remain in Philadelphia, but I was informed that two or three weeks after I saw her a discharge appeared. I think that there is still a slight discharge, but the membrane is forming. In another case a slight discharge appeared soon after the operation, but ceased after the membrane had reformed. The case reported by the last speaker was not one of the class to which I have alluded. The operation was evidently not properly performed if there remained a portion of the membrane and there was necrosis. I have not found this a dangerous operation. No one has reported bad results from this operation properly performed.

DR. CHARLES J. KIPP, of Newark: This operation has been performed a number of times by a foreign operator for the relief of tinnitus and vertigo, but he has given it up because it did not relieve these symptoms satisfactorily. He, however, did not have any bad results.

DR. S. SEXTON, of New York: I have performed this operation between fifty and one hundred times in the past few years, and have obtained decided benefit in a number of cases of tinnitus and other subjective symptoms. I have known of no case in which there was aggravation. In many cases, where there has been no marked tinnitus, the distressing sense of pressure has been overcome. The tinnitus is not always relieved by the operation.

Dr. Burnett has referred to the closure of the drum-head. My principal endeavor has been to avoid reformation of the drum-membrane. In a number of cases where this occurs the good hearing is lost. I have prevented this by the application of a solution of salicylic acid in ether to the margin of the closing membrane. This has succeeded even where the membrane has closed down to a minute opening. In regard to the purulent cases to which allusion has been made, I have operated on a number, and, on the whole, they are the more satisfactory cases.

Dr. S. Sexton then exhibited a new

PORTABLE BATTERY FOR THE STORAGE OF ELECTRO-MOTOR FORCE,

and a new

HEAD-LANTERN FOR THE EMPLOYMENT OF ELECTRIC LIGHT IN SURGERY.

The battery was made at his suggestion by the River & Rail Electric Light Co., of New York. It consists of three cells, and will light a six-candle electric light. The lantern is a modification of that of Trouve, but much lighter, and having a non-conducting base. Such a light is almost necessary in operations on the ear, when ether is used as an anæsthetic. The battery will work continuously for twenty-four hours, and will retain its power for several weeks or months. It may be charged by a dyna-

ous history. Originally it was started as an Inebriate Asylum (in 1854). It was built by a stock company as a private undertaking, and received its charter from the State. Drs. John W. Francis, Valentine Mott, and Willard Parker were among the presidents of the Managing Board. In 1867 there was a reorganization of the Board, and the institution was deeded to New York State for the sum of one dollar. This was done, according to the *Journal of Inebriety*, by the managers without the advice or consent of the stockholders. In 1879 the State turned the Inebriate Asylum into an Insane Asylum. The *Quarterly Journal of Inebriety* says that the action of the Board was illegal, and that the question of title is now to be decided in the courts.

ance played the part of a promoter of naso-pharyngeal catarrh or of aural disturbance. Some of those indirect causes which he had observed were then enumerated. Irritation of the gastro-intestinal canal is, in not a few instances, a strong exciting cause of naso-pharyngeal catarrh, and of all the aural disturbances growing out of such a catarrh. A male, forty-five years of age, had for years been more or less a sufferer from naso-pharyngeal catarrh, with tinnitus aurium and slight impairment of hearing, and more recently had begun to suffer from feeble digestion. He noticed that after indulgence in certain articles there would be abdominal discomfort, and at the same time marked exacerbation of the naso-pharyngeal catarrh. So long as the offending substance was in the stomach there was only a slight sense of discomfort, but in the course of three or four hours a slightly painful peristaltic movement would set up in the bowels; simultaneously the secretion from the vault of the pharynx would become unpleasantly active, and the tinnitus would increase. This condition would last for an hour, and then the naso-pharyngeal catarrh would return to its usual state. These attacks were accompanied with the escape of large quantities of gas by eructation. In many patients, usually men between forty and sixty years of age, where we have reason to believe that the gastro-intestinal tract is habitually in a state of greater or less irritation, we find the faucial mucous membrane red and swollen; in these cases the disease which claims chief attention is the gastro-intestinal affection.

Reflex influence, involving the vault of the pharynx and the ear, may emanate from more distant sources. A lady, forty years of age, complained of distressing tinnitus, involving both ears. There had been mild naso-pharyngeal catarrh, from time to time, for many years. At times she was almost entirely free from tinnitus. I always succeeded in giving prompt relief by applying a moderately strong solution of silver nitrate with a mop of absorbent cotton to the vault of the pharynx. After a time these failed to give relief. It was then learned that for many years she had suffered with pain in the pelvic regions and back, and that at this particular time she was suffering in a more marked degree. A specialist was then consulted, and it was found that there was retroversion of the uterus and subacute parametritis. These conditions were removed, and the tinnitus disappeared without treatment to the vault of the pharynx.

The author states that he had spoken of these as indirect causes; that is, as factors competent to aggravate a pre-existing but perhaps latent catarrhal disease, but he saw no reason why these reflex influences may not in certain cases play the part of direct exciting causes. He considered it impossible to demonstrate the correctness of this belief, and therefore preferred to adopt the view which assigns to them a less independent rôle.

DISCUSSION.

Dr. J. O. Tansley, of New York: I meet with many cases of naso-pharyngeal catarrh in young girls fifteen to twenty years of age, who are decidedly anæmic and chlorotic and who suffer with constipation, and I have found that this was the cause of the catarrhal symptoms.

Dr. S. D. Risley, of Philadelphia: It is pretty generally admitted that nasal and pharyngeal diseases are especially liable to occur in persons of a gouty diathesis. Naso-pharyngeal disease is one of the most uniform manifestations of lithæmia. From the symptoms detailed in regard to the first case of Dr. Buck, I should suggest that the digestive disturbance was probably associated with a lithæmic condition.

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Dr. A. H. Buck, of New York, then read

A CONTRIBUTION TO THE ANATOMY OF THE ELEPHANT'S EAR.

The ear was exhibited, and the interesting points indicated. The external auditory canal is embedded in air-containing cells, and is six and a half inches long. The canal at the time of examination was filled with desquamated material. In the middle ear, the handle of the hammer seems to lie in a horizontal plane; it is not vertical, as in the human being. The anterior part of the drum-cavity is completely cut off from the posterior part. The Eustachian tube comes up through a system of air-cells and opens through one of them close to the drum-membrane. Under the floor of the tympanic cavity there are three septa, making stall-like spaces. Two of these are quite long, six or seven inches. The labyrinth and other parts were not examined.

A paper by **Dr. Huntington Richards**, of New York, was then read by Dr. Buck, on

A CASE OF POLYPOID ANGIOMA OF THE EAR.

The patient, a girl, six years of age, came under observation May 4, 1888, with profuse and badly smelling otorrhœa, unaccompanied by pain, and dating only from the preceding February. Hearing seemed good. No bleeding from the ear had ever been observed. The general health was excellent.

Examination of the affected ear revealed a polypoid mass almost occluding the canal; the color was deep purplish-red. A considerable portion of the tumor was at once removed with the snare, and the remainder of the growth was extracted on the following day, leaving a small pedicle attached, seemingly to the outer surface of the drum-membrane, close to the prominence formed by the short process of the hammer. This stump was cauterized with chromic acid. Hemorrhage from the cut surface of the growth was unusually profuse at both operations. The child's hearing is now excellent, although both membranes are depressed and of a dark grayish-red color. The removed growth was pronounced to be an angioma. Three micro-photographs showing the appearance of the growth were exhibited.

Dr. Huntington Richards, of New York, also sent a paper, read by Dr. Buck, on

A CASE OF "FALSE DRUM MEMBRANE."

The patient, a man, twenty-one years of age, was totally deaf in the affected ear. There was a vague history of an attack of otitis media in early childhood. The other ear presented the common appearance of otitis media purulenta chronica. Examination of the ear that was not discharging showed a membrane occluding the canal. It differed from the normal drum-membrane in color, shape, relation of its plane to the long axis of the canal, and apparent thickness. It varied little in color from the skin lining the canal. The surface was perfectly smooth.

A triangular opening was made through this membrane. This caused no pain. Through this opening it was seen that there was no drum-membrane, but the inner wall of the tympanic cavity came into view. The hearing was only slightly improved. When seen a few days later, no discharge had appeared. Since that time he has not returned to the infirmary.

DISCUSSION.

Dr. S. Sexton, of New York: In a case seen last year I removed the membrane and then took out the malleus and incus. This case made a good recovery. The improvement in hearing was decided.

Dr. T. Y. Sutphen, of Newark: I have seen one or two cases of this trouble, which seems to me to be due to cicatricial closure of the external canal. It seems to me that the condition would be best spoken of as cicatricial closure of the canal.

Dr. A. Mathewson, of Brooklyn: A lady was under my care for some time, with an eczematous condition of the external meatus. She then passed from observation. Some time later she presented herself with a disk-like closure of the external canal. This was not complete, as there was a small opening in the centre. I dilated this opening with laminaria bougies, and the ear was left in perfect condition.

Dr. Samuel Theobald, of Baltimore: The members may recall a case which I reported, in which there was occlusion of both external canals. There was a history of suppuration, and, no doubt, there was ulceration and gradual closure.

Adjourned until evening.

Evening Session.

Dr. J. B. Emerson, of New York, read a paper on

THE FLEXIBLE CATHETER AS A DRAINAGE-TUBE—WITH CASES.

The author cited several cases, exhibiting the use of the flexible catheter as a drainage-tube.

With deeply seated inflammation of the auditory canal or mastoid cells, maintenance of drainage through a fistula is a necessity; and to prevent closure of the fistula, either by granular growth or natural healing, is important.

Dr. Emerson recommends the use of the flexible catheter as generally the best means to employ, and states his reasons to be, the comparative comfort and safety, together with convenience of control by both surgeon and patient. The efficiency observed in the use of the flexible catheter was also referred to.

Dr. Charles J. Kipp, of Newark, reported on

THREE CASES OF TRANSIENT BILATERAL HORIZONTAL NYSTAGMUS IN CONNECTION WITH PURULENT INFLAMMATION OF THE MIDDLE EAR.

Case I.—A young man, twenty-one years of age, had had otorrhœa seven or eight years previously. Three months before coming under observation he had an acute exacerbation, and suffered intensely with pain in the ear and head. The otorrhœa much diminished. Two or three weeks later he came, stating that he saw objects double, was dizzy, and could not walk. There was marked nystagmus in a horizontal direction. The vertigo and nystagmus continued four days. With the cessation of the nystagmus the vertigo disappeared.

Case II.—A young man, treated six years previously for acute otitis media purulenta, ending in recovery, appeared in March with an acute attack. Paracentesis was performed. The pain, however, continued for a long time. Finally, swelling developed behind the mastoid, and this was accompanied with several epileptiform attacks. One day, pressing on the swelling, pus poured from the canal. With this there was a sudden jerk of the head and nystagmus. The latter continued for about ten minutes. This was produced every time pressure was made on the mastoid. The mastoid was subsequently opened; since then there has been improvement.

Case III.—A young man, after exposure, was seized with intense pain in the ear, followed by otorrhœa. When he came under observation there was great pain. This was not relieved by treatment, but continued two or three weeks. Then a swelling appeared below the ear. This was incised and a large quantity of pus evacuated, with relief to the pain. Some days later, while washing out the cavity, the fluid came through the ear when considerable force was used. At the same time there was a jerk of the head and nystagmus, continuing several minutes. This could always be produced by making forcible injection.

Dr. J. O. Tansley, of New York, exhibited

AN IMPROVED AURAL SNARE.

The snare was devised to overcome an objection to the ordinary Wild snare; that is, the little jerk and rebound of the instrument when the growth is cut through. The instrument exhibited consists of a small tube through which the wire passes, to be connected with a small bobbin, by the turning of which it is gradually shortened.

A paper by **Dr. S. Sexton**, of New York, on

FOREIGN BODIES IN THE EXTERNAL AUDITORY CANAL,

was read by title.

Executive Session.

The following officers were elected:

President—Dr. J. S. Prout, of Brooklyn.

Vice-President—Dr. Gorham Bacon, of New York.

Secretary and Treasurer—Dr. J. J. B. Vermyne, of New Bedford, Mass.

Committee on Membership—Dr. A. Mathewson, Dr. D. B. St. John Roosa, and Dr. John Green.

Delegate to Congress of American Physicians and Surgeons—Dr. W. H. Carmalt, of New Haven; *Alternate*, Dr. G. Bacon, of New York.

The Society then adjourned, to meet at the Arlington Hotel, Washington, D. C., Tuesday, September 18, 1888.

Adjourned.

Knowsby Thornton on the Treatment of Uterine Fibroids by Electrolysis.—Dr. Thornton writes as follows to *The British Medical Journal:* 1. I think the whole discussion premature, because we know that fibromyomata are most uncertain in their habits of growth and retrogression when left entirely to themselves, the most surprising alterations taking place in periods of three, six, or twelve months. Such alterations are still more common if the patients are carefully handled as to diet, alcohol, rest at the periods, and special medicine. 2. Nothing which has yet been published by Apostoli or his followers is inconsistent with these natural, or slightly aided, changes, and the results obtained are probably as much due to the rest and care while under treatment, powerfully aided by the effect on the nervous system of confident hope of cure, as to the specific action of electricity. 3. No results can have any scientific value till the cure is proved by a sufficient interval of health for at least twelve months after the treatment has ceased. 3. We do not yet fully appreciate the dangers of the method. I know of one case in which rapidly fatal pyæmia followed a very few applications in the hands of one experienced in the use of the method. The journals tell us of narrow escapes, and even such careful manipulators as the Keiths record a serious case of cellulitis, of which the gravity is not lessened by attributing it to the carelessness of the patient. 5. I would ask the profession not to be carried away by the enthusiasm of anyone in a *revival* of this kind, but to wait patiently for definite results, confirmed by sufficiently long intervals.

KENTUCKY STATE MEDICAL SOCIETY.

Thirty-third Annual Session, held at Crab Orchard Springs, Ky., July 11, 12, *and* 13, 1888.

DR. JOHN G. BROOKS, OF PADUCAH, PRESIDENT, IN THE CHAIR.

DR. STEELE BAILEY, OF STANFORD, SECRETARY.

(Special Report for THE MEDICAL RECORD.)

DR. E. W. PALMER, of Louisville, Chairman of the Committee of Arrangements, in opening, made a few remarks.

NEW MEMBERS.

The following gentlemen were received as new members: W. L. Rodner, E. B. Schrieber, H. M. Busey, F. W. Kehler, all of Louisville; A. G. Lovel, Mount Vernon; T. B. Green, Bloomfield; J. W. Gilbert, of Lawrenceburg; W. H. Roach, of Mercer County. The Society has lost by death during the past year Dr. W. G. Ouchterlony, of Louisville.

DR. J. W. IRWIN, of Louisville, made a report on

PROGRESS IN OBSTETRICS,

in which he considered the subjects, Cæsarian Section, Electricity in Obstetrics, and Operations on the Perineum.

DR. J. MORRISON RAY, of Louisville, read a report on

THE PROGRESS IN OPHTHALMOLOGY.

Novelties in this branch he found not now so numerous as a short time since. The modern cataract operation, he thought, required some attention. The after treatment of cataract was undergoing some revolution. It was not thought to be so important as formerly. The late Dr. Agnew was the first to teach that light should not be excluded from cataract operations. Many others are following his teaching with good results. Much success in ophthalmic operations is now due to the use of antiseptics. Solution of the bichloride of mercury, 1:5000, or a dilute solution of argenti nitratis, are probably the best. The use of hydrochlorate of erythrophlœine as a local anæsthetic is objectionable, as Theobald, of Baltimore, has shown it brings on an attack of glaucoma in many cases. It is doubtful if it has any advantage over cocaine except that its effect is of longer duration. Antipyrine has come into use to control pain in the eye. Modern ophthalmology is striving to show a closer connection between eye diseases and general practice.

DR. DUDLEY S. REYNOLDS, of Louisville, said that he could not agree with the gentleman that suppuration depended on the depth of the incision in the cornea. In antisepsis it is very material to get an

EXACT MEASUREMENT,

and this we do not do when we compare grains and drops. We should go measure for measure, or weight for weight. He thought a better way was the way in which he used it, viz., one grain to the pint of distilled water. Marsden it was who determined the fact that the little rice-grained bodies found determined the disease. In granular lids trachoma is one of the manifestations of malarial disease, as has been found in India. He regretted that the pilocarpine treatment of glaucoma had been alluded to. The relation of defects of refraction to muscular defects of the eye and their combined effects on the general system, are interesting questions. The connection between the genito-urinary system and the eye is well known. He reported the case of a boy who was troubled with a spasmodic twitching of the eye, which disappeared on the removal of a lengthened prepuce.

DR. S. G. DABNEY, of Louisville, had seen the bichloride solution, 1:2000, irritate the conjunctiva very much, causing an ophthalmia. His experience with erythrophlœine had been to the extent of but one case. He wished to protest against the use of iodoform as an antiseptic in eye diseases. He had seen it used in Prague very extensively, and he thought it the most disagreeable antiseptic which could be chosen.

DR. M. F. COOMBS, of Louisville, thought that the extent of the cut influenced suppuration.

DR. J. H. BUCKNER, of Cincinnati, agreed with Dr. Reynolds that the danger from suppuration was from infection not from incision. Antiseptics, he thought, had done much for eye surgery. He was surprised to find so much apprehension from the use of strong solutions of the bichloride. He had been in the habit of using one grain of the bichloride to two ounces of the combined mixture of water, wine of opium, and glycerine, about 1:1000.

He agreed with Reynolds as to the confusion arising from the indiscriminate use of the terms ounces and grains. He did not believe eserine a safe remedy to rely on indefinitely in the treatment of glaucoma.

THE YOUNG OCULIST

is too apt to see only a sore eye and to forget that many eye cases are due only to constitutional conditions and to get well need only to see his brother, the general practitioner.

DR. RAY, in concluding the discussion, said he thought Dr. Reynolds had misunderstood him. He thought suppuration could be prevented in many cases by the use of antiseptics. He thought that too much stress had been laid on the difference between hypertrophy of the conjunctiva and trachoma. He wished to emphasize the importance of iridectomy in acute glaucoma. He thought we could make the cataract operation and send the patient home from the office and have about as good results.

DR. I. N. BLOOM, of Louisville, made a report on

PROGRESS IN DERMATOLOGY.

Science in this department has made steady progress during the past year, yet, nothing startling has been developed. Anthrarobin and chrysarobin have attracted considerable attention. The treatment of syphilis with insoluble mercurials hypodermically is attracting considerable attention and is followed by good results. The contest for supremacy lies between calomel and yellow oxide. America has been strangely conservative on this subject, while grand results come to us from Germany, France, and Italy. He had used the yellow oxide in fifteen cases and only one had an abscess. He urged the profession to make a trial of this method—the injection of insoluble mercurials for syphilis. He quoted a preponderance of authorities going to show the identity of lupus and tuberculosis.

DR. J. CLARK MCGUIRE, of Louisville, was of the opinion that lupus and tuberculosis were not identical. He quoted authorities to the proportion of seventeen out of twenty-seven, to substantiate his belief. In eczema he recommended the fixed adhesive dressing recommended by Professor Unna. He was opposed, on a theoretic ground, to the hypodermic injection of the insolubles in syphilis, and was backed by the authorities. If six or eight injections

'CURE" SYPHILIS,

then there must be a remaining reservoir of the poison hidden in the system. He thought the method by inunction the superior one. The bacilli of lepra, and of tuberculosis are considered the same in appearance.

DR. DUDLEY S. REYNOLDS, of Louisville, said the baccilli of lepra and tuberculosis were not the same in scarcely any particular.

DR. MCGUIRE replied that he did not make the statement of the identity of the two bacilli on his own authority, for he knew nothing about it, but upon the authority of Chiari, who was equal, at least, to anybody in Kentucky.

Dr. Archibald Dixon, of Henderson, had used the

HYPODERMIC INJECTION OF CALOMEL

in one case, where a man wanted to marry and be rid of his syphilis in a hurry. The injection was followed by a serious abscess, but all appearance of syphilis disappeared. He had not used the treatment since. He did not like to see anything condemned without trial in a fair way. Abscesses in calomel injections are now reduced to two per cent., and those in yellow oxide to nothing. My abscess was due, I think, to my omitting to disinfect the needle and part injected. Five and six hundred cases are reported where no abscess followed the use of yellow oxide.

Dr. J. G. Carpenter read a paper on the

DILATATION OF STRICTURE ANI.

The etiology, he thought, was often constipation in childhood. It comes on also reflexively, and was often due to retroflexion of the uterus.

This being literally the tail end of the discussion of the day, supper being ready, and the band playing, an adjournment was made.

Dr. W. O. Roberts, of Louisville, reported a case of

NEPHRECTOMY FOR SARCOMA.

The patient was a German girl, aged five years and six months, whose family history had been good. She complained for a considerable period of pain in the abdomen. She then had scarlet fever and then a tumor was detected in the left side of the abdomen just beneath the ribs and about the size of a fist. It was thought to be an enlarged spleen and treated accordingly. The tumor increased in size, downward, forward, and inward. The child complained of pain, referring it to the belly and to the back. She became greatly emaciated, and the outlines of the tumor could be readily made out. Its anterior surface was somewhat nodulated. Nothing abnormal appeared in the urinary secretions. A number of medical gentlemen saw the case, and all agreed that the only relief was in the removal of the tumor. An incision was made in the median line six inches long, with the umbilicus as the centre. The tumor was found situated behind the peritoneum and resting on its anterior surface was the colon, which was entirely empty. It was at once apparent that we had to deal with the left kidney rather than the spleen. Notwithstanding the fact that the tumor was situated outside of the peritoneal cavity it had pushed the small intestines deep into the pelvic cavity and produced

ENORMOUS DISTENTION

of the vessels of the mesocolon. This was now divided by the scissors, and the edges caught with the forceps so as to guard against hemorrhage. Adhesions between the tumor and the peritoneum were broken up, and a trocar and cannula pushed into the growth. A small quantity of syrupy straw-colored fluid escaped. The interior of the growth was found to consist of a pulpy mass. The cavity was thoroughly cleansed, the other kidney examined and found normal and the wound closed. Till the seventh day the case did well. On the seventh day the temperature rose to 101.5° F., and two small abscesses were found at the insertions of the sutures. Other parts of the wound had healed nicely. She left the hospital later in a promising condition. Weight of tumor, fifteen pounds; length, $6\frac{1}{2}$ inches; depth, $5\frac{1}{2}$ inches; thickness, $4\frac{3}{4}$ inches; oval and lobulated at the upper and back and the lower and anterior parts. Surface smooth. The kidney may be seen doubled upon itself. The neoplasm sprung from the outer border and the anterior surface of the kidney at a point about two and a half inches from its lower extremity, and is continuous with it along the whole concave border to the upper extremity. The capsule of the kidney formed the investing membrane of the tumor. The centre of the tumor comprises a cavity about the size of the fist, filled with pulpy matter. The microscopic appearances of the tumor are a mass of very small spherical embryonic cells. Encephaloid sarcoma. The kidney was normal except the portion contiguous with the growth, which shows infiltration with embryonic elements.

Dr. A. W. Johnson, of Danville, Ky., discussed the feasibility of accurate diagnosis in abdominal tumors. He reported one case which Keith had been watching for nine years as a case of fibroid tumor, and on operating before a large crowd found he had a cyst of the broad ligament. The vast majority of sarcomas in children he thought to be hopeless, and disaster is certain to follow.

Dr. E. R. Palmer, of Louisville, asked what fluid Dr. Roberts had used in cleaning the abdomen. Answer, warm water.

Dr. J. G. Brooks, of Paducah, Ky., delivered the

PRESIDENT'S ADDRESS.

Medicine is the most comprehensive of all sciences; while law has to deal with the material side of our nature, theology with the spiritual aspect, and the physical sciences look upon man as a wonderful, incomprehensible piece of machinery, from the standpoint of medical science we consider and deal with all three of these conditions of humanity.

What relation, therefore, can be considered half so confidential, half so intimate, as that which exists between the physician and his patient?

Realizing the extreme delicacy of this relation we can but admire the wisdom and forethought of our wise predecessors who so well formulated the

CODE OF ETHICS.

There has arisen in New York City and State a division in the regular profession between those who adhere to and those who ignore the code of ethics of the American Medical Association. Rather than allow his pocket to suffer by obeying the code, which would not allow him to consult with the homœpathic general practitioner, the regular specialist cries "Away with the code."

Another portion of our code makes it a reprehensible practice for a man to

ADVERTISE HIMSELF

in any of the numerous ways well known to business men; yet there are not a few men who, while obeying the letter, violate its spirit by taking hold of everything new, such at the gaseous enemata treatment, the pneumatic cabinet and the like, and manage to get their names published in the daily press in connection with long articles on "The New and Certain Cure for Consumption," etc., etc., etc. What little difference there is between those men who contrive to have reporters present (without their knowledge of course) at their operations, and the advertising charlatan, may be placed to the credit of the latter, for the public may if it will estimate him at his true worth.

It is easy to define the ethics which should govern the relationship of the specialist to the general practitioner, but how few observe the rules, how many

SPECIALISTS ABUSE THE CONFIDENCE

reposed in them to win away the patients of the physician to whom he should be an aid and consultant. When a patient is sent to him for treatment for some throat, eye, or ear trouble, with which the general practitioner does not feel sufficiently familiar to battle, it plainly becomes his duty to treat that particular trouble and nothing else.

Again, there is a definite relation which should exist between

THE DOCTOR AND THE DRUGGIST.

It is clearly the duty of the latter to compound the prescription sent him by the physician, and the issue between the pharmacist and physician should be definitely settled and lived up to by both parties. I would suggest that we memorialize our Legislature to adopt a law like that in force in Illinois, which, after describing the requirements of a physician and fixing the penalty for the violation of the law, reads thus: "Any person will be regarded as practising medicine, within the meaning of this act, who shall treat, operate on, or prescribe for any physical ailment of another." The American Pharmaceutical Association is in favor of securing amicable unity of action, as was evidenced by its representatives at the meeting of the American Medical Association at Chicago. The physician should adopt the rule never to prescribe any manufacturer's medicines whatever. We are induced to recommend pills, elixirs, etc., where the exact formulæ is published, because of their elegance of preparation; but to me they are like unto ready-made clothing compared with that made to order, they may fit, but most likely they will not. Another important point is, prescriptions should be put up by well-trained hands. The dispensing of medicines should be entirely separate from everything else which goes to make up the drug store.

I must condemn in the strongest terms the practice, growing quite common, of physicians giving laudatory certificates of proprietary medicines. Whether it be deserved or not, there will always lurk the suspicion that the physician has sold his name for so many dollars.

A word as to the relations between

THE DOCTOR AND CLERGYMAN.

"Every man to his trade" is an excellent motto of far-reaching significance. With the highest respect for the ministerial calling we often find them volunteering gratuitous advice on medical subjects, which is neither to the advantage of the physician nor patient. I have observed that when we find a preacher and doctor combined, that he is generally a bigot in divinity and a quack in medicine.

In thus reviewing the field of medical ethics, I more than ever feel the true value and wisdom of the code, and my reflection convinces me that he who flavors his daily life with the essence of this code, will surely not only be a better physician, but in every sense a truer, nobler, more nearly divine man.

Dr. O. D. Todd, of Eminence, read an address on

THE SUCCESSFUL PRACTITIONER.

He thought that too many of our profession spent too much time in advertising the abilities which they do not possess, for the good of themselves, the profession, and patients. Homœopathy received its just deserts at his hands, and he likened its treatment to the hair of the dog to cure the bite of the same. When he saw one of these gentlemen swinging his shingle to the breeze, he felt like exclaiming, in the language of the sheriff, "God save the Commonwealth." He thought they were murderers, and worse than murderers. The murderer was honest in his profession, and did not pretend to be a doctor, and was liable for consequences. He thought every homœopath should be hung till he was dead three times. The doctor then branched off from the "grave" to the gay, and rolled off sentiment about the ladies till he could hardly hear himself for the applause he created.

A communication was received from the State Pharmaceutical Society, asking the combined effort of the two societies to procure the passage of a law making doctors' and druggists' bills preferred claims.

Dr. W. W. Cleaver, of Lebanon, introduced a resolution which had for its object the removal from the Governor of the power to appoint superintendents of the insane asylums of the State, as this made it

A MATTER OF POLITICS,

and subject to change, and demanded qualifications more those of a politician than a scientific man. Our late Governor, Dr. J. Proctor Knott, appointed two little-pill men on the State Board of Health, which board of health was called into existence by this Society. One of these two was a non-resident of the State. True, he had a little office in Louisville, but his wife lived in New Albany, Ind., and he should have slept there if he did not. The speaker was a friend of the present Governor, and had brought his name before the county in which he lived, but he could not indorse his actions in regard to medical appointments. The Governor requested the resignation of the superintendent of the Anchorage Asylum at Louisville, a gentleman who had been long and faithfully in the harness. Such a storm of public indignation arose that the Senate would not have confirmed the nomination, and the Governor was compelled to withdraw his request. No sooner, however, had the Legislature adjourned, gone home, and

KISSED THEIR WIVES AND HUGGED THEIR BABIES,

than the superintendent was informed that his successor had been appointed, but if he wished he could have a few days in which to resign. He, of course, resigned. The Governors may not be so much at fault, but they have friends who are persistent in their demands for favors, and must be satisfied. The doctor closed with an eloquent appeal to take the appointments of medical offices out of the slums of politics. His speech was greeted with rounds of applause. The President appointed as a committee to push this matter, Drs. Cleaver, Rodman, Matthews, and Palmer. Dr. Palmer declined, saying that he could not stand Frankfort whiskey. Dr. Yandell was appointed, who declined, saying that he had his share of legislatures, and he proposed to keep clear of them for the rest of his life.

Dr. J. N. McCormac, of Bowling Green, reported progress from the committee appointed to secure legislation concerning empiricism.

A communication from the

WOMAN'S CHRISTIAN TEMPERANCE UNION

was presented. A motion was made to refer it without reading. This was supplanted by one to refer it to the board of health. Then a motion to have it read was put and lost, and it was finally referred to the board of health. Dr. Yandell, who made the motion to refer, wished to say that he intended no insult to prohibition or to any woman. Several gentlemen spoke slightly commendatory of the object of the ladies, but took care to state positively that they were not temperance men.

This discussion on temperance was followed by a very

INTEMPERATE EXHIBITION OF MEDICAL POLITICS.

There are factions in medicine in Kentucky as well as elsewhere, and when the report of the Nominating Committee was brought in, there was war almost to the knife. The chair was unable to decide on the vote on the adoption of the committee and a rising vote was called, and this was followed by the calling of the roll. The result was the rejection of the report of the committee by a vote of 26 to 29, followed by loud and prolonged cheers. The President felt affronted at the unprecedented action of the Society in rejecting the nominations of the committee, which was of his own creation, and refused to appoint another. After considerable discussion the matter was referred to the committee to report again. The committee after six or eight hours came together, held a short session, and reported to the Society the very same names for officers it had proposed before.

Motion was made to adopt the report of the committee, and was passed by a roll-call vote of 26 to 19.

Dr. Yandell rose to a question of privilege, and in a very bitter speech, in which he accused members of holding office above that which was higher than honor, offered his resignation.

Dr. William Bailey, of Louisville, offered his resignation as First Vice-President. Accepted.

Dr. John G. Cecil, of Louisville, offered his resignation of the office of Treasurer, which was accepted. Several gentlemen rose to a question of privilege, some acrimonious remarks were made, and matters began to look rather fiery in this

"DARK AND BLOODY GROUND;"

but some gentleman was thoughtful enough to call for the resumption of the order of the day, and it was done.

The trouble dates way back in feuds for which this State is so noted, and has grown into fights between college faculties. Louisville, like other cities, has three times as many medical colleges as she can stand, hence bitter rivalry and disgraceful quarrelling. The report of the Nominating Committee was adopted, and the following

OFFICERS ELECTED:

President, Dr. L. S. McMurtry, Danville; First Vice-President, William Bailey, Louisville; Second Vice-President, B. W. Stone, Hopkinsville; Permanent Secretary, Steele Bailey, Stanford; Assistant Secretary, S. M. Letcher, Richmond; Treasurer, John G. Cecil, Louisville; Librarian, T. B. Greenly, West Point; Censors, H. Brown, Houstonville; H. B. Evans, Riley Station; F. H. Clark, Lexington; Chairman of the Committee of Arrangements, J. M. Foster, Richmond, with authority to fill vacancies. Richmond was chosen as the next place of meeting, and the date the second Wednesday in May.

An amendment to the by-laws was offered, taking from the President the appointing of the Committee on Nominations, and making it to consist of one from each county represented and four from Jefferson (Louisville).

Dr. J. M. Matthews, of Louisville, made the

REPORT ON DISEASES OF THE RECTUM.

In fissure not involving the sphincter he used cocaine, one-half grain, sometimes more, dissolved in water and injected with the syringe. The discovery of rectal pockets of pus was something which he mentioned only to denounce. The regular profession does not accept this. Homœopaths are accepting it and making much money by removing these pockets. It is needless to say that it is the regular anatomical tissue that they remove, and serious results, viz., hemorrhage, may follow. At the last meeting of the American Medical Association Dr. Goodell read a most interesting paper on "The Nervous Rectum." I read a similar paper before this Society ten years ago. Laryngologists tell us of rheumatism of the throat, and I believe there are cases of rheumatism of the sphincter ani, and I have had the symptoms to clear up under rheumatic treatment. The injection of a drachm of glycerine into the rectum is generally followed by a stool in eight to twelve minutes, and forms a satisfactory new method of moving the bowels. That it would overcome constipation I hardly am ready to believe.

Dr. J. G. Carpenter, of Stanford, had been himself a subject of spasmodic stricture of the rectum, and assured the Society that death itself had no greater horrors. A tube has come into use by which you can wash out the rectum without changing the position of the patient to the upright during operation. It is quite an advantage.

Dr. A. R. Jenkins, of Louisville, thought that Dr. Matthews had laid too little importance on the injection of

CARBOLIC ACID IN PILES.

There are different piles. In some the ligature is best, in others the clamp should be used, and in still others the carbolic acid should be injected.

Dr. William Cheatham, of Louisville, made the

REPORT ON LARYNGOLOGY.

He discussed the subjects of local treatment of laryngeal tuberculosis, total extirpation of the larynx for cancer, and intubation. He thought there were, no doubt, some cases of primary tuberculosis, but they were few. We are still in want of a cure, yet local palliative treatment is incumbent on every practitioner. Lactic acid acts well on superficial ulcers. Twelve to twenty applications, or frictions of lactic acid, may cause cicatrization. Many claim to cure laryngeal phthisis, and why not, since pulmonary phthisis is sometimes cured. Intubation, in his opinion, has been the greatest advance in laryngology. All accidents may be avoided by care. He reported a case which he intubated last January.

The German Crown Prince case then came in for a share of discussion. Patrick Herron Watson, of Edinburgh, was the first who did the operation of total extirpation for cancer of the larynx. In one hundred and three cases of excision for cancer forty died within a short time of the operation.

Dr. M. F. Coomes, of Louisville, thought there must be some difference in the malignancy of the cases of Dr. Cheatham, for he reports a saving of one out of fifteen cases last year, and four out of nine this year. He thought the disease in the former year much more malignant. He did not think tracheotomy, unless done early, was of much use. If obliged to confine himself to one remedy in laryngeal phthisis he would choose iodoform. The Crown Prince's life had been prolonged, according to statistics, beyond that obtained by extirpation. I think the greatest length of life is obtained by judicious treatment. The best and lightest tubes are those made of aluminium.

Dr. Larrabee, of Louisville, said that in comparing the two operations they seem to

SCORE ABOUT THE SAME MORTALITY.

We have heard to-day points in favor of intubation, but in favor of tracheotomy we have not heard so much. Dr. Jacoby has attained remarkable results in tracheotomy by operating early. Our operations are too late. Jacobi advocates the operation as soon as the voice is lost. I would not do this, for it may be lost from other causes; but as soon as supra-clavicular breathing—so-called bellows-breathing—appears, it should not be delayed one moment.

Dr. J. H. Letcher, of Henderson, said that intubation was the best operation to begin with. It is much easier to obtain the consent of the family, as there is no hurrah and bloodshed. He reported a case where a child recovered without an operation, but generally we must operate early.

Dr. S. G. Dabney, of Louisville, thought the difficulty of feeding a very serious one. He preferred cocaine in laryngeal phthisis.

Dr. Cheatham said the child should be fed with the feeding-bottle, holding the child's

HEAD LOWER THAN ITS HEELS,

and the food then cannot run down the trachea. Wraxham and O'Dwyer had made tubes with artificial epiglottis, and report better results. He had not tried them as yet.

Dr. M. F. Coomes, of Louisville, read a paper on the improvements in instruments in

NASAL SURGERY,

and exhibited many of the instruments.

Dr. Ap Morgan Vance, of Louisville, read a paper on

THE EXPLORING NEEDLE IN BONE DISEASE.

He had been using this instrument as a means of diagnosis for the past ten years with no bad results. A patient of his recently fell into the hands of a prominent Cincinnati surgeon, who condemned the practice in the strongest terms. He brought the subject before the Society to elicit discussion, and asked, Did the needle do any harm, and if so, what? If the bone is healthy, the needle will not go farther than the periosteum; if diseased, it will certainly not make matters worse.

A number of gentlemen had used and recommended the needle, but acknowledged it to be strictly a Louisville practice.

Dr. D. W. Yandell, of Louisville, thought that the real advance all along the line in medicine and surgery was that "we are revising old methods, testing new, and trying to hold fast to the best." He favored the use of carbolic-acid injections for hemorrhoids, and added to any treatment of hemorrhoids dilatation of the sphincter.

Dr. W. A. Rodman, of Louisville, used carbolic-acid injections twenty per cent. to full strength. He thinks it necessary to inject deeply to get away from the mucous membrane, which is the only danger.

Dr. Matthews had condemned this method twelve years ago before this Society, and he still holds the same opinion. He is unable to find it mentioned by any of the authorities save a few, and by them but to be condemned. He thinks it a dangerous practice.

Dr. Yandell said he knew of two cases of death from hemorrhage after the ligature in Louisville, one of tetanus and two of peritonitis. Sloughs occur often in ligature clamps and excision, as well as after the injection of carbolic acid.

Dr. L. S. McMurtry, of Danville, read a paper on

ABDOMINAL SECTION FOR PERITONEAL INFLAMMATION.

He reported a case of a lady aged sixty years, who had had six children and good health till the past year. Five months ago she noticed an enlargement of the abdomen and all the symptoms of an ovarian tumor. Operation showed a case of encysted dropsy, and the peritoneum studded with tubercles. Many cases of peritoneal dropsy, he thought, could not be distinguished from ovarian tumor before incision. Abdominal section and drainage are of extreme value in pelvic inflammation. He reported another case of a section for peritoneal inflammation. Peritoneal inflammation has but one treatment, abdominal section and drainage done early. This is much superior to opium and euthanasia.

Dr. A. M. Cartillage, of Louisville, thought that section and drainage would not cause permanent cure. He thinks it will be of interest to wait and to see if the tuberculosis does not return.

Dr. W. H. Wathen thought it had been demonstrated beyond a doubt that abdominal section was the proper treatment. It appears now to be quite successful. He called attention in emphatic language to the growing tendency in the profession to

OPEN THE ABDOMEN.

Guarded by a correct diagnosis and good judgment, it is the glory of the profession. It is often cut open by persons unacquainted with the pathology of the abdomen, its anatomy, or the minutiæ of the operation, as well as unprepared for it. The question is to know when to open the abdomen, how to do it, and how to deal with the pathological specimens found therein. In hysterectomy the pendulum has swung just as far in the wrong direction as in the other case.

Dr. A. Morgan Vance, of Louisville, said he thought three out of five cases were not diagnosed before the beginning of the operation, which was, at the outset, really an exploratory incision. He thought that the peritoneum belonged as much, or more, to the general surgeon as to the gynecologist.

Dr. E. R. Palmer, of Louisville, made the report on

PROGRESS IN GENITO-URINARY SURGERY.

He discussed sterility in the male and female due to gonorrhœa, and said, as did numbers of gentlemen in the discussion, that he had seen repeated cases where women, after gonorrhœa, bore children. He had accidentally come upon an antiseptic and anæsthetic fluid. He had prescribed salol and carbolic acid. His salol dissolved, and, as a result, he had a very nice lubricant for the sound, etc. He used a stronger oil, consisting of salol, 360 grains; carbolic acid, 60 grains; olive oil, 6 drachms. Weaker oil: Salol, 120 grains; carbolic acid, 20 grains; and olive oil, 6 drachms.

An interesting report on Pediatrics was read by **Dr. J. A. Larrabee**, of Louisville, and a Report on Obstetrics in Dublin, by **Dr. E. S. McKee**, of Cincinnati.

Abernethy as an Advertiser. — Advertising doctors are by no means modern developments. The celebrated surgeon Abernethy, and others of his day, were regular advertisers in *The Times*, and even earlier still the announcements of regular physicians were to be met with in the public press.—*Hospital Gazette.*

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, May 23, 1888.

W. P. Northrup, M.D., President, in the Chair.

Dr. Biggs reported from the Committee on Microscopy that the lung showing a red and white mottling, presented at the meeting of April 25th, was the seat of a combined lobar and broncho-pneumonia, the red coloration being due to the lobar pneumonia, and the white showing through being the infiltrated walls of the bronchi.

The President presented, on behalf of candidates, two specimens, one showing a fracture of the ulna, and the other, abscesses of the mammæ in a child.

The President also presented, for Dr. Frank W. Hopkins, of Fishkill, N. Y., specimens showing

TUBERCULOSIS OF THE LYMPHATICS, ULCERS OF THE COLON, AND CROUPOUS COLITIS AND NEPHRITIS.

A female child, eight and a half years of age, had conjunctivitis, was listless and anæmic, and apparently quite sick. For a time she improved, but about three months before death she began to have elevation of temperature, and occasional chills and sweating. For more than a month before death she began to emaciate, albumin and casts appeared in the urine, and diarrhœa developed. For a time the treatment seemed to be of some avail, and her general condition improved, but her temperature again became elevated, there was tenderness over the spleen, enlargement of the liver, with moderate jaundice. No albumin was present at this time, but abundant hyaline and granular casts. Continuing in this condition, she gradually failed and died.

On autopsy numerous submaxillary and cervical glands were found to be enlarged, cheesy, and diffluent in their centres. The bronchial glands were moderately but uniformly enlarged, and all cheesy. There were no tubercles in the lungs, and no consolidation; only bronchitis and moderate congestion. The mesenteric and retroperitoneal glands were uniformly enlarged and cheesy, though no discrete tubercles could be found in the adjacent tissues, peritoneum, or diaphragm.

The kidneys were the seat of chronic nephritis. One was larger than the other. The markings were indistinct, the capsule adherent, and the cortex showed cicatrices. No tubercles were found within or upon either kidney.

The most marked lesion of the viscera was within the colon. At the cæcum, and about eight inches from it, upon the ascending portion of the colon, were two large ulcers extending entirely round the inner surface of the gut, and two and a half inches in breadth. When laid open, the wall seemed to have been ulcerated over nearly a square area. The lower or cæcal ulcer was limited on its upper margin by a narrow linear groove running transversely around the gut. The second large ulcer was limited both above and below by a similar narrow groove or sharp linear ulcer. These limiting grooves were large enough to allow an ordinary lead-pencil to lie in them. The edge toward the main ulcer was deeply undermined and overhanging and ragged, while the edge facing outward was clean cut. As for the main ulcers, they were honey-combed. A probe passed easily in a winding course beneath the undermined mucous membrane.

These two tubercular ulcers consisted, then, of undermined mucous membrane, limited on the margins by linear ulcers having one—the inner—edge overhanging, and the outer sharply cut, or punched out. The remaining mucous membrane of the colon was the seat of croupous inflammation, having upon its swollen and congested surface a shreddy layer of fibrine. The jejunum and ileum were the seat of catarrhal inflammation. Liver and spleen showed no tubercles, and the other viscera were normal.

Dr. H. M. Biggs presented a specimen of

PRIMARY TUBERCULOSIS OF THE UTERUS AND TUBES.

The clinical history was imperfect. The patient had had hectic fever and was supposed to be phthisical. At the autopsy the uterus was found to be about the size of an orange, and to contain considerable cheesy pus. Its walls were about the thickness of the walls of the bladder. Both the uterus and the tubes exhibited well-marked lesions of advanced tuberculosis, and there were tubercular ulcers in the vagina. There was also present recent tubercular inflammation of the peritoneum and pleura.

A second specimen was one of

THORACIC ANEURISM,

which was especially interesting because of its large size and from the absence of symptoms directing attention to its presence during life. The patient was a helper in Charity Hospital and had died suddenly. He had had no symptoms pointing to heart trouble. At the autopsy a large aneurism was found filling the whole of the mediastinum and a large part of the pleural cavity. It contained a clot, six inches in diameter, composed of laminated fibrine. The aneurism was not ruptured, and the cause of death was not clear.

A third specimen was one of

DERMOID CYST OF THE KIDNEY.

One kidney was of large size and normal in appearance; the other was small and contained six or seven cysts varying from the size of a pea to that of a filbert. The cysts contained fatty, pasty matter, composed of cholesterin crystals, fat-globules, epithelium, and compound granular corpuscles.

Dr. Biggs also presented a fourth specimen, of

MULTIPLE SOFTENING OF THE BRAIN,

which was remarkable on account of the large number and extent of the spots of softening. The brain was from a man who had been demented, but had always been able to be around. He was found one morning unconscious in bed, and so remained until he died. At the autopsy two large cysts were found in the frontal lobe on the left side, and one in the right frontal lobe. In the parietal and occipital lobes the convolutions were atrophied, and numerous small spots of softening—ten or twelve in all—were found scattered throughout the convolutions.

Dr. Boldt, referring to the first specimen presented, asked what symptoms were present, and what reason the speaker had for supposing that the tubercular process was primary in the uterine appendages.

Dr. Biggs said that there had been no symptoms of uterine disease. He had assumed that the tuberculosis was primary in the tubes rather than in the uterus, as that was more commonly the case. Primary tuberculosis in the uterus, extending thence to the tubes, was a very rare condition. The lesions in the tubes and uterus gave proofs of being so much older than those in the peritoneum and pleura that it was evident that the process had begun in the former.

The President stated that the specimen of ulcerative colitis, presented for Dr. Hopkins, had been preserved for six weeks in a solution recently prepared by Dr. Prudden for preserving specimens in gross. It had been found to be very satisfactory in its action. The solution would be presented and its composition described at the next meeting of the Society.

Dr. Francis Delafield then showed with the lantern a series of photo-micrographs illustrating the lesions of

ACUTE BRIGHT'S DISEASE.

He said: "I have been invited to demonstrate to you this evening some micro-photographs and drawings which illustrate the lesions of acute Bright's disease. But before doing this I must occupy a little time in telling you what it is that I wish to demonstrate.

"In considering the lesions of any part of the body there is a manifest advantage if we are not obliged to look upon them as morbid changes peculiar to that part of the body, but rather as changes of the same kind that we find elsewhere. This we can do as regards the lesions of acute Bright's disease.

"In many parts of the body we find what is called acute exudative inflammation—a morbid process in which the active share is taken by the blood-vessels. The serum, fibrine, and pus-cells which belong to this inflammation are derived from the contents of the blood-vessels, while changes in the tissues themselves are absent or of secondary importance.

"One of the ordinary forms of acute Bright's disease is such an exudative inflammation of the kidneys,

ACUTE EXUDATIVE NEPHRITIS.

Such a nephritis occurs as an idiopathic inflammation, and as a complication of scarlatina, diphtheria, and many of the infectious diseases. The products of inflammation, albumen, casts, pus-cells, and blood are regularly present in the urine. The excretory function of the kidneys is more or less interfered with; there is fever and prostration; there may be added anæmia, cerebral symptoms, and disturbances of the circulation.

"In the simplest examples of this form of nephritis we find, after death, no changes in the kidneys. The inflammatory products have all escaped with the urine, and no evidences of the inflammation are left. More frequently more or less of the inflammatory products remain in the kidneys, and we find, after death, cast matter, coagulated matter, and white and red blood-cells in the tubes, and white blood-cells and serum between the tubes.

"Still further than this there may be changes in the renal epithelium and in the glomeruli. The epithelial cells may be swollen or broken down, or detached from the walls of the tubes. The cells which line the capsules of the glomeruli are swollen, those which cover the capillaries and are situated within them are increased in number and size. Such a nephritis is essentially a transitory lesion. If the patient does not die from the immediate effects of the disease, the kidneys return to their natural condition.

"Secondly, we find that persons who have taken poisons such as mercury, arsenic, or phosphorus, or who have suffered from the infectious diseases, regularly exhibit changes in the cells of the viscera. These cells are simply swollen, or are infiltrated with fat, or die. How far such changes are degenerative or inflammatory is not yet definitely determined.

"In these ways are produced the second form of acute Bright's disease,

ACUTE PARENCHYMATOUS INFLAMMATION OR DEGENERATION OF THE KIDNEY.

Such a lesion is always secondary to one of the causes just mentioned. The urine is unchanged, there are no renal constitutional symptoms. But if the changes in the renal epithelium are decided and rapidly developed there will be added changes in the blood-vessels of the kidneys, albumen and casts make their appearance in the urine, and the quantity of the urine is diminished. After death we find the renal epithelium swollen, or fatty, or necrotic. In some cases the vessels are congested, and there is cast matter in the tubes.

"Thirdly, we find in different parts of the body inflammation, with the production of new connective tissue, and such inflammations are apt to persist. So we find as the third form of acute Bright's disease a condition which we may call

ACUTE DIFFUSE NEPHRITIS.

Such a nephritis is often idiopathic, it complicates scarlatina, diphtheria, and pregnancy. The urine with such a nephritis contains large quantities of albumen and casts. The patients exhibit anæmia, dropsy, cerebral symptoms, and marked disturbances of their general health. After death we find in the kidneys the same changes as are found in exudative nephritis, but, in addition, a growth of new connective tissue and of the capsule cells of the glomeruli.

The growth of new connective tissue begins in the cortex and follows the lines of the larger vessels. Its arrangement is often in the form of regular wedges. The growth of the capsule cells is often enormous, so that the tufts are compressed and finally atrophied.

"The lesions are permanent lesions, and when they have once begun their natural tendency is to continue until a large part of the kidney is replaced by new connective tissue, and a large number of the glomeruli are atrophied."

The speaker then made a lantern demonstration of the changes in the kidneys which he had described.

On motion of Dr. J. C. Peters, a vote of thanks was passed to Dr. Delafield for his interesting demonstration.

The President referred to the cases, not infrequently met with in autopsies upon children, whose urine had contained albumen and casts, where at post-mortem absolutely nothing abnormal was to be detected upon the closest examination in the kidneys.

These cases seemed to be most satisfactorily explained by the classification described under acute exudative nephritis in which the lesion is of the blood-vessels, and the exudative products are washed away in the urine.

The Society then went into executive session.

Correspondence.

HOSPITAL NOTES IN BOHEMIA.

To the Editor of The Medical Record.

Sir: Stephan's Hospital, in Reichenberg, not only provides hospital accommodation for this city, but also for a large surrounding district. Indeed, no large hospital is nearer than Prague, five hours distant by train. Situated in the centre of a thickly settled industrial district where the tall chimney of the factory is ever in sight, many cases of surgical importance present themselves, especially those resulting from injuries received from machinery, or those due to the depraved system of the European factory workman. Here, also, is a large gynecological department where almost every conceivable operation in that line is performed.

Without referring to the numerous amputations, resections, etc., which differ in no respect from our own procedures, I would call attention to certain plans of treatment that may be not without interest to the profession at home.

In the first place, chloroform is the only anæsthetic that is used here, and while not a case has ever been lost from its effects, the article employed seems to possess no advantage over ether. It takes about as long to produce narcosis, and vomiting is just as apt to occur, while the after-effects are no less unpleasant.

To prevent vomiting, Güsenbauer, of Prague, upon the first appearance of such a disposition, applies ammonia to the nostrils, to inhibit the reflex act; sometimes it does and sometimes it does not. It is, however, worthy of trial.

A simple and effective operation is that for bunion. The Vienna surgeons hold that the characteristic deformity is caused by the sesamoid bone slipping from the tendon of the flexor brevis hallucis between the first and second phalanges, thus crowding out the base of the first phalanx.

The operation is simply an incision between the bases of the great and second toes on the plantar surface, and the removal of the sesamoid. The deformity then disappears, and the wound is treated on general principles.

Amenorrhœa in plethoric young women of normal development is sometimes treated by the insertion into the cervix uteri of a small plait of spun glass. This is left in place several days, and by its irritation brings on a catarrh which results finally in menstruation. Usually the treatment must be repeated from time to time before success is achieved.

For endometritis, we use local application of iodine; but when bleeding from the granulations in the uterus is annoying, we dilate the cervix with Fritsche's steel dilators, and scratch out the uterus thoroughly down to the muscular tissue with a curette.

I cannot too highly praise the dilators referred to. They are simply steel sounds of graduated sizes, and can be introduced to the fundus without difficulty. In five minutes the cervix is sufficiently dilated and the operation can at once be completed. In the many cases we have had here, not a single bad effect has occurred from their use, and after the uterus has been thoroughly curetted the bleeding, no matter how obstinate it had been, is checked. In no case has a peritonitis, cellulitis, or other inflammatory condition been caused. One can only realize the blessing of Fritsche's dilators after experiencing the delays and annoyances incident to the employment of the various tents. Then, too, the former are cleaner and more antiseptic.

The one thing that most impresses an American studying here is the little respect that is shown to that unfortunate organ, the uterus. To one taught to handle this organ with the greatest care this is at first stupefying, but later, when he sees the excellent results obtained, he comes to the conclusion that the success of the German gynecologists is due greatly to their lack of timidity and to their thoroughness in operative measures.

For cystocele and rectocele we have operated a great many times; for the former we used the oval denudation, and for the latter the posterior colporrhaphy of Hegar—the butterfly-shaped denudation. Of late, however, especially if the prolapse is low down or there is a partially lacerated perineum, we resort to Tait's perineorrhaphy, which has the advantage of simplicity.

Amputations of the cervix are almost as common here as in Berlin, where it is said that every woman living on Friedrich Strasse (where Martin lives) has been relieved of this portion of the uterus. It seems of little use anyway, except to furnish a seat for erosions, lacerations, etc., as after the operation the internal os fulfils every requirement, and women have no difficulty in carrying children to full term and successfully delivering them. Amputations are resorted to in cases of hypertrophy and obstinate erosions, as well as on account of malignant growths.

An ingenious operation to remedy incontinence of urine in certain cases is to cut out of the vaginal wall on each side of the urethra, and arching over the meatus a long three-sided strip of tissue, one-fourth inch in width. The denuded surface is brought together with stitches. If it does not heal by first intention so much the better, as the contraction will be greater and the urethra more compressed. Usually only one side at a time is operated upon, and if the result is not satisfactory after the first operation, the second is resorted to. I have seen cases, in which all other means had been tried in vain, improve after this operation, so that in a few weeks they could hold their water for three or four hours.

Of five cases of total extirpation of the uterus (Martin's method) per vaginam, three were successful.

In thirty-seven cases of laparotomy, the mortality was a little over twenty-five per cent., many of the cases, however, being extremely unfavorable. Included in these thirty-seven cases are five Cæsarean sections, the last of which was complicated by an immense umbilical hernia and extensive adhesions. Usually in Cæsarean sections Porro's method is employed, and it is worthy of note that in every case where the intra-peritoneal method has been resorted to the patient has died.

An interesting case, to which I was sent, occurred recently in the adjacent country.

On a Tuesday night a woman began her labor, the midwife diagnosing a shoulder presentation. A country Æsculapius, being called in, succeeded in tearing off first a leg, then an arm, and finally the body, leaving the head *in* *situ.* Upon making an examination thirty-six hours later, however, I found a rupture of the lower part of the uterus, including the cervix and upper part of the vagina, the head having escaped into the abdominal cavity, while the bowel was protruding through the vulva. I at once sent for Dr. Johanovsky, formerly first assistant to Breisky, and now gynecologist here, and upon his arrival with proper instruments, a laparotomy was performed and the head removed.

The patient was left in as good condition as could be expected—reacting nicely after the operation—but subsequently died.

Another interesting case was a dermoid cyst, as large as a goose-egg, in the rectum. This had ulcerated through from the pelvis, dragging down the broad ligament with it, which formed a double pedicle. The rectal wall had entirely healed, so that the pedicles seemed to spring therefrom. On one side of the tumor grew a tuft of black hair, five inches in length, and as thick as the finger, while teeth could plainly be felt in the tumor walls. The pedicles were ligated close to the rectal wall after some difficulty, as the tumor lay high up in the rectum, and the tumor was removed. The écraseur was not employed, as the surgeon feared hemorrhage and wished to make all secure. The tumor contained teeth, hair, and spicula of bone. A young man recently had a tumor removed from just above and a little outside of his left eye. This also contained teeth.

A case of double uterus and vagina presented itself some time ago. A communication between the uteri existed. The anterior vagina was distended with pus which welled up through this opening (as only one vagina had an external outlet) and escaped through the patulous vagina. The woman had menstruated regularly, and the pus was decomposed menstrual fluid from the second uterus. The stench from this patient was something awful; a gangrenous lung could not have improved upon it. After a most careful examination a diagnosis was reached, and the septum between the two vaginæ was slit up, allowing about a pint of decomposed fluid to escape. The mucous surfaces were stitched together and the parts thoroughly syringed with carbolized water. A perfect recovery was the result.

The absence of fibroid tumors in this clinic is somewhat remarkable. In over five thousand cases treated in the female department of Stephan's Hospital, only four fibromæ have been found.

Cancer, on the contrary, flourishes in this land, where defective food, bad ventilation, and hard labor extending through generations, have greatly depreciated the physical condition of the working classes.

The loom worked by these debilitated people causes an endless variety of diseases. The continual use of the feet as a motor causes necrosis of the lower extremities, abscesses, periostitis, and all kinds of deformities.

The habit of carrying burdens on the back causes frequent periostitis of the scapula and ribs, with consequent caries and abscess. These abscesses occur very frequently at the lower angle of the scapula.

In regard to antisepsis, well, we don't place much faith in it. The doctors say they used to try it but their results were no better than at present, and it was expensive. Cleanliness, carbolized water and oil, iodoform (which latter is being discarded on account of the recent demonstrations of the Danish Professors Heyn and Rosving that it is not antiseptic, and that micro-organisms will grow freely in it, coupled with our own suspicions in this direction on account of the repeated occurrence of erysipelas in wounds in spite of it), and sublimate form our antiseptic pharmacy.

A rather complete list, it will be remarked. Yes, but the manner of using them. Only in the female department is sublimate ever used, and the carbolized water only to syringe out wounds after an operation. The spray apparatus is never employed, and only in the gynecological clinic are the instruments placed in a carbolized solution.

And we have just as good results in the surgical clinic as in the gynecological. Indeed, only two cases have died from the effects of operations in the surgical wards in two years, and they were both hernia cases. In this period over five hundred operations, largely of a major character, have been performed.

The results in both clinics are, however, extraordinarily good, and I cannot help ascribing much of the success to the clean, pure atmosphere of this mountainous district, about 2,000 feet above sea-level.

JOHN B. HAWES, M.D.,
Assistant in the Surgical and Gynecological Departments of Stephan's Hospital, Reichenberg, Bohemia.

WASHINGTON, D. C.

THE UNINTERRUPTED GALVANIC CURRENT IN EXTRA-UTERINE FŒTATION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the issue of THE MEDICAL RECORD of July 14th, Dr. A. H. Buckmaster reports a case of extra-uterine pregnancy where the fœtus was destroyed by the galvanic current without interruptions.

I think this is an important point to make, and by reference to THE MEDICAL RECORD of February 17, 1883, a similar case will be found among several others that I then reported. These two are, I believe, the only cases recorded where the uninterrupted galvanic current alone was used. As in Dr. Buckmaster's case, pregnancy had advanced to the fourth month; the reason for using the current in the manner described was the distended condition of the Fallopian tube, and its liability to rupture under mechanical influences.

I believe that the danger of rupture by the careful use, either of the faradic or the uninterrupted galvanic current, in cases that have not advanced beyond the third month, is but slight; yet the possibility of hastening this catastrophe in attempts to destroy the fœtal life should be ever borne in mind; it is well, therefore, to emphasize this doubly-demonstrated fact, that the fœtus can be effectually destroyed by the sudden increase and decrease of the current strength, without interruptions.

A. D. ROCKWELL, M.D.

TOBACCO AMBLYOPIA.—Dr. A. R. Baker read a paper with this title before the Ophthalmological Section of the American Medical Association in Cincinnati, of which the following were the conclusions: 1. There is a toxic amblyopia due to the excessive use of tobacco. 2. The excessive use of alcohol or other toxic agents does not produce the same or a similar amblyopic condition, although by their depressing influence on the vital functions they may serve as predisposing causes. 3. Tobacco amblyopia does not usually lead to total blindness. The disease is essentially a functional one. Gross pathological changes have not been demonstrated either in the retina, optic nerve, or cerebral centres. 4. The course of the disease may result in a certain amount of failure of sight and then remain stationary, even though the tobacco habit be not entirely given up. 5. Stopping the use of tobacco will result in recovery of sight without the use of specific medication, although strychnia and tonics, by increasing the general tone of the system, may hasten a cure. The moral effect of taking something to replace the loss of the tobacco is of great value.

ANODE AND CATHODE.—A writer in *L'Electrothérapie* suggests that it is easy to remember that anode corresponds to the positive pole, and cathode to the negative pole, if one reflects that the word anode contains an "n," while the word positive does not, and cathode contains no "n," while negative does. That seems to be about as useful as most mnemonic formulæ.

New Instruments.

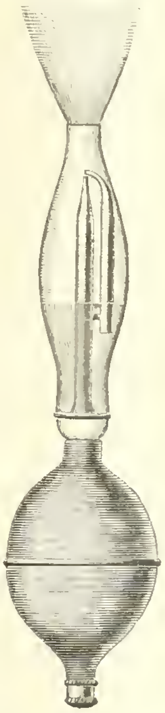
AN ATOMIZER FOR WARMING AND SPRAYING VASELINE.

By HOWARD SMITH, M.D.,

CHARLESTOWN, MASS.

The use of a spray of vaseline, either plain or medicated in various ways, has received the sanction of eminent specialists, while a convenient and altogether suitable atomizer for the purpose has remained a desideratum.

When liquefied by heat, vaseline quickly congeals at the points of the spray-tubes of the ordinary atomizer, and even what is called zero vaseline is apt to clog the instrument.



To obviate this difficulty the writer has devised the instrument figured herewith, in which ordinary vaseline or any fluid can be quickly warmed and sprayed with facility. It can be operated with one hand, leaving the other free for any purpose, and the conical extremity serves to dilate the nostril, and also protects the points of the spray tubes.

In children it may be used to spray the nasal cavities and to inflate the middle ear at the same operation, with greater facility, however, when attached to a compressed air apparatus.

It has been said of vaseline that it is only a placebo for diseases of the throat and nose, but it must be remembered that in addition to its soothing properties it is an excellent menstruum for many remedies of reputation in these diseases, such as cocaine, menthol, camphor, carbolic acid, iodoform, oxide zinc, ol. eucalyptus, and others, which in the form of spray, with vaseline, cannot fail to be thoroughly applied.

The writer can speak favorably of vaseline spray as an application to the nasal cavities, throat, and bronchial tubes, when about to be exposed to a cold, raw atmosphere. It forms a non-conducting coating to the parts, which is an admirable protection, and in our northern climate could be used on many occasions with advantage by the robust, while the delicate would find in the use of it not only comfort but safety.

In those occupations which are unhealthy from the presence of irritating particles in the air, this remedy will be found of service. There can be no doubt that the soothing properties of vaseline are increased by heat, therefore it is well to heat the atomizer containing the vaseline until the nozzle can just be borne in contact with the nostril without producing discomfort. In conclusion, the instrument here spoken of will be found useful for spraying ointments to irregular surfaces, such as the external ear, and to sensitive parts where the slightest friction is to be avoided.

A NEW EXTENSION APPARATUS.

By A. I. THAYER, M.D.,

NEWARK, N. J.

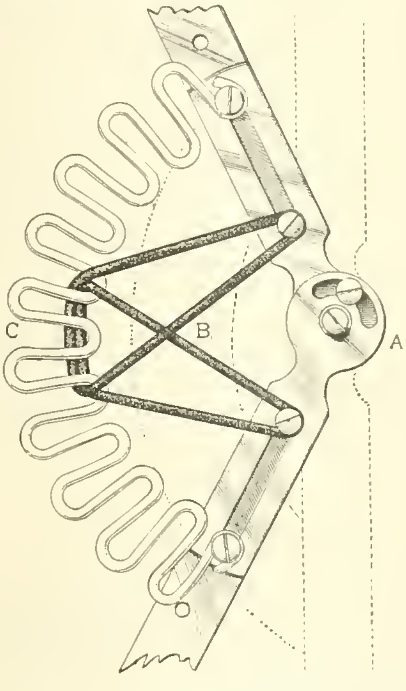
The illustration below is intended to represent an apparatus which we have devised for elastic extension of the leg, and for permitting flexion of the leg when combined with knee-joint extension.

It is presented to the profession on its merits and open to their friendly criticism. It is believed that it possesses qualifications not entirely fulfilled by other devices designed for a similar purpose, and it is hoped that on this account it may be worthy a brief description. It requires none other, for it is simple in construction, and well represented in the illustration.

That which is considered new and desirable, and hence worthy of notice, is the use of the serpentine spring (C) combined with elastic cords (B), as a means of furnishing elastic tension, which may be nicely graduated according to circumstances or changing needs by a simple change in the mode of attachment, or in the size, strength, or number of the rubber cords.

In a young child where the tension and strain are not great, the rubber rings such as are used on umbrellas will probably answer every purpose of the rubber cords. In the accompanying illustration, two of these rings are seen attached, the instrument being forcibly held, meanwhile, in a position of partial flexion.

One, two, or more of these rings may be readily attached by simply passing them over one or more of the bends in the spring and buttoning them over button-screws near and at the joints. The elastic force of these rubbers tends to resist the arching of the serpentine spring outward, and hence to favor extension of the upright bars, which are, of course, to be properly applied to the limb.



It will be seen also that the degree of flexion and extension of the leg may be strictly limited by the set-screw and slot at the joint (A). This latter neat and effective method was suggested to me by Mr. C. E. Thompson, of C. W. Thompson & Son, Newark.

There is nothing in the working of the spring *per se* to interfere with extreme flexion of the leg, and there is no awkward projection beyond the upright bars in order to allow of flexion to, or beyond, a right angle.

The special merits claimed for this apparatus are, therefore :

1. Simplicity and ease of construction.
2. Complete and ready adjustment of tension.
3. Unlimited range of motion, which may, at the same time, be effectively regulated.
4. With the above qualifications, a degree of neatness considered by wearers of instruments so great a desideratum.

It is hoped that the device may serve a useful purpose (either in its present form, or variously modified) in an important class of morbid conditions at and about the knee-joints.

Dr. Homer M. Thomas, of Chicago, has received the honorary degree of Master of Arts from the Lombard University of Galesburg, Ill.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 22 to July 28, 1888.

McParlin, Thomas H., Surgeon. Leave of absence extended one month. Par. 10, S. O. 160, Department of the Platte.

Wolverton, William D., Surgeon. Leave of absence extended twenty days. S. O. No. 142, Headquarters Division of the Atlantic.

Vickery, Richard S., Major and Surgeon. Leave of absence extended two months. S. O. 166, A. G. O., July 19, 1888.

Corson, Joseph K., Assistant Surgeon. Leave of absence for one month, with permission to apply for an extension of one month. S. O. No. 78, Headquarters Department of the Columbia, Vancouver Barracks, W. T., July 13, 1888.

Davis, William B., Captain and Assistant Surgeon, will proceed to Fort Niagara, N. Y., for the purpose of completing his target-practice for this year with Co. "C," 23 Inf. Upon completion of this duty Captain Davis will return to Fort Porter, N. Y. S. O. 145; Headquarters Division of the Atlantic, Governor's Island, N. Y. City, July 17, 1888.

Wood, Leonard, First Lieutenant and Assistant Surgeon, is released from duty at Fort Huachuca, Ariz. Ter., to take effect at the expiration of his present leave of absence, and will report to the commanding officer at Fort McDowell, A. T. Par. 14, S. O. 162, A. G. O. July 14, 1888.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 21, 1888:

	Cases.	Deaths.
Typhus fever	1	0
Typhoid fever	23	8
Scarlet fever	106	20
Cerebro-spinal meningitis	2	2
Measles	245	16
Diphtheria	118	36
Small-pox	9	0
Yellow fever	0	0
Cholera	0	0

Some Wonders of Advertising.—The extensive manner in which art is employed by modern advertisers may be judged by the fact that a certain printing firm during the month of January booked the following orders: For Pears' Soap, one million chromos of the "Dirty Boy" and the same of "Mary Anderson;" for Mother Seigel's Syrup, fifteen million chromo covers, and one million chromo box-tops; for Warner's Safe Cure, eight million chromo covers and eighty thousand show-cards; for Howell's Golden Herb Pills, one million and a half of chromo handbills; for Thorley's Food, four hundred thousand chromo covers and two-page pictures for an almanac; Kearley & Tongue require eighty thousand calendars for 1889.

"Imitative Tetanus."—Dr. Guánchez, records a case of "imitative tetanus," which occurred in a native of Caracas, a young man who had always enjoyed good health. The patient began to complain of pain in the calves of his legs, which caused him considerable difficulty in walking. There was no fever, but the pain increased, and some contraction of the flexor muscles of the leg occurred, rendering the man incapable of walking. Indeed, on the second day of the attack he could not turn in bed without a good deal of pain. He was unable to sleep, and suffered from mental anxiety. It was then elicited that his brother, who lived at a little distance, was suffering from tetanus, and that the patient, who went frequently to see him, had appeared to be greatly affected at the sight of his brother's spasmodic attacks, and had declared that he himself would die of the same malady. Dr. Guánchez, however, attributed the pains to rheumatism, which was common enough at the season when this occurred. He treated the man with anodyne liniments and jaborandi internally. No effect was produced, as intense rigidity of the legs, simulating anchylosis, came on, the patient obtaining no sleep whatever, and the pain being still very severe. A purgative was prescribed, but the trunk muscles became affected and clonic spasms began to show themselves. Bromide, chloral, narcein, and codeia were prescribed, but none of these arrested the rapid progress of the affection. The convulsions increased, opisthotonos, and lastly trismus occurred, and the man died on the sixth day. In this case the mode of invasion was different from that usual in true tetanus, which commences by affecting the muscles of the face and chest; again, there were no remissions, as in ordinary tetanus, but the disease progressed steadily and more rapidly than is usual in tetanus. As to treatment, Dr. Guánchez, who has had had some experience of ordinary tetanus, has found mercury and opium sometimes successful, and in one notable case the cure appeared to be due to the constant and careful administration of curare.—*The Lancet.*

Women and Obscene Literature.—A certain class of very good and well-meaning folk never tire of declaiming from the platform of the corrupt and licentious conduct of men, but from a recent discussion in Parliament respecting the rapid spread of corrupt literature in this country, it would appear that the male sex are not alone to blame in this matter. Indeed, were the corrupt literature business to depend on the patronage of men alone it would die a natural death. The chief customers of the vile traders in obscene publications and indecent prints and photographs are said to be women. In some parts of London there are reading-rooms and lending libraries open to females only, where young girls can have the use of private rooms, and a supply of indecent books and prints at a small charge. This is a matter which might well engage the attention of the Social Purity Association.—*London Hospital Gazette.*

The Tariff on Surgical Instruments.—The New York Neurological Society has refused to indorse the resolution of the Georgia Medical Society requesting the removal of the tariff on medical books, surgical instruments, and drugs. As the Neurological Society contains a large number of believers in tariff reduction, their action must have been dictated by the best interests of the profession. It is easy to see on what grounds they opposed this resolution, originally offered as a piece of buncombe merely. While a tax remains on the raw material the removal of the tariff on instruments discriminates against the American instrument-maker, and must ultimately raise the price of instruments. Furthermore, under existing circumstances, a surgeon who desires an instrument can have it made by a maker at his door. If the tariff on instruments be swept away without removing the tariff on raw material, the instrument-maker's trade is destroyed, and the surgeon must import his instruments. The fact that the members of the New York Society are greater importers of books and instruments than those of the Georgia Medical Society, renders their action peculiarly significant.—*Medical Standard.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 5 NEW YORK, AUGUST 4, 1888 Whole No. 926

Original Articles.

EXPERIMENTS ON SPECIAL SENSE LOCALIZATIONS IN THE CORTEX CEREBRI OF THE MONKEY.[1]

BY SANGER BROWN, M.D.,

NEW YORK.

WHEN it is remembered through what experiences any given monkey may have passed before falling into the hand of the physiologist to be experimented with, the importance will be appreciated of studying carefully the habits and characteristics of each specimen prior to operating.

For instance, a monkey fresh from his native forest, taken on shipboard and brought to a large city, might naturally be expected to be in a very unsettled frame of mind as to the nature and import of what he saw, heard, smelled, or tasted. Such a monkey might be expected to respond to the environments of civilization in a manner quite different from one which for several years, perhaps, had done duty as an organ-grinder's assistant.

The wild specimen might not have learned to associate any idea of danger with sounds which in a state of civilization are usually so associated, while the tame specimen may have been domiciled in such close contiguity to noises commonly regarded as startling, as to have acquired a certain tolerance of them. Again, in regard to taste, the wild monkey might, while in his native forest, have been forced by circumstances to accustom his palate to some root, bug, or berry similar in taste to substances which we would expect him to dislike.

In proportion, then, as the various characteristics are studied and understood, prior to operation, will the nature of the alterations produced by operation appear clear and satisfactory.

In our experiments much care and attention were given to gaining an intimate acquaintance with the various habits and preferences of each monkey prior to operation.

Some of our subjects, if very hungry, for instance, would eat a raisin quite heavily loaded with sulphate of quinine, and if less hungry, after tasting would pick such a raisin in pieces, rub it between their hands or on the floor to rid it somewhat of the quinine, and eat what remained; while other monkeys in the same cage would not eat such a raisin under any circumstances. We found no monkey which would eat a raisin loaded with quinine and a solution of acetate of strychnine.

Similarly, in regard to hearing, we found some react to noises more readily than others; but all, for some reason, showed a remarkable tolerance of the report of a pistol fired near them; even when in repose they would often fail to show any reaction, while under the same circumstances the rustling of a paper or a kissing noise was usually accompanied by a prompt bestowal of attention.

It will readily appear what erroneous conclusions one might reach if he should omit this preliminary study of each subject and proceed to compare the manifestations observed after operation with some original hypothetical standard of what a normal monkey should be.

With regard to the cortical centre, or area of vision, Munk has asserted that in the monkey extirpation of one or both occipital lobes produces persistent hemiopia or blindness. Ferrier and Yeo,[1] state that, "The only lesion which causes complete and permanent loss of vision in both eyes is total destruction of the occipital lobes and angular gyri on both sides.

"Complete extirpation of both angular gyri causes for a time total blindness, succeeded by lasting visual defect in both eyes.

"Unilateral destruction of the cortex of the angular gyrus causes temporary abolition or impairment of vision in the opposite eye—not of a hemiopic character.

"Destruction of the occipital lobe and angular gyrus on one side causes temporary amblyopia of the opposite eye and homonymous hemianopia of both eyes toward the side opposite the lesion."

Luciani[2] states that, "The visual sphere, though chiefly concentrated in the occipito-parietal zone of the hemisphere, is not clearly circumscribed therein." The same writer further states: "My new experiments confirm on the one hand the capital importance of the occipital lobes as centres of vision, . . . while on the other hand they confirm the view that these centres spread by irradiation into the parietal lobes, especially into the angular gyri."

Horsley and Schäfer[3] made four experiments in the regions of the angular gyri and occipital lobes, which they at the time thought supported the position taken by Luciani, and was intermediate between the views expressed by Ferrier and Yeo, on the one hand, and Munk on the other; but the post-mortem examinations showed that in no instance had the removal of the occipital lobes been complete.

It seemed, therefore, that further and more carefully conducted experiments were needed to set this matter at rest, and with this object in view we proceeded.

In one monkey, a small, active, intelligent Rhœsus, we destroyed as completely as we could from the surface, by the actual cautery, the gray matter of one angular gyrus. We tested the sight immediately after complete recovery from the anæsthetic, but could discover no defect of vision nor any loss of movement of the eyes or eyelids, or anæsthesia of the cornea or conjunctiva. When the eye of the same side was closed with plaster, the animal continued to see perfectly well with the eye of the other side.

No evidence of defective vision having appeared within one week after the operation, the angular gyrus of the opposite side was destroyed in the same manner as the first. This lesion was not followed, either immediately or at any subsequent time, by any visual defect that we could discover by the most careful tests we knew how to apply. This animal was kept several months and carefully examined by many people besides ourselves, and was exhibited at a meeting of the Neurological Society, held in the Physiological Laboratory of University College. That the lesion was complete on both sides was proved by the post-mortem examination (see Fig. 1).

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[1] The experiments to which this article relates were made in conjunction with Mr. E. A. Schäfer, F.R.S., Jodrell Professor of Physiology, University College, London, in the Physiological Laboratory of that institution. The details of our observations, with representations showing the exact post-mortem condition of the brains operated upon, are given in a paper submitted by us to the Royal Society, which was read at the meeting of that Society, December 16, 1887.

[1] Abstract of paper presented to the Royal Society by Ferrier and Yeo, Brain, vol. vii., p. 139.

[2] Brain, vol. vii., p. 145.

[3] Horsley and Schäfer: A Record of Experiments upon the Functions of the Cerebral Cortex. Philosophical Transactions of the Royal Society, 1887.

In another monkey we separated the lips of the fissures bounding the angular gyrus of one side and entirely scooped out that convolution, making a deep gap in the surface of the brain. This operation was followed by a disturbance of vision—hemiopia—which entirely disappeared in a few days. No other disturbance of the visual organs could be at any time discovered as a result of this lesion, and the temporary hemiopia is easily accounted for by the disturbance of the circulation in the adjacent occipital lobe, assuming that this latter lobe is the cortical seat of visual perceptions.

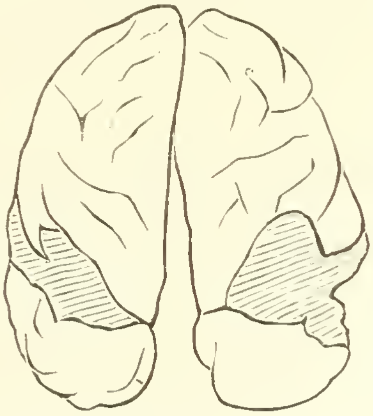

Fig. 1.—Brain of monkey, with complete destruction of both angular gyri, viewed from above.

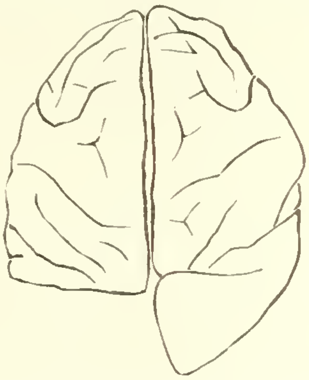

Fig. 2.—Brain of monkey, with complete removal of left occipital lobe, viewed from above.

It may be remarked, incidentally, that both of these cases oppose the statement of Professor H. Munk that the angular gyrus is related to the sensibility or movements of the opposite eyeball.[1]

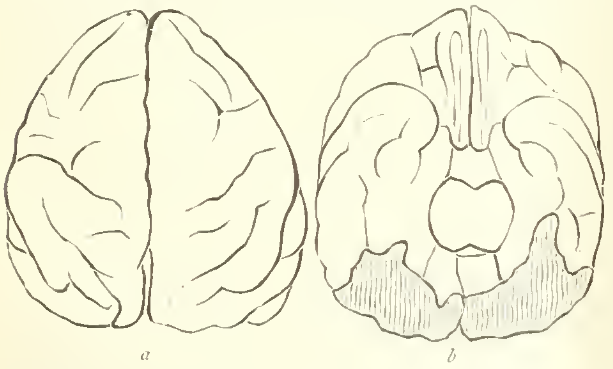

Fig. 3.—Brain of monkey, with complete removal of both occipital lobes, viewed from above in *a* and below in *b*. On the under-surface the lesion of the cortex, as shown by the shading, extends somewhat in advance of the limit of the occipital lobe.

Our experiments upon the occipital lobe have yielded no less definite positive results than those upon the angular gyrus have been negative.

In one monkey the left occipital lobe was removed by a vertical incision carried along the line of the parieto-occipital fissure. That the removal was complete was confirmed by post-mortem examination some eight months later (see Fig. 2), when the angular gyrus was found to be quite intact, the cut surface showing as clearly the distinction of gray and white matter as when the operation was performed. The result was the immediate establishment of bilateral homonymous hemianopsia, which persisted during the whole time that the monkey was kept alive. Objects so placed that their images fell upon the left half of the retinæ were not noticed. A raisin fixed to the end of a long stick held from behind, so the holder was not being observed, and then moved from right to left at a convenient distance from the monkey, was not noticed till it had passed the mesial vertical plane, when it was instantly seized and eaten; currants strewn upon the floor were only picked up toward the left side, and a threatened blow from the right side was not noticed.

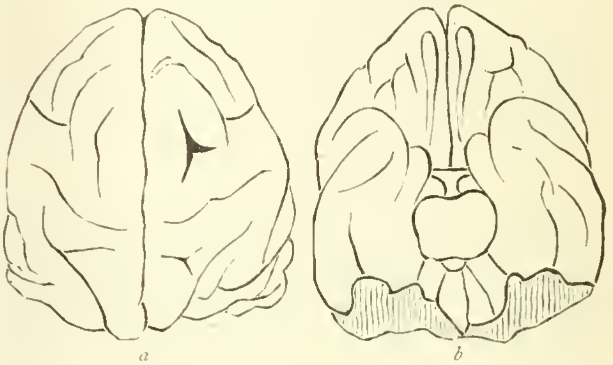

Fig. 4.—Brain of monkey, with complete removal of both occipital lobes, viewed from above in *a* and below in *b*. The lesion is not so extensive on the under-surface as the one shown in Fig. 3.

In our monkey we removed both occipital lobes at one operation (see Fig. 3, *a*, *b*). The result was total and persistent blindness. The animal could only find food by groping and smelling, and when frightened would dash headlong against whatever object happened to be in its way. Placed in a dark room, it gave no signs of perception when a bright light was flashed in its face.

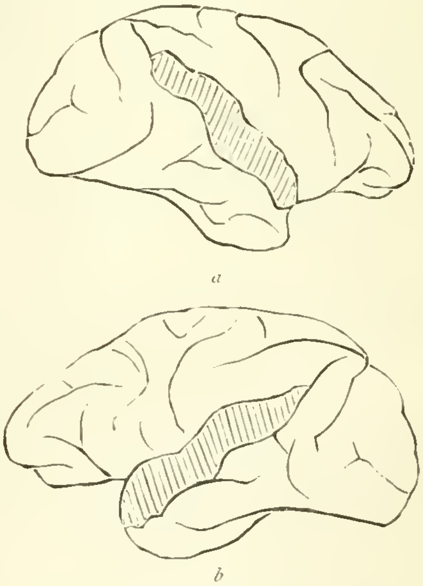

Fig. 5.—Brain of monkey, with complete removal of both superior temporal gyri. The right side is shown in *a* and the left side in *b*.

Hearing was very acute, and all the other senses besides vision appeared unimpaired. When the animal was killed, several months later, the angular gyri were found perfectly intact, and all the parts looked fresh and healthy.

Soon after the operation last described a similar operation was attempted upon another monkey of the same kind and size; but the post-mortem examination showed that in this case the lesion did not extend so far forward on the under-surface of the brain as in the former, and the animal, though entirely blind at first, after a few days appeared to have an indistinct perception of objects moved or held so as to correspond to the extreme upper and right-hand margin of the visual plane. This was only apparent when the conditions of vision were extremely favorable, for to objects placed in other positions he was as insensible as the other. All the parts were found perfectly healthy on post-morten examination several months after the operation.

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[1] H. Munk: Ueber die Functionen der Grosshirnrande, Gesammelte Mittheilungen, 4te Mittheilung, 1878.

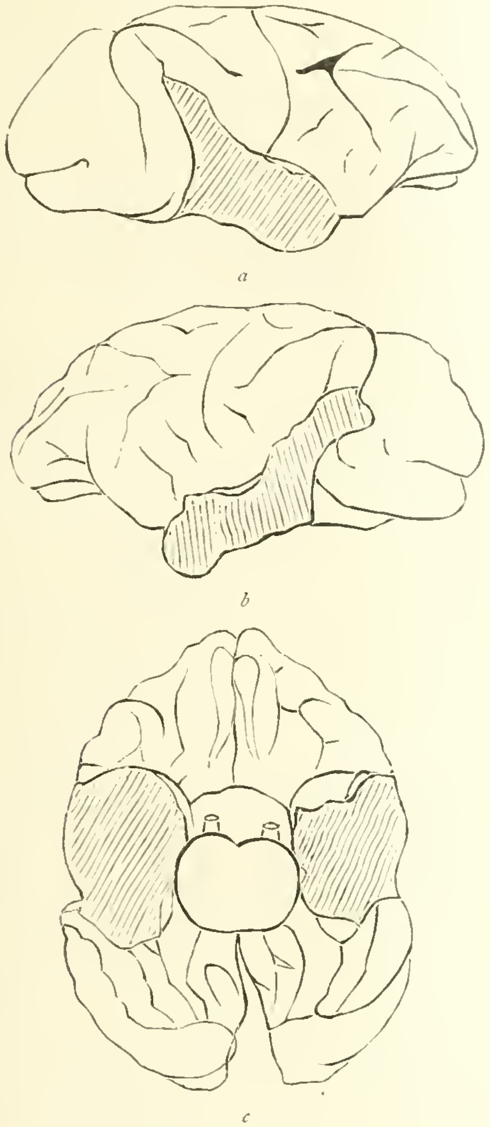

Fig. 6.—Brain of monkey, with almost complete removal of both temporal lobes, as seen from each side and below.

From these two cases it might reasonably be inferred that those experimenters in this region, who have concluded that the visual centre was not confined to this lobe, had not removed the part completely, and, indeed, Horsley and Schäfer[1] freely admit that the post-mortem examination of their cases showed that removal has been far from complete.

It should be stated that we invariably got measurements of the eyes by applying electrical stimulation to the occipital lobes.

We also made experiments upon six monkeys with a purpose of discovering the location in the cortex cerebri of the sense of hearing.

Ferrier and Yeo state[2] that "destruction of the superior temporo-sphenoidal convolution on both sides causes complete and permanent loss of hearing, without other sensory or motor defect. Hearing is not impaired by lesions of any other part of the temporal lobe."

The experimental evidence in support of the above statement appears to have been that electrical stimulation of this gyrus produced movements of the opposite ear, and that destruction of both gyri in one monkey appeared to produce deafness. As it did not appear to us that the conditions necessary to a reliable conclusion had been fairly fulfilled in this individual case, we more or less completely destroyed, in six monkeys, the superior temporo-sphenoidal convolution on both sides. In one or two instances a small shred of gray matter belonging to this convolution was found post-mortem, but as even in these the part had been deprived of the medullary centre, the removal in all six may be regarded as complete. In one large female Rhœsus we separated the fissures bounding the convolution and scooped it out to the very bottom on both sides of the brain, so that not a trace remained (see Fig. 5), and in another monkey we removed not only this convolution but the whole temporal lobe on both sides of the brain (see Fig. 6, *a*, *b*, *c*). These two, as well as all the other animals with this lesion, even immediately after the operation, as soon as sufficiently recovered from the anæsthetic, reacted to slight sounds, such as the crumpling of dry paper or smacking of the lips. These two animals with the more extensive lesions were kept alive for several months, as were some of the others, but none at any time showed evidence of impairment of the auditory faculties, or, indeed, of any of the special senses.

The case above referred to, in which the whole temporo-sphenoidal lobes of both sides were removed, is opposed to Dr. Ferrier's surmises that the special sense of taste is in the anterior part of this lobe,[1] as this animal's taste was tested in many ways, both before and after the operation, without any evidence of impairment having been discovered.

The two monkeys above referred to, in which the lesions of the temporal lobes were most extensive, presented well-marked psychical changes of a very interesting nature, which could not be fairly discussed within present limits.

Hotel Normandie, New York.

Tannin in Phthisis.—In the *Riforma Medica* of June 11th, Dr. C. De-Viti-Demarco recommends "saturation of the blood with tannin" as an effectual means of checking the development of the tubercle bacillus, and giving the organism time to eliminate it. He has recently treated two patients, in the second and third stage of consumption respectively, by giving them the drug in the following form: ℞. Tannic acid, ℨ j.; creosote, ♏ iij.; glycerine and alcohol, āā q. s. To make eight pills; one to be taken every two hours during the day. In both cases the temperature became normal after twelve days' treatment and remained so; the condition of the lungs, however, was unchanged. One of the patients, who was hopelessly ill when the treatment was begun, died in a month; but the other, though having a large cavity in each apex and extensive tubercular deposits in the left lung, was "immensely improved" after three months, having gained weight and almost lost his cough, while the expectoration was diminished to half what it had been. The prolonged administration of tannin had caused no ill effect. It is to be hoped that this plan will be further tried in less advanced cases than those reported by Dr. De-Viti-Demarco; the favorable results obtained by Professor A. Ceccherelli with tannin in local tuberculosis (see *Journal*, April 7, 1888, p. 656) seem to encourage the belief that it really has an antagonistic effect of some kind on the micro-organism causing the disease.—*British Medical Journal.*

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[1] Private communication from Mr. Schäfer.

[2] Ferrier and Yeo, op. cit.

[1] Ferrier: Functions of the Brain, second edition, chap. ix., part iii.

RENAL TENESMUS:

A Result of Chronic Cystitis and Ureteritis; Successful Treatment by Kolpo-uretero-cystotomy and Intravaginal Drainage combined with Elevation and Support of the Uterus and Ovaries.[1]

By NATHAN BOZEMAN, M.D.,

SURGEON TO THE WOMAN'S HOSPITAL, NEW YORK

I READ before the New York State Medical Association, September 27, 1887, a paper entitled, "Chronic Pyelitis; Successful Treatment by Kolpo-uretero-cystotomy, Irrigation of the Pelvis of the Kidney, and Intravaginal Drainage.[2]" In this communication I showed that the vesical orifice of one of the ureters could be exposed by making an opening at the ureteral angle of the trigone of the bladder on the affected side, and that disease of the renal pelvis could be treated and cured by local means. In order to catheterize the ureter and pelvis of the kidney, the anterior wall of the vagina is exposed, in the supported knee-elbow or left lateral position, by the use of my dilating speculum and perineal elevator; the upper border of the artificial opening is then elevated by means of a tenaculum, and the vesical mucous membrane containing the orifice of the ureter is thus rolled out into the vagina. In this way we are enabled to guide a flexible catheter into the ureter. and thus to avoid all injurious probing of the bladder. By injecting warm water, or a solution of bichloride of mercury (1–20,000), through the catheter with a small syringe, the pelvis of the kidney is gradually filled. Distention of the organ gives rise to a peculiar pain, which serves as a guide as to the quantity of fluid which should be injected. When the water is allowed to escape, it brings with it pus, blood, and calcareous detritus, if these irritating substances are present. The injection should be repeated every two or three days or oftener, according to circumstances, and the irrigation continued until the washings are free from sediment.

In the paper referred to I further showed the effect of this method of treatment upon obstruction of the urethra and cystitis, which are commonly associated with the pyelitis. The opening in the bladder, by affording physiological rest and drainage of this organ and the urethra, leads to the subsidence of the inflammation or irritability of the mucous membrane of both structures, and to the atrophy of the thickened muscular walls The bladder being thus kept continually empty through intravaginal drainage, offers no resistance to the entrance of the urine as it comes from the ureters, and there is no longer a tendency to its reflux toward the kidney during expulsive efforts of the bladder. Physiological rest and drainage of the ureters and pelves of the kidneys, as well as of the bladder and urethra, consequently follow the operation. I also described several forms of intravaginal and vulvo-vaginal drainage instruments, which, by collecting the urine in a satisfactory manner and making the patient comfortable, free, in great part, the operation from its chief objections; to wit, the presence of accumulated urine in the bladder and vagina, and dribbling from the vulva.

At this time I had treated two cases of pyelitis, both of which were cured. I have since done kolpo-cystotomy and kolpo-uretero-cystotomy eight times.[3] Having thus a ready means of access to the bladder, ureters, and pelves of the kidney, I have learned, by observation and experiment upon the living subject, some new and important facts concerning the diseases of the upper urinary organs in women.

ANATOMY AND PATHOLOGY.—In presenting the results of these investigations, I have selected as my subject "Renal Tenesmus," a frequent result of chronic cystitis and ureteritis, in contradistinction to pyelitis, the usual result of urethrocele, cystitis, and ureteritis. It is the most characteristic symptom of the class of cases of which I wish to speak. I have chosen this symptom rather than a pathological condition, as I wish to make it prominent, because it is the first and frequently the only indication of the gradual extension of urethral and vesical disease to the ureters and pelves of the kidneys. From the peculiarity and wide range of the group of symptoms embodied in the use of the term renal tenesmus, it is liable to be confounded with pyelitis, with which it is closely allied. I mean to designate by this term a distinct manifestation of morbid irritability, without pathological evidences of inflammation other than that of pain. The distinction between it and pyelitis, resulting, to a certain extent, from like causes, cannot, I conceive, be too sharply drawn.

Here, as in other parts of the body, the progress of disease is inward—from organs communicating directly with the exterior of the body and exposed to injurious influences from without to those in more sheltered positions in the interior. It is true that an abnormal condition of the urine sometimes leads to the formation of renal calculi, or the ureters and pelves of the kidneys may be pressed upon by abdominal tumors, be the seat of a new-growth, or be implicated in disease of neighboring organs, and in these conditions renal tenesmus may occur as one of the symptoms; but as I have approached its study from the urethra and bladder, I will at present consider it only in its relations to disease of the upper urinary passages following affections of the urethra and bladder.

That an inflammation of the mucous membrane of the urethra and bladder should extend to the vesical extremity of one or both ureters is not surprising. The mucous membrane lining the ureters is continuous with that of the bladder, and the ducts traverse the vesical wall for an inch and a half. It is therefore probable that in an acute cystitis, preceded or not by urethritis, the vesical part of the ureters rarely escapes. As a rule, when the inflammation of the bladder subsides the ureteral mucous membrane returns to a normal condition. But if urethrocele should coexist, or the walls of the bladder should become hypertrophied, or there should be distortion of a ureter arising from the pressure upon it of a displaced uterus or ovary, or both, or of pelvic growths of any kind; why, then, the disease of this portion of the duct is not only liable to continue, but it will sooner or later extend to the pelvis of one or both kidneys, under the form of pyelitis, or of renal tenesmus just pointed out.

Cystitis more or less localized in the base of the bladder, complicated by ureteritis, is a more obscure but highly interesting condition. The cystitis commences as a local or general inflammation, and afterward becomes confined to one locality in consequence of the retention of residual urine due to sacculation of this part of the bladder. Pouches in the base of the bladder may result from irregular thickening of its muscular coat or from distortion of the vesico-vaginal septum, in consequence of the presence of cicatricial bands and contractions in the vagina, or, as I have more frequently observed of late, from fixation of the uterus in an abnormal position. There is frequently, in these latter cases, lateral displacement of the uterus, and the cervix is drawn upward and outward toward one or the other side of the pelvis, carrying the vesical wall with it and becoming there more or less fixed. In this way is produced a funnel-shaped pouch, the apex of which corresponds to the attachment of the cervix to the bladder. A fold in the vesical wall also occurs in cases of backward displacements of the uterus, especially in well-marked retroflexions with inclination of the fundus to one or the other side of the pelvis. The bladder is attached to the anterior aspect of the cervix uteri along a line about an inch in length. When the fundus uteri sinks into Douglass' cul-de-sac and the utero-vesical pouch of the peritoneum is thus effaced, the highest part of the attachment of the uterus to the bladder is drawn backward, the lowest is displaced forward by the cervix, and the superior wall of the bladder approaches the base. In this way, instead of the regular and rounded form of the cavity of the bladder, at this point is produced a more or less acute angle, the apex of which corresponds to the highest point of the utero-vesical attachment, and consequently the deepest and narrowest part, to the side toward which the uterus is inclined. Frequently, these folds and distortions of the vesical walls are very distinct, and the artificial opening in the bladder, the result of the operation of kolpo-uretero-cystotomy, affords an excellent opportunity for the study of the mechanism of their production. One of the ureters may empty into a pouch produced in some one of these ways, and thus the inflammation may extend to its lining membrane. The distortion of the bladder at this part also favors the reflux of urine into the duct during expulsive efforts. Fixation of the uterus also, even when the organ is in a normal position, by interfering with the mobility of the bladder, prevents its easy and symmetrical dilatation by the urine and the complete evacuation of its contents. These influences must be studied all the more closely, because, although great irritability of the bladder and renal tenesmus exist, sometimes there is no pus in the urine, and at others only a very small amount. Exacerbations, however, occur, especially during the menstrual periods, when the inflammation extends to the entire vesical mucous membrane and the urine contains large quantities of pus.

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[1] Read before the Section on Gynecology of the American Medical Association, May 10, 1888.

[2] Transactions New York State Medical Association, vol. iv., 1887. American Journal of the Medical Sciences, March and April, 1888.

[3] I have now performed thirteen operations in all, combined with intravaginal drainage—two of kolpo-cystotomy and eleven of kolpo-uretero-cystotomy. Two of these operations were for urethrocele and cystitis, one was for left pyo-nephrosis with dilatation of the ureter, one for left pyelitis with sacculation of the ureter, three were for pyelitis with dilatation of the ureter, and five for renal tenesmus, without dilatation of the ureters, or pelves of the kidneys.

Ureteritis may remain localized in the vesical portion of the ureter, or the inflammation, from an increasing urethral, vesical, or uterine lesion, may extend upward and involve the pelvis of the kidneys. In my experience this extension is either preceded or accompanied by dilatation of the ducts. When I have opened the bladder and exposed the ureter, in those cases where the inflammation was confined to its lower part, the lumen of the duct was contracted in consequence of thickening of its coats or of morbid irritability in its entire extent, associated with uterine and ovarian displacements, which there is reason to believe are almost if not always present under such circumstances. In the cases of pyelitis which I have treated, on the other hand, associated also with uterine and ovarian displacements, the ureter was considerably dilated. The cause of the dilatation of the ureter and at the same time the extension of the inflammation is, as I believe, the reflux of the urine bearing septic material from the bladder, arising mainly from the increase of obstruction in the urethra to the outflow of the urine. Thickening and narrowing of the urethra, distinguishing features of urethrocele, by necessitating forcible efforts of the bladder to expel its contents, lead to concentric hypertrophy of the muscular coat and increase the strain upon the ureters, thus causing pyelitis. Partial or general thickening of the muscular fibres of both these structures, the result of overaction in irritable bladders arising from recurrent attacks of cystitis, produces the same effect by increasing the power of the contractions of the bladder. At the same time these contractions occur with greater frequency and longer duration, thus leading to renal tenesmus, as I have observed it in connection with the various forms of uterine and ovarian displacements just described.

CLASSIFICATION.—Now, from the foregoing anatomical and pathological considerations, the chronic inflammatory affections of the female urinary passages may properly be divided into four classes, namely: 1, Urethritis; 2, cystitis; 3, ureteritis; 4, pyelitis. The progress of development is from without inward, and the order of occurrence, as I believe, is the one enumerated.

URETHROCELE AND CYSTITIS.—The following extract from a paper[1] I read before the Medical Society of the State of New York, will show the scope of my views upon urethritis and cystitis at that date, and will serve at the same time to connect these views with those I at present entertain upon the pathology and treatment of the chronic inflammatory diseases of the upper urinary passages belonging to the third and fourth classes of our division, namely, ureteritis and pyelitis, to be discussed further on.

"The starting-point of urethral and vesical lesions in the female is to be sought in the lower half of the urethra, closely related in front with the triangular ligament and blending behind with a spongy erectile tissue of the vagina.

"The calibre of the urethra may be transiently narrowed by congestion of its mucous lining, or permanently narrowed by infiltration of coagulable lymph into the underlying cellulo-elastic tissue, which constitutes properly the so-called organic stricture, as in the male, and which, however seldom met with, is liable to the same sequences.

"Infiltration into the spongy erectile tissue outside the urethra, by plastic lymph, is, I believe, by far the most common beginning of the morbid process, whatever be the cause that produces it. This interrupts the stream of urine, either by encroaching on the calibre of the urethra, or by deflecting it beneath the triangular ligament, both cases being attended with more or less dilatation above.

"The next step in sequence is increased functional activity of the urethral muscular coat in overcoming the obstruction to the flow of urine. The result upon its structure is hypertrophy, and this will be of the eccentric type, thickening the urethral walls, while enlarging the calibre. Hence the ease with which large catheters of a proper curve pass at all stages of the disease. False and true hypertrophy here coexist. The true hypertrophy increases *pari passu* with the muscular contraction, and is followed by still greater distortion of the canal at an angle more and more acute as it turns the triangular ligament, and with corresponding contraction of its walls at that point. This mechanical impediment below coincides with the increased weight and volume of the stream of urine above, to put the walls of the urethra on the stretch in the upper part of its course.

"Thus is gradually formed the urinous tumor, which drags down in front the adjacent vaginal wall, appearing as a prolapsus between the nymphæ, and filling up the ostium vaginæ.

"The looser attachment of the urethra to the vagina in the upper part of its course facilitates this result. Such is the condition of the parts to which I apply the term *urethrocele*.[2] Often confounded with cystocele, it is really distinct.

"The arrest and retention of but a few drops of urine, at first, goes on until this may amount to a teaspoonful or more. It is then decomposed in this pocket, becomes alkaline, and by its irritation provokes congestion of the urethral mucous membrane. This congestion, extending to the vesicle trigone above, will bring white glairy mucus into the urine with vesical and rectal tenesmus. Causes favoring this extension are errors in diet, overexertion, and excessive coition. Acute cystitis resulting, first complicates the urethrocele, and is more or less decided according to the gravity of its determining cause. After a few days the active congestion disappears or subsides, with the vesical symptoms, leaving the urethrocele persistent. A few days, or weeks, or months afterward, similar provoking causes, even slighter than at first, will reproduce the congestion, while extending its area, with a corresponding increase of the severity of all the symptoms. . . . Finally, chronic cystitis overshadows the primitive urethrocele, although this still contributes to exacerbate the long and frightful train of evils.

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[1] Urethrocele, Catarrh, and Ulceration of the Bladder in Females. See Transactions for 1871.

[2] Urethra and κηλη, a mongrel of Latin and Greek. This word, in the absence of any other to designate the lesion named, I coined and first employed in the description here copied. There is no evidence of the use of this word by writers prior to the date of my paper. Still, recognizing the appropriateness of its first employment, I have used it in this paper in the same sense, believing it to be in strict harmony with the words cystocele and rectocele, and with my present study of the subject.

"The vesical mucous membrane seems to possess almost boundless susceptibilities of irritation, and the higher this ranges, or the greater the area congested by contact with ammoniacal urine, the more is the subjacent muscular coat excited to contractions of abnormal force and frequency. Hence hypertrophy, increased congestion, blindly seeking relief by increased mucous secretion, and more active fermentation of the urine, deposits of its ammoniacal magnesian phosphate, sometimes hemorrhage into the bladder, blood extravasated into the submucous cellular tissue, or abscesses formed there.

"This hypertrophy of the concentric type, although apparently slight in the mucous coat, is more serious in the muscular coat, whose efforts to overcome the urethral impediment and rid the bladder of its acrid contents, keep it growing until it reaches an inch or more in thickness. Autopsies reveal upon its inner surface fascicles of muscle like the interior of the right ventricle of the heart. Its color is deepened by the increase of venous blood in its retarded circulation, and its consistence softened by the same cause. The circular and spiral muscular fibres of the upper urethra are also hypertrophied and overcome the former dilatation of the canal, thus converting the eccentric into concentric hypertrophy of the urethra, which has become firmer to the touch, while its urinous tumor is less defined. . . .

"From the earliest period of vesical hypertrophy, the congestion of the mucous membrane occasions thickening with an œdematous feeling in the bas-fond, and the contraction of its pliant walls under this irritation is even greater than is possible after they have been straightened out and expanded by progressive thickening. The vesical cavity, moreover, is reduced by the pressure of the anteverted womb upon its superior fundus, which at this early stage gives it a somewhat cylindrical shape.

"On the vagina, the effects of a hypertrophied bladder are seen in the increased firmness of the vesico-vaginal septum, and the congestion and hyperæsthesia of its mucous membrane.

"Ulceration initiates the destructive stage of subacute inflammation or chronic catarrh of the bladder. It will be superinduced by the excessive hyperæmia of small or large patches of membrane, especially at the trigone and bas-fond, and by extravasations of blood into the submucous cellular tissue, caused probably by rupture of minute veins at the time of strong muscular contractions. In either event the mobility or pliability of the mucous membrane is lessened or destroyed by the inflammation which has reached its acme, and which now terminates in sloughing of the membrane (gangrene) perhaps to a very limited extent, or by an abscess opening through it into the bladder. It is also to be considered that the mucous membrane, rendered friable by previous inflammation, and thrown into irregular folds, may tear when it can no longer stretch under the powerful grasp of the hypertrophied muscular coat. This accident will occur the more readily on account of the anteverted position of the womb, which, I believe, always exists, and the pressure of which may explain the greater proneness to extensive ulceration of the female bladder, as averred by our morbid anatomists."

Treatment.—For my present purpose of study, I am led to regard all four of the inflammatory diseases of the urethra, bladder, ureters, and kidneys named as so many stages of the same pathological process. In short, if it were possible to cure the initial acute inflammatory lesions of the urethra and bladder, which rapidly become chronic, before the more internal organs are involved, the diseases of the ureters and pelves of the kidneys, thus arising from continuity of structure, might be almost, if not entirely, avoided. Hence the importance of recognizing early commencing urethrocele and cystitis, and treating them promptly, for, if neglected long, the upper urinary passages will surely suffer sooner or later in the order of sequences previously indicated.

Kolpo-cystotomy.—Kolpo-cystotomy, to secure physiological rest of the urethra and bladder, is undoubtedly the operation indicated for the relief of urethrocele coexisting with cystitis when the ordinary means at our disposal have failed; not dilatation of the urethra, nor an artificial opening between the canal and the vagina, expedients at best of questionable utility.

In the early stage of urethrocele, in which there is sacculation of the canal and retention of urine, I advocated on theoretical grounds, in the paper just quoted, the establishment of an opening into the canal from the vagina, a procedure which I called "tapping of the urethra;" but I soon saw that the practice recommended possessed no real merit, for the reason that the relief of the urethra afforded by such an expedient would confer little or no immunity upon the bladder against the extension of the inflammatory process to its cavity, and I therefore gave up the idea. Dr. T. A. Emmet proposed a similar operation on the urethra, several years later, which he called "button-holing of the urethra," but from what I have seen of the bad results of this procedure in cases which had been subjected to it by his followers, I would not be inclined to recommend it, for the reason that, when drainage from either the urethra or bladder or both is required, it should be established through an opening at a favorable point in the vesico-vaginal septum, where the opening afterward can be more easily closed, and injury of the functions of the urethra be entirely avoided. A large opening made here gives relief to both urethra and bladder by putting them in a state of physiological rest, and while they are being thus cured the ureters and pelves of the kidneys are guarded against further strain and the risk of commencing disease.

The practice of making a large opening into the bladder as a means of treating cystitis is itself of comparatively recent origin, but it is recognized generally by the profession as of great practical value. It has, however, been restricted in its employment, until recently, for the want of suitable artificial drainage of the bladder, by which alone the beneficial and legitimate results of the procedure can generally be obtained. I was the first in this country, as I believe, to treat successfully chronic cystitis by kolpo-cystotomy, which I did in my private hospital in New Orleans, in 1861. My first case was one of ulceration and concentric hypertrophy of the bladder coupled with urethrocele. The mucous coat of the bladder was thickened and redundant, and had a low grade of vitality. It was exposed to great tension from time to time on account of the violent and irregular contractions of the muscular coat. From its friable condition, no doubt, it readily became fissured and ulcerated, as was shown by the very minute disintegrated particles discharged through the urethra, which I recognized at the time with the unaided eye. The same pathology and mechanism of the walls of the bladder will serve to explain the occurrence of gangrene and perforation, not only of the mucous but of the muscular coat as well, in bad forms of recurrent cystitis, a case of which I could here cite if time permitted.

The very large opening, nearly the size of a silver dollar, which I finally made in the vesico-vaginal septum of my case referred to, afforded open and free vaginal drainage, and within one year all the diseased structures were completely cured by it, and the artificial fistula closed. The cause of failure to get the good effects of this procedure, in the hands of most surgeons who have employed it since, I am convinced, is because they do not make a sufficiently large opening.

To illustrate this point I will cite here a case—Mrs. S——, of Ohio, aged thirty-two, who recently came under my care—in which the initial stages of urethrocele and cystitis were completed after six years, with the development, as is believed, of ureteritis in the right side, in the regular order of sequences. The operation of kolpo-cystotomy was performed by one of the ablest gynecologists of New York, but, notwithstanding his acknowledged skill, the disease was only ameliorated for a time, resulting no doubt from the smallness of the opening he made and his want of a suitable form of artificial drainage. The patient, in spite of kolpo-cystotomy, after five years of further development of sequences (April 11, 1888) was admitted into my service in the Woman's Hospital, presenting all the terrible consequences of renewed and perpetuated sufferings, with blighted hopes and ceaseless dread of death from unknown causes. I found the fistula made for drainage five years before, situated a little to the right of the mesian line and very near the cervix uteri, a mere longitudinal slit through the thickened and contracted vesico-vaginal septum. It would about admit a No. 10 bougie, and through it protruded a small knuckle of the thickened vesical mucous membrane. The urethra had gone through all the stages of urethrocele, from an attack of urethritis occurring four days after marriage, and the bladder was in a state of concentric hypertrophy with a retaining capacity not exceeding three ounces of water. The patient says that she did not experience any real benefit from the operation she underwent until about six months afterward, when she got out of bed and began to walk about, attributed properly by her to a free escape of the urine, in obeyance, of course, of the law of gravity. The most of the symptoms in her right side from this time on continued to improve. But this amelioration of her sufferings was only of short duration. Pains soon began in the left groin and lumbar region, and they radiated down the thigh to the knee and foot, and came on in paroxysms not unlike those of renal colic. At the end of three years (two before admission into the hospital), though relieved almost entirely of her sufferings in the right side, the paroxysms of pain in the left had already become more frequent and severe in character, which were often followed by free discharges with the urine of thick and offensive pus. This condition of things continued to grow worse and worse until she entered the hospital. She had a bad form of retroflexion and fixation of the uterus. With all her varied sufferings of eleven years' standing, greatly aggravated no doubt from the last-named cause, I found her to all appearances in a state of robust health. But she was nervous and unable to sleep, results no doubt of the increased frequency and severity of the pains in her urethra, bladder, and left side, combined with the irritating effects of the constantly escaping ammoniacal urine. The treatment I proposed in the case was the correction of the displaced uterus and the successful establishment of intravaginal drainage, two most essential steps of treatment, I conceived, and without which I did not think it possible that any good could be accomplished.

Here the pathology and obstacles in the way of treatment were not unlike those usually found in certain forms of chronic cystitis in the male subject, resulting from old strictures of the urethra, and enlargements of the prostate gland. These two diseases, as is well known, bear a direct relation to dilatation of the ureters and surgical kidneys, which are usually rapid and certain in their developments; but they are no less constant and uniform in the production of their sequences than were found to exist in the case just cited, resulting from urethrocele and cystitis.[1]

From all this, therefore, it will be seen that I advocate and recommend for the successful treatment of urethrocele and chronic cystitis, alone or jointly, an opening in the vesico-vaginal septum between the orifices of the ureters, to secure physiological rest—the opening to be the size of a silver half-dollar to that, even, of a silver dollar, according to the advanced stage of the disease and the time it is desired to keep the structures at rest. This is to be coupled now, of course, with my system of intravaginal drainage, to protect the raw edges of the wound and the vaginal tract from the evil effects of the urine and to guard the patient against stillicidium. The main features of my procedure regarding the size of the artificial opening I have now clearly set forth; they are, I know, in contravention to the usually accepted practice.

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[1] June 30th. Progress proved necessarily slow in my first efforts to restore the displaced uterus and establish satisfactory drainage, owing to the greater immobility of the organ, and consequently the greater angle to be overcome in the adjustment of my utero-vesical drainage support than I supposed in the outset of the treatment. Notwithstanding these obstacles, however, and the restiveness of the patient, the gradually increasing mobility of the uterus and the daily improved state of her health encouraged me to persevere. I believed it was only a question of a little time before I should begin to secure beneficial results from the plan pursued. Matters thus went on until I became further convinced that the old fistula, from the smallness of its size, and the partial closure of it nearly all the while by the teat-like protrusion of the vesical mucous membrane, were obstacles even more grave than those just mentioned. These obstacles, to my mind, accounted for the former persistency of the pains in the right side, and now the renal colic-like pains in the left. A more minute and careful examination at this juncture of the pathological anatomy of the vesico-vaginal septum, especially in the locality of the vesical orifice of the left ureter, fully confirmed my impressions upon these points. Here I found the area of the structure contracted down to one-fourth at least of its original dimensions. It was thickened in about the same proportion, hard, resisting, and exquisitely sensitive under pressure of the finger and depressor. From this further study of the parts, I now thought it possible that, from the incompleteness of the relief—after the operation of kolpo-cystotomy five years before—the hypertrophy of the muscular coat of the bladder had itself not only gone on increasing in the locality indicated, but that the original cystitis had been followed here by ulceration of its mucous coat as well, thus causing in this way abnormal relations of the parts, and mechanical obstruction to the outflow of urine from the corresponding ureteral orifice. I therefore decided to perform left kolpo-uretero-cystotomy, in order to give a direct outlet to the implicated ureters, which I did in the supported knee-elbow position, on April 27th, in the presence of several physicians and the house-staff of the hospital. I made as large an opening as the restricted limits of the diseased structures would permit, leaving a longitudinal strip of tissue between the old and new openings, the breadth of the index-finger. I found the thickness of the structures fully five-eighths of an inch, and an artery in the upper border of the opening that spouted blood almost equal to a divided radial. Only by the quick application of a long pair of compression-forceps was the patient saved from excessive loss of blood. The orifice of the imprisoned ureter could not now be discovered, nor could the morbid changes of the muscular and mucous coats of the bladder around the newly made opening be carefully examined, owing to the free oozing of the blood. Suffice it to say, that a few continuous catgut sutures in the border of the fistula at the bleeding points, and the application of a small pad moistened in a twenty per cent. solution of subsulphate of iron, controlled effectually the hemorrhage. In this way I put the patient in the best possible condition for renewed progress in treatment by utero-vesical drainage, combined with elevation and support of the uterus. As might have been expected from a fresh wound in the parts, there was for eight or ten days considerable increase in discomfort of the patient, arising mainly from flooding of the raw edges of the wound with alkaline urine. But, nevertheless, the cavity of the bladder under the new order of things soon began to enlarge, and the thickness of the vesico-vaginal septum to perceptibly diminish, thus showing that the mucous coat of the bladder had not undergone ulceration. It was not until June 3d, thirty-six days after the operation, could I find the affected ureteral orifice, and explore the tube up to the pelvis of the kidney. This I did first with a delicate probe for a few inches, and then with a French catheter No. 8. The result was the escape through the catheter of ten drachms of pus and urine, white, thick, and cloudy, from a point not exceeding one and a half inch up the ureter. The pelvis of the kidney and ureter were then irrigated with a solution of bichloride of mercury, 1–20,000. Again, June 5th, two ounces of a simiar fluid were drawn off from a point about the same height in the ureter, containing a large amount of pus and albumen with acid reaction, and specific gravity of 1.019. This exploration showed that when the eye of the catheter was carried into the pelvis of the kidney and irrigation commenced, it had to be withdrawn three inches from the kidney before the fluid would begin to run through it, thus proving that the sacculation was not in the pelvis, but low down in the ureter. Still again, on June 8th, with the same precautions of introducing and withdrawing the catheter through to the dilated portion of the ureter, three ounces of fluid of the same character were taken away, and irrigation made. The fluid drawn off this time was acid, contained pus, epithelia, and some albumen, but no casts or crystals. The catheter, now left in the ureter five hours, showed that the secreting capacity of the left kidney was equal to, if not greater than, that of the right. The temperature next day, accompanied by nausea and vomiting, rose to 103.5° F., but it gradually came down, and the irrigation was resumed, though at longer intervals. The improvement of the parts was slow but progressive to the date of this note, when the patient left the hospital to return home to recuperate her strength for future treatment, when the hospital opens in the autumn.

Thus have I diagnosticated in this case sacculation of the left ureter, with obstruction just above the orifice to the outflow of the retained secretions, without perceptible disease of a serious nature in the corresponding kidney, resulting from concentric hypertrophy of the muscular coat of the bladder, and constriction within its grasp, probably, of the corresponding portion of the affected ureter.

Whatever may be the final result of the treatment in the case, now cut short for three months, I can at least claim thus far that a correct diagnosis of sacculation of the affected ureter has been reached, and that the domain of gynecology in this direction has been extended. It remains yet to be seen what the exact limit of such work in this new

Ureteritis and Pyelitis.—I have referred particularly in the preceding remarks to the teachings of my first operation of kolpo-cystotomy, in 1861, and the result of it, together with the case precited, because they have a direct bearing upon ureteritis and pyelitis, belonging to the third and fourth classes of our division. They show the tenor of the line of work that I have pursued during all the succeeding years of my experience, which has finally led me to diagnosticate, differentiate, and treat successfully the diseases named. This has been done by a careful study of certain groups of symptoms and physical signs characterizing these and other lesions sketched in the first part of this paper. I will here briefly point out the more important differences between ureteritis and pyelitis, from a practical point of view. Ureteritis indicates its presence by congestion and thickening of the mucous lining of the vesical portion of the ureter, and by diminution of its lumen, coupled with intense morbid sensibility. Pyelitis evinces a thickening or hypertrophy of the walls of the ureter in some part or the whole of its extent, with partial or complete dilatation, coupled with no greater sensibility than usually accompanies the lodgment of a similar sized instrument in the male urethra for the relief of a stricture.

I am sorry that time does not permit me to report all of my cases, in order to illustrate and substantiate more fully what I have said. Each presents certain points of interest, but at the same time there is a uniformity in the principal features of all. The case of Mrs. B——, already related in the journal cited, I regard as typical of my fourth class, where dilatation of the ureter had occurred and the inflammation had extended to the pelvis of the kidney.

Kolpo-uretero-cystotomy.—By kolpo-uretero-cystotomy, described in my paper on the treatment of chronic pyelitis, and now advocated and recommended for the successful treatment of renal tenesmus, I mean the making of an opening through the vesico-vaginal septum not smaller than a silver half-dollar, and having specific and close relation to the outlet of the affected ureter and kidney. When of this size and in this situation, it insures a direct escape of the secretions from both organs into my intravaginal drain, from which a state of the most complete physiological rest is obtained, with the best possible aseptic surroundings of the newly-made wound. In this way the greatest comfort is conferred upon the patient in any position she may choose to take for sleeping, sitting, or walking.

While it may seem to some, with no experience in such matters, that my recommendations for the establishment of the large openings in the two procedures outlined shows a needless sacrifice of tissue, with which I have indeed been charged by writers with regard to the first, yet, nevertheless, I am prepared to maintain the correctness of the practice on the basis of the good results I have obtained by them, and from having seen very defective open drainage and the evil consequences therefrom, when even larger fistulous openings existed than I have advocated, resulting from parturition. It is well to bear in mind that I operate either in the supported knee-elbow or left lateral position, using my bilateral dilating speculum, which spreads out the septum, very elastic in character, and the opening when made in it in this state of tension naturally seems large. From these circumstances it may be readily inferred that the loss of tissue is always more apparent than real.

Renal Tenesmus.—This brings us now to the study of renal tenesmus as a result of chronic inflammation of the mucous membrane of the vesical portion of the ureters, the main object of this paper. By renal tenesmus I mean violent and painful contractions of one or the other ureter and corresponding pelvis of the kidney, with marked tenderness or soreness under pressure of the latter organ, proceeding from morbid irritability of both structures. The pains occur in paroxysms, which vary in frequency, duration, and severity in different cases according to the stage of the preceding ureteritis and the extension of the lesion to one or both sides. As a rule, it is confined at first to the groin on one side of the body, and afterward to the corresponding lumbar region. In the more severe attacks the pain, besides being violent in these situations, radiates to the hip, the outer and inner sides of the thigh, the knee, leg, and even to the toes. Cramps of the muscles of the lower extremity on the affected side also occur in these severe paroxysms. In the well-marked cases, attacks of this sort come on daily, or even several times a day. They are most frequent and severe during the menstrual periods. The patients describe them as occurring most often during the night. They awake with a pressing desire to urinate; the emptying of the bladder is accompanied by more or less pain and spasm, and its evacuation is followed by a cramp-like pain ascending along the course of the ureter to the kidney, and radiating to the lower extremity. The patients sleep, as a rule, on the affected side, with the face turned toward the pillow, and it is the habit of many to draw the opposite thigh up over its fellow against the abdomen. The pain is excited in the early stages by the marital relation, which in nearly all cases becomes intolerable in the advanced stages of the disease.

Other symptoms are associated with the renal pain and the disturbance of the functions of the bladder. Anorexia, nausea, and vomiting are almost always present, especially during the menstrual periods, and as the attacks of vomiting are generally long continued, the vomited matters become stained with bile. Jaundice even is not an uncommon result. Hysterical symptoms form a marked feature of most of the cases. The patients start at the slightest noise, become despondent, cry, and laugh without sufficient cause, and sometimes have well-marked hysterical convulsions followed by a period of unconsciousness. Finally, in the advanced stages of the disease, after years of almost ceaseless pain, when dyspepsia, loss of appetite, nausea and vomiting, torpidity of the liver, constipation of the bowels, and yellowish tinge of the complexion shall have supervened, the general aspect of the subject is that of inanition or starvation, from which, with continually increasing physical and mental sufferings, death puts an end to the roll.

That the pains which I have described as constituting renal tenesmus are referable to ureteritis, beginning in the lower part of the ureter as an extension of cystitis, and are due to spasm of the affected ureter and pelvis of the kidney, appears not only from their situation and character, but also from the following physiological signs and observations.

Tenderness over the kidney on the affected side is usually present. Frequently I find a small area of great sensibility midway between the crest of the ilium and the last rib. There may also be tenderness on pressure in the groin. More important and characteristic than either of these signs is great tenderness at the ureteral orifice, and along that portion of the ureter which lies in the vesico-vaginal septum. The slightest pressure upon this part of the anterior vaginal wall on the affected side causes pain, which frequently ascends along the ureter to the groin and kidney. This, together with the sensitiveness of the urethra and the bladder, furnishes an explanation of the dyspareunia which is so commonly present in these cases. Pressure with even a few pledgets of dry cotton also gives rise to pain in the ureter. Looking back over my experience, I recognize these patients as those who were unable

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field of investigation may be, and how much further general surgery can be depended upon for the relief of such sufferings by the sacrifice of an endangered or diseased kidney, approached from the opposite direction through the resources of lumbo-nephrectomy.

One is here naturally led to ask, of what value or practical use would attempted catheterization of the ureter for diagnostic purposes have been in such a case, made through the urethra with dilatation, or, as to that matter, "free handed" without dilatation, for which it has been claimed that dexterity and supreme skill are all-sufficient? For my part I answer that it took me thirty-six days to find the ureteral orifice, and I had the advantage, too, of a window in the vesico-vaginal septum through which I could examine and study well the inside of the bladder. I possessed in the procedure also a ready method for treating the existing inflammatory lesion in the ureter, besides being able to guard against acute attacks of cystitis.

to tolerate columning the vagina with dry cotton for displacements of the uterus and ovaries—a practice which I have pursued nearly twenty years.

Paroxysms of renal tenesmus may also be excited in a most striking manner by moderately distending the bladder with warm water. The pressure of the water, when sometimes only a few ounces are used, causes an irresistible desire to urinate, which, if not promptly relieved, is followed by the pain along the ureter and in the kidney, even in the corresponding hip and lower extremity down to the ends of the toes. The patients recognize the pain produced in this way as the symptoms which have been their chief source of suffering. The attacks of renal tenesmus brought on by either of these procedures may last for several hours or days, and are frequently accompanied by great mental excitement and hysterical manifestations. Hence the necessity of caution in adapting these means to the peculiarities of the case.

Corresponding to these clinical facts after a kolpo-uretero-cystotomy is done, we find great sensitiveness and irritability of the bladder and ureter. In the report of my first two cases of pyelitis, I stated that catheterization of the ureter caused but little pain. This is true in a normal ureter, and in some cases of pyelitis with considerable dilatation of the duct; but when pronounced ureteritis exists at or near the vesical orifice of the tube and renal tenesmus is present, the passage of the smallest instrument gives rise to violent paroxysms of pain. In the normal pelvis distention with fluid occasions moderate pain, identical in character with that we are considering, and the quantity of fluid thus injected becomes a measure of its capacity. When renal tenesmus is present, however, the pelvis of the kidney is intolerant of fluid, and the pain beginning before distention is reached may continue for hours. In these cases, therefore, the quantity of water that can be injected is rather a measure of the irritability of the pelvis than of its capacity.

This view of the causation and pathology of renal tenesmus is further strengthened by the results of treatment. As soon as the proper opening is made at the affected orifice of the tube, and the bladder and upper urinary passages are put at rest, coupled with suitable drainage and support of the uterus, the paroxysms become less frequent and soon disappear altogether.

Differentiation from Renal Colic.—The pain of renal colic also depends upon violent contractions of the muscular fibres of the ureter and pelvis of the kidney, and when renal tenesmus is severe there is a close similarity between its paroxysms and those of renal colic. The situation and character of the pains are identical in both, and associated with either there may be a frequent desire to urinate, cramps in the lower extremities, and nausea and vomiting. Both are due to spasm of the muscular fibres of the ureter and pelvis of the kidney; the distinction between them lies in the cause of the contractions. The contractions in renal colic arise from the impaction of a foreign body, usually a calculus in the ureter, causing the urine to collect in and distend the pelvis of the kidney above the seat of obstruction; the contractions which follow are a response to this powerful source of irritation, and the condition of the mucous membrane, whether healthy or diseased, has little to do with their occurrence. In renal tenesmus, however, the irritable condition of the lining membrane, the result of ureteritis, leads to violent contractions of the muscular fibres of the ureter and pelvis from much slighter causes, as, for example, increased tension of the urine during forcible expulsive efforts of the bladder, or, as happens in the bladder, the presence of the urine itself, especially if abnormal, may excite spasmodic contractions. Dependent upon the difference in causation of renal tenesmus and renal colic, each possesses certain distinctive features. An attack of renal colic continues, as a rule, with only short intermissions, until the calculus escapes into the bladder, and the concretion is afterward generally discovered in the urine; the paroxysms also recur at irregular and usually long intervals. The pain of renal tenesmus is less severe and long continued; it comes on more frequently, and the paroxysms, as we have seen, occur several times a day, and often from the most trivial causes. The most important diagnostic feature of renal tenesmus, however, is the facility with which an attack can be excited. When any doubt of the causation of the pain exists, it may be set at rest by making pressure over the ureter where it lies in the vesico-vaginal septum, or by injecting the bladder with warm water in the manner already described. The distinction, thus easily made, is all the more important, because an error in diagnosis, as I have known to occur, may lead the surgeon to perform lumbar nephrotomy and find no stone in the pelvis of the kidney.

Differentiation from Pains in the Ovaries and Tubes.—In the milder cases of renal tenesmus, where the pain is referred to the ureter in one or the other iliac region and radiates less frequently to the pelvis of the kidney, the pain may be ascribed to ovarian neuralgia or disease of the ovary and Fallopian tube. This error is all the more likely to occur because at times there is no pus in the urine, and hysterical symptoms commonly referred to ovarian irritation may be highly developed; the patient may also describe the pain vaguely as being in the side, as often happens, and her sufferings may be intensified during the menstrual periods. That this error in diagnosis is not a mere theoretical possibility will be seen by the histories of two cases which I will presently report. In one of them the ovaries and tubes were removed a year ago by a distinguished laparotomist of New York; in the second case a Tait's operation was urgently recommended by another. In order to ascertain the cause of the pain the urine should be frequently examined, especially at or about the menstrual periods, the condition of the bladder should be inquired into, and the situation and character of the pain carefully noted; if then any doubt remains, pressure over the ureter should be tried and the bladder injected with water. The excitation by these means of an attack of renal tenesmus, which the patient recognizes as being identical with the pain she has suffered so long, will at once clear up the diagnosis. May not a more careful and painstaking study of the differentiation between deep pelvic pains, regarded usually as significant of diseases of the ovaries and tubes on the one hand, and the group of symptoms characterizing renal tenesmus on the other, serve to explain the too frequent resort to oöphorectomy as is now believed to be the case by the majority of the profession?

Treatment.—In order to present a clinical picture of our third class of cases, where the inflammation is confined to the bladder and ureter, and is associated with renal tenesmus, I will relate to you the histories of the following cases, together with their treatment:

Case I.—Mrs. G——, aged twenty-six, a laundress, was admitted into my service in the Woman's Hospital, November 30, 1887. Her symptoms began during her second pregnancy, seven years ago, with pain in the left groin which afterward extended to the corresponding lumbar region. Micturition also became frequent, and she noticed a strong odor and thick deposit in her urine. In 1885, she was under my care for seven weeks. At that time there existed a marked retroversion of the uterus and her urine contained pus. She was treated for the displacement by columning the vagina in the supported knee-elbow position, with ordinary dry cotton; but was unable to tolerate the required pressure, and left the hospital without having received any benefit. She was also under treatment for nearly two years in the out-door department of the hospital, but did not improve. In the spring of 1887, both of her ovaries and tubes were removed by a laparotomist of New York City. She entirely recovered from the operation, and during the past year has only menstruated twice. Her sufferings were not relieved, but rather increased, by this operation, especially those relating to the bladder and head.

When she was admitted into the hospital in November last, she had then been suffering from great vesical irrita bility for seven years. For five years she had been obliged to get up to empty her bladder many times during the night, and during the exacerbations of her symptoms, which occurred at the menstrual periods, she was unable to hold her urine longer than half an hour. The evacuation of the bladder was usually effected by violent and painful contractions or cramps. After the small amount of urine which she could retain was expelled, pain would ascend from the bladder into the left groin and continue for a few minutes or half an hour. At first the pain was confined to the left iliac region, running upward from the inguinal ring along a line to the lumbar region. At a later period, when her symptoms had increased in severity, it extended to the groin and lumbar region on the opposite side, and finally to the corresponding hip and down the thigh to the knee. Violent and long-continued cramps of the muscles of the lower extremities frequently occurred during the paroxysms of pain. The position in bed which she found the most comfortable was on the right side. (In this respect the case is exceptional; most of the patients lie on the affected side.) Her appetite was poor, and during the menstrual period she suffered most from nausea and vomiting.

On palpation, a point was found in the left lumbar region where moderate pressure caused the patient to cry out with pain. Vaginal examination disclosed great tenderness at the vesical extremity of the ureter. The uterus was now retroflexed instead of retroverted as previously existed, inclined to the left side of the pelvis, and immovable. A mass of exudation could be felt in the posterior cul-de-sac, all legitimate results of the operation she had previously undergone for removal of the ovaries and tubes. The urine contained a small amount of pus; otherwise, was normal.

On December 9th I made an opening in the bladder immediately in front of the orifice of the left ureter. The night after the operation the patient slept soundly, the first time, she declared, in two years. About ten days after the operation the ureter was searched for and found with some difficulty on account of the great tenderness of the bladder at this part. Catheterization and irrigation of the ureter and pelvis of the kidney were painful. The injection of only a drachm of water through the catheter caused violent paroxysms of pain, radiating down the corresponding hip, thigh, and leg. Owing to the extreme pain arising from the passage of the catheter, and my failure to find any pus in the pelvis of the kidney, I gave up the practice after a few trials, not deeming it justifiable under the circumstances.

While the patient remained in the hospital her symptoms steadily improved, the paroxysms of renal pain becoming less and less frequent. Owing to the fixation of the uterus, the use of the drainage instrument was less satisfactory in this case than in any I have treated. My utero-vesical drainage support collected the urine fairly well, but, owing to the pain which it occasioned by pressing up the uterus, it could not be worn. A special instrument, made short so as to occupy the vagina in front of the uterus, was tried. This did not cause pain, but collected only a part of the urine. After the patient, however, got accustomed to the presence of the instrument and learned how to manage it better, very good drainage was secured.

The patient left the hospital after having been under treatment about four weeks. I saw her a few days ago. She was relieved of all her symptoms. She says she is able to do the hard work of a laundress all day, and sleeps soundly at night. When asked if she would prefer to go all her life with incontinence of urine rather than return to her former condition, she answered, "A thousand times."

In the above case the vesical and renal symptoms were well marked, but the hysterical phenomena which, as a rule, form a prominent feature of these cases were absent. In the following case they were well developed.

CASE II.—Mrs. M——, aged twenty-six, was married at sixteen, and has given birth to three children. Soon after marriage she began to suffer from pain in the urethra, and a frequent desire to urinate following sexual intercourse, and at this time she first noticed a thick deposit in her urine. During her first pregnancy, nine years ago, these symptoms became worse, and in the latter months she began to have pain in the right groin radiating to the region of the kidney. These symptoms continued and were aggravated during her subsequent pregnancies. During the early months of her second pregnancy her urine contained blood. For a long time she complained of pain in the head, and suffered from nausea and vomiting during her menstrual periods, at which times all her symptoms were aggravated. In consequence of her sufferings she became nervous and hysterical. Frequently, at the end of a paroxysm of pain in the ureter and kidney, she would have convulsive movements ending in unconsciousness which continued for half an hour or more. For the relief of the pain she became habituated to the use of morphine and chloral, and took large doses of these drugs. About two years ago an abscess formed in the right iliac region. It opened into the rectum, and the discharge continued for about three months, when it ceased. She recovered from all the symptoms referable to the abscess except a dull, aching pain in the pelvis.

The patient was brought to me from Texas by her family physician, for the purpose of having her ovaries removed. His opinion as to the advisability of the operation had also been strengthened by that of a laparotomist of New York, who diagnosed a pyosalpinx. I first saw her on March 15th.

On palpation, a point of tenderness was discovered in the lumbar region over the kidney. Examination of the pelvis in the supported knee-elbow position disclosed the following: The urethra was much thickened, feeling like a hard rounded cord beneath the finger, and the vesico-vaginal septum also seemed indurated and resisting. The uterus was prolapsed and inclined toward the right side. A corresponding displacement of the right ovary existed; it was drawn to the right and imprisoned beneath the uterus. Pressure with the finger on the anterior wall of the vagina, over the line corresponding to the course of the right ureter, caused severe pain which radiated along the ureter to the kidney and downward to the hip, thigh, knee, leg, and even to the toes. Pressure over the left ureter occasioned little inconvenience. On examining the urine, it was found to contain a moderate quantity of pus.

A few days after the first examination, in order to support the uterus and ovaries and to gradually free them from their confined position, I commenced columning the vagina with dry cotton in the supported knee-elbow position. I introduced a few pledgets of ordinary cotton, employing very gentle pressure, as is my custom at first in cases where the parts are sensitive. After a few trials this plan of treatment had to be abandoned. The presence of the cotton caused the same group of symptoms which were excited by pressure over the ureter with the fingers.

An attempt was next made to wash out the bladder. When I had injected about three ounces of warm water through a small, soft catheter introduced into the bladder, the patient began to complain of pain. The pain soon became very violent, extending, as usual, along the ureter to the kidney on the right side, and down the thigh to the toes. The paroxysm lasted two or three hours, ending in a hysterical attack followed by a period of unconsciousness.

Failing to benefit my patient by other means, on March 31st I performed right kolpo-uretero-cystotomy. I was assisted by Dr. J. F. Chauveau, of New York, Dr. Joseph Letcher, of Texas, and my son, Dr. Nathan G. Bozeman, who had charge of the patient after the operation. I made an opening in the bladder about the size of a silver half-dollar, immediately in front of the orifice of the right ureter. The vesical wall was found much thickened and the cavity of the bladder contracted. A utero-vesical drainage support was introduced into the vagina; it collects the urine, and by its use the patient is kept almost perfectly dry.

Since the operation, there has been a marked improvement in the patient's condition. She is now entirely free from the attacks of renal pain, is able to sleep all night, and has left off the use of opium and chloral. She can sleep on her left side, which she has not been able to do for two years. Her appetite and general condition have improved, and she is able to go out of doors and take exercise. Nausea and vomiting, which had hitherto been constantly present during menstruation, were absent at her last period, and the exacerbation of her symptoms, usual at this time, did not occur. Owing to the elevation of the uterus and ovaries by the drainage support, even the symptoms referable to these organs have almost disappeared. In short, now, five weeks after the operation, the patient declares she is entirely relieved and wants to return home. She has increased five pounds in weight since the operation. In this case, owing to the marked and rapid improvement in all the symptoms, I decided not to catheterize the affected ureter and kidney, believing this to be unnecessary. The drainage was almost perfect from the beginning.[1]

In order to secure the best results in the treatment of diseases of the bladder and upper urinary passages by the operation of kolpo-uretero-cystotomy, the bladder must be kept free from urine. My practice, as previously stated, is to make the opening about the size of a silver half-dollar. My experience has taught me that an opening in the vesico-vaginal septum of this diameter will contract to the size of the index-finger, depending, of course, upon the degree of hypertrophy the structure has undergone.

But this is not all that is necessary to secure free open drainage and physiological rest of the bladder. The posterior wall of the vagina lies in contact with the fistula and tends to obturate the opening. In the recumbent posture, also, the orifice of the vagina is on a plane about an inch and a quarter higher than the most dependent part of the posterior cul-de-sac. The urine must therefore first partly fill the vagina and bladder before it can escape from the body. Furthermore, in unmarried women especially, where the perineum is intact, a small ostium vaginæ prevents free egress of the urine. Another cause of retention in cases of fistula was first pointed out by Jobert de Lamballe; to wit, extreme anteversion of the uterus. Here the fundus being displaced forward, it carries the superior wall of the bladder before it, while at the same time the vesico-uterine junction is drawn backward by the cervix. In this way is produced a fold in the bladder, and if the fistula be situated high up, it is more or less completely occluded. From some of these causes, it is a matter of common observation that patients suffering from fistula are frequently able in the recumbent posture to retain almost all the urine in the bladder and vagina—as in a common cavity, so to speak. It is evident, when great irritability of the bladder is present and the urine is not entirely drained off, spasms of the organ will persist, the tendency to reflux of the urine into the ureters will continue, and the group of renal symptoms and complications which I have described will not be relieved. The case of Mrs. S——, referred to in a previous part of this paper, proves this point in a striking manner. Here kolpo-cystotomy, it will be remembered, had been performed for cystitis five years before. But little benefit was derived from the operation, distress about the bladder continued, and ureteral and renal complications in the left side developed two or three years afterward. As evidences of the persistence of the spasms and excessive action of the bladder, I found the walls of the latter, five years after the operation, hard, resisting, excessively sensitive under pressure, and about five-eighths of an inch in thickness, with a cavity of scarcely three ounces retaining capacity.

Another and more obvious advantage which follows the use of the drainage instrument is the relief of the discomfort and evil effects of incontinence of urine. It increases the scope of the operation, because without it I would hesitate to open the bladder in all but the graver cases of vesical and renal disease. By its use the patients are made comfortable; they complain of but little inconvenience, and wait with patience until the opening can be closed.

I have made some changes in the drainage instruments since I described them,[1] the most important of which adapts them for drainage when the patient lies on her side. Drainage is now secured in all positions of the body. At a future opportunity I will give an account of these improvements, and also a modification of the instrument which adapts it to treatment of incontinence of urine in young girls, arising from weakness of the neck of the bladder, together with other practical points resulting from a more thorough study of the subject.

Frequently associated with disease of the bladder and upper urinary passages there are, as we have seen, displacements of the uterus and ovaries. The uterus is generally inclined backward and to one or the other side of the pelvis. The distortion of the bladder near one of the ureteral orifices resulting from the uterine displacement, and in some cases the pressure of the fundus uteri upon the inflamed ureter, tend to keep up the cystitis and to aggravate the ureteral pain. It is therefore important that the uterus and ovaries should be restored to their normal positions. Before the bladder is opened, owing to the tenderness of the urethra and the extreme sensitiveness of the ureter on the affected side, the use of a uterine support or pessary, however soft, is impossible, and in most instances even gentle pressure with a few pledgets of dry cotton cannot be borne. Fortunately, after the opening is made the uterus tends to be pushed forward by the pressure of the abdominal viscera, in order to fill the space formerly occupied by the bladder, and, owing to the rapidly diminishing tenderness of the ureter, the vagina soon becomes more tolerant of pressure.

In order, therefore, to secure the advantages of elevation and support of the uterus and ovaries in combination with drainage of the bladder, the drainage instrument is made thick and rounded at its upper extremity, where it lies in the posterior cul-de-sac beneath the cervix uteri. As a uterine support, its mode of action is similar to that of the dry-cotton column applied in the manner I use it. The instrument lifts up the body of the uterus, stretches the posterior wall of the vagina, and tends to carry the cervix backward. Not resting against the symphysis pubis as does a Hodge pessary, but conforming to the axis of the lower part of the vagina, and sustained chiefly by the perineum and vaginal walls, it exerts an elastic pressure upon the uterus. The instrument consequently yields during sudden movements of the organ, following jars of the body or expulsive efforts of the abdominal muscles. The mucous membrane of the anterior wall of the vagina is applied closely to the concave upper surface of the drainage support, and sinks into the perforations made in it for the passage of the urine. This gives steadiness to the instrument and increases its efficiency as a uterine support. At first the drain sometimes causes discomfort; immediately after the operation it is necessary to use a very small instrument, and exceptionally, as in the case of Mrs. G——, the form of the drain must be modified.

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[1] The patient continued to improve until May 28th, fifty-eight days after the operation, when she left New York for her home in Texas, having up to this date gained sixteen pounds in weight. The following is an extract from a letter to me after her four days' travel in the cars:

"Lampasas, Tex., June 8, 1888. . . . Was sick the first day, but after that got along very well. Did not sit up at all. Had my berth down all the way. Found my family quite well, and delighted to see me looking so well. Have felt real strong since I rested from travelling. Have not felt so well for years. Suffer very little pain anywhere. My friends all think it wonderful that I should have improved so much in so short a time. The instrument is working very well, but the drainage is not perfect, some water seeming to stay in the instrument. . . . I can walk now and sit down with perfect ease; can hardly tell I have the instrument on."

I have since performed three more operations for renal tenesmus, now making six in all, with results equally satisfactory, if not more so, than in the two cases here reported.

[1] American Journal of the Medical Sciences, March and April, 1888, and Transactions of the Ninth International Medical Congress, 1887.

I have found continuous irrigation and drainage to be of great value just after the operation, and my system of intravaginal drainage has been extended to accomplish this. For the perfection of the system in the application of suction I am indebted to my son, Dr. Nathan G. Bozeman, and Dr. William B. Gilmer, who have recently been deeply interested with me in working up the subject of drainage, and have materially contributed to my success by their experimental work. This system of continuous irrigation and drainage is of great practical importance and has a wide range of usefulness in general surgery, but the further consideration of it, together with the several improvements made in my drainage supports, will be the basis of a future paper.

In my paper on pyelitis, so frequently referred to, I explained sufficiently the method of irrigating the kidney. In cases where cystitis and ureteritis associated with renal lesions are present, the indications for the employment of this procedure are not so clear as when the inflammation has extended to the pelvis of the kidney. My experience so far tends to show that physiological rest and drainage of the bladder and ureter are all that are necessary when only these organs are involved. After the extreme sensitiveness of the parts has subsided, however, the passage of the catheter may be found useful for its tonic effect, as is the case in a similar condition of the mucous membrane of the male urethra; but further experience is needed to settle this point.

Now, a few words about the time which should be allowed to elapse before closing an artificial fistula. All thickening of the vesical walls and tenderness about the urethra, bladder, and ureter must have disappeared. From six to twelve months, as a rule, are required to accomplish these results. Of late I have adopted a useful method of determining this point experimentally. I introduce a large cylinder of hard rubber—one of my intravaginal dilators—which obturates the fistulous opening and keeps the urine in the bladder. If the patient can wear this instrument for a week or two without the occurrence of any distress in the bladder, the opening may be closed at once and the bladder allowed to take on its normal functions.

A LETTER OF DR. DANIEL DRAKE, written forty years ago, was read at the recent meeting of the Indiana State Medical Society. It gives an idea of the condition of Western State Medical Societies at that time.

"CINCINNATI, O., May 22, 1847.

"I returned yesterday from the annual meeting of the medical convention of Ohio at Columbus. Of the great utility of such conventions to those who compose them, if for no others, there can be no doubt; and that when the time shall come that they are numerously attended by the physicians of every State in the Union, the profession in the United States will be found advancing in aspiration and in intelligence much beyond anything we have yet seen. One hundred and twenty physicians of thirty counties of this State were present. The fifth pair of nerves were exercised not less than the seventh, and the discussion of the latter did not send forth a single angry or resentful expression. There was emulation without rivalry and wit without wine. DAN DRAKE."

THE JUICE OF CINERARIA MARITIMA IN CATARACT.—The juice of cineraria, a plant growing in Trinidad, is said by a Spanish practitioner, Dr. Mercer, to have a remarkable curative power in cataract. Dr. Mercer was himself the patient, and testifies to its remedial power in his own case.

A CASE OF ARSENICAL PARALYSIS, WITH SYMPTOMS OF LOCOMOTOR ATAXIA.[1]

By FREDERICK PETERSON, M.D.,

NEW YORK.

THE following case of arsenical paralysis,[2] with unusual symptoms of locomotor ataxia, is of interest:

E. A. D——, female, forty-two years of age, admitted February 15, 1887. A week or ten days after a second marriage in November, 1886, she became acutely melancholic and made several attempts at suicide. Father and sister insane. A week after the onset of melancholia the patient took a tablespoonful of "Rough on Rats," which is a mixture of arsenious acid and starch paste. Vomited two or three hours afterward, the vomiting continuing the first night and following day. In a day or two she had hemorrhages from the bowels. Paresis of all four extremities was manifested in two or three days, and gradually grew worse. For weeks afterward she complained of "crampy pains" in feet, calves of legs, hands, and abdomen. On admission these pains were still severe, and she had no use of arms or legs. There was great muscular atrophy, marked arsenical tremor, no patellar reflex, no anæsthesia or analgesia, but a slight hyperæsthesia.

February 17th.—Hands and feet feel numb and have a prickling sensation in them. Has had itching feeling over body and limbs, formication in feet, and the sensation of a cord drawn tightly round her waist. "Throat felt as if gone at times" (anæsthesia). At present in bed. Legs are flexed and somewhat contracted, extension causing great pain in flexor muscles and tendons. No tenderness over spine at any point. Muscæ volitantes often. Drop wrists and ankles. Faradic reactions of nerves and muscles of limbs lost. A general treatment was begun with iodide of potash, massage, and electricity, which was continued throughout the case.

February 25th.—Subject about once daily to a fainting spell lasting some fifteen minutes, with dyspnœa. Cardiac sounds feebler than normal.

March 6th.—Feet slightly œdematous. Urine examined now and at other times for sugar and albumen, with negative result.

March 19th.—Begins to move fingers and feet somewhat better.

March 25th.—Able to feed herself and is trying to knit. Pains in extremities still great at times.

April 19th.—Gradual but very slow increase of motor power. Gaining in flesh. Feet much swollen.

May 17th.—Walks a short distance alone.

July 16th.—Sews, knits, writes letters, but fingers still straighter than normal, and tremor still very marked. Cannot flex fingers into palms with ease or force. Still no patellar reflex.

August 30th.—Walks without assistance any ordinary distance. Motor power still increasing gradually. Tabetic gait.

September 26th.—In bed several days; weak, feverish, great increase of muscular tremor, vertigo, accelerated pulse, nausea, anorexia (a crisis?).

November 15th.—Still suffering from effects of relapse. Up only afternoons. Cannot walk as well as formerly, but gaining.

December 2d.—Walks now as well as at any time since residence in the hospital, and seems quite strong.

January 7th, 1888.—Has tabetic gait and entire absence of the tendon reflexes (the break in the reflex is on the sensory side). Use of arms also imperfect. Legs slightly œdematous.

January 21st.—Physical condition improved.

February 16th.—Œdema of lower extremities has disappeared.

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[1] Read before the Neurological Section of the New York Academy of Medicine, May, 1888.

[2] This case will be reported in full detail, with the mental history also, in the next number of the American Journal of Insanity, by Dr. Charles E. Atwood, of the Utica Asylum.

March 11th.—Able to walk a little more steadily.

March 13th and 14th.—Attack of acute indigestion; diarrhœa, nausea, and colic.

March 26th.—Has apparently passed through one of the gastric crises of locomotor ataxia with an unusual amount of tremor, which is still present when she sits up.

April 17th.—Discharged. Patient lost her hair to a considerable extent, and was cachectic. There are some points of difference between this case and those of Seligmüller and Dana. The occurrence of two apparent gastric crises is particularly noteworthy. There is no reason, in my opinion, why arsenic should not attack the spinal cord as well as the peripheral nerves and produce a condition very much like true locomotor ataxia.

34 East Twenty-first Street.

Clinical Department.

ACUTE PEMPHIGUS—DEATH.

By T. HAMILTON BURCH, M.D.,

NEW YORK.

The following case is reported on account of its rarity. If a fatal termination had been anticipated a photograph of the eruption would have been obtained, as it was very characteristic and perfect. Patient, I. T——, aged nineteen, colored; occupation, ship-steward. History of chancre (syphilis?) five years ago. Never had an eruption, no alopecia, or rheumatism. He was told at a dispensary that the sore was syphilitic. In appearance he was healthy, well nourished, and robust; weight, one hundred and eight pounds; height, five feet ten inches. He contracted small-pox in April, 1888, on board ship, and was removed to the small-pox hospital on Blackwell's Island, whence he was discharged cured, May 12, 1888. The following day an eruption of a number of small distinct, circular patches appeared on the scalp, covered with a bleb, and spread rapidly, the intervening skin being healthy. Symptoms complained of were some pruritus, headache, nausea, constipation, and general nervousness. The size of these bullæ varied, and as the eruption appeared on the neck, some of the blebs were not larger than a half-dime; others were the size of a silver dollar. In the course of a few hours the centre of each patch became elevated, and an opalescent bleb formed surrounded by an erythematous ring. The contents of most of them became so great that rupture occurred; but the smaller ones shrivelled up and were succeeded by thin, brownish-colored crusts. As the eruption extended to the breasts, the bullæ on the scalp commenced to dry. In forty-eight hours the entire body was covered, including the soles of feet and palms of hands. The duration of the illness was fourteen days. The temperature throughout was normal, respirations twenty to the minute, pulse one hundred and ten and of good volume. The patient was always pleasant and rational when seen by the physician, but the nurse reported that on the third day of his illness he had an attack of acute mania, and insisted on dressing and reporting to his ship for work, but on attempting to leave his bed he was seized with an epileptic fit and remained in that condition for about three minutes. Several of these seizures occurred, but the attending physician, whose calls were frequent, never saw him in any condition but one of perfect consciousness and good nature, and standing his sickness with manly fortitude. The stomach and bowels responded to treatment, and when the patient followed the prescribed diet he had no difficulty in digestion. I was hurriedly summoned on the morning of the fourteenth day, as the patient was thought to be dying. On reaching his bedside I found him quiet and conscious. The nurse stated that "he had just come out of a fit." His condition was excellent, and there was no indication of heart-failure, of collapse, or of pulmonary œdema. Five hours afterward I was again hurriedly called, and on my arrival found the patient dead. Not knowing any cause for death, and anxious to ascertain the condition of the brain, I obtained consent to an autopsy. Twelve hours after death, with the aid of Dr. R. W. Amidon, a post-mortem examination was made. Brain carefully examined and found perfectly normal. Chest revealed old extensive and very firm pleuritic adhesions. Lungs slightly œdematous. Heart normal, containing some blood-clots, but evidently of post-mortem origin. Kidneys: The cortex was very small, and there was apparently slight parenchymatous nephritis. The urine had been examined repeatedly before death, but no casts were found, and only a very faint lime of albumin by Heller's test. The urine taken from bladder after death was carefully examined by Dr. Amidon for casts, but the microscope revealed nothing abnormal. The treatment throughout was symptomatic. For the eruption, mild, protective, and soothing lotions acted the best. His mother stated (after death) "that when a child he had been treated by hospital physicians for epileptic convulsions and had been cured."

AN ACCIDENT FROM BITING THE FINGER-NAILS.

By JEROME TUTHILL, M.D.,

CHICAGO, ILL.

A novel accident, resulting from a habit of very common prevalence among nervous people, was brought to my notice recently. A young lady presented herself at my office complaining of a constant irritation in her throat. Two weeks previously she had been taken with a severe "sore throat," which was treated by a neighboring physician. Under his care, she says, the inflammation quickly subsided, but there still remained a sensation of irritation. Examination revealed a small fleshy-looking object, about the size of a kernel of wheat, adherent to the tissues posterior to the left tonsil, by one end. The other parts of the throat were normal. The little mass could not be detached by a cotton-covered probe, but by the use of forceps it was easily removed, and on examination proved to be a piece of finger-nail, which had become covered by a cheesy deposit. A broken piece of the nail was also removed from under the mucous membrane at the same spot by a sharp-pointed probe. The patient then confessed to the habit of biting her finger-nails, and, moreover, could remember that a day or two previous to the onset of her throat trouble a piece of nail which she had bitten off had become lost in her mouth, but after it had caused a fit of coughing she had forgotten about it until reminded by my discovery.

ACTIVITY OF THE SCARLET-FEVER POISON AFTER A YEAR.

Dr. J. Brooke, Surgeon U. S. Army, of Fort Monroe, Va., communicates the following case: "A girl aged about eight, living at this place, was some months ago attacked by scarlet fever, the disease running a typical course. For a long time no possible source of contagion could be discovered. The child had not been absent from home, had been with no one lately exposed, and no other case was known to exist anywhere in the vicinity. Subsequently I learned that one of the house-servants had nursed a case of scarlet fever in a distant city just about a year before. After the case terminated she packed some of her things, including some clothing then worn, in a trunk, and left the place. A year later she had the trunk sent to her here, opened it, and took out the contents, the little girl being present and handling the things. Very soon after the latter was attacked, as stated.

"As fixing the period of incubation, it would be interesting to know precisely how many days passed from the time the trunk was opened until the disease appeared; but I was unable to determine that period satisfactorily."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, August 4, 1888.

CHYLOUS ASCITES.

THIS rare and curious condition has recently been observed by Dr. P. J. Murphy, of Washington, D. C., who has reported the case, and collected the histories of those observed by others. Twenty-nine cases are all that have so far been recorded in medical literature. From these, however, some interesting facts can be drawn with regard to the clinical history of the disorder. As to etiology, hereditary tendency to lymphatic obstruction, as shown by elephantiasis occurring in several members of a family, the female sex, tropical climates, scrofula, and syphilis, are possible predisposing causes. It occurs at all ages, in various occupations, and is usually a complication of some abdominal tumor, or of those diseases causing enlargement of the abdominal lymphatic glands, adhesions, or inflammatory thickening of the intestine and mesentery —notably tuberculosis, peritonitis, and infectious fevers.

In the comparatively few cases in which it may be said to have occurred as a primary affection, it has been due to rupture of the thoracic duct, receptaculum chyli, or a lacteal, by traumatism or muscular exertion after a meal; or, as in one unique case, by obstruction of the thoracic duct by a "soapy mass," apparently analogous to a biliary calculus; or by the perforations of a parasite, probably the *filaria sanguinis hominis*. The latter cause is exceedingly rare in temperate climates. The immediate cause was obstruction of the thoracic duct or lacteals in nine cases, or possibly eighteen, and rupture without obstruction in six cases.

The symptoms in the uncomplicated cases due to rupture are comparatively well marked. The patient, usually after exertion, is suddenly seized with sharp, localized pain, followed by rapid swelling of the abdomen, suppression of urine, nausea, and vomiting, which in some cases is milky and accompanied by a milky diarrhœa.

There is no fever, unless as an accidental complication. Prostration is marked, and, if the case lasts long enough, rapid emaciation ensues. These cases usually recover after one or several tappings. Cases due to occlusion occurring after recovery from peritonitis, or caused by the pressure of a benign tumor, vegetations in the subclavian vein, or a deposit in the thoracic duct, present a somewhat similar history, but are more chronic in their course. They are characterized by dull pain, swelling of the abdomen not so rapid, scanty urine, progressive prostration and emaciation, and occasionally by milky vomiting and diarrhœa. The latter symptoms may occur in any case, and, in conjunction with the signs of peritoneal effusion, are highly diagnostic of chylous ascites.

The diagnosis can be made certain in all cases by tapping.

The prognosis is, on the whole, unfavorable. Out of twenty-two terminated cases death occurred in fourteen, eight recovered, two were relieved.

The treatment in cases due to rupture of a chyle-duct should be rest in bed, with light diet of such food as is digested and absorbed by the stomach, peptonized milk and beef-tea, soft-boiled eggs, whipped raw eggs, etc., given in small quantities at short intervals, and a restricted quantity of water and other liquids, the object being to prevent distention of the lacteals and to favor contraction of the ruptured ends of the lacteal and the formation of a coagulum.

In chyluria one or two drachms daily of gallic acid has been found the most useful remedy, and it would be likely to do good in chylous ascites, especially when caused by filaria. Turpentine is recommended as a remedy for this parasite, and a decoction of mangrove bark (*Rhizophora racemosa*) is a popular remedy in British Guiana. Surgical interference is often needed.

THE DIAGNOSIS AND TREATMENT OF ULCER OF THE STOMACH.

PROFESSOR GERHARDT contributes an interesting article upon the above subject (*Medical Press and Circular*, July 18th). He does not deal with the whole symptomatology of this affection, however, but takes up some especially important features. For example, he states that bleeding occurs in only about one-half (forty-seven per cent.) of the cases. Lebert, whose statistics are usually quoted, in one hundred and four cases met with hæmatemesis in seventy-eight per cent.

The absence of any palpable tumor is usually adduced as an important negative symptom of gastric ulcer. Professor Gerhardt, however, does not place much reliance on this. According to his views four kinds of tumors may be present with gastric ulcer, viz., old ulcers with callous margins, which can often be felt through the abdominal walls, or through the left lobe of the liver. A second kind belongs to the pylorus, and is a tumor of indirect origin, from extraordinary thickening of the pyloric musculature. Circumscribed exudation around perforations gives rise to a third and very rare form; a fourth kind is caused by the crowding of neighboring organs into a large gastric ulcer. In view of all this, the examination of the contents of the stomach is very important.

It has been claimed, of late, as is well known, that in gastric ulcer there is usually a hyperacidity of the gastric juice from increased secretion of muriatic acid. Professor Gerhardt has lately, in twenty-four cases of circular ulcer, found the reaction normal in seventeen cases, but not in seven. Gerhardt concludes that in some cases of gastric ulcer the increase of the hydrochloric acid, which has been generally set up as an absolutely certain sign of the existence of a gastric ulcer, is wanting.

Incidentally it is stated that in sixteen cases of carcinoma observed by him the acid reaction was present in two. The duration of the ulcer was sometimes as long as twenty-five to thirty years, with intervals of good health intervening, so that the patient was looked upon as cured. If a disease of the stomach has lasted three years without the formation of a tumor we are justified in assuming the probability of a gastric ulcer. The seat is generally to be determined by the situation of the pain, which is rarely absent in fresh ulcers. The presence of pain is the more valuable for diagnosis when it is not near the xyphoid cartilage, but at a distance away, when it coincides with tenderness on pressure, comes on at a fixed time after food, and is worse in certain portions of the body. With contraction of the stomach it is generally at the cardiac end; with dilatation, at the pyloric. With tenderness on pressure and the presence of a tumor, one would conclude the case to be one of ulcer of the anterior wall of the stomach, with frequent bleeding one in the posterior wall, because tumors in front are more inclined to perforation, those behind more to hemorrhage. When a patient abstains from food from pain in the stomach, and becomes thin and reduced in consequence, the disease is more probably ulcer, hardly carcinoma, rarely nervous dyspepsia. In the case of recent ulcer great loss of flesh is rare, but emaciation is often observed in old cases; weighing of patients is of great importance from a diagnostic point of view.

The cardinal points in diagnosis, therefore, are hemorrhage, hyperacidity of the gastric juice, long duration of the disease, pain peculiarly located, contraction or dilatation from insufficient ingestion of food.

As regards treatment, diet takes the first place, and, besides this, regard to the etiological condition and the character of the contents of the stomach is of importance. It has been proposed to feed the patient per rectum, but in many cases this is not practicable, as frequently there is a persistent hypersecretion of gastric acid. In recent cases milk diet often suffices, but in old ulcers in which structural changes have taken place milk is frequently not borne at all. Peptones Gerhardt could not praise. Even if they could be taken, they caused a secretion of gastric juices, as Schiff had shown. In cases of profuse hæmatemesis and perforation, on the other hand, they were very serviceable per rectum. Peptones were therefore very suitable for cases in which alimentation by the stomach could not be carried out. In many cases a continuous secretion of gastric juice was present, this was diverted from the ulcer by meat or egg diet. Most physicians therefore recommended a diet mainly animal, meat, milk, or eggs. In cases of stenosis of the pylorus, in which a tendency to lactic and butyric acid fermentations was present, one was compelled to give a diet consisting principally of flesh meat, and to avoid the hydrocarbons as much as possible.

THE DIAGNOSIS OF HUMAN BLOOD.

Dr. Henry Formad contributes an elaborate article upon the comparative morphology of the blood-cells to our always interesting contemporary, *The Journal of Comparative Medicine*. Dr. Formad's studies have not led him to any especially new results, but they confirm views previously expressed as regards the size and appearances of the blood-cells, and some useful directions are given for examining blood-stains and measuring the corpuscular elements. It is a tribute to the accuracy of Gulliver's original measurements, that Formad adopts the figure $\frac{1}{3200}$ inch as the average diameter of the red corpuscle. Our author also supports the claims of the late Dr. J. G. Richardson in regard to the value of very high powers in the measurement of the blood-cells.

For testing the question whether a certain substance is blood or not, the spectroscope and chemical reagents come into play; but for the recognition of human blood the microscope alone is of any value, and the sole method yet found available with this instrument is that of measurement of the corpuscular elements. The differentiation of mammalian blood from that of lower orders of animals is made easy by the fact that in mammals alone is the cell round and non-nucleated. The differentiation between the blood of man and that of lower mammals depends entirely upon the micrometer.

Only the following animals have corpuscles larger than man, *i.e.*, larger than $\frac{1}{3200}$ of an inch; viz., the elephant, great ant-eater, walrus, sloth, platypus, whale, capibara, and (according to Wormley) opossum. Animals the corpuscles of which are slightly below man in size, *i.e.*, having corpuscles from $\frac{1}{3500}$ to $\frac{1}{3200}$ of an inch average diameter, are the seal, beaver, musk-rat, porcupine, monkey, kangaroo, wolf, and guinea-pig. None of these are domestic animals. All other animals, including all domestic animals, have blood-corpuscles of a mean diameter less than $\frac{1}{3500}$ of an inch, and, in fact, those animals which, as a rule, are blamed for blood-stains found on the clothing and apparel of criminals (ox, pig, horse, sheep, and goat), have corpuscles with an average diameter less than $\frac{1}{4000}$ of an inch.

The above facts are formulated as follows:

1. The blood-corpuscles of birds, fishes, and reptiles, being oval and nucleated, can never be mistaken for human blood.

2. Fresh human blood cannot be mistaken, under the microscope, for the blood of any animal the corpuscles of which have a mean diameter of less than $\frac{1}{4000}$ or even $\frac{1}{3600}$ of an inch.

3. (*a*) If the average diameter of blood-corpuscles in fresh blood is less than $\frac{1}{4000}$, then it cannot possibly be human blood.

(*b*). If the diameter is more than $\frac{1}{3500}$, then it may be human blood.

(*c*). If the blood-corpuscles, after exhaustive measurement, give a mean diameter of more than $\frac{1}{3300}$, then it *is* human blood (provided it is not the blood of one of the wild beasts referred to).

The foregoing applies especially to the diagnosis of fresh blood. With regard to dried blood, it is claimed that this can be recognized just as readily, provided it has dried quickly. Blood that has dried slowly undergoes decomposition, and its morphology cannot be made out. A good liquid for remoistening blood is Müller's fluid, but perhaps the best is Virchow's solution, composed of 30 parts caustic potash and 70 parts water. At least five hundred measurements should be made in order to establish the average diameter of the cells.

If the corpuscles are spheroidal from absorption of moisture, or crenated from drying, they may still be diagnosed, because such changes as seen from the tables are the same in the corpuscles of all animals, and have really their proportionate and corresponding ratio of alteration in form and diminution in size, the range or scale of diminution being always alike in the same animal.

The red blood-corpuscles that have become spherical from imbibition of liquid have thus presented in Dr. Formad's experiments the following average diameters in the various animals :

1. Man, $\frac{1}{4300}$ in.
2. Guinea-pig, $\frac{1}{4500}$ in.
3. Wolf, $\frac{1}{4600}$ in.
4. Dog, $\frac{1}{4800}$ in.
5. Rabbit, $\frac{1}{4900}$ in.
6. Ox, $\frac{1}{5600}$ in.
7. Sheep, $\frac{1}{6700}$ in.
8. Goat, $\frac{1}{8100}$ in.

These figures show that the diameter of the artificially spherical corpuscles in each animal is just about one-third less than that of the normal bi-concave or disk-like corpuscles of the same animals.

Dr. Formad is very positive about the value of the microscope and micrometer in determining human blood, taking much the same position as that of Dr. Richardson. Fortunately, it is not very often that the microscope is called upon to decide whether a certain stain is that of human blood or of the blood of a domestic mammal. We hardly think that a jury would convict on its testimony that the corpuscles in a clot were $\frac{1}{5000}$ inch too broad to be those of a dog or guinea-pig. Still, the opinions of experts are becoming more fixed upon this matter, and doubtless Dr. Formad's article will help to give certainty to a hitherto mooted point.

THE DIAGNOSIS DURING LIFE OF CONGENITAL NARROWING OF THE ARTERIES.

It has been long known that the circulatory system is not very rarely subject to congenital defects. Descriptions of these have been given by Morgagni, certain French observers, Virchow, and especially by Beneke.

Dr. Fraenkel has recently attempted to show that congenital narrowness of the arterial system can be diagnosticated during life, and he reports an illustrative case (*Medical Press and Circular*, July 18th). It was that of a powerfully built man, aged thirty-four, who had œdema of the lower extremities, with a pulse-rate of 100 to 112, difficulty of breathing, some bronchial râles, but otherwise no affection of the lungs. Circulatory changes were the marked feature of the case. There was great arterial tension. The heart was displaced to the left and downward ; the apical impulse external to the nipple-line, very broad, high, and resistant, as in insufficiency of the aortic valves. The cardiac sounds were everywhere pure, but the second aortic sound was strikingly accentuated. The quantity of urine was slightly diminished, and it contained no albumen. The patient was of healthy family, and had always been well till his fifteenth year, since which time he had complained of heart trouble and occasional shortness of breath. In his twenty-first year he was a soldier, but had to be discharged as he could not perform the marches, owing to his cardiac trouble. He returned to his occupation, and became gradually worse till he entered the hospital with dropsy. With rest, digitalis, and opium he improved rapidly and was discharged. Diagnosis : Congenital narrowness of the aortic system. While at work the symptoms soon returned, and the patient again entered the hospital, where he died in a short time, with great dyspnœa. The autopsy showed very marked narrowness of the aortic system, commencing at the attachment of the aorta and implicating the whole system.

A second case was that of a laborer, who entered the hospital in 1886 on account of general malaise, but without any particular complaint. All the organs were healthy except for striking symptoms in the circulatory system. The patient, who was of extraordinary robustness, showed abnormal narrowness of the arteries, with marked dilatation of the left ventricle. The apex-beat was very resistant, external to the nipple-line, with accentuation of the second sound. There was absence of history of straining efforts. Although temporary improvement took place under treatment, the lungs became tuberculous, and the patient died of pneumothorax. The autopsy showed striking narrowness of the whole aorta.

Such cases as the above are said to be most frequently met with in women and girls, and are usually labelled chlorosis. In men, on the other hand, who made more demands on the heart, the disease generally led to dilatation of the left and then of the right ventricle. Cases in which such calls were not made on the heart carried the affection to their lives' ends.

In a discussion on Dr. Fraenkel's paper before the Berlin Medical Union, some doubt as to the reality of the condition was expressed, because autopsies, in young people at least, did not show whether the arteries were narrow during life, since the more elastic they were the more they contracted post mortem.

The evidence, however, is on the whole quite strong, that such a condition as Fraenkel describes does exist. Modern science will undoubtedly make it possible, in time, often to recognize it during life.

THE TEMPERAMENTS.

Ancient medicine is thoroughly permeated with the doctrine of humors and of their corresponding temperaments.

Modern scientific medicine, in its desire for exactness and impatience of things that cannot be reduced to some more or less rigid formula, has neglected the subject. We read very little about temperaments, except in essays by lay writers. The study of temperaments has been left chiefly in the hands of persons of a prying but not very scientific turn of mind, and without habits of careful thought.

Physicians learn consciously or unconsciously to recognize temperamental differences, and to suit both manner and medicine to the fact. Perhaps it would be better, however, if in their medical studies they received a little more instruction as to what is really known about temperaments. Our medical forefathers would not have laid so much stress upon the subject if it did not have a scientific basis and some practical bearing.

The foregoing reflections are suggested by the receipt of two small works, entitled "Die vier Temperamente bei Kindern" and "Die vier Temperamente bei Erwachsenen," written by Mr. Bernhard Hellwig.

Perhaps one reason why medical men rarely venture to discuss temperaments seriously is, that authors have so generally disagreed as to the number and names, the combinations and characteristics of the temperaments. Cullen observed only two temperaments, the sanguineous and the choleric ; Begin, quoted by Hammond (*Treatise on*

Insanity, p. 62), recognized three: the sanguineous, the lymphatic, and the nervous. Some writers have made seven temperaments; most authors, however, have made four. These four, according to the old Galenical division, should be the sanguine, the choleric, the melancholic, and the lymphatic; and this is the classification adopted by Mr. Hellwig.

Modern writers generally, however, give a nervous temperament in place of the melancholic. The sanguine temperament approaches nearest to the nervous in the Galenical classification, as described by the author quoted.

Müller, in describing temperaments, said essentially that they represented the reaction of the individual to the environment; and no better definition of temperament can be given than this. Hellwig gives the following curious table, which will be recognized as approximately true. It shows the quickness or feebleness with which persons receive and react to impressions in accordance with the temperament:

Reception.	Reaction.	Temperament.
Strong	Feeble	Sanguine
Strong	Strong	Choleric
Feeble	Strong	Melancholic
Feeble	Feeble	Lymphatic

Examples of "pure" temperaments are comparatively rare. Among one hundred Germans, says Hellwig, one may find ten sanguine, eight choleric, eight melancholic, and five lymphatic. The remaining sixty-nine represent mixtures of two, three, or even all four temperaments. In this country and in the large cities of Europe, a modification of the sanguine, which is called the nervous temperament, has become very prominent. It may be questioned, however, if this nervous temperament is not truly pathological.

THE MISTAKES OF PROFESSOR BLOWMUCH.

"No class of professional men mispronounce the technical words of their calling more commonly than physicians." Such is the indictment made by Dr. Campbell in his work, "The Language of Medicine." This is due partly to defective elementary education, but still more to the ignorance of college professors and orators. Even our dictionaries are not to be trusted, according to Dr. Campbell. Thomas, the most accurate, sometimes errs; Dunglison "commits frequent errors;" and in a small pronouncing medical lexicon a cursory examination has detected no less than forty mistakes.

A very striking and instructive example of the common errors is given by Dr. Campbell in a lecture assumed to be delivered by Professor Blowmuch, of the X. Y. Z. Medical College, before the class of Dr. Hippocrates. The study of orthoepy, it must be remembered, was so highly developed among the Greeks that the mispronunciation of a single word by an orator was greeted with jeers and hisses. Professor Blowmuch's experience is indicated in italics.

"*Gentlemen:* The subject of our dis'course (*hisses*) to-day will be vario'la (*hisses*), rubeo'la (*hisses*), and varioloid' (*hisses*). The ē'tiology (*hisses*) of these affections is not well known. Some regard micrococki (*hisses*) as the *primum causa* (*hisses*), others seek for fomi'tes (*hisses*). It is quite certain, however, that the det'ritus (*hisses*) of the pustules and the fē'tid (*hisses*) odor of the disease contain an infectious principle. When occurring in ad'ults (*hisses*) each vario'lous (*hisses*) pustule leaves a cic'atrix (*hisses*), especially in the fac'ial (*hisses*) tissues, but the ab'domen (*hisses*) may escape. With regard to treatment, use āmmo'nii (*hisses*) ac'etas (*hisses*) for a res'piratory (*hisses*) stimulant, when räls (*hisses*) and brooys (*hisses*) are heard in the lungs. Correct constipation with podoph'yllum (*hisses*) and hyoscyā'mus (*hisses*), removing s*k*ybalæ (*hisses*) by means of an enē'ma (*hisses*). For local antisepsis I prefer iō'doform (*hisses*) and weak solutions of hydrarg'yrum (*hisses*) chlorī'dum (*hisses*) corro'sivum (*hisses*). For asthe'nia (*hisses*) use digitäl'is (*hisses*), and con'ium (*hisses*) may be inserted in ăno (*hisses*). The cadăv'er (*hisses*) should be sent to the crē'matory (*hisses*)."

We suspect that many persons who read over the above will learn with dismay that they have been committing atrocious orthoepic sins during their whole professional life.

It is never too late to learn, however, and we trust that Professor Blowmuch's frequently interrupted lecture may prove of service in teaching a correcter pronunciation of commoner technical words.

INFLUENCE OF REMOVAL OF THE OVARIES ON THE SEXUAL FEELINGS.

A REMARKABLE exhibition of *ex parte* testimony occurred at a recent meeting of the British Gynecological Society, when Mr. Lawson Tait read a paper on the "Influence of Removal of the Uterine Appendages on the Sexual Appetite." Mr. Tait asserts that the ovaries have as little to do with sexual feeling as the front teeth! The other speakers referred in a vague way to the slight influence, sexually, of castration on horses and other animals. One speaker did confess to having a case in which his life was made wretched by the complaints of the patient at having been deprived of sexual feeling. But the general trend of the discussion was to show that öophorectomy was innocuous sexually, if it did not even have an aphrodisiac effect.

Now it is the rule, with hardly any exceptions, in lower animals that removal of the testicles or ovaries destroys the genesic sense (*vide* Colin's "Traité de Physiologie comparée"). The rule holds for human beings in all probability. Certainly it must be so considered until positive evidence accumulates to the contrary. The common opinion and observation of the past cannot be set aside by the flippant judgment of enthusiastic operators on the ovaries. The question must be settled by a careful inquiry of unprejudiced persons, and it should include a statement of the sexual condition at least five years after the operation. Such an inquiry has yet to be made, and meanwhile we trust that gynecologists in general will hold more conservative views than do those of the British Gynecological Society.

DR. KARL KILCHER, of Prague, assistant to Prof. Hlawa, has just succumbed to the effects of an exceedingly repugnant experiment. He had swallowed some blood of a man who had died of typhus fever, and death was caused by septicæmia.

News of the Week.

A Full Report of the Post-mortem Examination upon the Body of the Late Emperor Frederick has been published. The macroscopic changes are summarized as follows: Cancerous destruction of the larynx, with secondary disease of a rather large lymphatic gland at the lower part of the left side of the neck, and a cutaneous nodule on the right side near the wound. Œsophagus unaffected. Inflammatory destruction of the upper portion of the windpipe and the neighboring parts. Numerous bronchiectases, with putrid contents. Near these, broncho-pneumonic suppurating gangrenous patches. The microscopical report signed by Virchow and Waldeyer says:

1. The larger nodule at the base of the epiglottis shows, on the outside, still unchanged mucous membrane with cylinder epithelium, but in the interior, an alveolar structure with epidermoidal contents. The cells of the latter are large and highly developed; concentrically arranged cell-groups were not observed.

2. The cutaneous nodule on the right side of the wound in the neck is covered with extremely attenuated, but otherwise unchanged, epidermis; the cancerous proliferation reaches close to the surface; its chief development is situated in the deeper parts, where also, here and there, "nests," with a concentric arrangement of cells, occur. Some normal constituents, such as sweat-glands. are to be seen between the cancerous masses.

3. The lymphatic gland on the left side of the neck shows the highest degree of change. The normal structure has disappeared, and is replaced by a loose alveolar tissue, the spaces of which are closely filled with epidermoidal cells having large nuclei; many of these cells possess small, bristle-like fringes (*Bürstensäume*).

4. The contents of the bronchial tubes correspond exactly in their composition with the description given by the undersigned Professor Virchow (in his report of May 19th of the present year) on the solid particles found in the expectoration. Moreover, in certain places, a more abundant collection of small, bright fat-globules, like the globules in milk, was observed.

5. In the foci in the lungs were found thick clusters of pus-cells, but no cancer-cells. The natural alevolar structure was still perfectly distinct.

Death Currents.—A series of experiments to determine the death-dealing properties of electrical currents has been made by Mr. Harold P. Brown, of this city. Mr. Brown appears to have shown that the special lethal properties of the electrical current lie in its rapid alternation. A continuous current of 1,410 volts, equivalent probably to 250 or 300 milliampères, had been passed through a dog without causing any accident. On the other hand, an alternating current of 500 to 800 volts instantly killed. The alternating high-tension currents are those used in the arc lights.

The Hudson County Medical Association, formed to prevent the swindling of members of the profession by patrons who can pay but do not, has recently organized and adopted a constitution. It provides for the employment of a collector, in whose hands all questionable bills are to be placed. He is to report those from whom collections cannot be made to the Board of Governors, and the members of the association are to be warned by circular against trusting them.

Our esteemed contemporary, the *Brooklyn Medical Journal*, states that a homœopath of Ithaca, N. Y., recently excited much scandal by confessing to a regular employment of bromide and chloral, in quite large doses. This homœopath, says the *Journal*, evidently is in line with so many of his brethren who have caught the cry of the waiter in the cheap restaurant for dumpling sauce and practise "both kinds with plenty of hard on."

The Cost of the last International Medical Congress amounted to about $17 per member. The cost of the London and Copenhagen Congresses was about $10 a member.

The Children of Ishmael.—At the recent meeting of the National Conference of Charities and Correction, held at Buffalo, Rev. Oscar C. McCulloch, of Indianapolis, read a remarkable paper entitled, "The Children of Ishmael: a Study in Social Degradation." He had upon the stage an immense diagram showing the social condition of thirty families through five generations, numbering 1,692 persons. The history of these people had been followed up for fifty years. It was of the most startling nature. There had been several murderers in the group, and thieves without number. They did not work, they lived by begging and petty thieving. The children died young. Licentiousness characterized all the men and women. From this results mental weakness and general incapacity to work. and this is all met by the benevolent public with unlimited public and private aid, encouraging them in an idle and vicious life. The speaker believed that public relief was in a large degree chargeable with the perpetuation of this stock, and what public relief failed to accomplish private benevolence supplemented. The so-called charitable people who give to begging women and children had a large sin to answer for. Out of these 1,692 persons, Mr. McCulloch said he knew of but one who had risen from them and had become an honorable man. The remedy he indicated was to close up official out-door relief, check private, indiscriminate benevolence or charity, falsely so called, and get hold of the children.

Dr. Joseph Jastrow, a special student of psychology at Johns Hopkins University, has been appointed to the Chair of Experimental and Comparative Psychology at the University of Wisconsin, at Madison.

Advertising Specialists.—The *Journal of the American Medical Association* has officially interpreted the Code of Ethics to allow physicians who follow a specialty to place on their cards "practice limited to," etc. Such notices it is said can be legitimately used as extensively as an ordinary physician's cards. The result is already showing itself in practices which everyone interested in the high standing of the profession must deprecate.

A Number of London Ladies have formed themselves into a "Society for Nursing Sick Bachelors in their Lodgings." The object of this society is to rescue celibate men from the tender care of landladies and charwomen, and while enabling them to "lie by" in their apartments, provide them at the same time with skilful nursing.

Section of the Phrenic.—It is unfortunate that General Boulanger, who has recently suffered from a section of the phrenic nerve, very neatly done by M. Floquet, could not be submitted to the observation of Dr. G. Heinricius, of Berne. This latter gentleman is a scientist who has recently composed an elaborate memoir on the results of cutting the phrenic nerves. Not having the services of an accomplished statesman and swordsman like M. Floquet, the Berne physician had to confine his experiments to dogs and rabbits. He observed that when the phrenic was cut phenomena like those of vagus irritation developed. Whether Boulanger's vagus was upset, the bulletins do not state, but we trust that the results of M. Floquet's interesting section will be given to science.

The Death of Professor Tomassi, of Naples, is announced.

Congress and Quarantine.—The House Committee on Commerce has reported favorably the bill recently passed by the Senate perfecting the quarantine service. It provides punishment for any person trespassing upon any grounds belonging to any quarantine reservation or for any master, pilot, or owner of a vessel entering any port of the United States in violation of the law aiming to prevent the introduction of contagious or infectious diseases into the United States. It also establishes quarantine stations at the following-named places: At the mouth of Delaware Bay, near Cape Charles; at the entrance of Chesapeake Bay; at Key West; in San Diego harbor; in San Francisco harbor, and at or near Port Townsend, Puget Sound. The bill appropriates $542,000 for the construction and maintenance of the above stations and for the maintenance of the Gulf quarantine (formerly Ship Island) $10,000.

Powdered Talc in Diarrhœa was recommended at one of the last meetings of the Hospitals' Medical Society by Dr. Debove, especially for tuberculous patients. The powder is chemically inert, but its mechanical action is very efficient when given in sufficient quantities. He found patients could take as much as six hundred grammes (twenty ounces) in a day, but two hundred are enough for all purposes. The fine powder is to be administered in two pints of milk, the mixture requiring very thorough shaking. With tuberculous patients suffering from obstinate diarrhœa of several months' standing, the success has been in all cases complete, obstinate constipation often resulting.

The Congress of American Physicians and Surgeons.—The Committee of Arrangements announces that the arrangements are sufficiently advanced to assure the success of the First Triennial Session of the Congress of American Physicans and Surgeons, which will be held in the city of Washington, during the 18th, 19th, and 20th of September next. A number of distinguished foreign physicians and surgeons have signified their acceptance of the invitation to attend, among whom may be named Sir Spencer Wells, Sir Andrew Clark, Sir William MacCormac; Drs. W. O. Priestley, William Ord, and Grainger Stewart; Mr. Lawson Tait, Mr. Victor Horsley, Mr. Thomas Bryant, Mr. Thomas Annandale; Professors Ferrier, Esmarch, and Gerhardt; Drs. Rafael Lavista, of Mexico, and J. L. Reverdin, of Geneva. The preliminary programmes of the participating societies have already been published. The classified and final programmes will be printed and distributed at an early day. Places of meeting for the Congress and each of the Societies have been secured, conveniently located, so that members may interchange attendance without annoyance. All the sessions will be open to the profession. The meetings of the Congress will be held in the evenings, beginning at 8 o'clock; on the evenings of the 18th and 19th the meetings will be held in the main hall of the Grand Army Building, 1412 and 1414 Pennsylvania Avenue, and on the last (Thursday) evening in the Hall of the National Museum. During this evening the Army Medical Museum and Library building, alongside of the Museum building, will be lighted and opened for the inspection of the members and invited guests.

The meetings of the special Societies will be held during the day, according to the programme of each, at the following places: American Surgical Association, Main Hall, Grand Army Building, 1412 and 1414 Pennsylvania Avenue; Association of American Physicians, Hall No. 1, Grand Army Building, 1412 and 1414 Pennsylvania Avenue; American Climatological Association, Hall No. 2, Grand Army Building, 1412 and 1414 Pennsylvania Avenue; American Laryngological Association, Hall No. 3, Grand Army Building, 1412 and 1414 Pennsylvania Avenue; American Dermatological Association, Parlor in Willard's Hotel; Association of Genito-Urinary Surgeons, parlor in Willard's Hotel; American Neurological Association, parlor in Willard's Hotel; American Orthopedic Association, Welcker's Hotel, Fifteenth Street, N. W.; American Otological Society, Arlington Hotel, Vermont Avenue; American Physiological Society, Army Medical Museum; American Ophthalmological Society, Arlington Hotel, Vermont Avenue and H Street; American Gynecological Society, Columbian University, Fifteenth and H Streets, N. W.; American Association of Obstetricians and Gynecologists, National Medical College Building, H Street, N. W.

On Monday evening, September 17th, a dinner will be given by members of the Congress to the guests of the participating societies. It will be limited exclusively to members of the Congress and invited guests. Members desiring to participate are requested to notify the Chairman of the Committee of Arrangements. An informal collation will be served at Willard's Hotel on Tuesday evening, after the adjournment of the session of the Congress. A similar entertainment will be served in the National Museum building on Thursday night, after the final adjournment of the Congress. The Secretaries of the special societies are requested to forward to the Chairman the names and addresses of their foreign guests. Guests are requested to notify the Chairman, immediately after their arrival in Washington, of their address and whether they have ladies with them, for the entertainment of whom special arrangements will be made. Members of the Congress and the guests are expected to register. A Registration Office will be opened in a parlor in Willard's Hotel, from which the mail of the members and guests will be distributed, and at which the city residence of each member or guest can be ascertained. All communications to the Committee of Arrangements should be addressed to Samuel C. Busey, M.D., Chairman, 1545 I Street, N. W., Washington City.

Reviews and Notices of Books.

Essentials of Physiology. By H. A. Hare, M.D., Instructor in Physiology, University of Pennsylvania, etc. Philadelphia: W. B. Saunders. 1888.

This is a small manual of 164 pages, arranged in the form of questions and answers, and designed for the use of medical students. We have no hesitation in saying that it is the best condensation of physiological knowledge we have yet seen. Of course the preferable plan is for each student to make out his own condensations as he goes through his larger text-books. All men have not this faculty, however. To such as must depend on others we commend this book.

Diseases of the Skin. By James Nevins Hyde, M.D., Professor of Dermatology, Rush Medical College, Chicago, etc. Second edition. 8vo, pp. 676. Philadelphia: Lea Brothers & Co. 1888.

We must congratulate both the author and publisher on the appearance of this handsome volume. The present edition has been rewritten in most part, and is fully abreast with our most recent knowledge. Classification and nomenclature have been made to correspond to the standard adopted by the American Dermatological Association. Numerous wood-cuts and two colored plates are scattered through the pages. They are unusually clear, and the cuts on the histology of the skin deserve special praise.

The author's ideas on therapy are conservative. He does not regard the internal use of arsenic as by any means a sheet-anchor. He speaks favorably of Unna's muslin-salve preparations, but thinks them too expensive for general use. Dr. Hyde writes clearly and well, and his book is a credit to American medical literature.

Dissolution and Evolution, and the Science of Medicine. By Dr. C. Pitfield Mitchell, London. 8vo, pp. 246. London and New York: Longmans, Green & Co. 1888.

The space at our disposal precludes an adequate review of this book, and we can only indicate its general tenor. It is from the pen of a surgeon engaged in private practice. He is a devotee of Herbert Spencer's "Sympathetic Philosophy," of which he declares evolution and dissolution to be the sustaining elements. He proposes to apply some of the leading generalizations of the new system of thought to the collection of clinical data of medical and surgical practice. Thereby he hopes "to co-ordinate the necessary facts of pathology, and to establish the first principles of treatment." Part I. is styled General Disease. As dissolutional changes are cited inflammation and suppuration, the retrograde metamorphoses (coagulation, gangrene, thrombosis, etc.), the changes induced by animal and vegetable parasites, and finally neoplasms; as evolutional changes, resolution and repair. Part II. treats of Special Disease. As illustrations of dissolution and evolution he mentions interstitial and parenchymatous inflammations, Bright's hepatic cirrhosis, pulmonary inflammation, locomotor ataxia, the fevers, diabetes, and diseases of the mind. Part III. is Implications, and is a practical application of the principles of the author's reasoning to everyday medical work.

The foregoing abstract from the table of contents gives a fair idea of the ground covered. The phraseology is Spencerian throughout. It goes without saying that the thought is profound and the style of argument logical. The author has approached his task in all honesty and seriousness. He concludes that the ruling precept of practical medicine must be the detection and removal of causes. The *vis medicatrix naturæ* is, in the terms of synthetic philosophy, an "organic equilibration."

It may be asked how much does this discussion really accomplish? Does the application of the new philosophical data to current clinical phenomena really assist us in diagnosis and treatment? Here is where different readers of this book would disagree. A scoffer or disbeliever in the Spencerian doctrine would deny that it contributed anything to our positive knowledge. A lover of Spencer would claim that Mr. Pitfield Mitchell had accomplished a most commendable task in showing his professional brethren how to properly classify and consider the facts of clinical medicine and surgery—to trace out hidden relations between causes and effects, and to place therapeutics in general on a more logical basis than it at present occupies.

However, we must confess that we look forward with pleasure to a time when we may examine the book more thoroughly.

The Surgical Diseases of the Genito-urinary Organs, including Syphilis. By E. L. Keyes, A.M., M.D., Professor of Genito-urinary Surgery, etc., in Bellevue Hospital. A Revision of Van Buren and Keyes' Text-book upon the same Subjects. New York: D. Appleton & Co. 1888.

Those who are familiar with the older works of Keyes (Van Buren and Keyes) will scarcely recognize the present treatise. Since 1874 the advances in the department of surgery included under the term genito-urinary have been so considerable that the work before us is practically a new book. The author appears to have been prompted by feelings of reverence for his "dear old master" in calling this a revision of the work alluded to. To mention but a few subjects that are essentially new, we may allude to litholapaxy, suprapubic cystotomy (the modified and revised older operation), renal surgery, the modern methods of dealing with hydrocele, and the radical cure of varicocele.

The profession will give glad and speedy welcome to Dr. Keyes' treatise as it now stands. It may well challenge favorable comparison with similar works by other authors, and if so examined it will not be found wanting in all that is essential to a reliable, readable, and instructive manual on a highly important branch of the healing art.

Health-resorts in Australia. By L. Bruck. Sidney.

This is a tourist's guide-book, and mentions the various places of interest, with particulars as to climate, routes, hotels, medicinal springs, etc.

Stimulants. By J. M. Emerson. New York: Dick & Fitzgerald. 1888.

This is a brief essay on the much-discussed question of alcoholic beverages. The first part is sensible and moderate in tone, and coincides in the main with the general ideas held by physicians concerning the use and abuse of alcohol. In the latter part, the author very strongly advocates the use of pure wines of the lighter varieties as a substitute for alcohol, that is, so far as general consumption is concerned. He advocates this idea so strongly that we almost expect to find at the end an advertisement of some particular vintage. This, however, is not the case. Two of his propositions are strongly open to criticism. One is, that the use of pure wine will often enable a man to give up the stronger liquors. We regard this as a dangerous doctrine for anyone to promulgate. The second is, that the evils of drunkenness are least felt in vine-growing countries; whereas the fact is, that the question of intemperance is becoming year by year a more alarming one in all continental states where the vine is cultivated. The writer alludes to the current questions of high license and prohibition, and is to be commended for the courteous tone of his discussion.

Major George M. Sternberg, Surgeon, United States Army, has been elected an honorary member of the Epidemiological Society of London.

Society Reports.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 13, 1888.

W. P. NORTHRUP, M.D., PRESIDENT, IN THE CHAIR.

DR. G. C. FREEBORN stated that Dr. J. M. DaCosta, the Middleton Goldsmith lecturer for the present year, had declined to receive any compensation for his lecture and had requested the Society to apply the amount ($100) to any purpose which might seem desirable. The matter had been referred to the trustees, and they had decided that the most fitting tribute to Dr. DaCosta's generosity would be to purchase some microscopes for the use of the Society, and had requested the speaker to procure them. He had done so, and now exhibited them. He had succeeded in getting two microscopes, one having an Abbé condenser and a $\frac{1}{5}$ objective, the other having no condenser and being of a low power. The microscopes would be engraved with an inscription to the effect that they were the gift of Dr. DaCosta.

DR. J. J. GRIFFITHS presented a specimen of

ACUTE PHTHISIS IN A YOUNG CHILD,

with very extensive deposits of tubercle in the lungs and lymphatic system.

M. ——, aged thirteen months, a foundling, was presented at the Out-door Department of the New York Foundling Asylum, on April 22, 1888, with a history of severe indigestion and diarrhœa of three days' standing. The disease yielded to treatment, and the child remained well until May 17th, on which date she was returned with motor paralysis of the entire left side, including the face. The pupil of the same side was dilated; no paralysis of sensation; moderate diarrhœa; otorrhœa, left side; temperature, 100° F. Six days later it was noted that the left hemiplegia continued, and in addition there was loss of power of the right leg. During the next ten days motion slowly returned to the left arm and leg. The child was returned to hospital on May 30th, and the subsequent history was kindly furnished to the speaker by Dr. Lynde, the house-physician.

Upon admission the cervical, epitrochlear, and inguinal glands were enlarged, there was ptosis of the left lid, and the child refused to nurse.

On June 8th the child was much worse; respiration rapid and labored. There was dulness on percussion anteriorly and posteriorly on the right side, and the respiratory sounds were absent over the whole lung. No retraction of the intercostal spaces; diminution in movement of the chest-wall. The left side was tympanitic on percussion, and bronchial breathing and coarse bronchial râles were heard; marked retraction of the intercostal spaces; temperature, 104° F.

During the four days following, her condition remained unchanged, and she died in collapse, June 12th.

Autopsy, two hours after death. Child fairly well nourished. The brain was markedly anæmic, but otherwise normal. There was a small amount of bloody serum in the pleural cavity. On the right side the superior portion was collapsed and the inferior portion entirely occupied by a large tuberculous deposit, which at several points had broken down into small cavities. Costal pleura normal; pulmonary pleura thickly studded with miliary tubercles. On the left side there were abundant pleuritic adhesions over the anterior and lateral surfaces of the lung, binding it closely to the chest-wall.

In the substance of the entire lung were many deposits of yellow, caseous, tuberculous material, varying in size and consistency. The lymphatic system was largely involved. The cervical, bronchial, retro-peritoneal, inguinal, and epitrochlear glands were all much enlarged and caseous, and many were diffluent at their centres. The liver was anæmic and fatty. The other organs were normal.

The case was interesting chiefly for these reasons: 1, Because of the absence of cerebral lesions to account for the marked hemiplegia which existed; 2, that so extensive a deposit should have been confined entirely to the lungs and lymphatic system, no tubercle having been found in any other part of the body; and, 3, that in this instance epitrochlear enlargement was due to tubercular and not syphilitic disease.

THE PRESIDENT wished to emphasize especially two points of interest in this case. It had been dogmatically asserted that enlarged epitrochlear glands were always an evidence of constitutional syphilis, but here no signs of that disease were discoverable. The second point was the presence of symptoms pointing to cerebral disease, although no brain lesions were found post mortem.

DR. RIDLON thought it conceivable that there was an hereditary syphilitic taint in this case. He had seen a good many children, with a clear hereditary history of syphilis, who had tubercular bone lesions, and he had thought that there might possibly be some connection between hereditary syphilis and tubercular disease in children.

DR. BIGGS had never seen anything exactly like this specimen. The lungs contained large tubercular masses with diffuse miliary lesions.

DR. MYERS presented a

PLACENTA

with the following history of the labor and of the autopsy made on the child:

The mother was admitted to the Foundling Asylum in labor. She had œdema of the legs, and examination of the urine showed a specific gravity of 1.024, acid reaction, granular and epithelial casts, and enough albumin to cause it to solidify on boiling. The quantity passed in twenty-four hours was but four or five ounces.

The labor was rapid, but the head rested at the vulva, and the abdomen caused delay when presenting. The cord was about the neck, but parted on slight traction without hemorrhage.

The placenta was friable and pale, portions of it coming away like cotton-wool when pulled upon, and it was thought to be œdematous.

The child had œdema of the legs, arms, and face, and ascites. It weighed four and one-eighth pounds. Punctate hemorrhages were seen in the skin, especially in that of the legs. The infant was thought to be seven months old. It breathed twelve or fifteen times with assistance, and lived fifteen minutes.

Autopsy.—The abdomen contained eleven and one-half ounces of dark-brownish fluid.

The foramen ovale and ductus arteriosus were open, but the heart was otherwise normal; its weight was three and one-half drachms.

The liver and spleen were somewhat enlarged, and the former contained a number of chalky masses the size of a millet-seed.

There were numerous punctate hemorrhages seen upon the surface of the kidneys and in section of the organs. The tibia was decalcified, and showed normal epiphyseal junctions.

The microscopical examination of the placenta and of the liver of the infant had been made by Dr. Northrup, who reported as follows:

"The chalky, millet-seed-sized masses in the liver were found to be carbonate of lime. The tissue, when hardened and decalcified, showed them to be situated in the veins.

PHLEBOLITHS.

According to Delafield and Prudden 'the changes which occur in a thrombus after its formation may be either in the direction of degeneration or organization. In some cases they seem to undergo a simple shrinkage and decolorization, and to become infiltrated with the salts of lime, forming the so-called *vein-stones* or *phleboliths*' (" Handb. of Path. Anat. and Hist.").

"The capillaries were seen to be filled with white blood-cells, distinctly stained in the microscope specimen herewith shown. The capillaries were dilated and the nearest liver-cells were atrophied. About many veins and phleboliths there was a moderate increase of organized connective tissue.

"Placenta: The shreddy tissue making up the bulk of the body, when removed with care, was found to be a gnarl of fibres. These represented the normal stroma and were expected to tell something of the nature of the process. The stroma was slightly thicker than normal, but well organized, and the vessels with it were normal. The thickening meant diffuse moderate placentitis. The long bones were examined for the condition of the epiphyseal junctions. The tibia was decalcified and sections for the microscope prepared from the upper epiphysis. It was normal.

"The condition of the placenta was not explained by the microscope findings except negatively. There was no evidence of syphilis, and the moderate placentitis would not explain it. The mother was œdematous; the child was in a condition of general anasarca, and in my opinion the placenta was likewise œdematous."

Dr. W. H. Porter thought that there was general dropsy of the whole placental tissue, to which was to be attributed its macerated and atrophic condition. He had seen a similar placenta in a case in which the mother was perfectly healthy, but all the organs of the child were waxy. The cord was œdematous, and the œdema of the placenta resulted in its separation, and in the loss of the child at the seventh month.

Dr. Prudden said that a placenta, resembling this one exactly, had been sent recently to the pathological laboratory of the College of Physicians and Surgeons. No history of the labor had accompanied the specimen. The child was apparently six or seven months old, and had no œdema. Either this condition was not so rare as one would be led to suppose, from the scanty reference to it in the text-books, or else there was a remarkable coincidence in the report of these three cases.

The President did not believe that such cases were at all common. He had examined a great number of abnormal placentæ, but had never before seen one like this. He asked whether there was any objection to an explanation of the condition on the theory of universal œdema of mother, child, and placenta.

Dr. H. M. Biggs presented a specimen showing chronic

CARDIAC THROMBOSIS.

The patient was admitted to Charity Hospital suffering from advanced valvular disease of the heart, having dyspnœa, general anasarca, and rapid and irregular heart action. Under the administration of infusion of digitalis and Hoffman's anodyne he improved for a few days, but then sudden heart-failure occurred and he died.

Autopsy.—There was general œdema, all the large cavities being also filled with fluid. There were evidences of recent pericarditis. The heart was large, weighing about twenty ounces. The mitral valve was the seat of old endocarditis, some calcification being present, and was narrowed. The left auricle was enormously dilated, and contained in its upper part a thrombotic deposit one and a half inch in thickness, the central portion of which had undergone puriform softening, but had not yet opened into the auricle. The right auricle contained a number of small thrombi, varying from the size of a hickory-nut to that of a large walnut. The pulmonary artery was much dilated, and there were numerous points of hemorrhagic infarction in the lungs.

The President showed a piece of intestine which had been placed during warm weather in a quart bottle containing a new preserving fluid compounded by Dr. Prudden. The intestine had been in the fluid for nine weeks, but was well preserved, even showing distinctly the different colors of the fresh specimen.

Dr. T. M. Prudden presented the formula for the

NEW PRESERVING FLUID

referred to by the President.

Water	1,000	c.c.
Common salt	100	gm.
Saltpetre	25	"
Carbolic acid	5	"
Glycerine	15	c.c.
Amylic alcohol	50	"
(or Ethylic alcohol	100	")

Specimens should be first soaked in a strong brine and then placed in a large quantity of this fluid. He believed the mixture would be found to serve a useful purpose in the temporary preservation of gross pathological specimens without changing their color or otherwise altering their general appearance. The mucous membranes were particularly well preserved in the fluid.

Dr. J. Lewis Smith reported a case of

SEPSIS IN AN INFANT.

The child was born in the Foundling Asylum on May 13th. The mother did well, having no febrile disturbance. Before the separation of the cord it was noticed that the child's umbilicus was sore and discharging a little pus. The speaker first saw the umbilical phlegmon when the child was seven days old. At this time three whitish patches, about half the size of a silver dime, were noticed on the hard palate near the velum. There was also purulent conjunctivitis in one eye, notwithstanding the fact that Credé's method of instillation of argentic nitrate solution is always employed in the institution. The faucial trouble increased, and the phlegmon also continued to extend, until the child died at the age of fourteen days. The autopsy was made by Dr. W. P. Northrup, who reported as follows: "The abdominal wall, for the distance of an inch in every direction from the umbilicus, was swollen, the central portion being brown and dry. The peritoneal surface was congested and was adherent to the omentum at the level of the umbilicus. From this point a leash of dilated vessels, an inch in width and between three and four inches long, passed to the transverse colon. The umbilical and hypogastric arteries contained clots. Points of hemorrhagic pneumonia were scattered through all the lobes of the lungs. The stomach showed the lesions of acute gastritis; the mucous membrane was intensely congested, and there was an abundance of tenacious mucus. The kidneys were soft, flabby, and dusky in color. The liver and spleen were normal.

"The anatomical diagnosis was

UMBILICAL PHLEGMON,

peritonitis, acute gastritis, and hemorrhagic pneumonia."

The microscopical and biological examination was made by Dr. T. Mitchell Prudden, who reported as follows:

"The small ragged cavity at the umbilicus contained a moderate amount of pus and of cell-detritus, and enormous numbers of bacteria, of various forms, the spheroidal form predominating. The tissues of the abdominal wall about the umbilicus were infiltrated with fluid, fibrine, and pus. Scattered about in this exudation mass were small spheroidal bacteria. The hypogastric arteries and the umbilical vein were plugged with a clot for from one-half to three-quarters of an inch from their origins. Their walls were greatly thickened by infiltration with inflammatory exudate. Both in the lumina of these vessels along the sides of the clot and in the lymph-spaces in their walls were enormous numbers of small spheroidal bacteria. These bacteria were present in the umbilical vein beyond the limits of the clot, in the direction of the liver.

"The kidneys showed moderate parenchymatous degeneration. The consolidated areas in the lungs were due to a nearly complete filling of the air-spaces and smaller bronchi with blood.

"Cultures made from the inflamed tissue about the umbilicus, and from the edges of the sloughing cavity, showed several species of bacteria common in the air and in the fæces of children. In addition to these, the staphyloccus pyogenes aureus was present in large numbers.

"A set of cultures from the inside of the umbilical vein at a little distance from the sloughing cavity, revealed the presence of staphylococcus pyogenes aureus and streptococcus pyogenes, together with other forms.

"Cultures from the liver showed large numbers of staphylococcus pyogenes aureus, with considerable numbers of a stout bacillus similar to the one abundant in the sloughing cavity.

"From the consolidated regions in the long tissue enormous numbers of bacilli developed in a nearly pure culture, which corresponded in its biological characters to the bacterium lactis aërogenes of Escherich."

Dr. Smith then spoke of the treatment employed, and referred to the disinfection of the room, after a case of contagious disease, by means of burning sulphur. He read a letter from Dr. E. R. Squibb, of Brooklyn, in which the writer stated that

BURNING SULPHUR IS OF DOUBTFUL EFFICACY

as a disinfectant, the weight of the highest authorities in bacteriology being against it, notwithstanding that it is still largely used by very intelligent bodies in large institutions, boards of health, etc., where it would not be likely long to maintain an unearned confidence. Its efficacy would doubtless be greatly increased were the fumes allowed to mingle with the vapor of water discharged at the same time in the apartment. Many bacteriologists have admitted that burning sulphur would kill bacteria, but not their spores.

Dr. Prudden said that the bacteriological examination would seem to show that the child had been the victim of infection with the ordinary "suppurative bacteria," and with the bacteria of fæces. Many of these fæces bacteria were found in the lungs of the infant. As regards the restraining influence of iodoform upon the growth of bacteria, he had mixed bacteria and iodoform together very thoroughly, and had found that the bacteria grew well in cultures made from this mixture.

The Society then went into executive session.

Tympanites and Tympanitis.—The indiscriminate use of these words, says the *Journal of the Amer. Med. Assoc.*, for meteorism or flatulent distention of the intestines is exceedingly common—so common, in fact, that if usage can justify a continuation and sanction of error in the use of words, it may be assumed that it is proper to commit this error. But there is a limit to the justification of error by usage, and the error mentioned is beyond that limit. Tympanites cannot mean inflammation of the lining membrane of the middle ear; tympanitis can mean nothing else. The termination *itis* of the latter word shows that it means an inflammation of the tympanum, while tympanites means a flatulent or drum-like condition of the bowels.

The Percentage of Positively Useful Drugs.—Dr. Uhler writes, in the *Maryland Medical Journal:* Materia medica and therapeutics are more exact than I anticipated, for, after an examination of three hundred and twenty-four remedies described in our text-books, I find that two hundred and eighteen are known to frequently do their work, one hundred and sixteen are untrustworthy, and about one-third of the whole, or one hundred and eight, are very active, and this is probably the correct answer to Professor Bartholow's question of the "Degree of Certainty in Therapeutics."

AMERICAN OPHTHALMOLOGICAL SOCIETY.

Twenty-Fourth Annual Meeting, held at Pequot House, New London, Conn., July 18 and 19, 1888.

Wednesday, July 18th—First Day—Morning Session.

(Special Report for The Medical Record.)

The Society was called to order by the President, Dr. W. F. Norris, of Philadelphia.

Dr. H. D. Noyes, New York, read a memoir of the late Dr. C. R. Agnew.

Dr. C. S. Bull, of New York, read a contribution on the

TREATMENT OF MEMBRANOUS OPACITIES IN THE VITREOUS.

Operation by incision with a needle was first performed by Von Graefe. In the experience of the writer the operation had been found useful. Some opacities, as a result of hemorrhage or inflammation of the choroid, sometimes respond to internal remedies, but, as a rule, these fail. By incision of the membrane a direct improvement of vision may be obtained and the process of absorption may be stimulated. Posterior opacities are more easily reached, with less danger to the lens and with more favorable results than in the case of anterior opacities. The author has done this operation in seventeen cases of chronic membranous deposits in the vitreous. In some cases the ordinary discision-needle was used, in others a broader needle, and in a few a slender cataract knife. Cocaine was employed in all cases. The point selected by preference for the introduction of the needle was just in front of the equator of the eye, and below the insertion of the external rectus muscle. There seems in this operation to be no danger of loss of vitreous through the small opening, nor is there danger of hemorrhage. The puncture should be posterior to the ciliary process, and pressure with the forceps should be avoided. Little or no reaction follows the operation as a rule. A protective bandage is required only for a few days. Antisepsis was employed in all cases.

The details of the seventeen operations on fifteen patients were given. Fourteen showed decided improvement in vision; three were failures. There was no loss of vision from the operation in any case. The operation is appropriate in certain cases, but it is wise to wait until all inflammatory symptoms have subsided before attempting any operative procedure. The eye should be absolutely free from all irritation before surgical interference is attempted.

Dr. F. Buller, of Montreal, reported a case of

PULSATING EXOPHTHALMUS CURED BY LIGATION OF THE COMMON CAROTID.

Pulsating exophthalmus occurring spontaneously or as a result of traumatism is rarely met with. The pathology is so well understood that little remains to be done in this direction at the present time. In the matter of treatment there is no rule so firmly established as that much must not be left to the judgment and discretion of the surgeon.

The subject of the paper came under observation May 24, 1888. A young man, aged twenty-eight, fell a distance of twenty feet, striking the right side of head, rendering him unconscious for twenty-four hours. After the swelling had subsided the patient noticed diplopia, one image being higher and less distinct than the other. There was also a loud beating sound in the right ear. Two weeks before coming under observation prominence of the eye was noticed. There was still diplopia, the higher image moving up and down with each heart-beat. Four days before coming under notice the pain became intense. On examination, there was at the inner extremity of the right brow a swelling which imparted a distinct thrill to the finger. There was also a harsh bruit. Pressure over the common carotid diminished the intensity of the thrill and lessened the pulsation.

It was decided to ligate the common carotid in the upper part of its course, and this was done May 25th, two ligatures being applied and the vessel divided between them. The immediate effect was softening of the swelling, partial reposition of the eyeball, great diminution in the pulsation, and disappearance of the bruit. The patient made a good recovery, and left the hospital with very little prominence of the ball; $V = \frac{20}{20}$. movements normal.

Dr. Charles J. Kipp, of Newark, reported a case of

PULSATING EXOPHTHALMUS.

A lady, aged seventy-six, presented herself with the history that shortly after striking the head in a fall, she noticed noise in both ears, followed by protrusion of both eyeballs, the right four-tenths of an inch, the left two-tenths of an inch. There was no marked pulsation, but there was a thrill, and a bruit could be heard over the anterior half of the head. This could be arrested by compression of the right carotid, and partially so by compression of the left carotid. In view of the age of the patient no radical measures were recommended, but it was suggested that pressure be made on the right carotid as often as convenient; iodide of potassium was also given. Three months later the patient stated that the noise had suddenly disappeared. This was followed by disappearance of the exophthalmus, first in the left eye and subsequently in the right. The external appearance of the eyes is now normal. There is, however, a marked pulsation of the right subclavian artery, but no aneurism can be discovered.

Dr. Swan M. Burnett, Washington, gave an analysis of five hundred and seventy-six cases of the

REFRACTION OF HEALTHY HUMAN CORNEÆ, EXAMINED WITH THE OPHTHALMOMETER OF JAVAL AND SCHIOTZ.

These five hundred and seventy-six corneæ belonged to three hundred and one persons, examined within a little over a year by Dr. Burnett. Pathological states of the cornea were excluded for consideration at another time. The corneal refraction was found to be the same in both eyes to within 0.25 D in one hundred and ten persons. The horizontal meridian (to within 5°) was the least refractive (astigmatism according to the rule) in four hundred and twenty eyes. The vertical meridian was the least refractive (astigmatism against the rule) in twenty eyes. In eighty-eight eyes the meridians were oblique. In fifty-eight eyes, the difference in the refraction of the two meridians was less than 0.25 D. In one hundred and one eyes there was emmetropia. The largest number has a corneal refraction of from 44 D to 45 D; the next largest, from 43 D to 44 D; the strongest corneal refraction was 47 D, the weakest 39 D. In fifty-five eyes there was simple myopia. The strongest refraction in the weakest meridian was 47.25 D, the weakest 39 D. The corneal refraction did not, in any considerable number of cases, bear any close relation to the degree of the myopia. Simple hypermetropia was present in fifty-nine eyes. Weakest refraction in the weakest meridian was 40.5 D, the strongest, 46 D. As in myopia, the corneal refraction was no indication as to the degree of general hypermetropia. Myopic astigmatism was found in one hundred and forty eyes. In four eyes the general astigmatism was greater, and in eleven it was less than the corneal. In fourteen eyes the difference in the axes of the corneal membrane and that of the prescribed glasses was greater than 5°. Hypermetropic astigmatism was present in ninety-six eyes. In four eyes the corneal astigmatism was greater, and in two eyes it was less than the general. The axes corresponded in all but nine eyes. Compound myopic astigmatism existed in sixty-three eyes. In all but seven eyes the corneal and general astigmatism corresponded, and in forty-four eyes the axes corresponded. Compound hypermetropic astigmatism was found in fifty-five eyes. In thirty-one, the corneal and general astigmatic meridians corresponded. The corneal and general astigmatism was the same in all but four eyes. Mixed astigmatism was present in eight eyes. In four the corneal and general astigmatism was the same. In two the corneal was less, and in one greater than the general. Corneal and general astigmatic meridians were the same in five eyes.

In forty-two eyes the general astigmatism was against the rule, while in only eighteen of these eyes was the corneal astigmatism against the rule. From examinations under a mydriater the author felt himself warranted in thinking that many cases of lenticular astigmatism are due to an oblique position of the lens.

Corneal astigmatism is, with very few exceptions, according to this rule (vertical meridian) the stronger. From a study of these statistics the author feels warranted in concluding that while the corneal refraction gives no indication of the general refraction of the eye, its astigmatism in the vast majority of cases expresses the general astigmatism both as to degree and direction of its axis, and considers, therefore, the instrument of Javal and Schiotz one of, if not the most important, instrumental means for the diagnosis of the anomaly. He does not think astigmatism more productive of progressive myopia than any other form of ametropia.

DISCUSSION.

Dr. H. D. Noyes of New York: I have used the ophthalmometer of Javal and Schiotz with great satisfaction. The use of this instrument has led me to believe that mixed astigmatism is more common than we usually imagine. I have also noted the influence of the eyelids in altering the curvature of the cornea. I have also satisfied myself that the tension of the eye-muscles modifies the curvature of the cornea. I have also noticed in some cases a pulsation of the corneal reflex, due to the fact that the cornea was so thin that the circulation of the eye impressed itself upon it.

J. B. Emerson, of New York, read a paper entitled

PROGRESSIVE HYPERMETROPIC ASTIGMATISM.

Dr. Eduard Jackson, of Philadelphia, exhibited

A NEW FORM OF CATARACT KNIFE.

It was designed to combine the advantages of the Graefe and Beer knives. The point, resembling that of the Graefe knife, allowed the puncture and counter-puncture to be made in the same way as with the Graefe knife; while the rest of the blade, having the shape of Beer's knife, enabled one to complete the incision as with that instrument. With it the puncture and counter-puncture are completely under control, the flap is completed at a single thrust, the aqueous is not lost until the incision is nearly finished, and the counter-pressure by the back of the knife assists in steadying the eye.

Dr. J. O. Tansley exhibited the following instruments: An improved lachrymal syringe, in which the nozzle ends in a closed bulb, the openings being on the sides of the tube; a clamp to prevent the passage of atropine solutions through the lachrymal duct into the nose in cases where the free use of atropine is called for; an improved lachyrmal probe, and an improved style.

Dr. Samuel Theobald, of Baltimore, exhibited probes made of aluminium.

Dr. Eduard Jackson, of Philadelphia, described a case of

ŒDEMA OF THE CHOROID AND RETINA.

Dr. W. F. Mittendorf, of New York, gave a description of

SYMPTOMATIC MYOPIA.

But little attention has been called to myopia as a symptom of various affections of the eye. It may be caused by traumatism but more commonly by diseased conditions. It may be produced by displacement of the lens forward, more frequently it is due to swelling of the lens accompanying beginning cataract. This is sometimes relieved by the use of concave glasses, very strong glasses being occasionally required. Plastic exudations may also cause myopia, but these usually so interfere with vision that it is impossible to demonstrate the existence of myopia.

Glaucoma, serous choroiditis, and iritis are frequently accompanied with myopia as a symptom. A number of illustrative cases were cited. In these cases the myopia is not permanent, but as the disease disappears the myopia passes away, leaving the refractive condition of the eye the same as before the attack.

Dr. J. O. Tansley, of New York: Some years ago I reported a case of localized exudative choroiditis just beneath the macula, with myopia. The myopia gradually increased as the attack reached its height, and as the inflammation subsided the myopia passed away.

Dr. Carl Koller, of New York: I think that in these cases of myopia in iritis the condition may be due to the irritation of the ciliary muscle. There is hyperæmia of the ciliary body, and as the irides are contracted it is to be supposed that the ciliary muscle is also contracted. Although atropine may be used, there is not full dilatation of the irides. It is therefore reasonable to suppose that the myopia is a result of spastic contraction due to inflammation.

Adjourned till 8 p.m.

Evening Session.

Dr. William Oliver Moore, of New York, reported three cases of

HYSTERICAL BLINDNESS IN THE MALE.

Case I.—Male, aged twenty-five, farmer; family history good. During past two years had suffered with nervous symptoms. Did not smoke or drink. In June, 1886, complained of failing vision in left eye. When seen, June 16th, according to patient's statement, vision in left eye = O; in right eye, normal. Ophthalmoscope showed normal fundus, except a slight patch of opaque nerve-fibre near the papilla. Testing with prism and candle gave double vision, as did pressure on one eyeball. The patient was informed that treatment by electricity would cure him in a few days. A severe faradic current was applied, causing the patient to jump from his chair, exclaiming that there already was improvement. In ten days $V = \frac{20}{XX}$; emmetropic.

Case II.—Male, aged twenty-two, student and farmer; fine-looking. History of insanity in the family. Eighteen months previous to coming under observation atropia had been instilled by a physician to determine whether or not glasses were required. He thought from the effect of the atropine that he was going blind. He then put on smoked glasses, subsequently bandages, and kept in a dark room. He would not open the lids, and declared that he was blind. For ten months he kept in a dark room with covering over the eyes. On examination the lids were closed, but not by spasm; the cornea clear; V = O. Ophthalmoscopic examination under ether: normal fundus. Hysterical blindness was diagnosed, and a favorable prognosis given. Canthoplasty was then performed. Coming from the ether the patient opened his eyes and evidently saw clearly. He was told that the cause of the disease had been discovered and that he would be well in a few days. In two days he was walking around without glasses. Has remained well since.

Case III.—Boy, aged fifteen. Developed blindness in right eye after a disappointment at school. Normal appearance of eyes. Tests with prisms and colored glasses showed that vision was present. Ether was administered and patient assured that he would be well, and under electricity recovery was rapid.

Dr. Charles A. Oliver, of Philadelphia, gave a description of a series of tests for the

DETECTION AND DETERMINATION OF SUBNORMAL COLOR PERCEPTION (COLOR-BLINDNESS), DESIGNED FOR USE IN RAILWAY SERVICE.

It is a well known fact, both from theoretical and practical standpoints, that many "color-blinds," especially those of medium grades, have the power of differentiation, even by daylight, of the most difficult colors, when placed at ordinary metre distance of wool selection employed in the detection and determination of color-blindness. The writer, recognizing the possible dangerous consequences of this partial color-blindness in those employed on railways and in the marine and naval service, where the safety of lives and the protection of property is ofttimes solely dependent upon proper recognition of color at great distances, and frequently through the intervention of more or less translucent media, was led to combine two modifications of his method of color selection with a simplified plan of the former procedure, by which the candidate is placed in the actual position of after-work, and under exactly similar circumstances as during employment. The method is divided into three parts.

First. The selection and registry of a definite number of loose wools from twenty-three pure and confusion match skeins thrown upon a dead black surface at one metre distance.

Second. The selection and registry of the same number of similar reflected colors, under various intensities of diffuse daylight stimulus, placed at distances requisite for safety.

Third. The selection and registry of transmitted colors, under various intensities of artificial light stimulus, placed at distances requisite for safety.

In addition to the advantages shown to refer to the first test alone, the method has the following additional ones:

1. Much faster in time than any other method. 2. The selection of loose wools at a distance. 3. No necessity for an expert except in doubtful cases. 4. Employment of the same character of signal for testing as is used in daily routine. 5. Placing the eye, during testing, at a distance necessary for future safety. 6. Bringing the eye during testing directly before the true condition of weather experienced whilst it is upon duty. 7. Test and match colors all graduated in proportionate size.

Dr. Charles A. Oliver, of Philadelphia, gave a case of

EMBOLISM OF THE CENTRAL RETINAL ARTERY.

The patient, a young man, was seen October 5, 1887. Twenty-six hours previously while slowly walking in the shade, he was suddenly seized with blindness in the left eye. There were no other symptoms, and there had been no previous illness. The right eye was normal. Ophthalmoscopic examination of left eye showed clear media, nerve substance of a gray tint, and swelling of the retina. All the retinal vessels were reduced in size. The veins were somewhat contracted, especially toward the nerve entrance. The characteristic cherry spot in the macular region was distinct. There was a small hemorrhage out from the disk. Careful physical examination failed to reveal any lesion in other parts of the body. The case was kept under observation for some time, but there was no return of vision, the patient remaining completely blind in the left eye.

DISCUSSION.

Dr. H. D. Noyes, of New York: The result of autopsies shows that the great majority of these cases are really due to thrombosis and not to embolism.

Adjourned until Thursday morning.

Thursday, 19th—Second Day—Morning Session.

Dr. Samuel Theobald, of Baltimore, described a case of

DOUBLE CONGENITAL IRIDEREMIA

in a child whose mother exhibited a congenital coloboma of each iris.

James O———, aged eighteen months, was seen December 9, 1887. His mother brought him on account of the red appearance which the pupils presented. Upon examination, besides a congenital squint of the left eye, complete absence of each iris was discovered. The lenses were clear, and there seemed to be, at least in the right eye, fairly good vision. The interest of the case lies in the fact, accidentally discovered, that there existed in the mother a congenital coloboma of each iris. In her right eye the coloboma was large, its direction being directly upward; in the left eye it was somewhat smaller, and was in an upward and outward direction. In neither eye was the choroid involved in the congenital defect. The mother volunteered the statement that an older child had had a similar appearance of the eyes, so that it is probable that to this mother, with congenital coloboma, there were born not only one but two children with absence of the irides.

DISCUSSION.

Dr. David Webster, of New York. I think that the direction of the coloboma in the mother's eyes was unusual. I have seen a number of cases of congenital coloboma of the irides, but I do not recall an instance in which the coloboma was upward. It is almost always downward.

Dr. T. Y. Sutphen, of Newark, N. J., reported the results of three operations of

PUNCTURE OF THE RETINA FOR DETACHMENT.

A male, aged sixty-two, sought treatment, April 1, 1887, for a cloudy appearance before the right eye. This he had noticed only a few days. He was near-sighted, but had never used glasses. Examination: R. S. = $\frac{15}{100}$, raised to $\frac{15}{20}$ by $-\frac{1}{16}$; field of vision defective downward and toward the median line. Tension slightly diminished. L. S. = $\frac{15}{100}$, raised to $\frac{15}{15}+$ by $-\frac{1}{16}$. Ophthalmoscope showed myopia with choroiditis in both eyes. In the right eye the retina was found detached in its upper and temporal portion. The patient refused to undergo vigorous treatment in bed. He was given iodide of potassium in gradually increasing doses, rest being enjoined.

Five months later the patient returned with commencing detachment in the upper and temporal portion of the left retina. He was then kept in bed for two weeks with the eyes bandaged, while profuse diaphoresis was frequently induced, but without benefit. He was then sent to the country, the iodide being continued. By December 1st there was in the right eye only perception of light; in the left there was vision, confined to the outer and lower field. On this date puncture of the retina from beneath the detachment was made. Thorough antisepsis was employed, cocaine was instilled, a sickle-shaped needle was thrust into the globe between the insertion of the external and inferior recti muscles, on the equator, and on a plane with the lens. It was pushed onward until it was thought that the retina had been pierced. It was then withdrawn with a sweeping motion, the object being to enlarge the opening in the retina. Atropine was instilled, the eyes bandaged, and the patient ordered to keep quiet. The following day the subretinal fluid had disappeared, field of vision was normal, a red reflex was obtained from the fundus in every direction, and the patient could distinguish large objects. Bandage was reapplied. Two days later, patient could count fingers, at twelve feet, the retina appeared in its normal position, but the vitreous was quite cloudy. The vision continued steadily to improve.

December 10th.—A similar operation was performed on the left eye. Two days later there was marked enlargement of the field of vision, but some detachment was still to be seen on the temporal side.

December 16th.—The field of vision in both eyes normal. No detachment of retina in either. The patient remained in bed twenty-eight days.

February 10th.—Detachment began to reappear in the left eye, and by March 3d it was as great as before. Needling was again performed with the escape of very little subretinal fluid.

March 5th.—Field again normal.

April 1st.—Partial return of detachment in left eye.

July 6th.—Seven months after first operation: S., R. = $\frac{15}{100}$, raised to $\frac{15}{40}$ by $-\frac{1}{20}$, no return of detachment, field of vision normal, blindness for red. In the left eye almost complete detachment of the retina.

After referring to the history of the operation the speaker said that the interesting facts were these: The apparently perfect safety of the operation under modern antisepsis; one success and two failures under exactly similar conditions, barring the escape of the fluid outward in the successful case; encouragement to try this operation in otherwise incurable cases; the absolute freedom from all reaction. The best results will probably follow where the operation follows closely upon the subsidence of the acute affection causing the detachment. The chances of success are increased by a free flow of fluid outward. It was suggested that a narrow Graefe knife might be used after accurately measuring the depth of the detachment, provided the point be so directed that the wound in the retina shall be directly opposite the scleral puncture.

Dr. F. P. Copron, of Providence, reported

A CASE OF GLIOMA.

The patient was a child, aged three and one-half years. The growth was removed, but has since involved the submaxillary glands and the glands in the neighborhood of the ear. Photographs showing the appearances were presented.

Dr. D. B. St. John, of Hartford, Ct.: I would ask whether aid in the diagnosis between glioma and other affections is afforded by attention to the state of the tension.

Dr. David Webster, of New York: I think that I have never been able to detect any increase of tension until the second or inflammatory stage has been reached. Then there is always, I think, increase of tension. In at least two cases I have diagnosed glioma from the history with the existence of increased tension, when no tumor could be discovered.

Dr. Swan M. Burnett, of Washington, showed

MODELS EXHIBITING REFRACTION BY CYLINDERS.

It was shown how the refraction and focal line change with the variation in the strength of the lens and with the alteration of the angle of crossing of their axes. The models were made at his suggestion by Mr. C. F. Prentice, of New York. Diagrams were exhibited showing by geometrical construction how it was possible to tell the course of any given ray after its refraction by any two cylinders of differing power and at any angle of crossing of their axes. A formula applicable to any axis of crossed cylinders, calculated by Mr. Prentice, was also shown.

Dr. B. Alex. Randall, of Philadelphia, exhibited some drawings showing anomalous

OUTGROWTHS UPON THE OPTIC DISK,

and also drawings of anomalies of the retinal vessels.

Dr. Eduard Jackson, of Philadelphia, pointed out the inconveniences and errors arising under the present method of designating the

STRENGTH OF PRISMS,

and recommended their designation by their refractive powers as much more accurate.

A committee, consisting of Dr. H. D. Noyes, Dr. Eduard Jackson, and Dr. Swan M. Burnett were appointed to take the matter into consideration and report at the next meeting.

Dr. David Webster, of New York, described an

EXTRACTION OF A PARTIALLY ABSORBED CALCAREOUS LENS.

March 15, 1888.—C. C——, aged twenty-three, consulted Dr. Agnew and the author at the Manhattan Eye and Ear Hospital. She had phthisis bulbi in the left eye, and in the right were the calcific remains of a mostly absorbed lens, with a discolored atrophic-looking iris attached to the membranous mass by numerous adhesions. Visual field good. V=fingers at two feet. The vision of left eye had been lost through a blow with a whip at the age of two years. A catarrh developed in the right eye some time afterward. Seven years ago (1881) her sight having been lost four months, both eyes were operated on by a surgeon in another city several times. Violent inflammation followed one or more operations on each of the eyes. Eighteen months ago another needling was done by another surgeon, by which sight was somewhat improved. The atrophic eye, of late, has been painful and tender on pressure. March 16th, Dr. Agnew enucleated the atrophic eyeball. A calcific plate was found in the choroid, and a small, calcareous lens. While the patient was still under ether he did an iridectomy on the right eye. April 27th, Dr. Webster divided, with Knapp's knife-needle, two or three of the adhesions which were on the stretch. At least one could be heard to snap when cut. An attempt to penetrate the thinnest-looking portion of the membranous mass failed. There was considerable effusion of blood, which was soon absorbed.

May 14th.—An attempt to remove the pupillary obstruction with a sharp hook failed. Very little reaction.

June 6th.—With a keratome bent on the flat a wound was made as for iridectomy on the supero-nasal corneal border. The pupillary obstruction was drawn out and cut off close to the cornea. Not a drop of vitreous escaped. There was some pain in the eye for three or four hours, probably the reaction from cocaine. Four days later pain again appeared, and was relieved by iced cloths.

June 18.—Fundus normal, no floating bodies in the vitreous, but the remaining portion of the pupillary membrane, which by the way was very thick, and so tough that the iris scissors would scarcely cut it, extends backward horizontally and flops up and down with the movements of the eye.

June 22d.—$V = \frac{20}{20}$ with $- \frac{1}{32}$. Reads Jaeger No. 1 with $+ 1/2\frac{1}{4}$.

June 26th.—Discharged, wearing the above spectacles.

Dr. Samuel Theobald, of Baltimore, exhibited an unusually long cilium. The hair was over an inch in length, and was removed from the eyelid of a young lady suffering with some conjunctival irritation; the other cilia were of the usual length.

The officers for the ensuing year are: *President*, Dr. W. F. Norris, of Philadelphia; *Vice-President*, Dr. Hasket Derby, of Boston; *Corresponding Treasurer*, Dr. J. S. Prout, of Brooklyn; *Recording Secretary*, Dr. Samuel B. St. John, of Hartford.

It was decided to hold a special meeting, for the consideration of scientific matters only, September 19, 1888, at the Arlington Hotel, Washington, D. C.

The regular meeting will be held the third Wednesday in July, 1889, at the Pequot House, New London, Conn.

Adjourned.

The Best Method for Curing Fistula in Ano, according to Dr. Brinton, without the use of the knife, is by passing a silk or gum-elastic cord through the fistulous tract and, bringing it out of the rectum, tie it. This will excite inflammation, and the cord will gradually cut its way out, followed by granulation. By this method the patient can be cured while following his ordinary occupation. —*College and Clinical Record.*

The Antagonism of Poisons.—At the Paris Society of Biology, M. Roger gave the results of a series of observations made by him bearing on the alleged antagonism of certain poisons. (*The Medical Press*). He first ascertained by experiment the toxic dose of individual drugs, and then gave mixtures of any two. He found that animals succumbed to the effect of a mixture of morphine and atropine long before the fatal dose of either drug alone had been reached, and the same thing was observed with a mixture of atropine and quinine, or quinine and morphine. In every case the two substances produced their own particular effects, and, with the exception of a mixture of chlorate of potash and opium, a much smaller quantity of the double poison was required to kill than when either drug was employed singly.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 29 to August 4, 1888.

Magruder, D. L., Surgeon, is granted one month leave of absence, to take effect on or about August 13, 1888. Par. 11, S. O. 171, A. G. O., July 25, 1888.

White, Robert H., Surgeon, is relieved from duty with Battalion First Infantry, at Santa Barbara, Cal., and will proceed to Angel Island, Cal., on public business; on the completion of which he will stand relieved from duty in this Department. Par. 4, S. O. 43, Headquarters Department of California, July 17, 1888.

Munn, Curtis E., Assistant Surgeon, will proceed to Santa Barbara, Cal., and report to Commanding Officer of the Battalion of First Infantry for duty. Par. 3, S. O. 43, Headquarters Department of California, July 17, 1888.

Cochran, John J., Assistant Surgeon, will proceed to Benicia Barracks, Cal., on public duty; on completion of which he will return to these Headquarters. Par. 1, S. O. 44, Headquarters Department of California, San Francisco, Cal., July 20, 1888.

Robertson, Reuben L., Assistant Surgeon, is relieved from duty at Fort Keogh, Mont. Ter., and will report to the Commanding Officer at Fort Buford, Dak., for duty at that post, and by letter to the Commanding General, Department of Dakota. S. O. 167, A. G. O., July 20, 1888.

Jarvis, N. S., Assistant Surgeon, is granted one month leave of absence on Surgeon's certificate of disability, with permission to go beyond the limits of the Department. By par. 1, S. O. 90, Headquarters Department of the Missouri.

Johnson, Henry, Captain and Medical Storekeeper. Leave of absence granted for one month and fourteen days, from August 1, 1888. S. O. 170, Headquarters of the Army, A. G. O., July 24, 1888.

Wolverton, William D., Major and Surgeon, is relieved from duty at Washington Barracks, D. C., and ordered to duty at Fort D. A. Russell, Wyo. By par. 13, S. O. 173, A. G. O., July 27, 1888.

Gardner, William H., Major and Surgeon, is relieved from duty at Fort McHenry, Md., and ordered to duty at Washington Barracks, D. C. By par. 13, S. O. 173, A. G. O., July 27, 1888.

Caldwell, Daniel G., Major and Surgeon, is relieved from duty at Fort D. A. Russell, Wyo., and ordered to duty at Jefferson Barracks, Mo. By par. 13, S. O. 173, A. G. O., July 27, 1888.

Byrne, Charles B., Captain and Assistant Surgeon, is relieved from duty at Washington Barracks, D. C., and ordered to duty at Fort McHenry, Md. By par. 13, S. O. 173, A. G. O., July 27, 1888.

Ewing, Charles B., First Lieutenant and Assistant Surgeon, is relieved from duty at Fort Lewis, Cal., and is ordered to duty at Washington Barracks, D. C. By par. 13, S. O. 173, A. G. O., July 27, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending July 28, 1888.

Penrose, Thomas N., Surgeon. Detached from Navy Yard, Boston.

Parker, J. B., Surgeon. Ordered to the Navy Yard, Boston.

McCormick, Albert McD. Commissioned Assistant Surgeon in the Navy.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 28, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	38	13
Scarlet fever	119	17
Cerebro-spinal meningitis	4	3
Measles	199	10
Diphtheria	101	36
Small-pox	0	0
Yellow fever	0	0
Cholera	0	0

We Have a Swinburnian Medical Poet in the person of Dr. James Newton Mathews, who read the following melodious and alliterative verses at the banquet given by the Marion County Medical Society to the Indiana State Medical Society. It is entitled "Ballad of a Busy Doctor:"

When winter pipes in the poplar-tree,
  And soles are shod with the snow and sleet—
When sick-room doors close noiselessly,
  And doctors hurry along the street;
When the bleak north winds at the gables beat,
  And the flaky noon of the night is nigh,
And the reveller's laugh grows obsolete,
  Then Death, white Death, is a-driving by.

When the cowering sinner crooks his knee
  At the cradle-side, in suppliance sweet,
And friends converse in a minor key,
  And doctors hurry along the street;
When Crœsus flies to his country-seat,
  And castaways in the garrets cry,
And in each house is a "shape and a sheet,"
  Then Death, white Death, is a-driving by.

When the blast of the autumn blinds the bee,
  And the long rains fall on the ruined wheat,
When a glimmer of green on the pools we see,
  And doctors hurry along the street;
When every fellow we chance to meet
  Has a fulvous glitter in either eye,
And a weary wobble in both his feet,
  Then Death, white Death, is a-driving by.

ENVOY.

When farmers ride at a furious heat,
  And doctors hurry along the street,
With brave hearts, under a scowling sky,
  Then Death, white Death, is a-driving by.

The Treatment of Summer Diarrhœa at the Wilson Sanitarium, Baltimore, as described in the *Maryland Medical Journal*, is as follows: In acute diarrhœa with vomiting of milk, the child is at once taken from the breast or bottle, and no food except beef-tea is given to it for twenty-four hours. Small doses of calomel—gr. $\frac{1}{12}$ to gr. $\frac{1}{6}$—are administered hourly for a day or two, to quiet the stomach and to excite the secretion of the liver. At the end of twenty-four hours sterilized milk is given. If the vomiting returns the milk is stopped and beef-tea is resumed for twenty-four hours, when milk is once more given. No artificial foods are used in the Sanitarium. Irrigation of the lower bowel is practised two or three times a day, if it does good. In chronic cases resorcin, gr. ij., with tr. opii deodorata, gtt. $\frac{1}{2}$, is given every two or four hours. When vomiting proceeds from nervousness, sodii bromidi, gr. ij., and chloral hydrate, gr. j., are administered every two or four hours to a child of six months. This same prescription is used for sleeplessness. As a rule, no further medication is needed. For irrigation of the bowels a fountain-syringe full of tepid hydrant water is connected with a soft-rubber catheter about fourteen inches long, and this catheter, oiled, is passed gently to its full length into the rectum and descending colon, the water—a gallon or more—being allowed to follow into the bowel and out again by the side of the catheter. This irrigation is painless and often aids greatly in recovery, especially in severe cases resembling cholera infantum.

Treatment of Colds and Bronchitis.—In the *Therapeutic Gazette*, Dr. H. C. Wood discusses in a leading article the treatment of colds and bronchitis. When the cold is a wide-spread general one, involving the whole body in a condition which he regards as a form of subacute rheumatism, with aching pains and general wretchedness, he advises a free jaborandi sweat, followed by a few full doses of quinine. This, he says, will often liberate the sufferer at once, especially if the sweats are aided by mercurial or other purgation. For coryza, he says bismuth and cocaine injections into the nose almost invariably bring relief, though a vigorous dry shampoo may effect the same result. In bronchitis, he says, the so-called expectorant remedies are of course indicated. These he divides into three groups: First, the narcotic expectorants, which are to be employed to allay excessive cough and quiet nervous irritability; second, the sedative expectorants to be used in the first stages of a bronchitis, to facilitate secretion and expectoration; third, the stimulating expectorants, useful in the advanced stages of a bronchitis when expectoration has already become free. The ordinary narcotics, such as morphine and hyoscyamus, and the advantages and difficulties attending their use, he thinks are well known. Chloroform, however, he regards as one of the most valuable remedies that we have for quieting cough. In nervous or hysterical men or women, often the best expectorant mixture is one composed of pure narcotics. A very good home-made mixture for this purpose is one containing: Whiskey, paregoric, glycerine, of each, f ʒ ij.; chloroform, ♏ xxx. M. Shake well before using, and take in teaspoonful doses *pro re nata*. This mixture has, he says, enabled patients to secure many a night's rest, by keeping a little bottle of it, tightly corked, at the bedside, and sipping it when necessary. With regard to the use of hydrocyanic acid as a sedative, he seems to think that its action is so fugacious as to be untrustworthy in ordinary safe doses; while wild-cherry bark preparations he rejects as certainly useless. The older depressing expectorants he thinks have little power, unless given in nauseating doses, and in their stead he has come to use very largely the citrate of potassium. Of the following prescription, he says he thinks anyone who will use it will never give it up, unless some remedy of greater power be discovered: ℞. Potas. citr., ℥ j.; succi limonis, f ℥ iss.; syr. ipecac, f ℥ ss.; tr. opii cam., f ʒ iij.; syrup, q. s., ad f ℥ iij. M. Sig.—Dessert-spoonful every two hours. This dose is for robust men and must be varied according to the strength and peculiarities of the individual patient. Of the older stimulating expectorants the only ones in which he still places confidence are the muriate of ammonium, and syrup of garlic. When the citrate of potassium mixture fails, he habitually resorts to the muriate of ammonium, and has often seen very good results from its use. It may be given in capsules if the stomach is very sensitive, each capsule to be followed by a drink of water. The following furnishes the best disguise for the taste of the drug that he has been able to concoct: ℞. Ammonii chloridi, ext. glycyrrhizæ, āā, ʒ iss.; glycerini, f ℥ ss.; mucil. acaciæ, f ʒ ij.; syrupi, aquæ, q. s., ad f ℥ iij. M. Sig.—Dessert-spoonful every two hours.

Oliver's Test for Bile in Urine is performed as follows: Make a solution containing thirty grains of pulverized peptone, four grains salicylic acid, thirty minims acetic acid and eight ounces of distilled water. Secure perfect transparency by repeated filtration. Pour twenty minims of urine into one drachm of the test-solution, and if bile is present an opalescence appears proportionate to the amount present.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 6 New York, August 11, 1888 Whole No. 927

Original Articles.

THE RADICAL CURE OF HERNIA.

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The object of this paper will be to consider briefly the importance of some procedure for the cure of hernia, and the difficulties to be overcome in its accomplishment. Also, to present two unusual cases successfully operated upon.

It is no part of our purpose to enter upon a history of the various methods that have been proposed, through all the centuries, for the cure of hernia. The modern development of abdominal surgery places operations for the cure of hernia upon a new basis. The history of operations, as at present practised, dates back but a few years. That some method of cure is of great importance is evident. The frequency of the deformity, and the dangers to which its possessors are subjected, are known to all. Certainly there are few ailments which so impair the comfort and endanger the life of mankind.

Innumerable methods of cure have been proposed. The method of Wood, of London, of suturing the pillars with a silver wire, is, perhaps, the most successful of those which propose to relieve the difficulty without opening the abdominal cavity. Since the simple opening of the abdomen entails so little danger *per se*, the method of Mr. Wood has lost what was the chief argument for its support.

Two methods may properly claim our attention at the present time: First, that of opening the abdomen, dissecting from its attachments the hernial sac, and, folding this upon itself, returning it within the abdominal walls, so that, resting just outside of the peritoneum, it makes a convexity where the hernia formerly existed. This is the well-known method of Macewen, of Glasgow. Second, the method of extirpating the hernial sac, by ligation as close as possible to the peritoneal cavity, and uniting the opening in the abdominal wall. This method has been presented by Lucas Championnière, of Paris, perhaps as carefully as by any one.

It would be interesting to compare the opinions of these two most eminent surgeons on those points in which they agree, and also those in which they differ, but this would take us beyond the limit which we have assigned ourselves. We shall presuppose that those of this body who are interested in the subject of operations for the radical cure of hernia are already familiar with the methods in vogue, and we shall proceed to the consideration of those points in the operation upon which depend success or failure.

The chief dangers in operations for the radical cure of hernia have been considered to be those dependent upon opening the abdominal cavity. Peritonitis is as fatal now as at any time in the history of surgery, and, we suspect, as frequent, if not more so. Adherent omentum and intestines may seriously complicate operations. These are difficulties, however, which can be overcome successfully by operators skilled in the technique of abdominal operations.

We do not wish to be understood to underestimate the dangers of the operation in incompetent hands. Personally, we are doubtful if the length of life of the human race has, up to the present time, been prolonged by the various operations practised upon the abdomen. Laparotomy has come to be looked upon as so devoid of danger that it is performed by every one who chances to meet with a case which he thinks may possibly require it, and this, too, without a familiarity with those details, and a knowledge of possible complications, which make operation safe. I do not believe anyone should undertake to operate for the radical cure of hernia who is not a competent operator in the whole field of laparotomy. The difficulty inherent to all operations for the radical cure of hernia is in forming a new wall sufficiently strong to resist the impulse of the gut against it. What the power of the gut is to force itself through any aperture, however small, was remarkably illustrated to us in a laparotomy upon a fat woman, in whom complete anæsthesia was difficult to obtain. In pushing the hand down to the loins, for the purpose of feeling the kidneys, the fingers were repeatedly separated from each other by the intestines forcing themselves between them, and it was absolutely impossible to hold the fingers together. It is thus evident that if any depression or weakness remain at the point of operation, the gut will be liable to force itself into this, and cause recurrence of the hernia. How these difficulties may best be overcome will be considered a little later. It may be proper now to consider the important points connected with the operation.

To have the gut free from air and fæces is a great convenience to the operator, preventing the tendency of the gut to escape from the opening of the hernia while operating. In operating for hernia, as well as in all laparotomies, it is well to give a full dose of castor-oil twenty-four hours before operating. Follow this by an enema at the time of the first passage from the bowels, and again two or three hours before the operation. After administering the oil give only an easily assimilated diet, and give nothing beyond a cup of broth on the morning of the operation. The patient should be scrupulously clean, and the parts to be operated upon should be most thoroughly washed, shaved, and washed again; and then disinfected and surrounded by towels soaked in a disinfectant. To discuss the question of antiseptics in connection with this operation would take us too far. It is our belief that its relation to this operation is the same as to other laparotomies. Perhaps it is more important, since the surroundings are especially prolific of secretory and septic material. While we do not say that the employment of antiseptics is an absolute necessity, we do consider them highly desirable. By this we mean an antisepsis which is rigorous and complete in every detail.

In operating, a complete anæsthesia is of great importance, since, if incomplete, the escape of abdominal contents from the ring may at any moment seriously embarrass the operator.

The complete dissection of the sac of the hernia from its surroundings is desirable. If the lower part of the sac remain *in situ* it may form a cyst. The removal of the upper portion is highly important, since, if this is not done, it prevents the formation of as firm a cicatrix as would otherwise be obtained.

The opening of the sac has been looked upon by some as a thing to be avoided. We believe emphatically that it should be opened. The increased danger from this is, we believe, *nil*. By opening it the operator is enabled to see whether or no there are adhesions of gut or omentum, and successfully to care for them. It is our practice in operating to open the sac of the hernia about one inch below the abdominal opening, see that it is empty, and then to separate this part of the sac from its surroundings and from the cord, and clamp it with a pair of forceps above the point where it is opened. Thus the abdominal cavity is closed, and the operator can proceed to loosen the adhesions of the remaining portion of the sac. The dissecting of the sac from the surrounding tissues and from the cord is usually not difficult, and we have commonly succeeded best with the finger-nail. By this means, keeping close to the sac, the hemorrhage is, as a rule, slight. Occasionally, where there has been inflammation, the adhesions are very firm, and the process is difficult and dangerous, since the vas deferens, or even the femoral veins, may be injured.

If an undescended testicle be encountered, it may be removed, since these are found to be without function. Not unfrequently a large mass of omentum is found in the sac, either free or adherent. We have met adherent omentum, especially in cases of strangulated hernia which had not been entirely reduced for a considerable time. In such cases we have noticed that the portion of omentum situated at the ring was constricted, and in some cases atrophied and closely adherent to the ring. In one case of ventral hernia there was an immense mass of omentum contained in, and adherent to, the sac. The portion situated at the ring was firmly adherent, and reduced to a fibrous mass, the protruding omentum being wholly nourished from its adhesion. It is worthy of consideration whether, if this protruding omentum be reduced, it may not be a leading factor in causing a return of the hernia.

In the case of the young man whom we shall show you, we removed a mass of omentum as large as the fist, and we have removed smaller masses at various times, and cannot see that the amputation of such portions of omentum complicates the operation. Care must be taken, however, to ligate the omentum very securely by one, or, if necessary, several ligatures. A friend told us of a case in which he had failed to do so. Serious hemorrhage had ensued. To secure the bleeding portion it was finally necessary to open the abdomen, and the omentum was found retracted to the level of the umbilicus.

Adhesions of gut, if present and firm, are serious. We have never met with any but slight adhesions which could be separated without danger and the gut returned. Should they be present, the removal of the portion of the sac to which the gut is adherent would be desirable, if possible, and the returning of this with the gut to the abdominal cavity.

The treatment of the sac itself is a point giving rise to much discussion. The plan of Macewen, to dissect it free from all adhesions, transfix it with a catgut suture, and draw it upward inside of the abdominal ring, but outside of the peritoneal cavity, has rendered, in the hands of its originator, excellent results. Whether this success is not as much due to the care with which he loosens up the peritoneum about the internal ring, and closes the ring itself, is in doubt among many operators.

After seeing Mr. Macewen's surgical methods, we must say that we have formed for them the very highest esteem, having seen very few surgeons so full of resource and sound reasoning. Other eminent surgeons, however, prefer to extirpate the sac entirely, ligating it as high up as possible. Whatever method be chosen, there are two important points in connection with the treatment of the sac: 1st, It should be freed thoroughly from the ring, and for a distance about its upper margin. 2d, Whether left as a convex mass above the internal ring, or cut off, no depression should be left above the ring. If the sack is excised, the peritoneum should be pulled downward as firmly as possible before being ligated, and the ligature should be placed as high up as possible, so that when the peritoneum retracts no depression may remain. Should a depression remain, there is a liability that it will constantly be deepened by the pressure of the gut upon it. For the ligation of the sac we believe catgut to be the best material.

The closure of the rings is all important. Shall we seek to close them by first intention or by granulation? The weight of opinion is certainly in favor of closing them by first intention, it being held that a cicatrix formed by first intention is firmer than one formed by granulation. The first operation which we performed for the radical cure of hernia was on May 14, 1885. This was before the publication of Macewen's cases or those of Lucas Championnière. In fact, up to this time we had noticed nothing with reference to the question of the closure of the rings.

The method of operation we adopted was to close the opening in the peritoneum with a catgut ligature, then unite the pillars of the ring with interrupted silk sutures, leaving one end long. A drainage-tube was inserted to just outside of the united pillars, and the superficial parts were united by interrupted sutures. An antiseptic dressing was applied, and continued for about one week. This was then removed and the wound allowed to suppurate. We argued that at the end of a week the peritoneal cavity would be effectually closed against all danger from suppuration, and that by allowing suppuration a larger cicatricial mass would be formed to resist a return of the hernia. As the sutures loosened they were drawn away. Perhaps this is not the best way. We certainly must defer to the experience of abler surgeons than ourselves in this matter. We do not hesitate, however, to claim that this is a good method. Certainly no case can be a severer test of a method than the one we show you here to day, and it is to illustrate this very point (viz., that cicatrices formed by suppuration are firm) that we have brought you this case.

The important point in the suture of the pillars is to approximate them thoroughly. To accomplish this we believe methods must be varied according to cases. In some we have found approximation easy; in others the rings have been tense and approximated with difficulty. We strongly suspect that in some cases these sutures cut through the tissues in which they are embedded, for we have found on tying sutures considerable resistance to the drawing of the pillars of the ring together, and it is a rule that tissues held tensely by sutures are cut by them.

All we can say is, that the suturing of the pillars by interrupted sutures, leaving one end long, dressing the wound antiseptically until the abdominal cavity has been thoroughly closed, and then allowing the wound to heal by granulation, pulling away the sutures as they became loosened, has secured for us satisfactory results.

Drainage we believe to be desirable. Though the wounds may heal without danger of retained secretions, the possibility of such secretion pushing its way toward the abdominal cavity, should such secretion be present, would indicate measures to avoid such a serious complication.

The superficial sutures should approximate accurately the tissues. The application of dressings is a matter which should receive most careful attention, since if poorly applied what might have given a good result may end in failure. Dressings should be ample, and firmly held by a spica bandage, in order to secure equable pressure upon the wound. By slightly flexing the leg, in applying the dressings and bandage, and, on putting the patient to bed, raising the head and laying the leg on a pillow, there is less tension on the sutures uniting the pillars, and the parts are kept at rest and firmly in apposition.

We believe iodoform and hygroscopic gauze to be the best dressing. The gauze is applied dry, and thoroughly impregnated with iodoform. This absorbs all secretions, and forms an admirable dressing. It is good practice to remove this in from three to four days, or sooner if saturated with secretions. It enables one to see whether the wound is in proper condition, and also permits the removal of the drainage-tube.

Too great haste to leave the bed is a grave error. We should prefer that a patient remain in bed a couple of weeks after the wound has healed, and then that he should get up very carefully and gradually, believing that thus a firm cicatrix is more sure.

The application of a truss after an operation we believe to be good practice. One case we show you has never worn a truss; the other has one on to-day. Many cases never require a truss; but if a good-sized soft truss be worn for a time, it can do no harm, and it is an added safeguard against the early yielding of the newly formed and soft cicatrix to the pressure of abdominal contents.

The prognosis in case of operation for radical cure of hernia we believe to be good. The danger of life in the hands of an operator competent to perform laparotomy is slight. It is certainly less than are the dangers incident to the hernia itself, especially if not thoroughly controlled by a truss. If an uncontrolled hernia be simply changed by operation to one easily controlled by a truss, it is worth the risk of operation.

What cases shall be operated? That all cases of strangulated hernia which cannot be reduced should be operated goes without saying. We believe that the radical cure should be applied to such cases, unless contraindicated by especial obstacles, such as the gangrenous condition of the intestines, the extremely exhausted state of the patient, etc.

Cases not strangulated, complicated by such general conditions as diabetes, tuberculosis, infirmity, and old age, should not be operated on. In infants, only strangulated, irreducible, and uncontrollable herniæ should be operated on, since those which can be retained by a truss tend to recovery. All uncontrollable cases in adults in good health should be operated on. Without it the future of the patient is a sad one indeed.

We believe that irreducible though unstrangulated hernia in adults should be operated on. Undoubtedly such cases frequently fill out their full lease of years, but many such cases result fatally. We believe a considerable number of such cases, if not a majority, to be due to protruding omentum held by adhesions. In an operation, as has been said, this can be amputated with little danger. A case of this sort living within reach of skilful surgical aid is not so grave as one lacking it; but we believe all such cases would run less risk from operation than from strangulation. In vigorous young men, having hernia held by a truss which causes pain, or retains a hernia unsatisfactorily, especially if these difficulties are increasing, we should favor operation.

We are not prepared to advocate the radical cure for hernia in all vigorous adults, but believe that the tendency of good surgery is to extend the limits of the operation. In concluding our paper we would present to you two cases to illustrate two unusually difficult and rare cases of radical cure. The first is of a boy, operated on December 9, 1886, at the age of two years and one month. The case was one of inguinal hernia, and could not be controlled after the most persistent efforts. The radical cure was performed by the method described. The case progressed without fever, and in all respects satisfactorily. He was kept in bed a considerable time, and then allowed to get up with a pad held over seat of wound by a cotton-flannel band about the pelves, with perineal band of the same material.

In August, 1887, eight months from time of operation, boy seemed perfectly cured, when he had a sharp fall; he was noticed to place his hand at once at seat of the rupture. Several days later a slight bulging was noticed. The boy was placed in bed. Tinct. iodini co., ♏ xv., was injected at seat of this bulging, and when the tenderness had subsided a water-pad truss was applied. The case at present time (June, 1888) seems to be perfectly cured; but the truss will be continued for some time to come, to guard against danger.

So far as we know, few if any cases so young have been successfully operated on. Fortunately the operation is rarely indicated, since most cases can be controlled by a truss and are thus cured.

The second case we present was operated on May 14, 1885. We have desisted thus long from publishing the case that the permanence of the cure might be indisputably established. The patient, aged twenty-five, had a congenital left inguinal hernia, the largest we have ever seen, hanging down one-third the length of the thigh. This could apparently be entirely reduced, and the scrotum could be invaginated, and the wide-open hand could be passed upward into the abdomen as far as the umbilicus. The opening was enormous. The hernial sac was opened, and though before operating we had apparently returned the intestines to the abdominal cavity, it was found that many feet of collapsed intestine remained in the sac, the intestinal contents alone having been returned. The wall of the sac was so much thickened as to obscure the presence of the intestines.

The operation for radical cure was performed essentially as described. The cavity formed by the enucleation of the sac was so large, and obliterated with such difficulty, that a small amount of secretion was retained, causing a small abscess, and a ligature cut short and retained caused a continuation of suppuration for a time. Aside from this the case progressed favorably in every respect. The patient has been doing the heaviest sort of work in a rolling-mill, has never worn a truss, and to-day is perfectly cured.

EPILEPSY ASSOCIATED WITH INSANITY.

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The subject of this communication is a woman, thirty-five years of age; family history somewhat obscure. As far as can be ascertained her history shows that she has been subject to epilepsy since she was fifteen years old, and has since continued to have epileptic convulsions at irregular periods. Owing to the dulling of her mental faculties she cannot give reliable information concerning the onset of her epileptic attacks. She speaks of the preparoxysmal stage as manifested by a queer feeling which pervades her entire system, and which she is unable to describe. For the past six months she has been under close observation, during which time she has had two series or batches of fits, the first of which occurred last December, and numbered thirty-five; the second batch occurred in March, 1888, and amounted to more than forty fits. The nocturnal fits are at times slight, or of the *petit-mal* variety; while the diurnal are very severe, frequently giving rise to most marked epileptic violence, during which she is very maniacal in action, and is restrained with difficulty. During her excitement she generally is quieted by a hypodermic injection of hyoscyamine varying from one-twentieth to one-thirtieth of a grain. When irritable, she manifests suicidal tendencies. She always knows when the fits are coming on, of which she gives evidence by becoming irritable, assaulting, and quarrelsome without the least cause. When spoken to at this time she breaks out into violent outbursts of passion, which are quite the opposite of her usual demeanor. When her epileptic irritability has passed away she is of a most pleasant and agreeable disposition, is quiet and orderly, and appreciates her surroundings. Preceding the onset of her fits she complains of symptoms which she says she cannot describe accurately. She says she feels a sense of fulness in her stomach and chest, that her head aches very much, and that she experiences a feeling of tightness about her throat, like to that of being choked or suffocated. At length a queer feeling comes over her and she remembers nothing more until after the fits have passed away, when she has repeatedly informed me she was after having a bad fit. Her face at the oncoming of a fit is expressive of anxiety, and there is a look of vacancy, gradually deepening into ferocity and anger, followed by severe epileptic violence and a series of convulsions. When spoken to just preceding the onset of a fit, her speech is decidedly defective, her answers are very slow, and she responds only to urgent questioning, showing that the brain is slow in receiving impressions. Her facial expression now changes and her countenance assumes a pale, livid hue, and she does not look at the one with whom she speaks. Her expression becomes now more angry, and her look of vacancy deepens; there is marked movement of the eyes from side to side, and questions addressed to her fail to elicit any response; but slight movement of her lips is noticed, showing that impressions are still made upon the brain, and that the conscious state is about to be replaced by unconsciousness. Her limbs being examined at this period were found to be in a somewhat rigid state, and her position characteristic of an approaching paroxysm. On March 15, 1888, a note was made, as follows: "She is becoming depressed and melancholy; she does not appreciate her surroundings, and is less industrious than formerly. She refuses to eat her food, perhaps owing to delusions of poisoning. The patient continued in this condition for the following day, toward the evening of which she complained of a queer feeling in her head, and said she felt as though the fits were coming on. At this time, three hours preceding the onset of her seizure, she appeared more dull and stupid; her brain seemed to receive impressions more slowly, and her articulation, previously fairly distinct, now became almost unintelligible. When spoken to she attempted to answer, but muttered in an incoherent manner, and it was impossible to understand what she said. At length the epileptic echo is heard, which is premonitory of the onset of a definite series of convulsions. A peculiarity in this case is the occurrence of the epileptic cry just preceding the fit, which, though commonly conspicuous in the insane epileptic, is yet wanting in all but a few cases which I have observed. Finally, a definite convulsion occurs, followed by a batch of seizures at intervals of a minute or so, the number of fits amounting to thirty or forty, and cease in about one hour and a half after the onset of the initial seizure."

The condition of the patient during her epileptic seizures is that of rigidity, which becomes evident shortly before the onset of her fits, and she continues more or less in this condition till after the final fit has occurred. After her fits she is dull and stupid, and suffers but little from epileptic exhaustion, as compared with many others of the patients, who are weakened very much after a few fits. This condition of rigidity is most marked in the upper extremities, the hands being tightly clinched, requiring considerable force to open them. The palms of the hands are at times lacerated, owing to the severe pressure of the fingers when the hands are tightly clinched; the tongue is frequently bitten during her fits, her head is thrown back, her arms hang by her side, her lower limbs are extended, and her body is opisthotonic. Spasmodic twitching of the mouth is observed at the beginning of inspiration, and lasts until the inspiratory act has passed away, when the mouth returns to its symmetrical shape. In this case the left corner of the mouth is drawn downward and outward, due to contraction of the platysma muscle, which becomes quite prominent during each spasm. With expiration the lips are puffed outward, and at the end of expiration there is a period of quiescence, following which the inspiratory movements begin again. During the prolonged intervals between her fits she enjoys apparent good health, but gives evidence of being delusional; her delusions, however, are of a fleeting nature. Rarely she has a single slight fit, just preceding and after which she is somewhat irritable, and following upon this state there are evident signs of dulling of her mental processes or slowness of apprehension.

The most remarkable phenomenon in her case is her epileptic mania, attacks of which, though constituting part of her epileptic paroxysms, also occur independent of her epileptic seizures. During her stage of epileptic violence she is very difficult of control, attempting to assault any one who may chance to come near her. I have carefully observed this case in order that I might ascertain the relation, if any, of the aura to her epileptic seizures, and I am satisfied of the existence of some relation between the apparent movements of the patient and objects about her, and the direction in which the head is turned at the commencement of her fits. It is very difficult to obtain from the patient information as to the side on which the spasm begins, or is most marked, at the onset of her epileptic seizures. But there is every reason to believe that the apparent movement or initial rotation is generally in the same direction, or, in other words, the patient feels herself to turn in the same direction as her eyes and head appear to be drawn at the commencing spasm of the convulsion. I am inclined to think the attacks begin on the right side, as she feels herself drawn from left to right side; that she is giddy or dizzy in her head, and that she has noises in her ears. When in a fit she appears to be most convulsed on the right side. The aura or giddiness in the majority of the cases examined appears to proceed from right to left, as the patients complain of feeling themselves turning in this direction, and that external objects seem to rotate in a similar manner as they themselves. In other cases the fits began on the left side of the body, and the head was turned to the left at the beginning of the spasm. Several of the patients inform me that they can tell when a fit is about to come on because they feel the left corner of their mouth to twitch, that their heads turn to the left, and the left arm is drawn up. Having observed these patients while in fits I have no reason to doubt the accuracy of their statements. Another patient has repeatedly informed me that she seems to go round to the right, as well as everything about her, and that this condition is preceded by a feeling of sickness which begins in her stomach and goes to her head. Her fits begin with rotation of her head to the right, and various colors appear before her eyes. I have observed several cases in which the fits began by turning of the head to the left and drawing up of the left arm, others in which the head turns to the right with a slow and gradual motion, the patient falling on the side toward which the head is turned.

Of the many cases under observation there is every reason to believe, so far as the statements of the patients can be relied upon, that there is an apparent rotation of patients and their surroundings in like direction at the beginning of the initial clonic spasm. I have conversed with some patients who assured me that they and their surroundings seem to go to the right, while the attendants in charge of the ward, who are very observing, state that at the onset of a fit the patients' heads turn to the left, that the left arm is drawn up and the left side is convulsed more than the right. This is probably explained by the fact that a bilateral convulsion occurs, probably beginning on the right and then extending to the left side, where the convulsion becomes most marked. Of course there is always a certain allowance to be made for the remarks of this class of patients, but in case of doubt it is always well to have the patient, when free from fits, illustrate which way she would turn in case giddiness was coming on. I think I have derived sufficient information from the patients, attendants in charge, and from personal observation to justify me in asserting that at the onset of an epileptic seizure the patient appears to turn in a definite direction, as also her surroundings, and that the primary tonic spasm begins in the corner of the mouth or in the hand, on the side toward which the apparent movement of the patient and surrounding objects takes place. Pressure on the tragus of the right ear in one patient, who suffered from purulent otitis due to scarlet fever when a child, produced giddiness with a tendency to fall. Several years after the commencement of her ear trouble she became subject to epilepsy, which I think can be attributed to her ear disease as the causal factor, as I believe disease of the ear to give rise to epilepsy, especially when the aural disease follows upon attacks of scarlet fever.

In these cases the epilepsy is probably produced by some peculiar action of the poison of scarlet fever on the nervous system, or by extension of the throat affection to the tympanum, which is followed by inflammation of the middle ear. It would appear, then, that some relation exists between epilepsy and ear disease, for we occasionally meet cases where ear disease followed by epilepsy occurs after scarlet fever, and look upon the ear disease as a connecting link between the fever and epilepsy. But this condition is not always found to exist, as we meet with cases where epilepsy and ear disease result from scarlet fever independent of each other. Many of the cases complain of a ringing or drumming in their ears just preceding the fits; in these cases aural examination revealed nothing abnormal.

The case to which the above remarks chiefly apply was selected as the most suitable, because her fits always occur in batches of thirty-five or forty, lasting about an hour and a half, after which the fits will not recur for three or four months, and seldom has she a fit during this interval. In studying a case of epilepsy much difficulty will be met with in arriving at a definite diagnosis of the so-called slight fits, the outward physical symptoms of which are at times so slight as to be passed over unnoticed, especially when epilepsy is associated with insanity, in which case they may be overlooked, as they are occasionally reduced to outbursts of passion or attacks of irritability. The matter of treatment has not yet been thoroughly tested, and hence I cannot vouch for the efficacy of the bromides, or the nitrate of sodium, or other drugs which are lauded so much in the treatment of epilepsy.

TWO CASES OF INTRANASAL DISEASE.[1]

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I. Rhinolithiasis.—G. R. K——, a bright and lovely little girl, in her fifth year, was referred to me by Professor H. M. Lyman and Dr. W. K. Harrison, on account of nasal and aural disease, and she was first seen by me March 27th last. The following history was given: When the patient was six weeks of age a suppurating inflammation with discharge from the ears occurred. The latter ceased in a short time, however, under appropriate treatment. Since then, and after "catching cold," and preceded by earache, the aural discharge has many times returned.

About one year ago an increased nasal discharge appeared, and has since then still further increased, and has continued until the present time. Nasal syringing with boric-acid solution has been resorted to with little result, other than preventing a marked fetor which the discharge otherwise possessed. The child's mother, about six weeks ago, first noticed, when douching the nose, a white object in the left naris, and this has been seen daily until the present time.

Status præsens: From the appearance of the membranæ tympani—opaque, thickened, irregular in surface, with the usual landmarks partially obliterated—together with the fact that bone conduction in all positions is more distinctly heard than aërial vibrations, and with marked deafness for the watch, middle-ear disease is diagnosed.

The tonsils are slightly enlarged, and the posterior pharyngeal wall is covered with mucus, and dotted with enlarged follicles—the latter increasing in number upward. From the latter fact, together with the mouth-breathing, deafness, and slightly nasal voice, pharyngeal glandular tissue is suspected.

After carefully conducted, yet thorough nasal douching—the same removing a large amount of secretion, especially from the left side—anterior rhinoscopy reveals a reddened, swollen, mucous membrane, and in the left naris a yellowish-white object, plainly visible, and about one inch back of the anterior opening. With the probe the object is movable, and its surface slippery and soft, and without grating sensation. It occupies the inferior meatus, and extends upward between the inferior turbinate body and the septum, and appears to be about one inch from above down, though its peripheral portions are not definable on account of the swelling of the surrounding mucous membrane.

Its appearance suggested inspissated secretion, and the probe seemed to confirm this idea, yet with angular aural forceps repeated efforts to grasp the body resulted only in slight hemorrhage and failure—the object slid from between the jaws of the instrument at each attempt, a little dried mucus alone being extracted and no grating sensation observable. Daily nasal douching with warm sodium bicarbonate solution was advised, and office visits requested on alternate days, and after eight days the yellowish appearance of the body had given place to a dull white, roughened or slightly worm-eaten look; and to the probe an unmistakable grating on friction was evident, and the attendants could hear a click on striking the body with the end of the instrument. Its size smaller; its mobility increased; its calcareous nature unmistakable; it was now known to be a rhinolith, and yet, on account of the disparity in size between the anterior nasal opening and the stone, anterior extraction *in toto*, or by crushing, was impossible, for the calculus could not be grasped with any forceps—it invariably slipping backward on each attempt. Two days later the efforts were repeated with like results, and in the hope of finding a surface of the stone that forceps could be made to grasp, an attempt at rotation of the body was readily successful, but just as the act was accomplished the calculus disappeared from view—it had slipped further back into the posterior portion of the nasal cavity, or into the naso-pharynx. With the probe the denuded bone-grate was elicited at a greater depth, and further attempts at extraction were thought inadvisable without professional assistance, and an appointment with Dr. Harrison three days later was decided upon.

At this time no difficulty at posterior extraction was contemplated, and expecting that but momentary suffering would result, an anæsthetic was not given. The little patient was held in the doctor's lap, the feet held between his legs, and the shoulders and arms were covered and restrained with rubber sheeting. The mouth-gag was introduced on the right side, and it, and the head, were steadied by an assistant. Seated in front of the little patient I passed a large, well-curved Eustachian catheter along the opposite (right) nostril, and into the naso-pharynx, so that its tip extended to the lower border of the velum palati. The left index-finger was next passed into the throat until its tip touched the end of the catheter already *in situ*, and thus hugging the instrument the finger passed easily and quickly behind the velum; the only obstruction found was a large amount of pharyngeal glandular tissue in the vault, as already suspected. The finger-tip now closing the left posterior nasal opening, a good-sized cannula, with roughened end, and the latter protected with tightly wound absorbent cotton, was passed, first, along the left inferior and then along the middle meatus, with the intention of pushing backward the rhinolith through the posterior opening, the finger then guiding it into the mouth, the patient's head tipped forward at the same time, thus avoiding the principal risk, viz., that of the foreign body falling into the trachea. The chagrin was great; no calculus was found! The inferior meatus was enlarged in its posterior half; the middle meatus was empty! Yet, before we commenced the procedure the dead-bone grate was elicited with the probe in the naris at one and a half inch from the anterior nasal opening, and found by both of us. Afterward it was again found to be still present, proving that denuded bone was actually the cause. Previous to the withdrawal of the finger, the very friable pharyngeal tonsil was scraped off with the finger-nail, a fair amount of venous hemorrhage resulting. With the exception of the temporary apnœa, as shown by the facial cyanosis during the presence of the finger in the naso pharynx, the little patient did not appear to suffer much, and the conciousness of the little one was retained, so that in case the calculus had eluded the finger and dropped into the larynx, the reflex cough resulting would have expelled it.

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[1] Read before a meeting of the Chicago Pathological Society, June 11, 1888.

From the foregoing it will be seen that, at the time of the sudden disappearance of the rhinolith on rotating it three days previously, it had then most probably passed into or beyond the posterior nasal opening, and had at that time, or subsequently, been swallowed. My error consisted in mistaking the still-present dead-bone grating as dependent upon the presence of the calculus, whereas, actually denuded bone had resulted from the pressure of the foreign body, and the hemorrhage present in the early examinations was now explained.

The procedure was, however, fortunately justifiable on account of the presence of hypertrophied glandular tissue in the pharynx, and its destruction. The general health of the little sufferer, which had been greatly impaired since the onset of the catarrhal symptoms one year previously, immediately commenced to improve. The nasal respiration was again restored, the mouth-breathing ceased, the nasal twang vanished, the rhinorrhœa rapidly diminished, and the exuberant cheerfulness of the child again returned.

The English literature of rhinolithiasis, as far as my brief search has gone, is very limited. It is barely mentioned in some of the surgical text-books, and is entirely overlooked in many of the special throat and nose treatises. From the latter fact the infrequency of these cases may be inferred.

According to Morell Mackenzie,[1] Demarquay, a French observer, collected fifteen cases of the disease, and was one of the earliest writers on this subject. From him it is learned that the earliest reference to these concretions is in a work by Matthias de Gardi, published in 1502, wherein a case is vaguely mentioned. Bartholin (1654) observed two cases. Claude (1685), Kern (1700), Reidlinus (1706) recorded single cases, and Wepfer (1727) described two instances. Ruysch comes next (1733) with a case, and other cases were those by Saviales (1814), Gräfe (1828), Thouret (1829), Axmann (1829), Brodie (1844), Demarquay (1845), Cook (1847), Köstlin (1854), Rouyer (1857), W. N. Browne (1859), Verneuil (1859), West (1872), Erichsen (1872) mentions two cases, Roe (1880), Hering (1881), Nourse (1883), and Mackenzie gives the histories of two cases occurring in his own practice (1876, 1882).

In 1884 J. Bettman[2] read a paper before the Chicago Medical Society, and reported a case. R. E. Beach,[3] in 1885, recorded two cases.

Many of the following main facts are taken from Mackenzie and Bettman. Demarquay, in 1845, named this condition "rhinolithiasis." Stoerk had seen but one case up to 1880.

The nucleus of a rhinolith is usually a foreign body inserted into the nostril during childhood. In Mackenzie's cases, and one of Bartholin's, no nucleus was found. In Hering's a button formed the nucleus. In one of Bartholin's cases, in Bettman's, and in one of Beach's cases the nucleus was a cherry-stone. In Beach's second case a small seed was found in the centre of the concretion. Nasal secretion, dried or otherwise, may form the centre, as in Browne's and Thouret's cases.

In Bettman's case the calculus was supposed to have been in the nose for forty years, and Jacquemart had a case of over twenty years' standing. Beach's cases were both children of four and twelve years, and the condition had existed for eight and eighteen months respectively.

In size they vary from a lentil (Rouyer) to a small plum (Voltolini). In Browne's case the stone measured in length $1\frac{3}{4}$ inches; breadth, 1 inch; thickness, $\frac{1}{2}$ inch, and weighed three drachms and thirty-three grains. The smaller stones may be extracted anteriorly without crushing; but the larger ones must either be cut, crushed, or removed posteriorly, as in Hering's, Mackenzie's, Bettman's, and the accompanying case.

Chemically the rhinoliths consist mainly of carbonate and phosphate of lime, and are usually coated with a "soft, pultaceous, fetid material composed of epithelial débris, pus, and cholesterine."

Fetid rhinorrhœa is usually present, with or without epistaxis, and polypi and denuded bone may be associated conditions in this as in middle-ear disease.

The stones are rarely multiple, as in Axmann's, Blandin's, and one of Mackenzie's cases.

The diagnosis in many cases, especially where the calculus is situated posteriorly, is by no means easy, and these cases have been mistaken for osteoma, for necrosis with sequestrum, as in Bettman's and one of Beach's cases; for cancer, on account of the "fungous bleeding appearance of the mucous membrane" (Jacquemin). Jacquemart's case was diagnosed by himself and ten consultants as osteosarcoma.

The usual seat of the stone is in the posterior portion of the inferior meatus. In one of Mackenzie's cases, however, the stone was found in the middle meatus, and in his other case it extended "from the level of the inferior turbinated body to the roof of the nose."

Surgical removal is necessary, and with small stones anterior extraction *in toto* with dressing forceps is resorted to. Where too large for such removal, and yet can be grasped with a lithotrite, they are crushed and the débris removed with the douche. In those cases that cannot be removed by these methods, posterior extraction through the naso-pharynx and mouth, as already detailed, must be resorted to. On removal rapid subsidence of symptoms results.

II. PRIMARY INTRANASAL CARCINOMA.[1]—W. S——, aged twenty-nine, a vigorous-looking, well-nourished American, by trade a trunk-maker; first noticed, five years ago, a stenosis of the right nostril. Professional advice was then sought, and, in the doctor's own words, "a simple amorphous polypoid tumor, with not more bleeding than is frequently seen," was removed. "One year later," the doctor writes, "I removed a similar, though more vascular tumor, with considerable hemorrhage. Macroscopically benign in character. I did not have my suspicions aroused. Six months later he presented himself with a tumor entirely filling the orifice, very vascular, and breaking down easily under the forceps. The pieces I removed were very small, and none were saved. I used a curette, and then the cautery. He was instructed to return for treatment. I expected then to be able to get a portion for microscopical examination, but he failed to return, and I began to think, after all, it was benign, and that the cautery had cured him. He is marked cured—so statistics are made." The patient afterward passed on to the care of another specialist, and was operated on three times during the year 1886. From this practitioner, however, no details are obtainable, and he barely remembers having had such a case. In July, 1887, he became the patient of still another physician, and he writes as follows: "Mr. S—— has been under my treatment for some time. I removed the growths from nose and tear-sac, but they soon returned. The growth, in my opinion, is a fibro-sarcoma, and certainly demands a radical operation."

This patient was first seen by me on January 17th last, and the following are the details of his condition at that time: There was a tumor just below the right internal canthus, and on the right side of the nose, about the size of a hazel-nut—elastic on palpation and fixed deeply.

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[1] Diseases of Throat and Nose, vol. ii., p. 435. 1884.

[2] Journal of the American Medical Association, September 6, 1884.

[3] THE MEDICAL RECORD, July 11, 1885.

[1] Patient exhibited, and microscopic sections of the tumor shown at the meeting.

There was complete stenosis of the right nostril, and the latter cavity was completely filled—with the exception of a small portion anteriorly near the septum—with a gelatinous-looking vascular growth, bleeding freely on the slightest touch. On posterior rhinoscopy the tumor was seen extending through the posterior nasal opening, and the adjacent roof of the pharynx was reddened and swollen. Its appearance was the same as already described—the blood-vessels could be distinctly traced near and upon its surface. The right Eustachian orifice was not involved, and the hearing was alike and normal on both sides. Ophthalmoscopically the retinal vessels were seen to be unduly tortuous, yet otherwise the fundus of each eye was normal and the vision was good. The patient was the picture of health, and said that during the recent winter he had actually gained in weight. In the hot weather, as is the rule, however, he says he loses flesh. He came for advice and operation, and from his past experience well knew that only radical methods would avail in his case. With such a history and present condition a malignant tumor could alone be diagnosed, yet its exact nature was unknown. The expediency of further operation was questionable after such persistent recurrence, with an area of growth so extensive, and with more than probability that its seat of origin involved the ethmoidal cells at least, and possibly the antrum and sphenoidal cavities. From the tortuosity of the retinal vessels orbital involvement was thought of as possibly commencing, and might we not have an intracranial extension as readily as the one present on the facial surface, though not yet evident by cerebral symptoms? Mackenzie,[1] referring to such extension, writes: "It is remarkable, however, that the cranium may be perforated or eroded over a considerable area by the tumor without any cerebral disturbance being produced," and refers to several such cases published in a thesis by Petit (Paris, 1881, pp. 25, 26, 32, and 37).

With these considerations, and incredulous as to permanent benefit, even from the most thorough yet necessarily incomplete extirpation, and remembering the possible risk of injury from such procedures to the intracranial contents, operation was refused. He still persisted, however, and was referred to Dr. Charles T. Parkes, who subsequently removed the facial growth, which, on microscopical examination, consisted of alveoli of glandular epithelial cells, embedded in a matrix of connective and myxomatous tissue in different portions—the later growing most probably from the mucous membrane of the lachrymal apparatus. Still later, Dr. Parkes removed the intranasal growth by Langenbeck's method, which is briefly as follows:

A cutaneous incision was made in the median line from the base of the nose to the osseous extremity of the nasal bone; then bending the cut obliquely outward and downward, and passing through the cartilage of the tip it was continued, to the junction of the nose with the cheek. This angular flap was now reflected upon the cheek. With bone-forceps the nasal bone, in the median line, was cut through from tip to base; then a parallel osseous incision in the outer portion of the nasal cavity, through the nasal process of the superior maxilla, was made. These two incisions were joined by still a third, at right angles to the other two, and carried through the base of the nose. The cut bone was now turned out of the way, yet still attached by threads to the surrounding tissues. The cavity, then in plain view, was seen to be filled with the growth, and the latter was readily removed with finger-tip and curette—so friable was it—and the hemorrhage was quite profuse. The growth was found to extend into the anterior ethmoidal cells, but the other cavities were not explored. After freeing as far as possible the nasal fossa, the wound was closed, and the patient made a good recovery; his weight, however, two weeks later, was found to be ten pounds lighter, showing that an operation of this character is worthy of careful consideration.

Six weeks following the operation the patient was again seen, and rhinoscopic examination showed that the tumor was again budding out from several points of the cavity, and in all particulars the same as before described. After an interval of three months from the time of operation the nasal stenosis was again complete, and the condition of the patient the same as when first seen—he having gained again eight pounds of the ten lost as the result of the operation. The facial growth was again about the size of a hazel-nut. The intraocular circulation was now normal, however, the vascular tortuosity seen previous to the operation having disappeared.

Microscopic examination of the intranasal growth showed the same alveoli of epithelial cells occurring in a large amount of vascular myxomatous tissue. The knowledge of malignant nasal polypi dates back to the time of Hippocrates, and those interested may be referred to Mackenzie's[1] historical sketch of these growths.

A CASE OF CONGENITAL ABSENCE OF THE IRIS, WITH CATARACT, DISLOCATION OF ONE LENS, NYSTAGMUS, AND STRABISMUS.

By WARD A. HOLDEN, A.M., M.D.,
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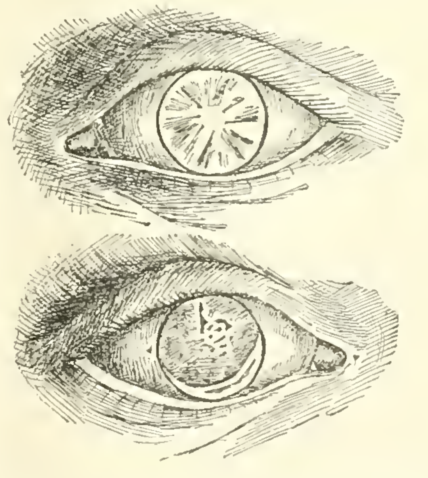
INSTANCES of aniridia are rare, but the following case is especially remarkable on account of the number of complications it presented. M. R——, a boy aged ten, with light hair and a fair skin, was seen in May, 1888. The irides were wanting in both eyes, and the lenses were hazy, with the right one dislocated. There was also a lateral nystagmus, and besides this, a slight convergent strabismus, which previously had been well marked When the eyes were observed with ordinary illumination, all behind the cornea had a hazy, bluish-black appearance, like the heavily pigmented iris of the negro, where neither detail nor margin can be distinguished, and it was impossible to tell whether an iris was present or not. Under the oblique illumination the opacities near the centre of the lenses were seen, but outside these was the same indistinctness. With the ophthalmoscopic mirror alone could the true condition, as shown in the sketches, be determined. The only vestige of iris to be seen in either eye was a pigmented line at the sclero-corneal junction. The right lens was dislocated upward and outward, its margin was slightly irregular, and scattered through it were diffuse nebulæ and a few punctate opacities. The left lens was in position, but had spiculæ of opacity running from the periphery toward the nucleus.



This eye illustrated the magnifying power of the cornea and aqueous humor, which is not often thought of in examining the iris or lens. For while the lens is small enough to slip easily through a flap in the cornea in this case. at a few inches distance no part of the margin of the lens could be seen through the cornea without moving the head to one side.

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[1] Diseases of the Throat and Nose, vol. ii., p. 499, 1884, under "Fibrous Polypi of the Naso-pharynx."

[1] Diseases of the Throat and Nose, pp. 385, 386. 1884.

It was impossible to get a distinct view of the right fundus, but in the left eye the fundus could be seen through the centre of the lens, and appeared normal in every respect. Vision was about $\frac{10}{200}$ in each eye, and the patient thinks that it is as good now as it has ever been. Lenses of 3 D — improved it slightly. The color-sense is normal. The sight is much better in the evening and in cloudy weather than in the sun, where he pinches the eyelids closely together to keep out the light. The patient's brother and sisters have perfect eyes, and the father and mother never complained of any ocular trouble, and wore glasses only for presbyopia. There is no history of any deformity in the grandparents, or in collateral branches of the family as far as known.

TREATMENT OF INSOLATION.

By R. ELLIS, M.D.,

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During the few days of intense heat in June, as ambulance surgeon of a city hospital I was called upon to treat five severe cases of sunstroke. As the cases were very severe and the results good, I should like to present a résumé of each case.

Case I.—Young man, aged twenty-two, German, butcher by occupation. I found him in a dark hall, apparently moribund. He was as hot and dry as a cinder; pulse, 160; temperature, 108° F.; respirations weak and sighing, and with involuntary evacuations. He was immediately stripped, ice-water applied by sprinkler, and tr. digitalis, ♏ x., and antipyrine, gr. xx., given hypodermically. Twenty minutes later, the air being very close in the hall, the patient was covered with a blanket and placed in the ambulance. On the way to the hospital three stops were made for water (some ice still remaining). After reaching the hospital the ice water was continued five hours with intermissions—the temperature falling to 99.3° F., but rising again to 105°, which was easily reduced to 101°. The patient opened his eyes two hours after reaching the hospital, and was rational seven or eight hours after. For two successive days his temperature rose to 105° F., but was reduced by quinine and cold sponging. Discharged on the fourth day, with no apparent sequelæ.

Case II.—Baker by occupation; had been lying on the sidewalk two hours uncared for. Temperature, 107° F.; pulse almost imperceptible, pale face, hot and dry skin, involuntary evacuations. He was stripped to the waist, ice-water was used immediately, and tr. digitalis, ♏ x., and antipyrine, gr. xx., given hypodermically. After working with him forty minutes, his pulse improving somewhat, he was brought to the hospital, reaching there about 8 P.M.; it was 2 A.M. before the physicians considered it safe to leave him. His temperature was reduced to 100° F. within two hours after admission, but unless the cold treatment was kept up the temperature would quickly rise to 103–4°. The patient had slight rise of temperature for several days, but left the hospital in a week, seemingly perfectly well.

Case III.—An Italian dock-laborer; had been without treatment two hours. Pulse, 170; temperature, 108.6° F.; involuntary evacuations and vomiting. Patient was stripped, and ice-water used immediately. The pulse was so weak and general appearances so bad that he was not placed in the ambulance for one hour. Hypodermics of tr. digitalis, ♏ x., and antipyrine, gr. xx., were given. On the way to the hospital, stops were made for water. On reaching the hospital, temperature was 100° F. The patient was put in bed, but, the temperature soon after rising, cold was used at intervals from 7 P.M. to 1 A.M., when the physicians considered it safe to leave him.

The next day his temperature was 102° F.; patient was dull and sleepy, but the second day after he was brighter, and left the hospital on the third day perfectly well.

Case IV.—An iron-moulder, who complained of feeling sick a few minutes before he fell. Patient was stripped, laid on boards, and ice-water applied till the temperature fell a little and pulse grew stronger (temperature, 107°F.; pulse, 164). At the hospital the patient was cared for as were the others, the thermometer being kept in the rectum and consulted every few minutes.

A singular feature of this case was the rapidly changing expressions which would sweep over his face.

As soon as he became half-conscious, he made things lively by yelling "murder" repeatedly and by trying to bite the attendants. By slapping his back and calling him "Tom, old fellow!" he would laugh quite pleasantly for a few seconds, when again there would sweep over his face a look of fear and anger, and he would renew his cries of "murder." Finally, morphine, gr. $\frac{1}{6}$, was given hypodermically and the patient gave no more trouble.

Case V.—A man, brought to the hospital by an outside ambulance. Patient was stripped immediately, and ice-water applied. Surface-temperature felt normal, but rectal temperature was 110°F. This being the limit of the thermometer, his exact temperature was not found, but the finger in the rectum showed the man to be as hot as a furnace.

He was immediately carried to the bath-room and placed in ice-water. Being a stout, full-blooded man, he was bled, the venous blood being very dark and coagulating almost as soon as it oozed out. Hypodermics of tr. digitalis and antipyrine were also given. Notwithstanding heroic treatment the temperature remained above 110°F. for over thirty minutes.

The temperature fell to 108° F. in one hour More tr. digitalis and antipyrine were given, and cold treatment kept up till, in about two and one-half hours, the temperature was 102°F. Then the cold-water treatment was stopped and blankets were made ready in case the temperature fell below normal.

Notwithstanding the use of blankets soaked in hot water the temperature fell to 96°F., but soon rose to normal. Soon after the temperature became normal, the patient slowly opened his eyes, raised his hands above his head, and soon after died, his pulse and respiration having been weak and feeble from his entrance till his death.

The first four cases developed tonic muscular spasms so well marked that they could be lifted by the head and heels without the body relaxing. In these cases, especially in No. 3, the jaws were held open by a mouth-gag and the lips kept apart by the fingers, to prevent them from biting their tongues and lips and to enable them to breathe more easily.

I have seen a case of insolation where, after the patient was recovering and in the tetanoid stage, an "ice-bag to the head" was ordered and the patient died before morning, his lips being tightly pressed together and swollen to twice their normal thickness. From the experience of several physicians it seems to be agreed that, in the treatment of insolation:

1. Every ambulance should carry ice, a sprinkler, and pail, and the patient should be treated on the spot till the ambulance surgeon feels it safe to move him.

2. Every patient should if possible be *stripped*, a sheet or blanket covering him when carried to and from the ambulance.

3. The thermometer should be placed in the rectum and kept there during the entire treatment, the advantage of knowing just the temperature at any minute being vastly more useful than the slight reduction gained by rectal enemas of ice-water.

4. If the heart is weak, and especially if any heart depressant has been given, as digitalis, quinine, or antipyrine, the patient should be kept as quiet as possible, and under no circumstances should his head or body be raised.

5. If the patient has a very high temperature (108° to 110°F.), care should be taken not to reduce it below 102°

to 103° too hurriedly, as the tendency in some cases is to fall below normal.

6. If a spasmodic stage occurs, and the patient has locked jaws and tightly pressed lips, the mouth-gag should be inserted, and the lips held open if necessary.
7. The ice-bag to the head is useless, save in subsequent treatment.
8. The judgment of the physician must decide when to "bleed," to "rub," to give stimulants, to stop "cold" treatment, to remove to bed.
9. The thermometer in the rectum is the basis for all treatment.

THE THERAPEUTICAL VALUE OF MINERAL WATERS IN THE DISEASES OF CHILDHOOD.

By ISABEL LOWRY, M.D. Paris,

SAN FRANCISCO, CAL.

The American physician who spends any considerable time in foreign schools and hospitals must often be struck by the great efficacy which is attributed to a course of bathing or of drinking the waters at the numerous springs of Europe, as well as by the thorough scientific classification of the different waters and the exactitude and discrimination with which they are prescribed in given maladies and diatheses. Particularly is this the case in France, a country which is probably richer in bathing resorts than any other on the continent. In the children's hospitals this is especially true, and in the wards of such authorities in pediatrics as the late Professor Parrott, of the Enfants Assistés, or at the crowded *conférences* and clinics of that master of infantile therapeutics, Dr. Jules Simon, of the Enfants Malades, the student can hardly pass a day without hearing mineral waters prescribed, either as active treatment or as an aid to convalescence.

The secret of the brilliant results experienced in this line of treatment lies in two things—in the careful analysis of the waters and of their effects, and in the exact study of each case before recommending a spring.

A rough diagnosis of the disease is not enough. Temperament must be studied, diathesis decided upon, surroundings, accommodations, temperature, and cuisine considered by the sagacious physician. If personal inspection can be added to these it leaves almost nothing to be desired. It would not be too much to demand that each physician be familiar, at least, with the springs of his own State. That these questions have been reduced to scientific principles by French and German *savants* is very evident, and a new arrival in their clinics is more apt to be bewildered than edified by the discussion as to the relative therapeutic merits of Bourbonne-les-Bains, Schwalbach, Aix-la-Chapelle, Vichy, Forges, Salins, Mont Dore, and an innumerable host of other springs. The mineral-water establishments of France are thought worthy of the appointment of a government inspector (le médecin-inspecteur des établissements d'eaux minérales naturelles), and the government in 1880 and 1884 gave prizes to those physicians who produced the most noteworthy works on mineral waters.[1]

Dr. Jules Simon, the authority on infantile therapeutics, himself made a tour of all the stations d'eaux in France, personally examining their effects, and embodying his experiences in a series of brilliant *conférences* which have since been published.[2] A similar plan in regard to America is less feasible when areas are considered, but even a partial analysis and comparison of the principal waters would throw much light upon this question, and therapeutics may gain many new and powerful agents through the careful collection and publication of the experiences of educated physicians.

American literature on the subject of balneology is conspicuously deficient, and, as Dr. T. M. Coan[3] has shown, compares most unfavorably with the full and exhaustive treatises of such men as Trousseau, Braun, Simon, Leichtenstein, and Rotureau; but this hiatus is easily understood in a new country like America, which was undiscovered when many of the famous springs of Europe were at the summit of their popularity. This gap will be filled in time, and if physicians resident at springs would produce monographs comparable with those of foreign countries,[1] the American physician need no longer seek a European resort for his wealthy patients. We certainly possess as many and as valuable springs as Europe. Our waters equal the foreign, but, with the exception of Saratoga and a few others, none have been as exactly tested nor as accurately analyzed.

Let us see what mineral waters are of therapeutic value in the diseases of childhood, and how they may be advantageously employed. The leading springs may be put under the following headings: 1. Saline (alkaline, muriated, sulphated). 2. Sulphurous. 3. Gaseous or carbonated. 4. Ferruginous (carbonated, sulphated). 5. Arsenical, which, strictly speaking, should be distributed under the preceding categories, there being few waters in which arsenic is the leading constituent.

I. Saline.—These waters hold in solution different salines (generally sulphates, carbonates, or chlorides, in combination with soda, potassium, lime, or magnesia) which impart to them corresponding properties. Occasionally a saline water, especially a saline muriated, contains iodine and bromine, or iodide of potassium, and such are valuable tonics in scrofula. Sea-water properly enters this class. But in considering mineral waters it must be remembered that their effects are not entirely due to their mineral constituents. Much seems to depend upon the organic and extractive materials derived from the earth and plants, upon the temperature, and upon the gaseous elements.

These waters are generally aperient. Epsom, Carlsbad, Seltzer, Apollinaris, Baden, Ems, Bourbonne, Salins, Salzbrunn, in the old world; Hathorn or Ballston, Greenbrier, Capon, California Seltzer, Congress, Cal.; Saratoga Vichy (alkaline saline, like the European Vichy), and Bethesda, in America, are of this class.

When are saline waters indicated? They are strongly called for as alteratives in the scrofulous diathesis (Simon,[2] Keating[3]) and with anæmic or lymphatic children who cannot endure sea-bathing. They are a precious resource in those cases where the presence of nervous disorders, cerebral irritability, rheumatism, cardiac, cutaneous, renal, ocular, and auricular diseases, or susceptible respiratory mucous membrane categorically forbid sea-baths. In torpid scrofula the stronger saline waters are best. The Greenbrier Spring is deservedly in repute in these cases, as well as the Deep Rock Spring at Oswego.

The best mode of employing them is as hot baths. Simon, to whose personal instruction in, and writings upon, this subject I am much indebted, lays more stress upon their use in baths than on their ingestion. When considerable carbonic acid gas and oxygen are present he allows the waters as an aid to digestion, but warns his readers not to trust too implicitly in this internal medication, which possesses the disagreeable disadvantage of sometimes causing, instead of calming, gastric troubles. In diathesic scrofula Salins and Kreuznach work many cures. In searching through the analyses of American springs none seems to me to so nearly approach the famous French eaux as St. Catherine's, Ontario, a peculiarly concentrated water, containing, like the Kreuznach, large percentages of sodium, magnesia, and calcium chlorides, and small percentages of iodine and iron. St. Catherine's has proven peculiarly successful in scrofula, as baths. Internally it must be given much diluted with ordinary water. Spring Lake Well, Mich., also approaches in composition the Kreuznach water.

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[1] Progrès médical, December 15, 1883, and May 3, 1884.

[2] De l'Emploi des Eaux minérales françaises chez les enfants.

[3] An Address delivered before the New York Academy of Medicine, December 21, 1886.

[1] As examples of these see Contribution à l'étude analytique des eaux minérales, par le Dr. Bovet, 1884; Salies de Béarn, notices médicales, etc., Dupourque, 1883; Eaux minerales de Luchon, Instructions avant, pendant, et après la cure, Valdis, 1882.

[2] Conférences sur les Maladies de l'Enfance.

[3] Clinical Lecture on the Therapeutics of Natural Mineral Waters, etc., Philadelphia Medical Times, July, 1886.

Some scrofulas, however, prove entirely rebellious to saline baths, and these should try sulphuro-saline waters, as those at Massena, N. Y., which are to be recommended in the scrofulous dermatoses and chronic ophthalmias. These sulphuro-saline waters can be given internally, but with prudence, beginning with minimum doses and increasing *à tâtons*.

For that obesity, accompanied by atony and feebleness, which is so often present in scrofulous children, one of the more purgative saline springs is to be recommended, and in the anæmia of scrofula a water like that of the Hathorn Spring is called for (Coan).[1] A distinction must be made between the scrofulous form of anæmia and that resulting from convalescence or too rapid growth. The latter demands a ferruginous spring, and although I have as yet found no report of its mode of action, it seems, from the analysis given, that the Warm Spring of Madison Co., N. C. (saline-chalybeate), would meet the requirements. When chlorosis accompanies anæmia, sea-bathing is the best form of hydrotherapy. In scrofulous phthisis, as well as "erethic" or irritable scrofula, a water corresponding to La Bourboule is desirable in conjunction with ol. morrhua (Simon).

In chronic synovitis, articular inflammations, etc., after the classic treatment has put the inflammation upon the road to resolution, the cure may be consummated by a season at a saline or sulphur bath, accompanied by a course of massage.

Rachitis.—Here sea-bathing is the most successful form of hydrotherapy; but if this be counter-indicated prescribe saline or sulphuro-saline baths, although much less effective results are to be anticipated.

Hot saline springs, as some of the Warm and Hot Springs of Virginia, are excellent in the chronic rheumatism of children. La Bourboule, the famous French spring, is in high repute for these chronic cases, when no cardiac or pericardiac lesion exists. These waters are given in baths and douches, whose exciting qualities are very grateful to the atonic patient. Rheumatismal torticollis and hydarthroses are benefited also by saline baths. There are some more debilitated rheumatic cases where more stimulating treatment is called for. Send these to sulphur springs and combine massage with the baths (Simon).

Chorea.—In this rebellious and baffling disease the foreign pediatrists have found that a mineral water, such as St. Catherine's Wells, Ontario, which contain chloride of sodium in marked proportion, together with the bromo-iodides, often produces marked results.[2] The Ballston Spring (Franklin) is of this type, containing ninety-three grains of salt to the pint, as well as small percentages of iodide and bromide of sodium.

Intestinal worms.—Keating[3] recommends in these cases the Capon water. In eruptive diseases, where there is excessive thirst and scanty, high-colored urine, the same author recommends the lithia waters *ad libitum* (Farmville Lithia and Buffalo Lithia, No. 2). When constipation exists he recommends the alkaline-saline waters, as Saratoga seltzer.

As can be seen, saline waters occupy an extensive therapeutic field. They are more applicable to infantile diseases than the other waters, and in them alone we possess a valuable medicinal agent and adjuvant.

II. SULPHUROUS SPRINGS.—Their impregnation with sulphuretted hydrogen, to which their fetid odor is due, is the leading characteristic of these mineral waters. In addition, there is generally found some saline which modifies their effects. To the sulphuretted hydrogen they owe their efficacy in cutaneous diseases, and to the sulphuretted and saline ingredients together, their applicability to digestive disorders. The purely sulphurous are also tonic and stimulant. Luchon, Bonne, the famous Aix-la-Chapelle, and Baréges, in France, and Harrowgate, Bath, and Dax, in England, are of this type. America is rich in sulphur waters. We find them at the Red, White, and Sulphur Springs, W. Va.; Harbin Springs and Santa Barbara Springs, Cal.; Sulphur Springs, at Sharon, N. Y., and at Saratoga Lake, the Richfield, Blue Licks, Indian Springs, Ga., besides many others. The Bladon Springs, near Mobile, resemble Aix and Spa, but not so closely as the Rockbridge Alum Spring, Va., which may be prescribed wherever Aix water is indicated. This water is astringent and tonic, and is beneficial in chronic diarrhœa, bronchitis, dyspepsia, nasal catarrh, and scrofula. Another remarkable sulphur spring is the Oak Orchard Acid Spring, the water of which contains considerable quantities of free sulphuric acid, a rare composition. This water is particularly successful in chronic digestive affections, chronic pharyngitis, and ophthalmias.

It is in cutaneous diseases that sulphur springs are deservedly recommended. To be sure, as Dr. Coan remarks, we are here upon debatable ground. Those giants in dermatology, Hebra and Braun, as well as other respectable authorities, deny their efficacy, contending that skin diseases do not yield to mineral waters, but practical experience gives the "lie circumstantial" to this assertion. Especially is this curative power shown in old dartrous affections and in chronic skin-diseases of all types. An American spring highly praised in scrofulous dermatoses is that of Ocean Spring, Mo., and the Richfield Sulphur Spring ought to meet the same requirements, being one of the most powerful American sulphur springs.

Rheumatism, which is frequently overlooked in children, succumbs most often to a thermal sulphurous water (as Virginia Springs, Bath, Dax), the effect being due in large part to the perfectly equable warmth during the whole time of immersion—a thing impossible in an artificially thermal bath. Their additional tonic and stimulant properties give them value in anæmias, chloroses, and scrofulas which present chronic articular inflammations.

Scrofula.—Those springs at once sulphurous and saline are most applicable in scrofula. Where great debility coexists (accompanied by adenitis, cutaneous affections, or inflammation of the nasal or pulmonary mucous membrane) a feebly saline and strongly sulphurous water is called for, as that of Challes, France. The Red Sulphur Spring, Va., is greatly analogous to Challes, containing chiefly sulphur and an organic matter, with small quantities of salt. It is slightly cathartic and diuretic, and allays pulmonary irritation, as well as being sedative to the pulse, diminishing the beats. If, in addition, the spring contains iodine and bromine (as the Salt Sulphur Spring, Va.), so much the better. Cooper's Well is also of this nature, but the additional peroxide of iron renders it particularly efficacious in gastro-intestinal affections. Old and inveterate scrofulous lesions (fistulas, necroses, tumeur blanche, fungous arthritis) do well at Baréges, and some of the West Virginia springs correspond pretty closely to the analysis of Baréges.

Affections of the respiratory mucous membrane.—Sulphurous water is valuable in chronic bronchitis, and a sulphur water rich in sodium (as Eaux Bonnes, Ems, Sharon) succeeds "excellently well" in laryngitis (Coan). For nasal and pharyngeal catarrhs the Rockbridge Alum Spring can be given as a spray. Fine results are often obtained in children suffering from chronic suppurative otitis, blepharitis, ozæna, coryza, and amygdalitis from the use of Sharon water locally, In the commencing phthisis of children of the nervous and sanguine temperament, the Red Sulphur Springs of Virginia, which have already been discussed, are to be recommended.

Anæmia, convalescence, etc.—When the little patient is of herpetic constitution, he demands a sulphuro arsenical spring, as those of Aix. As yet I know of no such combination in American waters, though undoubtedly some exist. If vague, osseous pains are present, a thermal water is necessary; if atony and apathy, order sea-bathing or cold douches.

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[1] Therapeutics of Mineral Waters, THE NEW YORK MEDICAL RECORD, January 8, 1887.

[2] See Picot et D'Espine, Maladies de l'Enfance; J. Simon; Salies de Béarn par M. le Dr. Dupourque.

[3] Keating: Philadelphia Medical Times, July, 1886.

III. Gaseous or Carbonated Waters have a sharp, acidulous taste, lost on exposure to the air. They contain, with the carbonic acid, saline, earthy, or metallic matters (lime, magnesia, iron carbonates, etc.). Our leading springs of this class are the Saratoga, Ballston, Sweet, and Alleghany Springs, Va.; Rockbridge, Alum, Capon, Buffalo Lithia, and Highland Springs, Lake County, Cal.; Seltzer, Bar, Mont Dore, Néris, and Vichy are gaseous springs.

These waters increase appetite and are diuretic, hence they are successful in gastric disorders, dyspepsia, gout, hypochondriasis. The Rockbridge Alum Springs are particularly efficacious, benefiting also chronic diarrhœa, scrofula, and skin diseases. According to Coan the Ballston Spring is to be chosen for atonic dyspepsias, while for acid dyspepsias he prefers the Saratoga, Capon, and Buffalo Lithia water. Gastric catarrhs call for a Glauber's salt, as found at Carlsbad, Marienbad, and Tarasp. Highland Springs, Cal., contain soda, lime, and magnesia carbonates as well as large quantities of free carbonic acid and traces of silica, aluminum and sodium chloride, resembling Vals, an admirable water for infantile dyspepsias, flatulence, and gastralgia.

Simon, however, whose judgment in matters of infantile therapeutics is rarely at fault, confesses to a repugnance for strongly gaseous mineral waters. Nevertheless he orders them in obstinate nausea, disgust for food, and repeated vomiting, but with the proviso that their administration be continued not longer than one or two days.

Nervous diseases.—It is here that carbonated waters are eminently successful. Néris, in France, is famous for its cures of budding hysterias and chorea. Considerable caution should be displayed in the treatment of these infantile diseases, and it must be kept in mind that the careless use of mineral waters, douches, and sea-bathing, do nothing more than aggravate all the nervous symptoms. Nervous, irritable children, those with cerebral troubles, persistent headaches, or neuroses, cannot endure the seaside or the exciting mineral waters, *i.e.*, saline and sulphurous. The gaseous waters, on the contrary, are sedative. One of the best methods in such cases is to begin with simple thermal hydrotherapy, modifying temperature and mode of administration according to susceptibility. Some children endure cold douches well, but in no case should these be prolonged longer than from three to ten seconds. Bromide, the valerianates, and arsenic may be combined with this treatment. Infantile and diphtheritic paralysis require the stimulating waters, with massage and the constant current.

Scrofula is benefited at the Rockbridge Alum Spring, and incipient phthisis and the anæmia of the scrofulous are said to disappear under this water's influence.

IV. Ferruginous Waters are among the more frequent springs, and hold their iron (carbonates, sulphates, or chlorides) in solution by excess of acids. The carbonated iron waters are generally weak, while the sulphurous are powerful. The most famous are Tunbridge Spa, Schwalbach, Mont Dore (ferruginous and arsenical), Provins, Forges; Oak Orchard, N. Y.; Rawley, Va.; Ocean Spring, Miss.; Seigler and Harbin Springs, Cal.; Stafford and Columbian. In fact, nearly all waters contain some iron, and at every spring there is at least one ferruginous source.

As can be readily understood, these springs are of greatest utility in anæmia and chlorosis. One of the most famous in America is at Stafford, Conn., and is also, like the Oak Orchard Spring, N. Y., of peculiar efficacy in chronic diarrhœa, purpura, and passive hemorrhages. These waters ought to succeed admirably in summer complaint, and in that annoying and obstinate disease of childhood, rectal prolapse. In the hemorrhagic diathesis the alum and iron waters are most effective (Bartholow). Oak Orchard Spring has a peculiarly good effect upon relaxed and ulcerated conditions of the intestinal mucous membrane. It has a composition rarely found either in America or abroad, containing considerable quantities of free sulphuric acid as well as lime salts. Keating recommends it in intestinal atony, relaxation of mucous membranes (as in whooping-cough), and as a gastric stimulant after summer complaint. Saline chalybeates (as Warm Spring, N. C.; Lenk, Switzerland) are successful in scrofula, ozæna, psoriasis, and hepatic enlargement.

In prescribing ferruginous waters the intestinal functions must be under continual surveillance, and this more especially if alumina be present. Cerebral congestion must be kept in mind as a possible contingency, and where any such tendency is known to exist, extreme reserve in their administration must be observed.

V. Arsenical Springs are rare, but the presence of this element imparts to a mineral water wonderful curative properties. No springs in Europe are more extensively patronized than the three leading arsenical ones, La Bourboule (also saline), Royat, and Mont Dore. At Roncegno, Southern Tyrol, is a ferruginous-arsenical spring, and Vichy has traces of this element. These springs are rare in America. They are indicated in scrofula, rheumatism, and humid dermatoses. Intermittent fever, and that extreme chloro-anæmia which often accompanies chronic impaludism in the child, resisting all the effects of quinine or cinchona, frequently meet in arsenic and hydrotherapy curative agents of the first order.

Phthisis of scrofulous children, nasal catarrh, chronic bronchitis, and enlargement of the bronchial glands are improved by arsenical waters, as are also articular and rheumatic troubles, and some forms of nervous diseases.

In termination, we find that in mineral waters we possess a valuable therapeutic agent in many of the diseases of childhood. We make no pretension of having treated the subject, which covers so extensive a field, exhaustively. It is one which requires long and careful investigation, as well as many clinical observations in an interesting branch of materia medica. Physicians of this country have not given it the attention it merits, and until they do so the owners of springs will not awaken to the necessity of the improvements which are so often absent at such resorts in America.

Résumé.

	Principal Springs.		
Saline..	Hathorn. Vichy. Saratoga. Deep Rock. St. Catherine's. Warm, N. Cal.	General application.	Aperient. Tonic. Excitant. Feebly laxative. Alterative.
		Special application to children's diseases.	Scrofula. Rachitis. Articular inflammations. Chorea. Rheumatism. Anæmia.
Gaseous...	Saratoga. Ballston. Virginia Sweet. Rockbridge. Alleghany. Capon. Highland, Cal. Buffalo Lithia.	General application.	Digestive. Stimulant. Laxative. Diuretic.
		Special application.	Nervous diseases. Dyspepsia. Scrofula. Diarrhœa. Chorea. Hysteria. Gastralgia.
Sulphur. ...	Red Sulphur. Sharon. Richfield. Harbin, Cal. Blue Licks. Greenbrier.	General application.	Laxative. Sedative. Tonic. Digestive.
		Special application.	Cutaneous diseases. Digestive diseases. Anæmia. Scrofula. Rheumatism. Bronchitis. Laryngitis. Hepatic engorgements.
Ferruginous.	Oak Orchard. Stafford. Columbian. Sans Souci. Bedford. Rawley.	General application.	Reconstituent. Digestive.
		Special application.	Anæmia Chlorosis. Chronic diarrhœa. Purpura. Prolapsus ani. Dyspepsia. Hemorrhages.

FOUR CASES OF ACUTE INFLAMMATION OF THE MIDDLE EAR FROM THE USE OF ROOSA'S BULB NASAL INHALER.[1]

By FRANK W. RING, M.D.,

NEW YORK.

CASE I.—J. D. G—— came to me December 13, 1885. He had been to several physicians, and the last he accused of making him deaf. I found the following conditions: Hearing somewhat impaired, a deviated septum, hypertrophied turbinated bones, chronic pharyngeal catarrh, with excessive secretion, and an habitual mouth-breather. I removed several polypi, dilated the nasal passages, and put him on what I considered proper and judicious treatment.

Saturday, January 2, 1886, I made an application of iron and glycerine to the posterior wall of the pharynx, sprayed the throat and nose with Dobell's solution, and finally inflated the ears with the Politzer bag, using Roosa's pear-shaped cylinder bulb. The patient departed in good spirits, breathing freely. The next morning he came to my office early, with a pale and anxious countenance, after a most wretched night. An intense and excruciating pain had seized him during the evening, and had continued up to the moment of my seeing him. I immediately applied hot water, with no particular relief; then leeches were resorted to, which, placed upon the tragus, soon relieved him of his suffering. He was confined to his room for two days; upon the fifth he called, and I found the outer canal filled with blood and exudation. The canal was thoroughly cleansed, and the patient made a good recovery.

CASE II.—Miss M. S——, aged six years, first consulted me December 16, 1885, with a history of chronic suppuration of the left middle ear. Since two years of age the left ear had discharged pus at intervals of a few months. The hearing distance for the watch was $\frac{3}{40}$ in the left, and $\frac{30}{40}$ in the right. The child was timid, pale, and ill-nourished. I gave her proper tonics, advised plenty of milk, exercise, and fresh air. She continued treatment until January 2, 1886. Upon that day I sprayed her nose with Dobell's solution, cleansed the ear with peroxide of hydrogen, and inflated her ears with the Politzer and Roosa's pyriform bulb. During the night she suffered intense pain in the left ear. Her agony was so severe that a physician was called. He warmed some sweet-oil and laudanum, poured it into the offending ear and awaited results, which were not satisfactory, as the patient got little relief until four o'clock in the morning. Two days later I saw her at my office, when all symptoms of the acute inflammation had subsided. One month later the child was taken from my observation.

CASE III.—Master E. W——, aged five years. The patient came to me for treatment, December 29, 1885, with a history of chronic suppuration of the right ear of three years' duration. Hearing distance in right was $\frac{6}{40}$, left $\frac{30}{40}$; right ear was filled with pus and granulations. The ear was cleansed thoroughly with warm water and peroxide of hydrogen. After inflation the child heard the watch at eight inches, a gain of two. I saw the patient again the next day, and then on the 3d of January, an interval of four days. At eleven A.M., on Sunday the 3d, I used the Dobell spray, curetted some granulations from the right auditory canal, and inflated with the Politzer bag, using Roosa's bulb.

The child awoke in the night crying with pain in the right ear. Nothing the parents could do would relieve the agony, so they sent for the family physician, who applied heat and other remedies, quieting the pain and relieving the patient, so that in twenty-four hours all symptoms of the aural catarrh had subsided. Under the use of peroxide of hydrogen the suppuration ceased in a few weeks, and has not recurred up to the present time. It will be noted that the acute symptoms occurred in the sound ear, not in the suppurating one.

CASE IV.—Miss B. M——, aged six years, consulted me October 14, 1885. Since three years of age the child had had a suppuration of the right middle ear. The mother had been to several physicians, with no relief, and wanted me to state definitely the time it would take to cure her. The right external auditory canal was filled with pus, granulations, and cheesy matter. After cleansing and inflation the hearing distance was the same as before treatment, *i.e.*, $\frac{2}{40}$. In the left it was normal. The patient was immediately put on the peroxide-of-hydrogen treatment. The mother was taught how to use it, and did so faithfully until January 5th, when all discharge had ceased. The membrane was closed, hearing distance $\frac{4}{40}$ with the watch.

Upon this day, the last but one of her visits to my office, my only treatment was an inflation with the Politzer bag and pear-shaped nozzle. In a few days the mother called and informed me that "Bessie" had been very sick since her last visit, with terrible pains in her right ear, which came on the same night of the day she last saw me. The mother, fortunately, remembered my injunctions in regard to the treatment of such an accident, and relieved the intense pain with the hot-water douche. The child entirely recovered in a few days.

I have given a brief history of the four preceding cases, in order that the condition of each might be satisfactorily known. In two there were perforated membranes, in the others they were intact. No. I. came to me Saturday, January 2d, at twelve o'clock. The throat and nose were sprayed with Dobell from my air cylinder, iron and glycerine was applied to the posterior wall of the pharynx, and the ears were inflated with the Politzer bag and Roosa's pyriform bulb.

No. II. I saw the same day at 4.30 P.M. I used the Dobell spray, cleansed the ear with peroxide of hydrogen, and inflated with Roosa's inhaler as in No. I.

No. III. visited me Sunday, the 3d, at eleven A.M. I sprayed the nose, pharynx, and throat with Dobell, used the curette on some granulations in the external auditory canal, and inflated with the Politzer and bulb.

No. IV. I saw two days following. I did nothing but inflate the ears as in the previous cases.

On the 2d I had two cases of violent acute inflammation of the middle ear. On the 3d, another, and on the 5th a fourth, until the sight of an aural patient became obnoxious to me. It was intimated that I must have caused this suffering, as they had never experienced any such symptoms before.

In three cases I had used Dobell's spray, therefore it was not the Dobell which caused the trouble in the fourth, curetted in one case, which eliminated the curette from the others, the peroxide was acquitted under the same rule. The Politzer and bulb alone remained; they were used in every instance, and to them I attributed my unfortunate experience. The water which I use in my inner office is supplied from a galvanized iron tank, holding about six gallons. In inflating patient No. I., on Saturday, January 2d, I drew into the nozzle of the inhaler some mucus. Wishing to cleanse the instrument, I supplied the bowl with some water from the tank, not getting a sufficient quantity the vessel was inclined, so that I got considerable sediment from the bottom. I unscrewed the cap of the inhaler, expelled all the liquid, squeezed the sponge, replaced it, and screwed on the cap again, then the inflation was thoroughly made.

Four days later, the tank in the meantime having been filled, I drew off all the water, and found a thick sediment adhering to the bottom and lower sides of the vessel, the accumulated deposit of several months' use.

To me the cause of the four cases of acute aural catarrh was then quite apparent. The element of carelessness which entered into the proceedings was equally obvious, although I am sure there was no water injected into the pharynx in any case, as I had forcibly exhausted it from the tube.

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[1] Read before the New York Academy of Medicine, Ophthalmological Section.

Had there been any doubt in my mind in regard to this, the account of these cases would not have been written, and, even allowing that the water had been injected on the first day, the tube was dry when the inflation was practised on the third and fourth patients, as I removed a portion of the sponge and placed it under the microscope on the 5th of January.

The question now naturally arises, What is there in the sediment of Croton water, which, after evaporation, should set up an acute aural catarrh if injected into the pharynx? There are algæ, *i.e.*, water-plants, infusoria or microscopic animals, bacteria, the lowest grade of animal organism, in multiform varieties. Were any of these germs pathogenic? Did they induce the catarrh of the mucous membrane in question? Last summer I had a number of cases of acute aural catarrh from salt- and fresh-water bathing, and only one was due to surf-bathing, in which instance the side of the head was struck forcibly by a wave, injuring the drum membrane. All the others were from still-water bathing, and where the purity of the water was questionable. It is not necessary to dive or force such water into the pharynx to bring on an acute catarrh, the same water is liable to produce the symptoms when used as a spray or douche. Therefore, it is not only the force with which it is injected, but also the character of the fluid.

We have in New York a system of free swimming baths, where the city's great unwashed go to transmit one to another any contagious malady with which they may be afflicted. These floating arsenals of contagion furnish a good proportion of the eye and ear diseases at our summer clinics. We also have various health resorts in the vicinity, where one may indulge in sea-bathing. Last summer I stood on the pier at Coney Island, in a stiff southerly breeze, watching the bathers disport in water freshly strewn with the contents of several scows from the city. Unloaded in this southerly wind, not two miles distant, decayed vegetable and animal matter could be easily seen floating about.

The north shore of Long Island Sound in Westchester County, and the inland bays of Monmouth County, N. J., are questionable bathing places. I had several cases of acute suppuration of the middle ear caused by bathing in these waters, so that now I always advise my patients to close the nose when they dive or go under the water.

Roosa says in his treatise on the ear: "Prolonged bathing and diving in still water are much more apt to cause congestion of the middle ear than surf bathing." Is it not because in surf bathing one gets less impurities in the water?

In closing, I would beg leave to call your attention to the following letter, sent to me by Dr. John E. Weeks, in reply to a communication in regard to the sediment of Croton water:

"In the continued deposit of a vessel used to hold Croton water we usually find a development of algæ, some infusoria, and a multitude of bacteria, including a greater or less number of varieties. Fortunately the forms that are detrimental when introduced in living tissues are seldom met with. However, it is impossible to say that any specimen of water is free from them, unless it has been previously boiled or analyzed. Croton water contains many germs. In an analysis extending over four months, I found that the number per cubic ctm. ranged from seventy-four to nine hundred and forty-five, the average was probably between two and three hundred. But few, if any, of the forms found, which numbered something over thirty, were in any sense pathogenic; in fact, I do not think that any that I have seen were capable of producing an inflammatory action. However, pathogenic germs may and do appear in water still preserving their vitality. I am inclined to think that purulent otitis from injections through the anterior nares is at times brought about by the presence of pathogenic or pyogenic germs which have been carried along with the fluid from the mucous membrane of the nasal cavities or pharynx into the Eustachian tube or middle ear. Pathogenic germs are very common on free mucous and cutaneous surfaces, remaining innocuous when the epithelium is intact. Your question is one that requires extensive investigation to enable one to answer it positively."

101 Park Avenue.

CONCERNING CHOLERA INFANTUM AND THE WEATHER.

By A. SEIBERT, M.D.,

PHYSICIAN TO THE CHILDREN'S DEPARTMENT OF THE GERMAN DISPENSARY AND INSTRUCTOR IN DISEASES OF CHILDREN AT THE POST-GRADUATE MEDICAL SCHOOL, NEW YORK.

In The Medical Record of July 21, 1888, Dr. T. Clark Miller, of Massillon, O., has published an article entitled "Cholera Infantum and the Weather," consisting chiefly of a number of criticisms of my report on an investigation concerning this question to the New York Academy of Medicine, and published in The Medical Record of March 24, 1888. My reply will at first treat of the method of Dr. Miller's criticism, and then of its results.

1. My critic says, in the beginning of his article: "The painstaking and elaborate study of this disease by Dr. Seibert is a very valuable addition to the literature of the subject;" and toward the end of his essay he remarks: 'But I believe his [Seibert's] reasoning from these facts to be utterly fallacious and misleading, and it seems to me many of his conclusions are squarely in the teeth of his data;" and further: "The learned discussion on the paper referred to in the Academy of Medicine is ample evidence that the subject is not exhausted, and it certainly cannot be said to be threadbare so long as it is possible for a great authority to question the superior mortality from this disease in July as compared with August."

The extreme inconsistency between this praise and fault-finding is so evident that no further reference need be made to it.

2. In looking for reasons and scientific arguments based upon acknowledged facts to sustain the above statements, we entirely fail to find them, and not even an attempt is made at drawing different deductions from the figures presented.

But my critic presents some statements of his own which are of interest: "What constitutes *hot* weather, there would be all shades of opinion, no doubt. If 75° to 80° F. be too high in the winter, in a hygienic sense, we may assume that it is a high temperature in the summer. The air we breathe ought not to be above 72° Fahrenheit." In reply: If 75° to 80° F. is *hot* weather, then it is strange that so few cases of cholera infantum occur in midwinter, in this city at least, for it is well known that our tenement house population, as a rule, keep the temperature of their rooms constantly nearer to 80° than to 70° during winter, and that the babies breathe this atmosphere for successive months, day and night. The air in these rooms is otherwise certainly in a much poorer hygienic condition in winter than in summer, with the windows open night and day, even at the same temperature, and yet cholera infantum and kindred diseases are extremely rare in winter in comparison with summer, which ought not to be the case if my critic's intimation that heat of 75° to 80° F. may produce this trouble in children by direct action on their systems be true. I will explain this conundrum. The milk used by these people and their children is, during winter, carefully kept outside of the window, and is constantly exposed to a temperature low enough to prevent, or at least retard, decomposition. If they kept their babies outside and the milk in the heated rooms, these children would get cholera infantum and like troubles as readily as in summer.

No doubt Dr. Miller has thought of the possibility of this argument, for, to counteract it, he makes this statement: "Infants may be affected at all seasons of the year by diseases having choleraic features; but it is clear that these troubles, occurring in the cool and cold months, are not at all related, pathologically, to the summer disease under consideration."

I must here admit my complete ignorance. I never heard of, read about, or saw, any pathological characteristic differentiating between summer and winter diarrhœa of children, and no doubt all pathologists will hail with pleasure this new addition to the pathology of the intestines, which is so clear to our friend.

In quoting from his interesting and valuable paper, published nine years ago (*Amer. Journ. of Obstetrics*, 1879), Dr. Miller points out the necessity of having tables showing three daily quotations of temperature in investigations of this kind, and speaks of monthly and weekly averages and reports as not satisfactory. Now I heartily agree with our colleague on this point, and my tables published show the three daily quotations of temperature for ten years, in comparison with my morbidity figures, and Dr. Miller's tables show but monthly and weekly averages and reports, and yet my results seem to him as "squarely in the teeth of *my* data."

Let us take one statement and see if the above is correct. It is true that Dr. J. Lewis Smith was surprised at the superior mortality from this disease in July as compared with August! But so was Dr. Cyrus Edson and Dr. Nagle himself, the latter the Registrar of the New York Board of Health, for these gentlemen had never added up their own figures, an omission others have since made, as I will presently show. But my figures regarding the mortality in this city were never *questioned* by anyone, as they can be verified at the Health Department at any time.

A greater surprise than the one spoken of, though, we now have ready for my critic. He has kindly published the weekly mortality statistics from cholera infantum of the city of Baltimore for the years 1879-1888. Desirous of gaining some "facts based upon figures," as in my former investigations, I simply compared the mortality of the July months with that of the August months. The figures are from Dr. Miller's article, but the adding has been done by me.

Mortality from Cholera Infantum in Baltimore.

	July as compared with August.	
1879	197	112
1880	169	65
1881	279	119
1882	237	72
1883	264	107
1884	224	76
1885	235	134
1886	242	102
1887	334	125
Total	2,181	912

This gives, in all, 2,181 deaths in July as compared with 912 in August, from this disease, making, on an average, 53 cases in each week of the July months to 24 cases in each week of the August months, being a proportion less than 2 to 1. My figures for ten years of mortality in New York were 12,468 for the July and 6,205 for the August months, 2 to 1, exactly as in Baltimore. How could it be otherwise? If 334 children die in Baltimore in one month, then surely there are 334 *less to get sick* the next month! I can leave it to others to judge whether or not my conclusions were "in the teeth of *my* data."

In conclusion I would, with all due respect, remind Dr. Miller that adding up statistics is a better and stronger argument than such terms as "I believe," "it seems to me," or "it is very clear," especially if they are to be used in criticising others, and intended for throwing more light on the subject under discussion.

122 East Seventeenth Street.

Clinical Department.

THE PRIMARY TREATMENT OF LACERATED PERINEUM.

By C. E. Munn, Captain and Assistant Surgeon U.S.A.,

Fort Klamath, Ore.

During the past few years I have had the misfortune to witness in primiparæ under my care four cases of tears of the perineal body. My conscience acquits me of bad management, for in all the cases I foresaw the need of extra care. The patients were all past girlhood—the youngest twenty-four, and the oldest thirty-one years of age. The presentations were natural, and the first and second stages of labor slow from rigidity of the soft parts. As relaxants I used small (nauseating) doses of tartarized antimony and hip-baths, and lubricated the vulva and perineum well with sweet, cool lard or vaseline jelly. In all the cases I resisted the last uterine efforts with the tips of the fingers on the vertex, to insure slow relaxation of the thinning perineal crescent. There was very little effort made formally for what is called "supporting the perineum," yet I gently supported the advancing head as it rose under the pubic arch. In my last case, recently, the patient had been in labor many hours when I was called. She was a small, robust woman, thirty-one years of age, first conception, at the end of the ninth month of gestation. The sac of the amnion was broken. The head, presenting by the vertex in the second position, seemed fixed in the pelvis by its disproportionate size to the canal, and the rigidity of the soft parts. The vagina was well moistened by its natural secretions, which I was careful not to disturb by too frequent touching. At the twenty-eighth hour of labor I applied the forceps, and after nearly an hour of strong vibratory traction during the pains, the head was engaged at the outlet. As the patient was very tired, and doubting still her power of expulsion, I did not remove the well-locked blades, but used the instrument as an upward guide, and even for gentle repression during the last minutes. As the head was born I noticed a red jet, which I hoped was from the fourchette. The child, a female, was alive and uninjured, and weighed nine and one-half pounds. The patient was rested, and then, after delivery of placenta, neatly washed, her toilet carefully made, and placed in a clean bed. This was at the thirtieth hour, and the uterus was well emptied and thoroughly contracted. As all my cases were treated substantially alike, an account of the dressing and result of this case will serve for all.

After refreshment by light food, the mother was informed of her serious mishap, and requested to submit to a trivial operation. She was laid upon her left side, the hips elevated at the edge of the mattress, and a loose plug of absorbent cotton introduced into the vagina. The nurse supported the right buttock. My hands had been repeatedly washed in a warm solution of the bichloride of mercury, 1-2,000, and with similar clean solution I now syringed and washed the parts exposed to view. I found a deep, irregular rent, extending to the muco-cutaneous border of the anus. From previous care in cleaning forceps, parts, and hands, I believed the fluids from the vagina and the wound were aseptic, and the rent only required closing. This I did with three silk sutures, first soaked in solution and then introduced very deeply through the tissues and tied loosely, just tight enough to hold the parts in position. Before they were tied all clots were gently washed out with sublimated water. Then, over the line of incision, I applied about a teaspoonful or more of dry iodoform, covered it with a good, soft napkin, previously washed and dried from sublimated solution, withdrew the vaginal plug, and covered the napkin, lower belly, and inside of thighs with about a pound of cotton batting. The knees and inner malleoli were then padded with cotton, and the limbs firmly bound together. The abdominal binder was made long and was pinned tightly below the trochanters. She was instructed to urinate, without reference to the dressing, by turning on her side. On the fifth day, just before my visit, she had a soft motion of the bowels, which was received on a folded sheet. Having plenty of sublimated water and prepared napkins in readiness, the dressings were removed and her body quickly washed and dried and the sutures withdrawn; but, as the parts were not swollen, the dressings were reapplied and the limbs bound up again, to be loosened after four days more. On the fourteenth day I examined the parts carefully; the vulvar orifice showed no marks of being torn, the union was complete and firm, and the line of cicatrix hardly visible. In a former case I was privileged to examine the parts three months after I had operated, and found them absolutely natural. It would seem as if the fourchette tear had united. I would respectfully remark that "Peace hath her victories," and it seems to me than these cases were illustrations. I believe these accidents are very frequent. The wearied physician, after laying the child by its mother, feels that his work is well done, and ignores or treats with indifference a laceration which may fairly be presumed a natural consequence of parturition. At any rate, if recognized, they are seldom reported to the family or medical confrères. But that wound may serve as the open gate of septic infection, or, if saved from this, the torn woman may go through life unconscious of the great cause of her many distressful feelings.

From my experiences, few indeed, but sufficient for me, and from my success with simple treatment, I think that no practitioner will have fulfilled his whole duty by his lying-in patient until he has patiently examined the parturient parts for tears, and, if found necessary, taken careful measures for their immediate repair.

UNSUCCESSFUL VACCINATION AND IMMUNITY AGAINST SMALL-POX.

Dr. Winslow Anderson, of San Francisco, writes: "In reply to the query of Dr. W. Thornton Parker relative to the immunity against small-pox when not successfully vaccinated, as published in The Medical Record of June 23, 1888, I would relate several instances which came under my observation during the recent small pox epidemic in San Francisco.

"Case I.—The mother of a nursing infant was taken down with variola discreta. The child had nursed for three days after the eruption had appeared. When I was called in I immediately sent the patient to the Small-pox Hospital and vaccinated the infant. At the end of a week the vaccine virus produced typical umbilicated vesicles. The child did not contract variola.

"Case II.—An old gentleman had been exposed to the disease, having an inmate of his house sent to the hospital with whom he had been in daily contact. He was ninety-five years of age, and had not been vaccinated for forty years. I vaccinated him and it took successfully. He also escaped small-pox. I do not suppose that the vaccination had anything to do with the immunity in these cases, but it shows the resistance in different individuals.

"Case III.—A young woman had been vaccinated twenty-five times since her birth. At every small-pox scare she would try it again. At no time had the vaccination been successful. I vaccinated her myself three times during January, 1888, without any success. In the early part of February symptoms of small-pox appeared, and in three days she was sent to the hospital with quite a severe case of discrete variola.

"Case IV.—A man refused further vaccination, as he had been vaccinated eighteen times without any success whatever. Six of these unsuccessful operations had been performed during 1887–88. It was supposed that here was a case of "immunity," but not so. The disease was contracted, and the patient died within a month from the time he refused vaccination.

"Case V.—A patient who had been vaccinated unsuccessfully six times applied for a certificate of 'successful' vaccination. Upon refusing to issue it I made the seventh attempt. On the ninth day vesicles with typical areolæ appeared. On the eleventh day after the vaccination true variola appeared; the patient was sent to the hospital, and barely escaped death. Had the bovine virus not taken I believe she would have died.

"It seems wellnigh impossible to lay down any fixed rule. It is largely an *individual* matter whether a given person contracts the disease or not. One system may be more susceptible than another, and the same person may be more liable to contract the disease at one time than at another.

"I believe small-pox may be contracted, no matter how many times a person has been *unsuccessfully* vaccinated, and the only 'immunity' or prophylaxis known is *thorough* and *repeated* vaccination."

CONSTRICTION OF THE PENIS BY AN IRON RING.

Dr. D. W. Lynch, of West Bend. Wis., reports the following case: "On July 12, 1888, a boy, twelve years of age, worked an iron nut 1 inch square, $\frac{1}{2}$ inch thick, with a calibre of $\frac{9}{16}$ inch, on his copulative organ to its root. To his great consternation he was unable to remove it from its position, and his father's and mother's efforts also failed to dislodge it. He applied at my office six hours afterward for relief. The distal end of the organ was swollen three times its natural size. I sent for a blacksmith immediately, who came armed with a powerful lever shears and some files. The boy was laid upon the floor, the blacksmith gripped the nut between the blades of the shears, and with repeated efforts in a few minutes succeeded in cutting the nut at one point, when it instantly broke at right angles and flew off. The œdema soon subsided and left no injury."

HÆMOGLOBINURIA IN RHEUMATISM.

Dr. Albert H. Ashmead, of New York City, referring to a note on this subject quoted from the *British Medical Journal*, writes: "Permit me to report the following cases. The first case was that of a cook in a Cuban hotel in this city. He was a high liver, and hæmoglobinuria appeared during the second week and continued until the rheumatic poison was antagonized. Professor Loomis saw the case with me in consultation. Two cases occurred in my hospital service in Japan. One was typical, the other subsequently developed rheumatic purpura hæmorrhagica. A fourth case was seen in the Missouri Valley, near St. Joseph, Mo., in the fall of 1878, the year of the yellow-fever epidemic. All during that fall the malarial fevers peculiar to the upper river valleys had been more severe than usual, and had shown a hemorrhagic tendency. This case was apparently typical, but may possibly have been complicated by the low malarial influence."

TRAUMATIC AMPUTATION OF LEG—STUMP UNDRESSED FOR EIGHT DAYS—RECOVERY.

Dr. T. J. Hutton, of Fergus Falls, Minn., writes: "Five years ago I treated this case, which is worthy of being placed on record. A family had recently arrived from the mountains of Norway, where life is chiefly pastoral, and both broad acres and farm machinery are unknown. The sickle of a mower at work seemed to fascinate a member of this family, a boy, aged nine. He followed it up and kept kicking at it with his feet—first one foot, then the other. Either failing to keep step, or because the unexpected must happen, the sickle amputated his left leg at about the union of the middle and lower third. It made a clean cut, leaving a long ovate stump. A bystander stated that upon receiving the injury the boy hopped rapidly in a bee-line, about four rods, upon the sound member, then suddenly assumed the dorsal decubitus, raising his stump straight up in the air. The family was both ignorant and poor—did not even know that surgical aid could be obtained at the public expense, and so it happened I was not called until eight days had elapsed, and nothing had been done for the boy save that an old woman had tied a rag around the stump. A grayish pellicle covered the stump. There was no swelling, gangrene, fetor, or sepsis. There was great weakness—that was all. I remained with him twenty-four hours, administering wine, quinine, and concentrated food at short intervals. I then reamputated. He made a speedy recovery, being out-doors within a week."

Progress of Medical Science.

Ectocardia.—According to the Paris correspondent of the *Medical Press*, M. Lannelongue made a communication before the Académie des Sciences on a case of ectocardia. A little girl, of six days, was brought to him in February last at the hospital for "something that the parents could not understand." The child, although weakly, seemed to be in fair health and took the breast well; but on the middle of the sternum there existed a circular ulcer a little larger than a shilling, at the bottom of which the ventricles were felt to beat, but a sort of membrane concealed the heart from view. A week subsequently this membrane was destroyed by ulceration and then the apex of the heart could be plainly observed, the surface of the ventricles being entirely exposed. M. Lannelongue by an auto-plastic operation was able to effectually close the aperture, and at present the child seems to be in excellent health.

Electrical Sunstroke.—A number of cases are now on record of effects produced by the electric light identical with those resulting from prolonged exposure to strong sunlight. At the Creusot Iron-Works the skin of the workmen becomes reddened and tender, and this is followed by desquamation. The eyes became painful and suffused, and the retina, notwithstanding the use of very dark glasses, lost its sensitiveness, and the visual images appeared for some time after to be tinged saffron yellow. As a result of some inquiries it appeared that a current intensity exceeding two hundred ampères is liable to give rise to the preceding symptoms. The ocular symptoms are occasionally somewhat alarming, but they are fortunately characterized by a tendency to prompt amelioration.—*Medical Press.*

Duodenostomy and Gastro-Enterostomy. — Dr. Jesset has recorded two cases of this kind in *The Lancet.* In his opinion one of these cases showed that such an operation in cases of extreme urgency is not only practicable, but without doubt a great source of comfort to the patient; the other case of gastro-enterostomy demonstrated how perfectly a fresh channel between the stomach and intestine may be established, and, notwithstanding the most adverse circumstances, how firmly the serious membrane of the stomach and jejunum unites in an extremely short time. The questions naturally arise: Are these operations justifiable? Is it worth the trouble, anxiety, and risk to subject a patient suffering from cancer or extreme stenosis of the pylorus to such a formidable operation? Both these questions he is inclined to answer in the affirmative, and for the following reasons: 1. We are dealing with a disease that of necessity will destroy life, not in the ordinary way, but by the most cruel and horrible process of starvation, accompanied by frightful agony. 2. The constant excruciating pain, coupled with the frequent and violent vomiting and total inability to take any food, renders the patient's life a perfect misery to himself and all around him. 3. By operation, if undertaken early enough, undoubtedly life may be prolonged if the operation is successful, and the last days of the victim will be considerably relieved of the pain. He would in no case recommend duodenostomy to be performed if the patient's strength was sufficient to allow of his undergoing an operation of such a prolonged character as gastro-enterostomy would entail, as undoubtedly by this operation the patient is placed in a far more satisfactory condition than by any operation that has for its object the opening of the small intestine for the means of feeding. This must be self-evident, as in gastro-enterostomy there is no interference with the process of digestion and the secretion of the liver and pancreas, as well as the admixture of the food with the saliva during mastication. These secretions thus mingling with the food in the natural manner, the process of slow starvation is prevented, to say nothing of the unpleasantness of the patient having to be fed by an artificial opening in his abdomen being avoided.

Phthisis a Disease of the Night.—Dr. Shepherd contends in *The Lancet* that phthisis is the result of constantly recurring irritation of the air-passages, and that the cold air breathed at night is at least one efficient cause of this irritation. He observes that it is well known that those who live most in the open air are the least likely to suffer from phthisis. Why? Simply because their lungs are so accustomed to cold air that they are not irritated by it at night. Phthisis is a disease of the night. It is so simply because we inhabit hot rooms by day and cold rooms by night, and many lungs find it more than they can do to accommodate themselves to the constantly recurring change in the temperature. The author concludes as follows: "It will be obvious that my theory has a very practical bearing. If it should lead the profession, and the public through them, to pay proper attention to the due warming of our bedrooms at night, and all night long, especially in all cases of diseases of the chest, I shall not have written in vain. If through this simple precaution it should be found that phthisis in this country may thereby be stamped out in the course of a few years, then my humble name would perhaps deserve to rank with even that of Jenner. I fully believe that if some means whereby a continuous supply of pure warm air could be given at night to those threatened—ay, and to those actually suffering—with phthisis, we should in the course of a very few years find that phthisis was as rare in England as in Egypt or Iceland."

Guaiacol in Phthisis.—In the treatment of phthisis Professor Fränkel recommends guaiacol as the effective constituent of creasote. The good effects of the latter are unmistakable in a strictly defined class of cases. If used promiscuously in this disease, its good effects are distinctly evident in sixteen or twenty out of four or five hundred cases, and are due not to destruction of the bacillus tuberculosis, but to a favorable influence on digestion. It has long been known that creasote is a mixture of different substances, and last summer Professor Penzoldt remarked that guaiacol appeared to be its chief therapeutical constituent. Since then Dr. Sahli, of Berne, has written on the clinical uses of guaiacol, and Professor Fränkel has been using it since the beginning of the year after the following formula: Guaiacol, 13.5; tinct. gent., 30; sp. vini rect., 250; vini xerici, q. s. ad colat. 1,000—a dessert-spoonful in a wine-glassful of water two or three times a day. This mixture is superior to gelatine capsules or tolu balsam. Fränkel remarks that his patients were nearly all hospital patients carefully watched, only nine being private patients.

A Deaf-mute Ball-player.—One of the noted ball players of a professional nine is a deaf-mute.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM WOOD & Co., Nos 56 and 58 Lafayette Place

New York, August 11, 1888.

THE PATHOGENIC CONDITIONS OF ALBUMINURIA.

THE study of the conditions which are capable of determining the passage of albumin from the blood into the urine is one which has always interested the medical mind, and the literature of the investigations, both clinical and experimental, made to solve the problem presented is voluminous. The results of these investigations, however, have not hitherto been wholly satisfactory, owing, possibly, as Professor Semmola suggests, to the fact that most of these investigators have started out with preconceived ideas to which they have unconsciously endeavored to mould the facts observed.

Professor Semmola, whose theories, if not invariably acceptable, are always deserving of respectful consideration, endeavors to throw some new light on this subject in an article embodying the results of additional researches, published in *La Riforma Medica*, Nos. 25 to 36, 1888. One thing, which he thinks has helped greatly to befog the question and to vitiate the conclusions of many of those who have studied the subject, is the notion of a normal or physiological albuminuria. This idea he combats at the outset, maintaining that the appearance of albumin in the urine, no matter in how small quantity or for however short a period of time, is always pathological. Albumin and sugar both circulate in the blood, and are both destined for the nourishment of the body and for the maintenance of its functions; but neither the one nor the other is, even in the most minute quantity, normally excreted by the kidneys, and when either is so excreted it is the expression of a pathological condition.

Three factors are to be considered in the study of albuminuria, viz., the mechanical conditions of the circulation, the physico-chemical constitution of the blood, and the histological condition of the kidneys. It is necessary to determine, first, to what degree these three factors are efficacious in causing the passage of albumin into the urine; and then to apply the knowledge thus obtained in each individual case, in order to determine which of these factors is here most active.

The author devotes little space to the consideration of the second of these factors, since his views in this respect are well known. He asserted many years ago that, when the normal serum-albumin circulating in the blood becomes changed from any cause, it becomes unfit for the nourishment of the tissues, and is thereupon excreted by the kidneys, just as is any other poison or waste-product either formed within the system or introduced from without. This was indeed, he believed, the primary cause of Bright's disease, the renal changes being secondary and produced by hyperæmia and subsequent inflammation resulting from the excessive labor thrown upon the kidneys in their endeavor to excrete the large amount of albuminoids circulating in the blood. We shall see to what extent he has modified this extreme view, and how far he now admits the other conditions as factors in the causation of albuminuria.

It has been generally held that an increase in the blood-pressure within the glomeruli of the kidney is capable of causing the escape of albumin into the urine. Nevertheless, the experiments on animals made to determine this point have not always been confirmatory of the theory, and the results of clinical study have seemingly contradicted it many times. Often, in cases of heart disease, in which all the conditions most favorable for a passive congestion of the kidneys are present, not the least trace of albumin is found in the urine. From this the author concluded that some other factor must intervene to determine the occurrence of albuminuria, since it was shown that increased blood-pressure alone was not always sufficient to cause it. In order to determine the effects of increased blood-pressure he made a number of experiments upon dogs. The blood-pressure was increased by means of direct transfusion from a large dog to a smaller one, the author believing that this method was less likely to induce general disturbances, thereby complicating the experiments, than was ligature of the aorta or other large arteries. Furthermore, a general increase of the blood-pressure, such as occurs in the human body in various diseased conditions, was obtained in this way. These experiments showed that an increased blood-pressure caused first polyuria and then hæmaturia, but albumin was present in the urine only in proportion to the amount of blood, and albuminuria without hæmaturia was not found. The author then made another experiment, injecting into the vein of one dog, by direct transfusion, a certain quantity of blood, and into another a nearly equal amount taken from the same animal, but previously defibrinated. Thus the conditions in the two cases were dissimilar. In one the blood injected was unaltered, in the other it was dead, and may well be assumed to have undergone essential changes in its constitution. In the first dog the results were the same as those obtained in the first series of experiments—that is, there was hæmaturia, but no albuminuria, properly speaking. In the second dog, into whose veins defibrinated blood had been injected, the urine was not reddened, and very few blood-corpuscles were found on microscopical examination, but there was a large amount of albumin. The kidneys in the first dog were found to be nearly normal, while those of the second were markedly altered, showing necrosis of the epithelium of the tubules and many casts. In all of these experiments the urine was examined before the transfusion was practised, and was found to be normal.

As a deduction from these experiments Professor Semmola concludes that patients with cardiac trouble, whose urine contains albumin, suffered from albuminuria prior to the advent of the circulatory disturbances consequent upon the heart disease. In proof of this proposition he took a healthy dog and injected daily into the circulation a certain amount of egg-albumen. The animal soon began to pass albumin in the urine. The author then practised direct transfusion from another dog, as in the previous experiments, with the result of increasing the amount of albumin excreted through the kidneys. He concludes, therefore, that the effect of heightened blood-pressure is to cause an increase in the degree of albuminuria already present, but not to excite it in those whose urine was previously normal. In this way, also, he explains the fact, often observed, that after the circulatory disturbances consequent upon heart disease have been relieved by appropriate treatment, the amount of albumin in the urine diminishes but does not wholly disappear. The influence of the increased blood-pressure is no longer active, but the pre-existing albuminuria remains as before.

The third factor is the pathological change in the kidneys. That the amount of albumin in the urine is not determined solely by the pathological conditions in the kidneys is shown, the author thinks, clearly enough by the fact that it varies greatly according to the quality of the food, a diet consisting largely of nitrogenous materials causing an increase, and a non-nitrogenous diet a decrease. It is also shown by the fact that extensive renal lesions are often found post mortem, although during life not even a trace of albumin was found in the urine. Dr. Semmola does not, however, deny absolutely the power of kidney lesions in producing albuminuria. He has no new experiments to relate, having simply repeated those of Cornil and others, but he interprets in a somewhat different manner the results obtained. To produce experimental nephritis he made use of cantharides. In chronic cases of poisoning by this substance, the lesions noted were most marked, but the albuminuria was very slight—out of all proportion, indeed, to the pathological changes. The quality, also, of the albumin, as well as its quantity, differed from that in the hematogenous, and, according to Semmola, the most common form, of albuminuria. In this form the substance excreted is the dializable albumin of the blood, and the process is one of filtration pure and simple. In the other form, the nephrogenous, on the contrary, it is the albumin of inflammatory exudations. It does not possess all the reactions of the serum-albumin, and especially it does not assume the reddish-violet color in the presence of oxide of copper dissolved in caustic potash.

The conclusions of the author are, therefore, briefly, as follows:

1. The excretion of albumin in the urine has as its fundamental condition certain alterations in the albuminoids of the blood, which render them unfit for assimilation; they must, therefore, be eliminated by the different emunctories, of which the kidneys are the chief. All the cases of so-called physiological albuminuria belong in this category.

2. Increase in the blood-pressure alone is incapable of causing the appearance of albumin in the urine, but it may increase the degree of a previously existing albuminuria.

3. Pathological changes in the kidney produce albuminuria only when they are the result of an acute or chronic inflammatory process. In cases of nutritive disorders of the kidney, such as amyloid disease, the albuminuria depends, not upon the renal lesion, but upon the general nutritive disturbance, of which the kidney disease is but one of the effects.

THE TONGUE AS A GUIDE TO THE DIAGNOSIS OF LESIONS OF THE INTRA-CRANIAL VESSELS.

THE inspection of the tongue is part of the routine of every clinical examination, but it is often little more than routine, and, beyond making a mental note of the amount and color of the fur, and of the degree of moisture of the surface, the physician ordinarily pays little heed to the condition of the organ. But even this cursory examination is usually confined to the upper surface of the tongue, and an inspection of the under surface is seldom made.

In a communication made at the recent meeting of the French Association for the Advancement of Science (*L'Union Médicale*, May 26, 1888), Dr. Gillot refers to the neglect of this portion of the tongue, which, he asserts, often presents certain points of diagnostic significance to reward the physician for his trouble in inspecting it. It is the condition of the superficial ranine vessels, especially, which is to be studied in this inspection. In a young and healthy person the veins alone are prominent beneath the mucous membrane, but with the advance of age, or as a result of disease, these veins become dilated, tortuous, or varicose, and the venules and capillaries become visible. In many cases little dilatations, like grains of sand, may be seen on the smaller vessels. These may be so minute as to be detected only with the aid of a lens, but are ordinarily readily visible to the naked eye as little projections the size of millet-seeds. They may be few and disseminated, or may be very numerous and grouped together like a bunch of grapes. They are ordinarily situated a short distance from the tip of the tongue, on either side of the median line, or near the root of the organ. Their color varies, according to their size and the condition of the general circulation, from a bright red to purple, or almost black.

These projections, Dr. Gillot states, are true miliary aneurisms caused by a thinning of the walls of the vessels, and are analogous to the miliary aneurisms occurring on the cerebral vessels. But more than this, they are diagnostic of this condition in the vessels of the brain, or at least should raise a grave suspicion of its existence. The circulation of the tongue has very close relations with that within the cranium, the same influences which act upon one acting also upon the other, and the inspection of the under surface of the tongue furnishes as valuable an indication of the state of the cerebral circulation as does an examination of the fundus of the eye, while it can be readily made without instruments and does not require of the physician any special training, as does the use of the ophthalmoscope.

The primary cause of these miliary aneurisms, of the tongue as well as of the brain, Dr. Gillot refers to the so-called arthritic diathesis, and he says that he has never seen these minute dilatations of the lingual vessels in any but those suffering from arthritism, a term used to denote the diathesis expressed by the manifestations of gout, rheumatism, gravel, cardiac affections, etc.

The author urges a careful inspection of the under surface of the tongue in the aged and in those presenting any lithæmic symptoms, and believes that the physician may, thereby, often derive much assistance in the diagnosis of disturbances of the cerebral circulation, and may also obtain very valuable indications for treatment, being often enabled to avert, or at least postpone, grave cerebral disorders by timely and judicious treatment.

THE DANGERS OF "PADDLING."

At almost any of the seaside resorts numbers of children, usually little girls, may be seen, with their clothes tucked up around their hips, wading out as far as the length of their little legs will permit. It is a pastime in which they take great delight, and it seems really cruel to attempt to deprive them of it. Dr. Raven, however, has no such compassion for them, and writes to *The Lancet*, pointing out the danger to health in this sport. The water around the legs is cold, and the sun beating upon the head and trunk is hot, and the common result, this writer states, is a condition resembling heatstroke. The victim is feverish and restless, complaining of headache and nausea. The head is hot while the extremities are cold. Jactitation of the limbs is commonly seen, and vomiting is a frequent symptom. The conjunctivæ are congested, and there is intolerance of light and sound. Twice he has seen peritonitis brought about by this practice, and in several cases the symptoms attributed to "paddling" have been sufficiently serious to cause anxiety. It is surprising that, among so many offenders, there should be so few sufferers; but the symptoms in many cases, he suggests, may not be sufficiently severe to render the attendance of a medical man necessary. If the children must wade, as probably they will, Dr. Raven says that a degree of safety is insured by making the child leave the water frequently, and run about on the shore. The limbs thus become warm again, and some danger is avoided at the expense of the skin, which is apt to become inflamed and blistered by the sun. This, however, is a minor evil.

The treatment which he employs in cases of heatstroke from "paddling" is to make the patient paddle, as it were, at the other end. That is, to immerse the extremities in hot mustard and water, while douches of iced water are applied to the head. To relieve congestion of the internal organs, a brisk purge is generally needed.

An Army Medical Board will be convened in New York City, October 1, 1888, for the examination of candidates for appointment in the Medical Corps of the Army. Application for an invitation should be addressed to the Secretary of War, stating date and place of birth, place and State of permanent residence, and accompanied by certificates, based on personal acquaintance, from at least two persons of repute, as to citizenship, character, and moral habits; testimonials as to professional standing, from the professors of the medical college from which the applicant graduated, are also desirable. The candidate must be between twenty-one and twenty-eight years of age, and a graduate from a regular medical college, evidence of which—his diploma—must be submitted to the Board. Further information regarding the examinations and their nature may be obtained by addressing the Surgeon-General U. S. A., Washington, D. C.

News of the Week.

A new position at the Boston City Hospital has been created, namely, that of ophthalmic and aural interne.

Dr. Raphael, of this city, died in Saratoga on August 4th, after a brief illness.

Dr. Kálmán Balogh, of Buda-Pesth, professor in the University and dean of the Medical Faculty, and a knight of the Order of the Iron Crown, died in that city on July 15th, aged fifty-three. According to *Orvosi Hetilap*, Professor Balogh was truly a self-made man, for his path to eminence was smoothed before him by neither relative nor noble patron, and all the honors that he acquired were earned by his own exertions.

The German Physicians of the Late Emperor.—The German Emperor has conferred on Professor von Bergmann the Star and Cross of the Royal Order of Hohenzollern, and on Professors Gerhardt and Schrötter the Order of the Red Eagle (of the second class).

Dr. F. Bramann, first assistant in the University Surgical Clinic, who performed tracheotomy on the late Emperor Frederick, has qualified for the position of *Privatdocent* in the University of Berlin by an inaugural dissertation on "Myotomy and Tenotomy To-day and in the Pre-antiseptic Period."

The Medical Department of the Minnesota State University has absorbed three of the medical schools of St. Paul and Minneapolis, but the fourth, the College of Physicians and Surgeons in the latter city, has not joined the new arrangement, and evidently has no intention of doing so. The project has given rise to much discussion, which seems to betray a certain lack of harmony in the medical profession of the sister cities of the Northwest.

The position of the layman expert on patent medicines in the courts is a vague one. In civil cases his evidence is often admitted; in criminal cases it is as often excluded. The last occurred in a case tried some years ago in Chicago. A member of the Eclectic Society was expelled for violating its code of ethics by advertising a patent medicine. He brought a suit of criminal libel against the president of the society. During the proceedings several lay witnesses were called to testify to the virtues of the medicine. Their testimony was excluded on the ground that they were not experts, and consequently not capable, legally, of giving evidence on the subject. Lay evidence is admitted to the columns of the secular and religious newspapers, and that to the nostrum-venders is of most the importance.—*Medical Standard.*

The Massachusetts Health Board, during the past year, examined 4,870 samples of food, of which 35.05 per cent. was found to be adulterated or not conforming to the statutes, including 3,080 samples of milk, of which 38.33 per cent. was below the standard or adulterated. Of 550 samples of drugs, 400 were of good quality. In the five years—1883 to 1888—of the operation of the act, the percentage of adulteration found has been reduced very materially, and in milk from 83.9 to 38.33. An extended report on oleomargarine shows that it is probably not quite so digestible as butter, but is very nearly as nutritious, and does not so readily become rancid; that it is wholesome if properly made of good material.

Experiments with the Alternating Electric Currents.—Drs. Cyrus Edson and Charles F. Roberts, of the Board of Health, made some experiments at the School of Mines of Columbia College, August 3, at the request of Mr. Harold P. Brown, Electrical Engineer, to determine the danger of alternating currents. Two dogs were exposed to the action of alternating currents of 272.16 and 340.5 volts respectively, for five seconds, the number of alternations being 288 per second. Each dog was motionless during the continuance of the current, and died soon after. A third dog was submitted to a current of 220 volts for five seconds, but was not killed. He was then exposed to the same current for thirty seconds, and died at once without a sound or struggle. Those present were convinced that the deaths were painless.

Trichinosis in New York.—Two cases of trichinosis have recently been reported to the Board of Health by Dr. Seibert of this city. The persons affected are a man and his wife. The woman was taken sick about twenty-four hours after having eaten some raw beef which had been passed through a pork-chopping machine. The husband was attacked eight hours after his wife. Dr. Edson of the Health Department agreed with the reporter in the diagnosis. The unusual feature of the cases was the short prodromal stage in each instance.

Cerebral Surgery.—Mr. Damer Harrison states that so far there have been forty-one recorded operations for the removal of cerebral tumors, or opening of cerebral abscesses, with only seven deaths. Mr. Jacobson collects seventy cases of operations for cerebral hemorrhage, with fifty-seven deaths.

A Vigorous Centenarian.—On August 5th, Mr. George L. Perkins, of Norwich, Conn., celebrated the rounding out of one hundred years of his life. He is still in full possession of all his mental faculties, and walks to his business every day as regularly as he did half a century ago.

Looking for Practice.—The following advertisements from the *London Times* would seem to indicate that the rising young physicians in England are not devoid of ingenuity, even though their self-respect be not great: "A Young Medical Man, of great abilities and high testimonials, is, from want of means, prevented from obtaining a practice. Would any benevolent lady or gentleman of influence assist him by obtaining an appointment or otherwise? Address," etc. "To Philanthropists.—Young Doctor, highest credentials, living West End, will attend, gratis, limited number of patients annually recommended by any philanthropist paying sufficient for rent and taxes."

Deaths from Alcoholic Excess in London.—Dr. W. Wynn Westcott, a deputy coroner of London, publishes in *The Lancet* an analysis of 1,220 consecutive inquests held by him in that city. He is, he says, neither a total abstainer nor an advocate of that cause, and therefore thinks that he may be free from the charge of having exaggerated the figures. Of 1,220 cases of death, including deaths from violence, sudden deaths, persons found dead, and death with regard to which no medical certificate is forthcoming, 470 were infants, children, and persons below the age of sixteen years. These may be presumably removed from the list of deaths from alcoholic excess. Of the remaining 750 deaths, no less than 143 are recorded as being the result of chronic alcoholic disease, acute alcoholism, delirium tremens, suicide caused by drink, or of accidental death while drunk, or of accidents arising because of incapability when intoxicated; that is, one death in every 5.24. Of these 143 cases, 86 were men and 57 women. Of these 143 cases, 21 were suicidal, 23 accidental, and 99 the result, more or less sudden, of syncope, apoplexy, etc., due to disease of the heart, liver, and kidneys, stated in sworn evidence as due to alcoholic excess. Of the 143 cases, 9 were suffocated during the stupor of alcohol, 3 died in the act of sexual intercourse from syncope due to degenerative cardiac muscular tissue, and three were run over by vehicles in the streets. Only 9 of the cases were of persons under thirty years of age, but 21 cases were of persons over sixty years of age. The results of this investigation show that there is still a wide field for useful exertion in the cause of temperance.

The Antipyrine Craze in Paris.—Dr. Warren-Bey writes to the *Virginia Medical Monthly* that the extent to which antipyrine is employed in Paris is incredible. The average French doctor prescribes it for all the ills that flesh is heir to; it has become as necessary an article in every lady's boudoir as her perfume-bottle; scarcely a man can be found who has not some of it carefully stored away in his pocket-book; children are raised on it, and cry for it as for their *biberons;* and, in fact, they all take it, and for all things, but especially for *migraine*, which, as you know, is pre-eminently the malady of those who indulge in social dissipation. "That you may form an idea of the extent to which it is the rage, I will give you an incident as it was told me by the party immediately concerned: Mrs. P.—— was dining out recently in the Faubourg St. Germain, when she chanced to mention that she had suffered with headache during the day. Instantly, from the pockets of thirteen of the fifteen guests who were present, antipyrine was produced—in capsules, wafers, powders, and elixirs—and she was compelled to take a dose then and there, notwithstanding her earnest protest, and her assurance of entire relief before starting from home."

The habit of discussing fees is considerably ingrained upon some American physicians. According to Dr. Warren-Bey, the French set a good example in this matter. Nothing, he says, offends a French physician more than an inquiry in regard to his charges for professional services or for money to be directly paid to him. Although at heart extremely solicitous respecting his fees, he considers it *infra dig.* to discuss them, and he expects every client to take a hint from the louis conspicuously displayed upon the mantel-piece, and to add his quota to them before leaving the room. In consultations it is the duty of the regular physician to obtain the fee—one hundred francs in ordinary medical cases—and then to hand it to the consultant, sealed up in an envelope, in the most quiet manner possible, and never in the presence of the patient or his family. No conversation on the subject is admissible, and the matter is treated as if it were the least important thing in the world. One excellent custom in connection with consultations prevails here: the regular physician, as well as the consultant, receives an extra fee—usually a double one.

Society Reports.

SURGICAL SOCIETY OF PARIS.

Stated Meeting, July 11, 1888.

(Special Report for The Medical Record.)

M. Polaillon, President, in the Chair.

M. Quénu presented a communication on the

TREATMENT OF COLD ABSCESSES BY IODOFORM INJECTIONS.

In a recent discussion on the occasional untoward effects of the injection of an ethereal solution of iodoform for the cure of cold abscesses, it had been asserted that poisoning occurred only when some lesion of the kidneys or liver existed. This, the speaker said, was true in a great majority of cases, but that it was not so always was shown by a case which he had just seen. A young woman, aged eighteen, came to consult him on account of a cold abscess of moderate dimensions. He injected an ethereal solution of iodoform which gave rise to alarming symptoms of poisoning. The urine had been previously examined with the greatest care, and was found to contain not a trace of albumin or sugar. The other abdominal viscera were also normal, as far as could be determined by the most painstaking investigation.

M. Richelot reported a case of

CYST OF THE VAGINA,

which was interesting by reason of the uncertainty of diagnosis which existed for a time. The cyst had its origin in the lateral cul-de-sac on the left side, and was of enormous size, filling the entire vagina and even projecting from the vulva. The cervix was found high up on the right side of the tumor, and apparently had no connection with it. The cavity of the uterus measured nearly three inches in depth. When an attempt was made to delimit the tumor it was found to be sessile and covered with the mucous membrane. A puncture gave exit to a thick fluid, and thus established the diagnosis of a cyst, which had before not been certain. The tumor, which was found to be of embryonal origin, was enucleated. But, on account of the redundancy of tissue in the vaginal wall, a prolapse occurred, and it was found necessary later to resort to a colporrhaphy for its cure.

M. Schwartz read a communication on a case of

PRESSURE PARALYSIS FROM A CALLUS,

reported by M. Marchand. A man, aged twenty-nine, had been thrown from a horse, sustaining a fracture of the upper end of the fibula with posterior luxation of the tibia. A plaster-of-Paris splint was applied, but when it was removed, at the end of six weeks, the patient was found to be suffering from various disturbances of motion and sensibility. The foot was in an equinos position, and anæsthesia and paralysis existed in the parts supplied by the external popliteal nerve. The electrical contractility was abolished, and a marked degree of atrophy existed. There was considerable callus at the seat of the fracture of the fibula, and pressure here caused pain. Thinking that the nerve might be imprisoned in the callus, M. Marchand laid bare the tumor and discovered the external popliteal passing over it. On following up the trunk of the nerve it was found to be embedded in a mass of hard fibrous tissue. When freed from this adventitious sheath the nerve was seen to be enlarged at this part, and congested. The wound healed readily, but the function of the leg was not immediately restored. Gradually, however, motion and sensation began to return, and, rather curiously, the power of voluntary movement was gained before the restoration of electrical contractility. At the end of seven months the patient's condition was nearly normal.

The author referred to the rarity of this accident, but called attention especially to the exceptionally good results which followed the liberation of the nerve. In some of the cases previously reported, slight or no improvement was obtained by operation, and in others neuritis occurred, necessitating amputation.

M. Bouilly reported a case of

TUMOR IN THE RIGHT ILIAC FOSSA.

The patient was a woman, aged forty-four, who had been suffering during the past five years from attacks of abdominal pain and vomiting, which had gradually become more severe and frequent, being finally excited by the least exertion. The woman was unable to eat anything, had become greatly emaciated, and was in a truly pitiable condition. Eight months before coming under observation she had discovered a swelling in the right iliac fossa, which was slightly painful on pressure, but which had not increased perceptibly in size since it was first noticed. The tumor was of about the size of a man's fist, immovable, but not adherent to the superficial tissues. The patient was kept fasting for two days, after which laparotomy was performed. The tumor was found involving the ileo-cæcal portion of the intestine, and loosely adherent to the pelvis, from which it was, however, readily detached. The portion of intestine involved in the tumor was resected, and the growth was removed. The Czerny-Lembert suture was used to unite the divided ends of the intestine, and perfect occlusion was obtained. With slight interruptions the case progressed favorably, and recovery was complete at the end of a few weeks. The tumor, which was found to be a lympho-sarcoma, had involved between six and seven inches of the bowel.

M. Nicaise said that he was not in favor of subjecting patients, already weakened by disease, to a prolonged fast. If it was desirable to have the bowel empty, he prohibited the use of solid food, but allowed the yolk of egg and peptones, which were easy of digestion and left no residue in the intestine.

M. Pozzi said that he had once assisted Billroth, in an operation very similar to the one just described, in which that surgeon inserted forty-two sutures in the intestine, besides a few more in the mesentery.

M. Trélat did not approve of a great number of sutures in intestinal wounds, and used only as many as were absolutely necessary for perfect occlusion.

M. Bouilly said that he was also opposed to the employment of such an unreasonable number of sutures, which answered no useful purpose, but only created the danger of extensive sphacelus of the intestine. He inserted as many sutures as were necessary to secure perfect apposition, but beyond that every additional thread was a potential cause of failure in the operation.

M. Reclus then read a paper on

SPERMATOGENESIS,

and its relation to the radical cure of hydrocele. It had been asserted by Gosselin that spermatozoa were no longer produced when the cavity of the tunica vaginalis was obliterated. This assertion, the speaker contended, was erroneous. He had examined three hundred testes, and had found the tunica vaginalis adherent in twenty-four cases. In twelve cases the adhesions were only partial, and in these he had found spermatozoa in the testicles in eight. In the twelve cases of total adhesion, he had found spermatozoa absent in only three, and these three were in individuals aged, respectively, seventy, eighty, and eighty-four years, at which ages the spermatozoa might be expected to be absent in default of any lesion whatever. He thought that

ASPERMIA

was dependent, not on adhesion of the tunica vaginalis, but rather upon primary changes in the epididymis. The relation of hydrocele to affections of the epididymis was now well established, and adhesions of the tunica vaginalis were dependent upon the same cause, being consecutive in many cases to lesions of the epididymis. He thought it more logical, therefore, to refer the absence of spermatozoa to the primary alterations in this organ rather than to the secondary obliteration of the cavity of the tunica vaginalis. As a consequence of this belief he did not fear that any evil results would follow the obliteration of this cavity in the radical cure of hydrocele. All that was necessary to avoid was a wound or inflammation of the epididymis. He looked with less favor on iodine injections, which he thought were very apt to excite inflammatory reaction.

M. Monod asked whether the author of the paper had examined the testes microscopically. It had been shown that the gland was often altered in chronic vaginalitis and hæmatocele, a true sclerosis of the organ resulting in such cases. He thought these changes were of very frequent occurrence, and resembled the condition described by Gosselin under the name of testicular anæmia. Possibly the absence of spermatozoa in cases of vaginalitis, that is, of adherent tunica vaginalis, might be explained by the existence of this sclerosis of the testicle.

M. Trélat did not think it was possible yet to determine, with any approach to certainty, which of the two methods of treatment was the more likely to be followed by epididymitis. He had not often practised

THE RADICAL CURE OF HYDROCELE,

and consequently could not speak from an extensive experience, but he did not believe that, when strict antisepsis was enforced, there was any danger of inflammation following it. He had, however, made a considerable number of iodine injections, and he had never seen epididymitis excited by them.

M. Reclus said that it had fallen to his lot to see a very appreciable enlargement of the epididymis and other signs of reaction in almost every case in which he had injected iodine, whereas he had never seen any inflammatory manifestations after excision of the sac. He believed that sclerosis of the testicle was ordinarily secondary to a similar change in the epididymis. The gland was so shut off from the cavity of the tunica vaginalis by the albuginea, that it seemed hardly possible for a sclerosing process originating in the serous investment to invade it.

M. Terrillon said that the relation between diseases of the epididymis and those of the tunica vaginalis was well recognized, and it had frequently been demonstrated experimentally that the testis became involved only secondarily in the morbid process. In some experiments made several years ago, M. Schwartz and the speaker had proven conclusively that, when the epididymis was the seat of disease, the serous covering was always inflamed.

M. Trelat said that the idea of a close relation between diseases of the tunica vaginalis and those of the epididymis was no novelty, for he had heard Nelaton affirm his belief in it. It was, however, become more and more established as a fact every day. It was beginning to be seen that hydrocele bore the same relation to disease of the epididymis that dropsies of other serous cavities, notably the synovial, did to affections of the tissues and organs invested by them.

M. Reclus said that he had not gone into the literature of the subject, which dated back to the days of Percival Pott, as the object of the paper was not primarily to discuss the pathological relations of the testis to its sheath, but rather to speak of one etiological factor in aspermia and the means of its prevention.

The Society then adjourned.

A Western Editor on Gynecologists.—The editor of the *Pacific Medical Record* says: "It is safe to say that more than half the revenue of the physicians of the world is derived from the treatment of females; and if we say that nine-tenths of the number thus treated have no need of that treatment, and that it works actual harm, we shall utter the truth."

HOSPITALS MEDICAL SOCIETY OF PARIS.

Stated Meeting, July 13, 1888.

(Special Report for The Medical Record.)

M. Siredey, President, in the Chair.

M. Bucquoy, referring to a case reported at the previous meeting, of

LINEÆ ALBICANTES IN TYPHOID FEVER,

in which the cause was thought to reside in the rapid growth of the body during convalescence, said that such an explanation would not answer for all cases. He had recently seen two cases in which they were formed while the disease was still in progress. In one instance, occurring in a young woman, eighteen years of age, he noticed these lines just above the mammæ and along the iliac crests on the sixteenth day of the disease.

M. Barié showed some pieces of skin, removed from near the ankle, in which the atrophic lines were well marked. They were taken from a young girl who had died of typhlitis complicating typhoid fever.

M. Hayem read a paper on the

DIAGNOSIS OF HÆMOGLOBINURIA.

His paper was based upon a case which had been reported to the Society by M. Millard, as one of paroxysmal hæmoglobinuria. The patient, a woman, thirty-two years of age, had since come under his care, and he had been led to reject the previous diagnosis. On the day that the woman came into his service she passed red-colored urine, but the microscope showed the presence of red blood-corpuscles, and spectroscopic examination gave two faint bands of oxyhæmoglobine and one of urobiline, but the bands of methæmoglobine and of hæmatine were absent. The urine contained albumin, but not constantly, it being most abundant during the menstrual periods. The blood was present for one day only, and though the patient was exposed to the action of cold in order to produce it, it did reappear; but the albumin was always found in greater quantity after such exposure. The woman complained of pain in the left lumbar region, and she had cold sensations, horripilation, and cyanosis in the extremities, chiefly on the left side. The author concluded that there was some affection of the left kidney, and thought, first, that it was tuberculosis. Under the influence of a tonic treatment the patient's condition improved somewhat, but as she complained frequently of headache, was losing her hair, and presented some crusts on the scalp, he finally arrived at a diagnosis of

RENAL SYPHILIS,

and instituted treatment accordingly. Under the administration of mercury and iodide of potassium the headaches and other pains were speedily relieved, and soon all signs of the renal affection disappeared. From this he concluded that the case was really one of renal syphilis accompanied by paroxysmal albuminuria and hæmaturia. M. Millard had not found any blood-corpuscles in the urine, and had, therefore, made the diagnosis of hæmoglobinuria, but the course of the disease, even at its commencement, was not characteristic of this affection. The urine was of a brownish red color for an entire week, but the attacks of

PAROXYSMAL HÆMOGLOBINURIA

do not last for so long a time, disappearing usually within a few hours. The color of the urine varies also, passing from a light-red to, at times, even a deep coffee-color, and then growing gradually lighter again; but it remains clear and translucent, even while deeply colored. It never contains any red blood-corpuscles, and albuminuria in the intervals of the attacks is of rare occurrence. In the spectroscope, in addition to the two bands of oxyhæmoglobine, there is another band in the red portion which is due to the partial transformation of the hæmoglobine into methæmoglobine. In hæmaturia the urine is redder and is murky, and when first passed never shows the methæmoglobine band in the spectroscope. In acid urine, however, which has stood for some time, this band may appear, and the fluid becomes translucent, the blood-globules being decolorized and sinking to the bottom. In such a case it will be necessary to examine the sediment, treated with a drop of solution of iodine, under the microscope. The lumbar pains are seldom present in hæmoglobinuria. And in this affection, furthermore, the attacks are usually readily provoked by an exposure to cold.

A point of some interest which the author had observed in this case was that the blood-serum, in repeated examinations, was always found to be of a cherry-red color, and this was observed even after the patient's recovery. This would appear to overthrow the assertion made by some, that the coloration of the blood-serum was characteristic of hæmoglobinuria. He had also noted the presence of red serum (*sérum laqué*) in a patient suffering from subacute nephritis, and again, in one with heart disease and secondary hepatic congestion.

In conclusion, M. Hayem said that renal syphilis would seem to manifest itself in two ways—in a paroxysmal hæmoglobinuria and in an intermittent albuminuria accompanied by hæmaturia. In either case cold and fatigue are the exciting causes of the attack. In both forms, also, there are vaso-motor disturbances.

M. Millard was not at all certain of the existence of syphilis in this case. The only signs pointing to it were the crusts on the scalp, with the consequent loosening of the hair, and the headache, and this would seem to be a rather weak foundation upon which to base a diagnosis of syphilis. Furthermore, the patient was inclined to exaggerate all her sufferings, and it was not improbable that the cephalalgia was simulated.

M. Hayem said that he was not positive of the existence of syphilis in this patient, but it seemed fair to assume its presence in view of the fact that a cure was obtained by anti-syphilitic treatment.

M. Hudelo presented, in behalf of M. Troisier, a heart showing a

STENOSIS OF THE LEFT CORONARY ARTERY.

The patient was a man, fifty-two years of age, addicted to the immoderate use of alcohol and tobacco, who had acquired syphilis at the age of thirty-two. He was admitted to hospital for treatment of angina pectoris, from which he had been suffering for six months. The attacks were at first mild and infrequent, but soon began to appear at shorter and shorter intervals, and became atrocious in severity. No relief was obtained from treatment, and the patient finally died in one attack about two months after entering the hospital. At the autopsy the aorta was found thickened with patches here and there of hyaline material, which had not undergone atheromatous degeneration. Under the microscope there was seen complete perivascular sclerosis, which seemed to have had its origin around the small vessels of the external tunic. There was coronaritis, most marked in the left coronary artery. The wall of the vessel was thickened and partly calcified, its lumen being reduced to less than one-half its normal size, and the orifice of the artery was almost entirely occluded.

M. Huchard reported a case of

ANGINA PECTORIS,

occurring in a dressmaker, fifty-seven years of age. The attacks were of the pseudo-gastralgic form, the pain being located for the most part in the hypogastric region, and being excited by exertion or the taking of food. The pains were very similar to those of gastric ulcer, and, indeed, the case had been so diagnosed by another physician. Auscultation revealed stenosis and insufficiency of the aortic valves, and soon all the signs of a subacute aortitis became manifest. The speaker insisted that the diagnosis of angina pectoris should rest less on the seat of the paroxysmal pain than on the presence of an excessive arterial tension, and of the exaggerated diastolic bruit. The pain is not what is to be feared and combated, but it is to the reduction of the arterial tension that the therapeutic measures must be directed. The remedies proper for these cases are the nitrites and the iodides, continued for long periods, together with a milk diet. In this case some improvement seemed to follow the exhibition of iodide of sodium, but the patient finally died in one of the paroxysms. The autopsy revealed an obliteration of the orifice of the left coronary artery and dilatation of the right artery. The aortic valve was narrowed and incompetent, and there was also cardiac sclerosis.

M. Barie reported a case of angina pectoris in which the lesions of

GENERALIZED ARTERIO-SCLEROSIS

were found at the autopsy. There was a double aortic lesion, as in the case previously reported. One coronary artery was normal, but the other was dilated in the first part of its course, but at a distance of about half an inch from its origin became narrowed, and for the rest of its course was so small that it would not admit a hair.

M. Huchard presented a woman, thirty-six years of age, who had a

CONGENITAL ECTOCARDIA.

The heart was seen beating in the epigastric region, where it lay directly beneath the integument, the abdominal muscles being deficient at this point. The auricles and ventricles could be distinctly seen contracting alternately, and the heart could be grasped in the hand. The cardiac sounds were normal. It was a curious fact that the pulsations were more distinct at a point slightly above the actual position of the heart. Below the organ was a protrusion in the abdominal wall, due probably to a hernia of the stomach. There had been an arrest of development of the lower part of the sternum and of the adjacent portion of the abdominal muscles. The woman was married, and had had four children. She had suffered no inconvenience from the cardiac hernia until after her fourth confinement, when the projection of the organ became more marked, and she began to suffer from frequent attacks of vertigo. The speaker proposed to have constructed a shield to protect the heart, and at the same time to act as a truss for the hernia of the stomach.

The meeting was then adjourned.

The Treatment of Chronic Diarrhœa.—A correspondent of the *Medical News* sends the following prescription: "Many years ago I suffered severely from that trouble; I considered it incurable. Being in Paris, one of the best physicians there assured me that it could be cured by a diet of racahout, and it was. Afterward I found one could not get the acorn meal that forms the active part, but knowing that its usefulness must depend on the tannin it contains, I tried substituting for it the following:

Powdered chocolate, pure	½ lb.
Rice flour	½ "
Powdered sugar	¼ "
Tannin	¼ oz. (120 grs.)

The tannin, or the rest, separately, have little effect. Together they restore the tone of the alimentary canal and nourish as well as cure. One thing is essential, that is long cooking, not less than half an hour. If simply boiled a few minutes, the harsh taste of the tannin is very strong; with a good half hour's cooking that disappears wholly. It is impossible to distinguish the medicine from ordinary broma. I think this has something to do with its curative powers and with the ease of digestion by the most irritable stomach. The remedy is too valuable not to be more widely known. The amount to be taken is a teacupful morning and evening at meals."

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE CROONIAN LECTURES ON ANTIPYRETICS—ANTIPYRINE AND ITS MODE OF ACTION—COLD BATHING AND ITS VALUE—THE COLLEGE OF SURGEONS—DIPLOMAS IN PUBLIC HEALTH AND MEDICAL OFFICERS OF HEALTH—THE BRITISH LARYNGOLOGICAL SOCIETY.

LONDON, July 21, 1888.

IN Dr. Macalister's third Croonian lecture, at the College of Physicians, he pointed out that the height of the temperature was not always in proportion to the gravity of the disease in febrile affections. High maxima occurred frequently in mild cases, and low maxima in fatal cases. Such considerations forced us to consider the other factor in these diseases, viz., the infection. It was obvious that if the grave morbid phenomena could not be set down to the pyrexial temperature, we must attribute them in large measure to the action of the specific virus or poison. It had been shown by experiments that some, at least, of the textural changes which were thought to be most undoubtedly induced by heat were capable of being produced by infective causes, both in animals and in men. The granular or fatty change in the muscles, and particularly in the heart, was especially referred to. Turning to the question of treatment, it was pointed out that as the chief pathogenic factor in the specific fevers was apparently the specific virus, our first object of search must be for a specific remedy capable of destroying or counteracting the virus. Quinine in malarial fever, salicylic acid and its congeners in rheumatic fever, were of this nature, and their claim to be antipyretics rested largely on their specific action. The action of antipyrine was then considered in detail. Among other actions, it was shown from the data of an actual experiment that a full dose had a marked effect in increasing the rate of radiation from the unexposed skin, as measured by Masje with Eichhorst's radiometer.

In his fourth lecture Dr. Macalister continued the discussion of the action of antipyrine. It had been shown, he said, that in cases of typhoid fever the effect of antipyrine had been to diminish the total excretion of nitrogen from fifteen to thirty per cent. It also had an effect upon the perspiration. Too much importance had been attributed to the production of sweating as a thermolytic process. In certain cases of phthisis, with colliquative sweating, the lecturer had seen antipyrine lower the hectic temperature, and at the same time check the sweats, to the great comfort of the patients. Summing up its various actions, Dr. Macalister said that it appeared that antipyrine increased skin-radiation, diminished the difference between peripheral and central temperature, lowered the temperature as a whole, diminished thermogenesis, lessened the production of nitrogenous waste, and therefore nitrogenous metabolism, and frequently, but not always, increased perspiration, while it generally slowed the heart and slightly increased the tension of the radial artery.

In the fifth and concluding lecture the physiological action of antipyrine was further considered. The lecturer referred to its remarkable effect in allaying certain forms of pain, especially that which we are accustomed to call neuralgic. He concluded, from a review of all its properties, that antipyrine should be classed as a true antipyretic, and not merely as a refrigerant. It repressed thermogenesis, and at the same time did something to make thermolysis more efficient. It imitated nature; it produced an artificial crisis by the same mechanism that nature used in producing a true crisis. In neither case, however, was thermotaxis at once restored. As after a true crisis the temperature, though lowered, was still very unstable, so after antipyrine the temperature was ready to rise again on slight occasion, and did, in fact, rise as soon as the drug was eliminated. It did not cure the specific fever, it only allayed the pyrexia.

After briefly discussing the relative merits of antipyrine, thallin, antifebrine, and phenacetin, the lecturer went on to consider another antipyretic methed, viz., cold bathing. Though its application was originally based on a theory which he regarded as erroneous and one-sided—that high temperature is the primary source of danger in fever—the practice had, in typhoid fever at least, proved itself remarkably successful. Its action was considered at length and shown to differ from that of antipyrine. Cold bathing did not diminish thermogenic metabolism, and led to an increased discharge of nitrogen from the body. The two methods of treatment should be regarded as in a sense complementary, each effecting what the other did not. A combined treatment in which, for example, a cool bath in the evening procured a favorable night, while antipyrine kept the fever and its attendant discomfort within limits during the day, was an eminently rational one. It was certainly more practicable than the frequent cold bath, at least in private cases. As Riess had suggested, in the case of wasted, feeble, or aged patients, it would be an advantage to use an antipyretic which was proved capable of checking excessive metabolism, such as antipyrine; while in the case of robust and previously healthy patients the fact that cold bathing appeared to check metabolism, would not deter us from resorting to a mode of treatment which in typhoid had been abundantly proved to be beneficial.

The conservative party at the College of Surgeons have triumphed again—for the time. The supplementary charter has received the royal assent in spite of the vigorous opposition made to it. Within the Council, matters continue much as they were. Mr. Savory has been reelected to the presidency, and the coming year will be the fourth during which he has held the office.

The Local Government Bill now before the House of Commons has been the means of drawing attention to the value of diplomas in public health. Sir Lyon Playfair moved that in future (except under special circumstances) only the holders of such diplomas should be eligible for such appointments, and, with some modification, the principle has been accepted by the Government. It is to be wished that some change in the tenure of sanitary appointments could be made, for one able provincial medical officer of health (Dr. Hine, of Bradford) has been dismissed—or rather refused re-election—by his Town Council under circumstances amounting to a public scandal.

The newly established British Laryngological and Rhinological Society is not an unqualified success. I already hear rumors of an intention to conduct it in the interests of a clique, and I understand that several members have resigned, and that many others are likely to follow their example.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE INCREASE OF RABIES IN PARIS AND THE ANTI-RABIC TREATMENT—THE RATIONAL THERAPEUSIS OF PHTHISIS—THE PATHOLOGY AND TREATMENT OF ANGINA PECTORIS—CANCER OF THE ŒSOPHAGUS AND GASTROSTOMY.

PARIS, July 20, 1888.

IN a note in the *Journal d'Hygiène*, the editor begins by exclaiming that there is no longer any possible doubt as to the increasing augmentation of human rabies in Paris, and he founds his alarming statement on the announcement made by M. Pasteur, at a recent meeting of the Council of Hygiene, that, on the 19th of last June, sixteen persons bitten by mad dogs (eleven of whom at Paris) presented themselves at his laboratory to undergo the anti-rabic treatment. The eminent chemist hopes that the new measures adopted by the Prefect of Police, the object of which is to destroy all stray dogs, will diminish the number bitten. He cites the example of other countries where rabies has almost disappeared, owing to the rigorous measures adopted against dogs. Commenting on the above, the editor concludes that it would have been better to devote to the organization of a corps of men for this service some of the thousands of francs which have been fruitlessly expended in the construction of the Pasteur Institute, adding that we should not then have established this unfortunate coincidence : brilliant success of the method of anti-rabic inoculations, considerable increase of cases of human rabies ! At this same meeting of the Council of Hygiene, the President announced that several persons made a written application to the Prefect of Police, requesting him to ask M. Pasteur to furnish "indications and instructions on the first symptoms of rabies in dogs and cats." M. Pasteur, always faithful to the principles of exact science, replied that "it is impossible to define in an absolute manner the characteristic symptoms of rabies. Even the most expert men may sometimes make an erroneous diagnosis !" This is a sorry confession to make.

In the same number of the *Journal d'Hygiène* the editor draws attention to your interesting details on the opinions of German and American physicians of the city of New York, as recently published in THE MEDICAL RECORD, relative to the treatment of chronic affections of the chest (consumptives). He remarked that hospitalization and dispensaries having, till now, furnished only discouraging results, Dr. Dettweiller has established a sanatorium at Falkenstein accessible to all purses. In referring to the method of treatment so successfully carried out by Dr. Dettweiller, which essentially consists in the use of fresh air, liberal food, and alcohol, the writer recommends this method to the notice of the promoters of the League against tuberculosis. He then concludes his note by the assertion that these practical facts are worth as much, if not more, than the learned dissertations on the mode of the propagation of Koch's bacillus.

In illustration of the pathological anatomy of angina pectoris, Dr. Huchard, at a recent meeting of the Société Médicale des Hôpitaux, related the case of a woman, aged fifty-eight years, who was affected with angina pectoris. The examination of the heart established the existence of aortic stricture and insufficiency of action. Antipyrine and digitalis aggravated the state of this patient, who was only relieved by the employment of the iodide of potassium in large doses. As often happens in such cases, this patient died suddenly. At the autopsy was found a dystrophic sclerosis of the myocardium. There existed besides a dilatation of the aorta, a dilatation of the right coronary artery, and a stricture with obliteration of the left coronary artery. Dr. Huchard remarked that this case is interesting in more than one point of view. It is the one hundred and tenth case of angina pectoris in which was found, at the autopsy, a stricture with obliteration of one of the coronary arteries. It furnishes, besides, a remarkable example of what has been termed pseudo-gastralgic angina, which was exemplified in the patient under notice, as she had for a long time been considered to be affected with ulcer of the stomach, but at the autopsy this organ was found to be perfectly healthy. The author added that this case is also interesting in a therapeutic point of view, as it proved once more the efficacy of the iodide treatment, which he had for so long a time employed against angina pectoris. What creates the danger, observed Dr. Huchard, is not the pain, nor the paroxysm of angina pectoris in itself ; it is the ischæmia of the myocardium and arterial hypertension. To combat this ischæmia and this hypertension recourse must be had first to the iodides and to trinitrin afterward.

At the same meeting Dr. Troisier exhibited the heart of a patient, aged fifty-two, who had succumbed to a paroxysm of angina pectoris eight months after the commencement of the malady. This patient was at the same time a syphilitic subject, a great smoker, and much addicted to drink. The heart and the aorta were the seat of atheromatous lesions, the coronary arteries were equally atheromatous and contracted, principally that of the left side.

At a recent meeting of the Academy of Medicine, Dr. Nicaise communicated the case of a patient, aged seventy-five, who was affected with a cancer of the œsophagus, and who was condemned to succumb by inanition in a short time. Gastrostomy was performed, the stomach having been at once opened, which Dr. Nicaise said is preferable, particularly when one has to do with a patient very much enfeebled. Notwithstanding his advanced age this patient lived five months and ten days after the operation. During this lapse of time the fistula never presented the phenomena of irritation which are observed in other cases, and the matters had but little tendency to escape, which was doubtless owing to the opening being placed not far from the pylorus. This neighborhood should, therefore, be searched for in future operations. Dr. Nicaise here remarked that this case showed that gastrostomy should always be preferred to the œsophageal tube in the palliative treatment of cancer of the œsophagus, as with the tube one only remedies a part of the difficulty of alimentation. Moreover, the renewed attempts at catheterism irritate the cancer, the operation is often delicate, and the examples of false passages are far from being rare. Finally, one often meets with insurmountable strictures. Now that the antiseptic method is in vogue, gastrostomy constitutes an operation of little gravity in itself, and it insures an alimentation sufficient to enable one to prolong the life of the patient.

CHOLERA INFANTUM AND DIARRHŒA.

To the Editor of The Medical Record.

SIR : Dr. T. Clark Miller, in his interesting article in THE MEDICAL RECORD of July 21, 1888, entitled "Cholera Infantum and the Weather," says : "Under the head of cholera infantum it is becoming more and more the habit of physicians to group the diseases occurring in young children, during the season of high temperatures, which are characterized by impairment of digestion and assimilation and varying degrees of gastro-intestinal irritation." Although he thus seems to accept this grouping, in the remainder of the article he seems almost entirely to consider cholera infantum proper. Diarrhœa of young children bears nearly the same relations to high temperatures as cholera infantum, and is "characterized by impairment of digestion and assimilation and varying degrees of gastro-intestinal irritation," but it is a distinct and very different disease from cholera infantum in its symptoms, prognosis, and treatment.

In cholera infantum the great prostration, the anxious pinched facies, the dark coloring below the eyes, the lack of expression in the eyes, the mental hebetude, the retracted abdomen, the moist, cold, and often cyanotic surface, the very feeble pulse, and the great rapidity with which these symptoms come on, at once proclaim the disease to be something far more serious than "bowel complaint." The discharges from the bowel, also, are very different from those of diarrhœa, being of a character to indicate great depression of the circulatory and nervous systems, and they do not precede much, if any, the general symptoms. In diarrhœa the passages indicate a local irritation of the mucous membrane of the digestive tract, and frequently contain undigested food, especially in the beginning of the attack. General symptoms of prostration and weakness of circulation do not come on until after some time, in fact, not until the bowel trouble brings them on. The pulse is full, rapid, and, at first, strong, and the surface hot. Diarrhœa is sthenic, cholera infantum asthenic.

Their treatment also is essentially different. In diarrhœa the treatment is directed almost exclusively toward the condition of the bowel, and the greatest success is attained by the use of opium in large doses, bismuth, chalk, mineral acids, and pepsin, and when persistent of calomel, mercury-with-chalk, ipecac, and rhubarb.

With the exception of opium, these remedies do little or no good in cholera infantum. In this disease the opium must be given in very small doses as a sedative and food for the nervous system, but we have to depend, for the most part, upon supportive treatment, giving alcohol, digitalis, and camphor. Minute doses of corrosive sublimate seem to act well sometimes, but the most important measure is immediate change of air. Take them away at once, even if they must be carried on a pillow. Probably the best diet for them is cream and water, with a little brandy in it.

Many physicians do group these diseases together and treat them as varieties of one disease, but it is evident that this is a grave error, and I do not think it is becoming "more and more the habit" to do so, for I think that physicians everywhere are paying more attention to, and becoming more successful in, differential diagnosis.

D. E. English, M.D.

Millburn, N. J., July 28, 1888.

THE INFLUENCE OF THE CLIMATE OF FLORIDA ON CONSUMPTIVES.

To the Editor of The Medical Record.

Sir: In a letter, in the issue of July 14th, Dr. Drew criticises Dr. Knight's conclusions that "cases of advanced disease, with cavities or severe hectic symptoms, should remain at home. But sometimes the moist, warm climate of Florida is *beneficial*."

I think that Dr. Knight is quite correct in his view of the matter. He does not imply that the climate is *curative*; but I am sure that Dr. Drew and other physicians in active practice in Florida know from experience that, at least the discomforts of the condition are remarkably palliated by a residence in that climate.

Much of the suffering of the consumptive is due to bronchial irritation, pneumonic pains, and catarrhal annoyances, and these conditions, as Dr. Drew admits, are relieved by the climatic influences of Florida.

In my experience the lives of sufferers with advanced phthisis are rendered more tolerable by a residence in Florida than in any other climate with which I am familiar. If they do not, as the French have a way of saying, "die cured," they can at least exist in comparative comfort, and finally depart from this life with but little or no suffering. Pulmonary hemorrhage seems also to be less frequent in such cases, or is more moderate, than in Northern climates and in elevated regions generally.

In the large class of chronic cases of bronchitis, bronchial catarrh, and pneumonia, so prevalent in the North, and often mistaken for pulmonary tuberculosis, a winter residence in Florida is almost invariably curative.

These conditions, which are so frequently preliminary to tubercular deposits, are the ones that are particularly amenable to cure and prevention by that genial climate.

R. J. Levis, M.D.

Philadelphia, Pa.

A Disinfectant of Air.—According to M. Keldyche, who has just published the results of a series of experiments on the air drawn from hospital wards, air which has been saturated with eucalyptol will no longer give rise to colonies of bacilli in gelatine. The spores of fungi are able to pass unharmed, but as their action on the higher animals is probably limited, it is not a matter of much importance. If confirmed by independant observation this valuable quality renders the drug worthy of widespread employment, for no other disinfectant is known which can be relied upon to effect its purpose without rendering the air irrespirable, besides acting very injuriously on furniture, clothes, etc.—*Medical Press.*

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 5 to August 11, 1888.

Noerper, Egon A., Major and Surgeon. Relieved from duty at Fort Keogh, Mont., and ordered to duty at Fort Walla Walla, Wash. Ter. Par. 5, S. O. 175, A. G. O., July 30, 1888.

DeWitt, Calvin, Major and Surgeon. Relieved from duty at Fort Sully, Dak., and ordered to duty at Fort Missonla, Mont. Par. 5, S. O. 175, A. G. O., July 30, 1888.

Corson, Joseph H., Assistant Surgeon. Leave of absence extended one month. Par. 17, S. O. 178, A. G. O., August 2, 1888.

Harvey, Philip F., Captain and Assistant-Surgeon. Relieved from duty as assistant to the Attending Surgeon at Washington, D. C., and ordered to duty at Fort Keogh, Mont. Par. 5, S. O. 175, A. G. O., July 30, 1888.

Merrill, James C., Assistant Surgeon. Granted one month's leave of absence from August 3d. Par. 7, S. O. 178, A. G. O., August 2, 1888.

Gardiner, John de B. W., Assistant Surgeon. Will, on the expiration of his present sick leave of absence, report in person to the commanding officer at Fort Leavenworth, Kan., for duty. Par. 4, S. O. 178, A. G. O., August 2, 1888.

Gorgas, William C., Captain and Assistant Surgeon. Granted leave of absence for one month, to take effect on being relieved from duty at Fort Randall, Dak. Par. 4, S. O. 177, A. G. O., August 1, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending August 4, 1888.

Hudson, A., Medical Inspector. Detached from the Trenton, and ordered home.

White, C. H., Surgeon. Ordered to the Trenton, via Panama.

Urie, John F., Assistant Surgeon. Ordered to the Receiving Ship Franklin.

Bates, N. L., Medical Inspector. Detached from the Richmond, and to the Pensacola.

Anderson, Frank, Passed Assistant Surgeon. Detached from the Richmond, and to the Pensacola.

Kite, Isaac W., Assistant Surgeon. Detached from the Richmond, and to the Pensacola.

Jones, W. H., Surgeon. Detached from the Pensacola, and to the Richmond.

Stone, E. P., Assistant Surgeon. Detached from the Pensacola, and to the Richmond.

McCormick, A. M. D., Assistant Surgeon. Ordered to special duty in the Bureau of Medicine and Surgery.

Wieber, F. W. F., Assistant Surgeon. Reports arrival home, having been detached from Vandalia.

A New Substance for use in Local Refrigeration is Canadol, one of the constituents of a heavy naphtha-ether obtained by the fractional distillation of American naphtha. It represents a limpid, very volatile, easily inflammable fluid, possessing a strongly pronounced benzine odor (*Therap. Gaz.*). The liquid is insoluble either in water or in alcohol. It is used in the same way as the ether spray, but it is cheaper than ether.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending August 4, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	30	11
Scarlet fever	87	22
Cerebro-spinal meningitis	2	2
Measles	179	16
Diphtheria	108	27
Small-pox	0	0
Yellow fever	0	0
Cholera	0	0

Successful Partial Extirpation of Larynx.—Professor Billroth recently performed the operation of partial extirpation of the larynx and of one of the vocal cords on a patient suffering from cancer in the throat. Subsequently the man was brought into the professor's lecture-room, and after examination was pronounced "completely cured." He breathes quite easily without a cannula, and has a good appetite. It is, however, admitted that a relapse is almost certain.

An Impecunious Medical Student advertises thus in a Dublin paper: "Matrimony.—Young gentleman reading for the medical profession is desirous of making the acquaintance of a young lady; one with some means preferred; widow not objected to; all communications will be regarded as strictly confidential; enclose carte if convenient."

Infant Mortality.—The Italian statistician, Signor Bodie, has published some figures showing that ten per cent. of all infants in Europe die within the first month, twenty per cent. before the end of the first year, and thirty-three per cent. of the remainder during the first five years. Hardly seven children out of ten reach the completion of their sixth year.

A Natural Cubic Centimetre Measure.—Everyone has at his disposal a cavity, viz., the external auditory meatus, whose capacity is about a cubic centimetre. The right meatus holds a little more than the left, and the capacity increases slightly with the height. The exact average capacity in one hundred men, according to Hummel, is 1.06 c.c.

The Favorite Treatment of Pneumonia in the Pennsylvania Hospital is by the administration of quinine, ten or twelve grains daily, in combination with tincture of digitalis, nitrate of potassium, and whiskey.—*College and Clinical Record.* Some will probably think that this kind of treatment is a pretty poor one.

Cancer and Vegetarianism.—Surgeon-Major Hendley, Resident Surgeon at Jeypore, writes to the *British Medical Journal* of April 7, 1888: "M. Reclus has shown that cancer was all but unknown among the persons whose food was exclusively vegetable." "M. Verneuil also believed that the increase of cancer was largely due to the carnivorous habits of diet of the present generation." The records of the Mayo Hospital at Jeypore, which is under my charge, show no such immunity of vegetarians from cancer. From January, 1880, to the present date, one hundred and two major operations have been performed in the hospital in cases of cancer. Of these, forty-one were on the persons of meat-eaters and sixty-one on those of strict vegetarians who had never eaten meat since their birth. In India, where caste rules are exceedingly rigid, the fact that the latter were true vegetarians is capable of absolute proof. Among them are six Saraogis, a class of Jains who even reject many kinds of vegetables. Three of these Saraogis suffered from cancer of the breast. Out of one hundred and two cases there were three deaths attributable to the operation. There is no information available as to recurrence, or the contrary. The cases were divided as follows: Cancer of breast, 20; tongue or lips, 8; head and face, 17; upper extremity, 11; lower extremity, 8; trunk, 18; penis, 15; labia, 1; testicle, 1; glands, 3. There were sixty-two males and forty females, a large proportion of the latter in a country where the *purdah* system is in force. The maximum age was seventy years, the minimum eighteen years, the average forty-three years.

Sweating in Infectious Diseases.—In a paper read before the R. Accademia Medica di Genova on May 28th, Professor G. B. Queirolo expressed the belief that the ancient traditional treatment of acute fevers by diaphoresis was too much neglected at the present day. He was convinced that there was a considerable amount of truth in the old notion that the "peccant matter"—or "morbid virus," to give it its modern name—is, to a certain extent, eliminated in the sweat. He had been led to this conclusion by the results of some experiments on rabbits, which he inoculated with the sweat of patients suffering from various fevers (small-pox, ague, articular rheumatism, pneumonia, etc.). These experiments were controlled by others in which sweat from persons in perfect health was used in a similar manner. The sweat was always collected and kept under the same conditions, the reaction being neutral, and the specific gravity about 1.006. All the rabbits into which sufficient doses of "pyrexial" secretion were injected died in from two to forty-eight hours; while the others, into which an equal or larger amount of healthy sweat was injected, were not affected in any way whatever. The former died without showing any rise of temperature, and on *post-mortem* examination not one of the known signs of septic infection was discovered; the spleen was not enlarged, and only in a few cases was there some scanty serous or sero-sanguinolent effusion in the peritoneal cavity. Professor Queirolo thinks that these experiments prove that the sweat of persons suffering from infectious diseases contains toxic matters, as to the nature of which, however, he is not prepared to express any definite opinion. He urges that in such cases diaphoresis should be encouraged by every means in our power, particularly by making the patients drink large quantities of liquid, whereby the poisonous matters produced by the infecting virus may be, as it were, washed out of the organism. Dr. Queirolo is continuing his researches on this subject, and promises to publish his results at an early date.—*The British Medical Journal.*

The Composition of Certain Artificial Foods.—No one more than physicians should know the composition of the many artificial foods which are pressed upon their attention by enterprising commercial firms. The *Boston Medical and Surgical Journal* contains an article upon this subject by Dr. B. F. Davenport, giving analyses of some of these foods. One of these is Loeflund's Cream Emulsion, of which the composition is found to be as follows:

	Per cent.
Water	24.32
Fats	15.32
Soluble albuminoids	2.24
Insoluble albuminoids	4.99
Maltose and lactose	43.16
Dextrine	6.27
Ash	2.60

This agrees quite well with the advertised formula. But what is more remarkable, it has over twice as much butter fat as is claimed for it, while usually such preparations contain less than a fair whole milk would naturally yield. It does not dissolve readily in water, white curds separating and coming to the top. It is much too sweet to resemble cow's milk. Such an excess of saccharine matter is highly objectionable.

Wells & Richardson's Lactated Food.—The name of this food conveys a false impression, for it does not contain any milk. The claim that it contains fifteen per cent. of malt diastase, retaining its full activity, is not sustained by the analysis, where no diastasic action upon the over one-third-part starch was found when the food was brought into solution. In the presence of so large an excess of alkali no such action is to be expected. Its albuminoids are derived from the gluten, etc., of the cereal, and not from milk.

Composition.

	As advertised. Per cent.	As found. Per cent.
Water	....	7.76
Fat	....	1.64
Milk-sugar	25.00	29.65
Malto-diastase	15.00	....
Soluble carbo-hydrates	41.67	39.00
Starch	....	36.43
Gluten and soluble albuminoids	16.35	....
Albuminoids	....	11.85
Potassium bicarbonate	1.25	....
Phosphates	0.25	....
Sodium chloride and other salts	0.48	....
Ash	....	2.61

Malted Milk—Composition.

	Per cent.
Water	2.18
Fat	5.30
Albuminoid	16.88
Soluble carbo-hydrates	66.99
Starch	5.57
Malt-sugar and milk-sugar	50.40
Ash	3.13

This food differs from Nestle's and others like it in that most of the starch has been converted by malt diastase into maltose. The malt extract in the food as sold has no diastatic activity. The claim that the caseine has been predigested by the diastase, that is, converted into a soluble form, is not found to be true. The caseine in the "Malted Milk" is present, with its properties no more changed than they are in Nestle's, the Anglo-Swiss, Carnrick's Soluble Food, or other similar milk foods, prepared by evaporating down baked wheat powder with condensed milk. In all of these it is left behind as separate, hard, unchanged particles of caseine.

Reed & Carnrick's Liquid Peptonoids—Composition.

	Per cent.
Water	64.694
Alcohol	15.136
Albuminoids	2.021
Fat	0.031
Carbo-hydrates, mostly sugars	17.666
Ash	0.350

This claims to be "concentrated beef and milk with gluten perfectly digested." It is a strongly alcoholic liquid of a light yellow color, with an alcoholic burning taste, and with a smell similar to that of many preparations of hair-oil. It appears that the insidious introduction into the bed-room of an invalid, of a preparation claiming, as this does, to be of a highly nutritious character, and yet which is principally composed of alcohol, is a criminal act.

VON MOSETIG-MOORHOF, at the December 5, 1887, meeting of the Wiener Med. Doctoren Collegium (*Deutsch Med. Woch.*, 1888, p. 153), was original in one respect—his English. He quoted the following as Lister's own statement of his "fundamental satze :" 1. "Let the Wound to be Alone." 2. "Let the Wound to be protected." 3. "Let to the Wound her free discharge." The use of a foreign language in a medical society discussion is generally an objectionable affectation, but the procedure becomes doubly objectionable and indefensible when the philologist murders the language after Moorhof's fashion.—*Medical Standard.*

INTRATRACHEAL CARCINOMA WITH CANCER OF THE THYROID.—At a late meeting of the Pathological Society (*The Lancet*), Dr. Semon related a case of intratracheal carcinoma continuous with carcinoma of the thyroid. The patient was a man aged thirty-nine, under the care of Dr. Ord, and afterward of Dr. Sharkey, in St. Thomas's Hospital. The chief symptoms were hæmoptysis of some standing, emaciation, cough, and night-sweats. There was paralysis of the right vocal cord, with indistinct pulmonary symptoms. Locally there was some thickening external to the trachea low down, and laryngoscopic examination revealed what appeared to be tracheal ulceration just at the lowest border of the field of vision. All symptoms present in the case appeared compatible with the diagnosis of tubercular disease of the lungs and trachea, but no bacilli were found in the sputum; and toward the end of the patient's life Dr. Sharkey entertained a strong suspicion of malignant disease of the trachea. Death ensued from increasing hæmoptysis. At the post-mortem examination double pneumonia affecting the lower lobes was found. Examination of the organs of the neck showed a smooth ovoidal growth projecting into the trachea from the anterior aspect, about 1.5 ctm. below the lower border of the cricoid. Section showed an extensive submucous infiltration, the tumor substance spreading between the tracheal cartilages to the thyroid gland, and to the exterior of the trachea below the latter. The right recurrent laryngeal nerve was found to enter the mass of malignant disease which lay around the trachea. The histology of the growth was that of cylinder-celled carcinoma; the investing epithelium of the trachea was not involved. As the tumor was traced outward, its thyroidal character became plain. The cell-columns had everywhere a lumen, and were formed by a single cell-layer. This form of thyroidal carcinoma is very rare. Wölffler collected seven cases from different authors, and figured a specimen very like the present. It was also remarkable that the extension into the trachea took place in the form of a well-defined, comparatively large tumor, and not, as usual, of mere infiltration of the tracheal walls.

TANNIN IN THE TREATMENT OF TUBERCULAR DISEASE.—At the fifth meeting of the Societá Italiana di Chirurgia, recently held at Naples, Professor Ceccherelli drew attention to the value of tannin in the treatment of local affections of tubercular origin. (*The British Medical Journal.*) From experiments which he hâd made on animals, and from clinical experience, he believed it to be a powerful antiseptic, with a specific power of destroying the tubercular virus. He found that the addition of tannin prevented putrefaction of animal tissues and fluids, and that decomposition was very considerably delayed in the bodies of animals which, while alive, had undergone a course of treatment with tannin. He had also found that while he could produce tuberculosis in certain animals by the injection of phthisical sputa, or of tubercle bacilli, the injections produced no bad effect when tannin was injected simultaneously, or was given internally every day for some time. He had treated twenty patients suffering from tubercular diseases with tannin, both externally and internally, with very satisfactory results. He therefore looks upon tannin as an excellent remedy in tubercular affections of the bones and joints; under its influence ulcers heal kindly, any tubercular formations that may already exist are destroyed, and generalization of the disease is prevented. Dr. Ceccherelli considers that tannin is much superior to iodoform in the treatment of tubercular disease, besides having the further advantage of being perfectly harmless.

PROFESSOR JACCOUD recommends a copious diluent draught and an exclusive milk diet in the treatment of gout; in cases in which there is considerable fever he gives a small quantity of hydrate of bromal. Preparations of colchicine and of salicylate of soda, though excellent as anæsthetics, are to be avoided. In patients affected with interstitial nephritis these substances produce most serious toxic symptoms.—*British Medical Journal.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 7 New York, August 18, 1888 Whole No. 928

Original Articles.

THE EXTENSION-WINDLASS METHOD OF TREATING FRACTURES OF LONG BONES,

Especially Illustrated with Reference to Fracture in Upper Third of Femur.

By CHARLES DENISON, A.M., M.D.,

DENVER, COL.

For some time the writer has been under the impression that there is a decided opportunity for improvement in the mechanical management of certain fractures of long bones requiring extension. Special reference may be made to railroad, marine, or military surgery, or wherever the transportation of the injured to hospitals or their homes is necessitated.

Contrivances for producing extension in the treatment of fractures have been numerous and ingenious; but most of them have been cumbersome, uncomfortable, and not beyond question as to average results.

During his early hospital experience (1870) the writer devised the extension windlass, here illustrated (see Fig. 1), which he believed was the epitome of extension, or the concentration of that power into the smallest possible space for practical uses.[1]

This little instrument—about the size of an ordinary silver watch—can accomplish everything that may be desired in the way of extension, if properly applied. By this is meant, if it is suitably combined with plaster-of-Paris or silicate of soda bandage-dressing, felt splints, or other appropriate device. Furthermore, because it furnishes a fixed and definable power, it is by so much superior to all unstable or elastic methods of treating fractures requiring extension, heretofore the rule in surgery. It may be claimed that this is an intermittent force because it depends upon the intermittent acts of the attending surgeon. But the slight relaxation between the surgeon's visits is as nothing compared with the unstable conditions which have to be overcome alike by all methods of extension.

In the treatment of fracture of the femur by the pulley and weight, the varying amounts of shortening or lengthening, as you like it, on successive days, with the weight of traction unchanged, has somehow caused the suspicion in the mind of the writer that this *unstable force* (motion) tends to elongate or change those cells into fibrous tissue (non-union), which, in nature's reparative process, were intended to become *bone.* The extension by pulley and weight is considered unstable because it is only opposed by the more or less *flexible* resistance of muscles, tendons, and tissues. Such methods, typified in Buck's extension, are, then, unnatural, inhuman, and unreasonable, and must of necessity give way to the utilization of steadier forces to accomplish the needed extension. The beauty about the screw or windlass method is that it requires nothing further of resisting muscles once relaxed than simply to hold them in position, which is finally an extremely simple affair, when once they have succumbed to just sufficient extension.

Fracture of the neck or in the upper third of the femur.—One of the most difficult fractures to treat, in which the surgery of the day is not up to its average success in other directions, is intra- and extra-capsular fracture of the femur, or the two combined. If the ligamentum teres is severed, if the break is intra-capsular, or in old people, the pain or confinement involved, and the long time consumed in obtaining the possible shortening, non-union, or deformity, are satisfactory *only* because they seem heretofore to have been unavoidable. Even with less serious complications the rule of shortening is perhaps more liberal than it should be. This is a conclusion which, it is hoped, will be supported by the use of the extension windlasses suitably adjusted. There are two methods of application to be mentioned at present, one by the aid of plaster-of-Paris or silicate of soda bandage-dressing, and the other by porous felt-splint material, or a like substitute, properly cut and moulded to fit. The preparation for the first method consists, first, in the plaster-rolled bandages. These are to be applied over a thick pair of drawers, which can be pulled well up on the waist, or (with one to whom flannel may be irritating) silk or fine balbriggan drawers might be substituted, covered with cotton-wadding, canton, or lamb's-wool flannel, cut to fit a space

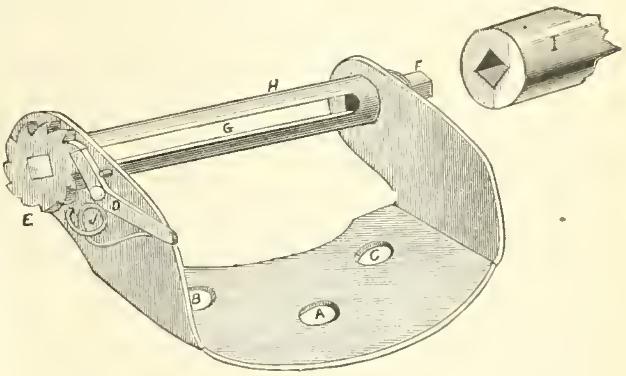

Fig. 1.—The Extension Windlass (diagram nearly the full size), made of brass, each pair of windlasses being rights and lefts, *i.e.*, the key-ends (F) of the winding-rod (H) both project forward on each side of the limb when in use. This winding-rod is firmly held in a bracket by means of which, through the perforations shown for screws or tacks, it is made either stationary (A, B, C) or swivel (A) upon any splint or wooden slat. The usual form of attachment (stationary) is to have the arms of the bracket, which are one and three-fourths inch apart, enclose the end of a pine- or soft wood slat of the same width. The windlass thus placed upon the outside of the slat, and the end of an adhesive plaster threaded through the slat at the winding-rod (G), traction is furnished about on a line with the surface of the limb to which the plaster is applied. The traction is regulated at will by the ratchet (E) and pinion (D) on one end of the winding-rod, the handle of the pinion serving as a means of throwing it off from the ratchet and thus letting up the tension whenever that is desired. The pinion is constantly held against the ratchet by the spring J, unless the handle of the former is purposely depressed. The winding-rod is easily turned by the key I.

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[1] In making extension we cannot expect the muscular power to be overcome, and, at the same time, its relations to the various states of the nervous system to remain *constant;* and yet, with a weight of twenty pounds, a constant force, it is sought to overcome another which naturally weakens. While so great a power may be necessary at first, still, as the opposing power lessens, its influence is really proportionately intensified. In this contest with a man's muscle and nervous system, a bag of sand has undue advantage. Then, too, there may be some uncertainty as to the amount of extension used by the pulley and weight. Some surgeons habitually weigh the sand or material used, instead of guessing at it, and then endeavor to regulate this weight as the case may require. Such are probably the exceptions. Now, if the maximum weight required (as Professor Hamilton found in making extension for fracture of the shaft of the femur) is twenty-two pounds, who can give us even an approximate rule for the weight necessary on successive days after the injury, as muscular contraction is gradually weakened, or that would be applicable to the great variety of cases occurring? The nearest to a correct guide would be the *length of the limb;* but this is just as reliable in extension by the windlass, which requires no more of muscles once relaxed, than to keep them under control.—*New York Medical Journal*, May, 1875.

a little larger than that to be enclosed in the plaster bandage.[1]

Fan-shaped adhesive plasters are cut to fit the sides of the leg, reaching from the knee to below the foot, where they can be threaded through the winding-rod, being there one to one and a half inch wide.

Pine-slats are needed, one and three-fourths inch wide, one-fourth inch or less thick above, one-half inch thick below, long enough to reach from below the groin on the inside, and from the trochanter major on the outside of the limb to just below the arch of the foot or to the malleoli, as the surgeon prefers. The upper ends of these slats are thinned and roughened to favor fixation in the plaster bandage. To the lower ends of the slats the windlasses are attached; each windlass enclosing the outside of the end of each slat. It is desirable to spread the upward pressure of the plaster bandage over as large a surface as possible, and protect the perineum and gluteal region by fixing in this locality an absorbent cotton or similar pad—perhaps plaited—one-fourth inch thick, five inches wide, and two feet or more long. The turning outward of the upper edge of the bandage-dressing at this point also helps to make a broad impinging surface along the inner and upper border of the inverted and truncated cone, which will be the shape of the dressing as it fits the thigh. The perineal pad and protecting covering to the thigh and waist being in place, the patient is lifted up above the bed, or out from the bed and at a right angle to its side, and a chair is placed under the opposite hip to help support him in this horizontal position. The parts over which the plaster-of-Paris bandage is to be spread are then entirely free and the application can be quickly made, turning the broad bandages from the thigh around the waist by the figure-of-eight movement, and properly enclosing the roughened ends of the side-slats in the middle layer of the bandage.

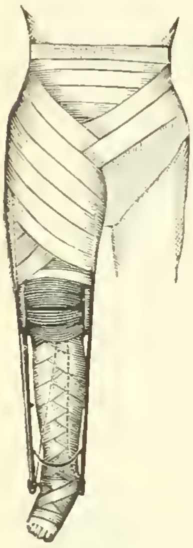

Fig. 2.

Extension had better be begun, by means of the windlass, before the bandage is entirely dry, so as to adjust the same to the swell of the thigh. Care should be also taken that the foot does not turn too much outward, that the thigh is slightly flexed upon the pelvis, and that the knee is a little bent, so as not to leave it in a strained condition. This latter can be accomplished by a broad band running from one slat to the other underneath the knee (see Fig. 2). The slats are held apart and prevented from pressing too much on the limb at their lower ends by a wire hoop extending over the limb and having sharp ends which stick into the inner surface of each splint, or pads may be tacked to the inner surface of each slat near their lower ends, which will guard the flesh from friction against the windlasses. In a variable time up to two days, after traction is commenced, the limb may be drawn down to the exact length of its fellow, and after that, for a week, turning the ratchet a chick or more a day, and the same amount every other day the second week, will probably be sufficient to hold the limb down in place, this being all that is requisite to neutralize the giving of the plasters and of the counter-extension around the thigh. If properly padded and adjusted, there is no pain from the upward pressure of the thigh-dressing. Care must be taken, however, not to use too much traction by the windlasses when once the muscles, etc., have succumbed to this apparently small, but yet invincible, force. How much better is this than the increasingly uncertain and never-ending traction on the pulley-and-weight principle of Buck's extension! The patient can be turned on to either side, and then be bolstered up in a comfortable way. Not only this, but with the aid of the nurse, who lifts the injured thigh and leg, the patient can move himself at will across the bed or on to a bed-pan. This is accomplished by the aid of the trapeze apparatus (illustrated in Fig. 3) which the writer devised for the use of his first case of fracture of the neck treated by this method. This the patient in question christened the "Fracture Alleviator," and was continually grateful for the comfort and freedom of motion which it afforded.

It consists mainly of a bar, which is made to swing down from a frame behind the head of the bed, so as to be within the reach of the patient, at which point it is made stationary by hinged supports, which fit into slats in the upright beams of this frame. The trapeze portion can be pulled up out of the way by a cord running over a pulley on the frame above. By this apparatus the patient lifts the thorax and head with the hands, and supports the body by the sound limb, while the nurse, resting his elbows on the bed, easily moves the disabled limb.[1]

The dressing of the leg and waist (Fig. 3) is intended to illustrate another, and perhaps better, method of treating these same fractures. It is a combination of a wide belt around the waist, made of four thicknesses of thick duck-cloth, attached to a porous felt casing to the thigh, to which, in turn, the side-splints are fastened either by copper rivets (used for belting), or better, by the slats being tied to the felting by tape threaded through holes punched in both. The felting is cut to fit the swell of the thigh (either of the patient or of another person of the same size) with a triangular projection on the upper edge and forward end, so as to form an extension of the dressing to and above the crest of the ilium. The writer has used the Russian felting, and been pleased with it. A paper pattern for this might be first made, which will have

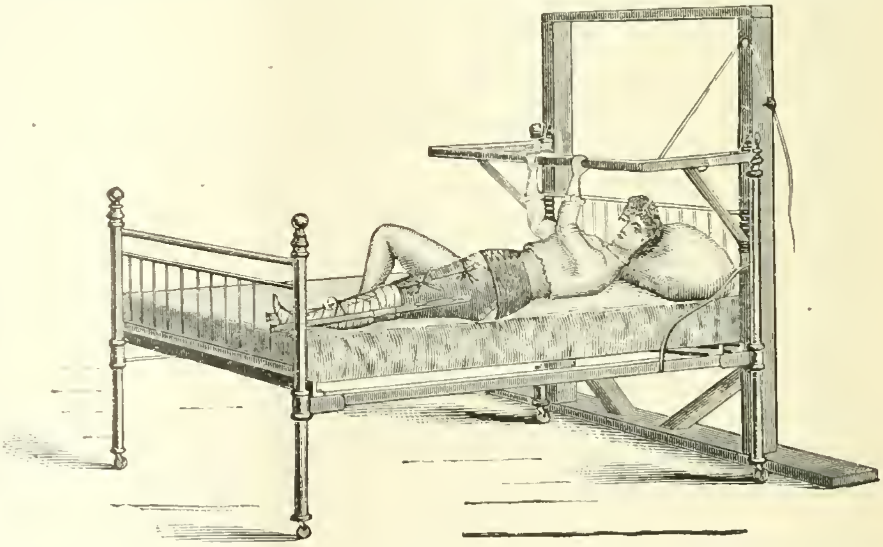

Fig. 3.

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[1] If silicate of soda dressing is to be preferred (because it is lighter and less likely to crumble), a thick duck or tent cloth has lately been found by the writer to be best for the bandages.

[1] The silicate of soda bandage-dressing will have this advantage: It is lighter and can be cut open along the front of the thigh and abdomen; the cut edges can be bound and furnished with eyelets so as to be opened or laced up at will. The plaster-of-Paris, after much use, crumbles and irritates the patient, which the lighter bandage will not do.

the following shape and dimensions for a man six feet tall and weighing one hundred and sixty pounds :

Having been moulded to the required shape, and this upper border turned out and fastened or sewed down to the outside of the cone, the shell is set aside to become hardened. Through holes, punched in this casing with a shoemaker's awl, the broad abdominal belt is sewed to the same or tied by means of tape. This method is also found to be quite suited to attach the side-slats (thinned above) to the felting (see Fig. 3). When in use, the upward pressure of this casing is relieved by means of a generous pad of cotton rolled in cheese-cloth or other soft material, extending from over the gluteal fold to past the inguinal region. It may be well to suitably protect the thigh from this stiff covering, and also to secure to the cone, on its inner surface, long strips of padding, one just back of the trochanter major and shaft of the femur, and a smaller one just in front of the same, so as by their pressure to fix the bone in proper relation to the pelvis.

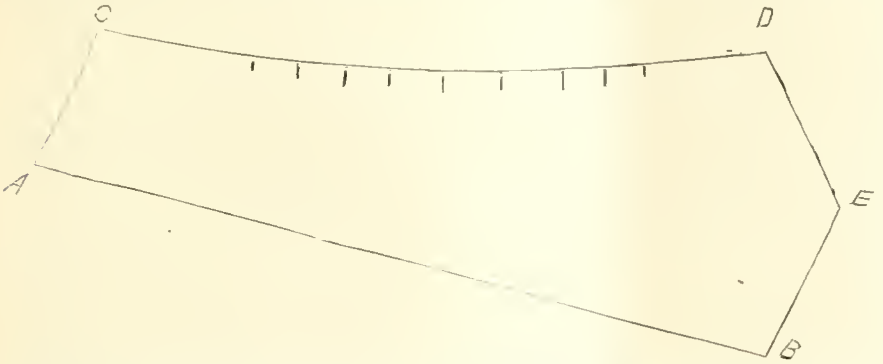

FIG. 4.—A B, distance around middle of thigh ; A C, or B E, distance from symphysis pubis to upper border of patella, about twelve inches ; B E D, about twice A C. For the right side, A C would be bent backward, and *vice versa* for the left side, A C lapping over B E, and the point D reaching above the crest of the ilium. After softening the felting the middle two-thirds of the upper edge C D is bent outward to form a rolling border, which process may be aided by slitting the edge one half to one inch deep, every two inches.

The advantages of this method of dressing the thigh and pelvis over the use of plaster-of-Paris bandage are its lightness, its adjustability through change in the padding, etc., and the facility with which the apparatus can be removed and the limb examined. At the same time, the control of the fracture and the conditions of suitable extension are as nearly perfect as possible.

It may be claimed that more ingenuity on the part of the surgeon is required to satisfy these conditions and adjust such an apparatus than to put up a limb by the old methods. Even if the claim is valid, it is so only in the first accurate adjustment. Afterward there is very little for the surgeon to do. It is hoped the plainness of the drawings, and the many details noted in these directions, may, in a measure, make up for any extra requirement of mechanical ingenuity. The results of this method of treatment of fracture of the cervix femoris in two cases where the first plan—that by plaster-of-Paris bandage-dressing—was used, have been most excellent, *i.e.*, with very little or no shortening. The first of these combined more unfavorable conditions than the knowledge or experience of the writer had ever presented, and the new method was not tried until the pulley and weight had been used and proved a failure.

The length of this paper does not permit of elaboration of other uses of the extension windlass. However, a brief mention of some of them will serve to indicate the wide range of uses to which the ingenious surgeon may put this little instrument, especially if he resides in the country or is away from depôts of surgical instruments where special appliances for extension are to be obtained.

A compound or comminuted fracture of tibia and fibula requiring extension is most admirably treated by the method illustrated in Fig. 5. The side-slats, like those already described, with windlasses on them, are simply inverted, and the thin and roughened ends are inclosed in the middle layer of an ordinary plaster-of-Paris dressing to the foot and leg. The dressing fits snugly only below the fracture, the foot being at right angles to the centre line of the leg. The pulling of the windlasses on the broad, fan-shaped adhesive plasters (bandaged to the thigh) simply pushes the dressing down to the required extension. In one case (comminuted) the tilting sideways of a four-inch fragment of the tibia was nicely prevented. In another case (compound and comminuted, 1874) the writer cut a large window in the plaster dressing over the tibia, where he had taken away half an ounce in fragments of that bone from its posterior surface. The remaining sharp points of the broken bones were so perfectly held in place that a good recovery was obtained with only one-fourth of an inch shortening. This was in a case where others had suggested amputation. With children, one windlass may be made to answer either for extension above or below the knee ; but with adults two are to be preferred usually. If desired, the windlasses can likewise be attached to the upper ends of slats fastened to the sides of an ordinary fracture-box, the foot being held to the foot-board by properly adjusted adhesive strips. The writer has always, by preference, slung these dressings in a coop.

Extension of the knee-joint can easily be imagined by duplicating the windlasses on the lower ends of the slats (shown in Fig. 5) and reversing the ends of the fan-shaped adhesive plasters to represent those which are applied below the knee. These side-slats need not be cumbersome, but must simply be strong enough to stand the required pressure at their ends, and not bulge too much outward.

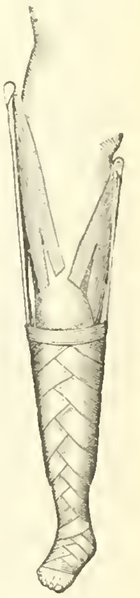

FIG. 5.

For extension of the ankle-joint (Fig. 6), notice how slats may be fastened to a foot-piece to which the foot is fastened by adhesive straps, and any desired angle of the foot to the leg be obtained by producing traction on either the posterior or anterior windlass (on the upper ends of the slats) as the case may require.

Extension of the hip-joint may be obtained by fastening the ends of a perineal band to the upper end of a long, light side-splint, over the lower end of which the extension windlass is made stationary. The fan-shaped adhesive strips are applied to the outside and back of the calf of the leg, converging toward the winding-rod. Or the point of traction could be reversed and two windlasses could be attached (swivel) to the upper end of the side-slat, or on a hip-piece to which this slat is jointed, each one pulling on separate ends of a long perineal band, while the lower end of the side-slat could be embedded in a plaster-of-Paris dressing to the leg; or it could terminate below in a right-angled metal brace fastened to the sole of the shoe under the instep. The perineal pad should have long ends and the inside of the upper end of the side-slat, or of an extra cross hip-piece if used, be properly padded, so that the traction of the windlasses would not produce uncomfortable pressure on the body.

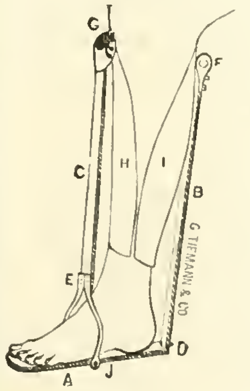

FIG. 6.

In 1870, while an interne in hospital, the writer contrived this windlass when treating his first case of fracture of the patella. He put the leg into a box made of half-inch pine-boards. Through the sides, which were higher than the limb, he put the round of a chair with a handle on its end, like the crank on a miner's derrick. The converging ends of adhesive straps, which wholly covered and controlled the quadriceps femoris, were threaded through a slat in this chair-round. The desired extension, thus obtained by turning the crank, was the chief factor in an excellent recovery with bony union. This led to the concentrating of this power of extension into the small space occupied by the windlass here illustrated. Fig. 7 shows this application on a finally perfected plan. However, the sides of the pine-splint should be raised a little higher than shown in the cut; the knee should be padded well underneath, so as not to be constrained in position, *i.e.*, not to be bent backward at that point, and the use of the limb, by the patient going around on crutches during the first part of the treatment (as was done with the case just mentioned) had better not be allowed.

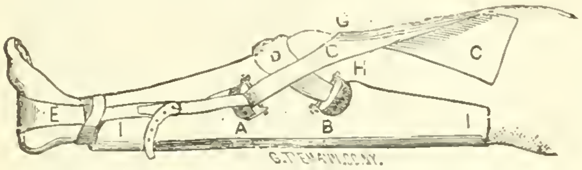

FIG. 7.—Fracture of Patella. A and B, extension and counter-extension windlasses, each fastened by one screw to the raised sides of a wooden posterior splint; C C are fan-shaped adhesive plasters crossing each other at G, and threaded through the winding-rods of A. D, a padded roller in front of ligamentum patellæ, the ends of which are threaded through winding-rods of B; E, reserve counter-extension to relieve D from uncomfortable pressure over the ligamentum patellæ. I I, points at which the posterior splint is bandaged to the limb. The bandaging of the limb, especially over the adhesive plasters, is not shown in this and the two preceding cuts. Brittain & Barber, of Denver, have made some dies to get these windlasses out cheaply; from whom, or from George Tiemann & Co., New York, they can be obtained quite reasonably.

A word in closing. It is with some apprehension that this paper is given to the press, because of the possible failure to appreciate the conditions necessary to a successful use of the instrument. It is surprising that a few physicians have at first seemed to experience difficulty in understanding where the extension and counter-extension are obtained, as shown in Figs. 2, 3, and 5. Then, again, too little, too thin, or too weak adhesive plaster might be used (a generous amount of Maw's moleskin, snugly applied without wrinkles, answers best); or the neglect to shave off the hairs where the plasters are to be applied; or to sufficiently protect by padding where much pressure is to be borne; or the mistake of leaving the joints in a constrained position; or of extending the limb longer than its fellow, any of these might lead to discomfort and so disparagement of the method. If, however, the requirements, as they are manifested, are appreciated, and reasonable ingenuity and patience are exercised in the adjustment, then this little instrument will prove itself a boon to others, as it has to the writer, in the treatment of some very difficult fractures of long bones.

April 27, 1888.

THE STATEMENT THAT WOMEN STUDIED MEDICINE IN IRELAND in the eighteenth century will doubtless surprise many physicians who have believed that the natives of that country entertain peculiarly restrictive views as to the position of the female sex, yet a stanza of Dr. J. Gilborne's poem, published in Dublin in 1775, refers to Dr. E. Foster, of Dublin, a noted eighteenth-century authority on obstetrics and hospitals, as follows:

> "Judicious Foster feels the latent Pulse,
> To hidden Maladies gives quick Repulse,
> In Parturition brings propitious Aid—
> Each Dame retrieves that has by him been laid.
> He teaches Pupils, either Sex, apart,
> In learned Lectures his mysterious Art."

—*Medical Standard.*

DISEASES OF THE SKIN DUE TO DEFECTIVE ALIMENTATION.

BY WILLIAM T. CORLETT, M.D., L.R.C.P. LOND.,
DERMATOLOGIST TO CHARITY AND ST. ALEXIS' HOSPITALS, ETC., CLEVELAND, O.

THE spirit of inquiry leads to analysis, while observation leads to synthesis. It is the latter that is receiving more attention at the hands of the profession at large than in time past. The crucible, the microscope, and the scalpel have each contributed to medical lore, and the torch of inquiry has even illuminated some of the dark and mysterious processes of growth and repair.

All agree that to maintain functional vigor there must be structural stability, and structural stability depends upon a proper supply of reconstructives; but in what form administered to supply the waning vitality of this or that structure we have only conjecture.

To clinical observation alone must we look for definite instruction.

In this line of thought let us trace the rôle which food plays in the healthful maintenance of the skin, as well as in those of its diseases which are dependent upon a disturbance of this great nutritive function.

In common with other organs, the corium requires a plentiful supply of oxygenated blood; but, in addition, certain substances are here called for to supply the hair-papilla, the matrix of the nail, and the rete mucosum at large with a corneous element as well as an albuminous cement—brick and mortar to house the ghastly mechanism of life with beauty.

Analysis teaches that these substances are most plentifully supplied from the outer strata of cereals. But a fine-haired civilization feeds only on the whitest flour and casts this bristle-forming material to the swine, until, if observation be not misleading, there is danger that man in his most civilized state will lose his grip on his congenital hirsute adornment. But here again we must appeal to observation.

There is no doubt that, aside from the abnormalities of growth, defective alimentation is a potent etiological factor in cutaneous pathology. In infancy it appears most frequently as an eczema, while later, urticaria and erythema are often met with. Of the former, Hardey[1] says that it often appears in infants from an insufficient supply of the nurse's milk; at other times the quality is at fault. It will also supervene upon too early weaning when the child is fed with a little of everything.

That infantile eczema is sometimes a sympathetic disturbance, due to an irritation of the gastro-intestinal tract, like erythema and urticaria, seems highly probable; that it is frequently dependent on an aberration of nutrition is more generally admitted. The first is not only highly probable, but it is true, as evidenced by clinical observation. The second is equally true, but it is viewed from two opposite stand-points. Thus the delicate skin of the infant in a state of malnutrition readily succumbs to irritating external agencies, which latter fulfils the requirements of the Vienna School of Dermatology, while the former supplies a *diathesis* to the French.

In adolescence, or between the extremes of life, the cutaneous affections arising from defective alimentation are, first, those in which assimilation and disassimilation are at fault; and, second, the neuroses.

In an address before the Medical Society of London[2] Sir Erasmus Wilson said: "Well, our first six patients are adults, say between forty and sixty years of age; some have eczema, moist and dry, recent and chronic; some erythema, some gutta rosea, and some lichen. We inquire into the functions of digestion and assimilation; in the majority we find symptoms of gastric disorder, nausea, loss of appetite, flatulence, distention, constipation, all more or less confirmed. Our pen flies to the paper; we are about to prescribe; and for what?—for indigestion and malassimilation. But our patient consults us for cutaneous disease, not for his stomach or liver or digestive organs, with which he finds no fault, and which he is not aware of being in a state of disorder; while we, on the other hand, know the assimilative organs to be the cause of the irritation, and that if they be restored to their healthy function all the cutaneous symptoms will subside and disappear. Undoubtedly, when the *force majeure* has been dealt with, we shall advise our patient as to some local treatment, an ointment, a powder, or a lotion for the immediate relief of the skin; but, practically, we treat the cutaneous affection as if it were altogether secondary in importance; neither need we care to inquire too minutely whether the anatomical lesion is an hyperæmia, a papule, a vesicle, a discharge, or a state of desquamation. And if we be in want of a name to include the cases of this description, we might adopt the word assimilation, and consider this as an *assimilative group* of diseases."

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[1] Traité des Maladies de la Peau. Paris, 1886.

[2] On the Progress of Cutaneous Medicine during the present Century. London, 1876.

These were some of the last words of one of England's best-known modern dermatologists.

In addition to what has been said in a previous communication [1] there is no doubt that the large consumption of nitrogenized foods, such as lean meat, eggs, etc., is conducive to derangements of the skin in common with other excretory organs. Beer, too, often has a deleterious effect, as seen in the following cases:

Case I.—L. H——, butcher, aged fifty-four, complained of swelling of the face and arms, with a red, slightly moist, eruption, which was very itchy. He was seen, in consultation with Dr. Hausheer, in December, 1887. His previous health had been good, excepting a similar attack a year or two previously. He was in the habit of eating plentifully of meat, and of taking copious draughts of beer in the evening. At the time of examination he presented a robust appearance, with a dilatation of the superficial blood-vessels of the face. He had a moist eruption on the upper half of the body, with marked œdema, as before mentioned. He perspired freely at night, and emitted a distinct urinous odor from the skin. The urine was normal in quantity, of amber color, sp. gr. 1.028, acid, with a copious deposit of urates.

The treatment adopted was as follows: Diet restricted to light non-nitrogenized substances, as gruel, dry toast, and milk; hot water taken freely an hour before meals, and pilulæ hydrargyri followed by saline cathartics. This was supplanted by potassii acetas with diluents, which in turn were followed by vegetable bitters. The external management consisted of warm alkaline baths, the lotio evaporans of Hutchinson,[2] and, finally, glycerinum acidi tannici. The patient made a good recovery twenty-one days afterward.

Case II.—W. H——, dentist, aged thirty-five, of unsettled nervous temperament, sought advice for a moist itchy eruption on the upper part of the chest and neck; he never had been afflicted before in a similar way. To increase his weight, he had followed a system of generous diet, with a free supply of beer at night. At the time of examination the urine was normal, but the bowels were constipated. He was given a light diet, ordered to discontinue beer, and was advised to drink Hunyadi water before meals. He was under observation ten days and ended in recovery.

These cases would come under the general title of eczema. But do not understand me to say that eczema is always the result of malassimilation or defective disassimilation; on the contrary, its causes are divers, and their name is legion. Thus, eczema occurring in the neurasthenic from derangement of digestion often assumes the character of a reflex neurosis, as in the following:

Case III.—Mrs. J. V——, aged forty-two, complained of an eruption on the face and hands which was very itchy. The family history shows that her mother had an eruption on the face which was called erysipelas; she also had asthma, from which she died. The patient has two sisters, one of whom has a similar eruption, and the other suffers from neuralgia. Her previous condition has not been good, and since 1883 has had recurrent attacks of the eruption every spring. Her present condition is markedly neurasthenic, and her emotions are sometimes beyond her control. While detailing her symptoms she broke down with a fit of crying, and a few minutes after her spirits were as light as a miss of twenty. The eruption is bright red and slightly scaly, distributed around the mouth and parts adjacent; less marked on the dorsal surface of the hands. She has constipation alternating with diarrhœa. She says strawberries and tomatoes act like poison on the eruption.

With this state of affairs, it seemed an excellent opportunity to test the effect of certain articles of diet. Accordingly, she was restricted to oatmeal and milk—not on the theory of *similia similibus curantur*, for I believe oatmeal to be a most wholesome food in diseases of the skin. The same may be said of buckwheat flour. In addition to the diet she was given the lead-wash, and a pill containing one-eighth grain each of calomel and ipecac after meals. At the end of four days she was much better and the fiery redness had disappeared. Strawberries were now added to the diet-list, when the following observations were made: Half an hour after eating she complained of an uncomfortable sensation in the stomach, which soon passed away; two hours after eating, the affected parts of the skin began to tingle and itch, without any appreciable change in appearance.

After the second meal the same symptoms were complained of, and, three hours after eating, the skin became inflamed, with marked discomfort. It was found necessary to discontinue further investigations, but the patient assured me that tomatoes acted in the same way.

Case IV.—J. G——, drayman, aged forty-four, complained of an acute eczema of the face and neck. He had previously had asthma. He was doing well under a soothing course of treatment similar to the preceding, and seemed in a fair way to end in recovery, when his wife yielded to his craving for raw onions, which he ate freely.

The next day the face and neck were acutely inflamed, and the itching was greatly aggravated. This yielded to treatment as before. The case was also seen by Dr. G. C. Ashmun, the family attendant. There is no reasonable doubt that these articles of diet, which to most persons are wholesome, in these instances were instrumental in inducing a relapse.

Just what vital process is involved in producing a surface inflammation from certain substances acting primarily on the gastro-intestinal tract may be studied best from a synthetical stand-point—from observation.

He who has seen the flush of the *bon vivant* after a full meal, and has noticed, too, the ariæ involved in this glow of repletion, may more readily trace certain cutaneous derangements to their remote source. He may have more readily impressed on his mind, too, that the pathological is but a step in excess of the physiological, and that a knowledge of the latter leads to the development of etiology.

And so it is in many diseases of the skin which we cannot associate with local irritation, diathesis, or extraneous substance seeking exit from the blood. More rational is it to affirm that they are perverted reflex manifestations of a physiological function. In place, then, of the reflex centres transmitting the vaso-motor relaxation to the mucous membrane of the stomach, a part of this influence is diverted and appears on the surface of the body as an erythema, urticaria, acute eczema, or a prurigo.

Then, again, there are diseases of the skin which are caused by the withdrawal of the vegetable acids; scurvy is representative of this class. In the winter and spring of 1884 there occurred a number of cases of these scorbutic eruptions of the skin and mucous membranes in the Cleveland Workhouse and in a neighboring Bohemian settlement. Through the courtesy of Drs. Sawyer and Stevenson opportunity was given me to follow some of these cases. The most noteworthy symptoms were great prostration, pain and swelling of the joints of the extremities, with bullæ of various sizes filled with bloody serum. The teeth were loosened and the gums bled on the slightest provocation. Those whom I saw subsisted almost exclusively on bread, and on supplying a mixed diet with fresh meat and vegetables, the disease yielded without further serious consequences.

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[1] Diseases of the Skin occurring in the Subjects of Gout, Journal of Cutaneous and Genito-urinary Diseases, by the writer, 1886.

[2] ℞. Spts. rectificati .... ℥ij.
Liq. plumbi .... ʒss.
Aquam ad .... ℥vj.
M.

In the aged, derangements of the skin, associated with defective alimentation, have been most painfully apparent at the public services. Here we see nature unassisted by art sometimes grappling with a sinking vitality, sometimes keeping afloat without fuel to move the complex enginery of life, and without a guiding hand to direct its tottering course. At this epoch, too, the circle of life nears completion, the beginning and the end become blended as one, and the same obstacles arise that were encountered in infancy. Defective teeth allows solid food to pass into the stomach without having undergone the first process of digestion, and many who present themselves with an urticaria or an eczema have these millstones of the body entirely absent. To this special defect I wish to call attention as having escaped the careful observation which it deserves.

CASE V.—Mrs. A——, aged fifty five, had always enjoyed good health until eight months previously, when she was attacked with a cutaneous disturbance which prevented sleep. Upon examination no definite lesions of the skin could be made out except nail-marks. Dr. Phinney, of Newburgh, with whom the case was seen, had observed these paroxysms, which took place between 1 and 2 A.M., and which lasted until daybreak; the diagnosis was urticaria. This hale matron had lost her teeth about a year before, and was in the habit of eating heartily of meat, vegetables, and sometimes pastry, late in the evening. She was advised as to the nature of her discomforture and directed to a dentist; in the meantime to eat only soft food, such as soft-boiled eggs, porridge, and milk. A year after this the family medical attendant told me that the urticaria became less annoying and ceased after the patient became accustomed to masticate with artificial teeth.

CASE VI.—Mrs. R——, aged seventy-two, complained of eczema of twelve years' duration. Previous to this she had enjoyed good health. Her teeth began to decay at about the age of fifty, and ten years later she was compelled to have them removed. Since the eruption appeared she has been a faithful attendant at the different dispensaries, and entered my service in 1882, where she was treated without much benefit. Four years later she returned for treatment, saying the disease had become so distressing that without relief life would be unbearable. At this time I was more strongly impressed than before that defective mastication bore an important position in the etiology of the disease. In accordance with this, she was given the following diet list: Breakfast—Black tea, very weak, milk toast, oatmeal, cracked wheat, eggs poached or boiled (three minutes), boiled milk. Dinner, at noon—Beef-broth or bean-soup, broiled fresh fish, mashed potatoes (sparingly), turnips, squash, pudding, huckleberries, peaches, milk. Supper—Gruel, with milk, weak black tea, dipped toast with butter. She was directed to eat lightly and slowly. The previous line of treatment was resumed. The result was marked. At the end of seven weeks the eruption had entirely disappeared, and she, who supplied the text as a *typical case of eczema senilis* to so many succeeding generations of students, and who was a living, a suffering monument to the futility of our art, now embodies a text more potent than words, to the value of dietetics in the well-being and management of the skin. What, then, do these principles teach?

1. That man is an omnivorous feeder and cannot thrive on bread alone, neither can he maintain a healthy skin on an exclusive diet of meat.

2. Those having irritable skins should avoid the continual use of: *a*, In youth—rhubarb, the small seed fruits, apples, shell-fish, sugar and acids sparingly, malt liquors and spirits; *b*, in old age—lean meat, eggs, beans, shell-fish, pastries, malt liquors, and spirits.

3. That wholesome foods may become unwholesome: *a*, By improper cooking, as hot cakes, heavy puddings, etc.; *b*, by defective mastication, either by eating too rapidly, or from loss of the teeth.

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TREATMENT OF CATARRHAL JAUNDICE.

By R. N. KITTRELL, M.D.,
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WHEN only a single recovery can be adduced in support of a certain line of treatment there is usually some room for doubt, but when five cases occur of the same disease, all conducted to speedy recovery by the same therapeutic measures, there is just reason to believe that the remedial agents are efficacious, and that a true sequence of cause and effect exists.

As my cases are identical in every respect, I will discuss them collectively, for fear of wearying the reader by tiresome repetition. In each case there were frontal headache, an intensely yellow integument and conjunctivæ, a bitter taste in the mouth, and tongue covered with whitish fur. The bowels were, for the most part, constipated, and, if moved, the dejections were of a light color. The urine presented the appearance, as one of my patients graphically described it, of mustard and water.

The respirations were shallow, as more or less pain was usually produced by taking a full inspiration. The pulse varied from 40 to 65 beats per minute, owing to the sedative effect of bile upon the circulation. In all the cases there was slight pain and tenderness in the epigastrium and lower portion of the right hypochondriac region. This symptom led me to believe that there was subacute inflammation of the duodenum, and that the jaundice was due to absorption, caused by the obstruction of the ductus communis choleductus by mucus. An examination of the urine confirmed this opinion. By means of Pettenkofer's test I detected the presence of biliary acids in the urine, and thus clearly proved that the jaundice was due to the absorption and not to the suppression of bile, for, as is well known, the biliary acids are formed by the liver, and, if it had been a case of suppression of bile and the liver had struck work, no biliary acids would have been formed, and consequently their presence in the urine could not have been detected. On the other hand, in the case of absorption, bile is formed by the liver, but being dammed back upon the liver by an obstruction in the biliary passages, the biliary acids along with other constituents are taken up by the lymphatics and capillaries, are eliminated by the kidneys, and consequently can be detected in the urine by the proper tests. I fear that my readers will accuse me of being too prolix and didactic, but this is the mode of reasoning by which I arrived at my diagnosis, and they will pardon me for reproducing it on paper. Having settled the matter of diagnosis satisfactorily to myself, I next considered the treatment. In each case I employed a drachm of the phosphate of sodium three times a day, and externally an application to the right side of dilute nitro-muriatic acid. A flannel jacket was made, sufficiently large to cover the entire right side, and confined by tapes attached to the borders of the flannel cloth and tied under the left axilla. This flannel was worn constantly, and was kept saturated with the dilute acid. Under this treatment the longest time required for recovery was thirteen days, two cases recovered within a week's time, and two in about ten days. I attribute the good results in these cases principally to the phosphate of sodium, for one of my patients neglected to use the acid, and recovered promptly in about a week's time. I consider that I have attained very good results in the treatment of this affection, and, if any one can show better results from the employment of other remedies, I shall be glad to profit by his experience.

RECTAL INJECTIONS OF CARBONIC ACID IN THE TREATMENT OF VOMITING OF PREGNANCY.

By A. ROSE, M.D.,

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A PERUSAL of the editorial note on "Hyperemesis Gravidarum," in THE MEDICAL RECORD of May 19, 1888, has led me to describe a remedy which suggested itself to me from theoretical reasons, and which I applied successfully. I feel the more justified to speak of this remedy as I found it, though in another form, published independently some time after my own first observations and experiences.

Early in the year 1884 I was called to Brooklyn as consulting physician in a case of incessant vomiting in pregnancy. The case appeared to be a very grave one, and many remedies, such as absolute rest and strict diet, had been employed in vain. I, for the first time, suggested introduction of carbonic acid gas into the vagina, and exhibited a simple apparatus to accomplish this purpose; I presented also to the attending physician a little paper which I just had published in the *Annals of Anatomy and Surgery*, December, 1883, entitled "Carbonic Acid Gas as a Local Application to Chronically Inflamed Mucous Surfaces."

My idea was to make use of the well-known anæsthetic effect of the gas on the womb, especially on the os, of which I had spoken in the quoted article. I assumed that the vomiting might be in this case reflex action, originating in neurosis of the womb. For some reason or another my suggestion was not accepted.

In my little paper mentioned, I spoke of my employment of carbonic acid gas in cases of impotency, and more especially of dysentery.

Wertheim ("Kohlensäure gegen Impotenz," *Wiener med. Jahrb.*, 1882, p. 10) had recommended the application of carbonic acid to the penis and scrotum, thus making use of certain physiological effects of the gas upon the epidermis in the treatment of impotency.

I soon found that inflation of the rectum with carbonic acid gas had a more decided stimulating effect on the sexual organs than its application to the external parts by means of a rubber bag charged with the gas, in which the penis and scrotum were encased. The absorption took place much quicker and more completely from the mucous membrane of the rectum than from the epidermis of the scrotum and penis.

The idea of introducing carbonic acid into the rectum instead of into the vagina, in case of incessant vomiting in pregnancy, the former organ offering better facilities for absorption, suggested itself to Dr. Adrian Schücking, of Pyrmont, Germany ("Zur Therapie des Vomitus Gravidarum," *Centralblatt für Gynecologie*, 1885, No. 12); his cases are the following:

A woman, aged thirty-eight, who had been pregnant four times without experiencing extra difficulties, and had always had easy deliveries, was in the fifth month of pregnancy, and had complained, ever since the first days of this state, of nausea and frequent vomiting. These symptoms did not lessen with the beginning of the second half of the pregnancy; on the contrary, they became considerably aggravated. When Dr. Schücking saw the patient in September, 1884, her condition had assumed a dangerous aspect; she was greatly emaciated and miserable, and could not even retain liquids on the stomach. The uterus and cervix were in a normal state. Dilatation of the latter did not have the desired effect in controlling the vomiting.

The attempts in the way of dieting and other hygienic measures, the usual medication, had brought no improvement. As the patient was sinking rapidly, Dr. Schücking proposed a remedy which he had already successfully employed in another case, a year previously.

This latter case was that of an unmarried lady suffering from tumor of the right ovary of the size of a child's head. There existed obstinate constipation (probably caused by pressure of the tumor on the intestinal tract), and violent vomiting after each meal. Neither ice nor cold drinks could be retained. The patient refused her consent to operation. Meanwhile she had become so enfeebled that she could not raise herself in bed without assistance. After all other remedies had been tried in vain, Dr. Schücking irrigated the rectum with carbonic acid water of the Pyrmont Spring, Helenenbrunnen, which had been warmed to blood heat. This water is highly charged with carbonic acid. Simple warm water introduced in the same way had had no effect on the vomiting. After the first applications of the carbonic acid water the vomiting ceased, and this remedy proved so beneficial that very soon all medication could be dispensed with.

In the case of the above-mentioned patient the application of Pyrmont carbonic acid water proved likewise gratifying. After about two quarts of carbonic acid water had been injected into the rectum, small quantities of water and wine, and very soon beef-tea, milk, and buttermilk could be retained. The patient's appearance, as well as her general condition, improved, but it was found necessary to continue the irrigations daily for six weeks.

In this case, as well as in the first, irrigations with simple warm water, which had been made for the purpose of comparison, had had no influence whatever on the vomiting.

The patient with ovarian tumor did not support the substitution of artificial Seltzer water, as it caused ructus and the sensation of violent pressure in the intestine; in the other case, however—that of the pregnant woman—the artificial Seltzer water acted nearly with the same effect as the natural Pyrmont carbonic acid water. It is probable, says Schücking, that the unequal distribution of carbonic acid in the so-called Seltzer water, and the development of large bubbles of gas, may have something to do with the different effect. Dr. Schücking assumes that the carbonic acid brought on the favorable result, either by its well-known anæsthetic effect, or its antiseptic action, and finally, perhaps, by the considerable dilatation of the intestine. In both his cases of incessant vomiting the condition of the patients had been such that a fatal issue would not have caused surprise.

I confined myself to inflation of the rectum with gas, and never applied the gaseous water in cases of vomiting in pregnancy. The results were invariably gratifying. I have never met another case of so-called incessant vomiting since the one above referred to, seen in consultation. Perhaps by my early applying the carbonic acid, graver symptoms may have been prevented in one or the other of those I attended.

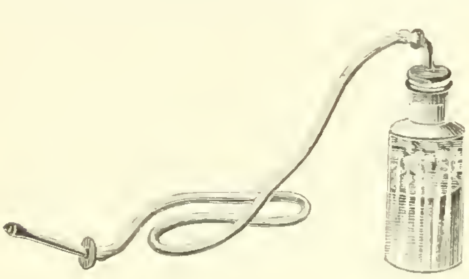
In certain forms of intestinal obstructions it has been recommended to make use of an ordinary siphon bottle containing carbonic acid water, to attach a rubber tube with a nozzle to the mouth of the bottle, turn the latter upside down, if we wish to introduce the test gas. This mode of procedure cannot be employed in case of pregnancy. No matter how gently we may press on the knob to discharge the gas, the effect—on account of the very high pressure under which the gas is in the bottle—is unpleasant, perhaps dangerous. A severe shock is felt in all the abdominal organs.

Von Ziemssen ("Die künstliche Gasaufblähung des Dickdarms zu diagnostischen und therapeutischen Zwecken," *Deutsches Archiv für klin. Med.*, Bd. xxx., p. 225), recommends for certain cases inflation of the large intestine by carbonic acid. His method is to develop the gas within the intestine, by introducing through a rectal tube, first, bicarbonate of soda, then water, and finally, tartaric acid. He used this method both for purposes of diagnosis and to cause sudden dilatation of the bowel, in order to reduce abnormal positions, strangulations, intussusceptions, etc.

I have never employed Ziemssen's method in the affection we are speaking of, but it may suggest itself in cases where a certain apparatus which I shall describe is not at hand.

The apparatus I employ for the purpose of inflation is an invention of Dr. Robert Rohland, of this city, constructed originally to apply the carbonic acid gas douche to the male sexual organs in the treatment of impotency, and to the vagina in the treatment of certain uterine diseases.

This apparatus, or rather the modification of Dr. Rohland's apparatus, consists of a bottle holding a pint or more, with wide neck, and rubber stopper perforated so as to admit a tube, with the nozzle of a rectal syringe attached to it. To prevent the escape of the gas from the rectum is desirable; a rubber valve to close the anus is attached a short distance below the point of the nozzle. In some cases the valve can be dispensed with, in others a rectal tube may have to take the place of the nozzle.



A solution of six drachms of bicarbonate of soda in about eight ounces of water is introduced into the bottle, and four drachms of *crystallized* tartaric acid (if pulverized acid is used the development of the gas goes on too rapidly) are added. The bottle is then quickly closed, and the carbonic acid rises through the tube, the nozzle of which has been placed in position before the tartaric acid is put into the bottle.

The apparatus of Bergeon for gaseous enemata will also serve admirably well, but it will not be worth while to procure one for such cases as these.

In mentioning Bergeon's apparatus, I may be allowed to call attention to an observation made by me in 1883, before Bergeon's method was published, and which I gave in the above-quoted paper.

My patient, whom I successfully treated for dysentery by means of carbonic acid inflations of the rectum, was afflicted with pulmonary phthisis. While she recovered from her dysentery by being treated with carbonic acid gas inflations of the rectum, her diseased lungs improved likewise. I could have anticipated Bergeon if I had drawn conclusions from this coincidence.

208 Second Avenue.

The History of a Quack.—Dr. Edward Storck, chairman of the Erie County Censors, has lately driven "Professor Legrand," alias "Dr." Geismardo, from Buffalo. The "professor" gave free lectures and healed by his "magnetic touch," caused by an electric belt concealed in the palm of his hand. He had three or four dummy patients travelling with him, who came up on his platform and were healed. He has been in the Oregon penitentiary for rape, by infecting a patient with venereal disease in treating her for "pruritus of the scrotum" with his "magnetic probe." He has been driven out of Denver, St. Louis, Kansas City, Chicago, Milwaukee, and Boston. He married a widow in Chicago, and was arrested for misuse of her money. The State Board of Health drove him from Illinois.

REFLEX INFLUENCES IN THE PRODUCTION OF NASO-PHARYNGEAL CATARRH.[1]

By ALBERT H. BUCK, M.D.,

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In the present paper I propose to call attention briefly to those comparatively remote exciting causes of naso-pharyngeal catarrh which act—so far as we are able to-day to explain the mechanism of their action—through the intervention of the vaso-motor fibres of the sympathetic nerve. Of the direct exciting causes of naso-pharyngeal catarrh we know very little. Certain kinds of dust and smoke, the pollen of certain plants, the decomposing secretions of the parts themselves or of adjacent organs, and, to a certain extent, the direct influence of heat, cold, and moisture upon the parts, comprise very nearly the entire list of the direct causes known to us. Of the indirect causes acting through the vaso-motor nerves, the commonest and best known is chilling of the surface of the body. If we might believe certain English and American authorities, affections of the teeth should rank next to chill in order of frequency. Possibly this may be the fact, but it has not fallen to my lot, in actual practice, to see more than a very few cases of which I could say that some dental disturbance was apparently playing the part of a promoter of the naso-pharyngeal catarrh—or of the aural disturbance, if the case in hand were complicated, as it often is, with an affection of the ear. The fact is, that we do not yet possess such trustworthy data in regard to the relative frequency of these indirect causes that we can venture thus to classify them. I will therefore simply enumerate some of those which I have observed in practice.

Irritation of the gastro-intestinal tract is, in not a few cases, a very strong exciting cause of naso-pharyngeal catarrh and of all the aural disturbances growing out of such a catarrh. While in most of these cases the evidence of such a relationship is not clear and well defined, it now and then happens that the patient is able, from a habit of close observation, to give the sequence of his symptoms in such a manner as to practically demonstrate the existence of a causative relationship between the gastro-intestinal trouble and that of the naso-pharynx and ear. Thus, for example, in one instance which came under my observation, the patient, who was about forty-five years of age, and had for years been more or less of a sufferer from naso-pharyngeal catarrh with tinnitus aurium and slight impairment of the hearing, and who, more recently, had begun to suffer from feeble digestion, observed that whenever he indulged in certain articles of food he would experience abdominal discomfort, and at the same time a marked exacerbation of his naso-pharyngeal catarrh. So long as the offending substances were in the stomach, he experienced only a slight sense of discomfort; but after they had left the stomach—that is, in the course of three or four hours after he had eaten—a slightly painful peristaltic movement of the bowels would set in, and simultaneously the secretion from the vault of the pharynx would become unpleasantly active, and the singing in his ears would become troublesome. This state of things would last for an hour, or at the most two hours, and then the abdominal discomfort and the other symptoms named would gradually disappear; or rather, the naso-pharyngeal catarrh and the tinnitus would return to their habitual state of slight and comparatively insignificant activity. These attacks were invariably accompanied by the escape of large quantities of gas from the stomach by eructation, and sometimes by a few qualms of nausea.

This case, it seems to me, affords unmistakable evidence that an irritation of the small intestine may, in the presence of a pre-existing naso-pharyngeal catarrh, excite that affection to greatly increased activity. There are many individuals in whom we have every reason for believing that the gastro-intestinal tract is habitually in a state of greater or less irritation. These persons are usually men between the ages of forty and sixty, and it is a very common experience to find the faucial mucous membrane in such patients red and swollen. Can we entertain any reasonable doubt, in these cases, that we are dealing with a naso-pharyngeal catarrh of reflex origin, and that the underlying disease which claims our chief attention as therapeutists, is the gastro-intestinal affection?

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[1] Paper read at New London, Conn., July 17, 1888, before the American Otological Society.

Reflex influences involving the vault of the pharynx and the ear may emanate, I am convinced, from still more remote organs. A lady, about forty years of age, and otherwise in good health, consulted me for the relief of a distressing tinnitus involving both ears. She had experienced the symptoms of a mild naso-pharyngeal catarrh from time to time during a period of many years. The hearing had not been affected and there were times when she was almost entirely free from the tinnitus. Her digestion had always been good. I saw her for short periods at intervals of a few months, and always succeeded in giving her prompt relief by applying a moderately strong silver nitrate solution, with a mop of absorbent cotton, to the vault of the pharynx, on alternate days. There came a time, however, when these applications failed to give the desired relief. The tinnitus became almost unbearable. I then learned from the patient that she had been a sufferer for many years from pain in the pelvic region and back, and that at this particular time she was suffering to a more marked degree than usual. I urged her to consult a specialist in reference to the suspected uterine disease, and she finally but very reluctantly consented to do so. In this way it was ascertained that the fundamental trouble was a retroversion of the uterus, associated with a chronic subacute parametritis, which from time to time, under the provocation of too much running up and down stairs, etc., became acute. Under proper treatment the parametritis was subdued, the uterus was restored to its proper position and kept there by means of a suitable pessary, and, finally, without any further local treatment of the vault of the pharynx, the tinnitus gradually disappeared altogether. From that time to the present (a period of about one year) the naso-pharyngeal catarrh and the distressing subjective noises have been so slight as to require no further use of the silver solution.

The case which I have just narrated in outline is the only one of the kind that I remember to have seen. However, it has impressed me with the belief that I shall encounter similar cases not so very infrequently hereafter, and that their apparent rarity in the past has probably been due to the fact that I had not given much thought to the probability of such a connection existing between the two diseases, and consequently did not make any effort to ascertain whether any inflammatory action was going on within the pelvic cavity, or not.

The question may suggest itself to some, Are not the reflex influences already referred to competent to act as the direct causes of a naso-pharyngeal catarrh? As will have been remarked, I have spoken of them only as indirect causes, that is, as factors which are competent to aggravate and heighten a pre-existing but perhaps more or less latent catarrhal disease. I see no fundamental reason, however, why these reflex influences may not also, in certain cases, play the part of direct exciting causes; but I think it would be almost impossible to demonstrate the correctness of this belief, and therefore I prefer to adopt the view which assigns to them a less independent rôle.

Saccharin is said by Dr. James Little to prevent ammoniacal decomposition of urine, and hence is valuable in chronic cystitis. It is given internally in doses of about six grains daily.

Clinical Department.

CASE OF DOUBLE PRIMARY EMPYEMA, WITH RECOVERY.

By HERMAN C. GARDINIER, M.D.,

TROY, N. Y.

I was called by Dr. B—— to aspirate the chest of G. A——, aged fifteen, April 8th, at 9 P.M. I found the patient in extreme orthopnœa, with his hands on his knees, panting loudly; respiration, 44; pulse, 130. The lips were cyanosed; skin pale and livid; great beads of perspiration were on the forehead; the boy was very anxious; had a distressed look about the face, and spoke in broken sentences.

There was no chest expansion, but some elevation, the scapulæ moving slightly upward and outward. Both sides of the chest were enlarged, the intercostal spaces of both sides being effaced.

The apex of the heart was pushed downward and inward, beating beneath the xiphoid cartilage. No vocal fremitus was heard below spines of scapulæ. There was marked flatness on the right side from the spine of the scapula downward; the flatness in front beginning at the third rib. The liver was pushed a little downward, but was not tender nor enlarged. Voice sounds and respiratory murmur were absent posteriorly from the spine of scapula downward; no egophony. In the interscapular, axillary, and infraclavicular regions there was marked bronchial breathing. On the left side there was flatness from the angle of the scapula downward; fremitus, vocal resonance, and vesicular murmur were absent. Distinct bronchial breathing was heard in the high axillary and interscapular regions. Heart-sounds normal; pulse of good strength, not intermittent. He had several days previously had slight pain in the right axillary region, and a few days later had pain beneath the left nipple, and considerable colicky pains in abdomen, with vomiting. He was perfectly well until the appearance of pain in right chest. A few days after the blizzard, in March, he got his feet wet. There was no phthisis in the family. Urine: Specific gravity, 1.018; reaction acid; no albumin or casts.

I aspirated in the seventh intercostal space on the right side, and withdrew three pints of pus, with great relief to the breathing, the patient passing a very comfortable night. The following day I was called at 10.30 P.M., and found the patient in great distress; pulse, 130; respiration, 40; temperature, 102° F. I then aspirated in the seventh intercostal space, on the left side, and withdrew two pints of pus, considerably thicker than that taken from the right side. The boy was much relieved; the lung immediately expanded; the color improved, and he passed a good night. The next evening, at 5 P.M., the patient was again distressed in breathing and cyanotic; respiration, 40. I found that fluid had reaccumulated on the right side, and I again aspirated and drew off two pints of pus; the lung expanded well, and the patient passed a comfortable night. On the next evening, at the same hour, I aspirated the left side, but the pus was too thick to run through the largest needle. I then tapped the right side, and drew off one pint of pus. On April 12th I thought proper to introduce a drainage-tube in the left side of the chest. Dr. Leroy McClean was called in consultation. We gave the patient a few whiffs of chloroform; the side had been previously rendered aseptic, and Dr. McClean introduced a double drainage-tube through the eighth intercostal space; about one pint of pus came out of the opening. On April 21st a drainage-tube was introduced on the right side by Dr. McClean, in the seventh intercostal space, in the axillary line; about half a pint of thick pus came out of the opening. At 5 P.M.: Temperature, 101½ F.; pulse, 124; respiration, 40; both sides were washed out with a solution of chlorinated soda.

The patient passed a comfortable night, and ate a good breakfast the next morning. The lips were of good color, and he appeared cheerful. Good vesicular murmur was heard in front as far as fifth intercostal space on both sides.

April 23d.—Passed a good night; has an irritative cough; heart-sounds normal; apex beneath sixth rib to left of sternum.

On April 28th, after a good night, the patient was awakened at 5 A.M., when a large fibrinous plug came out of the opening on the right side, affording him great relief. Good vesicular murmur could be heard in front on the right side down to the sixth rib, and posteriorly to the angle of the scapula. On the left side the vesicular murmur could be heard as far as the fifth rib anteriorly, and two inches below the angle of the scapula posteriorly. Both sides were washed out with sol. bichloride 1 to 10,000.

May 5th.—Has a splendid appetite; no cough; is gaining flesh; passes comfortable nights; can lie almost horizontally; temperature normal; one ounce of fibrinous flakes from right side, and three ounces of pus without odor was discharged from the left side. Respiration, 36; pulse, 116; examination of urine gave negative results.

May 11th.—No discharge from the left side; about one and a half ounce from the right side. The patient is improving in flesh and strength, and is able to walk around the room. The heart's apex is in the right situation. There is no curvature of the spine, but considerable retraction in the left inframammary and lower axillary regions, with considerable prominence of the lower portion of the sternum. The right inframammary region is slightly retracted. Good vesicular murmur can be heard on the left side three inches below the angle of the scapula; some crepitation at the base of both lungs.

June 1st.—Respiration, 22; pulse, 100; temperature has been normal for ten days. There has been no discharge from left side for fourteen days, and the drainage-tube was removed and the opening allowed to close, but two drachms of gelatinous-like substance came from the right side.

June 24th.—There has been no discharge for five days from the right side; the temperature has been normal for thirty days; pulse ranges from 80 to 100; good vesicular murmur to the very base of the left lung, and to the sixth rib anteriorly. The patient has gained much in flesh, has a good appetite, sits up most of the time, but is very pale. The drainage-tube was removed from the right side and the opening allowed to close. There is very little chest expansion, the scapulæ move but slightly. The left side measures, from spinous process of the mid-dorsal vertebra to the mid-sternal region, just above nipple, 14 inches; on the right side, $14\frac{3}{4}$ inches. The circumference at the same level, during quiet breathing, is $28\frac{1}{2}$ inches; in forced inspiration, $29\frac{1}{4}$ inches.

June 27th.—Patient was taken to the mountains; respiration, 20; pulse, 80; good vesicular murmur to base of both lungs.

THE PERFECT VAGINAL TAMPON.

By ROBERT T. MORRIS, M.D.,

NEW YORK.

If there *is* anything new in my method of constructing and using this tampon I am sorry, as the satisfaction derived from the results of its employment is so great that I would gladly hear that the thing has been used for many years by many men.

Adopting Wylie's suggestions as to the form of a cylindrical tampon, to be made with absorbent cotton, and the idea of some one else as to the value of wool,[1] I combined the two in such a way as to please patients.

It is not easy to give the exact proportions of cotton and wool to be used; but, like a woman's receipt for cake, we take "about so much of each ingredient." The wool is wound, with several half-hitches of thread, into a loose elastic cylinder two or three inches in length, and about one inch in diameter. This cylinder is then covered with a layer of absorbent cotton one-quarter of an inch thick, except at one end, where the wool is allowed to protrude a little. The cotton is bound on with three or four more half-hitches of thread.

The tampon, now complete mechanically, is dipped into Wylie's solution (alum, ʒ ij; boroglyceride, ℥ j; glycerine ℥ iij.), and it is then complete chemically. It is inserted with the aid of a Sims speculum and long forceps. Hamilton's bullet forceps are the best ones for the purpose.

The philosophy of the apparatus is as follows: The elastic wool centre prevents the cotton from contracting into a hard mass, and it acts as a drainage-tube because, being non-absorbent, it allows fluids to percolate freely through it. The end of wool which protrudes from the tampon nestles just within the sphincter vaginæ, and, being springy and spready, it prevents the tampon from slipping out.

The absorbent cotton-covering holds the medicated solution in contact with congested tissues, and allows of transmission of discharges into the wool centre.

The glycerine, because of its affinity for water, causes a rapid exosmosis of serum from congested tissues, and in such quantities that a patient will frequently have to wear napkins to catch it. The alum acts in its well-known way as an astringent; and the boroglyceride as an antiseptic prevents fermentable fluids within the vagina from decomposing. This tampon, above described, may be left in the vagina for several days at a time, and it will remain neat and sweet, and will not irritate the membranes with which it comes in contact.

In a case of ordinary catarrh of the cervix uteri, with obstructive dysmenorrhœa and congestion of the uterus, I would use the tampon in the following way: It would be introduced once every four days until there was a marked decrease in the evidences of inflammation. I should then give the patient laughing-gas or chloroform, dilate the cervix uteri widely, swab out the uterine canal with absorbent cotton held in Hamilton's bullet forceps, wash out the uterine canal with 1 to 30 carbolic-acid solution injected through an Otis urethral cocaine injector, and should finish the operation by inserting a glass or hard-rubber intrauterine drainage-tube dipped in Wylie's solution. The tampon should then be inserted into the vagina, and left in place for two days. I should then remove the tampon and the tube, and should reinsert the tampon once in every four days thereafter, until the patient was sufficiently happy.

In a case of retroversion of the uterus, in which the organ could be easily replaced, the patient would be put in the knee-chest position. Air being then allowed to enter the vagina the tampon should be inserted in such a way as to extend into the space behind the uterus, the free-wool end resting just within the sphincter vaginæ.

In a case of chronic pelvic cellulitis, in which the tampon would be used simply as a carrier of the medicated solution, it would be advisable to make a fresh application every day or every other day.

It is not necessary for me to go into further details. A little practice is required for making this perfect tampon; but when one has become somewhat expert at it the apparatus will give greater satisfaction than any other one thing that I know of as a medical or surgical appliance. The question as to the exact size and shape of the tampon for any given case is to be decided, of course, at the bedside. One of my patients, who has a cystocele and a retroverted prolapsed uterus, is wearing a tampon nearly five inches long, flattened, and about two and one-half inches broad. Another one, a delicate little virgin, with catarrh of the cervix uteri, is wearing a tampon about an inch and a half long, round, and three-quarters of an inch in diameter.

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[1] Surgeon's wool. To be obtained at all wholesale drug houses at about one dollar and fifty cents per pound.

Some of the tampons that are made after my description will not have a projecting tuft of wool at the lower end, and the makers will wonder why the apparatus does not stay in the vagina better. A majority of first specimens will be wound so tightly that the uterus will be irritated, or so loosely that the uterus is not comfortably supported.

APHASIA OCCURRING DURING THE SECONDARY STAGE OF SYPHILIS.

By JOHN S. WILSON, M.D.,

HOUSE-SURGEON, CHARITY HOSPITAL.

PROBABLY no organ or tissue in the human body enjoys an immunity from attacks of syphilis. The firm bony structures suffer as well as the more delicate glandular and nervous tissues. The following history, which is rather out of the ordinary run of cases, is that of a patient in one of Dr. Burchard's wards in Charity Hospital.

Annie C——, thirty-eight years of age, came under observation February 7, 1888, with her first venereal trouble. She firmly denied all subjective and objective symptoms of a previous syphilitic history. She presented herself with a diffuse papulo-squamous eruption of four weeks' duration, and had adenopathies and osteocopic pains, but no alopecia or sore throat. She was put upon hydrarg. iod. virid., gr. $\frac{1}{5}$, t.i.d. She then pursued an uneventful course until May 1st, when she began to complain of a severe localized headache, which was worse at night. This resisted antipyrine by mouth and hypodermatic injection. At this time, her gums becoming tender, the inunction of hydrarg. oleat. was substituted for the protoiodide, and in addition she was given potass. iod. in increasing doses. Suddenly, on the afternoon of May 12th, she was attacked with atoxic aphasia. The only word she spoke was "Yes." She answered "Yes" to every question, but realized her mistake. On the following day she said "All right," and from that time her vocabulary has gradually increased, until three months after the attack of aphasia she has full control of her speech. During the attack she understood remarks addressed to her, but answered with "Yes" or "All right."

At this time her pulse, respiration, and temperature were normal; there were no convulsions or mental disturbance. Diminished sensation and reflexes were observed in the right upper extremity, with paresis of the same part, and also of the right side of the face.

Pupils equally dilated; respond to light and accommodation. Possibly it may be said her aphasia was accidental and intercurrent, and wholly unconnected with her syphilis. In answer to this we find an absence of the usual causes of aphasia, such as alcoholic history, atheroma, cardiac and pulmonary history, traumatism, mental tension, etc.

There are two points of interest connected with this case. One is the early appearance, in the course of syphilis, of such a marked cerebral disturbance as aphasia. Such decided nervous symptoms are, in the vast majority of cases, seen later in the course of the disease, and are usually due to the presence of gummata. The other interesting feature of the case is the question of the diagnosis of the cause of the aphasia. This is, of course, more or less a matter of speculation. We know that syphilitic disturbances of the nervous system may be due to affections (1) of the bony encasement, (2) of the meninges, (3) of the parenchyma, and (4) to that little known derangement about which we confess our ignorance when we call it *sine materia*.

The aphasia, in the case before us, can hardly be due to a gumma of the skull, for these very rarely appear before the second or third year, and usually not before the twentieth year, or even later. Dry caries, necrosis, nodes, etc., are lesions of the tertiary stage, while our patient was in a blooming period of the secondary stage. Again, the lesions of the meninges are an accumulation of small cheesy or gelatinous gummatous deposits, situated upon a more or less deeply injected membrane. These deposits rarely accompany the secondary stage. Our patient recovered too rapidly to have been the subject of a diffuse encephalitis; nor did she give evidence of so grave a lesion, except a persistent and localized headache. Dr. Otis believes that nervous symptoms occurring during the secondary stage are due to pressure from the development of "an accidental papule, or its equivalent, within the skull, or in the track of a nerve."

Others lean to the idea that the early appearance of such symptoms is due to some derangement of the circulation within the cranium and leaves no post-mortem changes (*sine materia*), or are due to the poisoning of the nerve-cells by the specific virus of syphilis.

TIC DOULOUREUX OF SEVENTEEN YEARS' DURATION TREATED BY NEURECTOMY.

By W. A. HOWE, M.D.,

PHELPS, N. Y.

ONE of the most interesting cases that has ever commanded the attention of the medical profession in this vicinity is that of Mrs. T——, who during the past seventeen years has been almost a constant sufferer with most excruciating neuralgic pains. These pains would recur at intervals varying from a few minutes to several hours, and were always experienced in those regions of the face which are supplied by the supraorbital, infraorbital, and mental nerves. Their persistency during all this time has occasionally been interrupted by some energetic plan of treatment; but such relief afforded by drugs proved but of short duration, and she soon lapsed into as fearful a condition as before. Prompted by a knowledge of this repeated failure of drugs, and believing surgical measures would relieve her, I determined, if her consent could be gained, to resort to such a procedure. Being somewhat advanced in years, and fearing that serious consequences might possibly result, she was at first rather reluctant to give her consent to any surgical treatment. After explaining its perfect freedom of danger, however, and assuring her that there were chances of its effecting permanent relief, she finally yielded to my request and submitted herself to the trial. In accordance with her desire only one nerve was excised at a time. The treatment was begun on May 29th, at which time the supraorbital nerve was operated upon. Its point of exit from the skull having been ascertained by means of the notch through which it passed, fifteen minims of a four per cent. solution of cocaine were injected directly over the nerve. One clean incision was then made, as near as possible along its course, for somewhat over an inch. My dissection was next carried down to the nerve, which was at once exposed and divided at its distal end. Using this cut end as a guide, I proceeded to follow the nerve as far as possible in the direction of the infraorbital notch, upon reaching which another division was made, thus enabling me to remove in the neighborhood of an inch of the nerve itself. No pathological changes presented themselves in or about this nerve. Strict antiseptic principles were observed throughout, and the wound necessitated by the operation completely healed by the thirteenth day. From that time on, the patient enjoyed entire freedom of all pain in the regions supplied by that nerve.

Encouraged by the result so obtained I felt still more justified than before in prosecuting the same line of treatment. Ten days later I therefore performed a similar operation, at which time a portion of the mental branch of the inferior maxillary nerve was excised. As in the former case, cocaine was injected and a single incision employed. Instead of finding the nerve normal in appearance, as before, there was here seen a marked neuritis. This inflammation involved not only the connective-tissue sheath but the nerve-elements themselves, and extended along the nerve as far as I was able to examine with the length of the incision used. Besides these pathological changes in the nerve itself, there was also found a small abscess in contact with, though not adherent to, the nerve. The neuritis directly under this abscess was more intense in character than that present in adjacent parts of the nerve, which fact explains the extreme localized tenderness which the patient had experienced in that particular spot. No further changes were detected in this region. The wound occasioned by this operation also healed by first intention, and the patient suffered no further paroxysms along the course of the resected nerve. Urged by Mrs. T—— to rid her of the only remaining pain, I completed the treatment, three days later, by excising a portion of the infraorbital branch of the superior maxillary nerve. Marked pathological changes were here seen, corresponding in character and degree with those found in and about the mental nerve. The abscess in this case might have been a trifle larger, but except that no pathological differences manifested themselves, equally favorable results were here obtained, and my patient during the next four weeks gave not the slighest indication pointing to a recurrence of the pain. During this time she regained her sleep at night, and grew stronger and better in every particular. While everything thus seemed indicative of a most favorable issue, she was suddenly seized with a severe attack of choleraic diarrhœa, from which she died in a few days. As I fully appreciate the probability of a regeneration of the nerves so destroyed, I shall not attempt to say how long such relief would have continued; yet considering the torture which she had suffered, the freedom from danger of the operations, and the perfect relief afforded her, even though it might have lasted but a few months, I can but believe in the expediency of such a plan of treatment for facial neuralgia of such an obstinate character. It seems especially applicable where there are existing reasons sufficient to warrant one in believing a local condition is responsible for the recurring paroxysms.

TWO PLACENTAS—ONE CHILD.

Dr. Charles A. Church, of Bloomingdale, N. Y., reports the following case : "On June 9th I was summoned to attend Mrs. S. W——, aged thirty-nine, in her eighth confinement. The case progressed naturally, the position and presentation being normal, until the third stage of labor. After waiting a few minutes for a contraction I made gentle pressure at the fundus, and a placenta of natural size and shape was expelled, yet there seemed to be something to prevent extracting the remaining secundines. About this time the uterus relaxed and a severe hemorrhage set in, necessitating immediate action. I introduced my hand to near the fundus and extracted another placenta similar to the first one, excepting in size, the second being only two and one-half inches in diameter. It had a cord of proportionate size, composed of a vein and two arteries, the latter being twisted around the former the same as in the larger cord. The smaller cord was ten inches in length and joined the cord from the larger placenta about half way to the child. This case is of anatomical interest on account of its rarity, and of clinical interest from the fact that without care the second placenta might have been overlooked, and either hemorrhage or septicæmia have been the result."

ANTIPYRINE IN CEPHALALGIA.

Dr. F. Tuckerman, of Newport, R. I., writes: "If antipyrine is not a specific in certain forms of cephalalgia it certainly comes nearer to it than any preparation with which I have experimented. I have been subject to periodical headache of a nervous character and very severe type for nearly fifteen years, and during that time have employed most of the suggested remedies for that disorder, but with little or no beneficial result. Some time ago I tried antipyrine in single doses of ten grains (taking the remedy as near the onset of the attack as possible) with decided success. Almost immediately the paroxysm is lessened, and within an hour or two there is complete relief. Rarely I have increased the dose to fifteen grains, but in no instance has it been necessary to repeat it during the same attack. In addition to the immediate relief afforded by the use of antipyrine the individual attacks are rendered far less frequent, are shorter in duration, and are less intense in character than formerly. Upon others, for whom I have prescribed antipyrine in this disorder, the effects have been much the same, only less marked than in my own case. I consider antipyrine of special value in certain forms of cephalalgia, but not in all forms, as some observers assert. In occipital headache it almost invariably gives temporary relief and at the same time tends to prevent a recurrence of the attacks. In frontal headache and in headache depending upon a derangement of the digestive apparatus I have found it of comparatively little use."

A WOOLLY-HEADED CHILD.

Dr. B. J. Wetherby, of Arlington, Kan., writes; "I desire to place on record an account of what I consider a queer freak of nature, with a view of bringing out similar cases, if there are any such. I was called to see a child that was having convulsions and found the convulsions due, probably, to a very high temperature, the result of an acute attack of indigestion. On first seeing the child, my attention was called to its hair, or, more properly speaking, to its wool, for in the place of hair its head was covered with a thick growth of white wool, looking exactly like the wool on a young white lamb. As the child was very sick, and its parents excited and anxious, I did not ask any questions. At my visit next day, however, the child was much better, and I found on inquiry that it was four years old, very bright and intelligent, and in every other respect well developed for a child of that age. The growth was congenital, but of course much shorter at birth. She has several brothers and sisters, who have fine heads of hair. The father and mother both have fine heads of dark hair. There is no African blood in the family. On examining the wool I found it was real wool and not hair. Her mother tried to comb it while I was present, with the result of ploughing a sort of furrow across the head. Her mother's theory is that it is a 'birth-mark;' during her pregnancy she had a pet lamb that she thought a great deal of—feeding and caring for it and keeping its fleece clean. Now, can this be what she believes it is—a birth-mark? Has anyone ever seen a similar case?"

UNSUCCESSFUL VACCINATION AND IMMUNITY AGAINST SMALL-POX.

Dr. Walter Reed, Assistant Surgeon U. S. Army, of Mt. Vernon Barracks, Ala., in reference to this question, reports the following case in the affirmative : "During the summer of 1871, while an interne in the Kings County Hospital, Flatbush, L. I., I vividly recall the mental trepidation with which one of my fellow-internes looked forward to his month's service in the small-pox hospital, then a branch of the Kings County Hospital. This anxiety was due to the fact that he had again and again been unsuccessfully vaccinated, during childhood and adolescence, with both humanized and bovine virus. I remember that it was a subject of discussion among us whether, not being susceptible to the vaccine virus, he could acquire small-pox, and although the drift of opinion was against the probability of his taking the disease, this did not quiet the solicitude of the unsuccessful candidate for vaccination. Hence, to make matters doubly sure, during the month immediately preceding his service in the small-pox hospital he was several times very carefully vaccinated, but with negative results. All precautions having thus been taken, when the day arrived for Dr. —— to assume control of the small-pox wards he bravely 'faced the music,' as doctors always do, and was, therefore, for the period of one month daily, and, I might say, hourly, by the bedside of the most virulent cases of confluent and hemorrhagic small-pox *without acquiring the disease.* If any doubter believes that this individual's insusceptibility to vaccinia did not give him immunity against variola, I should be pleased to hear the explanation."

ACRANIA.

Dr. J. F. Lockwood, of Batavia, Ill., reports the following case: "Mrs. S——, a native of Sweden, primipara, gave birth to an acephalic female child. It was still-born and there was no response to the artifical efforts, yet quickening was felt to the last by the mother, and I myself, while manipulating, felt muscular effort on the part of the child. It seemed to be at full term, *i.e.*, otherwise fully developed. The peculiar features of the case were as follows: First, as to the conduct of delivery. I could not feel the parts of the child with my finger in the vagina, although the os was well dilated and the bag of waters was prominent and easily ruptured. The amount of amniotic fluid was very great. After the rupture of the membrane, the breech presented and was delivered at the end of four or five hours. The cord was coiled once around the right leg just above the knee. I anticipated trouble in delivering the head, but found no opposition to its passage, for this stage was soon completed and the explanation came with it. There was no skull and no scalp. The hemispheres were small and unprotected, and the outer integumentary covering to the spine was also lacking. I suppose the removal of the pressure from the exposed and partly developed cerebrum was the cause of death."

The Pupil as a Guide in the Administration of Chloroform.—As a result of experiments upon animals and of observations made upon man, Dr. H. I. Neilson formulates the following conclusions: 1. The first effect of chloroform narcosis on the pupils consists in a dilatation which varies in intensity and duration in different individuals. As the anæsthesia becomes more profound the pupils then begin to contract, and finally become very small and immovable. If now the chloroform is pushed still further, a sudden dilatation occurs, which is the result of asphyxia, from which the patient seldom recovers; 2. As long as the pupil is observed to dilate in response to sensory stimuli, such as pinching the skin, the anæsthesia is not yet sufficient to allow the commencement of the operation; 3. As soon as the pupil becomes strongly contracted and immovable the administration of the anæsthetic must be suspended until a commencing dilatation is observed, and the patient must be held at just this point as long as the operation continues; 4. Vomiting causes a dilatation similar to that occurring as the patient emerges from the narcotic condition, but it is usually more sudden in the former case. In experiments upon dogs it was found that the contraction of the pupils did not begin until the blood-pressure was somewhat reduced, and that the dilatation proceeded *pari passu* with the increase in the blood-pressure. The author regards the appearance of the pupil as a very reliable guide for the administration of the chloroform, as by it he is enabled to judge accurately concerning the condition of the patient.—*La Riforma Medica*, June 23, 1888.

The Vapor of Tar is said by Dr. Mills, of Glasgow, to be injurious to many persons, causing in them nausea and giddiness.

Progress of Medical Science.

Healing of Nerves by First Intention.—Dr Cavazzani has made a number of experiments upon dogs to determine the period of the restoration of conductivity in divided nerves. He divided the median or sciatic nerve with scissors and immediately sutured the severed ends with catgut. In one case the power of motion in the muscles supplied by the wounded nerve returned in five days, and in another case in eight days. From this he was led to conclude that divided peripheral nerve-fibres may unite, like other tissues, by first intention.

Abdomino-vaginal Complete Hysterectomy for Uterine Fibroids.—Prior to operation on a case of fibroids of the uterus recently, Mr. Reeves stated that he intended to adopt a new plan which had occurred to him, provided that the relations of the growth permitted it. If, on opening the abdomen, the tumor proved to be an ordinary form of fibroid involving the fundus and body, and did not extend too far laterally into the broad ligaments, he intended to tie these on either side in two interlocked ligatures, including the upper two-thirds of these structures, and, after applying pressure-forceps to their uterine side, to divide between. Then the peritoneal folds attaching the growth to the bladder and rectum would be divided well up on the tumor, so as to form flaps in the pelvic floor when the growth was removed. The ureters, bladder, and rectum would then be cleared from the cervix until the vaginal mucous membrane was nearly reached, when the vaginal part of the operation would begin. This consists in separating the mucous membrane, as in vaginal hysterectomy. The uterine arteries would be compressed with forceps, to be left on or tied according to circumstances, and the uterus removed entire. The pelvis would be cleansed, the serous flaps placed in apposition, or stitched together if thought desirable, and a drainage-tube inserted *per vaginam.* The subsequent treatment would be as for vaginal hysterectomy. Mr. Reeves explained that his object in combining these plans was to do away with the uterine stump and its disadvantages, such as secondary hemorrhage, septicæmia, dragging on the bladder and rectum, and occasionally the risk of its slipping into the abdomen and causing peritonitis. The combined operation should occupy less time than supravaginal hysterectomy with external treatment of the stump, as much time is taken up with trimming this and suturing the peritoneum over it. Seeing that the best results in the supravaginal operation have been obtained by extra-peritoneal treatment of the stump, and that the mortality is still a high one, any practical plan which will reduce the causes of death should be acceptable. The chief of these are nowadays hemorrhage, septicæmia, and peritonitis, and it is believed that the proposed plan will banish all but a possible traumatic peritonitis; and as in vaginal hysterectomy for cancer this has been practically abolished, there is no reason —except, perhaps, the greater size of the growth removed —why the same favorable result should not follow the proposed operation. Complete removal of the fibroid uterus by Freund's method has been done, but the results of his mode of operating have been far from encouraging. The combined plan suggested allows of free drainage and syringing of the pelvic cavity, and offers every element of operative success, while doing away with many drawbacks. —*The British Medical Journal.*

Pathology of the Ganglion of the Trunk of the Pneumogastric Nerve.—Dr. Alexander Levin, chief of Professor Manasseïn's clinic in St. Petersburg, has published as his graduation thesis an interesting series of observations on the pathological changes in the ganglion of the trunk of the pneumogastric nerve in different diseased conditions. He examined this ganglion in one hundred and two bodies where during life there had been disease of some of the organs receiving their nervous supply from the pneumogastric, including cases of heart disease, pulmonary phthisis, and croupous pneumonia, or where the patient had suffered from some general disease, such as typhoid, scurvy, diphtheria, cholera nostras, hydrophobia, and others. He finds that in typhoid the ganglion is frequently affected by an inflammatory process, there being marked hyperæmia, and sometimes extravasation of blood or granular changes in the nerve-cells, which lead to their atrophy or breaking down, and to hyperplasia of the connective tissue of the nerve. These morbid changes have as their result, as Dr. Levin believes, typhoid laryngitis and paralysis of the pharynx, cardiac irregularities unconnected with high temperature, the so-called "sudden death of typhoid," spasmodic dysphagia and vomiting, and finally, dilatation of the stomach, observed by many authorities in cases of typhoid. In cardiac disease the pneumogastric ganglion is found to be affected by chronic venous stasis, extravasation of blood, thickening of the external tunic of the small vessels and of the walls of the nerve-cells, with degenerative changes in these last. This condition of the ganglion may perhaps be connected with special forms of irregularity observed in cardiac cases, in chronic pneumonia, and often existing in aortic aneurism, and also with paralysis of the pharynx and vomiting observed in some cases of heart disease. In pulmonary phthisis the ganglion of the pneumogastric is found to have undergone degenerative changes of the nerve-cells, which are atrophied, shrunken, or eaten away, the stroma being at the same time hyperplasic.—*The Lancet*, July 14, 1888.

INTESTINAL OBSTRUCTION FROM WORMS.—Dr. Stepp has recently reported the case of a boy, four years of age, who died with symptoms of acute obstruction an hour and a half after medical aid was first summoned. Post-mortem examination showed that the intestine was completely obstructed by a twisted mass of some forty or fifty round worms, lodged just above the ileo-cæcal valve. The ileum contained some thirty five more higher up, and there were a few in the stomach and œsophagus. The boy's mother gave him some "worm medicine" two days before he died, and a meal of smoked bacon and sauerkraut on the following evening. Dr. Stepp thinks that the worms, weakened by the medicine, were dislodged in numbers by the violent peristalsis set up by the injudicious meal of the following evening, and so rolled down in a tangled mass too large to pass the ileo-cæcal valve.—*British Medical Journal*, July 14, 1888.

GOUT IN A YOUTH OF FIFTEEN YEARS.—At a meeting of the Hospitals Medical Society of Paris, held June 22, 1888, M. Gaucher reported the case of a lad, aged fifteen years, without gouty or rheumatic antecedents, who had been complaining for two weeks of pain, with a shining redness and swelling in the metatarso-phalangeal articulation of the great toe. The trouble had appeared suddenly during the night. The speaker believed the case to be one of true gout.

URETHRAL INJECTIONS OF COCAINE FOR THE RELIEF OF NEURALGIC PAINS IN VARIOUS PARTS OF THE BODY.—Mr. E. Hurry Fenwick, writing in *The Lancet* of May 5, 1888, reports the case of a man who complained of constant pain in the face, limbs, and urethra. The latter had existed for five years, and was consequent upon an attack of gonorrhœa. He had had several severe attacks of malaria. The pain in the face and limbs had been so constant and severe that it had forced him to resign a lucrative official position in Servia. Believing that his nervous system was thoroughly demoralized by malaria, and that under these circumstances a urethral granulation might have induced the neuralgia, Mr. Fenwick proceeded to pass an endoscope and examine the urethra. Before doing so he applied a few drops of a twenty per cent. solution of cocaine to the canal. In about a minute the patient exclaimed that the neuralgia in the face and limbs was leaving him, and at the end of a second minute he was entirely free from pain. A granulation patch in the urethra was cauterized, and the patient rapidly recovered. The author was led by this experience to make some experiments upon decapitated frogs, injecting cocaine into the cloaca and then dipping the toes into solutions of sulphuric acid of varying strengths. He concluded, as a result of these experiments, that the application of cocaine to mucous membrane temporarily abolishes the consciousness of weak stimuli, such as would correspond to slight nerve irritations, neuralgias, etc.; but that it has no power whatever over stronger stimuli, such as would correspond to the pain of carcinoma, inflammation, etc. He now proceeded to test this action of cocaine chemically in over one hundred cases of neuralgic pains in various parts of the body. In all cases in which the pain was slight and the cause trivial, a freedom from pain was produced, in from thirty to one hundred and eighty seconds, by the injection of a few drops of a twenty per cent. solution of cocaine into the urethra. He therefore concluded that he had obtained a clinical corroboration of the physiological results of a cocaine application, and he formulated the matter as follows: If pain in any part of the body be due to a *slight* nerve irritation of an unimportant character, a cocaine injection into the urethra will rapidly relieve it. If, on the contrary, the pain is due to severe nerve irritation, a cocaine injection will not relieve it. These facts, Mr. Fenwick thinks, open a large field in the differential diagnosis of the causes of pain, as well as the just estimation of the amount of pain experienced by neurotics and others. He has used these injections largely in the diagnosis of urinary diseases. For instance, in cases of renal pain, if a urethral injection of a twenty per cent. solution of cocaine immediately relieves a pain in the kidneys, he diagnoses a transient or unimportant cause for that pain, such as congestion, uratic urine or grit, colonic pressure, etc. If, however, the renal pain is uninfluenced by such an injection, he gives a more guarded prognosis, and this has been several times verified by the subsequent passage of small stone, or, as in one case, by the development of a renal carcinoma. There are also various vesico-urethral diseases in which cocaine thus used has proved of diagnostic value, as in glans pain, urethral pain, suprapubic pain, etc. Lastly, he states, there is every reason to believe that it will prove of value as a prophylactic agent in warding off, by inhibition, the untoward effects of reflex renal flooding after operations upon the bladder and urethra.

A FOREIGN BODY IN THE EAR FOR EIGHTEEN YEARS.—Dr. Alfred Swann reports, in *The Lancet* of July 7, 1888, the case of a man, aged twenty-seven, who consulted him on account of an irritability of the fauces, particularly on the right side, and deafness on the same side. He said that eighteen years ago, when a child, he was playing with a piece of slate-pencil, and poked it into his ear. He went to a medical man who attempted to remove the body, but did not succeed. Deafness gradually supervened, and unless some conducting medium was used the man could not detect sounds at all. On examining the ear with a speculum, it was found to contain cerumen, but nothing else could be seen. A few syringefuls of warm water and carbonate of soda soon dislodged a long plug of what appeared to be cerumen, but embedded in this was a piece of slate-pencil half an inch long, with its rounded end toward the drum of the ear. Hearing was immediately and perfectly restored, and on examination the tympanum was found to be perfectly whole and healthy. The throat symptoms cleared up in the course of a few days.

MICROKINESIS.—A paper by Dr. Francis Warner, on muscular movements in man and their evolution in the infant, was read at the meeting of the Royal Society on June 12th. In the new-born infant constant movement may be observed in all parts during the waking state; these spontaneous movements, to which Dr. Warner proposes to apply the term "microkinesis," cannot be stopped by external stimuli. This condition becomes gradually modified during the growth and development of the child, and the movements are gradually more and more controlled by external stimuli, while the phenomena termed memory and imitation are evolved. The paper also contained a study of the modes of action of nerve-centres in adult age, and it was suggested that when a co-ordinated movement followed a slight stimulus, temporary unions are produced among the centres, and that the brain-action corresponding to thought is the formation of functional union among cells—the outcome of such functional unions is seen in the movements which express the thought. Dr. Warner described a number of special postures and movements associated with certain states of the brain, and, in fact, affording physical signs by which those states might be recognized.—*British Medical Journal*, June 30, 1888.

ONE-CHILD STERILITY.—Out of 1,081 gynecological cases Dr. Kleinwächter noted ninety where the patients had borne one child at a more or less distant period, and had remained sterile since, although still cohabiting with their husbands. In twenty-one of the cases the single pregnancy had ended before term. He divided the causes of this kind of barrenness into ten groups: 1. Sequelæ of inflammatory processes beginning during the puerperium. 2. Catarrhal endometritis. 3. Sequelæ of inflammatory processes traced to a non-puerperal origin. 4. Displacements of the uterus. 5. New growths in the uterus. 6. Constitutional sources of sterility established after the first pregnancy. 7. Impaired potency of the husband. 8. Excessive involution or atrophy of the uterus. 9. New growths in the ovary. 10. Uncertain or unknown causes. These groups are arranged in order of frequency. Forty-three were traced to uterine and extra-uterine pelvic inflammations; that is, to the first three groups; nineteen to displacements and tumors. Dr. Kleinwächter admitted that the causes grouped above as two and four were not proved in every case to be uncomplicated. He declared that the seven cases making up group seven were well authenticated by the clinical history, the condition in question appearing to act in a positively deleterious manner on the genital apparatus of the woman. Under group six were included cases where anæmia, cachexia, obesity, or emaciation arose after the first pregnancy. Dr. Kleinwächter could come to no conclusions as to treatment, since his cases could not readily be kept under observation after their discharge from hospital. —*London Medical Recorder*, June 30, 1888.

SUSPENSION OF THE UTERUS FOR PROLAPSUS.—Dr. Malanco has recently brought before the Mexican Academy of Medicine an operation which was practised for the first time more than three years ago for the relief of prolapsus uteri, and which, it is claimed, possesses advantages over the use of pessaries and over Alexander's operation of shortening the ligaments. The Mexican operation is denominated "suspension of the uterus," and it has been performed during the course of the last twelve months no less than eight times in the hospital Angel Gonzáles Echeverria in Mexico, the unilateral and bilateral operation being each employed four times. In all the cases the results were satisfactory in a greater or less degree. The operation consists essentially in making a track, whose walls become indurated and indistensible, between the fundus of the vagina and the external surface of the abdomen just above the horizontal ramus of the pubes. At first it was proposed to employ the thermocautery, but this was abandoned on account of the danger of the heat given out by it affecting the peritoneum, and also because it was found that the retraction caused in the subperitoneal cellular tissue was insufficient, though that set up in the dermis is, as is well known, considerable. It was then determined to pass a thread or ligature through the track, and thus temporarily to tie the vagina to the abdominal wall until the tissues had become sufficiently retracted. Catgut was employed for this purpose, but, though admirable for its antiseptic qualities it did not last long enough to accomplish the desired effect. A thread of silver wire has latterly, therefore, been substituted. This is made into a loop, which passes round a bit of metal in a piece of gum-elastic catheter, which acts like the quill in a suture, and is retained in the vagina. The other end is passed out above the pubes, and retained by a piece of lead. Iodoformed ether is injected into both extremities of the canal. Cotton-wool and collodion impregnated with corrosive sublimate are applied to the external wound, and frequent antiseptic irrigations are practised per vaginam, with the object of keeping the internal wound free from septic matter. There is no need to tighten the wire much. It is then well borne, and it can remain until the track around it becomes lined with tissue of a sufficiently resistant character. This, of course, forms a hollow cord connecting the vaginal mucous membrane with the skin of the abdominal wall. In one case by some accident the wire got broken in a fortnight. This was quite time enough to fix the uterus in its proper position. If, however, this kind of thing happens, there is no difficulty in passing a new wire without making any fresh wound. Indeed, the patient herself may be taught, in case of need, to reapply the wire ligature. The advantages of the suspension operation over pessaries are said to be that the vagina is not obliterated or dilated, the neck of the womb is not irritated, and the facilities for cleanliness are perfect.—*The Lancet*, July 14, 1888.

ANOTHER YELLOW-FEVER MICROBE FOUND.—Dr. Paul Gibier, who was deputed by the French Government to investigate the whole question of yellow fever, has just delivered a lecture before the Academy of Sciences in Havana, embodying the results at which he has at present arrived. Before leaving Paris, he felt so convinced of the truth of Dr. Freire's views that he got himself inoculated with some of the cultures which that distinguished Brazilian physician had brought. The first insertion—made with a lancet with great care—was followed by no result whatever. A week later some of the attenuated virus was injected subcutaneously, and this produced such violent effects that Dr. Gibier declares nothing in the world would induce him to submit to a repetition of it. Since his arrival in Cuba, he has made post-mortem examinations of a number of persons who have died of yellow fever, some of the examinations taking place only two hours after death, and one of them within fifteen minutes from the moment life became extinct. The examination of the blood taken from the heart in these cases, as well as the inspection of the urine, the bile, the pericardial fluid, the liver, the spleen, and the mesenteric glands, convinced him that none of these organs contain any microbe. He, however, discovered in the black matter always found in the intestines a bacillus presenting many points of resemblance to the so-called comma bacillus of cholera, being sometimes curved, and occurring in some cultures in a spiral form, possessing also the property of liquefying gelatine. This bacillus, when cultivated in peptonized broth, blackened the sides of the tubes; and when a few drops of the culture were injected into the intestine of guinea-pigs it sometimes proved fatal, the intestinal contents then showing a great resemblance to those found in yellow-fever patients. In dogs, the injection of a few drops into the small intestine rapidly produced violent effects—vomiting, diarrhœa, and, the night following, pyrexia. Cultures of this bacillus had a smell resembling that of the black vomit. A moist heat of 60° C. destroyed the bacillus in a few minutes; desiccation also proved fatal to it in less than twenty-four hours. This last observation led Dr. Gibier to suggest that if this bacillus was really the cause of yellow fever the immunity of inland districts might thus be explained, the comparative dryness of the air destroying the virus. It developed extremely well in sea-water charged with organic matter; living, too, for a long time side by side with the ordinary microbes of putrefaction, so long at least as the medium did not become acid, for even a very slight degree of acidity destroyed the organism in a few hours. In confirmation of observations made at the laboratory, Dr. Gibier mentions that he has several times had an opportunity of demonstrating the same circumstance in the dead-house, the contents of the intestines, when they have become acid some hours after death, ceasing to show the presence of the bacillus. Since writing on this subject previously Dr. Gibier has had opportunities of examining the bodies of foreign sailors who have died in the civil hospital of Havana, and he has been able to demonstrate the presence of the bacillus in those who had suffered from yellow fever, and its absence in those who had died from other diseases. His opinion is that yellow fever is due to the development of the microbe in the intestine, the affection being therefore essentially a local one.

Myxo-fibroma of the Fifth Dorsal Nerve.—This case, recorded by Drs. Bruce and Mott in *Brain*, presented a history of rheumatism for four years before the growth extended into the spinal canal, as shown by the slowly increasing symptoms of pressure on the spinal cord. The diagnosis lay between syphilitic growth, vertebral caries, tuberculous growth, sarcoma, or an uncommon non-malignant tumor. Syphilis was not likely, because of the history and of the failure of antispecific treatment. No cause or sign of vertebral caries existed, and tubercular tumor and sarcoma were improbable, because of the absence of signs elsewhere and of the very slow course of the disease. Myxomata of nerves are not uncommon, nor are those commencing in the meninges rare; but this tumor began in the nerve and spread on to the cord—a decidedly rare course. Such a tumor might have been successfully treated by surgical interference.—*The Lancet.*

Raw Milk and its Impurities.—Dr. George O. Williams, of Greene, Chenango County, N. Y., writes: "While reading the editorial in the issue of June 30th, relating to Dr. Caille's article on sterilized milk, my attention was particularly arrested by its final clause: 'And as between fresh milk and sterilized milk, we think that no one will hesitate to prefer the former.' For the past few years I have pretty thoroughly excluded milk from my list of diets for the sick-room, and I seriously doubt its advisability as food, in its raw state, under any circumstances. It is not extravagant to say that such a thing as 'pure milk' does not appear in market. Nor is it far from the truth that a filthier material is not offered as food. This section has extensive dairy interests. Some of the milk is made into butter on the farm, some collected by cheese factories, a portion is received by large creameries, while a considerable quantity finds its way to the New York City milk-trains. That which is delivered by our local dealers for our own consumption, or that which is received at the milk-depots for transportation to the city, is usually strained once, through a wire strainer attached to the milking pail. It seldom receives more attention than that. The habit of the farmer is to 'milk in' everything that the udder yields, unless the amount of blood from a diseased bag perceptibly tints the milk, or leaves a too highly colored sediment in the bottom. Often it is impossible to detect the presence of the products of garget—mammitis—except by the mechanical separator. In answer to questions which I have asked farmers, as to their custom in disposing of the milk from cows affected with bovine eczema, which during the summer months is always more or less prevalent in every dairy, the uniform answer has been that generally, 'We milk it in.' The same reply was given to the questions as to their habits when cow-pox exists in the herd. In point of fact, anything is milked as long as it will give milk, whether there is eczema, cow-pox, tubercular disease, or anything else in the way of disease present at the time. Now add to these the insoluble materials which unavoidably fall into the pail during the milking process and the soluble matters which during a rainy milking hour trickle down the cow's sides and into the milk, and the whole presents an unwelcome amount of dirt. Let me refer to one establishment. This concern uses the milk from one hundred and forty cows. It separates the cream from the milk while still warm, by the centrifugal separator. After the process is completed, there always remains in the cylinder of the machine a mass of material which is more or less discolored with blood and contains other impurities whose specific gravity permits them to remain there. This material accumulates in quantities varying from one-half to one pound per four hundred of milk. It is not my purpose to describe this refuse other than to say that it presents an appearance that is far from inviting. For an ordinary experiment, let any one examine the quart or more of milk that is deposited at his dwelling, after it has remained quiet for a few hours and the cream has 'risen.' It will be found that every millimetre of its surface shows the presence of extraneous matter. This varies in size from a scarcely perceptible speck to some disagreeably large and suspiciously colored fragments. Now decant, and the bottom of the dish will show the heavier impurities. If the foreign substances in any quart of milk were separated and then mixed with a glass of water, there would be little temptation to drink it. Under the microscope, the débris will be found to contain fragments of digested vegetable fibre, fragments of insects and hair, blood-corpuscles, pus-corpuscles, bovine epithelium, some of which are decidedly ill-looking 'cow-scabs;' add to these the soluble matter that is unseen, but which the taste often betrays, and we have a truthful picture of what 'pure milk' actually is. Now I submit, on the evidence, which may be readily corroborated, whether this stuff is a proper food or not, at least unless its temperature has been previously raised to the thermal death-point of organic matter."

The Small Importance of the Alleged Organisms of Syphilis.—Dr. Smirnoff, of Kazan, has published an account of some investigations he has carried out on the micro-organisms of the secretions of syphilitic sores and papules, and on those contained in indurated syphilides (*The Lancet*). The total number of patients whose cases were examined amounted to one hundred. The preparations were stained according to the methods of Lustgarten, Doutrelepont, Schütz, de Giacomi, and Gram. With regard to the micro-organisms in the secretions of syphilitic chancres and papules, Dr. Smirnoff found that they were by no means constantly present, the prevailing forms being those met with in healthy tissues. In normal secretions of the genital organs bacilli and cocci were present quite as frequently as in syphilitic secretions. After local applications of calomel and iodoform no micro-organisms could be detected in the secretions of syphilitic sores and papules. On examination of indurated syphilitic lesions, he found that not only were micro-organisms not constant, but that they were only rarely present. The soft and moist syphilitic tissues always contained more micro-organisms than those which were dry and hard. In the hard syphilitic products the micro-organisms that were found differed so much from one another that it was impossible to point to any one form as being constant. Finally, Dr. Smirnoff is disposed to deny entirely the existence of syphilitic bacilli in the sense in which they are described by Lustgarten.

The Prevention of Cholera Infantum.—In a paper read before the St. Louis Medical Society (*Weekly Medical Review*, June 23, 1888), Dr. H. F. Hendrix states as his belief, founded upon his individual experience, that cholera infantum will not occur in any case where a plentiful supply of cold water is given at all times and on all occasions, night or day, whenever the little one desires it. And he urges upon all who have the care of children to lay aside any scruple of reserve they have in regard to giving cold water, and to give it freely. Those not able to let their wants be known should have it placed to their lips, and should be allowed to drink until they are satisfied.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, August 18, 1888.

DRINKING HABITS AND LONGEVITY.

THE English alone seem to successfully prosecute the work of collective medical investigation. The most recent report is one prepared by Dr. Isambard Owen, on "The Connection of Disease with Habits of Intemperance." This report embraces an analysis of four thousand two hundred and thirty-four cases, contributed by one hundred and seventy-eight physicians. Each schedule gives the social position or occupation, age at death, and cause of death of the different persons.

They are also classified as regards their drinking habits into, A, total abstainers; B, habitually temperate or moderate systematic drinkers; C, careless drinkers; D, free drinkers; E, decidedly intemperate. When doubt existed as to which class a person belonged, he was placed between, under the head of AB, or BC, or CD, etc. The statistics collected furnished facts, first, as to the drinking habits of the different classes of society; second, as to the longevity of those who drink and those who do not; third, as to the cause of death.

The following is a summary of the conclusions given:

1. That habitual indulgence in alcoholic liquors beyond the most moderate amounts has a distinct tendency to shorten life, the average shortening being roughly proportional to the degree of indulgence.

2. That of men who have passed the age of twenty-five, the strictly temperate, on the average, live at least ten years longer than those who become decidedly intemperate. (We have not in these returns the means of coming to any conclusion as to the relative duration of life of total abstainers and habitually temperate drinkers of alcoholic liquors.)

3. That in the production of cirrhosis and gout, alcoholic excess plays the very marked part which it has long been recognized as doing; and that there is no other disease anything like so distinctly traceable to the effects of alcoholic liquors.

4. That, cirrhosis and gout apart, the effect of alcoholic liquors is rather to predispose the body toward the attacks of disease generally than to induce any special pathological lesion.

5. That in the etiology of chronic renal disease, alcoholic excess, or the gout which it induces, probably plays a special part.

6. That there is no ground for the belief that alcoholic excess leads in any special manner to the development of malignant disease, and some reason to think that it may delay its production.

7. That in the young alcoholic liquors seem rather to check than to induce the formation of tubercle; while in the old there is some reason to believe that the effects are reversed.

8. That the tendency to apoplexy is not in any special manner induced by alcohol.

9. That the tendency to bronchitis, unless, perhaps, in the young, is not affected in any special manner by alcoholic excess.

10. That the mortality from pneumonia, and probably that from typhoid fever also, is not especially affected by alcoholic habits.

11. That prostatic enlargement and the tendency to cystitis are not especially induced by alcoholic excess.

12. That total abstinence and habitual temperance augment considerably the chance of a death from old age or natural decay, without special pathological lesion.

As regards occupation and drinking habits, it appears that the most temperate classes are the professional, clerical, and farming. The persons of most intemperate habits are licensed victuallers, drivers, soldiers, and domestic servants. The independent class rank low, showing that idleness begets intemperance.

The committee's report has an appendix containing the results of a similar inquiry made by Mr. Neison forty years ago, and one made by the Harveian Society in 1879 and 1880. Mr. Neison showed that the mortality-rate among the very intemperate was about five times the general rate. He also found that the intemperate use of spirits was more hurtful than the like use of beer, but that immoderate indulgence in both was more injurious than the exclusive use of either. "Mechanics, working, and laboring men," according to his figures, withstood the effects of intemperance better than "traders, dealers, and merchants," the latter better than "professional men and gentlemen," and all better than women.

The Harveian Society reported that they had reason to think that in London the mortality, among any considerable group of intemperate persons, will differ from that generally prevailing among adults in the following important particulars—namely, a fourfold increase in the deaths from disease of the liver and chylopoietic viscera; a twofold increase in the deaths from disease of the kidney; a decrease of half as much again in those from heart disease; a marked increase in those from pneumonia and pleurisy; a considerable increase and an earlier occurrence of those from disease of the central nervous system; a marked decrease in those from bronchitis, asthma, emphysema, and congestion of lungs; a decrease nearly as great in those from phthisis, and a later occurrence, or at least termination, of the disease; a very large decrease in those from old age, with an increase in those referred to atrophy, debility, etc.; and the addition of a considerable group referred in general terms to alcoholism or chronic alcoholism, or resulting from accidents.

The committee's conclusions under this head roughly correspond with those of the Collective Investigation report as regards diseases of the liver, kidney, and nervous system, and also as regards old age and phthisis, but not as regards diseases of the heart, pneumonia, bronchitis, etc., "atrophy," and debility.

There are, according to Dr. Owen, no statistics aside from his own giving the result of a comparison between the longevity of total abstainers and moderate drinkers.

SEWER-AIR DISEASES.

A GREAT deal of vague assertion has been made with regard to the effects of sewer-gas, or, as it is better called, sewer-air, upon the human system. While some look upon it as always poisonous and often virulent, others consider it usually harmless, though unpleasant. The good health of workmen engaged constantly upon sewers is cited in favor of this latter view.

Dr. Elias H. Bartley attempts, in a recent volume of Wood's "Reference Handbook," to treat the matter systematically, and he has made a very satisfactory contribution to a little understood, though much discussed, subject.

Sewer-air is defined as including the air of house drain-pipes, privy-vaults, cesspools, and other imperfectly ventilated places containing decomposing animal and vegetable matters.

The composition of badly ventilated sewers, according to Professor W. R. Nichols, of Boston, is :

	Maximum.	Minimum.
Oxygen	29 90	20.48
Nitrogen	79.26	78.89
Carbon dioxide	0.50	0.40
Sulphuretted hydrogen	trace	trace

In extreme cases the oxygen has been found as low as 13.79 per cent., the carbon dioxide as high as 3.4, and sulphuretted hydrogen as high as 2.90 per cent. Besides the gases here mentioned sewer-air always contains bacteria and volatile organic matters, sometimes in large amount. The exact nature of these organic matters is not well understood. Some of them seem to belong to the class of bodies known as compound ammonias, or amines. The gases making up sewer-air possess considerable diffusive power, and will pass easily through walls and porous earthenware or brick sewers. In this way these gases frequently find their way into the cellars of houses, especially in the vicinity of a broken sewer or improperly constructed cesspool. Fungi readily grow in such air, and articles of food, such as meat or milk, soon become tainted and decompose when exposed to it. Experience has shown that stagnant sewage gives off more gas and is more dangerous than that which is kept in motion. Sewer-drains which have a steep grade are, therefore, to be preferred to those having a slight grade. Where sewers are frequently flushed with water, and where there is no chance for stagnation, with a reasonably good ventilation, the danger from sewer-air is reduced to a minimum.

There are very strong reasons for believing that the specific poisons, or germs, of a number of the contagious diseases may be transmitted by sewer air. Dysentery, diarrhœa, the periodic fevers, typhoid, cholera, and yellow fever are among the diseases which may be conveyed by sewer-air.

Acute poisoning by sewer-air is comparatively rare, and when it occurs is due generally to the H_2S, or to absence of oxygen.

The symptoms of chronic sewer-air poisoning are of two kinds : the specific and the non-specific. The specific symptoms are those which result from pathogenic micro-organisms of various kinds suspended in the sewer-air and causing the various infectious diseases described.

Among the symptoms, when no specific disease-germs are at work, are malaise, headache, loss of appetite, with dyspeptic symptoms, drowsiness, and slight feverishness. There is a marked tendency to anæmia and general debility. These symptoms are frequently grouped under the name of "malaria." In children, to these phenomena may be added a smooth or glazed, broad, flabby tongue, with a marked tendency to digestive trouble, as vomiting, diarrhœa, dysentery, and attacks of gastric catarrh and catarrhal tonsillitis.

The tendency of sewer-air poisoning is to derange the organs of primary assimilation rather than the lungs; as, for example, gastric catarrh, duodenitis, hepatitis, splenitis, diarrhœa, enteritis, and colitis. Besides these effects, the debilitating influences of the polluted air render the persons so affected an easy prey to an intercurrent malady. Sewer-air is more likely to affect weakly and anæmic persons.

The treatment of chronic sewer-air poisoning is to remove the cause, secure a change of air, and use tonics and symptomatic remedies. The best specific is fresh air.

The methods of detecting sewer-air vary somewhat. The chemical tests depend upon the detection of sulphuretted hydrogen (H_2S) or ammonium sulphydrate. If a piece of filter-paper be dipped in a solution of lead acetate, and be exposed to an atmosphere containing either of these substances, it turns dark-brown, and finally black. A paper dipped in a solution of nitro-prusside of sodium assumes a crimson, and turmeric-paper a brown color with ammonium sulphydrate. White-lead paint is darkened by both the above compounds, while zinc white is not changed in color.

The peculiar odor of H_2S may be easily detected when the proportion reaches one part in 10,000 of air. On closing a room tightly for some hours and then going into it from the open air, a musty or oppressive odor is detected when sewer-air emanations from decomposing animal matters have found their way into it. If any circumstance should lead to the suspicion that sewer-gas is entering a room or house, it would be best to test the drain-pipes by the "smoke test" or the "oil-of-peppermint test."

A suspected joint in a sewer or drain-pipe may be tested by wrapping it with a single layer of white muslin, moistened with a solution of acetate of lead. As the gas escapes through the meshes of the cloth, it will be blackened by the sulphur compounds.

THE CURABLE PERCENTAGE IN GENERAL PRACTICE.

IT is often stated that nine-tenths of patients get well without any medicine, or whether the physician treats them or not. This is a small percentage of cures on the total of all kinds of cases that the physician sees. For example, the percentage of cures in general hospitals receiving acute cases is about ten, while the percentage of reported cures in dispensary practice is, we believe, much greater. Dr. J. R. Uhler, however, in the *Maryland Medical Journal*, who writes with much italicized emphasis, says :

"An examination of one medium-sized practice of medicine *shows* that there are 155 *common medical*, including the *self-limiting diseases*, and *for* 56 *of these* we *can do some-*

thing, either in the way of relief or cure, that is *about* $\frac{1}{3}$. Another practice *gives us* 242, with 68 *curable*, *equal to* $\frac{68}{242}$, rather *nearer* $\frac{1}{4}$ *than* $\frac{1}{3}$, not a very flattering exhibit to be sure; and when the largest books are considered it will probably be $\frac{1}{5}$ or less, say $\frac{5}{24}$, and *at this figure* we will *put it down.*"

THE NEW HYPNOTISM.

Ever since the publication of Bernheim's work on "Suggestion" in medicine, and particularly since the conversion of Professor Forel, of Zurich, to the Liebeault-Bernheim views of hypnotism, German and French medical literature has received a continually increasing number of contributions to this subject.

The peculiar views taught at Nancy by the physicians above referred to are, in many respects, antagonistic to the ordinarily accepted utterances of Charcot and his pupils at Paris.

Dr. C. L. Dana, in a recent clinical lecture reported in *The North Carolina Medical Journal*, June, 1888, calls attention to these views, and indicates the way in which they may be, perhaps, practically and usefully applied by regular physicians—and by regular physicians alone.

The peculiarities of the Nancy school are these: They do not believe in the three phases of hypnotism—lethargy, catalepsy, and somnambulism; hysterical patients, such as were used by Charcot, are not good subjects for studying hypnotic phenomena. The hypnotic state is not a pathological, but a normal, nervous condition, allied very closely to sleep; persons may be hypnotized in very varying degrees of intensity, in some of which the subjects hardly seem to be in a different state from the normal one. The method of hypnotizing patients should always be by simple suggestion. The old method of using brilliant objects, fixing the patient's eyes, etc., is faulty, and likely to cause injury. The new method, properly applied, is harmless.

This "suggestive method," as taught by Liebeault and Bernheim, is described by Dr. Dana as follows: The patient is placed in a chair in front of the operator. The operator then talks to the subject in a firm and confident voice, assuring him that he will go to sleep in a short time, telling him to make no resistance—that his sleeping will be natural, that nothing will be done to worry or fatigue him, that he will dream pleasant dreams, that he will wake up feeling better; then that he is feeling drowsy, his eyes are heavy, objects look confused, the lids are falling, they are closed—in a moment more the patient goes off to sleep. All this may require some little time—five to fifteen minutes. It may fail the first time and succeed the second. It is not always possible or necessary to put the patient to sleep; the effect may be gained short of this.

Professors Bernheim and Liebeault found that, by their method, they could hypnotize ninety per cent. of their patients. Forel, after studying the work at Nancy, said he had been able to hypnotize at least eighty per cent. of his patients. The class of persons that are hypnotized does not include necessarily the hysterical or weak-minded. Indeed highly excitable, hysterical persons, and insane persons are rather less easily affected by this method than those with a sounder nervous constitution.

The proportion of persons of all ages found to be hypnotizable by Beannis was about eighteen or twenty per hundred. Children up to the age of fourteen are very susceptible. After the age of fifty-five susceptibility lessens. Men are almost as easily affected as women; but persons of a docile mind, and those trained to some degree of mental discipline and capacity for submission, such as soldiers and artisans, are more sensitive.

The class of cases in which good results have been reported are rheumatism, neuralgia, alcoholism, morphine habit, various functional nervous diseases, and amenorrhœa. It has been applied also in the treatment of extremely refractory children.

The particular point made by the lecturer was that Bernheim and others in France had been working out on a rational basis the same art that the mind-curers in this country have been empirically applying. In other words, mind-curing and the "suggestion" of Bernheim are the same thing; the docile patients who sit about the parlors of mind-curers, if affected at all, are really experiencing hypnotism in some of the minor grades described by the French authors. Practising physicians, no doubt, in many cases cure unconsciously by "suggestion." They should, however, it is thought, know the scientific basis of their therapeutics, and perhaps extend its practical application. Dangers exist probably, however, even when suggestion is applied as directed by the Nancy school. This the report made to the Royal Academy at Brussels shows. Suggestive medicine and hypnotism, therefore, are measures to be tried carefully, and only by competent and responsible persons. Travelling mesmerizers should be prohibited by law, and parlor experimentation among the laity rigidly discountenanced. The regular physician, however, may, we are told, if he understands the "new hypnotism," take away the ground from under the mind-curer's feet, by a reasonable and careful application of "suggestion."

It is but just to add, as stated in the article quoted, that some of the observations now put forth by Bernheim were made and published some five years ago by physicians of this city, especially by the late Dr. Beard.

Sir Morell Mackenzie and the Report of the German Physicians.—A firm of London publishers recently wrote to Dr. Mackenzie informing him that a translation of the report of Dr. Bergmann and others on the case of the German Emperor had been offered them for publication, and asking whether he would object to the publication. They received the following reply: "I am much obliged to you for your courteous letter. I am not surprised to find that Messrs. Shenk, the Imperial publishers, of Berlin, are offering their thoroughly professional and strictly veracious publications for sale in the London market. I do not think, however, that any respectable publisher in this country will jump at securing the honor and profit necessarily contingent on the reproduction of the edifying document. But should any enterprising firm, emulous of the fame attaching to Curl in the past and Catnach in the present century, be found to swallow the delectable bait, I shall not shrink from a prompt vindication of my professional reputation through the medium of the law courts."

News of the Week.

American Orthopedic Association.—The following is a list of the papers to be presented at the meeting in Washington, September 18, 19, and 20, 1888: "The Modern Treatment of Chronic Joint and Spinal Disease," by Newton M. Shaffer, M.D., New York; "Immobilization in Articular Disease"—Report on the treatment of club-foot by means of the Thomas wrench, or the "T. T," by V. P. Gibney, M.D., New York; "Mechanical Treatment of Senile Coxitis," by Henry L. Taylor, M.D., New York; "A Practical Point in the Treatment of Pott's Disease of the Spine," by A. B. Judson, M.D., New York; "An Efficient and Inexpensive Method for the Mechanical Treatment of Pott's Disease," by C. F. Stillman, M.D., New York; "Rest, in the Treatment of Chronic Joint Diseases," by John Ridlon, M.D., New York; "Acute Epiphysitis in Infants," by Dillon Brown, M.D., New York; "Remarks on Lateral Curvature and its Early Treatment," by Samuel Ketch, M.D., New York; "Osteotomy for Anterior Tibial Curves," by De Forrest Willard, M.D., Philadelphia; "Description of an Apparatus for Measuring any Inequality in the Lengths of the Lower Extremity," by T. G. Morton, M.D., Philadelphia; "Hæmatoma Oris, as a Sign of Injury to the Spine in the Superior Cervical Region," by Benjamin Lee, M.D., Philadelphia; "Two Knee-joint Excisions," by A. J. Steele, M.D., St. Louis, Mo.; "Report on Morton's Operation for the Immediate Reduction of Club-foot," by H. Hodgen, M.D., St. Louis, Mo.; "Femoral Osteotomy," by Ap Morgan Vance, M.D., Louisville, Ky.; "A Case of Reflex (?) Valgus," by George W. Ryan, M.D., Cincinnati, O.; "Remarks on the Operative and Mechanical Treatment of some Joint Diseases and Injuries, with especial Reference to the Hip-, Knee-, and Elbow-joints, with Illustrative Cases," by W. R. Whitehead, M.D., Denver, Col.; "Analysis of Treatment of Seventy Cases of Club-foot," by E. H. Bradford, M.D., Boston, Mass.

Lewis Hall Sayre, *Secretary*.
285 Fifth Avenue, New York.

The Mississippi Valley Medical Association will hold its meeting at St. Louis, on September 11th, 12th, and 13th. The first day will be given to the discussion of abdominal surgery; the second, to infant feeding and some obstetric subject; the third day will be taken up with volunteer papers and some neurological subject. The society extends a cordial invitation to all members of the profession.

J. Lucius Gray, *Secretary*.

Puncture of the Retina for Detachment.—Dr. T. Y. Sutphen, of Newark, N. J., writes: "In the report of the Ophthalmological Society in The Medical Record of August 4th, in the abstract of my paper, on page 138, the last sentence should read: 'Provided the point be so directed that the wound in the retina shall *not* be directly opposite the scleral puncture.' I considered this an important feature of the operative procedure, and laid stress upon it in the original."

Dr. John F. Dunphy, of this city, died on August 12th, of Bright's disease. He was a graduate of Georgetown College in 1873, and was thirty-eight years old at the time of his death.

Yellow Fever is reported to be epidemic in Jacksonville, Fla. As there remain still several weeks before the end of the hot season, considerable alarm is felt in the neighboring towns lest the disease extend, and several towns have established a quarantine against the infected city.

Dr. Ludwig Julius Budge, professor in the Anatomical Institute in the University of Greifswald, died recently, at the age of seventy-seven years. He began life as a practising physician in Altenkirchen, but after a few years gave up regular practice, which was little to his taste, to engage in anatomical and physiological studies, which he prosecuted with zeal to the end of his life.

A Therapeutical Congress will be held in Paris, during the Exposition, at the end of July or beginning of August, 1889. It is to be under the management of the French Therapeutical Society. The annual meeting of the French Association for the Advancement of Science will be held at the same time and place.

Uroleucic Acid is the name of a new acid isolated from the urine by Dr. Robert Kirk, in cases of alcaptonuria. When boiled with Löwe's bismuth test-solution it reduces the bismuth, throwing down the black suboxide and darkening the urine. This is different from another substance, alcapton, found by Bödeker in alcaptonuria.

Absence of the Mammary Glands.—A curious case is reported by Dr. W. Wylie in the *British Medical Journal* of August 4th, of complete absence of both mammæ in a woman aged twenty-one. The girl was not married, but had given birth to a child three months before. The labor was natural, and no pain or uneasiness of any sort was occasioned by the absence of milk. A small mole exists near where the right nipple should be found, but there is no nipple on the other side, nor is there on either side a trace of anything at all suggesting a mammary gland.

A Death from Seasickness occurred recently on a Scotch steamer. The patient was a child aged eight, who became most severely sick, and the sickness finally culminated in a convulsion during which she died.

The Lettsomian Lectures of the Medical Society of London will be delivered next year by Dr. Gowers, F.R.S., who will take for his subject, "Diseases of the Nervous System due to, or related to, Syphilis."

Prince Louis Ferdinand, of Bavaria, has passed the final medical examination qualifying him to practise as a physician. He is the second member of his family who has joined the medical profession.

The Third Congress of Russian Physicians will be held in St. Petersburg in the early part of January, 1889 Connected with it will be an exposition of drugs, instruments, and various appliances for the sick.

The Foochow Medical Missionary Hospital.—The sixteenth annual report of this institution presents evidences of its continued usefulness. During the year five thousand and seventy-three patients were treated, and four hundred and ninety surgical operations were performed. The class of medical students numbers six. Dr. Henry T. Whitney is the physician in charge of the hospital and dispensary.

Society Reports.

FRENCH SURGICAL SOCIETY.

Stated Meeting, July 18, 1888.

(Special Report for THE MEDICAL RECORD.)

M. POLAILLON, PRESIDENT, IN THE CHAIR.

M. **TERRIER** read a paper on the treatment of

HAMMER-TOE

by resection. This method had been practised successfully by MM. Brun and Charles in two cases previously reported by them. In the first case there was a deformity of the second toe, thought to have been caused by a badly fitting shoe. The toe was flexed so strongly that the patient walked on its dorsal surface. M. Brun opened the joint and resected the head of the second phalanx. The wound was immediately closed, no drainage being provided for. The patient made a good recovery and the function of the foot was perfectly restored. The patient of M. Charles was a woman, aged thirty. The same operation was performed, and though the toe was not perfectly straightened the woman was able to walk well and without discomfort. A similar operation was performed subsequently by M. Cohen. Two instances were also reported by M. Schwartz. In these cases, however, the method followed by Williams and Anderson was adopted. This consists in making a longitudinal, instead of a transverse, incision, and possesses the advantage of allowing the removal of the callosity and of the bursa lying over the most prominent part of the deformed toe. The author then reported a case of his own, occurring in a young girl, who had a congenital hammer-toe which had been aggravated by a badly fitting shoe. He resected the ends of both bones by the cutting pliers, inserting a drainage-tube. The latter was removed on the third day, and on the tenth day recovery was complete, the patient being able to walk well. Since then he had simplified the operation by discarding the drainage-tube as well as the plantar splint. In the time that had elapsed since his previous report he had performed

CUNEIFORM OSTEOTOMY

successfully in eight cases. One of these was in the person of a physician, aged thirty-four, who had congenital hammer-toe of the four smaller toes of each foot. The deformity had increased progressively since the patient's sixteenth year, although it had not incapacitated him from serving his term in the army. Within a short time, however, it had grown rapidly worse, and walking had become very painful, especially in the morning. Cuneiform osteotomy was performed, and the patient was subsequently able to walk as well as if he had never had anything the matter with his feet. Blum had advised amputation in these cases, but the speaker believed osteotomy to be far preferable.

M. **TERRILLON** had performed osteotomy in five cases with excellent results. The operation was a very simple one, and was, he thought, strongly to be recommended for the relief of this crippling deformity.

M. **DESPRÈS** favored

AMPUTATION OF THE TOE

in advanced cases of the deformity when ulceration existed. If there was no ulceration he thought it was better to leave the patient alone. He amputated the first phalanx in continuity, and the result was always a definite cure. When resection was resorted to, a perfect correction of the deformity was not always secured, and he had seen rebellious cicatricial ulcerations persist, as in a case operated on by the method advocated by the reader of the paper, in which the speaker had subsequently performed an amputation. The case of the young physician reported by M. Terrier was one not of hammer-toe but of pes cavus, a condition well described by Duchenne, of Boulogne.

M. **TRÉLAT** thought that the procedure to be adopted should vary according to the age of the individual. In adults he preferred osteotomy, as advocated by M. Terrier, but he did not discard the plantar splint, which he thought served a very useful purpose in maintaining the toe in its new position. In children the deformity may generally be overcome by electricity, manipulations, and the application of a retentive apparatus. The last speaker was in error in assuming that the condition of multiple hammer-toe was identical with pes cavus, for he had seen cases in which all the toes—particularly the third, fourth, and fifth—were bent, but in which flat foot existed.

M. **SCHWARTZ** had seen a case of double hammer-toe, in a child five years old, cured definitely by means of a plantar splint, with tapes attached, which passed over the affected toes, holding them flat. In another case, occurring in a young woman, aged eighteen, this treatment was ineffectual, and he was obliged, subsequently, to resort to osteotomy. The results of the operation were all that could be desired.

M. **TERRIER** said that the discussion had brought out reports of twenty-three cases in all, treated successfully by resection. He had never been called upon to treat any cases in young children, but had had an adult patient upon whom the method referred to by M. Trélat had been tried in childhood without success. He thought the law of exemption from military service was badly executed, for the physician whose case he had reported should not have been made to serve.

M. **CHAUVEL** said that the regulations exempted recruits in whom the deformity was so far advanced that the nails rested on the ground.

M. **DESPRÈS** thought that the speakers had confused many varieties of deformity of the toe under one name. Besides hammer-toe there was a similar but distinct deformity known as *orteil en chien de fusil*, which was a very different affection, and not to be confounded with the former.

M. **TERRILLON** reported a case of

CHYLOUS ASCITES

occurring in a woman, aged thirty-seven. Eight years ago she had noticed that the abdomen was increasing in size, while at the same time she began to emaciate rapidly. Paracentesis was performed two years ago, and a quantity of a light chocolate-colored fluid was withdrawn. No diagnosis was made at the time. One year later a second puncture was made and the same sort of fluid was removed. Soon after this the patient came under the author's care, and on examination he detected the presence of a tumor enveloping the uterus. The patient's condition was very serious, and M. Terrillon determined to perform

EXPLORATORY LAPARATOMY,

thinking that the tumor was ovarian. The incision gave exit to about eight pints of chylous fluid, having a specific gravity of 1.021, alkaline reaction, and the color of café-au-lait. It contained a large proportion (nearly four ounces to the pint) of albuminous and fatty matters. On the left side of the uterus was found a small fibroid tumor, involving the broad ligament. The peritoneum was reddened and velvety, and bled easily. The abdominal wound was closed, and the patient recovered from the operation, but the fluid was quickly reformed.

Two theories in explanation of this rare condition have been advanced. The first, propounded by Weill, Debove, and others, is that the chylous fluid results from a transformation of pus, the primary condition being a suppurative peritonitis. The speaker thought this view was hardly tenable, for the fluid contained much more fat than pus, and he inclined rather to the opinion that it was due to ruptures in the lymphatic vessels. He had seen a case of chronic suppurative peritonitis in at old woman at the Salpêtrière, in which the effusion presented much the same appearance as that seen in chylous ascites, but microscopic examination showed the presence of but a minute quantity of fatty material. In a case reported by Straus, small openings in the lymphatic vessels were plainly to be seen. In his own case he had been unable to discover these openings, although he had searched for them. He did not believe the presence of the small fibroid tumor had anything to do with the origin of the chylous ascites.

M. Bouilly spoke of

THE RELATION BETWEEN ASCITES AND ABDOMINAL TUMORS,

which was, however, very obscure as yet. He had seen one case, occurring in a woman, aged forty-five, in which he thought the effusion was due to the presence of a malignant growth of the ovary, but on operation the ovaries were found to be normal, while the tumor was a smooth uterine fibroid. The abdomen contained nearly two gallons of fluid, and the peritoneum was so injected that a general hemorrhage occurred from its surface after the pressure of the fluid was removed.

M. Quénu admitted that the

PATHOGENESIS OF ASCITES

was still a vexed question, but he believed that the cause lay in a peculiar condition of the peritoneum, which was found covered with inflammatory granulations, looking as if sand had been strewn over it, and suggesting cancerous or tubercular disease. He had examined these little granulations, however, and had found them possessed of no special histological characters. This alteration in the peritoneum was often found associated with ruptured ovarian cysts, but it had also been observed in connection with solid tumors of the ovary or uterus.

M. Lucas-Championnière said that the presence of ascites in connection with an abdominal tumor was strongly presumptive of the malignant nature of the latter. It was true that ascites was met with occasionally in cases of benign tumors, but such instances were very exceptional, and no satisfactory explanation of them had ever been made. He had seen two such cases in which there was an enormous development of lymphatic vessels in the omentum.

M. Terrier said that ascites might occur in simple chronic peritonitis, and he had seen it in connection with very small tumors. There was still much to be learned of the pathogenesis of ascites, and he thought the study of the relation between hydrocele and changes in the epididymis might throw some light on the subject, since hydrocele and ascites were similar conditions.

M. Terrillon said that he had referred only to chylous ascites in his paper, and had not purposed opening a discussion on the relation of ascites to abdominal tumors. Concerning serous effusions, however, it was well to bear in mind the fact that they were found associated with two distinct conditions of the peritoneum. In one case the peritoneum was reddened and velvety in appearance, while in the other it was pale and showed no traces of inflammatory change.

M. Le Dentu reported a case of

TOTAL EXTIRPATION OF THE LARYNX.

The patient was a man suffering from some affection of the larynx, but the diagnosis was not certain, and lay between syphilitic œdema of the glottis and carcinoma. Intercrico thyroid laryngotomy was first performed for relief of the threatened apnœa. Soon after this the growth began to increase rapidly, and the larynx became adherent to the skin, so that the question of diagnosis was no longer uncertain. A preliminary tracheotomy, as low down as possible, was performed, in order to accustom the patient to the presence of the cannula and to breathing through it. The operation of removal of the larynx was performed in the usual way, but it was found that the neoplasm had invaded the œsophagus, necessitating the employment of the thermo-cautery to remove the diseased part. Notwithstanding this complication, however, the immediate results of the operation were good. There was some slight pulmonary congestion, which disappeared after the application of a few cups. At the end of about a month, however, a recurrence of the disease took place in the floor of the mouth, and the patient died after three months of great suffering. The operation had been attempted too late, but the patient would not at first give his consent to the extirpation of the larynx, even after the diagnosis of cancer had been established. The speaker thought, however, that the fact of a recurrence of the disease in this case argued in no sense against the wisdom of the operation in laryngeal carcinoma. It was true that the mortality of the operation itself was double that following tracheotomy (forty per cent. in the former, and twenty per cent. in the latter), but the average period of survival is greater in the former than in the latter. The operation would therefore seem to be a justifiable one.

M. Bouilly exhibited the patient upon whom he had performed

RESECTION OF THE INTESTINE,

and whose case he had reported at the last meeting of the Society (page 161). Previous to the operation the patient had weighed but seventy pounds, but since then she had gained rapidly, and now weighed ninety-two pounds, her appetite and strength keeping pace with this improvement in avoirdupois.

M. Berger presented a patient upon whom he had performed a

RESECTION OF THE ANKLE,

in the treatment of tubercular disease of the astragalus. Bending of the foot outward had been prevented by the insertion of an ivory peg, which was removed at the end of about two months after the operation. The results of the operation were all that could be desired, the wound having closed readily and completely, and the disease having been thoroughly eradicated.

The Society then adjourned.

Mastoid Disease in Minnesota.—It will be remembered that the late Mr. Roscoe Conkling developed his fatal mastoid disease soon after protracted exposure in the "blizzard" of March last. Dr. Frank Allport, of Minneapolis, Minn., writing in the *Northwestern Lancet*, says that during a practice of five and one-half years in that city, and with a total number of seven hundred and sixty-two ear cases, he has opened the mastoid twenty-five times, always finding pus. Comparing this proportion with that observed in other cities, Dr. Allport concludes that the climate of Minneapolis, with its enormous extremes of temperature from winter to summer, has a special tendency to produce mastoid disease, as it has toward catarrhal affections generally.—*Boston Medical and Surgical Journal.*

Water and Obesity.—A physician of Erlangen, Dr. Lorenzen, experimented with himself for the purpose of seeing the effects of imbibition of water upon the bodily weight. For four years he indulged in the not ascetic task of drinking two gallons of beer daily, and discovered the remarkable fact that he had increased his weight seventy-eight pounds. On stopping the ingestion of water (beer) he reduced his weight fourteen pounds in seven days. Dr. Lorenzen's experiments are being performed daily by a large class of our esteemed Teutonic citizens.

Corpses as Parlor Ornaments.—A Pittsburg physician is said to have invented a process of preserving human bodies by compression with steel rollers and hot presses. A full-grown body can be reduced to a small size, about 12 × 15 inches; it can be made to assume any shape, and thus form an ornament for the parlor. He has on his centre-table the body of a child in the form of a cross. It is entirely odorless and resembles marble.

Correspondence.

DUBLIN LETTER.

(From our Special Correspondent.)

GYNECOLOGICAL WORK IN IRELAND—ADDRESS ON OBSTETRICS AT THE MEETING OF THE BRITISH MEDICAL ASSOCIATION—ELECTROLYSIS IN THE TREATMENT OF UTERINE FIBROIDS—MANAGEMENT OF THE THIRD STAGE OF LABOR—SIR FIELDING OULD.

THAT branch for which Dublin is so noted, obstetric medicine, will form the greater part of this letter.

Dr. Arthur V. Macan has recently removed the uterus by vaginal extirpation and tied both ureters, with a good result. The operation was quite favorable in its results and the recovery rapid. Dr. Macan removed the uterus for supposed malignant disease, but after removal the most competent microscopists could find no trace of cancer. This brings up a fact with which the most competent have found themselves confronted on several occasions.

Dr. Kinkead has recently had a number of cases under his care where the hymen has persisted after frequent intercourse, and in several instances in prostitutes of the most notorious character.

During the past year at the Rotunda, Emmett's operation has been performed but once. It is strange with what stubbornness this operation is resisted on this side of the water. Fifteen abdominal sections were made at the Rotunda during the year, and only one case of tubal disease required an operation. There were two cases of extrauterine pregnancy, one of which died.

Dr. Lombe Atthill, the well-known obstetrician and gynecologist of Dublin, and for so long the very acceptable master of the Rotunda Hospitals, is being much talked of as a candidate for the presidency of the Royal College of Physicians of Ireland.

Dublin obstetrics and Dublin obstetricians have been highly honored of late, first, by the selection of Dr. A. V. Macan as president of the Section on Obstetrics at the Dublin meeting last year and in his very satisfactory manner of carrying out his duties in this chair; and, second, by the choice as president for the Glasgow meeting this year of the well-known obstetrician, Dr. Thomas More Madden, also of Dublin, and formerly master of the Rotunda Hospitals.

To Sir Fielding Ould, the second master of the Rotunda Hospitals, is credited the first employment of version as a substitute for craniotomy in 1752. It was revived and published more extensively by Dr. McClintock a century later. The revival of the use of the forceps, the prophylaxis of the post-partum hemorrhage, and many other important improvements in the management of childbirth and the puerperal state, the introduction of which is claimed elsewhere, have also emanated from this same practical school of midwifery.

It has been your correspondent's privilege, in consideration of the great length of time required to cross the Atlantic, to have an ante-partum glance at the address of the president of the Section on Obstetrics at the Glasgow meeting of the British Medical Association, Dr. T. More Madden, of Dublin. Dr. Madden makes quite a complimentary review of the history of Scotch obstetrics, in which he speaks in the highest terms of Young, Hamilton, Smellie, Hunter, Houstoun, Lizzars, Simpson, Duncan, and Keith. He then reviews, in a somewhat briefer strain, the work and glory of the Dublin school of obstetrics.

The progressive treatment of midwifery practice received consideration. He thought that it had been very great during the last few years. The writings of Dr. Priestly have freed from much of their former obscurity and difficulty the pathology and treatment of intrauterine death. The present control of epidemics of puerperal septicæmia and the treatment of the same disease are matters of great congratulation. Improved methods in the treatment and prevention of post-partum hemorrhage have saved many lives. The throes of labor are much mitigated by the employment of comparatively safe anæsthetics, such as have been used by the eminent writer for the past twenty years; viz., two parts of ether and eau de Cologne with one part of chloroform. That period of protracted parturient suffering which, as a student, he had often seen allowed to continue for forty, fifty, or even eighty hours, is now safely abridged by judicial instrumental assistance. The use of child-destroying instruments has been decreased in exact proportion to the increasing employment of the forceps. The main reason why craniotomy instruments have remained so long in use is the failure of most midwifery practitioners to sufficiently recognize the compressive powers of the long forceps. He then exhibited two instruments; the one can be used in nine-tenths of all cases, viz., where uterine inertia exists in the second stage, the other for cases of difficulty from disproportionate flattening of the pelvis.

The recent progress in gynecology he thought even greater than that in obstetrics. He mentioned the advantages derived from rapid and safe dilatation of the cervix uteri in diagnosing and treating disease. In the pre-antiseptic days the wonderful results which have been realized in laparotomy operations could not be anticipated. Especially is this so in regard to ovariotomy and cancer, and even peritonitis. Ovarian displacements, the bearing of cervical lacerations on pelvic pathology, the diagnosis, importance, and curability of diseases of the uterine appendages, such as hydro- and pyo-salpinx, were formerly practically ignored by gynecologists. Prejudice and fashion have as great a play in gynecology, if not greater, than in any other department of medicine. He could not agree with those who opposed the admission of women to the practice of the art among those with whom they were so especially fitted. He thought that, in this age, women who preferred to be treated by women should be allowed that privilege. He doubted if the lady doctors would ever replace the ruder sex in the general estimation of their sisters, yet there were fields of great usefulness for the female practitioner in India and other Oriental countries, and he was in favor of the admission of women into the British Medical Association. Foremost among the signs of progress in gynecology are the results of abdominal surgery in the treatment of abdominal tumors. He urged the expediency of a fair trial of less serious methods of treatment before resorting to the extirpation of the uterine appendages. The operative treatment for uterine fibromata, which he considers to be quite a debatable question, received a good share of his attention.

Treatment of uterine fibroids by electricity he considered as the most promising method of dealing with this trouble. His own experience had been considerable, and had been most satisfactory in the arrest of hemorrhage. He had observed no entire cure, yet he had seen a subsidence of the tumor to a marked degree, even after six weeks or two months of treatment. In his cases he used Apostoli's method as nearly as he could. If the results attained by Apostoli are confirmed by others, as he hoped they would be, then we may well congratulate ourselves on having at last arrived within sight of the long-sought-for safe and effectual curative treatment of uterine tumors.

His résumé, he thought, afforded a sufficient vindication of his branch of medicine from the aspersions which had been poured upon its followers. This is no narrow specialism, and should rank high in the profession of medicine, the great object of which is the prolongation of life and the relief of every form of suffering.

External palpation in the diagnosis of pregnancy receives much merited attention at Dublin. They determine the fact of pregnancy, period, size of the child, condition of the bladder, axis of the uterus, condition of the abdominal walls, abnormalities of the ovaries, such as twins, excessive liquor amnii, hydrocephalus, anencephalus, hydatid mole, and frequently the life or death of the fœtus. It directly leads to the practice of external turning, renders the finding of the fœtal heart simpler, often tells whether the pelvis is contracted or not and the amount of disproportion between the head and the pelvis. Such accuracy is attained that they are often able to feel the arm of the child growing out from the shoulder and to get the fingers in the groin, and occasionally the elbow is palpated. A hydrocephalic head has been readily made out, and in one case anencephalus. In some instances the cord has been felt crossing the child's back, and the placental site has been determined by the fingers being lifted off the child and the outlines of the body being rendered indistinct. To make this possible, the placenta must be implanted on the anterior wall and the conditions for palpation favorable.

In the third stage of labor, as soon as the child is born the left hand is placed on the fundus, the ulnar edge pointing toward the vertebral column, with the palm of the hand looking directly in the axis of the uterus. The eyes are carefully wiped and a finger passed in to see if the cord is passed around its neck. If the uterus fails to act promptly, or the child shows symptoms of defective aeration, pressure is made on the fundus, which is generally sufficient to expel the child. If not, gentle pressure is exerted on the head, which presses it backward toward the perineum till the anterior shoulder, with a well-marked jerk, passes the pubes, and delivery is terminated by pressure over the fundus uteri. The left hand follows down the fundus as the child leaves the uterus, expelling any liquor amnii which may remain. The head remains in the same position as before the child was born. The accoucheur rotates the hand so that the fingers irritate the posterior and lateral sides of the uterus, especially the insertion of the round ligaments. Improperly done, this pressure may do harm instead of good. The fundus may be deflected to one side, generally the left, and if pressure be made in the median line this flexion is still more increased, folding the uterus on itself and pressing toward the fundus rather than toward the os. By means of his hand the attendant keeps himself posted, by watching alternate relaxations and contractions, as to whether the uterus is becoming widely distended with blood or not. The nurse ties the cord as soon as pulsations have ceased, and the medical man never loses his grip on the uterus. If in a state of asphyxia, the physician directs his attention to the child, and the nurse follows the uterus. If there is a tendency to post partum hemorrhage on the part of the mother and asphyxia in the child, the physician must be bound, under these delicate circumstances, to look after the welfare of the mother. No accumulation of blood taking place in the uterus, gentle friction is used every fifteen minutes, and firm pressure is made on the fundus in the axis of the brim and at the acme of the contraction. This nearly always expels the placenta from the uterus and the vagina. The hand is still kept over the uterus till there is no danger of a recurrence of hemorrhage, when the binder is applied and the woman turned over on her back. This has been the method employed in the Dublin Lying-in Hospital since the mastership of Dr. Joseph Clark, 1786-93. In the words of Dr. Collins, a duty of paramount importance was to press the placenta out of the uterus during the third stage of labor. This method should be called by the name of the city in which it first saw light, the Dublin method.

That reputation for which the Dublin school of midwifery is so noted is due largely to the Rotunda and her students, who number now about seven thousand. These are doing good work, not only in the British Isles, but also in the colonies, America, France, Germany, and other countries. The annual number of women delivered at the hospital is about one thousand two hundred, and in the externe department about one thousand six hundred. Laceration of the perineum of more than three-fourths of an inch is treated at the Rotunda by douching out the vagina with an antiseptic solution and suturing immediately with silk or catgut, using the continuous suture with the latter. The stitches are inserted deeply, so as to bring the whole of the torn surfaces together and prevent the entrance of lochia into the wound.

Corrosive sublimate for the hands, 1 to 1,500, and for intrauterine injection, 1 to 4,000, has almost entirely taken the place of carbolic-acid solution. In cases of considerable hemorrhage, suspected renal mischief, or great corpulence, where absorption is great and mercurial poisoning is feared, 1 to 100 or 1 to 80 solution of carbolic acid is used. Evaporation of carbolic acid in the wards is now discontinued, as is the use of iodoform pessaries, excepting in cases where there is much fetid discharge after first washing out the uterus. The napkins used are soaked in a sublimate solution, 1 to 500–1,000, and wrung out before being applied to the vulva. The mortality from any form of septic infection is $\frac{52}{100}$ per cent., or 1 in 189.6. Eighty-five per cent. of the cases do not exceed the maximum physiological temperature, 38° Centigrade, or 100.4°F.

Forceps cases are about six per cent. of all cases. Of these there is a mortality of about three per cent. Axis-traction forceps are used in a large proportion of cases.

Infantile asphyxia is treated after the method of Schultze. The incubator is used with a considerable degree of success with asphyxiated children; also those whose circulation is bad.

The prophylactic treatment of ophthalmia neonatorum is never adopted until the disease is manifest. Nitrate of silver solution, eight grains to the ounce, is then applied to both eyes, even though but one is affected. The proportion of these cases is 1 to 100.

Hour-glass contraction is believed to be due to pressure on the ring of Bandl, which causes the circular fibres to contract tonically and may imprison the placenta or a part of it. The difficulty is sometimes removed by douching the uterus with a hot sublimate solution.

When the placenta is adherent, the hand is passed into the uterus, first being made antiseptic.

Careful external examination is recommended to be made of every pregnant woman a fortnight before the expected confinement, and thus determine whether malposition or conditions favoring it are present.

In the case of retained membranes, gentle traction is made on the part left behind; as a rule, the ligature is tied on the retained portion as near as possible to the vulva. It is then twisted into a sort of a rope, whereby its chance of breakage is lessened. If a large amount is left behind the douche is often used, in the hope that a portion or all of it may be brought away.

The bimanual is made with the patient lying on her back, contrary to the general practice in Great Britain, and great stress is laid on this position.

The Rotunda Lying-in Hospital is the oldest of its kind in the British Isles and the oldest but one in the world. It was founded by Dr Bartholomew Mosse, who experienced many vicissitudes in his noble endeavors, and his heroism in the face of difficulties, slander, and poverty is worthy of all honor. In establishing the admirable institution, which freely receives within its walls all who have poverty for their plea and the pangs of approaching maternity as the grounds of their request, he plunged himself deeply in debt, and was arrested in Wales when returning from London, and thrown into debtors' prison. His successor was Fielding Ould, who was afterward knighted. Upon this occasion some contemporary wrote:

> "Sir Fielding Ould the sword of knighthood gained,
> For saving ladies' lives in childbed pained."

Also another, who thought the rank conferred was not exalted sufficient:

> "Sir Fielding Ould is made a knight,
> He should have been a Lord by right;
> For then each lady's prayer would be—
> 'O Lord, good Lord, deliver me.'"

McClintock affords to him the honor of attending the Countess of Mornington at the birth of the Duke of Wellington. He attained considerable prominence while still comparatively young, and was described by a jealous critic as "the youngest surgeon practising midwifery in the city."

The R. C. P. I. refused to examine him for the degree of Trinity College, on the ground that the practice of obstetrios was degrading to the dignity of the profession of medicine. This absurdity was shown up in its ridiculous light by Gilborn, who wrote:

> "The College him a Fellow would announce,
> Condition this, to midwifery renounce:
> Renounce but sooner he would his right hand,
> Than from the service of the Fair disband.
> Why may not a doctor who would chuse
> For man's relief his total knowledge use,
> Or does one portion of Apollo's trade
> More than the rest his votaries degrade?"

LETTER FROM FREIBURG, GERMANY.

(From our Special Correspondent.)

MEDICAL PILGRIMS TO EUROPE—ADVANTAGES OF THE SMALLER UNIVERSITIES—THE STUDY OF GYNECOLOGY AT FREIBURG—THE DIRECTOR OF THE FRAUENKLINIK—OPERATIVE METHODS AT FREIBURG.

FREIBURG, July 30, 1888.

THE annual stream of Americans bound Europeward carries with it a yearly increasing number of physicians. They are of all ages and degrees. There is the recent graduate, fresh from his alma mater, characterized by his obtrusive readiness to give you points on everything. He is generally engaged on a self-inflicted mission of instruction to his benighted European confrères. Between this entertaining specimen of the genus medicus and the hoary-headed "old stager," on his "first trip across," there is every conceivable intermediate variety of practitioner, including the "professor," who may seem youthful, but whose dignity and title are not to be trifled with. It is noticeable that the older medical people are commonly quite as eager to "get points" as their juniors are to dispense them.

But, tyro or man of experience, with few exceptions they all drift toward the large cities, if they are in search of medical instruction. This prevalent practice I wish to caution your readers against following. A residence of nearly five years at various European university towns had long ago taught me that time is much more profitably spent at the smaller schools than at the great and famous "medical centres" of the capitals.

This opinion has just received added force from a residence at Freiburg of five weeks. The man who has travelled all the way from San Francisco to Vienna, in order "to see Billroth operate," is very apt to be speedily undeceived when he gets there, and to regret his trip. I venture to assert that no practitioner, old or young, will regret having spent some time at this university. Is it not time to remember, once for all, that overcrowded lecture-rooms are not conducive to profitable instruction? The small-fry hangers-on of the "large city" clinics will readily promise you unbounded advantages in exchange for a generous supply of the coveted American dollar. But he who has had access to the charmed inner circle of these "teachers" will agree with me in saying, that the "American medical lamb" is a fully recognized institution there. (Moral: To preserve your fleece, don't be a lamb.)

At the smaller universities you are treated fairly and squarely, and I am confident that for considerably less money you can there get considerably more useful information. Lest my meaning be misunderstood, I must add that this applies to the study of medicine in general. Those who visit Europe only to "see many cases" in some narrow special line will, of course, find more material at Paris, London, Berlin, or Vienna than at the smaller universities, like Freiburg, Halle, Würzburg, and others.

THE STUDY OF GYNECOLOGY AT FREIBURG,

which formed the chief object of my visit here, can be pursued in a most profitable manner at this university. An adequate knowledge of the German language is quite essential, however; and it is eminently unsatisfactory to attempt to learn German by listening to Professor Hegar's lectures. I mention this particular, because I have known Americans to express disappointment at not learning more "German" at the daily clinical lecture on "gynecology."

The material for scientific gynecological demonstrations, including all kinds of operations, is very ample here. And German clinical material is something peculiar to German soil. You would look for it in vain in America. It is a product of monarchy, with its centralization of power, its awe of office, and the existence of its "lower class brutalized." For the student, the practitioner, and the professor, this state of affairs has its very palpable advantages. To have an unlimited supply of human material that considers it almost an honor to be fully exposed, to be examined again and again, and to be subjected to as much treatment as may be necessary for didactic purposes, what American student and teacher of gynecology will not exclaim: "'Tis a consummation devoutly to be wished?"

And yet, after all has been said on the side of humanity, in opposition to such a system, the fact remains that patients do not fare worse under this rougher usage than they do at home under our system of excessive sentimentality. Another reason why the "material" is so much more pliable and easily instructive here is found in this consideration. Our institutions are compelled to make competitive bids for material. If our professor "acts nicely," and makes a good bid, he gets the case. Here, if the patient behaves, and does not object to occasional rough handling, he gets the professor, *i.e.*, the latter condescends to treat him or her. There is no use in mincing matters—the German system has its decided advantages. But, of course, it cannot be transplanted.

The reputation of the director of the "Frauenklinik" (as the hospital for women is called) has become so widely established that Professor Hegar's private patients include women from all parts of the world, from San Francisco to Constantinople, and from north to south. There is no doubt that his reputation is not the result of accident or influence in high places, as often enough happens over here. It is entirely owing to natural gifts, hard work, and remarkable energy. At home we would call Hegar a self-made man. He is a brilliant surgeon, an astonishingly accurate diagnostician, and, in addition to being an eminent specialist, he has managed to remain a good physician. On top of all this, his intimate knowledge of pathology permits him to speak of the diseases peculiar to women in a way that cannot fail to command immediate confidence.

It was my good fortune to be very well received by Hegar. I was at once made a *de facto* assistant, although, of course, I could hold no official appointment of that kind. And I may as well confess that I had to pocket many a scolding from the professor, who is in some respects rather "cranky." In America, even assistants are not ordered around in quite the perfunctory manner employed by some of the German professors. But this merely *en passant*.

A more thorough method of gynecological examination than is practised here does not exist. The drawback of this method for office practice is, that it almost invariably necessitates complete anæsthesia. Combined rectal and vaginal exploration, with external palpation, is the name given to Hegar's mode of examination. It was like a revelation to me, to learn how much more can be felt in this way than by ordinary vaginal examinations. The ovaries become so accessible, and the uterine ligaments are so distinctly made out, that a nodule as large as a pin's head will scarcely be overlooked anywhere in the pelvis. This leads to extreme accuracy of diagnosis, which I was able to verify again and again.

The system of rigid antisepsis, as practised at Hegar's hospital, deserves some mention, as it is held to have in great measure led to the excellent results recently obtained here. Not to weary you with details, I will simply state that Hegar has just performed sixteen consecutive enucleations of myomatous tumors, of the intraligamentous variety, without a death, and that within a period of less than two years he has done Cæsarean section six times, without a fatal issue. I doubt whether any surgeon can show better results than these. Ordinary laparotomies amount to nearly one hundred annually. The tendency of Hegar is in the direction of altogether discarding the poisonous antiseptics. In place of this he seeks to prevent infection by employing sterilized instruments and dressings, and by extreme precautions as to personal antisepsis, or, rather, asepsis. Sponges have been given up in all laparotomies, and strips of sterilized gauze are employed in place of them. Weak solutions of carbolic acid, iodoform, and chlorinated water are still employed, but in a limited way, and so as to prevent all danger of poisoning from their use.

As the technique of his abdominal sections does not differ essentially from that employed elsewhere, I will turn now to a department of gynecology for which Freiburg has become justly famous, namely, the so-called plastic operations which concern the female genitalia.

And here I must state my impression that Hegar's son-in-law, Dr. Wiedow, if he does not surpass, at least equals his teacher. They both excel in extremely painstaking attention to the minutest details, and the nicety and accuracy of bringing together the damaged and lacerated parts. It is impossible to give a serviceable description of the various operations belonging to this category. To be appreciated and followed, these operations must be witnessed again and again. It may seem like "piling on the agony," but it is nevertheless true that failures after these plastic operations are not known here.

To those of your readers who are not specially interested in gynecology, I can only say that the surgical and medical wards of the Freiburg University afford ample opportunities for profitable study. The surgeon Kraske, formerly Volkmann's assistant, is a wide-awake, go-ahead man. His methods are more conservative, however, than those of many other German operators. Bäumlers, the professor of internal medicine, is almost as well known in America as here. The material in his wards is also very abundant, and well utilized. He speaks English fluently.

Finally, Freiburg, regarded merely as a place of residence, is one of the most charming spots that can well be imagined. Its proximity to the "Black Forest" mountain range, its exceptional climate, pure air and pure water, have combined to render it so attractive that a large colony of foreigners has become permanently established here. It has about 45,000 inhabitants, and it is at present still a cheap place to live in.

Edmund Charles Wendt.

QUININE AND THE TARIFF.

To the Editor of The Medical Record.

Sir: Apropos of your editorial in The Medical Record of July 28, 1888, on "Quinine and the Tariff," allow me to remind you of the following facts: The price of quinine in England has gone down in the last ten years as much in proportion as in the United States; *i. e.*, the percentage of reduction has been the same in the two countries, although there has been an import tax removed in the United States and not in England.

The result in this country of the removal of the tax has been to cause all but one of some seven or eight manufacturers to cease making the drug, and consequently has taken just so much labor away from skilled American workmen.

These firms now buy English and German quinine and put American labels on the packages.

It has also caused us to send over three and one half millions of dollars each year to Europe, which we might as well have kept at home. An import tax sufficient to protect our manufacturers of quinine would not raise the price of a single quinine prescription in any drug-store in the United States. It would make the profits of the wholesale and retail druggists so little less than they are now that they would never notice the difference.

More than that, a small tariff on cinchona-bark would soon develop a new and profitable industry in the United States. We have climate and soil eminently suited to the growth of the cinchona-tree, and there is no righteous and just reason why the United States should not grow and manufacture all the quinine necessary to supply her own market, and thus prevent our sending millions of dollars every year to help support the pauper labor of Europe and India.

Respectfully yours,
D. E. English, M. D.

Mill Burn, N. J.

LOSS OF SEXUAL FEELING AFTER OÖPHORECTOMY.

To the Editor of The Medical Record.

Sir: Despite your recent editorial on the subject, I think the question of necessary loss of sexual feeling after removal of the ovaries must still be considered as *sub judice*, for reasons which will be here stated:

It may be assumed, I think, that if the ovaries become diseased or atrophied to such an extent that their functions are destroyed, the subject is substantially in the same condition as if they were removed. This being granted, we state as a frequently observed fact, that in sterile women sexual feeling is not necessarily absent, and is indeed often exhibited to a very marked degree.

After the menopause sexual desire persists for some years, and not unfrequently is greater than before.

Some years since, I witnessed the removal of the ovaries from a lot of cows and heifers. The operator made an incision in the flank, drew out the parts he wished to remove and cut them off. In one instance, after removal of the ovaries, he again introduced his hand in search of something more. I asked him what he wanted, and he replied that he had failed to remove the "curl," and that that must be cut off too, otherwise you would get a "bulling" heifer, which would be a great nuisance. She would be "wanting the bull all the time and would never be satisfied." He presently found the "curl," which I recognized as the fimbriated extremity of the Fallopian tube, and cut it off.

A Texan horse-breeder stated to me that he had several valuable stallions, and to prevent them being injured by the heels of unwilling mares, he used a common stallion as a "teaser" to test their receptivity, instead of following the usual custom of hoppling the mare. If the mare was found to be in proper condition the "teaser" was led away and the selected stallion put to her. He claimed that a distinct advantage was derived from this practice, in so much as it preserved his valuable stallions from the needless excitement of being taken to mares not quite ready to receive them. I remarked that while this might be all very well for the blooded horse, it must be rather aggravating to the "teaser." He said that he was in the habit of turning over the latter to a female *mule*, who was *always willing to receive him.*

As a female mule is certainly ovarianly inert, whence does she derive her sexual desire?

With these facts and statements before me I must certainly entertain a doubt as to the necessary connection between the ovaries and sexual desire.

Returning to human oöphorectomy, we have evidence that in some cases sexuality is, and sometimes is not, abolished. We further know that in some instances the ovaries are alone removed, and in other instances the Fallopian tubes in addition; but we are not aware that any one has carefully noted whether the loss of desire occurred with equal frequency in both sets of cases.

H. G. Piffard.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 12 to August 18, 1888.

Lauderdale, J. V., Major and Surgeon. Promoted July 28, 1888, to Surgeon, with rank of Major, to rank from July 3, 1888.

Mason, Charles F., First Lieutenant and Assistant Surgeon. Reappointed July 28, 1888, to rank from July 2, 1888. Reported for duty at Fort Washakie, Wyo., August 2, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending August 11, 1888.

Whitaker, H. W., Passed Assistant Surgeon. Detached from the Mohican, proceed home, and wait orders.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending August 11, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	23	4
Scarlet fever	78	14
Cerebro-spinal meningitis	1	1
Measles	130	12
Diphtheria	94	27
Small-pox	1	0
Yellow fever	0	0
Cholera	0	0

The Sense of Smell is diminished in criminals, according to Dr. Ottolenghi, who made a series of tests upon eighty persons.

Dr. Thomas Wood recently showed before the Obstetrical Society of Edinburgh an experiment proving that the caudal extremity of the fœtus is specifically heavier than the cephalic (*Edinburgh Medical Journal*, July, 1888). In a glass vessel was put a fluid composed of salt water and spirit, of such a density that the fœtus which it contained neither rose to the top nor fell to the bottom, but was suspended in the centre—in fact, the specific gravities of the fluid and of the fœtus were almost, if not entirely, equal. The position which the fœtus assumed, therefore, showed which is the specifically heavier end, and this, as was seen, is the caudal extremity. The fœtus floats in the fluid almost in a vertical position with the head uppermost.

To Facilitate Catheterization in Women.—Dr. S. E. Josephi, of Portland, Ore., writes: "For some time past I have been using a simple device in catheterizing females which adds greatly to the convenience of the operation. As I have not seen any mention of it in books or journals and have not heard of its having been used before, I make this communication, in the hope that it may be of some benefit to the profession. The device consists simply in using a piece of rubber tubing, one end of which is slipped over the distal extremity of the catheter, and the other end dropped into a proper vessel on the floor by the bedside. The ordinary red rubber tubing to be found in any drug-store is appropriate. A piece about four feet long may be used. The tubing being attached to the catheter, the latter is carried over the thigh of the patient in the usual way, the tubing extending from beneath the bedclothes into the vessel. As soon as the catheter enters the bladder the urine flows through the instrument and tubing into the vessel, and upon the flow ceasing the catheter is withdrawn, the residual fluid being allowed to drain from the lower end of the tubing. This obviates the inconvenience of a cup or bowl being held between the thighs of the woman, the leakage or spilling, and the necessary changing for emptying, and replacing a small vessel."

The First Nephrotomy.—In the *Gentleman's Magazine* for August, 1773, appears the following: "Mr. Paul, a surgeon, at Stroud, in Gloucestershire, lately extracted from the kidneys of a woman, by an incision through her back, a rough stone as large as a pigeon's egg, and made an entire cure; it is the first of the kind ever performed in this kingdom."—*Hospital Gazette.*

Dr. Ledyard's Toast.—It is told of old Dr. Isaac Ledyard, a notable character who flourished in Newtown a century or so ago, when there was a frequent passing of the social cup and much drinking of toasts, that when a sentiment or toast would be demanded of him, it was his wont to lift his glass and pledge the company in this guise: "Here, my friends, is your very good health, and that is most consumedly against me." If the good old doctor had survived until the days when sanitary science was discovered, he would have been found acting in like manner as he phrased his toasts—at odds with his material interests.—*Gaillard's Medical Journal.*

Carburetted Hydrogen in Uterine Cancer.—Carburetted hydrogen mixed with olive or almond oil in equal proportions, is recommended by Dr. Drzewiecki, of Warsaw, in advanced cases of uterine carcinoma. Cotton-wool, saturated with the mixture, is applied to the ulcerated parts, after the vagina has been disinfected by means of a solution of permanganate of potassium or chlorinated water. This plan may be used when all other means have failed; it diminishes pain, and prevents the fetid emanations so distressing to the patient and all about her.—*British Medical Journal.*

Regarding the infant operation of ovariotomy, Professor Charles D. Meigs once said: "I detest all abdominal surgery. I am free to say that I look upon all operations for the extirpation of the diseased ovary as not to be justified by the most fortunate issue in any ratio whatever of the cases." "Dr. Atlee's coolness in cutting open a woman's belly does not, I think, entitle him to judge more clearly than I as to the morals of such surgery. . . . Dr. Atlee likes ovarian operations; on the contrary, I detest them, and should be glad to see them prevented by statute."

A Curious Account of Artificial Fecundation.—Another attempt to put it on a business basis in Paris is given by a correspondent of *The Medical Press.* Eight years ago a married couple in Bordeaux, despairing of having a family, consulted a Doctor Lajatre, who, by circulars spread about the country, pretended to render sterile marriages fruitful by a special operation. The doctor performed the operation, but no result followed, and his clients refused to pay him the fee demanded—£60. He thereupon summoned them before the magistrate, but this worthy representative of the law, after listening to the explanations of the doctor, which, by the way, were very minute, all the details of the operation being entered into, not only dismissed the case, but fined the plaintiff for revealing professional secrets. Further, the magistrate gave it as his opinion that artificial fecundation was repugnant to the laws of nature and a positive social danger, and that such procedures should not be put into practice. This verdict was taken up by the Society of Legal Medicine, as it is called, in France, and the president (M. Brouardel) said that the operation might be performed where, after other means had failed, no reasons were found in the man or the woman to account for sterility. Encouraged by this declaration, M. Lajatre came up to Paris, where he advertised in the daily papers his method of procuring families. It will be remembered that the Paris Faculty refused to accept a thesis on this subject presented by a student called Gérard. Last year a sort of company was got up in the capital, sending broadcast pamphlets entitled *Do Vitam*. A large apartment was hired in the Chaussée d'Antin, a doctor was engaged to do the operation, and for a time all went on well. Disappointed husbands and wives came in numbers, but some disagreement took place between the parties interested, and the whole matter has now been placed in the hands of the lawyers, from which it is not likely ever to come out.

Heredity and Temperament as Factors in Longevity.—Dr. B. W. Richardson states that if the ages at death, from natural causes, were obtainable of the parental lives of a man or woman through three generations, the average of their ages—the sum total of them divided by six—might be accepted as the commercial value of the last life. To this rule there were some variations, to the effect that, taking the age of sixty as a medium point, the value of the last life was less under that point, greater above it. Dr. Richardson also thinks that the bilious and sanguine temperaments are the best for long life, the nervous and the lymphatic the worst.

The Willard Parker Hospital.—The report of the Willard Parker Hospital, for the quarter ending July 1, 1888, shows a total of one hundred and seventy-eight cases treated, of which eighty-nine were of scarlet fever with a mortality of 19.1 per cent., and eighty-nine of diphtheria with a mortality of 20.22 per cent.; 82.35 per cent. of the deaths from scarlet fever occurred in children under five years of age, of which 42.9 per cent. were complicated with diphtheria. As compared with the corresponding quarter for 1887, there was an increase in the number of cases admitted of forty-eight of scarlet fever and forty-six of diphtheria, a total increase of ninety-four. Also, as compared with the first quarter of this year, an increase of twenty-one cases of scarlet fever and twenty of diphtheria, a total increase of forty-one. The admissions for the past quarter (of scarlet fever and diphtheria) show an increase over any previous quarter since the opening of the hospital, and only nine less than for the entire year 1886.

Hypertrophy of the Tonsils.—A Russian physician, Dr. Uspenski, has examined the pupils of a school in Moscow and found more than fifty of them suffering from enlarged tonsils. Of these the greater number were in poor health, three-quarters of them were more or less deaf, and one-third were myopic. Most of them suffered at the same time from a dry rhinitis and from granular or atrophic pharyngitis. Furthermore, all were backward in their studies, and were evidently intellectually inferior to their schoolmates.—*Revue Internationale des Sciences Médicales.*

Potassium Permanganate in Burns and Frostbites.—Dr. Zyboff has had great satisfaction from the use of permanganate of potassium in the treatment of burns and congelations. He keeps the parts constantly wet with a solution of from three-fourths to two grains of the permanganate to an ounce of water. If the integument is broken he employs a weaker solution, one-half grain or less to the ounce.

Sudden Death from Washing Out the Stomach.—Dr. Marten reports in *The Lancet* the case of a man, aged forty-eight years, suffering from dilatation of the stomach, caused by pyloric stenosis. Lavage of the stomach was practised, and the man had an attack of syncope immediately following, and died about six hours later. At the autopsy nothing was found except the stenosis of the pylorus and dilatation of the stomach.

Sesquichloride of Iron in Cavernous Angioma.—Dr. Studentski reports, in the *Chirurgicheski Vestnik* for April, 1888, a case of cavernous angioma, involving the entire thickness of the cheek and a part of the tonsil and palatine vault, cured by injections of a ten per cent. solution of sesquichloride of iron. One drop of the solution was injected every six days.

Recurrent Dental Abscess.—Dr. Kums reported at a meeting of the Société Médicale d'Anvers (*Annales et Bulletin*, April, 1888) the case of a lady suffering from an alveolar abscess, which presented periodical exacerbations occurring every afternoon at about four o'clock. The patient lived in a malarious district, and, suspecting a malarial cause for the periodicity, the author prescribed quinine, with the result of obtaining a perfect cure.

Meco-narceine is the name proposed by Laborde for a mixture of some of the alkaloids of opium remaining after the extraction of morphine and codeine, the chief of which is narceine. It is said to cause a profound and tranquil sleep, from which the patient awakes without any of the disagreeable after-effects experienced from a narcotic dose of morphine.

A Supposed Illegal Practitioner.—A man was arrested in Paris on the charge of practising medicine without the proper qualifications, but proved his innocence by exhibiting his diploma. On being asked why he pretended to be practising illegally, he said that he had tried to gain a practice after his graduation but failed. He then went into business, but by accident was called to give medical assistance several times to some of his neighbors, who were ignorant of the fact that he was a doctor. They paid him well, and sent other patients to him. He found that it paid to pretend to be a quack, for in the course of ten years he had made a fortune.—*La Pratique Médicale.*

Aphasia following Typhoid Fever.—Dr. Louis Arboleya reports, in *El Sentido Católico en las Ciencias Médicas*, June 1, 1888, the case of a boy, six years of age, who was suffering from typhoid fever. From the beginning of the disease the boy was dumb, and remained so at the time of the report, when he was already far advanced in convalescence. The hearing was unaffected.

Anæmic Sore Throat.—Dr. R. Scott Skirving calls attention, in the *Australasian Medical Gazette* for May, 1888, to a form of relaxed sore throat which he has found associated with anæmia. The subjective sensations are more pronounced than the objective alterations would seem to account for. There is a gradually increasing weakness in speaking, with some pain and stiffness in the throat, and lastly, considerable pain on deglutition, speaking, or singing. The mucous membrane is pale, with patches of rather deep congestion scattered here and there, for the most part behind the tonsils. Occasionally small submucoid hemorrhages are seen. The uvula is long, and œdematous at its point. There is a deficiency of moisture in the throat. The cough, which is a prominent feature, is dry and paroxysmal. The treatment consists mainly in the exhibition of remedies for the anæmia, chlorate of potash or rhatany lozenges being employed for local medication. The voice is apt to remain weak for some time after the anæmia is cured.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 8 NEW YORK, AUGUST 25, 1888 Whole No. 929

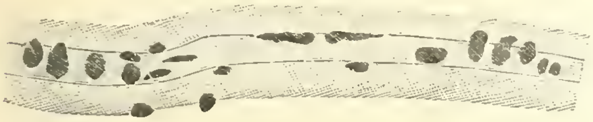
Original Articles.

OBSERVATIONS ON INFLAMMATORY AND CERTAIN OTHER CHANGES IN THE MINUTE VESSELS OF THE PIA MATER.

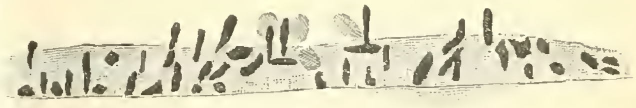
BY C. HANDFIELD JONES, M.B. CANTAB., F.R.S.,

LONDON, ENGLAND.

THE first change to be noted is that the extima, the quasi-homogeneous membrane which, in the normal state, lies evenly along the outer side of the corpuscular—the muscular—layer, is raised up to a less or greater degree and extent by a clear fluid. That it is detached and elevated is manifest, and also that the space included by this elevation is clear and transparent, so that it seems a matter of necessary inference that the effusion of a fluid—liquor sanguinis—is the cause of the change. Though it occurs early, it is by no means a necessary event, and when present it may be very partial. The elevated membrane is thrown into irregular prominences, much like the teeth of a saw, so that the margins of the vessel have a serrated aspect. In the intervals of the serrations the extima remains adherent to the corpuscular layer, and in some instances forms capsules, either full of clear fluid, or enclosing also one or two corpuscles. When the membrane is more extensively detached the enclosed space is, of course, larger, and may contain many corpuscles, mingled with varying amounts of granular matter. From this condition it is only a question of degree to that in which the whole surface of the arteriole is covered with a layer of corpuscles—the familiar periarteritis. Whether this term is correct seems to me questionable, as it is hard to conceive of inflammation restricted to the outer part of so thin a wall as that of an arteriole. That the so-called lymph-sheath now described is a normal arrangement seems to me impossible. The shape of the corpuscles varies; most of them are round or oval, but not a few are elongated, and closely resemble the endothelial nuclei, or those of the muscular layer. In the precapillary and capillary vessels fusiform corpuscles (endothelial) are often seen lying along the inner surface of the wall, in the "Randstellung" of the Germans, and as similar ones not infrequently lie just external to the wall, there can be no doubt, even apart from Cohnheim's experiment, that they actually traverse it. The great majority of the escaping corpuscles are of leucocyte character, and most of these are, no doubt, derived from the blood; but many also appear to proceed from the corpuscular layer, or its representative in the precapillary and capillary vessels. In this situation the transversely elongated nuclei of the muscular bands are replaced by round or oval corpuscles, adherent to the outer surface of the intima, which probably proliferate and separate. I must, however, mention here that in the arterioles of the tomentum—the deep surface of the pia—in meningitis the extima is well preserved, and forms, blended more or less completely with the intima, the whole arterial tube, enclosing the multitudinous corpuscles, endothelial, muscular, and leucocytoid. In such vessels there is no trace of muscular bands, though their enlarged nuclei are evident enough. Indications of multiplication by subdivision are frequent in all the various corpuscles. The endothelial particles are apt to become shorter and thicker, and so approximate, as also do the muscular nuclei, to the condition of oval leucocytes. In fact, it seems a character of the inflammatory "nisus," that it effaces all special features of cell-structure, and reduces them all to one common embryonal level. The endothelial nuclei pretty frequently are aggregated together in largish groups, occupying more or less of the vascular channels. The margins of the arterioles often present a row of corpuscles, some of them transversely elongated, the majority spherical. I am quite aware that the latter are held by many good observers to be only ordinary muscle-nuclei, which appear round in consequence of their marginal position causing them to bend round the edge. When this is the case, however, careful focussing detects the under-part of the bent corpuscle. The round corpuscles often project from the margin of the wall, and are evidently on the point of being detached. Occasionally elongated corpuscles are seen projecting at right angles from the wall. These are mostly muscle-nuclei.

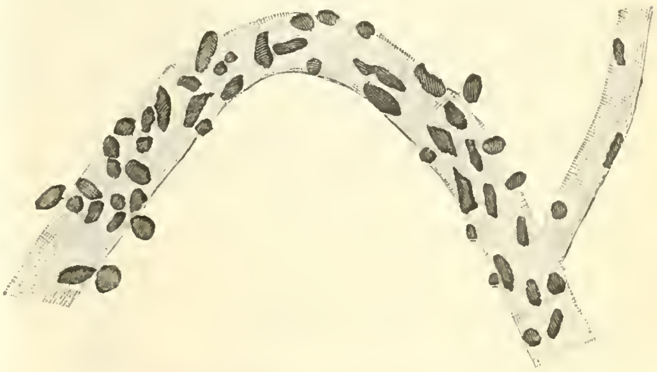


A. Lewington, No. 1.—Capillary, $^{1}/_{3800}$ inch diameter, containing corpuscles, several of which are escaping. It is surrounded with a feebly tinged subgranulous layer of the same thickness on each side as the vessel. Case of chronic meningitis. The insheathing layer is probably a chronic exudation.

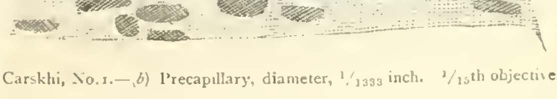


Charles Obern, No. 9.—Arteriole from pia, diameter, $^{1}/_{1250}$ inch. On left side of vessel, the wall about the mid-third is indistinct, and seven or eight corpuscles (muscle-nuclei) are escaping, together with four large colorless granular globules. On the right, at upper part, there is an imperfect lymphatic sheath.

Charles Obern.—(*a*) Large capillary, $^{1}/_{2500}$ inch, a single round corpuscle half escaped. (*b*) Similar capillary, $^{1}/_{3333}$ inch. The lowest corpuscle is pale and filmy.

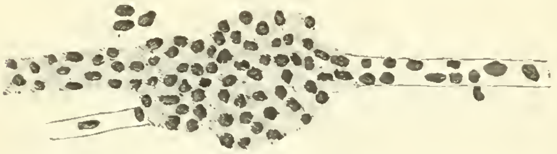


Carskhi, No. 1.—(*a*) $^{1}/_{1000}$ inch diameter. $^{1}/_{8}$th objective.

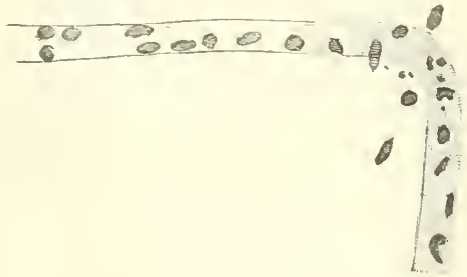


Carskhi, No. 1.—(*b*) Precapillary, diameter, $^{1}/_{1333}$ inch. $^{1}/_{15}$th objective.

Much red-stained granulous matter is frequently contained in the arterioles, along with corpuscles, and represents the débris of red globules which have been destroyed in making the preparation. Endothelial particles are sometimes mingled with this granulous matter, which demonstrates their position inside the tube of the intima. Loss of corpuscles sometimes goes on to such an extent that the walls of an artery $\frac{1}{300}$ inch diameter is reduced to the intima. blended perhaps with the extima and with an extremely scanty layer of fibrous tissue. A similar wasting is met with occasionally in the smaller vessels. To this change the term denudation may be applied. Corpusculation, on the contrary, denotes the opposite state, when a vessel is crowded with enlarged corpuscles heaped together more or less confusedly. Both these changes, though met with in meningitis, are by no means confined to it. In parts where the inflammatory process is more advanced, the surface of the minute vessels is covered with oval or elongate corpuscles protruding from the altered wall. The latter has lost more or less completely its normal structure, and appears as a strip of granular membrane where it can be discerned amid the overlying cells. In many instances the vessels, with their corpuscular coating, appear as solid cylinders, branching here and there into irregular processes, which often exhibit a plexiform arrangement by the union of lateral offsets with adjacent ones. These processes have some resemblance to granulations, consisting, as they do, of embryonal cell-particles. Escaping corpuscles sometimes form a linear series perpendicular to the axis of the vessel. Sometimes a small vessel runs through a large mass of corpuscles which seem to have proceeded from it. Smaller masses are seen now and then, either resting on the wall of a vessel, or dispersed through the rete of the pia. Appearances are not rare, suggestive of the eruption of corpuscles taking place in a focal manner, as if a vessel had given way at a particular spot, from which the particles diffuse themselves peripherally. If a specimen be carefully pencilled to remove most of the corpuscular formation, the change which has occurred in the vessels is very striking. The great majority have lost their normal structure, and are reduced to tubes of intima. The result of this must be to promote still more the occurrence of exudation from the blood. In some specimens the wall of the artery, though greatly changed, retains some of its corpuscles. No channel can be seen; the corpuscles lie, as it were, embedded in a tract of granulous matter.

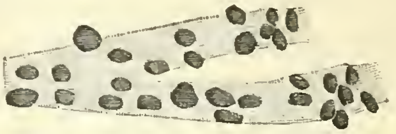


W. Sadler, No. 2.—(*a*) Small vessel running into a lobulated group of corpuscles mingled with reddish amorphous matter; a small capillary issues from upper part.



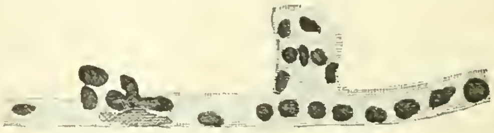
W. Sadler, No. 2.—(*b*) Precapillary with superficial corpuscles, one passing out. Two tiny corpuscles near bend, one, $^1/_{13500}$, the other, $^1/_{15000}$ inch. Vertical part of vessel of reddish-gray color.

A discrepancy may seem to exist between certain of the foregoing observations relative to the condition of the arterioles, they being found in many instances full of corpuscles, while in others they are empty, the corpuscles having escaped. The latter state I believe to be subsequent to the first. Two forces seem to be at work, one causing the multiplication and accumulation of corpuscles in the vessels, the other impelling them to wander out into the adjacent tissue. In the frog's web the first of these actions is seen to precede the second (*v.* M. Foster, p. 173). The same may be observed on a larger scale then by microscopy. I had a whitlow once which, after six days of active inflammation, continued very hot, painful, and swollen. Thinking that pus must have formed, I had it incised, but none escaped, and only four or five drops four days later. Here the emigrative tendency of the corpuscles remained in abeyance, though proliferation was probably active.

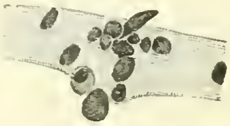


Charles Obern, No. 1.—(*b*) Tuberculous meningitis. Vessels with very faintly marked walls from pia.

The veins in meningitis present nothing remarkable, except that fibrinous coagula are more frequent than in the normal state. Elongate—probably endothelial—corpuscles are also frequently present in their contents, but this is not peculiar to inflammation.



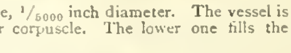
F. Trippas, No. 5.—Capillary escaping corpuscles and bulging wall with corpuscles in cavity. $^1/_{15}$th objective.



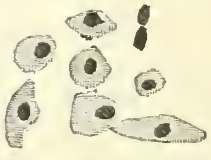
F. Trippas, No. 8.—(*a*) A large capillary containing corpuscles bulging the wall and escaping at both sides.

The capillaries in lower grades of the inflammatory process are normal; in more advanced they are either indistinct and filmy, or lost amid the abundant corpuscular formation.

The pia is often thickened, but not always in the same way. Sometimes the thickening is produced by numerous corpuscles fusing down into a layer spread over its surface. When this happens the corpuscles stain imperfectly with picro-carmine. Sometimes the thickening depends on the generation of filamentous webs, probably from the coagulation of liquor sanguinis, or, again, on the issuing of fibres, single or multiple, from corpuscles, and their coalescing in a plexus. This, of course, must not be confounded with the plexiform arrangement of the granulation processes above mentioned. The corpuscles of the pia in the normal state are very scanty, or may be so; but it is tolerably certain that slight deviations from absolute health may cause them to increase in number greatly.



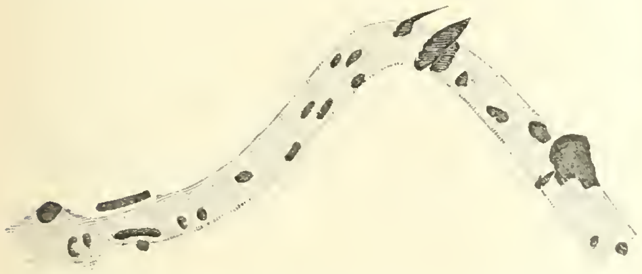
Capillary from same, $^1/_{6000}$ inch diameter. The vessel is slightly but distinctly bulged by the upper corpuscle. The lower one fills the lumen exactly. Its length is $^1/_{1430}$ inch.



From same.—Celloid corpuscles, and two probably produced by fission.

Nay, it is not to be denied that this may occur during the last few hours of life, or even after death. In the pia mater of a (presumably) healthy sheep I found, to my great surprise, the vessels throwing off corpuscles most copiously and extensively, and the tissue of the pia largely occupied by them, especially in the vicinity of certain (radiating) vessels. The condition closely resembled that of inflammation, but assuredly was not. In the next sheep I examined things were widely different. This result can only be explained by supposing, which is not unlikely, that the amœbic faculty varies a good deal in different individuals, in some being much more active than in others. It proves also that not all outwandering of corpuscles from the vessels is to be regarded as indicative of inflammation, even of a low grade. It does not, however, as I think, affect materially the value of the anatomical research I have made as to the changes occurring in meningitis in the human subject. But of this I must leave others to judge.

The main features of the inflammatory process now described are: (1) The excessive formation of indifferent cells; (2) the degradation of the special structure of the arterioles; (3) the amœboid wandering of the corpuscles; (4) the thickening of the pia by the fusing down of corpuscles and the development of plexiform filaments; (5) the presence of endothelial accumulations in some of the arteries. Inflammation is evidently in its essence degenerative, and depends for its existence on detriment of the higher power—whatever we term it—which originally framed organized structure, and in health maintains it. When this fails the lower powers of indifferent cell-growth and of amœbism are let loose and run riot. A muscular band has a special structure, a function, and a place; an indifferent cell has none.

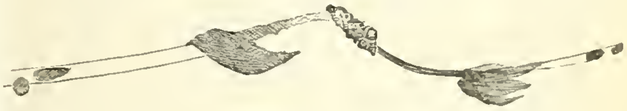


Walter Sadler, No. 15.—(*a*) Arteriole, $^{1}/_{1800}$ inch. Wall degenerate, appearing as a gelatinous film. Single corpuscles here and there, and two large corpuscular masses. It lies between centre of specimen and lower edge, close to a vegetable hair, and to micr. left of a blue mass.

Between passive congestion on the one hand, and active inflammation on the other, there intervenes a long series of morbid conditions approximating, more or less, to one or other type. The essential feature of the first is remora of the blood-current, and stagnation, with more or less escape of red corpuscles. The characteristic of the second is active growth and outwandering of leucocytes or indifferent corpuscles. In both the retentive faculty of the minute vessels is impaired, but much more gravely in the latter, where structural lesion often exists. Mitral stenosis, with its occasional hemorrhage, may be named as an example of the one; simple pneumonia, with its massive exudation, of the other.

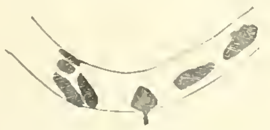
Endothelial Changes.—In some individuals whose arterioles appear normal, the endothelium is very evident, far more than is the case in most subjects, where it has to be demonstrated by the action of silver nitrate. It is seen after picro-carmine staining as a delicate layer or band, stretching along the middle third or thereabout of the channel and following its subdivisions. Occasionally, for a short distance, it lies *in situ*, applied to the free surface of the intima at one or both sides, but for the most part it has evidently separated and shrunk away from the wall. It is composed of delicate elongated nuclei, lying rather far apart from each other, attached to very thin plates representing cell-formations. These are of fusiform shape, as figured in Stricker's work, and are well seen in flakes which are sometimes found hanging out of the broken end of an arteriole, having been drawn out from the other fragment. Such is a correct description of normal endothelium, but very often it differs widely; the nuclei being no longer attached to cell-plates, but resting alone on the inner surface of the intima. Here they often greatly increase in number, aggregate in larger or smaller groups, and obstruct to some extent the channel. The development of the nuclei and the plates seems to vary inversely, hyperplasia of the former coinciding with atrophy of the latter. This difference in the condition of the endothelium, so far as I know, has not been noticed previously. The hyperplasic nuclei are sometimes very evident in the small veins, but are not found in the right cavities of the heart.

Quasi-vitreous Change.—The small cerebral arterioles present occasionally an atrophic condition, of the nature of vitreous alteration. The muscular fibres appear as pale, unstained, non-nucleated, glassy bands which extend beyond the intima, surrounding it, and by their translucency amid the intervening substance, somewhat resembling vacuoles. In specimens steeped in picro-carmine it is remarkable how the affected vessels refuse the stain, which others take so freely. This depends in large measure on the absence of the nuclear corpuscles, which in the normal state become colored so readily. It is not always easy to distinguish this vitreous change from that in which remnants of the lymphatic sheath form capsules around the parietal corpuscles. I am not clear that this so-called vitreous change is a degeneration; it seems to be rather atrophy of the nuclei than of the muscle-substance itself. Perhaps it is not morbid. It has some resemblance to amyloid change, but is essentially different.



Walter Sadler, No. 15.—(*b*) Capillary with extravasations of corpuscles and granulous matter.

Atrophic Change.—In two instances I have observed remarkable wasting of the corpuscles of the capillaries and precapillaries. One of these occurred in a male, aged fifty-six, dead of morb. br., with embolism of the right lenticulo-striate artery, and consequent softening of the hemisphere. A lamel of pia mater from his brain contrasted extremely with one from a case of typhoid fever with albuminuria and delirium. The latter was crowded with plump corpuscles free or adherent to the vessels, the former contained only scanty and shrunken corpuscles. The other instance was that of a female, aged twenty-six, dying with a sarcoma of walnut size springing from the sella turcica, and probably impeding the blood-flow through the large divisions of the carotids. The corpuscles of the capillaries and precapillaries in her brain were scanty and wasted, and contrasted strongly with those of a child, aged three, examined at the same time, who died of catarrhal pneumonia attended with violent and persistent screaming. The fibrous rete of the pia mater varies much as to its amount of corpuscles. Sometimes this is scanty, and its individual corpuscles are small and mingled with much granular matter; sometimes, especially in states of active hyperæmia, the corpuscles are multitudinous. Even in the same brain, great difference in the condition of the pia in this respect may exist in different places.



Charles Obern.—Tubercular meningitis. Precapillary from pia of cortex, diameter, $^{1}/_{2000}$ inch. (*c*) A corpuscle is shown protruding a pointed process through the wall.

Atrophic states are not rarely met with among arterioles in which all trace of normal structure has wellnigh disappeared, and the vessel is reduced to a mere strip of fibroid and granular stuff without any apparent channel. I am much disposed to regard these conditions as late results of corpuscular hyperplasia, such as occurs in the so-called periarteritis, the process terminating in the destruction of the artery. Long after I had observed the change, an eminent pathologist suggested to me the inquiry, whether arterioles might not have a term of life ending in decay ("Path. Trans., 1883").

Atheroma.—The atheromatous change appears to me, after numerous careful examinations, to consist essentially in deposition of oil on the surface of the intima, or at a little depth below it. The oil-drops vary greatly in size from the most minute to the largest, say $\frac{1}{500}$ inch diameter, and are unmingled with any other formed substance, except occasionally with granules very numerous and much resembling micrococci. The atheromatous matter, as it accumulates, encroaches on, and causes wasting of the wall of the arteriole, which in some places yields and, gives rise to aneurismal bulging of well-marked character. The nature of the deposit is clearly shown by the blackening effect of osmic acid. The patches are often singularly local, a trunk with numerous primary and secondary ramifications remaining healthy, except in a few spots. This opposes the idea of the smaller patches being embolically derived from larger and more centric (*vide* "Path. Trans., 1883").

In what I have termed the *diffuse* form of atheroma, the walls of the minute arterioles are lined with a reddish-brown semi-opaque matter, rendered translucent by liquor potassæ, but darkened by osmic acid. Oil-droplets, in varying amount, are seen in it. The change is frequently met with, but its nature is uncertain.

Coagula.—In examining small cerebral vessels it is not rare to find colorless coagula in their channel. These are often microscopic, but often also are distinctly visible to the naked eye, especially when stained. They consist of amorphous basis-substance, with the usual fibrils and leucocytes, and contain besides, in most instances if not in all, extremely numerous small granules, $\frac{1}{30000}$ to $\frac{1}{10000}$ inch in diameter. The larger sometimes appear as minute vesicles having a wall and pale contents; the smaller are more like solid particles, and have sometimes an angular outline, or are more or less elongated. The granules are more constant in the coagula than the leucocytes. Sometimes in a specimen a tract is occupied with granules alone, while another adjacent is full of corpuscles, or of corpuscles mingled with granules. The latter stain strongly with methylene blue or gentian violet, certainly more deeply than the fibrils between which they lie. They are not dissolved by liq. potassæ. Vegetations on the cardiac valves are sometimes very largely made up of these granules. sometimes contain few, if any. They are found also in the sputa of lung inflammations in great abundance.

In a case of pneumonia, on the tenth day, the sputum contained multitudes of granules, but very few pus-corpuscles. Many of the granules, especially the elongated ones, were seen moving actively. This circumstance, and their considerable variation in size. due probably to growth, indicates their possession of vitality, at least during the earlier period of their existence. To this may be added that the larger ones bear a very close resemblance to micrococci and take blue stains freely. In a case of ulcerative endocarditis, with quasi-abscesses in the mitral valve, the contents of these foci consisted very largely of similar granules, varying in diameter from $\frac{1}{20000}$ to $\frac{1}{5000}$ inch, together with bacilli. The septic character of the disease, and the presence of bacilli among the granules, marks the condition as one in which micro-organisms of various kinds would be likely to appear, while the presence of inflammatory products would naturally be expected. What difference exists between a pus-corpuscle, a bacillus, and a febrine granule, *quâ* vitality, is hard to state.

THE FREQUENT DEPENDENCE OF PERSISTENT AND SO-CALLED CONGESTIVE HEADACHES UPON ABNORMAL CONDITIONS OF THE NASAL PASSAGES.[1]

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There is perhaps no single affection that causes so large an amount of human suffering, and which is regarded so lightly, as that known by the generic term, headache.

There is also no affection that has so many different types, nor one which is caused by such a great variety of bodily conditions. It not only attends nervous affections, but is a frequent complication of nearly every other form of disease.

A headache is in every instance a warning of some disease or derangement that should be sought out and corrected. Dr. Day very truly says: "The subject of headache is of manifest importance, because it claims so many sufferers and is surrounded by so many difficulties —the pathology is obscure, the diagnosis perplexing, the remedies uncertain. Headache is a disorder of the utmost frequency, and yet there is none which more taxes the experience and scientific knowledge of the physician, or requires closer observation in elucidating its nature and removing its obscurity.[2]

The connection between abnormal conditions of the nasal passages and certain forms of headache was recognized a long time before we had any definite knowledge concerning diseases of the nose. These headaches were, however, only those observed to be associated with, or caused by, an engorged condition of the nasal passages, usually that attending a cold in the head, and were therefore termed "catarrhal headaches."

Headaches caused by chronic abnormal conditions of the nasal passages, in which the nasal derangement played a less conspicuous part, were sometimes attributed to other causes, and the nasal disease was entirely overlooked or unsuspected. In case of entire failure to detect a cause, the headache was often termed "nervous" or "congestive," or by that most comforting of terms, "idiopathic."

The physical relations of the nose to the other portions of the human system are very important; for in diseases of this organ not only are the well-known offices which it performs interfered with, but derangements are produced in other organs and parts. Such derangements may be the effect not simply of cutting off nasal respiration, but of the irritation that is reflected from the nose to other parts through its abundant nervous connections.

An impetus was given to the study of nasal neuroses when it was shown that nearly all the phenomena attending hay fever were reflected irritations from the nose; and also that many other neuroses, such as megrim, facial spasm, choreic symptoms, epileptiform seizure, sneezing, cough, laryngeal spasm and asthma, were frequently excited by disease in the nasal chambers.

With this array of symptomatic effects of nasal irritation, together with the proximity of the nasal chambers, and their communicating cavities, to the brain. we would naturally expect to find morbid impulses quite as often reflected to the head as to any other region.

For the purpose of illustrating the clinical character of headaches of nasal origin, I have selected from the many instances that have come to my observation the following cases:

Mr. A. K——, fifty years of age, had been subject to persistent headaches for fourteen years. At first the headache was slight. He would awaken with a headache in the morning, which would pass away during the early part of the forenoon, after exercising in the open air. This symptom steadily increased in severity and would continue longer during the day, until for two years previous to the time I first saw him, his headache was persistent and continuous during the entire twenty-four hours. The pain was confined to the upper portion of the frontal region. There was no pain over the region of the frontal sinuses. The pain was a dull ache, like a sensation of pressure, with a feeling of fulness throughout the head. When I saw him, the pain had become so severe as to be almost unbearable. His ideas were confused and his memory had begun to fail him, so that he was apprehensive of softening of the brain or some other severe disease in his head. A short time before his headache commenced he began to be troubled with what is termed a "catarrhal" difficulty, with more or less stoppage of the nostrils—particularly the left one—and also with considerable discharge. On lying down his nostrils became stopped and he was obliged to breathe through his mouth during sleep. His throat would become parched and dry, and there would be left a bad taste in his mouth in the morning. His headaches were considered to be a form of congestive headache, due to what is commonly termed "biliousness." He was treated by a variety of different physicians—regulars, irregulars, and defectives—with no permanent benefit. A great deal of quinine was given him by those supposing it to be of malarial origin. The only medicines that seemed to give him any relief whatever were active cathartics, which seemed to confirm the congestive and bilious theory. Accordingly, for the two years previous to the time I saw him he took a cathartic every day, such as pills of some sort, salts, senna, castor-oil, rhubarb, cream of tartar, etc. A Turkish bath would also give him complete relief during the time that he was in the bath.

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[1] Read before the last Session of the Medical Society of the State of New York.

[2] Headaches: Their Nature, Causes, and Treatment. Am. Ed., 1883, p. 11.

On examination of the nasal passages I found a bony ridge projecting from the left side of the septum and pressing firmly into the left middle turbinated body. There was also some hypertrophy of both the inferior and middle turbinated bodies on that side. On the right side there was some general thickening of the mucous membrane, but the nostril was comparatively free.

The bony ridge I removed with a nasal saw, and applied the galvanic cautery to the turbinated hypertrophy. The result was complete and almost immediate relief from the headaches. For some time his whole scalp had been so sensitive that he could not endure the slightest pressure, but this sensitiveness of the scalp disappeared almost entirely with the headache. He is, however, still sensitive to draughts of cold air, but by keeping his head warm with a skull-cap or other closely fitting cap, he is exempt from every vestige of headache. Since he ceased treatment two years ago he has taken no medicine whatever, has enjoyed perfect health, and now says he feels better than he has at any time in fifteen years.

Mr. E. R——, aged twenty-seven, cigar-maker by trade. For a year and a half he had experienced an obstruction in the nose which seemed to follow a severe cold in the head. This was followed by more or less ringing in the ears, profuse discharge from the nose, and soon after by a severe headache or pain confined to the occipital region on that side. He also had more or less intermittent pain in the left side of the chest. This condition continued, and the pain grew steadily worse until he had to give up all work and became seriously alarmed as to his condition. He was subject to frequent colds in the head, his nostrils were most of the time stopped, and he was obliged to breathe through his mouth. He was also subject to frequent attacks of sore throat.

On examining his condition a bony ridge was found projecting from the left side of the septum, prodding into the lower turbinated body on that side, very similar to the case just described.

There was also marked hypertrophy of the middle turbinated bone, which pressed firmly against the septum above this region. On the left side there was marked inferior turbinated hypertrophy, which almost completely occluded the nostril. On removal of these abnormal conditions the pain disappeared, and there has been no return of it since. The general condition, which had become much reduced, at once rapidly improved. He went back to his work and has had no trouble since.

Mrs. J. K——, aged thirty-one, had had nasal catarrh and obstructed nostrils for eight years, and during each summer hay fever very severely. Four years previous to the time when I saw her, she began to have frequent and severe headaches affecting the whole head, but more intense over the supraorbital and frontal regions. She had a profuse discharge from the nose. She also had tinnitus aurium, but her hearing was not impaired. She became unable to use her eyes to read or sew, on account of a headache which was immediately brought on. In general health she was weak and anæmic.

On examination of her nasal passage I found both inferior and middle turbinated hypertrophy, on both sides, obstructing the nostrils anteriorly and posteriorly. Most of this projecting was removed with a snare, and the remainder with the galvanic cautery. After some subsequent treatment the nasal stenosis was completely removed and nasal respiration became entirely free. The headaches disappeared, as did also the sensitive condition of the eyes, so that she could read and sew, and use her eyes without the slightest discomfort or headache. Her general health improved. She began to gain in flesh and strength, and during the five years which have since elapsed she has remained entirely well, with no return of the headache or the hay fever.

Miss K. C——, aged twenty-six. For two years she had experienced a great deal of obstruction in the nostrils, with a sensation of pressure about the bridge of the nose, sensitiveness of the eyes and lachrymation, pain about the head in the temporal and frontal regions, but particularly back of the neck. She also had a profuse discharge from the nose, and frequent hoarseness.

On examination the middle and superior turbinated bones on both sides were found greatly enlarged and pressing firmly against the septum. There was very little other trouble found in the nostrils. The inferior turbinated bodies were not hypertrophied. Pressure over the inner wall of the orbit on either side would greatly increase the pain on that side of the head. The treatment consisted in removing the hypertrophied portions of the middle turbinated bodies which pressed against the septum. The headaches were at once relieved, as was also the sensitive condition of the eyes and the lachrymation.

Mr. L. H——, aged fifty. He had experienced trouble in the throat since he could remember. During the past four years he had had much obstruction of the nostrils, with profuse discharge, and also a severe but dull pain and a sensation of pressure about the bridge of the nose, with a dull headache extending through the frontal and temporal regions.

On examination of his nose, on both sides, there was found inferior posterior turbinated hypertrophy. On the left side, the middle turbinated body was found enlarged and pressing against the septum, while on the right side of the septum, along the superior border, there was a thick ridge of tissue of a doughy consistency, which was pressing against the superior turbinated body on that side. The removal of these abnormal conditions in the nose resulted in complete relief from the headache and of the noticeable symptoms of the nasal difficulty.

Mrs. J. R——, aged forty-three. Throat sensitive, and subject to frequent colds in the head for several years. During the past three years she had been subject to headaches, slight at first, but gradually increasing in severity. They were confined mainly to the frontal regions, but at times severe pains, which she considered neuralgic, would extend throughout the whole region of the scalp. She had also more or less stoppage of the nose, and was obliged to sleep with her mouth open. In the morning her mouth would be dry and parched. She also suffered from a great deal of irritation about the throat and was frequently hoarse.

On examination of the nose there was found, on the right side of the septum, an exostosis projecting against the middle and superior turbinated bodies, which were very sensitive to the slightest touch of the probe. There was also some inferior posterior turbinated hypertrophy on both sides. There was a pad of hypertrophy along the upper border of the septum, on the left side, pressing against the middle turbinated bone. The turbinated hypertrophies were removed, the hypertrophies of the septum, and the bony projection. With the necessary subsequent treatment the nasal difficulty was entirely relieved and the headaches wholly disappeared.

Mrs. D. G——, aged forty-two. For several years she has had more or less obstruction of, and discharge from, the nostrils, attended with very severe headaches. She was subject to frequent attacks of cold in the head, which would at once bring on a headache. These attacks were considered to be of a congestive nature. The headaches at first were slight, but afterward they became much more severe and persistent. Sometimes a severe attack would be attended with nausea and vomiting. Occasionally these attacks would supervene during some change in the weather, and without the evidence of a cold. She was very sensitive to the inhalation of dust or damp air, which would bring on a headache. Her general health was much impaired. Examination of her nose revealed a firm hypertrophy or enlargement of the middle turbinated body, which pressed against the septum. There was also some inferior posterior turbinated hypertrophy on both sides, and a pad of thick, soft tissue on the right side of the septum, near the upper portion, pressing against the middle turbinated body on that side. These abnormal conditions of the nose were removed. The headaches and attacks of nausea speedily disappeared, and, with the administration of tonics of bark and iron, she soon became restored to a condition of vigorous health.

Etiology.—Headaches that have their exciting cause in the nose are reflex in character. This is a self-evident fact, for the reason that the manifestation of pain is at a point more or less remote from its exciting cause in the nose.

The exceptions to this statement are where the pain occurring directly over the frontal sinuses is due to the disease of these sinuses; or to the accumulation of secretions or of mucous discharges in these sinuses caused by obstructive swelling at the opening of these sinuses, or to hypertrophic rhinitis; or to the direct extension of disease from the nasal cavity to the meninges and brain. Such extension, however, very rarely occurs.

It may occur, nevertheless, when the cribriform plate and the upper portion of the lateral masses of the ethmoid bone are quite extensively diseased and undergoing necrosis, or it may take place through the communication of the lymphatics of the nasal mucous membrane with the supraorbital and subarachnoid spaces. It has been demonstrated that by injecting fluids into the latter spaces with sufficient force, such fluids can be made to pass through the lymphatic canals to the surface of the mucous membrane. Therefore, if these nasal lymphatics become obstructed, it is not impossible that more or less pressure might be made on the cerebro-spinal fluid.

The exciting cause of nasal headache is an irritation of the terminal nerve-filaments in the nasal chambers, which excites an undue activity in the communicating ganglion, and from which an irritation is reflected to the terminal filaments of other communicating nerves. This undue activity of the sympathetic ganglia also causes a dilatation of the smaller vessels and the capillaries, and a greatly increased vascularity of the part takes place, which, being associated with the head pain, is recognized as a congestive headache. Sometimes, when the irritation is great, the congestion will be intense. The vessels of the scalp will be full and bounding. There is often more or less hyperæsthesia of the scalp, with a sensation of heat at the spot where the pain is most intense, or a sensation as if a nail were driven into the scalp, a "clavus" which the patient will sometimes instinctively indicate by a gesture. It is in this manner that other well-recognized headaches, due to irritation reflected from distant parts and organs, are caused; as, for instance, those due to uterine irritation, and most commonly expressed by a vertex pain; those excited by derangements of the stomach, causing irritation of the gastric plexus of the sympathetic, and reflected to the frontal region; and those due to eye strain, and manifested by pain in the region of the orbit and temple.

In the latter case the irritation is caused by the effort of the ocular muscles to adjust themselves so as to overcome a defective accommodation, and as soon as the irritation is removed by ceasing to use the eye, or by the use of properly adjusted glasses, the consequent headache ceases. The frequent occurrence of the dependence of severe headaches on defective accommodation of the eye is shown by the number of reports of such cases that have been, during the past few years, scattered through our medical literature. Many cases of eye trouble due to disease in the nose are also reported.

In the nose, the irritation is occasioned by some abnormal condition which brings together parts that normally should be separate, and produces more or less pressure between them.

In no case of headache, either temporary or persistent, excited by nasal irritation, have I failed to find the irritation to be due to such pressure in some portion of the nasal chambers. I should except polypoid or other growths in the nose, which will produce pressure, and frequently severe headaches, but in such cases the parts are forcibly separated. This pressure may be constant or only during the period of temporary engorgement of the soft parts, which brings them forcibly together or against the septum. There may be an exostosis of a turbinated bone prodding the septum, or a firm hypertrophy of a turbinated body pressing against it; or the septum may be markedly deflected, or there may be a bony ridge or sharp spur projecting from it prodding a turbinated body.

When one wall of a nasal passage comes in contact with its opposite wall, sooner or later the resulting irritation causes a sensitiveness and thickening of the tissues of the latter side.

It is not uncommon that a sensation of fulness is felt at the base of the nose and about its bridge, associated with more or less head pain, due to an enlarged middle turbinated body wedged in tightly against the septum.

I have also not infrequently found a pad or oval mass of tissue located on the septum, near its upper border, opposite to and pressing against the middle or superior turbinated body. These are almost always very sensitive to irritation, and in persons subject to hay fever they are extremely so.

Character and direction of the pain.—The character of the pain varies from a dull, heavy ache, like that from undue pressure, to a sharp pain, like that characteristic of neuralgia. The pain also may be intermittent and more or less transient, recurring at frequent, and, it may be, regular intervals, or it may be persistent or nearly continuous.

In the latter case it is, as a rule, due to a constant pressure between parts that are found to be bony or composed of more or less firm tissue; while in cases of transient pains the pressure is between soft tissues, and on the subsidence of the engorgement the parts separate and the pain disappears. In other words, when there is constant pain there is a correspondingly constant pressure, and in temporary attacks of pain the pressure is correspondingly temporary.

Certain atmospheric conditions will excite headache. It is usually when there is a low temperature and low barometer, with the air surcharged with moisture—a condition that causes these diseased nasal tissues to become engorged and also distended by the absorption of water from the atmosphere.

Various conditions of the body have an influence on the nose and cause reflected headaches. Gastric and hepatic disturbances and a plethoric condition of the system will not only produce a fulness of the cerebral vessels by sympathetic irritation, but also a distention of the cavernous sinuses of the nose, thus producing intranasal pressure.

The connection between the nose and stomach is often experienced by those who indulge in wine dinners, and tax their stomachs beyond their normal capacity with *pâté de foie gras* and other like substances of difficult digestion; for it is rarely that they escape a cold in the head and a matutinal headache. Persons who have organic derangements in the nasal passages can rarely indulge to excess in eating, drinking, or nervous excitement without exciting a coryza and an associated headache.

It is to be noticed in those cases in which an engorged condition of the nasal passages is associated with a headache, that the pain is mainly located in the region where a pain is experienced by the same individual when suffering from what he considers a purely catarrhal headache. In the latter case the relation between cause and effect is recognized by the individual, but in the former instance the pain is attributed to some other cause.

The location of the pains in the head has no constant relation to the disease nor to its seat in the nose, and it has no such relation to the distribution of the nerves or blood-vessels. As I have pointed out in a previous paper,[1] an irritation reflected from the nose (or from any other part, as the case may be) is, like the electric current, reflected always in the direction of the least resistance. It may be reflected in one direction at one time, and in another at another time. Therefore, from the same region in the nose the pain may be reflected to the vertex, to the occiput, the parietal, temporal, or frontal region; or it may be spread out over the whole surface.

In some cases, as we would naturally expect, when the abnormal condition in the nose is confined to one side, we have a hemicrania on that side; but this is not always true, as shown by some of the cases cited.

Notwithstanding the fact that the location of the pain in the head bears no *constant* relation to the location of the disease in the nose, it is observed that from certain portions of the nasal chamber pain is *more often* reflected to certain regions of the head than to other regions. Thus from the inferior turbinated body and lower portion of the septum the pain is most often reflected to the lower and posterior portion of the temporal, parietal, and occipital bones.[2] The pain reflected from the region of the middle turbinated bone is commonly referred to the temple, sometimes invading the whole region from the nose to the parietal eminence, and extending to the vertex; while pain reflected from the region of the superior turbinated bone is commonly felt in the frontal and supraorbital region. Sometimes the pain will completely surround the eye, or be centred in the back of the eyeball.[3]

Diagnosis.—The dependence of persistent and so-called congestive headache upon abnormal conditions of the nasal passages is sufficiently frequent to call for a careful examination of the nasal passages in a large proportion of such cases. In fact, in all cases where there is not an unquestionable relation of cause and effect between some other local or general disease and the headache, the nasal passages should be interrogated, even in the absence of urgent or distinctive symptoms of nasal disease.

It is too frequently the case that a well-pronounced nasal trouble is looked upon as nothing more nor less than an ordinary "nasal catarrh;" while the headache that results from the disease in the nose is considered to be chronic neuralgia, as was the case with some of the patients whose cases I have reported, and the patient is teased for months, or years, until general debility, nervous prostration, or a neurosis is developed.

The necessity for an exhaustive study and careful examination of each particular organ that may, by any possibility, contain the exciting causes of any obscure neurotic affection, cannot be better illustrated than by the affection under consideration.

In case the headache is associated with pronounced nasal irritation, and there is an absence of any other pronounced cause, such as gastric disturbance, eye strain, uterine and renal disease, rheumatic and lithæmic affections, or the effects of drugs, such as cocaine, and sometimes quinine, we have presumptive evidence that the headache originates in the nose.

Further evidence we should seek for, by carefully examining the nasal passages. If we see evidence of one or more of the various diseased conditions in the nose, already described, that may be the cause of headache, we should carefully explore the part with a probe. Usually the slightest touch of the probe against the offending part will provoke the characteristic head-pain. This connection is more pronounced during the exacerbation of the pain than during the period when the nasal irritation is in a condition of comparative quiescence.

Dr. Harrison Allen[1] has called attention to the effect of pressure upon the inner wall of the orbit; the pain that is caused thereby being due to the pressure of the anterior end of the middle turbinated bone against the septum. This pain, he observes, is reflected on a line from this point to the temple, and sometimes to the parietal eminence; while pressure of the entire bone against the septum will give rise to vertex pain.

The treatment of headaches dependent on intranasal disease consists in the removal of the cause and the restoration of the nose to a normal condition. The conditions which we may have to deal with as possible causes of cephalic pain have been described under the head of etiology.

Dr. Glasgow,[2] of St. Louis, has called attention to the immediate relief given in the case of "congestive headaches" by the abstraction of blood from the cavernous sinuses of the nose.

He observed that, during a congestive headache, the cavernous bodies of the nose were always in a condition of intense hyperæmia, and that on the abstraction of blood from these bodies the hyperæmia disappeared and the headache subsided. The abstraction of blood was accomplished by simply puncturing the cavernous bodies with a needle, and the flow of blood was proportionate to the amount of engorgement—from a drachm to several ounces. This also illustrates very clearly the dependence of headache on intranasal pressure.

The prognosis in regard to the result of the treatment and the relief of the pain will depend entirely on the accuracy of the diagnosis and the care with which the indications are carried out; for, when the cause is gone the symptoms will disappear—*sublatâ causâ tollitur effectus.*

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[1] Hay Fever: An analysis of forty-four cases treated by the writer, together with results of treatment, New York Medical Journal, 1887, vol. xlvi., p. 225.

[2] Pain may be reflected from this region in other directions. A little more than a year ago a gentleman, aged forty, consulted me in regard to a naso-pharyngeal affection that troubled him very much. He also complained of a continuous dull pain in the upper portion of the left side of his chest, which greatly annoyed him, lest it were due to some disease of the lung. I examined his chest, but could not find the slightest evidence of disease there. In his left nostril there was a bony ridge projecting from the left side of the septum, near its lower border, and pressing into the left inferior turbinated body. On the removal of this bony ridge in the treatment of his nasal disorder the pain in his chest entirely disappeared, and there has been no return of it since.

[3] Since this paper was read, a lady, aged fifty-five, was referred to me for treatment for a frequently recurring slight epistaxis from the left nostril, which I found to be caused by a small ulcer near the upper portion of the triangular cartilage. She also suffered from periodic headaches, occurring regularly every three weeks. The pain was confined to the right supraorbital region, surrounded the right eye, and extended in behind the eye. During the two weeks previous to the time I saw her, she had also had divergent strabismus of this eye. Examination of the right nostril showed a rounded pad of hypertrophied tissue on the right side of the septum, near the upper border, opposite the superior turbinated body. It completely filled the passage at that place and pressed against the superior turbinated body. Pressure with a probe against this spot was referred to the supraorbital region, while pressure against the superior turbinated bone caused a sharp pain in the back of the eyeball. On taking away this pad of hypertrophied tissue, pressure against the superior turbinated bone was removed, and there has been no headache or pain in the eyes since, and the strabismus has disappeared.

[1] Medical News, 1886, vol. xlviii., p. 290. Phila.

[2] On Certain Measures for the Relief of Congestive Headaches, New York Medical Journal, 1887, vol. xlvi., p. 260.

ELECTRICITY *vs.* LAPAROTOMY IN INFLAMMATORY AFFECTIONS OF THE UTERINE APPENDAGES.

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Notwithstanding the earnest protests which have emanated from more than one quarter against the dictum that laparotomy, followed by the removal of the appendages, offers the sole hope of cure in case of disease of these organs, this radical method is still advocated with as much zeal as a few years ago when the wave of laparotomy, starting from Birmingham, swept over this country with a force which boded ill to womankind and awakened alarm in the breasts of what I may term the conservative element in the profession. The aim of the average gynecologist became at once to rival, if possible, the wizard of Birmingham, and our journals began to teem with the records of *successfully removed* tubes and ovaries. The series has gone on lengthening, and to-day it is no uncommon matter to peruse the tabulated results of twenty-five, fifty, or one hundred and more laparotomies of a single operator. Iodine to the vaginal vault, the glycerine tampon—these agents of the past have been laid aside, and the knife has full sway. In skilful hands few of the patients die of the operation; many are restored to usefulness, minus their appendages; a small minority suffer as much as they did before running the risk of laparotomy.

Not so very long ago, when pretty much everything of an inflammatory nature around the uterus was termed cellulitis, the persistent tamponnade and counter-irritation of the vaginal vault, associated with the hot douche, unquestionably restored many a woman to health and to usefulness. Later, when the majority of these instances of cellulitis were recognized as cases of pelvic peritonitis, associated generally with tubal disease, the impression began to gain ground that the only means of curing these patients was to remove the tube or tubes whence, in the vast majority of cases, emanated the affection of the pelvic peritoneum. Such argumentation was scarcely in accord with strict logic, but the wish became the father of the thought. What was possible in case of cellulitis ceased to be in case of peritonitis, and the offending organs had to be removed. What is the use of these tubes and ovaries to the woman? became the dominant question. They are diseased, *ipso facto* the woman is sterile; by removal the woman is surely not altered for the worse. And so these appendages have been removed, and are daily being removed, and the record of successfully performed laparotomies is swelling, in utter oblivion of the fact that suffering is by no means always lessened, and that a not inconsiderable proportion of laparotomized women are to-day finishing where they should have begun—having iodine applied to the vault, the glycerine tampon inserted; or, better still, in the opinion of the writer, receiving the benefits of electricity rationally utilized, as a great palliative if not always a curative agent.

Such statements as the above are not strictly novel, but reiterated they must be until, in a certain class of instances of disease of the appendages, the knife yields, as it must, to electricity. In my own case this belief is founded on results personally obtained in cases where laparotomy has been advised by high authority, and in such instances I desire to maintain the superiority of electricity over laparotomy from a conservative stand-point, seeing that the agent is capable of as much good without risk and leaves the woman with unmutilated procreative organs, even though these organs may never furnish outward evidence of thorough function beyond that which is offered by menstruation.

The class of cases in which I would contend electricity will prove as serviceable, and frequently more so than laparotomy, and this, too, without subjecting the woman to the slightest risk, are those in which careful exploration, if necessary under anæsthesia, fails to suggest the presence of pyo-salpinx. Disease of this nature calls for speedy and radical action. The knife is here indicated, even as it is in any other region of the body where pus is predicated. A history of recurrent attacks of pelvic peritonitis should constitute the call for laparotomy, lest the next attack should eventuate in a general peritonitis fatal to the patient. Where, however, the careful bimanual exploration of the patient, the rational history, and the appearance do not suggest the likelihood of pyo-salpingitis, then the greatest palliation, if not entire cure, may be predicated from resort to electricity. The conditions termed catarrhal salpingitis, pachy-salpingitis, peri-salpingitis, peri-oöphoritis, I would include in the class which may properly be subjected to electricity rather than to the knife.

When I first began to systematically use electricity in my gynecological practice, I deemed it contraindicated in acute pelvic peritonitis—the term under which, for the sake of brevity, I would include the affections just referred to—and to be used with caution in subacute instances. With increased experience I have learned that the agent may not alone be resorted to with safety, but with benefit as well, where the condition is acute. By means of electricity the circulation is regulated, absorption is favored, and we effectively counter-irritate. The technique of the application I have so recently described that it is unnecessary here to do more than lay stress on certain of the cardinal principles. Notwithstanding the advocacy of Apostoli, Engelmann, and others, I am not convinced that it is at all essential to success to use currents of great intensity. Indeed, in certain instances, I am satisfied that I obtain greater benefit through resort to weak currents of considerable duration. The action of the current is thus more prolonged, and the effect more lasting. The non-active pole, and this will ordinarily be the negative pole, should cover as large a surface as possible, the abdomen being the preferable site for its application. As long as there exists tenderness on pressing the vaginal vault, or pain in imparting motion to the uterus, galvanism is indicated, the positive—the anæsthetic, alterative pole being placed within the vagina. When the symptoms have disappeared, faradization, first the primary current, and later the secondary, will be found most effectual in completing the cure in so far as this is possible. In the intervals between the séances, and these should be held every other day, at the outset, the uterus should be gently supported by a wool tampon—the organ should not be crowded up by a number of tampons packed as solidly as possible into the vagina, for thus as much harm is done to the ligaments, blood-vessels, and adjacent organs in an upward direction, as they suffer when, without the tampon, the uterus sags downward. Attention to these simple rules is strictly essential to success. Through resort to electricity the gynecologist may not gain such great renown as the operator who can boast of a long series of operations, and who can exhibit to colleagues and to patients the bottled specimens, emblems of his prowess, but he will have the satisfaction—no mean one—of knowing that he has relieved suffering without risking life, and he will find that a reputation for conservatism bears golden fruit in plenteous harvest.

109 East Fifty-fourth Street.

To Prevent the Condensation of Vapor on Lenses in the Throat.—Dr. Stocquart, in the *Paris Médical*, calls attention to an easy method for preventing the lenses of instruments from becoming dim while being used to examine cavities. It suffices to spread a drop of glycerine on the lens. This done, it can be introduced in the throat, for example, without becoming dim.—*London Medical Recorder.*

SOME REMARKS ON THE TREATMENT OF PLEURISY BY SALICYLATE OF SODA AND SALOL.

By JOSEPH DRZEWIECKI, M.D.,

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WHETHER acute primary pleurisy is of contagious origin or not, is a question that is as yet not positively decided. If, however, we consider that acute pleurisy appears rapidly and often epidemically, and, as the statistics show, it most frequently develops in winter and summer, and if we closely examine its clinical course, we must undoubtedly come to the conclusion that between the latter and all contagious diseases there exists many points in common.

These appear most strikingly if we compare acute pleurisy with acute rheumatism. In both cases the morbid process affects the tissues, which present almost the same histological structure and the same physiological function. The same injurious factors at one time produce inflammation of the pleura, at another time inflammation of the joints, or both. Thus, for instance, the so-called "catching cold" produces at one time pleurisy, at another time rheumatism, or both follow. It sometimes happens that during articular rheumatism inflammations of the pleura or endocardium appear. It has likewise been observed that during gonorrhœa sometimes inflammation of the joints, and sometimes that of serous membranes appear; at least the sudden beginning and the further clinical feature of the course of these diseases show very much analogy.

Starting from this point of view, it must be supposed that if salicylate of soda is almost always the best and surest therapeutical remedy in the treatment of rheumatic fever, it should also successfully be applied in the treatment of pleurisy.

Last year I published in a Polish paper (*Medycyna*, Nos. 44, 45, and 46, 1887) a series of cases of acute pleurisy treated by salicylate of soda, and the results which I obtained, in short, are as follows: 1, Inflammations of the pleura, on which no other remedies had any influence, subsided quickly under the influence of salicylate of soda; 2, the use of salicylate of soda within, after twenty-four hours, produced a favorable turn in the course of the disease, the prickling pain, if it did not entirely disappear, at least diminished; 3, the temperature fell; 4, the quantity of urine rose considerably, and with it also the quantity of chlorides, accompanied by diminution of pleuritic effusion; 5, this treatment was continued during two weeks, after which time the patients recovered their health again. Such a short duration of pleurisy, which generally lasts at least three weeks, speaks so eloquently in favor of the treatment of pleurisy by salicylate of soda that any further dispute on it would be needless.

This favorable action of salicylate of soda in pleurisy is by no means dependent upon its diuretic action, as some of my colleagues suppose, nor upon its sudorific action, as Eichhorst pretends, because no diuretic or sudorific remedies, which have long been employed in the therapeutics of pleurisy, are able to conquer this disease so quickly as salicylate of soda. Besides that, perspiration appears very often as well in the beginning of pleurisy, when the patient has not yet employed any remedies, as in its further development, just as in rheumatism; and in this regard we have another proof to support my opinion, that a certain relationship exists between these two diseases.

In my opinion salicylate of soda has in these cases a specific action as well as in rheumatic fever. However, I must add, that in order to obtain a good result from salicylate of soda, it must be given in large doses, two drachms daily; or, as I prescribed, a tablespoonful of a five per cent. solution every hour, till signs of poisoning appear, marked by a buzzing in the ears, and afterward a tablespoonful every two hours. I have never seen any injurious effects, such as collapse or weakness of the heart. On the contrary, I can say that in cases where the pulse was very feeble it improved considerably, which can clearly be explained by the action of the remedy in reducing the pleuritic effusion and the temperature. On the other hand, a great buzzing in the ears, loss of appetite, and a repugnance to the drug, were the constant signs that accompanied such treatment. As I convinced myself, this unfavorable influence of salicylate of soda on the stomach can be greatly diminished by giving it with milk.

Having received, through the kindness of Professor Marceli Nencki, of Berne, one kilo of salol from Heiden, of Dresden, and encouraged by the results which Bielschowski,[1] Gregori,[2] and Rosenberg[3] obtained from its use in articular rheumatism, I decided to try this new remedy also in pleurisy. I believe that the few following cases best illustrate the influence of it on the course of this disease.

CASE I. *Left pleuritic effusion.*—On August 7, 1887, I was called to a boy, aged eight, who, as his aunt told me, a week ago complained of a pain in his left side and a cough, but supposing it to be nothing grave she did not consult a doctor. In the night from the 6th to the 7th of August the boy was very restless and delirious, and this was the reason I was sent for. On examining him at 1 P.M., I found his temperature 39.8° C. (103.6° F.), absolute dulness at the back from the fifth right rib. In the beginning, when raising him up, respiration was bronchial, and, after some breathing, it became very feeble. This experiment I repeated several times with the same result. In both lungs some moist râles existed. Vocal resonance over the dull area was very feeble, as was also vocal fremitus; pulse, 148; abdomen pretty hard; stools absent since two days; tongue coated. I prescribed two powders of calomel and lactin, each two grains, to be taken in the course of an hour, and dry cups on the back. Evening temperature, 38.6° C. (101° F.); pulse, 118, and fairly good.

August 8th.—Morning temperature, 40.1° C. (104.2° F.); pulse, 148, small; physical signs unaltered; slight continual perspiration. I ordered eight grains of salol with lactin, every two hours, and milk diet. Evening temperature, 39.3° C. (102.7° F.); pulse, 110.

August 9th.—Morning temperature, 38.6° C. (99.7° F.); pulse, 90. The patient had taken ten powders; he perspired slightly; the dulness commenced from the seventh rib; friction sound present; no buzzing in the ears. He wanted to get up. Evening temperature normal; pulse, 86, and strong. The treatment was continued.

August 10th.—He took ten powders; temperature normal; the tongue almost clean; he felt appetite and continually begged to get up. Some dulness beginning from the tenth rib; respiration sounds puerile on the whole area of the lungs, only in some places some moist râles. I ordered salol every three hours, and fifteen cups on the back.

August 11th.—The tongue was perfectly clean; the patient got up and played, coughed but very little, and on the 12th of August he went out for a walk. In order to avoid a relapse I advised his aunt to give him salol every three or four hours during a few days.

CASE II. *Left dry pleurisy.*—S. W——, a gravedigger, aged thirty-five, came to consult me on the 8th of August, last year. According to his story he felt sick, after having got his feet wet a week ago. At first dry cough appeared without pain in the chest; but four days ago he remarked that when coughing and breathing deeply he felt pain in his left side. This pain, being of a shooting character, increased to such a degree that for the past twenty-four hours he could neither inspire deeply nor cough. The patient perspired continually and profusely. He then complained of a shooting pain in his left chest.

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[1] Therapeutische Monatshefte, p. 48, February, 1887.

[2] Erfahrungen über das Salol, Berlin. klin. Wochenschr., 1887, Nos. 9, 10, and 11.

[3] Salol als Antirheumaticum, ibid., p. 51.

troublesome cough, and shortness of breath. On examining him I found dry pleurisy on his left side; the temperature, 38.5° C. (101.3° F.); pulse, 94; respiration, 40. I ordered fifteen grains of salol every two hours. I did not see the patient in the evening.

August 9th.—The patient took ten powders. The morning temperature, 37.7° C. (99.8° F.); pulse, 84; respiration, 26. The pain had ceased completely; friction sound not to be heard at all, even on the deepest inspiration; cough very little. Evening temperature normal; pulse, 72. Salol was continued.

August 10th.—I visited him at 1 P.M., and he told me that he had been out and felt quite well. On examining him I found no signs of pleurisy, and advised him, however, to continue salol—a powder every four hours. No buzzing in the ears during this time.

Case III. *Right pleurisy, with effusion.*—F. A——, a locksmith, aged twenty years, came into the Holy Ghost Hospital on August 13, 1887. His illness had commenced ten days before by a pain in the right chest during inspiration. He coughed from time to time, had difficulty in breathing, a dry mouth, and headache. A year ago he had, as he affirmed, a similar complaint in his left side; now he complained of a prickling pain in his right chest, cough, and headache. He was of middle stature, not strongly built, and insufficiently nourished; his family history was good. Beginning from the fourth right rib on the parasternal line, and running horizontally to the spinous process of the fifth vertebra, existed absolute dulness, and breathing sound and vocal fremitus were absent. The physical signs in the left lung were normal. Sounds of the heart quite normal; spleen and liver could not be felt. The temperature, 38° C. (100.4° F.); pulse, 96; respiration, 24. I ordered a powder of one gramme of salol every two hours.

August 14th.—In front, as well as behind, the dulness had diminished 1 ctm. Morning temperature, 37.2° C. (99° F.); pulse, 93, pretty well; respiration, 33; evening temperature normal; pulse, 96; respiration, 28. The treatment was continued.

August 15th.—Morning temperature normal; pulse, 88; respiration, 28. Pain in the side ceased. The dulness had still further diminished; feeble respiration sounds could be heard; no buzzing in the ears. The treatment the same.

August 16th.—The temperature normal; pulse. 80; respiration, 24. Dulness in the front absent, behind it began from the eighth rib; friction sound audible; the quantity of urine, 450 c.c., specific gravity, 1.030, of dark-green color, without albumin or sugar. Treatment the same.

On August 21st the patient was discharged cured.

Case IV. *Left pleurisy, with effusion.*—P. L——, a house-painter, aged forty-eight years. He said that he had "caught cold" two weeks previously, and then had fever, violent headache, and vomiting, followed by dry cough and pain in the left side of the chest. He took a purgative, and was cupped on the left side behind which gave him some relief for a short time, but the pain increased afterward, and dyspnœa appeared, and on August 6th he sent for me. Examination showed temperature 38.9° C. (102° F.); pulse, 120; respiration, 38; absolute dulness on the left side in the axillary line on the sixth rib; behind, it began from the lower angle of the scapula; over the dull area bronchial respiration could be heard; vocal fremitus absent; the tongue was coated, bowels open. Salol was given in one-gramme doses every two hours.

August 7th.—He took ten powders of salol. The morning temperature, 37.8° C. (100° F.); tongue somewhat cleaner; dulness diminished 1.5 ctm. behind, and 1 ctm. in front. The pain considerably less. Evening temperature, 37.2° C. (98.9° F.). Salol was continued.

August 8th.—The temperature was normal; dulness commenced from the eighth rib; friction sound audible. Salol was continued every two hours.

August 9th.—He had no buzzing in the ears; he had some appetite and felt tolerably well; dulness from the ninth rib; friction sound plainly audible. Treatment the same.

August 10th.—Respiration sound normal; friction sound could still be heard, but only during deepest inspiration. Salol was continued every three hours.

August 12th.—The patient returned to his work, being completely recovered.

Case V. *Right pleurisy, with effusion.*—J. K——, aged twenty-four, a locksmith, came to the out-door department of the Holy Ghost Hospital on August 18, 1887, complaining of a pain of shooting character in the right side of the chest, cough, feebleness, and violent perspiration. As he said, he had become ill two weeks before, after "catching cold." He took a Roman bath and purgatives without any relief. His family history was good. On examining him I found absolute dulness, commencing from the right spine of scapula. On the dull area bronchial respiration existed; vocal fremitus was absent. The temperature, 37.9° C. (100.2° F.); pulse, 124, a little feeble. I ordered one gramme of salol to be taken every two hours.

August 19th.—I saw the patient at 1.30 P.M.; he had taken ten grammes of salol. The temperature was normal, the dulness diminished 1.5 ctm., the skin moist. I ordered to continue salol.

August 20th.—He took ten powders of salol; no buzzing in the ears. The dulness commenced from lower angle of scapula. Respiration sound very feeble; the tongue cleaner; temperature normal. The treatment was continued.

On August 25th the patient was well.

Case VI. *Articular rheumatism; large right pleuritic effusion, endo- and peri-carditis; recovery.*—J. M——, a servant, aged twenty-four, well nourished and strongly built, was admitted into the Holy Ghost Hospital under my care on August 26, 1887. According to her the illness commenced, after catching cold, ten days before she came under observation, with an attack of fever, headache, pain in the throat, and in the joints. In spite of her illness she walked about and worked, but in the evening the pain increased to such a degree that she was obliged to go to bed. On admission her pulse was 105, full, quickly disappearing; temperature, 39.8° C. (103.6° F.); tongue coated, but moist. She complained of shortness of breath, cough, and pain in the joints, aggravated by movement. On examination the right chest, from the lower angle of the scapula was found to be dull on percussion. Bronchial respiration was heard over the dull area; movement was much diminished and vocal vibration was abolished. The dulness of the heart was increased toward the left; the apex-beat was found in the fifth space, about half an inch outside the nipple. On auscultation the sounds were feeble, with a prolongation of the first sound at the apex; to-and-fro friction sounds were audible at the third left space. Pulse was quickened. The joints were œdematous and painful when touched, especially the knees and heels. Salicylate of sodium was ordered, a blister was applied every other day, and the bowels were kept open. The following days the temperature did not fall; in the morning it was 38° C. (100.4° F.), and in the evening never below 39° C. (102.2° F.); pulse from 105 to 120, full and rapid. The patient was lying on her right side, and this position was most convenient; on changing the position she suffered from dyspnœa, pain in the right chest, and palpitation.

August 31st.—Pericardial friction disappeared, the heart's sounds obscure, but without any murmur. Dulness of the heart increased a little—it began from the third rib—as likewise dulness of the right chest, which began from the spine of the scapula, and in front from the fourth rib. The articulations were painful. She commenced to spit blood, and complained of more violent cough. The morning temperature was 39° C. (102.2° F.); evening, 40.3° C. (104.5° F.); pulse, 134, feeble. From the fact that the patient continually lay on her right side, the bloody sputum was regarded as the consequence of hypostatic pneumonia. Digitalis, and a blister on the cardiac region were ordered. By this treatment she not only obtained no relief, but, on the contrary, every day it could be observed that she became worse, so that on September 6th she was without strength; her pulse was 132, very feeble; the eyeballs sunk; temperature, 39.9° C. (103.8° F.); physical signs without change. All my colleagues who observed the patient believed that she would die in less than two days. Instead of giving stimulants, I prescribed fifteen grains of salol every two hours, and a blister on her right side behind, and also on the cardiac region.

On September 7th she took seven powders of salol and felt better; the pain in the articulations and in the chest was less; pulse, 116, and better, although it was still feeble; evening temperature, 38.6° C. (101.5° F.) Salol was continued.

On September 8th she took eight powders of salol. The absolute dulness of the right chest began from the lower angle of the scapula. The sputa was still bloody. Morning temperature, 38.2° C. (100.7° F.); pulse, 102; evening temperature, 38.6° C. (101.5° F.).

September 11th.—The temperature was normal; pulse, 96; dull area of the heart from the fourth rib; the cardiac sounds clear. She slept well; sputum, mucus. Behind, some dulness from lower angle of right scapula. Respiration sound very feeble; slight vocal vibration could be felt. From this time the remaining physical signs of pleurisy began to disappear pretty quickly, so that on September 27th the patient was able to leave the hospital, being quite recovered.

Remarks.—From the results obtained in these few cases, it may be concluded that in salol we possess a more valuable agent in the treatment of pleurisy than in salicylate of sodium. Possessing all the positive qualities of salicylate of soda, it is free from unpleasant effects of the latter; viz., it very rarely produces buzzing in the ears, and even being employed for a long time does not spoil the appetite, which is a very important thing, and does not produce any feebleness of the heart, nor collapse. However, I must draw the attention to this, that in order to receive a quick effect from salol, it must be given in large doses, from eight to twelve grammes (ʒ ij.–iij.) daily. Smaller doses, as half a gramme, even given often, have no such good action.

I have noticed that some of my colleagues, after having given only three or four grammes of salol to patients with rheumatism, become uneasy on account of the dark color of the urine, which was preserved in order to show it to the doctor. The dark color of the urine can only then be considered as a symptom of poisoning when present in fresh urine, as the urine of every patient who takes salol will, after standing in the air, turn black. As to myself, I went as far as twelve grammes daily, and I never saw any symptoms of poisoning. According to Professor Nencki, of Berne, the maximum dose is thirteen grammes, and although it has been observed that even twenty grammes of salol daily did not produce any symptoms of poisoning, yet this fact must be explained by the circumstance that the drug in these cases was not entirely absorbed. Finally, I must add that, as in rheumatism there exist cases on which neither salicylate of soda nor salol has any action, it must be supposed that also similar cases of pleurisy can be found which will not yield to such treatment. In one word, all that has already been said about salol in the treatment of rheumatism can also be equally said of the treatment of pleurisy.

21 Stare Miasto.

Santonin in Amenorrhœa.—Dr. Whitehead recommends santonin, in ten-grain doses at night, in the treatment of amenorrhœa, and says that he has seldom seen the drug, given for several nights in succession, fail to relieve this condition.

THE VALUE OF CONDENSED MILK AS A SUBSTITUTE FOR MOTHER'S MILK.

By S. HENRY DESSAU, M.D.,

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A prejudice toward the use of condensed milk as an article of infant's food, or, more properly speaking, as a substitute for mother's milk, has long existed among certain physicians of this city, who are recognized over the entire country as authorities in the diseases of children. The views of our city physicians are justly held as exerting a high influence upon the professional mind of the surrounding country, and it is for this reason that I desire, more especially at this time, when the question of the best substitute for mother's milk is of the highest importance to our infant population, to direct attention to condensed milk as an article of infant food, for the purpose of endeavoring to correct some of the false impressions entertained against its more general use. It may be stated at the outset that there are two kinds of condensed milk made in this city by the Borden, Canfield, and Eagle Companies, known as the *plain* or fresh, and the *preserved* or canned. The associations connected in the mind of many practitioners with the use of the latter may account in a large measure for the unfavorable opinion held concerning the value of condensed milk. It is to the plain, or fresh variety, that is served daily from the company's wagons that I wish to direct attention. It is unanimously conceded by recognized authorities that cow's milk is the best and most available substitute for the mother's milk. The objections to its general use, however, are that, during the summer months, it is impossible to obtain it fresh and unadulterated in large cities, unless at a cost beyond the reach of the masses. All of the milk that is delivered in this market is at least from twelve to twenty-four hours old, and has undergone rough transportation of from fifteen to thirty miles in not strictly clean vessels. I am informed that the cans used in bringing the milk to the city are not cleansed until returned to their owner. By the time that the milk has reached the poorer classes, it has commonly undergone more or less adulteration, often in spite of the closest watching by the health-authorities. In the course of its consumption by the average infant, it is still further liable to lactic-acid fermentation, and even though boiled, it is not unlikely to become scorched or made otherwise unwholesome for the infant.

Perhaps the most important objection to cow's milk, notwithstanding the fact that it is regarded as the nearest approach to mother's milk, is the *difficult digestion of the casein* by the delicate infant whose stomach has been damaged by an attack of summer diarrhœa. This has necessitated the invention of numerous means and measures for overcoming the obstacle, the most common of which is the addition of some farinaceous substance. Such practice, I hold, for an infant previous to the eruption of its teeth, is contrary to the provisions of Nature, and, though occasionally successful, cannot be defended as a general usage upon physiological principles.

For infants living in small communities, where a fair quality of cow's milk can be procured fresh, these objections need not apply; provided that a reasonable amount of care is observed in keeping the various utensils for holding the milk clean and the milk cool.

In view of these many deficiencies, there can certainly be no valid reason against the more general use of the plain condensed milk, as a substitute for cow's milk, for infants living in large cities, when the manner of its preparation is more widely known. In the first place, it is impossible to adulterate condensed milk. The quality and purity of the milk employed in its manufacture, especially that of the Borden, or New York Company, is of the best. The milk used is delivered under strict contract; besides that, the various dairies are frequently inspected by agents to see that the terms of the contract are not violated. This milk, obtained from a large number of cows, presents an average quality that renders it far preferable to the milk of one cow only. Contrary to the statement of some writers on this subject, no cream is removed from the milk before condensing. In the process of condensing, the milk is exposed for an hour or more to 210° F. of heat under pressure, which, according to Soxhlet, is sufficient to destroy any germs it might possibly contain, thereby rendering it practically sterile. At the same time, and this is a point that I wish to be regarded, the condensing process *alters the casein* in such a manner that it appears, when properly diluted thereafter, to coagulate in the infant's stomach more like the casein of mother's milk; that is to say, in light flakes, instead of the firm, hard masses into which we sometimes see the casein from ordinary cow's milk coagulate. When the plain condensed milk, which contains *no cane sugar* to preserve it, is kept in an ice-box or refrigerator, it will remain fresh for from two to six days, which is long enough for all practical purposes. Compared with cow's milk, made sterile according to Soxhlet's method, it is far simpler, as the latter must prove complicated in its process of preparation in the hands of the ignorant and careless.

A not unimportant advantage in favor of condensed milk is the fact that it can always be *diluted in any desirable proportion*, to suit either the age of the infant or the powers of its stomachal digestion. It is never known how much ordinary cow's milk has previously been diluted. It has been urged as an objection to the use of condensed milk that it requires too much dilution, it being supposed that it has been reduced one-fifth in bulk. Now it is a well-known fact that the first thing advised in the use of cow's milk for infants under six months of age is to dilute it one-half with water. Condensed milk will require four parts of water to bring it to the standard of fresh cow's milk. If this is now diluted again one-half, we would have to use altogether seven parts of water to one of condensed milk for an infant under six months of age. As a matter of fact, I have found in my experience, which is not altogether a small one, that a dilution of one part of condensed milk to *sixteen parts of water*, is the proportion most easily digested, and it agrees in every way best with the young infant. After the age of six months I am in the habit of increasing the condensed milk from one-half to double the quantity. It is true the urinary functions are kept active, but that is all the better. Water is as necessary for the perfect assimilation of food in the infant as in the adult, and the mistake is commonly made of withholding it where it should be given.

Then it is said that though a child thrives on condensed milk, if it becomes ill it loses fat rapidly. This idea may apply to the preserved or canned condensed milk, which is only fit for use on ships and in armies; but as to the plain or fresh condensed milk, there are certainly no just grounds for such statements. The elements of nutrition are precisely the same as in fresh cow's milk; the amount of water is the same as it is commonly prepared; there is *no addition of sugar*, as is usually the case when fresh cow's milk is prepared for infants; and, finally, in a large observation of many years, I have not witnessed such results. That is to say, infants fed upon plain condensed milk do not lose fat any more rapidly than infants fed upon the breast or fresh cow's milk, when taken ill; and, it will be remembered, I advise a larger dilution than that compared with the ordinary preparation of cow's milk.

Condensed milk is certainly as simple and easy to prepare as cow's milk, and even safer; for it requires more care and labor to keep vessels used in the preparation and boiling of cow's milk, to which sugar has been added, clean, than it does to clean a cup that has simply contained a mixture of water already boiled, and the condensed milk.

Certainly I insist upon strict attention to the preparation of the condensed milk as a food for infants, irrespective of the season of the year. I direct a tablespoonful of the plain condensed milk to be added to a teacupful (equivalent to eight ounces) of water that has been previously boiled and allowed to cool to about 100° F., and a pinch of table salt is added. I prefer giving it from a graduated nursing-bottle, and instruct the nurse to scald out the bottle immediately after using, and to keep it filled with a solution of borax, when not in use. The nipple is likewise kept in a glass filled with the solution of borax. As with natural-fed infants, the hours for nursing are systematically arranged and strictly adhered to, unless the infant will go longer than the schedule time which is allowed.

As I have endeavored to present the case in favor of condensed milk, I fail to see what reasonable objection can be offered to its use, referring, as I have before shown, to the plain or fresh variety; while I see, as I hope this article may help others to do, many reasons why it is superior to ordinary cow's milk as obtained in this city and others of large size. If there were establishments for its preparation in all of our larger cities, I am convinced that it would be a blessing both to infants and parents.

47 West Fifty-sixth Street.

Progress of Medical Science.

Parasites in Fish.—Among the more recent discoveries of scientific research is that of the presence of parasites in fish. Of these tiny eel-like creatures ten kinds are recognized in the fish of the Mediterranean Sea, the Atlantic and Indian Oceans. They are generally found in some hollow part of the fish's body, the cavities of the star-fish's respiratory organs being a very favorite abode. Sometimes, however, they attach themselves to a part of the fish where life is not so easy a matter for them; for instance, they have been found in a pearl-oyster, buried in a curl of the shell. These parasites do not endanger the life of the fish on which they live, as they feed on the microscopic organisms which are washed into the cavities of the fish by the sea-water—eating their messmates, as Van Beneden says.—*The British Medical Journal.*

Hysterical Eye Symptoms.—At a recent meeting of the London Ophthalmological Society, Dr. Griffith read a paper on "Functional Eye Symptoms in Hysteria" and allied conditions. He classified the cases into the following groups: 1. Hysterical blindness, mostly monocular. 2. Amblyopia of one eye, with achromatopsia and hemianæsthesia (Charcot). 3. Same group with absence of hemianæsthesia. 4. Blepharospasm as sole eye symptom. This symptom was common in all the groups. 5. Hysterical conjugate deviation of eyes. 6. Neurasthenic asthenopia, symptoms bilateral. He was in favor of the theory of changes in the centres of vision rather than in the retina, as the cause of the contraction of the field of the vision.

The Treatment of Spinal Abscess.—At the Harveian Society (*The Lancet*), Mr. Watson Cheyne read a paper on the "Treatment of Spinal Abscess." In these abscesses the contents, the wall, and the lesion of bone from which they start are to be considered, although the latter cannot always be made out. Three types of tubercular disease were described: 1. Tubercular cavities containing soft cheesy material; 2. Tubercular sequestra, either unseparated or in cavity lined with tubercular granulations; and 3. Superficial caries of bone. Curvature is commonest in the first class, but the last is the most extensive, and is chiefly found in adults accompanied with abscess. The contents of these abscesses is not true pus, but broken-down cells and tissues floating in a variable amount of fluid. This fluid produces, when inoculated, tuberculosis in guinea-pigs. The pyogenic organisms take no part in the production of the chronic abscesses, but grow freely in their unexhausted contents, and therefore the entrance of putrefactive ferments into their cavities causes septic intoxication and chronic osteo-myelitis of bone. Two methods of treatment were considered: One, in which the abscess was cured without opening it, and by the injection of iodoform and glycerine, or iodoform dissolved in ether; and the other method by antiseptic opening. Statistics of fifty-six cases were given, of which 73.2 per cent. healed and 12.5 died. These were mainly psoas abscesses, but dorsal, lumbar, and cervical were included. Cases were most numerous between twenty-eight and thirty years of age.

THE TONGUE AS AN INDICATION OF DISEASE.—In this year's Lumleian Lectures, delivered by Dr. W. Howship Dickinson (*The British Medical Journal*), the subject indicated by this title was discussed at great length. The author states that the knowledge which enables many a practical physician to make the tongue an index of diagnosis, treatment, and prognosis is, for the most part, unwritten. It has been handed down to us as part of the tradition of the elders, and few attempts have been made to analyze or educe laws from the accumulation of experience of which it consists. The labor which has been bestowed upon the pulse is in remarkable contrast with the neglect which, in recent times, has been the lot of the tongue. Of late the tendency in this matter has been to agnosticism; it has become the habit with many, and those not the least influential, to look upon the changes which this organ displays as of less and less importance, to regard them as accidental rather than essential, as the results of unimportant local conditions rather than as inseparably connected with constitutional disturbances. "The tongue," said a great surgeon, "belongs to the mouth in the first place, and to the general system only in the second." Dr. Dickinson would put the general system first.

The following is the author's

Classification of Tongues.

Naked Eye.	*Microscopic Description.*
1. Healthy. Moist.	White epithelium in small amount on papillæ, not continuous or superabundant.
2. Stippled. Moist. Dotted with white.	Excess of white epithelium on papillæ, not extending between them.
2 (D). Stippled. Dry.	Ditto.
3. Stippled and coated. Coat continuous in parts. Moist.	White epithelium on papillæ in excess, with partial filling of intervals.
3 (D). Stippled and coated. Dry.	Ditto.
4. Coated white. Moist. Coat continuous.	Excess of white epithelium on papillæ. Intervals more or less filled up with epithelium and accidental matters.
4 (D). Coated white. Dry. Coat continuous.	Ditto.
5. Strawberry. Coated and injected, especially showing in fungiform papillæ.	Like the coated or plastered, but with more injection.
6. White, plastered. Thick uniform coat, abrupt and striking.	More elongation of papillæ than with coated tongue; more filling of intervals, with superficial accumulation.
7. Furred or shaggy. Moist. Greatly elongated papillæ.	Extravagantly long papillæ, mostly of horny epithelium.
7 (D). Furred or shaggy. Dry.	Ditto.
8. Encrusted, dry, brown. Thick felted dry coat over papillæ.	Continuous crust on and between papillæ, largely of parasitic matters.
9. Furred or encrusted, becoming bare. Generally dry	Crust breaking away, together with more or less of normal surface.
10. Denuded. Red. Absence of normal covering.	General absence of all epithelium excepting the Malpighian layer; sometimes of that also.
11. Red. Moist. Dry membranous covering.	Level membrane replacing epithelial processes.
12. Cyanosed.	Injected; hypernucleated; excess of deep epithelium.

Dr. Dickinson sums up his conclusions as follows: The tongue is an index of constitutional states, seldom of individual diseases. An ancient theologian described the face of a wicked man as a map of the empire of sin. It has been fancied that the tongue presents a map of the empire of disease; and a writer, though one of no great note, has gone so far as to divide the lingual surface into a number of rectangular regions as numerous as the United States of America, which he places under the rule of separate organs; the larynx, the bronchi, the lungs, the pleuræ, the large intestine, the small intestine, the kidneys, and the brain each possessing a distinct territory. The heart, says this writer, very wisely, has a common control over all. But, in truth, the tongue has no such local signification; it seldom points to solitary organs or isolated disorders, but is rather a gauge of the effects of disease upon the system than an indication as to the locality of it. It is often a guide in treatment, so far as treatment is general, not local; and it is an important help in prognosis. It may, indeed, be doubted whether any means of observation open to the physician, including the pulse and the thermometer, give him more insight into constitutional states than he can derive from the tongue. Clinically, it always speaks the truth, and in a language which is not foreign to the experienced physician.

It has been shown that the white coat of the tongue essentially consists of horny epithelium, and that the various grades of coating are mainly due to its increase. It has been shown that the several degrees of coat are mainly due to overgrowth of epithelium, though in a smaller measure to its want of removal, and that there is a remarkable correspondence between the heat of the body and the coating of the tongue. If the tongue be coated, the indication is usually of febrile disturbance without especial reference to the stomach or liver, and points more to the general system than the alimentary. Though something is to be ascribed to disuse, yet I think I have shown that too much has been; and that more than one modern observer, like an uncharitable pedagogue, has attributed to idleness what is directly due to illness.

Superadded to the *forcing process*, if I may so speak, of fever, we have step by step other changes—dryness, furring, and encrustation—which are essentially connected with want of saliva. I have endeavored to show that this diminution or arrest is declared by the state of the tongue almost as certainly as by observations on the ducts, and is the chief cause of the furring and encrustation which accompanies it. It is true that in the crust are parasites, but these are secondary; the primary fact is the want of saliva, a clinical indication always of importance, though the process by which it is brought about is not always the same. I have shown the effect of dehydration in diabetes and by diarrhœa; but it has, I think, been made clear that the most frequent and important concomitant of the dryness is a certain failure of bodily force and function which I have not assumed to describe with physiological exactness, but have expressed by such terms as weakness, prostration, and exhaustion. I do not ignore the effects of deprivation of water, of alcohol, and of opium; but, nevertheless, the relation to which I have drawn attention, so far as it concerns such dryness as to cause encrustation, has a general hold. It is difficult not to infer that with the salivary are other glandular failures, more especially such as concern the digestive system. Good digestion waits on appetite. Putting aside diabetes, where there are special circumstances, it may be said with general truth that with the dry encrusted tongue appetite is *nil*, and solid food impossible, not merely from the local difficulty caused by the dryness of the mouth, but from inability more profoundly seated. It may be inferred without rashness that the loss of power to take food is connected with a loss of power to assimilate it; and if the digestive function is in abeyance it is not likely that the digestive fluids are abundant. Hence it presents itself as what may be called a working probability, that a want of the more vital juices concerned in nutrition may be indicated by the want of saliva which is sometimes so conspicuously displayed. Physicians acknowledge in their practice some such guidance; the dry and encrusted tongue is seldom disregarded as a call for animal liquids, which require little digestion, and alcohol, which requires none. To translate theory into practice is not only dangerous because the theory may be wrong, but the means may be ill-adapted, though the theory be sound. I have often taken the dry tongue as an indication for peptonized food, and thought it beneficial, but have not as yet had enough experience to speak confidently.

Proceeding from the varieties of clothing which dryness produces, we come to the opposite, but sometimes succeeding, condition—that of nakedness. This is often connected, like the previous, as has been shown, with want of saliva, of which it is usually a latter concomitant. It may be simply due to this cause, but other circumstances are so often present that it is difficult not to assign to them some share in the loss of integument, and attribute this, in part at least, to the failure of nutrition which belongs to hectic fever and suppurative waste. When the tongue becomes dry and bare it is ill with the patient. He is not sure to die, but likely to. If, as has been said, the tongues of dying men enforce attention, it must be often directed to this. The indication of the red, smooth tongue is for what failing nutrition calls for—tonics, stimulants, and food, probably liquid, but nourishing. The failing pulse does not more surely tell of asthenic tendencies than, as a rule, does the red, dry, and polished tongue.

The tongue, indeed, has a whole book of prognostics written upon its surface. When the tongue is approaching the condition of health, so, as a rule, is the patient, as is seen whenever the red, dry, and bare tongue acquires moisture and clothing. There is no better sign in diabetes than the resumption of the natural moisture by the tongue which has been dry. Something may be judged by the way an incrusted tongue cleans; if gradually and from the edges, well; less so when in scales, especially when the surface exposed is red and dry. One glance at the coated or plastered tongue may give an assurance, which perhaps could not be otherwise obtained, that the disease is on the wane. If the thick coat in the centre steeply shelves toward the sides and front, revealing a normal, moist, not over-injected surface, the tongue is in process of cleaning; the natural friction is overcoming the coating process, and tongue and patient are on the mend.

Opposition to the Alcoholic Treatment of Disease.—In a recent paper on "The Difficulty of Diagnosis between Disease Symptoms and Drug Symptoms" (*The British Medical Journal*), Dr. Alfred Carter condemns alcoholic treatment in the following terms: It is far better to allow disease to run its course in a natural way, and to pilot the case through the blood storms which the disease may be setting up, rather than by rendering the nervous system less sensitive to the influences of disease by deadening the activity of those nerves, and while so deadened, allowing disease to establish itself, and so organic change may take place, never to be entirely removed. This appears to me to be the effect of the alcoholic treatment of disease. It is better for the patient to endure the discomfort, and ultimately get quite well, than to be comforted, as it is called, by the use of intoxicating liquor, and so allow real disease to gain a standpoint, instead of treating the upset which arises from the functional disturbance caused by the determination of natural laws to assert their predominance, and so to lead to a perfect cure.

Acute Periosteal Swellings in Several Young Infants of the same Family, probably Rickety in Nature.—At a recent meeting of the London Clinical Society (*The Medical Press*), Dr. Samuel West read a paper on this subject. A child, five weeks old, was brought by its mother, with the statement that its left arm had "dropped." A swelling, apparently periosteal, occupied the middle third of the shaft of the left humerus. It was exquisitely painful and tender. The movements of the arm were perfect, but the child kept the arm still on account of the pain which movement caused. Similar swellings were found on the right humerus and on the left femur. There were some slight bosses on the ribs, but no other signs of rickets, and the child was well developed and well nourished, and, except for the pain of the swellings, seemed in good health. The treatment consisted in the administration of some cod-liver oil and a little iodide of potassium, and the mother's milk was supplemented with cow's milk. In a fortnight the pain had almost gone, and the swellings were smaller. In the course of three months they were hardly to be made out, and they ultimately entirely disappeared, leaving the bones straight. The patient was the fifth child, born at the eighth month, and fed upon the breast only. The first swelling came on the ninth day, the second on the fourth week, and the last two days before it came under observation. Of the other children the eldest was similarly affected at the age of a week. The child, now a lad of nine years of age, was seen, and showed no traces of the old bone affection. The second, a boy, now seven years of age, was never so affected. The third, a girl, now five and a half years of age, and also the fourth, a boy, now three and a half years of age, were both affected, the former recovering completely, but the latter had considerable rickety deformity. There was no history of syphilis, or evidence of it, in the family. The second case was seen in a child of the brother of the father of the previous children. It was a girl-infant of three weeks old, and had developed a swelling of the left humerus a week before being seen. It was also suckled, and as the mother was strong, no medicine was given and no treatment adopted except to keep the arm still by a loose bandage. In about a month the swelling had entirely disappeared. This patient was the fourth child. The first, a girl, aged six, and the third, a girl, aged two, were, and had been, always well. The second, a boy, aged four, had had both arms and legs affected in the same way at the same age, but had got quite well. In this case also there was no evidence of syphilis. Dr. West believed that all these cases were rickety in nature, and closely allied to acute rickets, if not actually cases of that disease. From the cases of acute rickets recorded they differed in respect of age, acute rickets being rare in so young children; also in the fact that more than one member of the family was attacked; and lastly in the mortality. That these were cases of early rickets cannot, however, be doubted, on account of the evidence of rickets in the family, and of the absence of any other assignable cause. Of syphilis there was no other evidence, and green-stick fracture or injury must also be excluded. Dr. West also referred to another case seen by him, and recorded by Mr. Herbert Page, which was an undoubted case of acute rickets, and that seemed to him to differ from those here described only in degree. The element of scurvy had been supposed to enter into the causation of acute rickets, but that condition was certainly not existent in the present cases.

Antipyrine in Labor.—M. Queirel, of Marseilles, has pointed out the alleged good effects of antipyrine in labor. He administers it subcutaneously in five-grain doses. He says that in about twenty minutes after the injection the pains become much less severe, and in two hours the dose may be repeated. The contractions continue regularly under its influence, and when the moment of expulsion arrives the woman seems to suffer but very little. Of twenty cases treated in this manner fifteen were greatly benefited. The remaining five were refractory, four of them being primiparæ.

Electrolysis in the Treatment of Resilient Stricture of the Urethra.—The treatment of urethral stricture by electrolysis appears to be finding more favor recently than was accorded to it not many years ago. In *The Medical Press*, Dr. F. S. Edwards, of the West London Hospital, records a series of twenty-four cases treated by the electrolytic method. He observed only three failures among the two dozen. He makes the statement that the only disadvantage attaching to electrolysis is the time it takes, whereas its advantages are many, viz.: 1. No confinement is necessary. 2. No risk to life. 3. No pain, and only sometimes slight discomfort. 4. No bleeding. 5. If unsuccessful it does not interfere with urethrotomy being undertaken forthwith. 6, and lastly, a cure (permanent) may follow, which is the rarest thing by any other method. He concludes that electrolysis is of the greatest use, in strictures of small calibre, to facilitate the passage of a urethrotome, and in impassable strictures to render the passing of bougies possible, if for some reason or other electrolysis is not persisted in. The more recent the stricture and the more it approaches the ring variety the better the result. In his experience electrolysis does not appear to answer in meatal strictures, but these can so easily be cut. He would suggest that strictures, of whatever variety, when situated in the deep urethra, and which are not amenable to treatment by dilatation, should be subjected to electrolysis before any cutting operation is thought of. He excepts cases calling for an immediate restoration of the calibre of the canal, as in stone, etc. In saying this he does not wish to depreciate internal urethrotomy. No one values it more than he, and the risks attending it are now reduced to a minimum, the mortality being under three per cent. in his hospital. Yet there is a risk, and a fatality may occur when least expected, and where most to be deplored. In electrolysis, as far as he has seen and heard, no risk whatever is run.

Turpentine in Surgery.—The oil of turpentine is recommended as an application to all cases involving a solution of surface continuity from injury. In severe wounds of the hand or other parts, involving extensive laceration, the oil is said to prevent suppuration and sepsis, and so conduce to rapid recovery. In such cases the parts are well cleansed with hot water, and pledgets of lint steeped in the oil are applied. The dressing is kept saturated with a mixture of two parts of the oil of turpentine and one of linseed oil.—*The Medical Press.*

Ligature of the Thyroid Arteries in Goitre.—In speaking of this subject Professor Billroth says that the reason we are not content with the results of extirpation in goitre is because we are not always able to prevent tetanus, because the recurrent laryngeal nerve may be cut or tied, and because "cachexia strumipriva" is not always avoidable (*The British Medical Journal*). As after ligature of the thyroid arteries small arteries still supplied the goitre with a certain quantity of blood, it was probable that no gangrene, but only a gradual shrinking, would take place, just in the same way as in the case of obliteration of the renal artery. The small arteries, which in this case derived their origin from the renal capsule, hindered the occurrence of gangrene after the obliteration of the renal artery, but they were not able to prevent atrophy supervening in the kidney. Though this analogy was very striking, the matter, nevertheless, required to be verified by experiments on animals and men, which was also done by Wölfler. The indications for this operation were, nevertheless, limited, as extravasation, calcification, cystic and colloid softening were very often met with in goitres, which, owing to the absence of any circulation in them, would, of course, undergo no change whatever after the ligature of the thyroid arteries. The question as to whether the fluid contents of cysts were capable of undergoing absorption after operation had yet to be decided. It thus became evident that the method in question would be really successful only in those cases in which no degenerative necrobiotic processes had yet taken taken place, such as rapidly growing goitres in young subjects. Two points were necessary for the success of this plan: 1. The first effect after ligature of all four arteries was that of a glandular anæmia; the goitre would be smaller and softer than before operation. 2. The second effect was obliteration of the blood-vessels, and the disappearance of the epithelial and interstitial tissue, so that only cicatricial connective tissue would remain behind. Respecting the development of "cachexia strumipriva" in children after complete atrophy of the thyroid gland, Professor Billroth considers that no positive statement could be made on this subject, but that it was possible that such a condition would not supervene, as the atrophic process, in such a a case, took some weeks or months to become complete, and the organism had thus sufficient time to get accustomed to the absence of the thyroid gland. As to whether it was probable that the atrophy would be permanent, Professor Billroth holds that, when all four arteries are ligatured, there could be no doubt about this, but that, when circulation still existed in one of the chief arteries, or became established again by the "vasa vasorum," such a permanent atrophy would never occur. This had already been confirmed by experience. Discussing the details of the operation, Professor Billroth states that, in his opinion, the incision on the outer margin of the sterno-mastoid muscle was the most convenient one for ligaturing the inferior thyroid artery; he wished, however, to lay stress on a point which had not yet been mentioned, namely, the extreme thinness and fragility of the inferior thyroid artery. It had occurred to him on three different occasions that this blood-vessel was torn by the manipulations with the forceps or by ligaturing too fast, etc. The hemorrhage which thus ensued was very considerable, and it was very difficult to pick up the artery which retracted behind the scalenus muscle. In one case he cut through the scalenus muscle to enable him to seize the end of the artery with a broad clamp. In ligaturing arteries Professor Billroth usually applied two ligatures in their continuity, dividing the vessel between them. In the above-mentioned operation, however, he contented himself with one ligature, owing to the fragility of the inferior thyroid artery. He had never met with secondary hemorrhage in such cases. Professor Billroth has performed the operation in question in four cases of common goitre. In all of them there was a slight degree of fever, of short duration, but the absorption of the substance of the goitre was not attended with any ill effect on the general condition of the patients. The impression which the operation had made on him was a very favorable one, and he would repeat it in appropriate cases, but in future he would ligature all the four arteries at one sitting. In one of the cases thus operated upon he observed a slight degree of jaundice, which soon disappeared, and was probably due to absorption of the blood. From a cosmetic point of view it had to be borne in mind that the ligature of all four arteries naturally caused four scars, as against the single lateral scar left after extirpation, which could easily be hidden by a small cravat. On the other hand, the attenuated appearance of the neck from which the thyroid had been removed was a still greater disfigurement. Professor Billroth concludes by stating that although ligature of the thyroid arteries was a valuable and interesting addition to our operative resources in the treatment of goitre, it would have a much greater importance if it were attended with similar results in the case of sarcoma and carcinoma of the thyroid gland.

Cholesterine Crystals in the Retina.—At a late meeting of the Liverpool Medical Institution (*The Medical Press*) Dr. Grossmann showed two cases with crystals of cholesterine in the retina. In the one case, that of a young woman, aged twenty, the ophthalmoscopic image was a very beautiful one. There was to be noticed first an oldish hemorrhage in the region of the yellow spot; besides this, the retina was detached in various places, principally toward the equator. On closer inspection the region between the yellow spot and disk (and surroundings) showed a number of very brilliant crystals, changing their bright yellow light with every movement of the ophthalmoscope into green and blue. Some of these crystals were situated just in front of a retinal vessel, leaving no doubt about their position in the retina. The other patient, a man, aged thirty-five, showed a few large crystals, but an otherwise healthy retina. In both patients the urine had a specific gravity of 1.030 to 1.032 on an average, without albumen or sugar, but rich in urates and phosphates.

Loose Body in the Elbow-joint.—Dr. G. Boeckel relates this case: The patient, a strong, healthy man, aged forty-five, fell from a ladder on his left elbow. Immediately after the accident he lost all power of movement in the forearm. When he came under Dr. Boeckel's care, some two months later, movement was found to be very limited and painful, both pronation and supination being accompanied by grating in the joint. Between the olecranon and the external condyle of the humerus a hard body was felt projecting slightly, which could be moved laterally to the extent of some millimetres. Dr. Boeckel was under the impression that he had to do with a case of old arthritis deformans, which the injury had started into renewed activity by displacing an osteophyte. He cut down on the loose body, and with considerable difficulty removed it, when he was surprised to find that it consisted of half the head, with a small piece of the neck, of the radius. The patient made an excellent recovery, and in three weeks from the date of the operation had so far regained the use of his limb that he was able to do light work with it. Dr. Boeckel said that this was the first case he had met with in which the loose body was a fragment of articular surface broken off by violence, and he took the opportunity of formally recanting a different opinion to which he had recently committed himself on the subject. In fact, less than a year ago he had maintained that such a mode of origin was inadmissible, the loose body being in all cases formed by vegetations springing from the synovial membrane or the articular cartilage.—*Gazette Médicale de Strasbourg*.

THE PHENOMENA OF DEATH BY DROWNING.—Dr. Paul Loye has published some observations made by him, bearing on the phenomena which precede death by sudden immersion. The first stage of deep inspirations lasts about ten seconds, followed by a reaction caused by the resistance to the entrance of water into the bronchioles. This lasts for a minute, and is succeeded by arrest of respiration and loss of consciousness. Finally the scene closes with four or five respiratory efforts—the last. Immersion causes an immediate rise in the blood-pressure, with slowing of the heart-beats. The action of the heart remains slow but strong till death ensues. The pressure gradually lessens, but rises just before death, to fall to zero immediately afterward. The heart sometimes continues to beat feebly for about twenty minutes. The result is the same in animals which have been tracheotomized; the period of respiratory resistance is, therefore, due to the respiratory muscles, and not to spasm of the glottis.—*The Lancet*.

TRANSPLANTATION OF MUCOUS MEMBRANE.—Professor Wölfler has pointed out the value of transplantations of mucous membrane. He said that where cicatrices were produced in cylindrical organs of the body, which were lined with mucous membrane, an operation could only be useful, if it were possible, after excision of the scar, to unite the mucosa. But that was impossible in many cases. Therefore he had employed the method of Thiersch (the transplantation of portions of epidermis) with great success. After having excised the thickened and indurated tissue from impermeable urethral strictures, he transplanted mucous membrane from a prolapsed uterus. The operation was completely successful. In the same manner he transplanted mucous membrane from a prolapsed rectum on to the conjunctiva in a case of blepharoplasty. He succeeded even in transplanting mucous membrane from frogs, pigeons, and rabbits with good results.

PEPPERMINT-WATER IN PRURITUS PUDENDI.—Dr. Routh writes to *The Lancet* that he has found peppermint-water very useful in the treatment of pudendal pruritus, especially those of the neurotic type. The remedy is to be employed as a lotion. The British Pharmacopœia preparation of aq. menth. pip. answers well, but is bulky for carrying about, and is incapable of concentration unless rendered alkaline. This is best done by borax, as being in itself soothing and antiseptic. Patients can easily make their own lotion, as required for use, by putting a teaspoonful of borax into a pint bottle of hot water, and adding to it five drops of ol. menth. pip., and shaking well, the parts affected to be freely bathed with a soft sponge. If no cracks or sores are present, this lotion will remove the itching; but if there be eczema, etc., or rawness from scratching, it is inapplicable, olive-oil, with five grains of iodoform to the ounce, being then more useful. The greatest and most permanent relief is afforded in the neurosal form, especially in the reflex pruritus which often accompanies pregnancy, and which then may take the place of reflex sickness or vomiting. It is also very useful in the pruritus which occurs in the climacteric, or in elderly women, in whom it may be only part of a general pruritus, and also in those cases of women of all ages where the urine simultaneously becomes of a very low specific gravity, without any evidence of having a gouty or granular kidney as a remote cause. In pruritus due to pediculi, ascarides, an irritable urethral caruncle, an endocervical polypus, early cancer of the cervix, distention of Bartholini's ducts or glands, the leucorrhœa of vaginitis, endocervicitis, and metritis, or the irritating discharges of advanced carcinoma uteri, or to a gouty or diabetic diathesis, the drug excels all others, cocaine inclusive, in affording relief, while endeavors are being made to remove the cause.

TETANUS SUCCESSFULLY TREATED WITH STROPHANTHUS.—Mr. W. J. Clapp reports, in *The Lancet* of July 21, 1888, a case of tetanus occurring in a man aged twenty-three. He was suffering from severe burning pains between the shoulders, extending down the spine. Abdomen rigid; spasms of body, chest, arms, thighs, and legs; jaws locked; countenance anxious; face and mouth contracted; pulse quick and wiry; temperature 108° F. He was in appearance a well-developed man; height, five feet and eight inches. He stated that about three weeks previously he had the nail of the little finger of the left hand torn when at work, from which he suffered severe pain, and believes that it was frost-bitten while following his employment (the cause of his illness). As the patient was constipated the writer gave him a purgative powder, which he had great difficulty in taking on account of the locked state of his jaw. He also prescribed a mixture containing large doses of bromide of potash and hyoscyamus, to be taken every hour for some days; and ordered liniments and poultices to be applied to the spine, abdomen, legs, and feet. The urine was dark and scanty, without any deposit. Beef-tea, mutton broth, milk-and-water, and lemonade were given often, as only very small quantities could be taken at a time. No improvement taking place, it was determined to give strophanthus a trial, and for this purpose Mr. Clapp employed tabloids containing two minims in each; one was given every three hours, it being with difficulty placed in his mouth, and cold water was taken after each tabloid. About the second day after commencing the strophanthus a decided improvement was noted. The writer could open the patient's mouth sufficiently to introduce the mouth of a feeding-cup. The spasms of the body, abdomen, and extremities became less frequent, the pulse quiet, and the temperature lower. He then continued the tabloids, gave another aperient, and ordered him, in addition to the beef-tea, broth, etc., corn-flour, custards, bread-and-milk, and bread and-butter, which he commenced to take regularly, and which he had not been able to do for some considerable time previously. The urine was copious and clear. All the symptoms gradually became less. The strophanthus was now given only twice a day, and was soon discontinued. In a fortnight afterward the man was able to walk and to take his usual food, the jaws being competent to perform their wonted work.

INHERITED DEFICIENCY OF A TOOTH.—Dr. Cryer says that he has, among his patients, members of the same family, representing five generations, each lacking the left lower lateral incisor tooth. An interesting feature of this remarkable instance of heredity is that one of the members of the same family has a supernumerary lower incisor.—*Philadelphia Medical Times*.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, August 25, 1888.

THE RADICAL TREATMENT OF HERNIA.

AMONG the many surgical procedures which have felt the impulse given to all capital operations by the adoption and gradual perfection of antiseptic methods, that of the permanent cure of hernia is not the least. The attempt to effectually close the opening through which the bowel protrudes is not new, and many and ingenious were the methods which were advanced by the older surgeons to compass this end. The "golden suture" the "royal suture," the actual cautery, instrumental invagination, and a host of other methods are now remembered only by historical writers; yet the subject of the radical cure of hernia occupies to-day a prominent position in medical literature, and is engaging the attention of many of the foremost surgeons of all countries. At the annual meeting of the British Medical Association, in Dublin, and also at that of the French Surgical Society, in Paris, this was one of the chief subjects for discussion. There were many speakers, and the number of cases upon which their conclusions were based was large, and it may therefore not be uninteresting to notice briefly some of the methods employed, as we find them collected by Mr. Keetley in a review of the discussions published in the July issue of the *Annals of Surgery.*

The first method is that employed by Mr. Mitchell Banks. He makes no claim to originality in the operation, which is the type of the procedures now in general favor, although surgeons frequently refer to it as "Banks' operation." In the case of inguinal hernia he dissects out the sac, opens it, replaces the bowel, and ties and cuts away all adherent omentum. The sac is then pulled down, ligatured high up, and removed, and finally the pillars of the ring are drawn together by silver sutures. In femoral hernia the sac is dissected away and removed, but no attempt is made to close the femoral opening.

Professor Macewen does not remove the sac, but forms it into a pad, which is returned through the canal and placed on the abdominal aspect of the internal ring. He endeavors to carry the conjoint tendon outward toward Poupart's ligament, and to unite with the transversalis and internal oblique muscles; for when the conjoint tendon is approximated to the outer pillar of the external ring the abdominal wall is thinned, and the natural valve, which the canal forms, is to a great extent obliterated.

Mr. Thornley Stoker employs a method which is substantially that of Dr. C. B. Ball. He opposes the use of silver wire and regards the drawing together of the walls of the canal by any form of suture as a matter of slight importance. The sac is first thoroughly isolated up to the internal ring, and the peritoneum is separated from its attachments for a little distance from that opening. Then the neck of the sac, which must be empty, is seized with broad-catch forceps and twisted through four or five complete revolutions, until it is felt to be quite tight, and then a catgut ligature is tied around the sac as high up as possible. "Two sutures of strong aseptic silk are now passed through the skin at a distance of about an inch from the outer margin of the wound, through the outer pillar of the ring, through the twisted sac in front of the catgut suture, and then through the inner pillar of the ring and skin upon the inside. These sutures prevent the sac from untwisting, and it is now cut off in front of them. A catgut drain is brought out of a separate opening at the back of the scrotum, and the two sutures are closed over lead plates, which lie at right angles to the wound."

Mr. Arthur Barker clears the neck of the sac around at the level of the external ring, and ligatures it after opening it to see that it is empty. It is then divided half an inch below the ligature, the scrotal part being left to take care of itself. "One of the threads hanging from the stump of the neck of the sac is now threaded in a Liston needle, and the latter is passed up the inguinal canal in front of the vas, guided by the left index-finger, which pushes the stump of the sac before it and feels for the inner aspect of the abdominal opening, that is, the internal ring. Here the needle is forced through one border of the ring and out through the external oblique muscle. It is then unthreaded and withdrawn, and is again filled with the other thread hanging from the stump of the sac. This is now carried in the same way as the first up the inguinal canal through the border of the opening opposite to that in which its fellow already lies, and through the external oblique as before. Both threads being now pulled upon, the stump of the sac is drawn well within the abdomen, and when the threads are knotted securely the first step, namely, that of closing the internal ring, is complete." Finally, the walls of the canal are approximated by from four to seven silk sutures.

Mr. Kendal Franks seeks to secure the ligatured stump of the sac between the pillars of the internal ring by means of a silver-wire suture. Some of his best results were obtained, he says, in cases in which the sac and its contents had slipped back into the abdomen, where he left them, merely closing the rings and the canal.

Mr. Keetley spoke in favor of injections into the canal, and reported the results of this method. Of eleven herniæ thus operated upon, five were cured, four were apparently not benefited, although they thought themselves better, and the others had been lost sight of. He believed the operation by injection to be far the safest and easiest of performance, though he thought it could not compare in its results with operations involving mechanical interference with the sac and canal. The latter, however, was not an operation to be lightly undertaken, and was safe in the hands of only a few experienced and careful operators.

The discussion at the French Surgical Congress was opened by M. Socin, who was most enthusiastic in his appreciation of the radical operation. He advocates complete removal of the sac, but thinks that approximation of the pillars by suture is seldom required. The operations, he thinks, in no sense dangerous, except in the case of the aged, or when the hernia is very large and the integument ulcerating, or when it is necessary to remove a large part of the omentum.

M. Léonté drags down the sac until its abdominal orifice is visible. Just above this point he divides the peritoneum by a circular incision, and the serous edges become wrinkled, thus tending to close the internal aperture. The internal ring is drawn together by a circular suture, and the interior of the sac is scraped with a sharp spoon, or irritated with chloride of zinc or carbolic acid. A silver-wire or silk suture is then passed through the integument and the sac.

M. Lucas-Championnière advocates the complete removal of the sac at a point as high up as possible, and insists upon the most thorough attention to every antiseptic detail.

These are by no means the only methods in use, for each surgeon seems to have devised a system of his own or to have modified that of another, so that the operations may be said to be almost as numerous as the operators. In skilled hands these operative "cases" of hernia are doubtless for the most part both effective and safe. But we think, with Mr. Keetley, that, in the hands of any but the experienced, the method of injections is by far the more safe, and is to be preferred even though the proportion of permanent cures resulting therefrom is somewhat less.

TREPHINING THE SPINE FOR THE RELIEF OF POTT'S PARAPLEGIA.

Trepanation or resection of the spinal column for the relief of paralysis following injury has been performed a number of times during the present century (Ashhurst has collected the reports of forty-three such operations), but we believe the following is the first recorded instance of trephining for the so-called pressure-paralysis of spinal caries. The case is reported by Mr. J. H. Thompson, in *The Lancet* of July 14, 1888.

A boy, aged seven, was admitted to the Hospital for Sick Children, Manchester, suffering from angular curvature of the spine. The disease, which had been first noticed about seven months before the admission of the patient, involved the mid-dorsal region. There was paresis of the lower limbs, with apparent psoas contraction and wasting of the muscles on the right side. In spite of the usual methods of treatment—absolute recumbency, the administration of hydrargyrum cum creta, and of iodide of potassium (the latter in gradually increasing doses up to fifty grains three times daily), and the application of the actual cautery, all of which were given a fair and prolonged trial—this condition gradually grew worse, until there was complete paralysis of both lower extremities, with loss of sensation and incontinence of urine and fæces. It was then decided to open the spinal canal, in order, if possible, to relieve pressure.

The operation was performed by Mr. G. A. Wright. An incision about four inches in length was made along the lines of the most prominent spinous processes, and the soft parts on each side separated so as to expose the osseous surfaces. Three laminæ were divided on each side, and were removed with their attached spines, uncovering the theca of the spinal cord, which, at the lower part exposed, was found surrounded by a buff-colored, tough, leathery substance; this was cut away with scissors. The cord did not appear to pulsate, but no point of constriction could be found. The muscles were brought together by deep sutures of catgut, and the skin with waxed silk; a small drainage-tube was left in. The wound, having been dusted with iodoform and boracic acid in equal parts, was dressed with sublimated wood-wool wadding. Careful antiseptic precautions were observed before and during the operation. The trunk was supported by a special iron splint.

The wound healed rapidly by first intention, except at the drainage opening, which, however, also quickly closed. No change was noticed until the twelfth day, when pin pricks could be felt about three inches below Poupart's ligament on each side. Nine days later there was slight voluntary flexion of the left thigh, and on the following day distinct voluntary contractions of the right quadriceps extensor were observed. Three days later pin pricks could be felt as far as the knees, and both thighs could be slightly flexed. On the day following this pin pricks could be felt in the left foot, but on the right side there was no return of sensation below the knee. No further improvement took place, the condition of the patient remaining *in statu quo* until March 17th (fifty-one days after the operation), when the area of anæsthesia was found to be increased, and a few days later was practically the same as before the operation; about the same time he lost all power of voluntary movement in the lower limbs.

This case, as the reporter remarks, demonstrates the possibility of safely exposing the spinal theca, but we cannot agree with him that it appears to justify the hope that operative procedure may give permanent relief in similar cases. In the forty-three cases above referred to, in which resection of the spine was performed for injury, relief was obtained in only four, or 9.3 per cent.; and there is no recorded instance, according to Ashhurst, of complete recovery after spinal resection. In Mr. Wright's case the relief was only temporary, the child being in the same condition two months after the operation as he was before it was attempted. The case is interesting, we fear, rather as showing the inutility, and therefore the unjustifiability, of operation in such cases, than as offering any hope of the permanent relief of Pott's paraplegia by spinal trepanation.

A PRACTICAL EXPERIMENT AND ITS RESULTS.

We referred some time ago to a communication made by M. Ossian-Bonnet before the Paris Academy of Medicine upon the use of antipyrine in sea-sickness. He had made use of the drug in an extended series of cases during a sea-voyage to South America and return, and felt himself justified, from the results obtained, in regarding antipyrine as curative of naupathia. The pretty safe prediction which we made at the time, that the drug would fail to relieve sea-sickness in many cases, has been verified in an amusing way.

There was a medical meeting held recently at Oran, and about one hundred and twenty physicians set sail from Marseilles to attend it. One of their number, M. Rollet, having recently listened to M. Bonnet's eloquent advocacy of antipyrine in sea-sickness, bethought himself that here was an excellent opportunity to put the question to a practical test. Accordingly he had prepared a number of packages of antipyrine powders, one of which, with an abstract of the discussion on sea-sickness before the Academy, and printed directions for the use of the remedy, he gave to each of his one hundred and nineteen *compagnons de voyage*.

As the ship sailed out of the harbor, all were on deck, discussing the subject of naupathia, and filled with the zeal of true scientific experimenters. Soon, however, the vessel began to pitch, and at the same time the discussion began to grow more languid, and one by one the pale and unhappy scientists went below to begin their experimentation. The pitching meanwhile became worse and worse, and presently the cabin was deserted, each experimenter seeking the seclusion of his stateroom in order the more quietly to swallow his antipyrine. At six o'clock dinner was announced, and fifteen appeared at the table. But their zeal was greater than their appetite, and all but four quickly returned to their experimentation, after ridding themselves of what little food they had unwisely swallowed.

On the return voyage the experiment was repeated, with nearly the same results. One hundred and twenty French physicians may now be relied upon to deny vehemently, and sadly withal, that antipyrine will cure sea-sickness.

News of the Week.

THE YELLOW FEVER AT JACKSONVILLE.—Within the past few days the fever cases in Jacksonville have increased in number. They are, however, mild in character, and the disease is under control. There does not appear to be any danger of its spreading beyond its present limits. The people in the infected and exposed places are in perfect accord with the health authorities in maintaining strict quarantine.

DR. W. BALLS-HEADLEY, of Melbourne, Australia, has been appointed lecturer on obstetrics and diseases of women at the Melbourne Medical University.

NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.—During the winter session of 1887–1888 over three hundred and thirty-five different physicians attended the courses of instruction of the New York Post-graduate Medical School and Hospital, 226 East Twentieth Street, New York City—an increase of more than sixty per cent. over last year. In the Hospital Department about four hundred operations were performed, all of major importance. To all of these matriculates had access, as the hospital is used solely as a means of clinical instruction. This remarkable increase in the matriculation list has necessitated both larger clinical space and hospital accommodations, so that a new clinical amphitheatre has been erected and will be used for the first time at the opening of the winter session, September 17, 1888. A new and commodious laboratory has been erected and furnished with the latest apparatus for the study of normal and pathological tissues. The nose-and-throat clinical room has also been enlarged. Professors Abraham Jacobi, Robert F. Weir, Joseph E. Winters, L. Bolton Bangs, and Peter A. Callan have been appointed to the Faculty. The session of 1888–1889 promises to be the most prosperous ever held.

THE ASSOCIATION OF POLISH PHYSICIANS AND NATURALISTS held its fifth annual meeting in Lemberg, July 18 to 22. There was an unusually large attendance, some five hundred delegates being present.

A QUEER FUNCTION FOR A BOARD OF HEALTH.—It is reported in the religious papers that idolatry is resuming its sway among the natives of the Sandwich Islands, and that Christianity is being rapidly crushed out. The *Congregationalist* says "that since 1880 there has been a systematic effort to reinstate old heathen practices, some of them unspeakably revolting in character, and the corrupt Legislature of 1886 actually organized a board of heathen sorcery, though under the innocent title of a board of health." The Hawaiian Board of Health, to judge from its reports, at least, seems to be doing good work, and we think our esteemed contemporary's fears have been somewhat unduly excited.

A SIBERIAN UNIVERSITY.—The Russian Government has established a university in Tomsk, Siberia, and proposes to add to it a medical department during the coming year.

HOW SHALL WE DRINK OUR BEER?—This weighty question has at last been settled by a German experimenter, who has written a book on the subject. If we fill an ordinary glass with beer, he says, and set it on the window-sill exposed to the sunlight, and put alongside of it a covered earthen mug filled with good Münchner beer, in a very few minutes the liquid in the glass will be found to have a bad smell and taste, while that in the mug will preserve its bouquet unchanged. Thus it is proven that sunlight is bad for beer, and that the "stein" is the proper vessel from which to drink the beverage.

SULPHUROUS-ACID FUMIGATIONS IN WHOOPING COUGH.—Pertussis is not usually regarded as a curable disease, although, as is the case with most affections of this class, remedies are often brought forward with the indorsement of being positively curative. Dr. F. E. Manby relates his experience in *The Practitioner* for August, 1888, with sulphurous acid, according to Mobin's method, which has given him great satisfaction. The method is the follow-

occur. The lacteal secretion of [illegible]

s not capable of carrying the infection, but only that oming from a tuberculous gland.

M. BAILLET strongly deprecated the

EXAGGERATIONS OF THE CONTAGIONISTS,

nd did not believe in the wholesale destruction of the heat from tuberculous animals. If an animal was fat nd in good condition, the flesh could be eaten with imunity even though there were tubercular deposits in the ngs, the pleura, and certain lymphatic glands. It was. f course, proper and necessary to reject any organs hich were found to be infected. and also the flesh in oximity to them, but the other parts of the animal ould be eaten. If an animal was greatly emaciated d was suffering from a generalized tuberculosis then it ould be wholly destroyed and no portion of it should

thusiastic in his appreciation of this method that he thinks a general application of it for six months would suffice to practically exterminate the disease.

THE PRIZE OF THE CAUCASIAN MEDICAL SOCIETY for the best paper read during the year has been awarded to Dr. Kucharski. His essay was upon the micro-organism of trachoma.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.—The following is the announcement of papers to be read at the annual meeting of the Southern Surgical and Gynecological Association, which will be held in Birmingham, Ala., September 11, 12, and 13, 1888: The President's Annual Address, W. D. Haggard, M.D., Nashville, Tenn.; The Annual Oration, W. F. Hyer, M.D., Holly Springs, Miss.; "Floating Kidney, with Vicarious Menstruation," DeS. Ford, M.D., Augusta, Ga.; "Gastrostomy," W. B. Rogers, M.D., Memphis, Tenn.; "The Medical Treatment of Fibroid Tumors of the Uterus," Bedford Brown, M.D., Alexandria, Va.; "Indications for Operative Interference in Cerebral Troubles," T. O. Summers, M.D., Jacksonville, Fla.; "A Case of Tubal Pregnancy, presenting Interesting Medico-legal Relations," E. P. Sale, M.D., Aberdeen, Miss.; "Superinvolution of the Uterus following Trachelorrhaphy," Virgil O. Hardon, M.D., Atlanta, Ga.; (*a*) "Dermoid Cysts of the Coccygeal Region," and (*b*) "Electrolysis in Gynecology and Surgery," E. J. Beall, M.D., Fort Worth, Tex.; "Alexander's Operation," W. L. Nichol, M.D., Nashville, Tenn.; "Hysterectomy in Cancer of the Uterus," W. H. Wathen, M.D., Louisville, Ky.; "The Extravagances and Impracticable Requirements of Modern Antiseptic Surgery, so far as the Country Practitioner is Concerned," J. M. Taylor, M.D., Corinth, Miss.; "Treatment of Fractures with Plaster of Paris Splints," W. F. Westmoreland, Jr., M.D., Atlanta, Ga.; "The Present Status of Electro-therapeutics in Gynecology," J. R. Buist, M.D., Nashville, Tenn.; "Antiseptics in Surgery and Gynecology," F. T. Meriwether, M.D., Asheville, N. C.; "The Attitude of Removal of the Uterine Appendages for the Cure of the Convulsive Neuroses," W. Locke Chew, M.D., Birmingham, Ala.; "Interesting Cases of Surgery," R. M. Cunningham, M.D., Pratt Mines, Ala.; "My Antiseptic Bags, or Practical Aseptic Surgery," J. W. Long, M.D., Randleman, N. C.; "The New Departure in Uterine Therapeutics—the Dry Method," T. A. Means, M.D., Montgomery, Ala.; "A Study of the Various Methods of Treatment of Laceration of the Perineum and Rectocele, with Report of Cases," J. H. Blanks, M.D., Meridian, Miss.; "Re-paresis of the lower limbs, with apparent psoas contraction and wasting of the muscles on the right side. In spite of the usual methods of treatment—absolute recumbency, the administration of hydrargyrum cum creta, and of iodide of potassium (the latter in gradually increasing doses up to fifty grains three times daily), and the application of the actual cautery, all of which were given a fair and prolonged trial—this condition gradually grew worse, until there was complete paralysis of both lower extremities, with loss of sensation and incontinence of urine and fæces. It was then decided to open the spinal canal, in order, if possible, to relieve pressure.

The operation was performed by Mr. G. A. Wright. An incision about four inches in length was made along the lines of [illegible] greatly disturbed for some weeks by reason of an unusual amount of sickness, which they attributed to witchcraft. Finally, suspicion centred upon one man, who was seized and searched, and in his pocket was found what is known among these people as a "conjuror's jack." It was a red flannel bag, one and one-half inch long and half an inch wide, containing ten No. 4 gunshot and one buckshot, all securely wrapped in a piece of red flannel. To one end of the bag was attached a piece of black thread, about ten inches in length. Since the charm has been destroyed the sick are recovering rapidly from their illness. The alleged sorcerer has fled from the town in order to escape death at the hands of his excited fellow-citizens.

DR. JOHANN DLAUHY, formerly professor of State medicine in the University of Vienna, died in that city on July 29th, at the age of eighty-one years.

MATERNAL IMPRESSIONS AND THE SEX OF THE FŒTUS.—A writer in a French journal offers the suggestion that the sex of a child is determined by the desire or the strong belief of the mother. Malformations, he says, are often the result of maternal impressions, and why should not the mental processes of the mother be equally potent in determining the sex of the fœtus?

THE SUICIDE OF DR. RIDLEY.—The coroner's jury in the case of Dr. James Ridley, late medical officer of Tullamore Jail, rendered a verdict, on August 17th, that Dr. Ridley committed suicide while suffering from temporary insanity, produced by apprehension of disclosures with reference to the treatment of the late John Mandeville in Tullamore Jail.

THREE HALE OLD PHYSICIANS.—Three of the oldest physicians belonging to any one family in the world are the brothers Ranson. Secretary Ranson, of Des Moines, is in his ninety-third year. Bass Ranson, of Findlay, O., is in his eighty-ninth year, and L. Q. Ranson, of Fremont, O., is eighty-four years of age. They are all well preserved and still follow their professions.

ABSENCE OF THE MUSCULO-CUTANEOUS NERVE IN MAN.—A case of this rare anomaly is reported by MM. Daraignez and Labougle in the *Journal de Médecine de Bordeaux*, August 5, 1888. The missing nerve was supplied by the external branch of the median. The two roots of this nerve, instead of uniting in the axilla, diverged, the internal one following the normal course of the nerve along the brachial artery, the external sending filaments to the biceps and brachialis anticus, and uniting finally with the other branch just above the elbow-joint. It here gave off sensory filaments to the skin and external portions of the arm and forearm.

DR. J. FIEUZAL died in Paris on July 28th, at the age of fifty-two years. Dr. Fieuzal was well known by his writings on ophthalmological subjects, a study which he took up in his later years and followed with ardor. He was a chevalier of the Legion of Honor, and was connected editorially with *La Tribune Médicale*. He was placed by Gambetta at the head of the Hôpital des Quinze-Vingts, where he displayed administrative abilities above the average.

HELLEBOREIN has been found by Drs. Venturini and Gasparini to be capable of exerting marked local anæsthetic effects when placed upon the cornea. It also produces local anæsthesia when injected into the tissues.

Society Reports.

CONGRESS FOR THE STUDY OF TUBERCULOSIS.

Held in Paris, July 25, 26, 27, 28, 30, *and* 31, 1888.

(Special Report for The Medical Record.)

Wednesday, July 25th—First Day.

The opening session of the Congress was devoted to the business of organization and the election of officers. The following were the officers elected: *President*, M. Chauveau; *Vice-Presidents*, MM. Villemin and Verneuil; *Secretaries*, MM. Cany, Gallois, Piot, and Thounet. Honorary Presidents from the United States, Brazil, and most of the countries of Europe were also elected.

M. Chauveau, the newly elected President of the Congress, then delivered the

OPENING ADDRESS,

in which he reviewed the advances made in the study of tuberculosis in modern times, referring especially to Villemin's views, which had been so strikingly confirmed by Koch's discovery. He then outlined the work to be done by the members of the Congress, and expressed the hope that the results of this work would be such as would mark an era in the history of tuberculosis.

M. Verneuil followed with a short address in which he referred to the

SCIENTIFIC CO-OPERATION OF PHYSICIANS AND VETERINARIANS,

as exemplified in this meeting, and hoped that it would be but the beginning of a series of works in which the two professions would be united in doing battle to a number of diseases common to man and the lower animals.

M. Cornil opened the scientific work of the Congress with a communication on

TUBERCULOSIS OF THE MUCOUS SURFACES.

One of the most important facts which have been proven by experiment is that the tubercle bacillus may penetrate the unbroken mucous membrane. This had been shown in the case of the lungs and of the intestinal tract. The author had made a special study of

TUBERCULAR AFFECTIONS OF THE UTERUS.

In most cases tuberculosis of the genital organs begins in the tubes, and the uterus is secondarily infected by the caseous matter descending into its cavity from the diseased tube. He had seen one case of the disease affecting the cervix alone, in a woman who had no pulmonary or peritoneal trouble, in which it seemed probable that infection had occurred during coitus. In connection with M. Dobroklonsky he had made a number of experiments by introducing a few drops of a culture-fluid containing the specific micro-organisms into the vagina of female guinea-pigs, and had found, on later examination, that the uterus was tuberculous. This showed that it was certainly possible to infect this organ through the vagina.

M. Nocard read a paper on

THE DANGERS FROM THE USE OF THE FLESH AND MILK OF TUBERCULOUS ANIMALS.

It was incorrect, he said, to assume that the flesh of tuberculous animals was always capable of exciting the disease in those who ate it. That there was some danger in eating such meat he admitted; but he thought the danger very slight. It was wise to guard against all means of infection, but it was also necessary to proceed with caution, for immense interests were concerned in raising cattle and in preparing food for the market, and it was not just to injure these interests and to enormously increase the cost of meat by precipitate action without reflection. In regard to milk, the question was somewhat different.

ALL COWS' MILK SHOULD BE BOILED

before being given to infants. It was the general opinion of those most competent to judge, that the milk is infected only when the tubercular process has invaded the glandular tissue. But in view of the great difficulty of recognizing mammary tuberculosis in cows, it was safe to look upon all raw milk with suspicion, and to allow infants to drink it only after it had been rendered innocuous by boiling. With goats' milk, however, no such precaution was necessary, for a tuberculous goat was one of the rarest of curiosities.

Thursday, July 26th—Second Day.

The question proposed for discussion at this session was the following:

THE DANGERS RESIDING IN THE USE OF THE FLESH AND MILK OF TUBERCULOUS ANIMALS, AND THE MEANS OF PREVENTING THEM.

M. Arloing opened the discussion with a paper advocating

THE FORCIBLE SEIZURE OF TUBERCULOUS ANIMALS.

The first thing necessary was to proclaim tuberculosis in animals a contagious disease, thus, under the law of 1881, placing the disposal of all such diseased cattle in the charge of a commission. He did not agree with M. Nocard that the danger of infection through the flesh of tuberculous animals was slight. It was true that the bacilli did not long preserve their virulence in muscular tissue; but it was fair to suppose that a certain number existed in the flesh at the time the animal was killed, and they would then retain their vitality in the dead meat, and be capable of infecting those who ate of it. The temperature to which beef was ordinarily exposed in the process of cooking had been shown to be insufficient to destroy the bacilli. Experiments made by feeding diseased meat to guinea-pigs showed that twenty per cent. of the animals became tuberculous, and, therefore, of twenty diseased beeves, four might be assumed to be capable of spreading tuberculosis by their flesh.

M. Bang, of Copenhagen, read a communication on

TUBERCULOSIS OF THE MAMMA IN COWS,

and its relation to diseased milk. He did not believe that the early diagnosis of this condition was as difficult as was commonly supposed. One of the earliest symptoms is a tumefaction in the gland, which may exist a long time before any changes are observed in the milk. It is only when induration follows upon this swelling that the milk becomes of a yellowish color and contains fibrinous flocculi. The lacteal secretion of all tuberculous cows is not capable of carrying the infection, but only that coming from a tuberculous gland.

M. Baillet strongly deprecated the

EXAGGERATIONS OF THE CONTAGIONISTS,

and did not believe in the wholesale destruction of the meat from tuberculous animals. If an animal was fat and in good condition, the flesh could be eaten with impunity even though there were tubercular deposits in the lungs, the pleura, and certain lymphatic glands. It was, of course, proper and necessary to reject any organs which were found to be infected, and also the flesh in proximity to them, but the other parts of the animal could be eaten. If an animal was greatly emaciated and was suffering from a generalized tuberculosis then it should be wholly destroyed and no portion of it should be allowed to be sold or eaten.

M. Butel thought that, in a matter of such vital importance to the well-being of the community, no considerations of a commercial nature should be allowed to bias the judgment of the speakers. He believed that the risk of infection from diseased meat was too great to allow of any compromises or fine distinctions.

ALL MEAT FROM TUBERCULOUS ANIMALS SHOULD BE SEIZED,

but it was only just that the government should indemnify the owners of the sacrificed cattle for their loss. To show the inefficacy of the present regulations concerning the inspection of meat, it was only necessary to mention the fact that in Paris, of 260,000 cattle slaughtered during the year 1883, only eleven had been condemned as unfit for food. He believed that a large proportion of sufferers from phthisis acquired the disease through the ingestion of infected meat.

M. **Grissonnanche** read a paper on

THE EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS IN CATTLE.

His experience as a veterinary surgeon, practising in the country, had led him to regard the early diagnosis of phthisis in cattle as a much more easy matter than that of glanders. Pulmonary tuberculosis is characterized from the first by tumefaction of the retropharyngeal glands; the inspiratory movements are irregular; a harsh friction-sound is heard on auscultation, resembling somewhat the sound produced by rubbing the thumb over a tambourine. The cough is short and not easily provoked except by sharp percussion on the thoracic parietes, a procedure which evidently causes pain to the animal. The disease is met with most frequently in cattle living together in herds, hence the necessity of its prompt recognition, and of the isolation of the affected animal.

M. **Veyssière** opposed strongly the views set forth by M. Baillet, and hoped that the Congress would not endorse them. He thought the distinctions made between localized and generalized infection were too fine to be followed by the ordinary meat inspector, and insisted upon the rejection of any infected animal, whatever its general appearance of health may be. He had seized a very fat and apparently well-conditioned cow on account of a local tuberculosis, and had injected some of the juice expressed from the meat into two rabbits. Both animals died, and an examination showed the presence of tubercular alterations in the lungs and liver.

M. **Moulé** referred to the danger of infection by eating the flesh of

TUBERCULOUS POULTRY,

a matter which seemed to have been overlooked in the discussion hitherto. His observations had led him to believe that domestic fowls were very frequently the subject of tuberculosis, the disease often involving the abdominal organs. Thus pâte-de-foie-gras was especially dangerous, being in some cases almost a pure culture of tubercle bacilli.

M. **Thierry** said that the inspection of meat in all the larger cities ought to be most vigorous; while in the country such precaution was less necessary, for the butchers there were generally good judges of cattle and rejected those that they considered unsound.

M. **Villain** said that the proportion of tuberculous animals brought to the abattoirs of Paris was about six in a thousand head.

Mr. Robinson, of Greenock, Scotland, said that from an experience of fourteen years as meat inspector, he had come to the conclusion that

TUBERCULOSIS IN ANIMALS IS COMPARATIVELY RARE,

but that when it does exist, even in cases in which it seems to be most limited, a more careful examination will generally show the presence of glandular involvement. He urged upon the Congress to pass some very strong resolutions against the use of the flesh of diseased cattle, for he did not think it possible to decide safely, in the case of tuberculous animals, between those that were fit to be eaten and those that were not, and it was necessary therefore to exclude all.

M. **Guinard** called attention to the danger which existed in the practice of

DRINKING FRESH BLOOD

at the abattoirs. He had seen a lady drink the blood from a fine-looking animal which, however, was found afterward to be diseased and was condemned. This lady was already consumptive, but it was not uncommon for physicians to send patients with simple anæmia to the abattoirs, and for them the practice might be fraught with evil.

A RESOLUTION

was then proposed to the effect that, in the opinion of the Congress, all animals affected in any degree with tuberculosis should be seized and condemned as unfit for food. This resolution was carried with only three dissenting votes.

M. **Degive** made some brief remarks on

TUBERCULOSIS AND VACCINATION.

He said that it was the practice in Belgium to kill all the calves from which vaccine had been taken, and to reject the latter if the animal was found to be tuberculous.

The President said that this was certainly an excellent rule to follow, but one could easily exaggerate the dangers to be apprehended from this source. In the first place, it was only in very rare cases that the vaccine contained tubercle bacilli, and even then experiments had shown that it was very difficult to inoculate an animal with tuberculosis through a superficial abrasion of the skin. The advantages of vaccination were too great to be counterbalanced by the almost infinitesimal risk of acquiring tuberculosis by this means.

M. **Solles** then read a paper on

A NEW MICRO-ORGANISM FOUND IN THE LUNGS OF PHTHISICAL PATIENTS.

When this organism was introduced into the circulation of rabbits, the animals died with a disease very distinct from tuberculosis, but with constant and characteristic lesions. This microbe could also be propagated by cultures from the blood of consumptive patients. It was distinct from the tubercle bacillus of Koch, as was shown by the fact that it did not take up Ehrlich's stain.

M. **Lannelongue** presented a communication on

TUBERCULAR HEPATITIS.

He said that there were two forms of tuberculosis of the liver, excluding miliary tuberculosis, viz., a tubercular infiltration or caseous hepatitis, and cavernous ulceration or tubercular abscess of the liver.

M. **La Torre** read a paper on

HEREDITARY TUBERCULOSIS.

He had come to the conclusion, from his observations and from the study of all attainable statistics, that the influence of a tuberculous father is more marked than that of the mother similarly affected. This was contrary to the generally received opinion.

Friday, July 27th—Third Day.

M. **De Brun**, of Beyrut, presented a communication on

THE ANTAGONISM BETWEEN MALARIAL FEVER AND TUBERCULOSIS.

The author said that he was struck on his first arrival in Syria with the fact that phthisis was much more rare there than in France. It could not be due to any advantages in the climate of the country, for the incessant rains of winter, the continued heat and moisture of the atmosphere in summer, and the depressing winds from the desert, all contributed to favor the spread of tuberculosis. The only explanation of the fact, therefore, that was at all satisfactory was furnished by the law of Boudin, who maintains that there exists an antagonism between malaria and tuberculosis. Tuberculosis was absolutely unknown in former times when there was no attention paid to sanitation, but its advent coincided in time with the introduction of drainage, and other works designed to prevent malaria. Just in proportion as these works were successful and as malaria diminished, phthisis increased. Often indeed, in malaria, there is pulmonary congestion, and this, taken in connection with the debility and lowered general vitality of those affected, not infrequently leads to a diagnosis of phthisis, but the effect of quinine in dispelling all these symptoms discloses quickly their true character.

M. Piot, of Cairo, related his experience with

TUBERCULOSIS IN EGYPT,

which, he said, had led him to conclusions similar to those of the preceding speaker.

M. Redard read a paper on

THE SURGICAL TREATMENT OF TUBERCULAR ARTHRITIS IN CHILDREN.

He was in favor of opening widely the diseased articulation with the thermo-cautery, scraping away all the affected parts, whether bone, cartilage, or synovial fringes, and providing for subsequent irrigation. Recurrence of the disease was frequent, but after two or three operations a definite cure resulted.

M. Verneuil said that he had abandoned long ago resections, and other operations made by rule, in children. He favored scraping away the diseased parts, but he was also in favor of previous sterilization of the tubercular centres with iodoform and ether. He had seen most excellent results from such measures.

M. Chantemesse presented a communication, embodying the results of a series of experiments made by M. Widal and himself, to determine the

PERSISTENCE OF TUBERCLE BACILLI IN RIVER WATER.

The authors had used the water of the Seine for this purpose, some being previously sterilized and some taken just as it flowed in the river. To various samples, some kept at a temperature of 45° to 50° F., and the rest at 60° to 70° F., pure cultures of tubercle bacilli were added, and it was found that the micro-organisms were still present at the end of seven weeks, but the injection of this water into the peritoneal cavity of guinea-pigs gave negative results.

M. Arloing reported the results of some experiments of MM. Galtier and Cadéac to determine the length of time during which the

VIRULENCE OF TUBERCLE BACILLI IN STAGNANT AND RUNNING WATER IS PRESERVED.

Pieces of tuberculous tissues were placed in the bottom of a flask in which was maintained a stream of running water of a temperature of about 60° F. It was found that the micro-organisms were still active at the end of six weeks. In stagnant water the virulence was preserved for seventeen or eighteen weeks.

M. Arloing then read a paper embodying the results of some experiments of his own in the way of

THE PREVENTION OF TUBERCULOSIS AFTER INOCULATION.

He inoculated a certain number of guinea-pigs under the skin of the thigh. Seven days later he removed the inguinal glands from two of the animals, although the glands appeared to be healthy. On the fifteenth day three of the remaining animals presented some swelling of the glands, which were thereupon removed. Two animals remained which were not operated upon. Two months and a half after the inoculations the seven animals were killed, and all presented marked lesions of general tuberculosis. Thus it would appear that exsection of the glands had no effect upon the course of the disease.

The author then related some further experiments made with a view of testing the efficacy of

PREVENTIVE INOCULATIONS OF TUBERCULOSIS.

It had been thought at one time that scrofulous glands contained the tubercular virus in an attenuated form. He had accordingly practised inoculations with scrofulous material, subsequently inoculating the animals with unmistakable tuberculous products. The result was that tuberculosis developed, seemingly uninfluenced in its course by the previous inoculations. Other experiments with the previous repeated inoculations of typhoid virus showed that the latter exercised no restraining influence upon the course of the tubercular disease.

M. Babès presented a communication on

THE BACTERIAL RELATIONS OF THE TUBERCLE BACILLUS.

He had noted the bacterial conditions in 73 autopsies made on children, 65 of whom had tuberculous glands, and had found Koch's bacillus in but 45. In 52 autopsies of cases of more general tuberculosis he had found the tubercle bacillus alone in but 10 instances. In all the other cases there were other microbes associated with it. These were most commonly the micro-organisms of suppuration, but in certain special diseases, tuberculous in character, such as pleurisy, peritonitis, meningitis, etc., the microbes present were those usually credited with the production of the ordinary non-tubercular forms of the same diseases. He concluded that

UNCOMPLICATED TUBERCULOSIS RARELY CAUSES DEATH,

at least in children, but it usually opens the door to other bacteria which induce the special and fatal forms of the disease. He believed also that latent, incapsulated tuberculosis, which is extremely frequent in children, under the form of scrofulous glands, may become active in the course of affections excited by other micro-organisms.

M. Duret then read a paper on

TUBERCULOSIS OF THE GLANDS.

He recognized three forms of the affection: 1. Fibro-caseoma; 2, simple caseo-tuberculosis; 3, suppurative caseo-tuberculosis. The treatment of the first form should consist in extirpation of the affected glands. In the second form the author advised igni-puncture and scraping out of the caseous material. In the third form, in which ulcers or fistulous tracts exist, his plan was to destroy the fungous granulations with the thermo-cautery.

M. Cornil presented a communication, on behalf of himself and M. Toupet, on

PSEUDO-TUBERCULOSIS.

The authors had examined a little tumor, the size of a pea, removed from the finger. It was composed of fibrous tissue, in the midst of which were certain small nodules, having all the appearances of tubercles, and containing within them perfectly characteristic giant cells. The degenerating cells, found around the giant cells in typical tubercles, were, however, absent in this case. Repeated careful examinations failed to reveal the presence of the bacilli of tuberculosis. Upon the strength of this and other similar tumors observed by the authors, they concluded that the presence of the pathological formation, known as tubercle, was not always an evidence of the disease tuberculosis, and that, therefore, it was not possible to rely with certainty upon the anatomical diagnosis, and the latter should always be supplemented by a bacteriological examination.

M. Hurean de Villeneuve read a paper on the use of

RAW MEAT AND BLOOD IN THE ALIMENTATION OF CONSUMPTIVES.

He thought that the exclusive use of these substances was bad for tuberculous patients. A more rational treatment consisted in the administration of strychnine and arsenious acid, which drugs, given in sufficient doses, tended to excite a good appetite. When the desire for food was once aroused the only indication was to satisfy the patient with an abundance of good nourishing food such as pleased his palate.

M. CARTIER sent a communication on the same subject. He recommended the flesh of the sheep or goat as most suitable to be eaten raw. If it was considered desirable for a patient to drink fresh blood, that coming from these same animals should be chosen by preference. The writer had himself drank sheep's blood, and said that, with his eyes shut, he would have supposed that he was drinking milk fresh from the cow. There was nothing in the least disagreeable in its taste.

Correspondence.

THE MNEMONICS OF ELECTRICAL TERMS.

To the Editor of The Medical Record.

SIR: Since electricity has assumed considerable importance in medicine, and as the general practitioner, burdened as he is with so many things, may find some difficulty at times in recalling to mind the definition of electrical terms, it may not be out of place to give to your readers an illustration that I have found useful in fixing the meaning of these terms. To the non-medical mind the formula might seem vulgar, but in science there is nothing unclean. The term *volt* is a common one in electricity. It means the unit of measure of electric force or power, or, we might say, pressure. Thus we say a battery giving so many volts is necessary to run an electric light or kill a dog.

We may represent the voltage by the contractile power of a male bladder.

The term *ohm* is the unit of measure of resistance to the passage of an electric current. The ohm or ohmage may be represented, then, by the calibre of the urethra attached to this bladder; or, a still better illustration to the medical mind, a stricture in that urethra (a not uncommon condition of the male urethra).

The term *ampère*, or milliampère (the latter meaning the thousandth of an ampère), is the unit of measure of the amount of electric current passing through an object in a second of time. It is a resultant of the pressure and resistance, the volts and ohms, and may be represented by the volume of urine passing the stricture. Thus the more powerful the bladder (more volts) and the less the stricture (fewer ohms) the greater the current (more ampères). This equation can be varied indefinitely. This illustration explains why the same number of cells will not give the same number of ampères or milliampères when passed through different persons or different parts of the body; the resistance is different.

The following, then, would be the graphic formula for this subject:

Volts or voltage = bladder.
Ohms = stricture.
Ampères = passing current.

There is no patent on this formula, and Professor Loisette is at liberty to use it in his method for strengthening the memory.

W. E. FOREST, M.D.

NEW YORK, August 9, 1888.

MIDDLE-EAR DISEASE AND POLITZERIZATION.

To the Editor of The Medical Record.

SIR: In your issue of August 11th, page 152, Dr. Frank W. Ring contributes an article entitled "Four Cases of Acute Inflammation of the Middle Ear from the Use of Roosa's Bulb Nasal Inhaler." I desire, in a kindly spirit, to take issue with Dr. Ring. I infer that in three of his four cases he resorted to Politzerization *after* having made applications to the nose and naso-pharynx. In the first case, he applied "iron and glycerine" solution to the "posterior wall of the pharynx" and a spray to "the throat and nose with Dobell's solution, and *finally* inflated her ears with the Politzer bag, using Roosa's pear-shaped cylinder bulb." In the second case, he "sprayed her nose with Dobell's solution . . . and inflated her ears with the Politzer bag, and Roosa's pyriform bulb." In the third case, he "used the Dobell spray . . . and inflated with the Politzer bag, using Roosa's bulb."

The doctor does not distinctly say that in the second and third cases the Politzerization *succeeded* the local applications, but as he definitely states the order of procedure in the first case, and mentions Politzerization last in the others, it is reasonable to suppose that the order of application was the same in all. If this be the case, I maintain that the inflation of the ears, after the throat-applications had been made, very probably forced some of the solution into the ears, and that this was the cause of the inflammation. It is, I believe, very generally admitted and urged by all authorities that the ears must not be inflated in any manner just after the naso-pharynx has been swabbed or sprayed. I resort to Politzerization, both with and without Roosa's bulb, constantly, that being always the first manipulation in such cases, and I have never seen any new trouble set up or any old trouble aggravated when the throat-applications *succeeded* the inflation.

Are we not warranted in the belief that in the first three of Dr. Ring's cases the sediment in his water-tank, the infusoria and bacteria, and the Roosa bulb can be eliminated as etiological factors?

Would not the reversal of the order of procedure have removed all danger?

His fourth case shows an inflammation following inflation alone; but it seems hardly fair to insist that Roosa's bulb is directly and solely responsible for this accident until a sufficient number of cases shall have been observed to eliminate the possibility of simple coincidence.

H. P. ALLEN, M.D.

COLUMBUS, O., August 14, 1888.

THE STORAGE OF LIFE.—At the last anniversary meeting of the Sanitary Institute of Great Britain, Dr. B. W. Richardson delivered an address, taking as his subject the "Storage of Life as a Sanitary Study." The conditions favoring the storage of life he dealt with under the headings of hereditary qualification, the virtue of continence, maintenance of balance of bodily functions, perfect temperance, and purity from implanted or acquired diseases. While urging the importance of maintaining the balance of the working organs of the body as a means of keeping up the storage of life, the lecturer spoke yet more emphatically upon what he termed "all-round temperance"—temperance in speech, action, thought, as well as in eating and drinking. Everything that quickened the action of the heart he regarded as a stimulant, taxing and reducing the storage of life. Necessarily the work of the sanitarian called for appreciative remark toward the close of the lecture, the prevention of "damaging diseases" promoting the storage of life. After all, in spite of the interest of the lecture, the moral is somewhat trite. The advantages of a favorable family history, the disadvantages of acquired diseases, the influence of personal habits of restraint—all these have long been granted. The individual may toil and strive, but he is still largely at the mercy of his neighbor, whose erratic proceedings may greatly upset all the foresight of storage. While all admit the value of personal attention to sanitary and physiological laws, most people will wish for greater powers of sanitary control over the actions of their neighbors.—*The Lancet.*

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 12 *to August* 18, 1888.

Sutherland, Charles, Colonel and Medical Director. Directed to inspect the Medical Department at Forts Brady, Mackinac, and Wayne, Mich.; Forts Porter, Niagara, and Ontario, N. Y.; Madison Barracks and Plattsburg Barracks, N. Y.; Fort Preble, Me.; Fort Warren, Mass.; Fort Adams, R. I.; Fort Trumbull, Conn. Paragraph 7, S. O. 168, Division of the Atlantic, August 16, 1888.

Janeway, John H., Major and Surgeon. Granted leave of absence for one month, on Surgeon's certificate of disability. Paragraph 2, S. O. 41, Division of the Pacific, August 8, 1888.

Brown, Harvey E., Major and Surgeon. Upon being relieved by Captain William C. Gorgas, Assistant Surgeon, to proceed to his proper station, Jackson Barracks, New Orleans, La., reporting in person to the Commanding Officer of that post for duty. Paragraph 8, S. O. 187, A. G. O., August 14, 1888.

Cowdrey, Stevens G., Captain and Assistant Surgeon. Granted leave of absence for one month. S. O. 77, Department of Texas, July 25, 1888.

Tarney, George H., Captain and Assistant Surgeon. To proceed to St. Augustine, Fla., via Palatka, accompany the U. S. Troops thereat to Huntsville, Ala., as Medical Officer, and thereafter return to his proper station (Fort Monroe, Va.). Paragraph 4, S. O. 165, Division of the Atlantic, August 13, 1888.

Appel, Daniel M., Captain and Assistant Surgeon. Ordered to Fort Bliss, Tex., for temporary duty. S. O. 77, Department of Texas, July 25, 1888.

Gorgas, William C., Captain and Assistant Surgeon. Leave of absence granted in S. O. 177, A. G. O., August 1, 1888, revoked, and ordered to proceed to Camp Monte Sano, Huntsville, Ala., and report in person to the Commanding Officer thereof for duty, relieving Major Harvey E. Brown, Surgeon. Paragraph 8, S. O. 187, A. G. O., August 14, 1888.

Wood, Leonard, Assistant Surgeon. To proceed from Fort McDowell to San Carlos, A. T., and carry out the instructions of the Department Commander. Upon completion of that duty to return to proper station. S. O. 89, Department of Arizona, August 1, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending August 18, 1888.

Ferebee, N. M., Surgeon. Detached from the Franklin, and ordered to the Naval Hospital, Norfolk, Va.

The Power of the Imagination.—Dr. Durand, wishing to test the practical effect of mind disease, gave a hundred patients a dose of sweetened water. Fifteen minutes after, entering apparently in great excitement, he announced that he had by mistake given a powerful emetic and preparations must be made accordingly. Eighty out of the hundred patients became thoroughly ill and exhibited the usual result of an emetic; twenty were unaffected. The curious part of it is, that with very few exceptions the eighty "emeticized" subjects were men, while the strong-minded few, who were not to be caught with chaff, were women.—*New Orleans Picayune.*

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending August 18, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	19	6
Scarlet fever	54	8
Cerebro-spinal meningitis	2	3
Measles	130	13
Diphtheria	89	39
Small-pox	1	0
Yellow fever	0	0
Cholera	0	0

Advanced Medical Views One Hundred Years Ago.—In 1784, Dr. John Gardiner, President of the Royal College of Physicians, and Fellow of the Royal Society of Edinburgh, wrote as follows: "Apart from imprudences of diet and living, human beings suffer most from the effects of cold and heat, from marsh miasm, but especially from human effluvia, or human infection and contagion, or the typhus poison, and sometimes from al combined. Cold and wet produce catarrhal and rheumatic affections, and catarrhs are, perhaps, often merely rheumatic affections of the mucous membranes. Catarrhs of all the mucous membranes are attended with acrid secretions like those which irritate and almost excoriate the nostrils and lips, and should be neutralized in the stomach, bowels, air-tubes, lungs, and perhaps kidneys. In every severe catarrh of the lungs there is more or less tendency to an obscure inflammation after the patient has got rid of his cough and seems to be perfectly recovered, and there frequently remains, in different parts of the substance of the lungs, small obstructions without any apparent inconvenience. A gradual resolution of these may take place, but they often increase in number and at last become irresolvable, and lay the foundation of what are called tubercles." He says: "This irritation of the mucous membranes, but especially the absorption of the acrid mucus, causes catarrhal fever which may become contagious, like the contagious catarrh known by the name of *influenza*, unless the air of the house be good, and the general condition of the city clean. If foul human effluvia, or the typhus poison, be added to catarrh, it becomes virulent and contagious." He says he also knows that consumption of the lungs may be brought on by a person lying on the same bed, in a badly ventilated house or hospital, with another suffering from phthisis pulmonalis, and that this acquired disease may terminate in open sores, abscesses, or ulcers of the lungs. He conceives that the lungs of the second sufferer are inoculated with the poison of the first. But Dr. Gardiner is especially concerned about catarrhs of the stomach and bowels, and the necessity of neutralizing or evacuating this acrid mucus before the gall-ducts and liver become involved and a serious bilious complication is added. Under the influence of spoiled mucus the bile may ferment and putrefy, and a bilious catarrhal fever may arise. Emetics of ipecac, aided by large quantities of warm water, with or without the addition of some alkali, like soda, or mild saline laxatives, like Rochelle salts, he thinks will prevent the absorption of acrid or spoiled mucus and bile, or the intervention of a mucous, or catarrhal, or bilious fever. Subsequently he used the mineral acids to constringe the mucous glands and membranes, of alum for the same purpose, followed by Peruvian bark and wine if the debility was great. He knew that bilious fevers were often produced by marsh and other miasms, but was sure that they could originate without this, from bad diet, and human effluvia in dirty houses and towns. "Marsh miasm," he says, "arises in the greatest quantity from fenny and marshy grounds, more or less impregnated with putrid exhalations from an immense quantity of corrupting vegetable and some animal substances, and aquatic plants, insects, and reptiles dying and corrupting, produce vapors of a more or less malignant nature." He is confident that a lesser degree of malaria must arise from every place where there is heat, moisture, and filth, even in towns and villages, especially unpaved ones. He thinks that marsh miasm is not so much inhaled as swallowed with marsh or other water, or it lodges in the mouth and throat and is swallowed down into the stomach; and advises exposed people to rinse their mouths frequently, especially before eating or drinking, not to swallow their saliva, but to chew calamus in preference to tobacco, and even to chew Peruvian bark. But he says the most active cause of fever in cities, towns, villages, and badly appointed houses, is human effluvia, or the typhus contagion, which is capable of making all other fevers most dangerous in kind, and adding to the malignity of all other co-operating causes. In camps human contagion arises chiefly from the privies; but is found to have still greater effects in crowded hospitals, jails, and ships, where it attains its highest degree of virulence from the excrementitious effluvia of those sick and dying of putrid distempers. He says it has been repeatedly observed that this malignant vapor becomes more contagious and powerful in its effects some time after it has been thrown off from the body, aided by excrementitious matters collected in the apartments of the sick, especially where it is imbibed by blankets and woollen cloths, or even cotton fabrics, which retain it for a considerable time; especially when they have been rolled up moist, and delay has happened in sending bed and body clothes to the wash. He says: "Just as marsh miasm may come from places which are not very marshy, so may human effluvial contagion come not only from jails and ships, but also in private houses where there is not a free circulation of air, and especially where there is a total neglect of cleanliness in their persons and rooms, which is so frequent an attendant of poverty. A smaller quantity of the same unwholesome human effluvia exists in every city, town, and village, and causes the principal difference between town and country air. And even when not great enough to cause typhus fever pure and simple, always adds to the severity and malignity of most other diseases." He says the marsh miasm is of a putrid nature, and human contagion, or the typhus poison, still more so, and both may add themselves to the specific causes with which all sick persons are afflicted. Marsh miasm may acquire a degree of noxious power equal to the human contagion or typhus poison of jails and ships, and then the two diseases seem nearly the same.

HIPPOCRATES ON METRIA, URÆMIA, PUERPERAL FEVER, PYÆMIA, SEPTICÆMIA, AND PERHAPS DIPHTHERIA, ETC.—*Case I.*—A maid was taken ill of fever, without thirst at any time. She had no relish for and loathed food, her alvine discharges were small, her urine thin, scanty, and dark colored. She had pain about the nates, which came to suppuration and burst on the sixth day, when she had a crisis without sweat, and became free of fever. On the seventh day she had a rigor, became slightly heated, and sweated. On the eighth day she had another rigor, followed by a slight one, and her extremities remained cold ever after. On the tenth day, after a sweat, she became delirious, but was afterward calm. She had an intermission of fever on the twelfth day, but soon talked much incoherently, and her bowels again became disordered with bilious, scanty, unmixed, thin, and acrid discharges, which required her to get up frequently. She died on the seventh day after the return of the delirium. In the beginning of her attack she had pain in her throat, which was red throughout, with thin, acrid, and copious defluxions. She coughed, but had no concocted sputa. She was silent, despondent, and had no hopes of herself. The affection of the throat was a common complication in this epidemic.

Case II.—A woman had a complaint with fever which commenced in her tongue and throat, which were red and parched. On the third day she had a rigor followed by an acute fever, and a reddish hard swelling on both sides of the neck and chest. Her extremities were cold and livid, her respiration was labored, and her drink returned by the nose. She could not swallow, and her alvine and urinary discharges were suppressed. On the fourth day all her symptoms were exacerbated, and on the sixth she died.

Case III.—A woman from a miscarriage was taken ill of fever, with dry tongue, thirst, nausea, insomnolency, and thin, copious, undigested dejections. On the second day she had a rigor followed by high fever, copious diarrhœa, and no sleep. On the third she was worse; on the fourth delirious, and her urine scanty and thin. On the seventh she died.

Case IV.—Another woman, after a miscarriage about the fifth month, was seized with fever, sometimes with stupor, at others with insomnolency, pain in the loins and head. On the second day she had scanty and thin discharges, which grew more copious and worse on the third. On the fourth she was delirious, with frights, despondency, strabismus of the right eye, a cold sweat about the head, and cold extremities. On the fifth was still worse, and talked incoherently, but afterward became calm. She had no thirst, was sleepless, had diarrhœa with copious and unseasonable dejections, and her urine was thin, scanty, and dark. On the fifth and sixth days her extremities were cold and livid, and on the seventh she died.

Case V.—A woman having brought forth a son, in a first and difficult labor, was seized with fever, thirst, nausea, and cardialgia; her tongue was dry; evacuations thin and scanty; and she had no sleep. On the second day she had a slight rigor, followed by high fever, and a faint cold sweat about her head. On the third day she had much pain in her bowels, with undigested, thin, and copious evacuations. On the fourth she had another rigor, and was worse on this and the fifth and sixth days. On the seventh she had a third rigor with high fever, much thirst, restlessness, and a cold sweat toward evening, when her limbs became cold and she could no longer be kept warm. In the night she had another rigor, her limbs could not be warmed, she did not sleep, but was delirious, although afterward she became collected. On the eighth she became warm again, was thirsty, comatose, had nausea, and vomited small quantities of yellowish bile, passed large quantities of urine unconsciously, and did not sleep. On the ninth she was comatose toward evening, had slight rigors, and small vomitings of bile. On the tenth she had another rigor, with much fever, did not sleep at all, but in the morning passed much urine with a sediment, and her limbs became warm. On the eleventh she vomited verdigris-green bile, and not long after had another rigor, with cold limbs. In the evening she had another chill, a cold sweat, much vomiting, and passed a painful and restless night. On the twelfth she had copious black, fetid vomitings, much hiccup, and excessive thirst, which were repeated on the thirteenth, when she had still another rigor and loss of speech. On the fourteenth blood ran from her nose and she died.

Case VI.—A woman, on the third day after the delivery of a daughter, the lochial discharge not taking place, was seized with an acute fever, and rigors, which were repeated up to the eighth day, when she was very incoherent, and had copious, thin, bilious stools, without thirst. On the eleventh she was disposed to coma, and her urine was copious, but thin and black. She had no sleep, and on the twentieth slight chills set in again, but she soon became warm. On the twenty-seventh day she was free from fever and was constipated, but not long afterward had violent pain in the hip, followed by renewed fever. Her urine was pale, watery, and copious. On the fortieth day she had cough with copious watery sputa, and had fever in an irregular form, sometimes present and sometimes not. The right side of her face was convulsively retracted, her passages became scanty and bilious, her fever more acute, and she often had rigors. She lost her speech, became comatose; then became collected again and talked rationally, but soon again became incoherent. Her urine was always black, thin, and watery, and on the fiftieth day she died.

Case VII.—A young woman was seized with an ardent fever, was thirsty, could not sleep, and menstruated for the first time. On the sixth day she had much nausea, was chilly, followed by flushing, and tossed about, and continued so on the seventh, when her urine was thin but of good color, and her bowels were not disturbed. On the eighth she was deaf, had high fever, was insomnolent, with nausea and rigors, all of which continued up to the fourteenth day, when she was delirious; but her fever had abated. On the seventeenth she had copious bleeding from the nose, and her deafness was slightly better; but on the following days the nausea, deafness, and incoherence returned. On the twentieth she had a small hemorrhage from her nose, and a sweat followed by apyrexia, when her delirium and deafness left her; but she had pain in her feet. On the twenty-fourth the fever and deafness returned, she was incoherent, and the pain in the feet persisted. On the twenty-seventh she had a copious sweat, followed by apyrexia, her deafness left, and the pains in her feet were lessened.

Case VIII.—A young unmarried woman was seized with an acute and ardent fever, insomnolency, thirst, constant nausea, dry and sooty tongue, and scanty, thin urine. On the third and following days she had copious watery, greenish stools, with some relief, but her urine remained scanty and she became delirious. On the sixth she had a great hemorrhage from her nose, and a chill, followed by copious hot sweat all over. The rigors were

are exceptional with most physicians; at least this is true of this city, where, as a professional friend aptly expressed it, "The cases of typhoid fever are too few to go around." The actual frequency of the disease in this city cannot be ascertained, but the most liberal estimate, based upon the number of deaths reported to the Board of Health, will not amount to more than from two thousand to three thousand cases annually. As a considerable proportion of these cases are treated in hospitals and by a comparatively few physicians in large practice, it is evident that most members of the profession in this city have no adequate opportunity to become familiar with the disease in the great variety of aspects it presents in different cases.

incoherently and had no sleep. On the eleventh she had wild delirium, her urine was black, thin, scanty, and oily, and she had copious, thin, diarrhœic stools. On the fourteenth she had frequent convulsions, her extremities were cold, her mind always wandering, and her urine was suppressed. On the sixteenth she had loss of speech, and on the seventeenth she died. The uterus was inflamed, and the head affected by sympathy.

Case X.—A woman, from sorrow, was seized with an acute fever with chills. From the first to the last she wrapped herself up in her bed-clothes, which she fumbled, picked, bored, and gathered threads from. She was silent, or broke into tears, or else laughed; she had no sleep and her bowels were irritable, although she passed nothing from them; her urine was thin and scanty, and she only drank a little when ordered to. She did not feel very warm, and her limbs were cold. On the ninth day she talked much and incoherently, and then became more composed and silent. On the fourteenth her breathing became slow and deep at intervals, and then again hurried. On the sixteenth, after a stimulant clyster, she had looseness of her bowels, passed urine involuntarily, and became completely insensible. Her skin was parched and tense. On the twentieth she talked much, her respiration was hurried; then she lost her speech, and soon died. Her respiration was often slow and large and deep, and then hurried; she always wrapped herself up in the bed-clothes, and either talked very much or was completely silent. This is regarded by commentators as a vivid and accurate description of a fever complicated with meningitis, or congestion and effusion on and in the brain. The Cheyne-Stokes respiration also attracted the attention of Galen. All these cases were treated by bleeding in the early stages; by clysters and injections of the bowels; and by suppositories, or so-called medicated pessaries, in the vagina. Affusions of hot water on the head were regarded as useful in all fevers except the bilious; fumigations to the uterus were also used. Warm baths, too, were given in acute diseases. Purging electuaries were used if the patient was young and strong; clysters only every three days, if the patient was weak. Hippocrates says if *erysipelas of the womb* seizes a puerperal woman, it will probably prove fatal.

SUPPRESSION OF A MEDICAL JOURNAL.—Dr. Grant-Bey, writing to the Albany *Medical Annals*, states that the Egyptian government has suppressed the *Shifa*, a journal published in Cairo in the Arabic language. First the subscriptions were withdrawn, and then, finally, notice of suppression was served. The article which was offensive to the British government in Egypt was an account of a visit by Virchow to Dr. Grant-Bey, in Cairo, written by the latter, and discussing the nature of cholera and the necessity of strict quarantine on every arrival from India.

CENTENARIANS.—A family of centenarians has just been brought to notice by a statistician. The seat of this remarkable family was at Tarbes, in the Department of the Hautes-Pyrenées, where its last survivor, Joseph Ritas, has departed this life one hundred and eighteen years of age. Ritas was born in Spain on August 21, 1770. His father lived to the age of one hundred and eleven years, and his brother died a few years ago at the age of one hundred and fourteen. The mother and paternal uncle of Ritas were equally long-lived, having far outstepped the allotted span of ordinary mortals. Lubicz Kurkovski, a Polish officer, has just died at Makoff, at the age of one hundred and sixteen years. It is stated that his age is authenticated beyond doubt. He was born in 1772. As the last survivor of the period when Poland was an independent kingdom, the death of Kurkovski has attracted great attention, and his funeral was attended by Polish gentlemen from all parts of Galicia.—*The Lancet.*

HYDROPHOBIA IN PARIS.—In the first five months of 1888 there were two hundred and eighty applicants at M. Pasteur's laboratory from the department of the Seine alone, all of whom had been bitten by dogs either known to be rabid or suspected of being so. This number is almost equal to the corresponding total for the whole year 1887, which amounted to three hundred and six. The Prefect of Police has, therefore, issued an order that for six weeks no dog shall be allowed to go about the streets of Paris, unless led by a string.

DEATH IN THE COURT PLASTER.—The "isinglass court plaster," that is so much in vogue with the laity and dilettanti medicals, is a material most plenteously pregnant for evil. It furnishes an ideal atmosphere and pabulum for bacteria, and has sent many an unfortunate to the ground. It is questionable whether it can be disinfected so as to be safe. Phlegmon, pseudo and true erysipelas are its most usual companions. Its most frequent victim being the accommodating and officious person (or his friends) who carries it about his person for emergencies, and who dispenses it with a "lick and a stick."—DR. A. R. JENKINS, in the *Annals of Surgery.*

THE REFORM OF CIRCUMCISION.—The Israelites of Paris recently appointed a commission of surgeons, under the presidency of Zadoc Kahn, the Grand Rabbi, to consider what modifications might advantageously be introduced in the ritual of circumcision. They have published rules looking to more thorough cleanliness of the operator, of his instruments, and of the infant, and have decided to do away with the sucking of the wound after the operation.

SOMETHING WRONG WITH THE BABY.—Dr. J. H. Straughn, of Lexington, Mo., writes that a woman sent for him to examine her new-born child, for she thought "there was something wrong." The child had an enormous caput succedaneum, double club-foot, umbilical hernia, spina bifida, and a supernumerary finger.

THE PRACTICE OF MEDICINE IN BALTIMORE.—Dr. E. M. Reid, of Baltimore, in an address on Medical Jurisprudence before the American Medical Association, says: "A school or college must be of good standing to be allowed to issue diplomas, but any ignoramus can hang out a sign and otherwise advertise as a doctor without having suitably prepared himself to perform the duties of one. In Baltimore an ignorant man, who had served a doctor in a menial capacity, and had had no opportunity to gain knowledge except such as could be acquired in sweeping the office and emptying spittoons, after his employer's death hung out his shingle, and commenced the practice of medicine on his own account."—*Maryland Medical Journal.*

A SOCIETY FOR THE SUPPRESSION OF QUACKERY exists in Holland. It is said to be in danger of dissolution owing to the heavy expense incurred in prosecuting charlatans, and in defending itself in the numerous libel suits which the exposed quacks bring against it.

ORIGIN OF THE MEDICAL AND SANITARY SERVICE IN RUSSIA.—Catherine II., of Russia, is said to have established, by imperial ukase, in 1762, hospitals in the cities and large towns for the reception of cases of contagious disease. She also established the foundling asylum in Moscow in 1764, and a home for the aged, and hospital for chronic diseases in St. Petersburg. Finally, in 1779, she opened an asylum for the insane. Previous to her time, it is said, there was no public medical service in that country.

HÆMOPHILIA AND CIRCUMCISION.—It is stated in a French medical journal that the Talmud provides that, in case two children in one family have died from hemorrhage following circumcision, any subsequent male children shall not be circumcised.

A TAIL IN THE HUMAN SUBJECT.—Dr. Piatnitsky reported the case of a peasant, aged twenty-three, who came to see if anything could be done to relieve him of a tail, which was a source of chagrin as well as of inconvenience to him. In the anal groove was a cylindrical tumor, about three inches long and three-fourths of an inch in diameter, covered with rather long hair. The tumor, which was attached to the coccyx, was removed. It was composed of a connective-tissue stroma, with vessels and nerves and striated muscular fibres arranged in three bands in each half of the appendix. Most of the muscular fibres had undergone fatty degeneration. The presence of muscular tissue led the reporter to regard the tumor as a true caudal appendix, and not as a simple new-growth. —*Meditsinskoye Obozreniye.*

ENTRANCE OF AIR INTO A VEIN.—At a meeting of the French Surgical Society on July 4th, M. Reynier said that he had recently removed a mass of enlarged glands from the neck, and during the operation had heard a gurgling sound like that produced by the entrance of air into a vein. No bad effects were noticed at the time, but on the third day, while dressing the wound, he heard the sound again, and the patient suddenly died. At the autopsy a small opening was seen in the internal jugular vein, and the vessel was seen to contain a number of bubbles.

PILOCARPINE IN DEAFNESS.—Pilocarpine would appear, according to Corradi, to be very serviceable in the treatment of deafness due to labyrinthine derangements, whether associated or not with disease of the middle ear. Large doses may be required. In one case two centigrammes of pilocarpine were injected twenty-four times. Moos has injected from five to eight drops of a two per cent. solution in cases of deafness resulting from diphtheria. Considerable improvement of hearing resulted even in cases in which deafness had existed for three weeks. Care is required lest the pilocarpine should increase the debility of post-diphtheritic cases.—*The Lancet,* July 21, 1888.

QUININE IN CHOLERA.—Dr. Lawrie, the Residency Surgeon in Deccan, asserts that quinine in three- to five-grain doses three times a day is an efficient preventive of cholera.

MICRO-ORGANISMS IN THE HOSPITAL WARD.—In order to determine the best place for the ventilators in a surgical clinic in process of building, Dr. Durante instituted some experiments in the wards of the hospital to ascertain at what level the air contained the greatest number of micro-organisms. Dr. Neri, who conducted the experiments, found that this point was about three feet above the beds. A great number of microbes were here found, the most numerous of the pathogenic ones being the Staphyloccus pyogenes aureus and Fehleisen's Empipelas streptococcus.

POTASSIUM PERMANGANATE IN AMENORRHŒA.—Dr. P. W. McDonald relates several cases in *The Practitioner* for June, 1888, of amenorrhœa associated with mental disease, in which permanganate of potassium, in doses of one or two grains three times a day, was prescribed. In six of the nine cases the mental faculties and utero-ovarian functions were restored, in three the utero-ovarian functions but not the mental equilibrium. In two of these three cases the menses ceased some time after the pills were discontinued. The writer believes that in these cases the remedy was stopped too soon, and he says that the permanganate should be continued for at least three months after the catamenia appear, and on no consideration should the patient cease taking it between the periods.

THE MICROBE OF CANCER.—Dr. Lampiasi-Rubino has

thin and scanty, [illegible]

day she had a slight rigor, followed by high fever, and a faint cold sweat about her head. On the third day she had much pain in her bowels, with undigested, thin, and copious evacuations. On the fourth she had another rigor, and was worse on this and the fifth and sixth days. On the seventh she had a third rigor with high fever, much thirst, restlessness, and a cold sweat toward evening, when her limbs became cold and she could no longer be kept warm. In the night she had another rigor, her limbs could not be warmed, she did not sleep, but was delirious, although afterward she became collected. On the eighth she became warm again, was thirsty, comatose,

ANTIPYRINE IN WHOOPING-COUGH.—Antipyrine, in doses of one to three grains in raspberry syrup, is recommended by Sonnenberger as an excellent remedy for pertussis.

ADDISON'S DISEASE.—At the conclusion of an interesting paper on this subject, Dr. McMunn remarked that as the animal body became more complex in the course of development, and a greater abundance of respiratory pigments became necessary for internal and ordinary respiration, certain organs had to be set apart, or had to take a new function, in the increased "division of labor." This function in the case of the suprarenal capsules was the removal from the circulation of useless and worn-out pigments. When the adrenals are diseased, these effete pigments and effete proteids circulate in the blood; the former, or their incomplete metabolites, producing pigmentation of skin and mucous membrane, and appearing often in the urine as urohæmato-porphyrin; the latter producing toxic effects, and leading to further deterioration of the blood with its consequences.—*Medical Recorder,* May 21, 1888.

CREOLIN is praised very highly by Dr. Heinrich Rausche as an antiseptic of undoubted power, which is harmless to the human organism. It furthermore possesses the advantage of cheapness, and does not stain instruments like corrosive sublimate. It is used in one-half to three per cent. solutions.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 9 NEW YORK, SEPTEMBER 1, 1888 **Whole No. 930**

Original Articles.

ON SOME DIFFICULTIES IN THE DIAGNOSIS OF TYPHOID FEVER.[1]

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I HAVE some hesitation in presenting for discussion this evening so well-worn a theme as the diagnosis of typhoid fever, but the difficulties of the subject are so great that even a restatement of old facts may not be unprofitable. As Liebermeister has well observed, "The more one believes in the possibility of error, the surer will he be to avoid mistakes."

Although well-marked typhoid fever, with fully developed symptoms, and running a typical course, is not likely with ordinary care to be mistaken for any other disease, except at the outset, it is still true that there are few affections of common occurrence in which errors in diagnosis are so frequent. The explanation is not difficult. Typical typhoid fever is the exception rather than the rule; most cases deviate more or less from what may be called the normal type. Furthermore, the opportunities for studying these deviations in a large number of cases are exceptional with most physicians; at least this is true of this city, where, as a professional friend aptly expressed it, "The cases of typhoid fever are too few to go around." The actual frequency of the disease in this city cannot be ascertained, but the most liberal estimate, based upon the number of deaths reported to the Board of Health, will not amount to more than from two thousand to three thousand cases annually. As a considerable proportion of these cases are treated in hospitals and by a comparatively few physicians in large practice, it is evident that most members of the profession in this city have no adequate opportunity to become familiar with the disease in the great variety of aspects it presents in different cases. It is not surprising, therefore, that the doubtful nature of the symptoms in the early stage, and a natural reluctance to excite alarm by suggesting the possibility of so serious a disease as typhoid fever, should often mislead the physician at the outset into giving an erroneous opinion, that is persisted in, or only vaguely modified, when the real nature of the attack is revealed in the light of later developments.

While it is true of typhoid fever, as of other specific infections, that its symptoms tend to conform to a general type, nothing is more essential to its correct diagnosis than a recognition of the equally important fact that the picture of the disease may be widely different in different cases. As Jürgensen[2] has pointed out, the very inclusion of enteric fever in the category of infectious diseases implies the occurrence of all grades of severity in the symptoms, no less in this affection than in scarlatina, measles, and small-pox. Since the disease is a reaction between a specific virus and an extremely variable individual factor, we must expect to find all shades of intensity in the morbid process, from the fulminant forms in which the system is overwhelmed from the start, to those milder types in which there are merely slight disturbances of a few days' duration, so uncharacteristic that their true nature can be determined only by etiological considerations. Moreover, it cannot be insisted upon too strongly that, aside from the detection of the typhoid bacillus, there is no pathognomonic symptom of typhoid fever. Every one of the symptoms, even those upon which we place the most reliance, is found with greater or less frequency in other affections; so that in typhoid fever, more than in most diseases, the diagnosis must rest upon the significance of the symptoms as a group, rather than upon the pathognomonic value of any individual member of it.

In a certain proportion of cases—and this proportion seems to vary in different epidemics and in different localities—typhoid fever instead of presenting its usual gradual access is ushered in suddenly with a rigor or marked chilly sensations, and a rapid rise of temperature to 103° or 104° F. within the first twenty four or forty-eight hours. Wunderlich's well-known dictum, that typhoid fever may be excluded when the temperature is 104° on the first or second day, is doubtless true for the great majority of cases, but the exceptions are too numerous for the rule to be an absolutely safe guide. This sudden access of symptoms appears to be determined sometimes by a malarial complication—certainly this is the interpretation usually put upon it—but it does occur also in cases which at no time during their course present any evidence of malarial infection. Thus, a rapid onset is occasionally seen in those very acute cases which resemble the fulminant forms of typhus; it occurs also in cases of moderate severity with protracted course; but the point to which I wish to call special attention is this, that a sudden outbreak of symptoms is observed occasionally in the very cases which are most likely to present difficulties in diagnosis, viz., in the abortive forms, in which characteristic symptoms are often absent, and the termination of the attack at the end of the first or second week leaves us in more or less doubt as to the nature of the illness. Jürgensen's statistics [1] upon this point are instructive. They include eighty-seven cases of abortive typhoid fever occurring alongside of pronounced forms of the disease in house and hospital epidemics, under conditions, therefore, which made the diagnosis reasonably certain. Of these eighty-seven cases there were

ENDED.		BEGAN.		
		Suddenly.	With Shivering.	Gradually.
On 4th to 7th day,	16......	All	9	None
On 8th to 10th day,	19.....	All	11	None
On 11th to 13th day,	24......	20	11	4
On 14th to 16th day,	28......	19	11	9

In eighty-five per cent., therefore, the attack began suddenly; in nearly half the number it began with a distinct rigor or chilliness, so that the patient could name the first day of his illness, while in all the cases that terminated before the eleventh day a gradual onset of symptoms was not recorded once. My own impression, though I have no statistics to present, is, that in this country abortive typhoid fever presents prodromic symptoms with greater frequency than was observed in Jürgensen's cases; but there is no doubt, I think, as to the general correctness of his statement. Fortunately these abortive cases usually show symptoms that are fairly characteristic, such as enlargement of the spleen, slight diarrhœa, and an early crop of rose-spots; but these signs may all be absent in cases that are apparently due to typhic infection. A single illustration must suffice:

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[1] Read before the Practitioners' Society of New York, May 18, 1888.

[2] Volkmann's Sammlung klinischer Vorträge, No. 61 (Innere Medecin, No. 21). German Clinical Lectures, New Sydenham Society Publications, 1877.

[1] Loc. cit.

In a family in which a husband and wife were both ill with severe and protracted typhoid fever, the wife's brother, after a few days' malaise and headache, took to his bed with a slight fever. During the following week the temperature ranged between 99° and 101.4° F., at no time rising above the latter point. The general prostration and hebetude were disproportioned to the temperature, but there were no other symptoms that would suggest typhoid fever; no meteorism or diarrhœa, no rose-spots, and no appreciable enlargement of the spleen. The patient had been in perfect health up to this time, and careful examination failed to reveal any cause for the fever except a very mild typhic infection. The fever defervesced at the end of the first week, practically without medication, and convalescence was established within a short time. Abortive cases of typhoid fever, occurring independently of conditions likely to excite suspicion, are much more frequent than is commonly supposed; and when quinine is used freely, as is generally the case, the physician too often regards the malarial nature of the attack as demonstrated by the apparent arrest of symptoms, or congratulates himself on having cut short an attack of typhoid fever.

Much importance has been attached, and I think justly, to the peculiar physiognomy and manner of typhoid-fever patients during the first period of the disease. The grave and serious aspect of the countenance, the air of listless indifference, the brief replies to questions without attempts at explanation, the avoidance of unnecessary motion, the dilated pupils, and the dusky pallor, or, perhaps more frequently, the hectic flush of the cheeks, constitute an *ensemble* of symptoms that is very characteristic in well-marked cases. It is important to remember, however, that these symptoms are due, not to the mere elevation of temperature, but to oppression of the nervous system by the typhic poison, and that in milder grades of infection, even with high temperature, a natural buoyancy of temperament may be preserved throughout the attack. I recall especially one case in which, notwithstanding an afternoon temperature of 104° F. for several days, the patient manifested a gayety of manner that would have allayed suspicion if the occurrence of some diarrhœa and a fairly marked roseola, together with the presence of two pronounced cases of typhoid fever in the same family had not confirmed the diagnosis.

So, too, with the temperature curve of typhoid fever, we must expect to find frequent deviations from the usual type with its triple series of oscillations—one of ascending, one of stationary, and a third of descending oscillations. To be sure, the temperature curve in this disease derives its only value from its greater or less conformity to the general type; but it should be borne in mind that the temperature equilibrium of typhoid fever is particularly unstable, and that the schematic curve which is depicted in text-books to show what the course of the temperature in typhoid fever ought to be, but which one rarely sees anywhere else, is apt to be changed by a great variety of disturbing influences. Thus, as we have already seen, the period of ascending oscillations may be absent, in consequence of the rapid onset of symptoms. The final series of descending oscillations may also be lost from a termination by a comparatively rapid or irregular lysis; while in the intervening period the usual curve of stationary oscillations may be broken by sudden falls or rises, due to the action of medicines, mental emotion, physical exertion, errors in diet, hemorrhages, malarial complications, and other causes, the nature of which is not always clear. The greatest diagnostic value belongs to the period of descending oscillations, when this assumes a markedly intermittent type, with nearly or quite normal morning temperatures, and high evening temperatures slowly descending to normal through a period of several days. Such a course of the final temperature in the third or fourth week of a fever is fairly pathognomonic of typhoid fever, as it is rarely found in other febrile affections. In private practice this characteristic termination of the curve is often lost by a failure to take the afternoon temperature, on account of the favorable condition of the patient at the usual morning visit. The typical curve may be altered, also, by the assumption for one or more days of the "inverse type," with temperatures higher in the morning than in the evening; also by a general depression of the curve, with oscillations not rising above 101° or 102° F. throughout the attack, and, finally, by the absence of any rise above the normal. Several epidemics of typhoid fever, in which a certain proportion of the cases were afebrile during the whole course of the disease, have been recorded by such competent observers as Strube, Liebermeister, Friedlander, and others.

The roseola of typhoid fever, when typical in form and recurring in successive crops, is a most valuable aid in diagnosis. Except in children, it is found in a large proportion of cases occurring in this part of our country, but with a frequency varying according to the severity of the epidemic type. In Western, and particularly in Southern States, it seems to be observed less frequently, even in cases presenting other characteristic symptoms of the disease. The eruption is overlooked sometimes through ignorance of the fact that the favorite site is not on the abdomen, as is commonly supposed, but on the dorsal region of the back, where the spots, in some cases, may be found when they are absent elsewhere. When the eruption is present, and especially if it be copious, some of the spots often fail to answer to the usual description, and may be mistaken for "ordinary pimples" or flea-bites, though they never show the central dot which characterizes the latter eruption. Such irregular forms—if they may be so called—may be distinctly elevated or even acuminated, they may last longer than the usual limit of three to five days, they may fail to disappear on pressure, and, as Jenner pointed out, in rare instances they may present a minute vesicle at the apex. Still, no diagnostic importance can be attached to any spots that are not typical, and the only safe way to guard against mistake is to surround each suspected spot with a circle drawn with ink, an aniline pencil, or nitrate of silver, and then study its changes from day to day in connection with the appearance of rose-spots elsewhere. Typical rose-spots recurring in successive crops are fairly conclusive evidence of typhoid fever; and yet it should be noted that, according to Rilliet and Barthez, and Bouchut, a similar roseola is found not very infrequently in children with acute miliary tuberculosis, and that Murchison and Senator have each recorded a case of the same disease in adults with rose-spots that could not be distinguished from those of typhoid fever.

Enlargement of the spleen, when not due to cardiac, pulmonary, or liver disease, is merely evidence of some infective process, and has only this diagnostic significance, which is yet a very important one. When the tumor is of moderate size it is of little service, therefore, in distinguishing typhoid fever from other affections in which similar enlargements are found. In malarial infection the splenic tumor is usually larger than in typhoid fever, but a considerable enlargement is occasionally seen in the latter affection, especially when it attacks young children. Splenic enlargement is met with also in general tuberculosis, septicæmia and pyæmia, malignant endocarditis, and other infective processes; but, as a rule, it is not found in simple gastro-enteric catarrh, in ephemeral fever due to various non-infective causes, or in symptomatic fevers, between which affections and typhoid fever, therefore, the presence or absence of enlargement of the spleen may be of much assistance in diagnosis. So much uncertainty, however, attends the physical examination of the spleen in the presence of distention of the stomach and intestines that this sign is not available in many cases. On careful palpation the projecting edge of the spleen may be felt occasionally when we have demonstrated apparently the absence of enlargement on percussion.

The presence of constipation, in place of the usual diarrhœa with pea-soup stools, often proves to be another source of difficulty in diagnosis. The absence of diarrhœa seems to have been specially frequent in the forms of typhoid fever seen in this region during the past ten years. In fact, it has been no uncommon experience to meet with cases in which the proper emptying of the bowels, without resorting to cathartics, has been the chief embarrassment in treatment. This difficulty is encountered, of course, more frequently in mild cases; but it is met with also in severe types of the disease. I have seen fatal peritonitis produced by perforation of a typhoid ulcer in a patient who had at no time presented diarrhœa, but had required daily enemata, the diagnosis being confirmed by autopsy. In another well-marked case the constipation that had persisted throughout the attack resulted, after a constipated stool, in an anal fissure that subsequently required incision to cure it. Moreover, when diarrhœa does occur, it may be slight, or uncharacteristic in the appearance of the stools, or it may develop at a late period after typhoid fever has been excluded from the diagnosis by reason of the atypical nature of the symptoms.

We are so much in the habit of regarding typhoid fever as essentially and predominantly an enteric process that we are apt to forget that it is also a general infection, and are not always prepared, therefore, to recognize the significance of other localizations when these press to the front in the early stage, and the intestinal symptoms remain for a time in the background. In such cases the usual picture of the disease may be changed, at the outset, almost completely, by the attack being ushered in with marked pulmonary, renal, or cerebral symptoms, the true nature of which may be revealed only by the later development of meteorism, diarrhœa, and roseola. The prominent part which lesions of the respiratory tract—pharyngeal catarrh, bronchitis, and pneumonia—often play in this disease, especially during the second or third week, is well known; but the fact is less familiar that, in certain cases, pulmonary symptoms may assume such prominence from the start as to disguise, at least for a time, the real character of the illness. Thus, the attack may begin with a catarrhal pneumonia in such massive form as to present all the signs of croupous pneumonia, or more commonly with a bronchitis, so marked as to disarm suspicion of any other cause for the fever.

Last autumn I saw in consultation a girl, twelve years of age, who had been ill for two weeks with obscure symptoms. The attack began with sore throat, followed by a cough which had steadily increased in severity, and of late had become very distressing. There had been some fever, but its type could not be ascertained on account of the irregular attendance of her physician. Except some loose stools on one day, due to action of a cathartic, there had been no diarrhœa. The marked loss of flesh and urgent character of the pulmonary symptoms had excited suspicion of an acute miliary tuberculosis; in fact, such a diagnosis had been given to the family. At the time of my visit, two weeks after the first symptoms, the child was about the house, and had not been confined to bed, although evidently seriously ill. She was thin; her face flushed and somewhat cyanotic; pulse, 120; respirations between 40 and 50; temperature normal (morning). The cough was incessant, and accompanied by only slight mucous expectoration. Physical examination of the lungs gave only signs of bronchitis. There were no rose-spots, meteorism, or diarrhœa. The child was quite deaf in both ears, much more so than could be accounted for by the small amount of quinine she had taken, and this fact excited my suspicion that, although the symptoms thus far appeared to be wholly pulmonary, we really had to deal with a typhic infection. The absence of fever seemed to contraindicate such a diagnosis, but there was a history of fever, and it was possible that this remission might be accidental. The child was put to bed. In the evening of the same day the temperature rose to 104° F.; roseola developed two days afterward, with meteorism and diarrhœa, and from that time on the disease ran its usual course, with relief to the pulmonary symptoms when diarrhœa set in. Subsequently she had a relapse, ushered in by the same urgent bronchitis noticed in the primary attack, but followed by complete recovery of health.

A second very similar case may emphasize this lesson. A young lady, twenty-one years of age, after a month's residence in Florida this spring, complained of some malaise during the last days of her visit, and was supposed to have caught cold at a lawn party the day before she returned to this city. On her arrival here she had some sore throat and a very troublesome cough, for which she consulted her physician. I saw her two weeks after the appearance of the first symptoms. During the preceding three or four days she had been chilly at times, and somewhat feverish, but had not been confined to bed and complained of nothing except a very severe cough. This was incessant, with only trifling mucous expectoration. There had been no abdominal symptoms, no epistaxis, only slight headache, and no more malaise than often occurs in connection with bronchitis. Her temperature, however, was 103° (evening), and her general aspect, together with the marked resemblance of her peculiar cough to that of the previous case, impressed me with the possibility of typhoid fever. On the following day there were increased malaise and marked hebetude. Two days later a few rose-spots appeared on the dorsal region of the back, followed forty-eight hours afterward by successive crops on the abdomen, meteorism, diarrhœa, and the usual train of typical symptoms. In this case also there was marked relief to the cough on the development of abdominal symptoms. The fever defervesced completely on the thirtieth day. After an interval of thirteen days her cough returned with considerable urgency, and for forty-eight hours this was the only symptom that excited suspicion of a relapse, except a slight acceleration of the pulse and a temperature that did not rise above 100° F. After this time the bronchitis persisted as the most prominent symptom, until the appearance, on the fourth day of relapse, of marked meteorism, and some tenderness in the right iliac region, but without recurrence of the diarrhœa. Another case of typhoid fever, contracted in the same hotel at about the same time, was sent to one of our city hospitals, and had a sharp attack, with diarrhœa and intestinal hemorrhages.

The resemblance between these pulmonary forms of typhoid fever and a pulmonary tuberculosis is often so close that a differentiation between them by the symptoms alone is impossible. In illustration two cases may be quoted; the first of which was reported by Murchison.[1]

Female, aged twenty-five years. Mother died of consumption. Patient had had a cough for one year, with emaciation and night-sweats. Twelve days before admission to hospital her symptoms had become much worse; increased cough, fever, profuse perspirations, rapid emaciation, and great prostration. On admission every appearance of advanced phthisis; pink flush on cheeks; pulse, 120 to 140; temperature, 101 to 103.5°; respirations, 40; great dyspnœa, profuse expectoration of creamy pus; tongue dry and red; abdomen flat; no diarrhœa or rose-spots; constant delirium. Four days afterward hemorrhage from the bowels, and death forty-eight hours after. The autopsy revealed typical typhoid ulcers in the lower part of the ileum, and no tubercle anywhere. Lungs congested; commencing lobular pneumonia in both inferior lobes. "At the entrance of larnyx there were several small ulcers, the largest forming a deep excavation in front of the epiglottis, and being the apparent source of the pus which was expectorated during life."

The reverse of the picture is shown by an equally striking case reported by H. Senator.[2] In this patient there were no pulmonary symptoms until five days after admission. Well-marked catarrh then developed, but the other symptoms seemed to point unmistakably to typhoid fever. There were present, during the course of the attack, enlargement of the spleen, successive crops of rose-spots, several epistaxes, dicrotic pulse, deafness, meteorism, and suppurative parotitis. On ophthalmoscopic examination nothing abnormal was found except paleness of the fundus. At the autopsy there was no typhoid lesion, but miliary tuberculosis of both lungs and bronchial glands, as well as of the enlarged spleen, liver, and kidneys.

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[1] Lancet, 1870, ii., 808.

[2] "Ueber einen Fall von acuter Miliartuberculose mit dem ausgeprägten Bilde des Abdominaltyphus," Berliner klin. Wochenschrift, 1881, 349.

In all forms of tuberculosis, whether pulmonary, peritoneal, or cerebral, the fever is usually of a different type from that of typhoid fever. As Dr. Waters, of Liverpool, has pointed out, it commonly attains its maximum at or before 5 P.M.; while in typhoid fever the temperature is generally higher at nine than at five o'clock. Moreover, an inverse type of temperature is much more common in tuberculosis than in enteric fever. Brunniche [1] lays special stress on this point, as he found it fifteen times in seventeen cases of acute miliary tuberculosis. This proportion is doubtless much larger than is commonly found, and it is to be borne in mind also that the typus inversus is occasionally met with in enteric fever, though rarely for longer than one or two days at a time. These are specially the cases in which search for the tubercle or typhoid bacilli is desirable, and sometimes affords the only means of positive diagnosis.

Another localization of the typhic process which may give rise to difficulties in diagnosis is the renal type, first described by Gubler and Robin, and known as the Gubler-Robin form of typhoid fever.[2] In these cases renal symptoms may assume in the early stage a predominance over other symptoms that may suggest acute nephritis rather than typhoid fever. In well-marked forms the attack may begin with a rigor or chilly sensations, general depression, and repeated epistaxes. The face is often pale, occasionally bloated, with some swelling of the feet, but no general anasarca. The pulse is often as tense as in acute nephritis. The urine is scanty and contains a large amount of albumen, with blood, epithelial, and granular casts. When these symptoms usher in the attack the diagnosis must remain in doubt temporarily until abdominal symptoms develop, as they usually do later. Amat takes a discouraging view of the prognosis of these cases, and says that five-sixths of them die in the second week; but this is probably an exaggerated statement, as it is not confirmed by other writers. These renal symptoms, like the pulmonary symptoms, often subside on the appearance of diarrhœa, and severe lesions of the kidneys are rarely found at the autopsy.

So, too, much embarrassment may be occasioned by the early development of nervous symptoms, cerebral or spinal. Murchison [3] reports a case of a man, aged forty, "who after a few days' malaise, which attracted but little notice, passed suddenly into a state of maniacal delirium, requiring two men to hold him down in bed." After a dose of chloral he slept well, and from this time the fever ran its usual course. In his classical work on the "Fevers of Great Britain," he states that he has seen a considerable number of cases in which delirium was the first symptom observed, and that in two of the cases removal to a lunatic asylum had been contemplated. Several instances in which such patients have actually been sent to asylums have been recorded by other observers.

Spinal symptoms may also predominate, in the early stage of typhoid fever, to a degree sufficient to excite suspicion of organic lesion of the spinal cord. As Fritz [4] has pointed out, such cases may present marked pains in the entire spinal region, extending into the extremities, stiffness of the neck, cutaneous and muscular hyperæsthesia, and even paresis of the lower limbs. In both the cerebral and spinal forms these early symptoms, as in the other atypical localizations, usually subside on the later appearance of enteric symptoms, and without appreciable lesions at the autopsy in fatal cases. Still, in exceptional instances, the nervous system may be overwhelmed fatally at the outset. Trousseau [1] reports a case that began very suddenly—the date of onset could be fixed accurately—with violent headache and insomnia, disturbed by frightful nightmares. She was brought to the hospital on the fourth day of her illness, suffering from racking headache, atrocious pains in the limbs and loins, intense fever, and rapid pulse. She died the same evening, and the autopsy disclosed one of the most confluent enteric eruptions Trousseau had ever seen.

Difficulties may occur also in the differential diagnosis between typhoid fever and acute rheumatism. Bourcy,[2] in a Paris Thesis, 1883, has reported a number of cases of typhoid fever in which during the course of the disease joint symptoms developed, resembling those of acute rheumatism, but which he regards as "typhoid in nature, and only apparently rheumatic." A similar case is reported by Wagner [3] with acute articular symptoms, involving several joints, appearing on the twelfth day of the fever. At the autopsy no pyæmic lesions were found in the joints.

In certain localities articular symptoms appear to be a very frequent complication of typhoid fever. Thus, Dr. Turner, of Gibraltar [4] in an article on the rock fever of that region—which he regards as a true enteric and not a malarial fever—states that articular symptoms, varying from slight tenderness of a single joint to an extensive febrile rheumatic affection, are present in a large proportion of the cases observed there. The frequency of this complication in Gibraltar he ascribes to the marked prevalence of rheumatism in that locality, and suggests that persons whose vitality is lowered by any protracted illness are, for this reason, specially liable to contract it. In his cases the rheumatic symptoms rarely developed before the end of the second week, usually during convalescence.

Again, acute rheumatism, or at least symptoms which cannot be distinguished from it, may occur coincidently with typhoid fever and for a time overshadow it. Dr. Finlay [5] has reported a very interesting case illustrating this fact. The patient before admission to the hospital had been ill for a week with fever, pain, redness, and swelling of his ankles, hips, and knees, and examination showed a well-marked mitral systolic murmur. He was treated with salicylate of soda, and the fever and joint symptoms disappeared five days after admission. A fortnight afterward the fever returned; rose-spots appeared six days later, with diarrhœa, and the patient died on the twelfth day of this attack The autopsy showed general peritonitis from perforation of a typhoid ulcer in the lower part of the ileum, and another ulcer, nearly healed, that was clearly of much earlier formation. It seemed probable, therefore, that the fatal attack was a relapse of typhoid fever, and that the primary one had coexisted with, and been concealed by, the acute rheumatism. He also reports three cases of typhoid fever occurring during convalescence from acute rheumatism, and suggests the query whether rheumatic fever may not, in some degree at least, predispose to enteric fever, though perhaps only in the general sense that all febrile processes may do so. In this connection he states that of seven patients in whom typhoid fever had developed in the wards of Middlesex Hospital during the preceding ten years, five had been admitted for undoubted rheumatism.

Moreover, acute rheumatism with marked fever, but with imperfectly developed joint symptoms, may be mistaken occasionally for typhoid fever. Wagner, in the article already quoted, mentions several cases in which the diagnosis fluctuated between typhoid fever, acute rheumatism, and cerebro-spinal meningitis for several days, until finally pronounced articular symptoms appeared, and yielded to the administration of salicylic acid.

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[1] Gaz. hebd. de Méd. et de Chir., 1875, No. 3.

[2] Journ. de Thér., 1875. Amat: Sur la fièvre typhoide à forme rénale, Paris Thèse, 1878. Homburger: Berliner klin. Wochensch., 1881, 277, 292, 308.

[3] Loc. cit.

[4] Etude clinique sur divers Symptômes Spinaux dans la Fièvre Typhoïde. Paris, 1864.

[1] Lectures on Clinical Medicine, New Sydenham Society, vol. ii., 1869, 359.

[2] Des déterminations articulaires des Maladies infectieuses (pseudo-rheumatismes infectieux.)

[3] Deutsches Archiv für klin. Medicin, xxxvii., 1885, 201.

[4] The Practitioner, London, 1884, vol. xxxiii., 305.

[5] Transactions Clinical Society, London, 1884, xvii., 135.

Several questions of much interest are suggested by these observations on a subject that seems to have attracted but little attention until within the past few years, but we can delay only to draw the following practical conclusions: 1. That typhoid fever, like scarlet fever, though much less frequently, may present joint symptoms apparently rheumatic, but whether such symptoms are a manifestation of typhic infection, or indicate a complication with true rheumatism must be decided by the special conditions of the individual case. 2. That after an attack of acute rheumatism the development of typhoid fever, in more or less direct association with it, is to be borne in mind as a possibility. 3. That rheumatic fever, independently of typhic infection, may simulate the latter for a time so closely that only the result of treatment or the future progress of the case can clear up the diagnosis.

Perityphlitis usually differs from typhoid fever so widely in its symptoms and history that it may seem scarcely necessary to refer to the possibility of confounding the two diseases. Still, this mistake has been committed not very infrequently, and I have to confess having been myself a *particeps criminis* in such a blunder. Some years ago, on beginning my service at a hospital in this city, I found a convalescent patient who had been ill—so I was told by the house-physician—with an attack of perityphlitis in which resolution of the inflammatory process had occurred, as so often happens, without suppuration. My predecessor, now dead, a man of acknowledged skill and a careful observer, had made this diagnosis on account of the absence of the usual symptoms of typhoid fever, and the presence of an unusual degree of tenderness and some tumefaction in the right iliac fossa. The bowels had been constipated, rose-spots had not been found, the temperature curve had been uncharacteristic, and the slight fever had subsided at the end of the second week. The patient was kept in bed a few days longer, and then was allowed to sit up, but on doing so she was seized with a return of the pain in the right iliac fossa, accompanied by fever. During the following week, although no tumor could be detected, there was decided resistance to pressure, and both the right iliac fossa and the right flank were markedly tender. The bowels were obstinately constipated, there were no rose-spots, and the temperature was uncharacteristic. Deep-seated burrowing of pus behind the cæcum and ascending colon was suspected, and this opinion was confirmed by two attending surgeons, who saw the patient in consultation with me. The case was, accordingly, transferred to the surgical side, and two punctures for pus were made without success. During the night the patient fell into collapse and died the next day. At the autopsy no evidence of perityphlitis was found. There was commencing general peritonitis, and numerous typhoid ulcers were present in the lower part of the ileum, some partly healed, some evidently of recent origin, and one that had perforated the bowel, and had been evidently the immediate cause of death.

One attack of typhoid fever, as is well known, confers a certain degree of immunity from a recurrence of the disease. Instances of second attacks have been mentioned by Murchison, Bartlett, Budd, Liebermeister, and others, but rather as curiosities in medical experience, and the general impression seems to be that in a case with suspicious but not typical symptoms, the history of a previous attack may exclude typhoid fever with a considerable degree of certainty. The recent investigations of this subject by Eichhorst, of Zurich,[1] show, however, that recurrent attacks are much more frequent than is commonly supposed, and that even a third or a fourth attack may possibly occur. In an analysis of 666 cases of typhoid fever treated by him (1884–1886) he found a recurrence of the disease in 4.2 per cent. of his cases. From the Munich Hospitals Huber reports second attacks in 1.7 per cent. out of 457 cases (1865–1866), Körber in 1.6 per cent. out of 1,291 cases (1870–1873), and Beetz in 1.7 per cent. out of 599 cases (1874–1875). Eichhorst's statistics also fail to confirm the general impression that a second attack, when it does occur, is less severe than the first one. The mortality was as great, and the complications as numerous in the second attacks as were observed in the general typhoid fever statistics of the hospital.

The limits of this article will permit us to touch only very briefly on the diagnostic relations of typhoid and malarial fevers, a subject that has excited much controversy, and is admitted to present serious difficulties. The attempt, however, to adjust some of these difficulties by the introduction of a new category of fevers—typho-malarial fever—has proved unsatisfactory in many ways. As originally proposed by Dr. Woodward, in the late war, this term was intended to be restricted to cases in which there was reasonable evidence of infection with the special poisons of both malarial and typhoid fevers. It was in this sense only that typho-malarial fever was recognized as a distinct affection by the International Medical Congress of Philadelphia in 1876, and was introduced by the London College of Physicians into its nomenclature of diseases. It is not easy to see why a hybrid term is necessary here more than in several other diseases which we know are often complicated with malaria; but if such a term be actually needed, others are available which are less open to objection—such as "malarial typhoid fever," "malarial enteric fever," or, still better, as Dr. Squire, of London, suggests, "typhoid fever and malarial fever," "just as one would enter syphilis and scarlet fever if the two coexisted."[1] The term "typho-malarial fever" throws the emphasis on the malarial element, which must be, in the great majority of cases, the subordinate and less dangerous factor. Nor is this objection hypercritical. The practical result of the adoption of the term has been that with a large proportion of the medical profession "typho-malarial fever" has lost its original meaning, and has come to be regarded as merely malarial fever with typhoid symptoms. In fact, Dr. Squire, in his article on Typho-Malarial Fever,[2] actually defines it as "a *malarial fever which has assumed that adynamic type which is present in typhoid fever.*" According to this definition typho-malarial fever is a malarial fever without true typhic infection—the prefix "typho" having merely the meaning of "adynamic." Such a misuse of a term that has been employed in an entirely different sense for a quarter of a century cannot be justified, and only adds to the already existing confusion.

I say confusion, because I think no one can have seen many cases of typhoid fever in hospital or consultation practice without being struck by the very great frequency with which this disease is confounded with malarial fever, and that, too, not only in regions where malarial infection assumes its intenser forms, but perhaps also with almost equal frequency in localities where intermittent fever and other mild malarial affections prevail to a greater or less extent, but the poison is rarely severe enough to excite the remittent or continuous forms of fever. The explanation lies, I suspect, in a very prevalent bias in the minds of a large portion of the medical profession toward interpreting all febrile disturbances not clearly traceable to obvious lesion as malarial manifestations. That such a bias does exist, and that, by reason of it, typhoid fever is not recognized in a large proportion of cases are facts of common observation, though not susceptible of demonstration on a large scale except by indirect proof. Such evidence is presented, at least so far as the City of New York is concerned, by the following comparison of the mortality statistics of typhoid and malarial fevers in the city at large with the similar statistics of eight of our largest hospitals.

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[1] Klinische Erfahrungen über wiederholtes Erkranken an Abdominaltyphus, Virchow's Archiv, Bd. cxi., Heft 1, 1888, 48.

[1] The American Journal of the Medical Sciences, April, 1887, p. 396.

[2] Loc. cit.

Annual mortality from typhoid, typho-malarial, and malarial remittent fevers in the City of New York, from 1883 *to* 1887, *inclusive, as reported by the Sanitary Bureau.*

	Typhoid fever.	Malarial remittent fever.	Typho-malarial fever.
1883	471	174	154
1884	389	119	77
1885	294	120	111
1886	325	151	108
1887	323	117	78
Total	1,802	681	528

In the published reports of the Board of Health typho-malarial fever is classed under the head of malarial fevers. Following this classification the record is, therefore: Total number of deaths from typhoid fever, 1,802; from malarial remittent and typho-malarial fevers, 1,209.

Mortality from the same diseases in eight hospitals in the City of New York for the quinquennium 1883–87.

	Typhoid fever.	Malarial remittent fever.	Typho malarial fever.
Bellevue Hospital	116	5	8
St. Francis' Hospital	78	0	0
New York Hospital	50	3	0
Roosevelt Hospital	41	0	0
St. Vincent's Hospital	25	3	0
Presbyterian Hospital	21	0	0
Mount Sinai Hospital	19	0	2
St. Luke's Hospital	16	0	0
Total	366	11	10

Following the Board of Health classification, the hospital record is, therefore: Total number of deaths from typhoid fever, 366; from malarial remittent and typho-malarial fevers, 21. In the city at large, according to the Board of Health statistics, the ratio between the mortality from malarial remittent and typho-malarial fevers, and that from typhoid fever, is 1 to 1.65. The relative mortality between the same diseases in the hospitals specified is 1 to 17.42.[1]

As the relative mortality of typhoid and malarial fevers must be approximately the same in our hospitals as in the city at large, and as the diagnosis of these affections in hospitals, where the cases are carefully studied, may be regarded as fairly accurate, only one conclusion can be drawn from the very striking contrast presented by the above tables. Nor is it merely a question of medical terms or comparative skill in diagnosis. In a disease requiring such careful management as typhoid fever, error in diagnosis implies also, in many cases, injudicious, perhaps harmful, treatment. The dangers from intestinal hemorrhages and perforation are not guarded against, while the spread of the disease in the community is favored by neglect of sanitary precautions. Indeed, it is difficult to exaggerate the serious importance of such mistakes, repeated as they are in many hundreds of cases every year in this city.

It should be noted also that the introduction of "typho-malarial fever" into the classification of fevers has made it impossible to ascertain the relative frequency of typhoid and malarial fevers. The Board of Health of this city classes typho-malarial fever under the general head of malarial fevers, and thus throws the weight of its authority in favor of the view that in this part of the country typho-malarial fever is essentially a malarial fever. Every one familiar with the facts knows that the great majority of cases so reported were really cases of typhoid fever, which were diagnosticated as malarial at the outset, a revision of the diagnosis being necessitated by the later development of symptoms more or less characteristic of typhoid fever. Still, even if the diagnosis in these cases be admitted as correct, there can be no doubt that in such combined infections the fatal element, at least in this part of the country, is the typhoid rather than the malarial poison. The Board of Health of this city is, of course, not responsible for the correctness of the diagnoses reported to it, but it can at least make its statistics less inaccurate than they are under its present classification of fevers, by removing typho-malarial fever from the general category of malarial fevers, and placing it in a nondescript class by itself.

As regards uncomplicated malarial remittent fever, the report of only eleven deaths in eight of our largest hospitals during the past five years—most of these deaths occurring in patients from Southern States or from regions farther south—shows clearly that malarial fever of a remittent type is far from being a prevalent endemic disease in this locality. On the contrary, I believe that it is comparatively uncommon, and that this diagnosis is made here so frequently mainly because there are so few opportunities for becoming familiar with its characteristic symptoms. It is unnecessary to enter into details of differential diagnosis; the only point I wish to emphasize is this, that, given a case of more or less continued fever in this city, the chances between typhoid fever and malarial fever are altogether in favor of the former, and that the burden of proof lies wholly on the malarial side. Doubtful cases do occur occasionally which require quinine as a test, but the better acquainted one becomes with the varied forms of typhoid fever the less occasion there will be to resort to the diagnostic use of this drug. I lay some stress on this point because the routine use of quinine in large doses in the early stage of fevers in this region is unnecessary for the great majority of cases, and is, therefore, objectionable for obvious reasons. Most of our hospital patients with typhoid fever have been thoroughly dosed with quinine before admission, even when the symptoms were typical from the outset.

In other localities, however, where malarial infection assumes a severer type, the differentiation of typhoid fever from malarial fever is much more difficult, and is embarrassed by the question whether uncomplicated malarial infection may present the adynamic and enteric symptoms of typhoid fever, or whether the occurrence of these symptoms in malarial fever implies infection with both poisons. This was the problem presented to the physicians in our Northern armies during the War of the Rebellion, when they met in Southern States a type of fever different from the typhoid fever with which they were familiar, and different also from the usual malarial remittent of the South. The first Commission, appointed in December, 1861, to investigate the nature of the fever prevailing in the Army of the Potomac, in front of Washington, reported that, while a certain number of cases of ordinary typhoid fever existed in the army, the large majority of the febrile cases were "bilious remittent fevers, which, not having been controlled in their primary stage, have assumed that adynamic type which is present in typhoid fever." This decision was reversed by a later Commission, and the term typho-malarial fever was introduced into our nomenclature of fevers, with the unfortunate results already alluded to.

During the late war there were circumstances which favored to an exceptional degree a combination of the two infections. Large masses of men from the North were exposed in Southern States not only to severe paludal poisoning, but also to typhic infection from the unsanitary conditions incidental to camp life, and there were doubtless good reasons for assuming such a double infection in a certain, perhaps a large, portion of the fever cases. But to apply these observations to fevers developing under the widely different conditions of civil life, and to regard such combined infections as of common occurrence is open to serious objection. Many cases of simple typhoid fever present, during their course, symptoms that bear a certain resemblance to those of malarial fever. So, also, it is contended by writers of large experience in regions where the intenser forms of malarial infections are encountered, malarial fever occasionally assumes an adynamic form, with more or less pronounced enteric symptoms that may be mistaken for those of typhoid fever. In such cases the temperature curve loses its remittent type after a few days, and the fever becomes subcontinuous, with adynamic symptoms. The resemblance to typhoid fever may be increased also by the development of intestinal symptoms, meteorism, diarrhœa, and even hemorrhages. A certain amount of congestion of the alimentary canal, especially of the stomach and upper part of the intestines, is present in most cases of remittent fever, as shown by the frequency of bilious vomiting and epigastric tenderness in this disease. In severer forms patches of inflammation may occur also in the ileum and large intestines, with ulcerations, which usually differ, however, from those of tyophid fever in not being confined to Peyer's patches and the solitary glands. Ulcerations confined to these situations are doubtless to be regarded as more or less pathognomonic of typhoid fever; but it is quite possible that in rare instances malarial infection may produce a type of intestinal ulceration quite indistinguishable from that of typhoid fever. In such cases the true nature of the ulcerations may be shown by the melanæmia and the pigmentation of the liver, spleen, kidneys, and cortex of the brain.

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[1] Deaths from intermittent fever are very rare in this part of the country, except in persons coming from hot climates, and suffering from the congestive forms of this disease. Even such cases, however, are so uncommon as to be remembered among the curiosities of medical experience. It will scarcely be credited, therefore, that not far from one hundred and fifty deaths from "intermittent fever" are reported to the Board of Health of this city annually This fact indicates a degree of "malarial bias" that I was not prepared to expect.

For comparison I have been compelled to use mortality instead of morbility statistics, because the latter are not available, as few except fatal cases of fevers are reported to the Sanitary Bureau. But since the percentage of mortality is very much less in malarial than in typhoid fever, it is evident that the above mortality statistics do not represent fairly the relative frequency of cases diagnosticated respectively as typhoid fever and malarial fever in this city. Could the facts be obtained, they would show unquestionably that the number of cases diagnosticated and treated in this city as malarial remittent and typho-malarial fever, is greatly in excess of the number of cases diagnosticated and treated as typhoid fever.

The form of malarial fever just described has given rise, as is well known, to much controversy, and many writers doubt its existence independent of typhic infection. Such cases are still regarded by a large part of the profession in our Southern States and in India as typho-malarial fever, but many competent observers in both countries maintain its occurrence as a separate disease. This view is taken by Dr. Squire in the article to which we have already referred. He retains the term typho-malarial fever, but uses it in the sense of a malarial fever with typhoid symptoms, but without typhic infection. Many of our Southern writers prefer the term "malarial continued fever," which has the advantage of recognizing the nature of the disease, while at the same time distinguishing it from the milder and more common remittent form of malarial fever.

The differentiation of typhoid fever from malarial continued fever, especially if the latter be complicated by marked intestinal symptoms, is often very difficult. In this severe form of malarial infection quinine frequently fails to break the fever, so that we cannot rely upon the effects of this drug to guide us. Crops of rose-spots indicate typhoid fever almost with certainty, as they are never seen in simple malarial fever; but this symptom is often absent in typhoid fever, particularly in warm climates. A careful analysis of all the symptoms, with a consideration of surrounding conditions, will usually suffice to establish the diagnosis; but in some cases a differentiation between the two diseases is impossible without a microscopical examination of the blood or alvine discharges.

As a means of differentiating typhoid fever, malarial fever, and acute miliary tuberculosis, such examinations during life are of great value in doubtful cases, although with our present methods only positive results can be regarded as diagnostic. In acute miliary tuberculosis, besides the detection of tubercles in the choroid by ophthalmoscopic examination, tubercle bacilli may be found in the sputa in the pulmonary forms; while in the general forms, without marked pulmonary localization, the bacilli, as Meisels[1] has shown, may be discovered in blood drawn by puncture of the spleen, where the bacilli are often more numerous than in the general circulation. In malarial fever the malarial germ, or pigment granules, may be found in blood drawn from the finger or surface of the body, but with greater certainty in the splenic blood. In typhoid fever examinations for Eberth's bacilli have been less satisfactory; still a number of successful results have been reported. Thus Neuhauss[2] succeeded in nine out of fifteen cases in obtaining characteristic bacilli from blood taken from incisions through the rose-spots of typhoid fever, and in cultivating them upon nutritive gelatine. Inoculations with blood drawn from other parts of the skin remained sterile. He regards the rose-spots as cutaneous emboli of these micro-organisms. On the other hand, Merkel and Goldschmidt[3] repeated these experiments without success. In six cases they failed to find the bacilli in blood taken from the finger, and from rose-spots, and the cultures remained sterile. In three of these cases, however, bacilli were found in the stools, establishing the diagnosis, which had previously been doubtful. Leitz, Fraenkel and Simonds, and Pfeiffer, have also found the bacilli in the stools of typhoid fever, though in a minority of cases. In splenic blood and pulp successful results have been obtained by Hein[4] as well as by Meisels,[5] who states that the bacilli are less numerous in the later stages of the disease, and that distinct differences in their number are noticeable according as the blood is examined during the remissions or during the exacerbations of fever. With constant high temperatures these differences are less marked. He infers from this fact that the bacilli have an ephemeral existence, and that large numbers of them disappear during the exacerbations of fever, as seems to be the case also with the germ of malarial fever.

In examinations for the typhoid bacilli and for the malarial germ, splenic blood is much to be preferred, as it contains these organisms in larger number than the blood of the surface of the body; but whether puncture of the spleen for this purpose, with a thoroughly disinfected needle, is entirely free from danger, should be considered carefully. Seitz regards the operation as hazardous. At an autopsy of a case of typhoid fever he punctured the spleen to obtain blood and pulp, and found, on opening the abdomen, laceration of the capsule and an extravasation of blood into the peritoneal cavity. On the other hand, Dr. Councilman, of Baltimore, in a recent letter to me on this subject writes: "I have punctured the spleen with a carefully disinfected needle twenty-one times without any bad results. Previous to last autumn I have punctured in both typhoid and malarial cases. In one typhoid case the needle broke off short and was left in the organ, and no bad results followed. The needle should be disinfected by boiling. I should not hesitate to put a needle which I knew was pure into any part of the body, save possibly the medulla."

Dr. Councilman's opinion as to the harmlessness of the operation is doubtless correct for the great majority of cases; but I am by no means certain that serious accidents may not arise in exceptional instances. In advanced stages of typhoid and malarial fevers the splenic pulp is frequently much softened, and may be even of a semifluid consistence. In seven out of forty-six cases of typhoid fever Louis found the pulp reduced to a mass of "putrilage," and several cases have been reported in which spontaneous rupture of the spleen has occurred. Marked softening of the splenic pulp to such a degree that the spleen "presents the consistency of a mere bag of blood" has been observed occasionally also in malarial fever.[1] With a tense distention of the capsule under these circumstances, the conditions are similar to those of a hollow viscus with fluid contents, and it is now well known that when the wall of such a viscus is tensely stretched the opening made by puncture, even with a fine needle, sometimes fails to close after withdrawal of the needle, and the fluid contents escape. I have seen one case of fatal peritonitis produced by puncture of the gall-bladder for diagnostic purpose, the autopsy showing a considerable discharge of bile into the peritoneal cavity; and fatal results have been noted also from puncture of the intestines for the relief of meteorism.[2] Diagnostic puncture of the spleen, with proper precautions as to disinfecting of the needle is probably a perfectly safe procedure in the early stages of a febrile process; but in advanced stages the possibility of the accident referred to must be borne in mind.

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[1] Wiener Med. Wochenschrift, 1884, 1148, 1187.
[2] Berliner klin. Wochenschrift, 1886, 89, 389.
[3] Centralbl. für klin. Med., 1887, 393.
[4] Centralbl. f. Med. Wissenschaft, xxii., 1884, 695.
[5] Wiener Med. Wochenschrift, 1886, 759, 788, 816.

A word, in conclusion, with regard to a urine test proposed by Professor Ehrlich,[3] of Berlin, in 1882. Dr. C. L. Dana, it will be remembered, brought this subject before this Society three years ago, and I have little to add to what he said on that occasion, except to present my own experience with this test as an aid in the diagnosis of typhoid fever. As the test seems to have been but little used in this country, I append the formulas for its preparation.

The reaction consists in the production of certain colors in the urine (diazor-benzol reaction) by the addition of sulphanilic acid in the presence of nitrous acid, and the alkalinization of the mixture by strong aqua ammoniæ. As the test spoils rapidly, it is better to keep two separate solutions which are to be combined when needed, or to make a fresh preparation when examinations are made only at long intervals. No failure to obtain the reaction can be relied on unless we are certain that the test solution is unspoiled. The two solutions are prepared as follows:

℞. Acidi hydrochlorici (pure).... 1 part.
Aquæ.................... 20 parts.
Sulphanilic acid............ to saturation.
M. Signa—Solution A.
℞. Sodii nitritis.................... 1 part.
Aquæ..................... ... 200 parts.
M. Signa—Solution B.

This solution spoils more readily, and should be renewed more frequently than Solution A.

The test solution is made by adding one part of Solution B, to twenty-five parts of Solution A. Equal parts of the urine and of the test solution are mixed in a test-tube, and then stronger aqua ammoniæ is added freely to alkalinize the mixture. In normal urine the addition of the ammonia merely deepens the color, or develops a light reddish tinge, and the deposit of phosphates, after twelve to twenty-four hours, retains its grayish color. In urine presenting the characteristic reaction, addition of ammonia produces an intense scarlet, carmine, reddish orange, or even purplish color, and the phosphatic deposit is colored billiard green, violet, or greenish black, especially in its upper portion, as the layers last deposited carry down with them more of the pigment.

During the past five months Dr. Vaughan, of the house-staff of St. Luke's Hospital, at my request, has used this test in all urinary examinations, no results being recorded as positive which did not present the above-mentioned characteristics. Over seven hundred examinations were made in three hundred and seventy-five different patients. A characteristic reaction was found in all the cases of typhoid fever, fifteen in number; and the intensity of the reaction usually corresponded with the severity of the disease in its several stages. The reactions were always more marked, as Ehrlich has noted, in the relapses than in the primary attack. Well marked reactions were found, also, in almost all advanced cases of phthisis, even in the absence of fever: in three out of nine cases of lobar pneumonia, these three being fatal cases and in an adynamic condition at the time of examination; in two cases of empyema; in two cases of diffused carcinoma of the abdominal viscera; in one out of two cases of scarlet fever, and in one case of ulcerative proctitis.

These results correspond, in a limited way, with those obtained by Ehrlich in his far larger number of examinations—over seven thousand. He found the reaction occasionally in afebrile condition, such as advanced heart-defects, chronic hepatitis, carcinoma, especially of the pylorus, in the later stages of leucæmia, in senile marasmus, in severe malarial cachexia, cold abscesses, phosphorus-poisoning, and acute gastric catarrh. The febrile conditions presenting the reaction he classifies under three groups: 1. Rheumatism, meningitis, and erysipelas, in which it is usually absent; 2, pneumonia, scarlet fever, and diphtheria, in which it is encountered more frequently; and 3, typhoid fever and measles, which give the reaction almost invariably. In abortive and very mild cases of typhoid fever he has observed its occasional absence. Two instances of this kind have fallen under my observation. In the first case—one of mild typhoid fever without diarrhœa or meteorism, but with typical successive crops of lenticular spots, and aborting on the sixteenth day—no reactions were obtained throughout the attack. In the second case, which was seen first on the twelfth day, no reaction was found on that day, but on the day following a slight but characteristic reaction was obtained. After this time the reaction was invariably absent. This case also was a mild one without diarrhœa, but presented a typical roseola.

In typhoid fever this reaction is found usually as early as from the third to the sixth day, and until just before defervescence takes place. During the course of the attack the reaction sometimes disappears on the development of some severe complication, such as pneumonia, or in great prostration from any cause; but with these exceptions the absence of the reaction, or its feebler manifestation, after pronounced reactions have been obtained, usually indicate the approach of defervescence.

As a diagnostic test for typhoid fever this urinary reaction has little value except from a negative standpoint; but, even with this estimation of it, I regard it as a valuable addition to our means of differential diagnosis. During the first week of typhoid fever—the trying period for diagnosis—it is of little assistance, but after this time the absence of the reaction renders the existence of typhoid fever very doubtful. At St. Luke's Hospital during the past winter, in several obscure cases admitted with a diagnosis of typhoid fever and presenting many of its symptoms, a failure to obtain the reaction has enabled us to exclude this affection, the subsequent course of the attack revealing some other disease. This negative value, it seems to me, is far more important than any positive indication from the presence of the reaction, since the latter is found in so many other febrile affections.

Whether Ehrlich's test has any value in the differential diagnosis of typhoid and malarial fevers I am not prepared to say. The reaction has been absent in all the cases of intermittent fever in which I have tried it, and also in the only cases of malarial remittent—two in number and both from the South—which I have seen during the past year. Ehrlich mentions the occasional presence of the reaction in severe malarial cachexia, but makes no reference to the application of the test in malarial remittent fever. So far as I am aware this point has not been investigated by European observers, and it is to be hoped that this deficiency will be supplied by observations in our Southern States where ample material is always at hand.

In the application of this test the following points are specially important: 1. The test solution should be fresh; 2. a greenish or violet color of the phosphatic deposit, especially of its upper layers, is more significant than the color of the urine produced by the addition of ammonia; and 3, as regards typhoid fever, the absence of the reaction has greater diagnostic value than its presence.

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[1] E. G. Russell: Malaria: its Causes and Effects, p. 58 Calcutta, 1880.

[2] B. F. Curtis: The Dangers of Intestinal Puncture in the Treatment of Tympanites, New York Medical Journal, 1888, xlvii., p. 628.

[3] Zeitschrift f. klin. Medicin, 1882; Charité Annalen, 1883; Deutsch. Med. Wochenschr., 1884, No. 17.

ENTEROSTOMY FOR ACUTE INTESTINAL OBSTRUCTION.

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While studying the results of laparotomy for acute intestinal obstruction, in the preparation of a recent paper (*Annals of Surgery*, May, 1888, p. 329), I could find no statistics of the operation of enterostomy performed for that condition, except the figures of Treves, who gives a rate of mortality of 67.2 per cent. in sixty-one cases—a percentage which appeared to me much too high. A tolerably thorough search through the literature has revealed the fact that the operation is less often performed at the present time than laparotomy, or, at least, less often reported, for I have been able to gather only sixty-two cases, against the three hundred and twenty-eight cases of laparotomy which formed the basis of my first study.

It should be stated in the beginning that, by enterostomy is understood the operation of forming an artificial anus in any portion of the intestinal canal, including both "enterotomy" and colotomy. The cases have been collected within the same limits as the series of laparotomies, using only the acute cases with sufficiently complete histories, from 1873 to the end of 1887. It is often difficult to draw the line between the acute and chronic cases, and in some instances it has not been easy to determine whether certain operations, in which considerable exploration of the peritoneal cavity was made, should be classified as enterostomies or laparotomies. But as the same hand has collected both series, it is hoped that the errors will balance, or, at least, give no undue favor to either side.

The results in this series of sixty-two cases of enterostomy, performed for acute intestinal obstruction, were as follows: Forty-six cases (seventy-two per cent.) were relieved by the operation, six cases were not relieved (in three the fistula was established below the obstructed point), and in the other ten cases there is no definite statement whether relief was obtained or not, several of them having died within a very few hours.

Thirty-two cases recovered. In nineteen of these cases the fæces resumed their natural passage per anum, generally within a few days—three cases within twenty-four hours, nine more during the first week, and four more during the second week. The longest interval before the resumption of passages per anum in these cases was ten weeks. To these should be added two of the fatal cases, in which the passages per anum were resumed four, and fourteen days, respectively, after the operation. The fistula closed spontaneously in seven cases, and in six others it was closed by operation. It probably closed, or at least contracted to inconsiderable dimensions, in many others who were lost sight of before that result was attained.

Thirty cases died, a mortality of only 48.3 per cent. Stating these facts in tabular form we have:

Relieved by the operation............	46 cases,	= 72 per cent.	
Not relieved........................	6 "		
Recovered...........................	32 "	= 51.7 "	
Passages per anum resumed in	19 "	= 60 "	of recoveries.
Died	30 "	= 48.3 per cent.	

These results were so remarkable that I hesitated to adopt them. A certain glamour surrounds the laparotomist, and a surgeon might be ready to publish an unsuccessful case of laparotomy, who would feel that there was but little honor to be won in publishing an unsuccessful enterostomy. But the last fifteen cases in the series happen to furnish the results of the experience of two surgeons, Schede and Fuhr, and presumably contain all their failures as well as their successes, and an analysis of these cases yields results even more favorable than that of the entire series. Their record reads: Total, 15; relieved, 14; unrelieved, 1; died, 4; recovered, 11, including as a recovery one case which died of delirium tremens ten days after the operation, and in which natural passage of the fæces took place on the fifth day. Of the eleven cases which recovered, the passages per anum were resumed in seven, including the case just mentioned. The fistula closed spontaneously in two cases, and in four it was closed by plastic operation. Among the fatal cases is also a case in which natural passages took place in fourteen days, death being due to an attack of erysipelas two months after the fistula was formed.

Another aspect of this subject is the condition of the patients who recovered at the time of the operation. This is given in twenty-one of the thirty-two cases, being fair in six, bad in eight, and very poor in seven cases. In many cases, in fact, it was the bad condition of the patient which led to the choice of enterostomy instead of laparotomy. These facts compel us to accept these favorable results for enterostomy, however bad the comparison may be for laparotomy, with its mortality of 68.9 per cent.

That there may be no dispute as to classification, the details of all the cases in which there could possibly be room for doubt (four cases ranked as recoveries, and two as deaths) are given below.

Case LI.—Male, aged forty-five years. Obstruction for six days. In very bad condition. Enterostomy, left side. Fæces per anum in five days. Was recovering, when delirium tremens set in. Died on tenth day. Considered as a recovery from both obstruction and operation.

Case XXXI.—Male, aged seventy-six years. Obstruction for fifteen days. Bad condition. Enterostomy, right groin, relieved. Mental disease, refused food, died in three weeks. Autopsy—volvulus of small intestine below the fistula, gut not gangrenous. Considered as a recovery.

Cases LIII. and LXII. died of the results of overdistention of the bowel by the accumulation of material between the fistula and the point of obstruction below, but after such a long interval that they may fairly be classed as recoveries. The details of these cases will be given below.

Case XII.—Male, aged forty-three years. Obstruction for six days. (Attacks ten and twenty days previously, relieved by enema, and by the introduction of the hand into the rectum.) A tumor felt between the bladder and the rectum. Left lumbar colotomy. Was relieved, but continued to lose strength, and thirteen days later something was felt by the patient to give way inside, death following within an hour. Here probably the operation relieved the obstruction, but progress of a cancerous tumor continued and resulted in perforation of the bowel. But as it is not certain that this was not a case of volvulus or internal strangulation with gangrene and perforation, it is reckoned among the fatal cases.

Case XLVIII.—Female, aged fifty-eight years. Obstruction four days. (Three weeks previously herniotomy was performed for right femoral hernia, and a fecal fistula formed in the wound, and erysipelas attacked it.) Very bad condition. Enterostomy, left groin, relieved. The other fistula began to discharge again in seven days, and fæces passed per anum in fourteen days. The right fistula closed spontaneously, and the left was closing when erysipelas started again from it, and caused death two months after the operation. Autopsy revealed adhesions as the cause of the obstruction. This case is considered a fatal one, because of the septic infection of the wound, one of the dangers of the operation, even as late as it took place in this patient.

An analysis of the causes of death is necessary, espe cially in comparing the operation with laparotomy, and they are given in the following table:

Causes of Death after Enterostomy for Acute Intestinal Obstruction.

	Cases.	
Sepsis from the wound	5	
Failure to reach distended gut	3	
Gangrene of the gut subsequent to the operation	4	
Shock	4	
Total due to the operation, or its failure		16
Bad condition of the patient	7	
Heart failure	1	
Perforation of gut on thirteenth day. (Cancer?)	1	
Gangrene of the gut existing at time of operation	1	
Extensive adhesions, infant, malnutrition	1	
Total, independent of operation		11
Cause unknown		3
Total		30

In order to compare these results with those of laparotomy I quote the table from the article referred to, with some variation in arrangement.

Causes of Death after Laparotomy for Acute Intestinal Obstruction.

	Cases.	
Sepsis not due to gangrene of the bowel	17	
Prolonged operation	3	
Shock	13	
Cause of obstruction overlooked, or not found	19	
Total due to the operation, or its failure		52
Poor condition of the patient	101	
Complications (peritonitis, gangrene, various)	41	
Cause of obstruction irremediable	9	
Total, independent of the operation		151
Cause unknown, details wanting		23
Total		226

It will be seen at once that a larger proportion of deaths are set down as due to the operation in enterostomy than in laparotomy, but the reason is simply that the great majority of these patients are in such a miserable condition that the mere shock of an operation like laparotomy causes death, while enterostomy is so much less severe that its performance is seldom immediately fatal. Hence not enough patients survived the first danger of laparotomy—the shock—to enable us to form an idea of how many would have perished of peritonitis and other dangers of the operation. Certainly the proportion of these later accidents would have been much greater after laparotomy than after the relatively simple operation of enterostomy.

One very remarkable fact which appears in this study of the causes of death is that in only three cases was death occasioned by gangrene of the gut taking place after the operation. This danger at once occurs to the mind as the chief objection to enterostomy as compared with laparotomy, for by the latter operation the surgeon is enabled to remove the cause of the obstruction, while in the former it is left untouched. It is natural to suppose that a failure to cut the band, untwist the volvulus, or reduce the intussusception would be followed by gangrene of the gut and certain death, even if the bowel above were relieved of its contents by an artificial anus. But, as we have seen, the facts do not support this belief. More than that, there are some cases at our disposal which prove that relief of the pressure from behind will actually remove the cause of constriction, or render it so harmless that the fæces can even resume their normal passage. We give these cases in detail.

Case XLV.—Female, aged fifty-two years. Obstruction for ten days. Enterostomy, right groin, cæcum opened. Exploration through the wound showed existence of an intussusception of the ascending colon. Recovered.

Case XXXVII.—Male. Enterostomy, right groin. In two weeks twenty centimetres of gangrenous gut was expelled per anum. Recovered. In this case the enterostomy gave time for spontaneous cure.

Case XXXI.—Male, aged seventy-six years. Obstruction for fifteen days. Bad condition. Enterostomy, right groin. Relieved, no passage per anum. Demented, refused food, died of inanition in three weeks. Autopsy: Volvulus of small intestine below the fistula, without gangrene of the gut.

Case XLVIII.—The details of this case have been given above. Obstruction was caused by adhesions, and relieved by enterostomy.

Case LV.—Male, aged forty-two years. Obstruction for four days. Poor condition. Enterostomy, right iliac, small intestine opened. Fæces per anum in five days. Six weeks later, laparotomy, adhesions in pelvis found and freed, and artificial anus closed. Recovered.

Case LVIII.—Female, aged thirty-eight years. Obstruction for three days. Femoral hernia. Herniotomy, no constriction in sac; incision extended upward, and cæcum opened. Fæces per anum in two weeks. Four weeks later laparotomy to close the fistula; a band found attached to the small intestine and the cæcum, supposed cause of obstruction, divided. Recovered.

Case XLIII.—Female, aged fifty-two years. Obstruction for six days. Enterostomy, left groin. A few hours later a large mass of fig-seeds passed per anum and there was no further trouble. The fistula contracted rapidly.

To these cases we may add a similar one observed by v. Wahl (*St. Petersburg med. Wochenschr.*, 1886, 183).

Female, aged fifty-four years. Obstruction after reduction of umbilical hernia. On sixth day a fistula was made at the umbilicus without relief. On the twelfth day, laparotomy, median incision above the umbilicus; no cause of obstruction found; artificial anus made in the incision. Fæces per anum in three days. Recovered. Fistula permanent. v. Wahl considers this a case of internal incarceration.

These cases show that intussusception, volvulus, adhesions, bands, impaction of foreign bodies, and even internal incarceration, can be relieved, or at least rendered harmless, by simply removing the pressure from behind, as is done by opening the distended bowel. In some cases, indeed, this would seem probable enough *à priori.* The adhesion, band, or even internal incarceration, has in most cases existed for some time, and the intestine has maintained its passage by increased force of peristalsis. But although the parts remain nearly in the same relative position, some sudden undue distention of the gut causes the latter to be so bent or constricted that it can no longer overcome the obstruction in the path of its contents. The longer the obstruction lasts, the greater the pressure and the tighter the constriction. Remove the pressure entirely, and it becomes easy for affairs to return to their previous condition, the gut having its former power of overcoming the obstruction restored to it. Even when a loop of intestine has slipped into an opening, or under a band, for the first time, it is not at all improbable that the relief of pressure will enable it to escape again. At all events, our cases prove that there is some hope that it may do so, and that there is a "fighting chance" in enterostomy.

The operation of enterostomy may fail in three ways: First, the fistula may be made below the constricted point, especially when there is more than one obstruction, or it may be situated in the distended and doubly occluded loop which has undergone a volvulus, or been strangulated through an abnormal aperture; secondly, the fistula may be properly placed, and yet be inefficient because the bowel refuses to contract, being paralyzed by over-distention or by peritonitis; thirdly, the fistula may act well, but death may ensue by continuance of the constriction and gangrene of the included gut. We have just discussed the last cause of failure. Of the second there are two instances in our series, Cases XVI. and XVII., besides others in which the fistula acted, but not until some time after it was formed. As to the first cause of failure, in only three cases was the fistula made below the point of obstruction, a percentage of 4.8, which compares very favorably with the record of failures in laparotomy, for in nineteen cases out of three hundred and twenty-eight of the latter, 5.8 per cent., death resulted because the obstruction was overlooked or could not be found.

But besides the liability to death at the time of operation, from the original obstruction, from failure of the operation, or from some of the dangers inherent in it, there remains a source of danger to the bearer of a permanent fistula with a permanent constriction of the bowel farther down, in the possibility of accumulation of fecal matter between the two. This is well illustrated by the following cases:

CASE LIII.—Female, aged forty-seven years. Obstruction for thirteen days. Enterostomy, left groin. Recovered. No passages per anum. Two years later she died with an enormously distended abdomen, although the fistula continued to act. Autopsy showed a cicatricial stricture of the sigmoid flexure, with a great collection of fecal matter between it and the fistula above, and this had caused death by its pressure upon all the viscera, and by fecal absorption.

CASE LXII.—Male, aged eighty years, but robust. Obstruction for fourteen days, good condition. Colotomy, cæcum opened. Recovered. Several months later he died of rupture of the intestine where the wall was perfectly healthy, the whole large intestine being very much distended by fæces collected below the fistula and above the obstruction, which was a cancer situated in the sigmoid flexure.

To avoid such consequences as these, it has been proposed to construct the artificial anus in such a way as to form a spur, and prevent the passage of any fecal matter beyond. But in cases of acute obstruction this practice would certainly be unjustifiable, for we should then lose the advantage of the large percentage of cases which may hope to recover with normal passage for the fæces. This modification of the operation should be confined to cases in which a positive diagnosis of cancer or stricture is possible, and fortunately this is generally not difficult. In all cases of acute obstruction the intestine should be simply sutured in the wound, in such a way as to avoid the formation of a spur.

With regard to this return of the fæces to their natural passage, it must be noted that, even after laparotomy, this ideal result cannot always be obtained. From Table IV. of the paper already quoted, it will be seen that in one hundred and two cases which recovered after laparotomy, in only eighty-one could the natural channel of the fæces be preserved, giving a rate of seventy-nine per cent., which is not so very much better than the sixty per cent. which we have found for enterostomy. This result is less surprising when it is remembered how late these cases are brought to the surgeon, and how often extensive adhesions, gangrene of the bowel, or the feeble state of the patient (demanding a rapid termination of the operation) compel the surgeon to make an artificial anus.

For the sake of completeness, the following facts may be recorded before closing: The fistula was made in the right groin twenty-eight times, in the left, twenty-one times. The small intestine was opened in thirteen cases, the sigmoid flexure in six, and the cæcum in nine, the rest not being specified. Lumbar colotomy was performed in seven cases.

The variety of obstruction was determined (mostly by autopsy in fatal cases) to be—intussusception in six cases, four died; volvulus in three cases, two died; adhesions in five cases, four died; bands and diverticula in four cases, three died; internal incarceration in one case, fatal; stricture, five cases, four died; tumors of the bowel, ten cases, six died; foreign bodies, two cases, none died; compression by pelvic tumor, one case, recovered; peri-uterine hæmatocele, one case, recovered; no cause of obstruction found, two cases (peritonitis, paralysis of intestine), both died. In the other twenty-one cases, with three deaths, the cause was not ascertained. The relative mortality for these various forms of obstruction is unimportant, for the numbers are too small, but it is remarkable that, out of ten cases of tumor of the intestine, and six cases of stricture, which are supposed to be the most promising varieties of obstruction for this mode of treatment, there were ten deaths; while, on the other hand, two cases of intussusception recovered out of six, and one case out of four of volvulus.

In conclusion, we may compare the two operations for the relief of acute intestinal obstruction as follows: 1. The mortality for laparotomy is 68.9 per cent. The mortality for enterostomy is 48.7 per cent. 2. In enterostomy 4.8 per cent. of the sixty-two cases died because the operation did not relieve the constriction; but even in laparotomy 5.8 per cent. of the three hundred and twenty-eight cases died from the same cause. 3. Enterostomy restores the natural passage for the fæces in sixty per cent. of the cases which recovered; while even laparotomy preserves it in only seventy-nine per cent. of the recoveries. 4. Laparotomy is therefore so very little better than enterostomy, that, in consideration of its greatly increased risk, it is indicated only when the patient's condition is so good that he can bear the shock, and when the intestines are not so greatly distended as to offer a serious obstacle to a thorough exploration of the abdomen. 5. Under all other circumstances enterostomy should be performed, and if necessary this can be done without an anæsthetic. Laparotomy may be resorted to later, to remove the cause of obstruction and to close the artificial anus. 6. Whichever operation may be chosen, it is necessary to operate early, for every delay greatly increases the risk of failure.

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Case III. Holmer: Nord. Med. Ark., 1874, vi., 42.
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Case V. Puglièse: Lyon Médical, 1874, xvi., 523
Case VI. Svensson: Hygeia, 1875, 265.
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MEDICAL ADVERTISING IN GERMANY.—At a little village in Germany, recently, a crier went through the streets proclaiming that a certain physician in the place would give medical advice to all comers for the reasonable sum of 60 pfennige (15 cents). Two hours later the same crier passed through the town announcing that the other doctor of the village was prepared to give his services to the sick for 50 pfennige (12 cents) a visit.

PROGRESSIVE MUSCULAR ATROPHY, WITH ANÆSTHESIA.[1]

By J. A. BOOTH, M.D.,

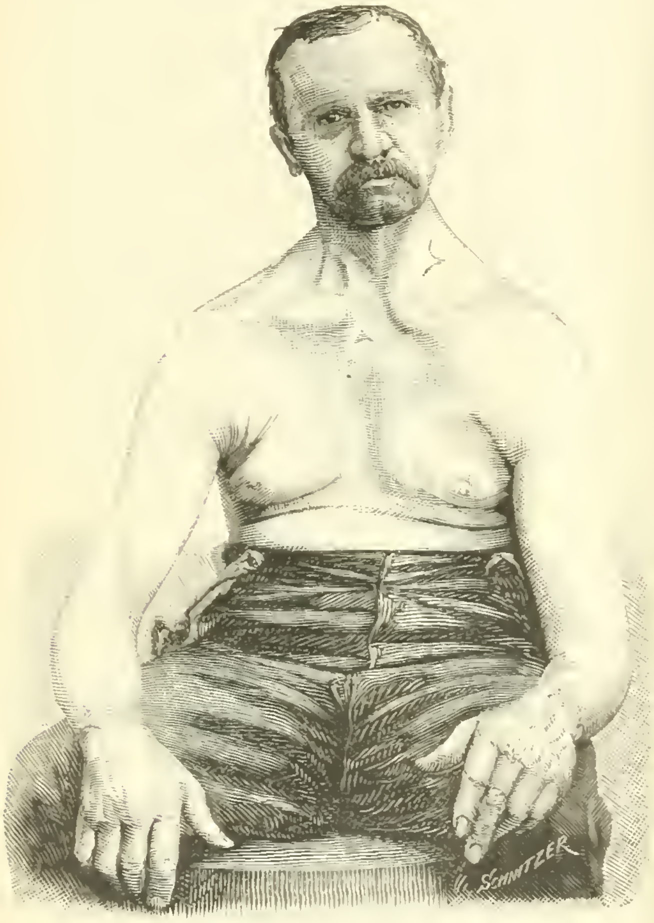
ASSISTANT PHYSICIAN TO THE NERVOUS DEPARTMENT OF THE MANHATTAN EYE AND EAR HOSPITAL.

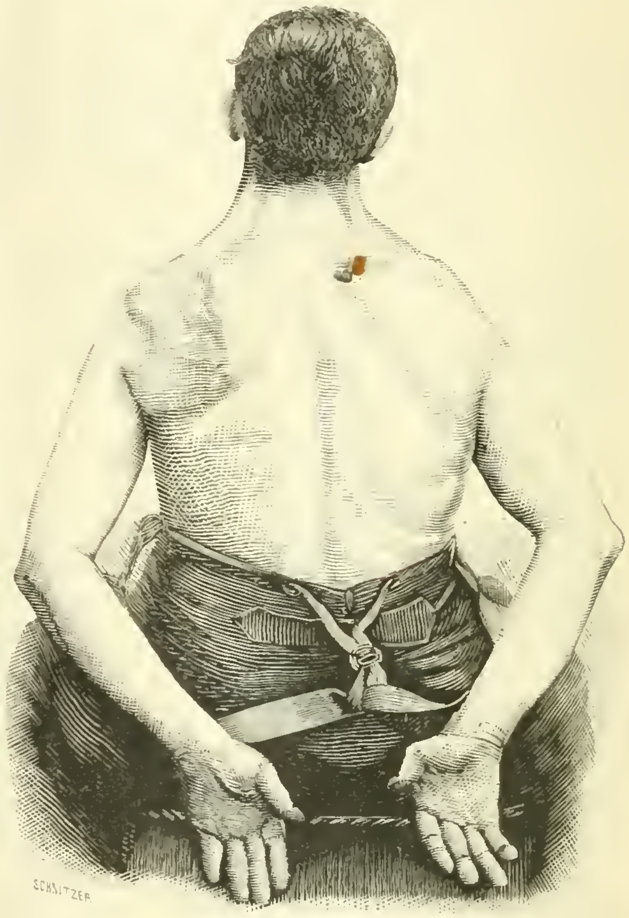
F. K——, aged forty-two, married; shoemaker; German.

Family history good; no history of any nervous or tubercular disease, alcoholism, or syphilis, nor has anyone in the family had any similar disease.

Personal history.—Was always strong and healthy. He never indulged in excesses of any kind, and never had any venereal disease. He never received a blow or fall, nor is there any history of exposure to wet and cold. Been married eighteen years; has two children, the older, a girl of five years, has never walked.

Present disease.—The first symptoms were noticed about eight years ago, from October, 1878, to January, 1879, and came on gradually; they were general debility, a worn-out, tired feeling, and dizziness. He was inclined to lie down most of the time, but never felt rested. About the same time he observed weakness in arms and hands, with inability to use his awl so well. No change was noticeable in the appearance of the shoulders, arms, or hands at this time.





Seven years ago (January, 1879) the voice became husky and changed. He has spoken in a harsh, unequal tone since. Six months later (June, 1879), sensations of cold and numbness appeared in left shoulder, gradually extending to neck, arm, and hand of same side. This sense of numbness was especially severe and troublesome on left side of neck, so that he resorted to very hot applications for relief. After the removal of a poultice, it was discovered that his neck had been badly burned, though he had not experienced any sense of pain. About September, 1879, a decrease in size and a difference in the shape of the shoulders was noticed, the left being more prominent than the right. This atrophy of muscles, first noticed in the deltoids, slowly progressed, involving the trapezii and scapular muscles, and the interossei of the hands; and still later, the latissimus dorsi, the pectoral muscles and extensors of arms.

In October, 1855, a painless ulcer formed in helix of left ear, which went on to perforation. Some time elapsed before this healed. During the last three years he has been closely observed by me, and the only new symptoms that have developed are an increase in the muscular weakness, a slight difficulty in swallowing, and a sense of heaviness in the tongue. He has also noticed lately that his eyesight is not so good. He is also frequently dizzy.

Present condition.—The patient is a man of medium size—weight, one hundred and fifty-five pounds. There is a marked sinking of both shoulders. His voice is harsh, impure, and unequal in tone. On the left side of neck there is a cheloid scar, the result of a burn. On both hands are noticed several scars and abrasions. He notices that slight wounds and abrasions of the skin heal very slowly and imperfectly, remaining for some time as open sores, and, morever, that these cause no pain.

Nervous system; motor functions.—He shows no ataxia in gait or on standing. There is marked muscular weakness in upper extremities. The movements of the upper extremities are imperfect and limited. The grasping power of both hands, as measured by the dynamometer, is diminished; R., 30.32; L., 28.26. The little and ring fingers of right hand are slightly flexed, and their movements limited. All the interossei are wasted, especially third and fourth of right hand. The muscles attaching the upper extremities to the trunk are atrophied. The atrophy is more marked in some muscles and in some parts of muscles than in others; the lower part of the trapezius is much more affected than the upper; the upper part of the pectoral muscles more than the lower. The left cheek feels thinner and less firm than the right. There is no appreciable difference between the two sides of the tongue, though the patient states that the left side feels different from the right. When the tongue is protruded to its fullest extent, there is a slight deviation to the right. There is a marked paralysis of the palate, it and the uvula being sharply drawn to the right. An examination of the larynx reveals a paralysis of left vocal cord. An examination of the patient's throat was also made by Dr. Andrew H. Smith, and he reports as follows:

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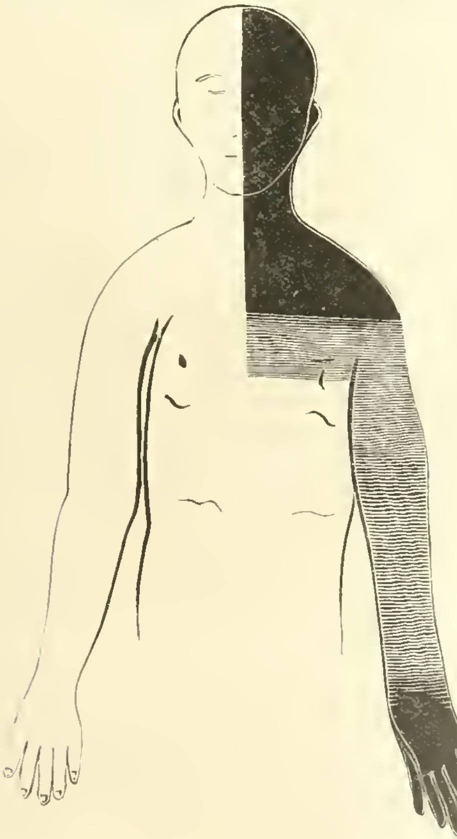
[1] Read before the Neurological Society, June 5, 1888.

"Patient has a high, stridulous voice; no difficulty in respiration or deglutition. Examination shows complete paralysis of the left superior constrictor of the pharynx, and of the left palato-pharyngeus. There is also paresis of the adductors of the left vocal chord. The paralysis of the superior constrictor results in a rotation of the mucous membrane of the fauces toward the right with every vocal effort. This case would seem to indicate that the superior constrictors are energized with every effort at speech, but owing to the perfect balance between them, no visible movement results. The laming of one, however, renders the action of the other immediately apparent."

The mechanical irritability of the atrophied muscles is increased.

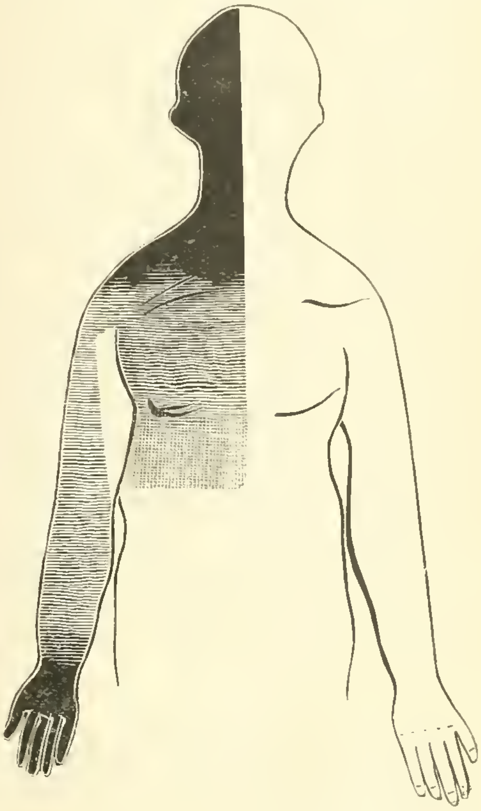
Electrical irritability.—Very marked fibrillary twitchings frequently occur in the atrophied muscles. There is a general reduction in the strength of the contraction produced both with the faradic and voltaic currents. The inferior segment of the trapezius fails to contract with the strongest faradic current. The only muscles which give a true reaction of degeneration are the third and fourth interossei of the right hand.

Reflexes.—The patella tendon reflexes are exaggerated; organic reflexes are natural. No clonus. Muscular sense not impaired. Nothing abnormal found in lower extremities.



Deep shading = complete anæsthesia. Light shading = slight anæsthesia.

Sensory functions.—He complains of feeling cold, and states that left side of face, head, and neck are numb, also both hands. The skin of left face, arm, shoulder, forearm, and hand; also left side of trunk and neck, as far forward and backward as the median line, and as far downward as the fourth rib in front and ninth rib behind, is anæsthetic—a region corresponding to the distribution of the cervical and brachial plexuses of the intercostal and fifth cranial nerve. This region of insensibility is somewhat ill-defined on the trunk behind, but on the face its limits are sharply marked. One-half of the mucous membrane of the tongue, mouth, and palate of the same side are insensitive. On the right side there is no anæsthesia of face, head, or neck. But on dorsum of hand, over anterior and lateral aspects of arm, sensation is not natural. There is no response to metals.



Deep shading = complete anæsthesia. Light shading = slight anæsthesia.

There is marked analgesia, which occupies the same distribution as the anæsthesia.

Sensibility to temperature.—There is a complete loss of temperature sense over entire circumference of hands and left side of neck; partial loss over both deltoids, anterior and lateral aspects of arms and forearms, and on left side of face. Tests used were sponge, dipped first in hot, then in cold water, and test-tubes containing hot and cold water. Warm objects seem cold. After prolonged contact the test-tube of hot water was frequently recognized.

Sight.—There has been no trouble referable to the eyes until lately. He has now to look at an object some little time before recognition is complete. No diplopia. No change in the visual field of either eye. Optic nerves normal. Taste and smell are natural. Hearing not impaired.

Remarks.—There are present in this case three sets of symptoms. 1. The muscular atrophy. 2. The bulbar symptoms. 3. The hemianæsthesia and analgesia, the characteristic slow wasting, the loss of power, and the result obtained from the electrical examination, decide the case to be one of progressive muscular atrophy, with the usual changes in the spinal cord—a slow degeneration of the ganglion cells of the anterior cornua, accompanied by a similar degeneration in the motor-nerve fibres which spring from the cells.

It not infrequently happens that the degenerative process, which previously had involved the large nerve-cells of the anterior cornua, extends upward and involves the motor nerve nuclei of the pons and medulla. And thus, as in the case before us, bulbar symptoms are added to those of the original affection, viz., paralysis of the palate, pharynx, and left vocal cord, paresis of tongue, and dysphagia.

Regarding the sensory disturbance, any marked loss of sensation is certainly not one of the changes we expect to find in cases of progressive muscular atrophy. Therefore its presence in this case, so well marked and limited, justifies me in considering the hemianæsthesia as a separate complication and due to a lesion in the sensory tract.

Hemianæsthesia presents itself with two different degrees of completeness: 1, cerebral hemianæsthesia; 2, mesocephalic hemianæsthesia.

1. The first, or cerebral form, is the most complete. The special senses are generally involved. It is due to a lesion of the posterior third of the hinder segment of the internal capsule. The anæsthesia may be complete or incomplete, depending on the extent of the lesion.

2. The second, or mesocephalic form, is less complete, and may be produced by lesion or disease in the upper or outer layers of either the cerebral peduncle or pons Varolii. The special senses of smell and sight are not implicated, those of taste and hearing are sometimes lost on the side opposite the lesion.

Conclusions.—The lesion is evidently in some part of the sensory tract, from the following symptoms: Left hemianæsthesia, including loss of sensation of the left half of mouth and tongue; the cutaneous and muscular analgesia and thermo-anæsthesia; loss of pain to strong faradic currents; increased reflexes; attacks of giddiness. The case, then, is one of progressive muscular atrophy, complicated by a secondary lesion either in the internal capsule, peduncle, or pons Varolii of the right side. From the history, and as there is no involvement of the special senses, I am inclined to doubt the presence of a capsular lesion here; but conclude that the hemianæsthesia is of the mesocephalic form, due to a tumor in the upper and outer layers of the pons Varolii or peduncle on the right side.

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A CONTRIBUTION TO THE SURGICAL TREATMENT OF MEMBRANOUS OPACITIES IN THE VITREOUS.[1]

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PATHOLOGY teaches us that membranous and cord-like opacities in the vitreous humor are not usually freely movable or floating, owing to the continuity of the original septa, which is more or less completely preserved, and to the consistency of the intercellular substance of the vitreous humor contained within these septa. When, however, the processes of retrogressive metamorphosis and degeneration set in, and the intercellular substance becomes fluid, then these membranous opacities may become freely movable, unless they have formed adhesions to the retina, choroid, or optic nerve; and even then they may often be seen to wave and flutter with every motion of the eyeball. These membranes, no matter how delicate and cobweb-like they may be, resist all internal medication or local applications, even though persisted in for a long time, and such are the vitreous opacities which seem suitable for operation. Von Graefe was the first to suggest the possible advantage of surgical interference in such cases, and he gives in detail the history of a case of a young woman, aged nineteen, in whose left eye a moderately thick membrane extended all across the posterior part of the vitreous. Vision in this eye was reduced to counting fingers at eighteen inches, and the patient could read some words of Jaeger No. 20 with spherical $+\frac{1}{6}$. Von Graefe rotated the eyeball strongly inward, and then plunged a keratonyxis needle through the sclera, between the external and inferior recti, just in front of the equatorial region, parallel to the plane of the iris and behind the lens, and divided the membrane in several places from before backward. In a few days the patient could read Jaeger No. 8 with spherical $+\frac{1}{6}$, and three weeks later she could read Jaeger No. 3 with the naked eye. The ophthalmoscope showed a retraction of the membrane from the centre toward the periphery, and a subsequent absorption of its remains. Ten months after the operation not the slightest trace of the opacity could be discovered in the vitreous, eccentric vision was perfectly normal, and central vision was almost normal.[1]

In the experience of the writer this operation has proved positively useful in some cases. There are some opacities of the vitreous, such as are seen after hemorrhages or inflammatory processes in the choroid, which are capable of undergoing retrogressive metamorphosis, and disappear wholly or in part. But we often meet with membranous opacities which resist all treatment, and not only materially affect the vision, but become still more dangerous through their traction on the retina at their points of adhesion. If we succeed in dividing such membranes we not only gain a direct optical effect and improve the vision, but may also start up an absorptive process which may produce further contraction, and also, by reducing the tension in the membrane, lessen the danger to the retina. If the cornea and lens be transparent, the position of these membranes may be located with tolerable accuracy. When in a choroidal process the infiltration encroaches on the region of the papilla, the opacity in the vitreous is almost certain to occur in its posterior part, in the form of thread, or patches, or membranes, which are often directly connected with the optic papilla by adhesions to the sheath of the central vessels. On the other hand, the farther forward the choroidal infiltration occurs, and the nearer to the ciliary processes, the more anterior are the opacities in the vitreous likely to be. Other things being equal, the posterior opacities are more easily reached by the needle or knife in the proposed operation, the less the danger of injuring the lens, and the more favorable are the results likely to be.[2]

The writer has done this operation in seventeen cases of chronic membranous opacities in the vitreous, and presents the histories of these cases, with the results obtained, to the members of the Society for their consideration. In some of the cases the ordinary discission or keratonyxis needle was employed; in others a broader needle with a double cutting edge; while in still others, where the membrane appeared to be tough and thick, a very slender cataract knife was the instrument selected. Cocaine was employed in all cases. Wherever the peculiarities of the case admitted, the point selected for the puncture was just in front of the equator of the eyeball, and just below the lower border of the external rectus muscle. In a few cases the puncture was made on the nasal side of the eyeball, just below the lower margin of the internal rectus muscle. The operation is a very brief one, and where possible was preceded and followed by a rapid ophthalmoscopic examination. There seems to be no danger of any loss of vitreous through the minute puncture made in the sclera, and almost as little probability of any annoying or disturbing hemorrhage. Care should be taken to make the puncture always posterior to the ciliary processes, and to avoid any undue pressure on the eyeball by the forceps which are used in rotating the eye inward or outward as the case may be. Little or no reaction follows, save in exceptional cases, and a protective bandage is needed for only two or three days.

CASE I.—Selah M——, aged forty-five; first seen October 12, 1885. Patient has always been myopic, but has never worn glasses. Eighteen months before, the left eye had become inflamed without any apparent cause, though he had been rheumatic for years. The attack was accompanied by some pain and marked loss of vision, and the inflammatory symptoms did not subside until nearly four months had elapsed. Since then there has been no relapse, and vision has somewhat improved, but is still extremely defective.

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[1] Read before the American Ophthalmological Society, at its Twenty-Fourth Annual Meeting, July 18, 1888.

[1] See Archiv. für Ophthalmologie, IX., 2, page 102, 1863.

[2] See Bergmeister, Archiv für Ophthalmologie, XX., 2, page 95, 1874.

Present condition.—R. E., V = $\frac{20}{100}$, with cyl. D 2.50, axis 90° = $\frac{20}{30}$ + ; media clear ; fundus normal except a small conus on temporal side of disc. L. E., V = $\frac{3}{200}$, unimproved ; cornea clear, iris normal in color and reaction, lens transparent except for some faint striæ at the periphery. Under a dilated pupil there is seen a broad, thin, membranous opacity, running from the nasal margin of the optic disc downward, forward, and outward to the lens ; both ends fixed, and the membrane becoming broader as it neared the lens. The rest of the vitreous was apparently clear, but the course of the membrane covered both the disc and the region of the macula. There were traces of an old choroiditis, marked by patches of atrophy, some of them surrounded by a zone of pigment. A four per cent. solution of cocaine was instilled several times, and the eyeball was strongly adducted by means of a pair of forceps grasping the conjunctiva over the insertion of the internal rectus muscle. A keratonyxis needle was then plunged through the sclera, just in front of the equator and below the external rectus muscle, and the membrane lacerated freely in several directions. The needle was then withdrawn, and an ophthalmoscopic examination at once made, the pupil being under the influence of atropia. This showed that the membrane had been completely divided in two places, and incompletely in one place. Atropia was instilled and the eye at once bandaged. The bandage was removed on the third day, and there being no sign of reaction vision was tested on the fifth day and found to have risen to $\frac{10}{200}$ without a glass, and with sph. — D 2 $\smile$ cyl. — D 1, axis 90°, to $\frac{20}{70}$. The patient was then permitted to go out, and on the eighth day left for her home. Three months later V = $\frac{20}{50}$ + with the above glasses, and an ophthalmoscopic examination showed that the divided ends of the membrane had retracted, leaving the optic disc and region of the macula exposed to view.

Case II.—Miss E. W——, aged twenty-six ; first seen October 19, 1885. Ten months before, the patient had been attacked by a serious inflammation in both eyes, only slightly painful in character, but attended by marked loss of vision. There was no external evidence of any ocular inflammation. The disease subsided in about two months, and the vision slightly improved in the right eye, but there has been no change in the latter for at least six months. The patient gives a distinct syphilitic history.

Present condition.—R. E., V = $\frac{1}{100}$; cornea and aqueous humor clear, iris normal in color and reaction, lens transparent ; a mass of filaments and membranes running like a mesh-work across the vitreous, the fundus appearing indistinctly through the meshes. L. E., V = $\frac{20}{30}$ — unimproved ; media clear except for some small floating opacities in the vitreous ; iris normal ; small patches of old choroidal inflammation, mainly in the equatorial region. This was considered an unfavorable case, but the operation was done on the right eye in the same position as in the first case, but with a broad needle with a double cutting edge. The ophthalmoscope showed that the membranous mesh-work had been incompletely divided in two places. Atropia and a bandage. The latter was removed on the third day ; no reaction ; V = $\frac{4}{100}$. The ophthalmoscope showed that the cut on the temporal side had gaped considerably. The vision was tested at the end of two weeks, and found to have risen to $\frac{15}{200}$, beyond which it did not improve. The patient was seen at the end of two months, and the same condition existed.

Case III.—Mrs. M. R——, aged thirty-five ; first seen October 26, 1885. Patient has been myopic since childhood, and four years ago had serious trouble with both eyes, particularly the left eye, accompanied by partial loss of vision and great intolerance of light, brought on probably by long-continued abuse of her eyes in doing fine embroidery. Since the attack subsided she has been more careful in the use of her eyes, and there has been considerable improvement in the vision of the right eye, but the left eye has remained very defective in vision. No history of syphilis or rheumatism. There is no external evidence of disease in either eye, except a tendency to divergence of the left eye.

Present condition.—R. E., V = $\frac{10}{100}$; with sph. — D 6 = $\frac{20}{50}$; some floating opacities in the vitreous ; general choroidal atrophy, most marked on temporal side of disc and downward in infero-temporal quadrant. L. E., V = $\frac{6}{70}$; with sph. — D 6 = $\frac{20}{200}$; numerous floating opacities in the vitreous, and one band of thin membrane running from near nasal margin of disc forward and outward to the ciliary region ; patches of choroidal atrophy all over fundus. Here the two-edged cutting needle was introduced on the nasal side of left eyeball in a corresponding position, and the single membranous band was thoroughly divided, as the ophthalmoscopic examination showed. There was no reaction, and on the fifth day V = $\frac{20}{70}$ with sph. — D 6. Two weeks later the vision was the same, and it remained unchanged for four months, since which time the patient has not been seen.

Case IV.—Miss E. F——, aged twenty-two ; first seen November 30, 1885. Patient has always been myopic, and has worn glasses for several years. Nine years before she had received a violent blow on the left eye, with immediate loss of vision, which was followed by severe inflammation, swelling of the lids, and great pain in the eye and head. As the inflammatory symptoms subsided the vision began to be restored, but there has been no change for a number of years.

Present condition.—R. E., V = $\frac{20}{200}$; with sph. — D 2.50 = $\frac{20}{30}$ +. The fundus presents the usual appearance of a myopic eye. L. E., V = $\frac{5}{100}$, unimproved ; pupil dilated and immovable ; lens slightly opaque at the periphery ; floating opacities in the vitreous of varying size and shape, and a large, thick, vascularized membrane, attached anteriorly to the outer ciliary region, and posteriorly to the retina on the nasal side of the disc, and entirely concealing the latter and the region of the macula from observation. Here the membrane was so dense that the slender cataract knife was employed, being introduced on the temporal side of the left eye through the sclera, and the membrane divided in the vertical direction. It was felt to give under the knife, and the ophthalmoscope showed a small hemorrhage, probably from the divided vessels of the membrane, lying on the membrane and floating in the vitreous. Some reaction followed this operation, but on the tenth day the eye was quiet, and V = $\frac{10}{100}$. The ophthalmoscope showed a retraction of the nasal end of the membrane. while both ends moved freely as the eye moved. There was no further improvement in the vision, though the case was watched for nearly a year.

Case V.—Mrs. M. N——, aged sixty-three ; first seen November 30, 1885. Patient has been excessively myopic from childhood, but has never worn glasses. Has had repeated attacks of some form of deep inflammation in the eyes. accompanied by deterioration of vision, from which she recovered each time with a steady loss of vision.

Present condition.—R. E., V = $\frac{3}{200}$, unimproved ; iris sluggish ; periphery of lens cloudy ; several broad, fine membranes stretching across the vitreous, apparently from side to side, floating with the movements of the eye, but fixed at either end, and permitting a very indistinct view of the fundus through their cobweb-like substance, where are signs of most extensive choroidal atrophy. Myopia of about D 16 with the ophthalmoscope. L. E., V = $\frac{3}{200}$; vitreous and fundus in about the same condition as the right eye. As both eyes were about alike, the operation was done on the temporal side of the right eye with the discission-needle, and the membrane extensively lacerated, as the ophthalmoscope showed. No reaction. On the fifth day V = $\frac{3}{200}$, but with sph. — D 14 it rose to $\frac{10}{200}$, and continued slowly to improve, until at the end of the second month it was $\frac{20}{200}$, the membrane having retracted on both sides, leaving a free vent.

Case VI.—Mr. J. C. R——, aged forty-two; first seen January 25, 1886. Four years ago he had a violent fall, striking on the right side of the forehead and supraorbital region. There was extensive laceration of the soft parts, and the bone was fractured. The vision of the right eye was affected at once, and grew steadily worse, so that in the course of a few weeks it was reduced to perception of light. Since then it has somewhat improved.

Present condition.—R. E., V = $\frac{2}{200}$, cornea clear, iris fluttering, and pupil immovable; lens in place and transparent; vitreous is crossed by a dense, broad membrane, running from outer margin of disc downward, forward, and outward; projection good in every direction; pupil easily dilated by atropia. L. E., V = $\frac{20}{20}$, media clear, and fundus normal. Here the slender cataract knife was plunged through the sclera on the nasal side, below the internal rectus muscle, and a long cut made through the membrane, but the ophthalmoscope showed no gaping of the edges—absolutely no reaction. On the sixth day there was a decided gape in the membrane, and V = $\frac{20}{200}$, the hole being oval in shape. There was no further improvement. The patient was seen in May, 1888, and the condition of the eye remained the same.

Case VII.—Mr. William B——, aged forty-five; first seen May 3, 1886. Syphilitic patient; has had repeated attacks of iritis in both eyes, and for more than a year the vision in the right eye has been steadily failing, and for several months it has been useless.

Present condition.—R. E., V = perception of light; field wanting in supero-nasal quadrant; cornea clear; iris discolored, and adherent to capsule of lens; pupil irregular and immovable, and only partially dilated by repeated instillations of atropia; lens apparently transparent; filamentous membrane stretching across vitreous nearly in horizontal plane. Tension − 1. L. E., V = $\frac{20}{30}$+; cornea clear; iris discolored and adherent to lens; lens and vitreous apparently clear. A detachment of the retina was supposed to exist in the infero-temporal region, probably directly connected with the membrane. This gentleman was told of the bad outlook, and that the chances of improvement were slight, while serious inflammation might follow the operation. He decided to risk it, and the small discission needle was plunged through the outer aspect of the sclera of the right eye, and a single sweep from above downward given to it, and it was then withdrawn. Somewhat violent reaction followed, which yielded to atropia, hot water, and a bandage, but no ophthalmoscope examination was made for three weeks. No change was discoverable in the membrane, owing to the adherent condition of the pupil, but the patient could distinguish the movements of the hand, and claimed that he noticed considerable improvement in the vision. He urged another attempt, but the danger of reaction was considered too great. The defect in the field remained the same.

Case VIII.—Mrs. E. H——, aged sixty-four; first seen May 10, 1886. Patient had never had any trouble with her eyes until about eighteen months ago, since which time the vision in both eyes has gradually failed, and she now complains of seeing everything through a mesh-work or veil.

Present condition.—R. E., V = $\frac{20}{30}$, unimproved. Ht. = D 1; cornea and lens normal, except at the periphery of latter, where there are numerous opacities; delicate cobweb membrane extending across the vitreous from the nasal side downward and outward. L. E., V = $\frac{20}{30}$, unimproved. Ht. about + D 1.75; cornea and iris normal; peripheral opacities in the lens; delicate cobweb membrane in the vitreous, not quite so extensive as in right eye. In this case an attempt was made to lacerate the membrane with the discission needle in each eye separately, but although it was readily torn, there was no gaping of the rents in the right eye. In the left eye, however, one of the lacerations gaped wide, but there was no improvement in the vision. The needle was introduced through the sclera on the temporal side in each eye. There was absolutely no reaction in either eye following the operation.

Case IX.—D. C——, aged fifty; first seen November 28, 1887. Twenty-five years ago this patient contracted syphilis, and had, among other constitutional symptoms, an inflammation in both eyes, beginning in the left eye, which ended in total blindness. The right eye was much less seriously affected. Both eyes remained quiet until six years ago, when the left eye became inflamed again. This attack subsided, and there was no further trouble till September, 1887, when the left eye became again inflamed and still remains so.

Present condition.—R. E., V = $\frac{20}{50}$ −; cornea clear; iris discolored, but freely movable; lens clear; large membraniform opacity in the vitreous, attached by a broad base to the nasal margin of the optic disc. L. E., V = 0, tension + 2; iridocyclitis; cloudy cornea; lens opaque, and lying in the anterior chamber; iris dilated ad maximum and adherent to the lens. The left eye was enucleated as a necessary preliminary to the operation on the right eye. Two weeks later, the needle with double cutting edge was introduced through the temporal side of the sclera, and an attempt was made to cut across the entire membrane, which, however, was only partially successful, as the membrane seemed to bend before the instrument. Some reaction followed, and it was feared that the vision might suffer, but on the sixth day the eye had become entirely quiet, and a laceration was discovered in the membrane, which had already gaped a little. On the twelfth day V = $\frac{20}{46}$ +, and even improved a little beyond this in the course of the next few weeks.

Case X.—Miss A. L——, aged thirty-two; first seen December 5, 1887. Two years ago the patient suddenly noticed a large black spot before the left eye, which rapidly obscured her vision. This has remained ever since, with alternate conditions of improved and deteriorated vision. Her sight is always worse at the menstrual epoch.

Present condition.—R. E., V = $\frac{20}{20}$; media clear and fundus normal. L. E., V = $\frac{20}{50}$ −; cornea, iris, and lens normal. At the posterior pole are spots of choroidal exudation, and stretching across the vision in every direction are numerous fine filamentous opacities, fixed at the ends and waving with the motions of the eye. The keratonyxis needle was plunged through the sclera at the point before indicated on the outer aspect of the eye, and the fine filamentous opacities swept in every direction by the needle. An ophthalmoscopic examination immediately afterward showed that apparently nothing had been accomplished, the filaments bending before the needle instead of being torn. There was no reaction and no improvement in vision.

Case XI.—Mr. George G——, aged thirty-five; first seen December 5, 1887. The patient has had defective vision in the left eye for several years, which came suddenly without any known cause, but which was probably a hemorrhage in the vitreous. He thinks the vision of the right eye has failed of late. Had a chancre nine years ago.

Present condition.—R. E., V = $\frac{20}{30}$ + unimproved; cornea, iris, and lens clear; refraction hypermetropic; faint, dust-like opacities in the vitreous; fundus apparently normal. L. E., V = $\frac{10}{200}$, unimproved; cornea, iris, and lens normal; broad but very delicate membrane in the vitreous, fixed but wavy, obscuring slightly the entire fundus; remains of an old chorio-retinitis. The double-edged broad needle was introduced in the position of choice on the outer aspect of the eyeball, and a single sweep of the needle made, from above downward. There was no reaction from the operation, and on the eighth day the ophthalmoscope showed that the membrane had been entirely divided, and the ends had retracted on either side almost out of sight. V = $\frac{20}{40}$. This has remained unchanged, the patient having been seen within the mouth, and the vitreous was found almost clear.

Case XII.—Mr. A. E——, aged forty-four; first seen

January 16, 1888. Patient has had defective vision in left eye for five years, dating from a sudden attack of almost complete loss of sight. Three weeks ago he again had a sudden obscuration of vision in the left eye, which during the past week has begun to improve.

Present condition.—R. E., V = $\frac{20}{20}$; media and fundus perfectly normal. L. E., V = $\frac{1}{200}$; cornea, iris, and lens normal. A membrane, pierced by numerous holes, stretches across the posterior part of the vitreous, adherent posteriorly to the margin of the optic disc; and floating in the vitreous, and at times obscuring nearly the entire fundus, are several blood-clots. The patient has grave cardiac disease, both hypertrophic and valvular. It was thought best to wait until the recent hemorrhage had at least been partially absorbed. On February 14th, the slender knife was introduced in the position of choice and several attempts made to lacerate the membrane in various directions. A somewhat violent reaction followed, and it was not until the fourteenth day that an ophthalmoscopic examination was made. There were still some blood-clots floating in the vitreous, but quite a large laceration was seen in the membrane and the vision was found to have risen to $\frac{20}{100}$. This slowly improved as absorption went on, and at the end of three months the vitreous was very much clearer and V = $\frac{20}{70}$ +.

Case XIII.—Mr. William S——, aged thirty; first seen January 30, 1888. This patient had a chancre in July, 1886, and after numerous constitutional lesions the left eye became affected in April, 1887, the attack having evidently been a choroiditis. The vision was markedly affected, but since the subsidence of the attack it has slowly improved.

Present condition.—R. E., V = $\frac{20}{20}$; media and fundus normal. L. E., V = $\frac{20}{100}$; cornea, iris, and lens normal. Some minute floating opacities in the vitreous, and a single strand of rather dense tissue extends directly from the temporal margin of the optic disc, forward and outward toward the periphery. As the narrow membrane seemed to be rather thick and dense, it was deemed wise to employ the slender cataract knife. This was introduced at the usual point in the outer side of the eyeball, and passed slightly upward, and then brought downward and withdrawn with a single cut. The ophthalmoscope was immediately used, and the membrane was seen to have been completely divided. No reaction followed, but the vision was not tested till the eighth day, when it was found to have risen to $\frac{20}{40}$ —. An examination of the fundus showed that marked retraction had taken place in the membrane, especially in the peripheral fragment, which had almost disappeared from view. Subsequently the vision improved slightly to $\frac{20}{40}$ +.

Case XIV.—Mrs. M. H——, aged twenty-four; first seen February 21, 1888. This patient has both cardiac and pulmonary disease. Was confined with her first child fourteen months ago, and almost immediately afterward had a sudden attack of loss of vision in the left eye. From this she slowly recovered, but this eye never quite regained its normal vision. Early in January, 1888, she had a similar attack in the right eye, while nursing her child, from which, in a week or two, she began to recover. On February 14th she again had an attack in the right eye. This patient has no sign of any renal disease.

Present condition.—R. E., V = fingers at four feet; cornea, iris, and lens normal; dense membranous opacities with wide meshes stretching all across the fundus and obscuring every detail, and numerous large blood-clots fixed on the membrane, or floating in the vitreous. L. E., V = $\frac{20}{70}$; cornea, iris, and lens normal. Broad, cobweb-like membrane in the vitreous, fixed posteriorly some distance below the margin of the disc, and attached anteriorly by a much broader base to the equatorial region upward and outward. I regarded the right eye as being in an almost hopeless condition, but decided to operate on it before attempting anything on the left eye. Owing to the density of the membrane the slender knife was used, introduced in the usual position through the sclera on the temporal side, and attempts were made to thoroughly divide the membrane in several places. The attempts were partially successful, but violent reaction followed the operation, accompanied by fresh hemorrhage into the vitreous, which reduced the vision to perception of light. This subsequently improved to about what it was before the operation, and the ophthalmoscope showed several holes in the membrane. One month later the left eye was operated upon at a corresponding point in the sclera, the keratonyxis needle being used, and the cobweb membrane was thoroughly lacerated. Vision improved almost immediately to $\frac{20}{40}$ +, the central retraction of the membrane being considerable. This patient is still under observation.

Case XV.—Mrs. W. L——, aged fifty; first seen March 14, 1888. This patient has had gradually failing vision in both eyes, without any decided or sudden inflammatory attacks, for more than two years. There is irregularity of the heart's action, but no very decided organic lesion.

Present condition.—R. E., V = $\frac{20}{200}$; well-marked arcus senilis; faint opacities at periphery of lens; delicate band of connective tissue extending across the vitreous from above and outward, downward, and inward; signs of old choroiditis. L. E., V = fingers at two feet. Same conditions in cornea and lens as in the other eye. Broad, rather thick, irregularly shaped membrane in the vitreous, extending from near the nasal margin of the optic disc upward and outward to the equator. In this patient the operation was done on both eyes at the same time, as her stay in the city was limited. On the right eye the keratonyxis needle was used, while on the left eye the double-edged cutting needle was employed, the puncture being at a corresponding point on the outer aspect of each eye. There was some reaction following the operation on the left eye, which, however, subsided within the first week. An ophthalmoscopic examination showed complete division of the delicate membrane in the right eye, with marked retraction of the divided ends, and a large hole through the thicker membrane in the left eye. One month after the operation an examination showed in the R. E., V = $\frac{20}{50}$, and in the L. E., V = $\frac{20}{200}$.

Of the seventeen operations done on fifteen patients, fourteen gave decided improvement in the vision, and three proved failures. In no case was there any loss of vision from the operation. It seems proper to conclude that the operation is a suitable one in certain cases, and is justified by the results obtained. It would seem wise to wait in any case until all inflammatory symptoms have long subsided before attempting to divide the resulting obstructing membranes, no matter whether caused by hemorrhages into the vitreous, or by a hyalitis, the result of choroiditis. The eye should be absolutely free from all irritation before attempting any such surgical interference.

51 West Thirty-sixth Street.

Traumatic Separation of the Superior Tibial Epiphysis.—Dr. F. T. Hueston reports the following case in the *British Medical Journal* of July 21, 1888. R. L——, eight years of age, was admitted into the Adelaide Hospital on May 7, 1888, suffering from the result of an accident which occurred in the following manner: On May 1st he was running in a school-room from two other boys, and, in order to escape, attempted to force his way between two desks, which were then pushed together by the other boys, the injury occurring while attempting to wrench his leg free. At the time of the accident he had but little pain, and was able to walk home, where he was kept in bed and stupes applied, a large amount of swelling supervening in a few hours. On examination all the local evidences of acute synovitis of the knee-joint were found, while free movement was to be obtained between the superior epiphysis of the tibia and the shaft, there being, however, no crepitus. The author was able to find only four cases of this nature on record.

COMPRESSED AIR BELOW THE SEA-LEVEL.

By WALTER LINDLEY, M.D.,

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I RECENTLY read[1] that an American of wealth was establishing a sanatorium in the valley of the river Jordan, near the Dead Sea. He ascertained that a bronchial affection was relieved where the barometric pressure was great, as it is in this valley of the Holy Land. This is the most marked depression on the face of the earth, being twelve hundred feet below sea-level. This gentleman makes the reasonable assertion that where atmospheric pressure is greatest, as in the depressions, respiration is easist.

In the eastern part of San Diego County, about one hundred miles from Los Angeles, is a depression traversed by the Southern Pacific Railroad, known to geographers as the San Felipe Sink, but commonly called—on account of the innumerable shells spread over its surface—the Conchilla Valley.

The unobserving transcontinental traveller over the Southern Pacific Railroad would travel the one hundred miles west of Yuma—on the Colorado River—without giving a glance out of the car-window, but would think he was in the Colorado desert, and wish the train would go faster; yet this very spot is one of the most remarkable on the face of the globe.

Dr. J. B. Widney,[2] of Los Angeles, while surgeon in the United States Army, crossed this region with troops twenty-one years ago. He then noticed surrounding this territory a well-defined line along the mountain-sides, always at the same level. Above that line the rocks are sharp and jagged, showing that for ages the water had stood at that level. He says, "I found it to be the old beach of a sea." I find nothing else noted of this country until the surveying party of the Southern Pacific Railroad, in running the line from Los Angeles to Yuma, found that sea-level was at the point where Dr. Widney had noted the ancient beach. They then gradually descended to the south until they reached a depression of two hundred and sixty-eight feet below sea-level, at a point near Salton.

This basin is about one hundred and thirty miles in length by thirty miles in average width. The deepest point is about three hundred and sixty feet below sea-level. Along the northern margin of this basin, right up against the mountains, are great numbers of date-palms. These tropical trees are indigenous to this valley, and many of them reach a height of eighty feet. When ripe, a single bunch of the fruit weighs one hundred pounds. It has a taste very similar to the date-palm of commerce. The tree has large fan-leaves, and is the same as can be seen in almost every park and yard in the towns of Southern California. The passenger on the Southern Pacific Railroad, by glancing out of the north side of the car at Indio, can see these giant sentinels keeping silent vigil over the plains beneath them.

At Salton, on the Southern Pacific Railroad, the surface of the earth for nearly ten miles square is covered with a crust of salt from four inches to a foot thick. I stopped there in midsummer and went out on this great white field about noon. The mercury indicated 105° F. in the house, but out in the sunshine, with the dazzling reflection from the glistening surface that extended for miles on each side, the temperature was probably 130° F. The workmen out in this peculiar harvest-field were as cheerful as any set of men I ever saw, and there was far less exhibition of suffering from heat than is to be seen, ordinarily, in July, in the wheat-fields of the Mississippi Valley. The low relative humidity explains the total absence of sunstroke here. The atmosphere in this region, adulterated by the chlorine gases emanating from the salt-beds, must be nearly aseptic. There are extensive mills here for grinding the salt. It is not put through any system of purification, but, after grinding, proves to be excellent for table use. Several hundred tons are thus prepared every month and shipped away.

A few miles east of here are the famous mud volcanoes, which are equal in wonder to the geysers of this State. Owing to the treacherous character of the ground around them they have never been thoroughly examined. Professor Hanks, the State mineralogist, undertook it, but breaking through the crust he was so severely burned that he was compelled to abandon his investigations.[1] Here is an extensive, almost unexplored field for some adventurous scientist.

Indio is the place to stop and make headquarters for tours through this interesting country. It is the principal station in the valley, and is near the northern rim of the basin, being only twenty feet below sea-level. The sandy plains around Indio were formerly considered a hopeless barren waste, but the advent of the railroad has made great changes. Good water is supplied by surface wells; but in order to have water for irrigation, artesian wells have been bored. There is one two and three-fourths miles east of Indio that is now flowing one thousand gallons per hour. This flowing water was reached at a depth of only one hundred and fifteen feet, after boring through layers of sand, clay, sand, tough blue clay, clay, coarse gravel, clay, and sand. Oranges and various other kinds of fruit are being grown here, and melons, tomatoes, and berries ripen several weeks earlier than at Los Angeles and other places near the coast. There are in this vicinity about forty thousand acres of excellent land. The visitor here, on witnessing the water flowing from the artesian wells, the grass growing, the melons ripening, and the peach-trees blooming, can fitly say with Isaiah: "The Lord shall comfort all the waste places. He will make the desert like the garden, and the desert shall rejoice, and bloom as the rose. For in the wilderness shall waters break out, and streams in the desert. And the parched ground shall become a pool, and the thirsty land springs of water."

In this valley live about four hundred of the Cohuilla Indians. This is an interesting tribe. Dr. Stephen Bowers, in a paper read before the Ventura County Society of Natural History, March 5, 1888, said that he believed them to be of Aztec origin. They are sun and fire worshippers and believe in the transmigration of souls, and that their departed friends sometimes enter into coyotes, and thus linger about their former habitation. They practise cremation. Their principal article of food is the mesquit bean, which they triturate in mortars of wood or stone, after which the meal is sifted and the coarser portion is used as food for their horses and cattle, and the finer is made into cakes for family use.

The Agave, or Century-plant, which is indigenous here, is also much used for food. The roots, roasted, taste like stewed turnips, while the stem, roasted, is said to taste like baked sweet-potatoes. From this plant they also make the Mexican beverage *pulque*, which has about the same alcoholic strength as beer. The ethnologist can, by gaining their confidence, get much interesting information from these very peaceable Indians.

I found at Salton and Indio asthmatics, rheumatics, and consumptives, all of whom reported wonderful recoveries. Some of these stories I accepted *cum grano salis*, which quotation is, by the way, especially applicable to the salt-fields. These asthmatics and consumptives claim that the farther they get below sea-level and the dryer the atmosphere, the easier they breathe. The rheumatics claim that the heat and dryness improves the circulation, and thus relieves them.

My stay was not long enough to make any trustworthy observations, but it occurred to me that, aside from dryness—mean annual relative humidity certainly not over twenty-five—and equability, there was considerable atmospheric pressure at a point three hundred and fifty feet below sea-level, and that we had here moderately compressed air on a large scale. In a recent paper[1] on the use of the pneumatic cabinet, the author, from many cases in practice, shows that compressed air relieves asthmatics and cases of phthisis. He says the compressed air will gradually force its way into every part of the lung, in order that the pressure may be the same on the inside as on the out. While the proportion of oxygen is, of course, not increased, yet there is an increased quantity in a given space, and we really have the oxygen treatment here on an extensive scale.

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[1] Eclectic Medical Journal, Cincinnati.

[2] See California of the South, second edition. New York; D. Appleton & Co. 1888.

[1] Dr. Stephen Bowers, in the Golden State, March 3, 1888.

The physician may say that at from two hundred to three hundred and sixty feet below sea-level the pressure would not be as much as in the cabinet. That is true, but the patient goes into the cabinet for, say half an hour, three or four times a week, while if he is at a point like Salton, he is breathing this moderately compressed air all the time, day and night. This is simply on the principle of the pneumatic chamber of Tabarie, the first one ever employed. This is the method recommended by Dr. A. H. Smith.[2] He refers to the therapeutic value of the increased amount of oxygen inhaled. He says compressed air is useful in catarrh of the mucous membrane, in acute and subacute inflammation of the respiratory mucous membrane, in restoring the permeability of air-tubes occluded by exudation or otherwise, in asthma, in pulmonary hemorrhage, in pleuritic effusion, in simple anæmia, in inveterate cases of psoriasis and ichthyosis, and in the various forms and stages of phthisis. He does not recommend it in pulmonary emphysema. Dr. Smith says compressed air should be used promptly and perseveringly on the earliest recognizable signs of apical catarrh in those predisposed to chest disease. He also especially recommends it as an alterative.

Of course my deductions are all tentative, but I hope by calling attention to this unique region to gain the assistance of intelligent observers.

If a phthisical or asthmatic patient of considerable vigor intends coming to Southern California, his physician might be justified in suggesting that—except during the summer months—he stop at Indio, and from there test the climate of this basin. If not suited or benefited, it is but two hours' ride by rail to Beaumont, a delightful resort, with excellent accommodations, two thousand five hundred feet above sea-level; but two hours more to the pine forests in the San Jacinto mountains, from six thousand to ten thousand feet above sea-level, or to Riverside, Monrovia, Pomona, or Whittier, all about one thousand feet above the sea; or to Los Angeles, three hundred and fifty feet above sea-level; or to Santa Monica, Long Beach, Santa Barbara, or San Diego, directly on the coast, and but nine hours' ride by rail and boat to Catalina Island, twenty-five miles out at sea, where a typical ocean atmosphere can be enjoyed. Thus an error in location can be quickly corrected.

NOTE. — OTHER PLACES BELOW SEA-LEVEL. — *Sink of the Amorgosa* (Arroyo del Muerto), in Eastern California, two hundred and twenty-five feet below sea-level. *The Caspian Sea*, eighty-five feet below sea-level. *Lake Assal*, east of Abyssinia in the Afar country, eight miles long and four miles wide, is about seven hundred and sixty feet below sea-level. Its shores are covered with a crust of salt about a foot thick. This salt is a source of revenue to the Afars, as they carry it by caravans to Abyssinia, where they find a ready market. There are several other depressions about six hundred feet below sea-level in this vicinity. The noted oasis Siwah, in the Libyan desert, three hundred miles west of Cairo, is one hundred and twenty feet below sea-level. Here are beautiful date-palm groves, and here also the apricot, the olive, the pomegranate, and the vine are extensively cultivated. In this same desert is the oasis *Araj*, two hundred and sixty-six feet below sea-level. There are also numerous other depressions in the desert portion of Algeria and at various points on the Sahara Desert.

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[1] Dr. H. B. Lathrop, in Southern California Practitioner, October, 1887.

[2] Smith, Andrew H.: The Physiological, Pathological, and Therapeutic Effects of Compressed Air. Detroit: Geo. S. Davis. 1886.

Clinical Department.

NOTES ON THE GERMICIDAL ACTION OF PEROXIDE OF HYDROGEN.[1]

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In spite of the extensive use of peroxide of hydrogen and the commonly received opinion as to its value as a germicide, its germ-killing power has not, so far as I can learn, been investigated thoroughly. The prevalent impression of its value probably rests largely on the experiments of Kingzett, Guttmann, and Miguel; but these, which were not conducted with the improved methods of bacteriology, prove nothing as to its germicidal power, but simply that in certain small proportions it prevents the development of some microbes (species not determined). Wecks,[2] using modern methods, found, devoting a short paragraph to the subject, that the "hydrogen dioxide, formula HO_2," [*sic*] destroyed pyogenic germs in exposures of one to one and one-half minute. He gives no idea, however, of the strength of the solution used, and the impression given by him of the extreme instability of the compound requires some correction. I have therefore thought it worth while to test the substance in various strengths on the bacilli and spores of anthrax, and on the white and yellow pus cocci.

The article used was Charles Marchand's fifteen-volume solution. The methods were, 1, that of Koch, in which threads, impregnated with the germs, are subjected to the influence of the germicide, and then, after washing in sterilized water, placed on the surface of the nutrient medium; 2, the following plan, which is somewhat simpler and more expeditious: A small platinum loopful of the germs is rubbed up rapidly in the germicidal liquid; from this emulsion a loopful, containing many hundred germs, is, after the desired length of exposure, transferred to a test-tube containing melted agar or gelatine, in which it is thoroughly shaken up. The tube is then placed in the incubator in a nearly horizontal position, and if any germs are left alive they develop, scattered through the mass. This method has the advantage, without the bother, of plate-cultures, or even of Esmarch's roll-cultures, of giving an approximate idea of the proportion of germs that survive a given exposure. The method is open to the theoretical objection that the minute amount of the germicide introduced into the culture medium might prevent the growth of germs not really killed, but the weight of this objection is easily removed by a few control-experiments. Since completing my work I notice that Martens[3] has used a similar plan, and doubtless it has been used by many others, though I have not seen it mentioned.

It was found that the fresh fifteen-volume solution killed the white and yellow cocci and the anthrax bacilli in exposures of three-quarters to one and one-half minute, and fully developed anthrax spores in three to four minutes. When the second method was employed, with Koch's threads, the results were more inconstant, and the average time required for killing was somewhat longer (*i.e.*, three to five minutes for anthrax spores, and one to two and one-half minutes for the cocci and bacilli). This was probably because, in the dried clumps on the threads, some of the germs were shielded from the action of the peroxide. Also, when mixed with blood and pus (*i.e.*, under approximately natural conditions), the pus germs were killed in one to two minutes.

To eliminate the possibility that these results were due to the free acid which the stable solutions of the peroxide contain, a gravimetric analysis of a sample was kindly made for me by Mr. Bruce of the Union Pacific Laboratory. showing the presence of 0.118 per cent. of free HCl. This result differs considerably from the statement, in the announcement of Marchand's solution, that the latter contains but "$\frac{1}{3000}$ phosphoric acid and $\frac{1}{6000}$ sulphuric acid," still the proportion is too insignificant to account for the results achieved. A full-strength neutral or alkaline solution is difficult to obtain, as the H_2O_2 decomposes very rapidly on the addition of the alkali (sodium bicarbonate) even when it is kept at a low temperature by the aid of ice, during the neutralization; but a slightly alkaline mixture formed by the addition of a drop of a saturated solution of sodium carbonate to twenty drops of the peroxide solution, is still actively germicidal.

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[1] Read before the Omaha Medical Club, July 18, 1888.

[2] Archives of Ophthalmology, xvi., 4.

[3] Virchow's Archiv, cxii., 2.

The statement of Wecks, therefore, applies correctly to the fresh fifteen-volume solution, but his report of the instability of the solution used by him would lead one to infer that exposing it to ordinary room-temperature for a few hours, to say nothing of days, would certainly destroy all valuable germicidal power. I found, however, that a solution exposed for forty days to a temperature of 68° to 75° F., in an ordinarily corked flask, still killed the yellow pus cocci in ten to eleven minutes.

While, however, the enthusiasm with which the peroxide has generally been received as a germicide can be considered justified if the fresh fifteen-volume solution is referred to, the same cannot be said of some of the dilutions recommended. The instructions accompanying the Marchand solution advise diluting with about four times its bulk of water, for use on "mucous membranes as injections, etc." A dilution of this strength was found not to have killed the pus cocci after an exposure of thirty minutes, a result which practically bars it as a germicide, though for its cleansing action it may still be valuable, especially when combined with another antiseptic, as has been recommended by Dr. Macrae, of Council Bluffs.[1] The fresh solution, diluted with an equal volume of water, killed the pus germs after a three to four minutes' exposure; diluted with twice its bulk of water, it destroyed all but a minute fraction of the germs, after an exposure of ten minutes.

The fifteen-volume solution is sharply irritating to the conjunctiva and nasal mucous membrane, and even the weakest solution mentioned in the announcement (two to three volumes) instead of being "bland as water" causes considerable smarting of the eyes and nose for a few minutes.

Regarding the mode in which the peroxide acts, the common impression, fostered by alleged observations, that the bacteria and pus globules are rent asunder, and reduced to a mass of débris by the violence of the decomposition, is erroneous. After an exposure of an hour, all active ebullition having ceased, I have failed to observe any appreciable change in the appearance of anthrax spores and bacilli, though they were killed dead as stones; and pus globules, after many hours' exposure, though changed in appearance, still retain their contour. Neither is it, in my opinion, the nascent oxygen which kills the germs. Formerly, in common with many others, I believed that it did, and would watch with glee the mass of bubbles resulting from an instillation of the peroxide into a suppurating ear, considering each bubble the signal of the death of many micrococci. As a matter of fact, however, a partly decomposed alkaline solution, which foams much more furiously (*i.e.*, gives out nascent oxygen more rapidly) than a fresh slightly acid solution. is much less efficient than the latter. The germs, apparently, are not killed by the ozone liberated, but are simply poisoned by the undecomposed peroxide just as they are by carbolic acid and sublimate. In other words, while the ebullition, by its mechanical effects, is what makes the peroxide valuable as a cleanser, when it comes to germ-killing, with a solution of a given strength, the less bubbling the better, except in so far as it favors the access of undecomposed peroxide to germs protected by secretions.

[Since reading the above paper, I have first noticed the work of Van Hettinga Tromp (Ref. in "Centralblatt für Bacteriologie," III., 25) who finds that H_2O_2 in the proportion of $\frac{5}{10.000}$ kills anthrax spores in twenty-four hours, typhus bacilli in five minutes, and that cholera bacilli are killed in less than five minutes by $\frac{1}{10.000}$. Unless typhus and cholera bacilli are especially susceptible, these results would indicate a greater germicidal power than I have found, as a fifteen-volume solution is supposed to contain something more than three per cent. of the peroxide; but without knowing just what preparation Van Tromp used, a profitable comparison of our results can hardly be made.]

THE STERILIZATION OF MILK.

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A PROBLEM which occurs to every general practitioner to solve, with greater or less frequency, is the successful rearing of children which have been, from some cause or other, deprived of the maternal nourishment; to this end various foods have been devised—some good, others bad, and all expensive.

After experimentation with, and trial of, most of these, I have come back to cows' milk, properly prepared, as the best substitute at our command.

This summer the bottle-fed children under my care have, with the exception of an occasional slight diarrhœa, done uniformly well, and this has tested, to my complete satisfaction, the method employed to render their food digestible and aseptic.

Since the publication of Dr. Jeffries'[1] interesting article I have caused the milk consumed by all my artificially reared children to be prepared in the following manner: Into an ordinary cooking steamer, which can be bought at any hardware store, a couple of inches of water is put and brought to the boiling-point; the milk, which is the infant's allowance for the next twenty-four hours, is placed in as many nursing-bottles as are used during that period of time. These bottles, having been previously placed in an oven for a quarter of an hour, are now stoppered with cotton-wool, and put on the perforated plate in the steamer, not touching each other, the cover shut tightly down and the whole allowed to steam for half an hour.

As will be readily seen, by this method all germs are destroyed, and if the milk is left stoppered and in a cool place, it will keep a long time. In the course of some experiments which I have been making, I find that, to-day, milk which was steamed exactly five weeks ago, is perfectly sweet and good.

When feeding-time comes, the woollen cork is removed and lime-water and sugar-of-milk are added. A nipple taken out of boiling water is put on, the bottle warmed, and the child's food is ready for administration.

Until six weeks old the proportions of lime-water and milk are half and half, with a teaspoonful of sugar-of-milk. About three ounces of this mixture will be taken every two hours; from six weeks to three months, one-third lime-water, and from this time gradually diminish the amount. I prefer using the ordinary cooking-steamer to the somewhat elaborate and costly apparatus of Sophlut for the sterilization of milk, for the reason that it is inexpensive, easily kept clean, and does not bewilder the overtaxed mother or nurse with elaboration of detail.

In closing I wish to merely emphasize the fact that a bottle must be used but once; immediately after the child has nursed all it will, the remainder of its contents must be thrown away, the bottle washed, and placed in the sun and air.

836 SEVENTH AVENUE, NEW YORK CITY.

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[1] Omaha Clinic, i., 3.

[1] American Journal of the Medical Sciences, May, 1888.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, September 1, 1888.

THE FLY AS A CARRIER OF DISEASE.

It is a popular belief that malignant pustule and certain other affections may be propagated by the bites of flies, and it has also been asserted that inoculation of yellow fever may be effected by the stings of mosquitoes. It is readily conceivable that flies or other insects, lighting upon pus or other material containing pathogenic micro-organisms, may soil themselves with the matter, and thus carry it to the surface of a small wound, or to food which will later be eaten. As long ago as 1883 Grassi stated that he had found the ova of certain intestinal parasites, such as tænia solium and oxyuris, unaltered, in the intestines of flies. Two years later Marpmann reported the results of certain experiments which he had made with micrococcus prodigiosus and bacillus fœtidus. He fed flies with potato-cultures of these micro-organisms, and obtained the same micro-organisms in cultures made from the intestinal contents of the same flies.

Dr. Giuseppe Alessi was led, from a consideration of the importance of these results, to undertake a further series of experiments with some of the known pathogenic micro-organisms (*Archivio per le Scienze Mediche*, vol. xii., No. 3, 1888). It will suffice here to relate briefly his mode of procedure and the results obtained in his experiments with the tubercle bacillus. He took some sputum from tuberculous patients, which he had found to contain the specific micro-organism, and placed it upon glass plates under a screen. He then put some flies under the screen and left them there for several days. At the end of this time he removed the intestines from the flies and made some cover-glass preparations from them, staining them by the Koch-Ehrlich-Weigert method. These preparations, examined under the microscope, showed the presence of large numbers of the bacilli. The experiments were repeated a number of times, and always with the same results.

He then examined the dejections of the flies which had been fed on phthisical sputa. For this purpose he placed a sheet of paper on a wire framework under the fly-screen, and examined the fæces there deposited by the same method of cover-glass preparations and staining. He found that these fecal matters contained the bacilli in great quantities, the organisms being here much more numerous than in either the intestinal contents or the sputa. It was thus shown that flies ingest, along with the sputum, the specific bacilli, and that the latter are found unaltered in the intestinal canal and in the fæces of the insects. As a control experiment he examined the intestinal contents and the excrement of other flies caught in the laboratory, which had not been fed on the phthisical sputum, but in no case found the specific micro-organisms.

Having ascertained that the flies ingested and passed in their fæces the tubercle bacilli, the next step was to learn whether the micro-organisms were destroyed in this journey, or whether they were still alive and had retained their virulence. To determine this fact he inoculated healthy rabbits with the excrement of these flies, introducing it into the anterior chamber of the eye. He always used the dried fæces, having previously examined it to determine the presence of the microbes. The immediate result of this inoculation was always an inflammation, more or less violent in character, but this disappeared in the course of eight or ten days, and the wound healed completely. A few days later a white point appeared in the centre of the crystalline lens, and then a little nodule was seen at the border of the iris, or a white filament stretching over the pupil. In from twenty-five to thirty-five days the entire pupil was invaded with a dense white cloud, and the peripheral ring of vessels was seen to be strongly injected. The iris, seen by oblique illumination, was of a dirty yellow color. Finally the cornea became gradually clouded so that the further intra-ocular changes could not be observed. An examination under the microscope of matter taken from the corneal ulcers showed the presence of large numbers of the tubercle bacilli, thus supplementing the clinical evidences of the virulence of the micro-organism.

Dr. Alessi made a number of additional experiments with the microbes of cholera nostras, typhoid fever, and charbon, and with staphylococcus pyogenes aureus, feeding flies with pure cultures of these micro-organisms, and in each case he obtained the same results as related above in the case of the tubercle bacilli. In every instance he showed that the micro-organisms were not digested by the insects, but passed through the intestinal canal unchanged, preserving their vitality fully, and being capable of further culture after their journey.

It would be easy to draw most alarming conclusions from the results of these experiments as related by Dr. Alessi. It does not necessarily follow, of course, that, because it has been shown that a few pathogenic micro-organisms can be carried from place to place by flies, all can be so transported; but, nevertheless, it suggests a possibility of such an occurrence. If this were the case, simple isolation of a patient suffering from a contagious disease would not be sufficient to prevent the spread of the malady, for the flies might readily carry the micro-organisms from one room to another, from one floor to another, or from house to house in the same portion of the city. But practically, even admitting the author's conclusions, which must necessarily be confirmed before being generally accepted, there is little to cause alarm to the most timid. If flies were such active agents in the transmission of disease we ought to have our epidemics in summer; but, in point of fact, we find most of these diseases more prevalent in winter, at a season when the house-fly is at rest. It nevertheless furnishes one argument more pointing to the necessity of the immediate and thorough disinfection of all the excretions from the body of one suffering from contagious disease, a matter which everyone recognizes the need of, but which everyone, we fear, does not insist upon as he ought.

WOMEN PHYSICIANS IN MEDICAL SOCIETIES.

OUR friends of the Quaker City have at last realized that there is no good reason why a properly educated and legally qualified female practitioner may not be admitted to their County Society, and yet it has taken several years to bring about this result. Even in the present instance the vote was a close one. We both honor and congratulate the pioneer in her efforts to secure for her sex their due professional recognition.

Professional conservatism is hard to overcome. Having the great past at its back, it has in argument to act only a defensive part. The burden of proof devolves upon those who desire a change. After the latter have manfully fulfilled their part, the conservatives, forced to yield one point after another, fall back upon their own conservatism without argument, for a final stand. This is such a rapid age that this last defence is soon undermined, and the beleaguered party eventually capitulates.

In this instance it appears to have done it very gracefully. The advocates of the admission of women to the Philadelphia Society publicly acknowledge that they "owe her election to the forbearance, good-will, and great-heartedness of our friends, who have for so many years *successfully opposed* our efforts to gain recognition of women physicians in that body." The writer of these words would make a good diplomat. He is able to retain his own convictions and state his triumph over his opponents in terms complimentary to the latter.

The work of the women's medical colleges in our large cities has been most commendable during the past few years. Our local institution has long had a graded course, and the thoroughness of its instruction has been superior, if anything, to that given in the larger institutions for men. In the clinical department it has, we think, been decidedly superior. No wonder, then, that the graduates have at once stepped into the ranks of the progressive elements of the profession. Their own work has been the best justification for their admission to the Societies.

THE OVERCROWDING OF THE MEDICAL PROFESSION.

IT is generally admitted that the number of physicians in this country is much greater than is needed to attend to the wants of the people, and far too great to be compatible with the best interests of the medical profession. In his annual address at the Cincinnati meeting of the American Medical Association, the late Dr. Garnett referred to this overcrowding, and used it as one of the arguments in favor of a higher medical education. "That the professions of law and medicine are overcrowded in this country," he said, "no man of common observation will deny. The ratio of professional men in the United States to the population exceeds that of any other country in the civilized world, so that any legitimate means of checking this evil which can be devised and carried into practical effect must be hailed by the medical world, as well as the general public, as an inestimable boon." The speaker estimated that the ratio of practising physicians in the United States to the population was about as 1 to 580.

The general belief seems to be that this ratio is not decreasing, but that, notwithstanding the rapid increase in population, the proportion of the latter to each physician is constantly growing less. It is gratifying, therefore, to learn from the report of proceedings of the quarterly meeting of the Illinois State Board of Health, held in Chicago in June last, that this is not the case.

Dr. Rauch, the Secretary of the Board, referring to Dr. Garnett's address, shows that there is not so great cause for alarm, but that the tide has apparently begun to turn. Quoting from the forthcoming report on Medical Education, he says that, notwithstanding the growth of population, the total number of medical students has never yet reached the proportions attained in 1882–83. The sessions of that winter were attended by 13,088 students; of 1883–84 by 12,763 students; of 1884–85 by 11,975 students; of 1885–86 by 12,321 students, and of 1886–87 by 12,948 students. Although there was a gain last year of 627 students over the attendance in 1885–86, the aggregate in 1886–87 was still 140 less than in 1882–83.

Not only is the absolute number of students growing smaller, but what is of perhaps even more importance, as indicating a better quality of the finished product, is the fact that the percentage of graduates to the total number of students is steadily diminishing. In 1882–83, out of every 1,000 matriculates 322 were graduated, taking both the United States and Canada and all schools of practice into the account. In 1886–87 only 294 out of every 1,000 matriculates were graduated. In the United States alone, in 1882–83, out of every 1,000 matriculates 331 were graduated, while in 1886–87 only 305 out of every 1,000 matriculates were graduated. Thus it is seen that, while the population increases—according to the census authorities—at the rate of two per cent. per annum (exclusive of the increment by immigration), the number of new graduates entering the profession was nearly eight per cent. less in 1886–87 than it was in 1882–83.

The causes which are working to produce this good result are chiefly two. In the first place, it is getting to be more commonly understood by the laity that the physician's calling is not an easy nor a lucrative one, and that a young man whose ambition it is to acquire a fortune cannot choose a less certain means of attaining this end. But the second, and more active, cause is the gradual evolution of the medical school from a business college to an institution for scientific training. The effects of a demand for a preliminary education, of a graded course of studies, and of a higher standard of qualifications for graduation are beginning to be felt. The number of graduates is less, and the proportion of well-educated men among them is greater.

The example of the leading medical schools of the country, and the influence of an awakened professional opinion, will doubtless be able to raise still higher, rather than to lower, the educational standards now in force. But it must in justice be admitted that to the work of the Illinois State Board of Health, and of its able and untiring Secretary, Dr. Rauch, much of the credit is due for the improvement now being made in the methods of medical study throughout the country.

THE MECHANICAL TREATMENT OF ERYSIPELAS.

THE methods hitherto employed in the treatment of erysipelas may be divided into the medicinal and the operative. The former is, of course, the older, and it is to Kraske that the more modern method of scarification, the operative method, is attributed. He did not originally employ multiple scarifications in order to render more effectual the action of antiseptics locally applied, as was done later, but rather to relieve tension and to give exit to the septic fluids. Riedel modified Kraske's method by making incisions two or three inches in length on the borders of the erysipelatous area, instead of multiple scarifications in the diseased part itself. Both these methods have given good results, but they have some serious disadvantages. The incisions cannot be made on the face or other exposed parts, on account of the disfiguring scars which remain, and even when the disease is on the body it is no light matter to the patient to be cut so often and in so many places.

A new method, called by the author the "mechanical" method, is proposed by Dr. Anton Wölfler, in an article published in the *Zeitschrift für Therapie* of July 15, 1888. He was led to its adoption from a consideration of Barwell's plan of covering the erysipelatous area with white paint. He found, however, that simply painting the part was not sufficient, but that it was necessary to cover the diseased skin with some waterproof material retained by a bandage. Further experience showed him that, when the bandage became loose, the erysipelas was very apt to spread, and he then adopted the practice of sealing the covering with traumaticin, a solution of gutta-percha in chloroform. This answered the purpose of keeping the disease within bounds very well, as a rule; but in certain parts, where there were many inequalities of surface and where the skin was very movable, the erysipelas would occasionally escape from under the protective, necessitating an extension of the traumaticin dressing. The author then resorted to strapping with adhesive plaster, and had no further trouble. He reports over twenty cases successfully treated with the traumaticin or adhesive plaster. The disease process was confined to the area covered by the dressing, the temperature speedily fell, and the patients made a rapid recovery.

Dr. Wölfler regards the action of the compressive dressing as a purely mechanical one in preventing the invasion of new territory by the pathogenic cocci. It is probable, he says, that the microbe soon exhausts the material for its sustenance in the skin, and, unless it can spread to the neighboring healthy parts, it quickly dies. The operative methods prevent this spread by dividing the small vessels in the skin, thereby producing extensive capillary thrombosis, and the pressure of the traumaticin or adhesive plaster exerts a similar restraining influence.

ENLARGEMENT OF THE LIVER IN RICKETS.

THAT rachitis is a disease of general malnutrition, and not affecting the bony framework alone or primarily, is now well recognized. In many cases, indeed, which are now regarded as rachitic, the osseous evidences of the disease are but slightly marked, or even absent, and the muscles and ligaments, the brain, or the intestinal canal are the parts most affected. The liver and spleen are also often involved, as is shown clinically by their increase in size. The minute changes in these organs have been studied in some detail, but not sufficiently, as yet, to enable us to determine precisely what their nature is.

In the Birmingham *Medical Review* for August, 1888, Dr. Edgar Hogben reports the results of a series of histological observations which he has made in cases of enlargement of the liver in rachitic children. He took pains to exclude all those cases in which there was a suspicion of tuberculosis, syphilis, or alcoholism, an instance of which in a young child he refers to in the article. The liver was, as a rule, tough and solid to the touch, and much heavier than its size would lead one to expect. Its surface was smooth, and of a color varying from that of deep congestion to the red mottling of fatty infiltration. There was in all the cases an increase in the fibrous connective-tissue elements of the organ, and sometimes a fatty infiltration of the hepatic cells was found associated with it. The fibrous growth was marked in the interlobular connective tissue surrounding and isolating the individual lobules. In the immediate neighborhood of the interstitial growth, and at the periphery of the lobules, there was in places a small-celled infiltration, derived apparently from the interlobular connective tissue, and encroaching upon the hepatic cells at the margin of the lobules. Occasionally there was a very marked thickening of the coats of the bile-ducts, and there seemed also to be a multiplication of the biliary canaliculi.

Of course, it is necessary to exclude other possible causes of this cirrhotic process before it can be definitely referred to rickets. Dr. Hogben endeavored to do so, yet, when there are so many sources of error a larger number of cases is necessary, in order to establish the relation between the two processes definitely. It has been recently asserted by Dr. Crooke that scarlatina often occasions an interstitial hepatitis, which may be the starting-point of a chronic cirrhosis; and it is possible, as the author admits, that some of the children upon whom his observations were made may have previously suffered from an attack of scarlatina.

Concerning the cause of these hepatic changes, the author says that, in its general appearance and microscopic details, the liver in rickets seems to correspond to the type of hypertrophic cirrhosis. The changes in the bile-ducts and canaliculi point indeed to a biliary hepatitis, which is supposed to be caused by a chronic obstruction to the bile. He is inclined, therefore, to believe that a possible explanation of the hepatitis in children who suffer from rickets is to be found in the chronic gastro-intestinal catarrh, which is a constant early symptom in all cases. The involvement of the bile-duct in the general catarrhal condition, and the chronic incomplete biliary obstruction consequent thereon, may be supposed to give rise to an interstitial hepatitis such as described.

THE INHALATION OF HYDROFLUORIC ACID VAPORS IN PHTHISIS.

A CORRESPONDENT writes for information concerning the hydrofluoric-acid treatment of phthisis, about which much has been written of late, in France more especially. The reports as to the efficacy of this remedy are very conflicting, some claiming as high as forty per cent. of cures, others asserting that the inhalations exert absolutely no effect upon the course of the disease, and that the improvement noted in certain cases is owing partly to the better care which the patients under experiment receive, and partly to the renewed hope with which they are inspired.

Some experiments recently made by MM. Grancher and Chautard (*Journal de Médecine et de Chirurgie Pratiques*, July, 1888) would seem to show that the assumed poisonous action of hydrofluoric acid gas upon the tubercle bacillus is far from being a fact. They inoculated several rabbits with the same cultures of bacillus tuberculosis, leaving some without treatment and submitting others to the hydrofluoric inhalations. All the animals died at about the same time, and all presented exactly similar lesions. They then treated the cultures, before inoculation, with vapors of varying degrees of dilution, and the rabbits died as in the previous experiments, the only difference noted being that those inoculated with pure cultures, not previously subjected to the action of hydrofluoric acid, died a short time before the others, and that the rabbits that survived the longest were those that had been inoculated with cultures submitted to the vapors of the undiluted acid. They concluded, therefore, that the direct and prolonged exposure of the tubercle bacillus to the action of hydrofluoric vapor slightly modifies its virulence, but does not destroy it.

These experiments do not inspire much hope for a cure of pulmonary tuberculosis by inhalations of hydrofluoric acid gas, for if the concentrated gas failed to kill the bacillus in a test-tube, it is hardly probable that it can exert any very injurious action upon it when growing within the lungs. It is, nevertheless, possible that the inhalations may be of some benefit by weakening the micro-organisms, and thus aiding the tissues in their struggle against the ravages of the invader.

News of the Week.

Dr. Fordyce Barker, our esteemed townsman, has been a third time honored by the degree of LL.D. First from Columbia College of this city, secondly by the University of Edinburgh, Scotland, and recently by the University of Glasgow. The profession will unite in congratulating him on these well-deserved distinctions.

The Mississippi Valley Medical Association.—The Mississippi Valley Medical Association will meet at St. Louis, September 11, 12, and 13, 1888. Dudley S. Reynolds, A.M., M.D., Louisville, is the President, and John L. Gray, M.D., Chicago, Ill., Secretary.

Polypathy is a new form of quackery which seems to have taken its birth in Michigan. The *Medical Standard* says Drs. Plunkett and Rennie, former professors of the Michigan College of Medicine, have become travelling "Polypathic" advertisers. Their circulars state: "Poly is derived from the Greek word which indicates many, and pathy is the root of the word to which we have affixed homœo, also electro, hydro, etc. Therefore, to be a polypath, you must graduate in all schools of medicine, and the doctors are always pleased to show that they hold these diplomas."

The Rarity of Centenarians.—The number of very old people is really much less than is believed or reported. Doubt exists with some as to whether there exists authentic evidence of any person living to be over one hundred and ten years. M. Lévasseur has recently made some investigations which show the truth of the above view. He states that when the Bavarian census of 1871 was taken, thirty-seven persons stated that they were upward of one hundred years of age. It was found, however, on careful inquiry, that only one of them had outlived a century. In Canada, which has a reputation for the longevity of its inhabitants similar investigations were made at about the same time. Four hundred and twenty-one persons were reputed to be upward of one hundred years of age. The exact age of only eighty-two of them could be ascertained by the authorities. Of these, five men and four women were found to be centenarians. In France the Minister of Commerce has endeavored to carry out a similar inquiry in connection with the census of 1886. The report on the subject states that on examination it was found that, of one hundred and eighty persons declared to be centenarians, sixty-seven were only "believed" to have reached that age by their relatives, who could produce no written evidence in support of the assertion. There were only sixteen persons whose age could be shown to be upward of one hundred by authentic documents. M. Lévasseur believes that there are probably not many more than fifty centenarians in France.

The Brinkerhoff Treatment, as we are informed, is a method of injecting piles with carbolic acid, practised by an itinerant "doctor" in Northern Ohio. It appears to possess no merits peculiar to itself, its local popularity depending solely upon the fascination which irregular medicine exercises over so many ill-balanced and novelty-loving minds.

Naphthalol, or Betol, is a compound of salicylic acid and naphthol, which has been recently brought forward by Sahli as a useful remedy for rheumatism. It is given in doses of three drachms in the course of the day. It has no odor nor taste, and is said to cause no disagreeable after-effects. It has been recommended also in the treatment of cystitis from whatever cause produced.

Sloughing of the Cornea from Cold.—A case of partial sloughing of the cornea is reported by Dr. Kuritzin, due to exposure for nine hours on a Russian steppe driving against a snow-storm. Both eyes were similarly affected, somewhat deep ulcers having formed, in shape and position corresponding to the openings between the eyelids; the other parts of the eyes were scarcely affected at all. The patient, who had never previously suffered from any affection of the eyes, made a good recovery.—*The Lancet.*

Poisoning of a Regiment.—A large number of soldiers in a regiment stationed in one of the French fortifications recently exhibited symptoms of poisoning by belladonna. An investigation undertaken to discover the source of the poison showed that it could not be in the water or wine drunk by the troops, for all the garrison had the same. In the absence of a better explanation, it was attributed to the eating of some unripe potatoes containing solanine.

Society Reports.

CONGRESS FOR THE STUDY OF TUBERCULOSIS.

Held in Paris, July 25, 26, 27, 28, 30 *and* 31, 1888.

(Continued from p. 220.)

(Special Report for The Medical Record.)

Saturday, July 28th—Fourth Day.

The subject proposed for discussion at this session was

THE RACES OF MEN AND ANIMALS CONSIDERED IN RELATION TO THEIR SUSCEPTIBILITY TO TUBERCULOSIS.

M. **Robinson**, of Constantinople, sent a communication on

PULMONARY PHTHISIS IN ASIA MINOR.

Notwithstanding the fact that the inhabitants of this country lived much in the open air, and under the best hygienic conditions, tuberculosis was very prevalent, and ten per cent. of all his patients were suffering from this disease. The natives recognized the contagious nature of the malady and always destroyed the articles used by the sick. The frequency of the disease, there could be no doubt, was owing to the free consumption of milk and of nearly raw meat by the natives.

M. **Solles** read a paper on

HEREDITARY TUBERCULOSIS IN GUINEA-PIGS.

He had watched carefully several litters of guinea-pigs sired by males born of tuberculous parents, but coupled with healthy females. The young were not at first tuberculous, but became so later.

M. **Hanot** related a case of

TUBERCULAR CIRRHOSIS.

The patient was a man, twenty-five years of age, free from malaria, syphilis, or alcoholism. He died of pulmonary phthisis, having suffered also from marked ascites, and at the autopsy the peritoneum was found normal, but the liver was small and marked by numerous furrows. The microscope showed advanced cirrhotic changes. It was impossible to attribute the hyperplasia of the connective tissue to the presence of tubercles, which were absent in the liver, and the author thought it probably due to the action of soluble products secreted by the micro-organisms.

M. **Galtier** sent a communication on

EXPERIMENTAL HEREDITARY TUBERCULOSIS.

He was unable, in nine experiments on guinea-pigs, to obtain a single example of the transmission of the disease from the dam to her young. He concluded, therefore, that true hereditary tuberculosis, if it exist at all, is of very rare occurrence. The young which were suckled by the dam became tuberculous as a rule.

M. **Arloing** said that he had seen a case of

INTRA-UTERINE TRANSMISSION OF TUBERCULOSIS.

A female guinea-pig was inoculated, and two of the young, born ten days later, were found to have caseous masses in the skin.

M. **Robcis** said that, of nearly three hundred autopsies of milch-cows in Paris, he had found tubercular lesions in only three per cent. The disease, in the dairies of Paris at least, would seem, therefore, to be less common than is generally supposed.

M. **Ricochon** read a paper on

FAMILY TUBERCULOSIS.

He said that the early appearance of tubercular lesions in infants was not necessarily an evidence of the hereditary transmission of the disease. In the case of fifty-three individuals suffering from pulmonary phthisis, he had made careful inquiries into their antecedents, and had found tuberculosis in one hundred and eighty-one of the near or remote relatives. In eighty-three there was nervous or mental disease; in thirty-eight, congenital dislocation of the hip; in twenty-eight, cancer; and in thirty-three, rachitic deformities of the bones. Besides these there were numerous cases of varicose veins, hernia, nævi, and various developmental defects. These various affections were an evidence of some structural defects in the osseous and fibrous tissues, notably of deficiency of the mineral constituents, and this excessive loss of the mineral elements was also shown by the examination of the excretions (urine, sweat, and sputum) in those hereditarily predisposed to tuberculosis, which were found to contain an excess of alkaline chlorides, earthy phosphates, lime-salts, etc. The tissues became probably, by reason of this deficiency in the salts, more susceptible to the attacks of the specific micro-organisms.

M. **Ferrand** related the histories of three families, in each of which one of the parents was tuberculous. The other parent did not become affected, but all of the children were diseased.

M. **Malvoz** asserted that

MICRO-ORGANISMS CANNOT PASS THROUGH THE HEALTHY PLACENTA,

for this organ is not adapted to the arrest and detention of pathogenic microbes. The cases of congenital tuberculosis in the records of veterinary practice are very rare.

M. **Cagny** related a case of

TUBERCULOSIS TRANSMITTED FROM MAN TO POULTRY.

The chickens belonging to a certain family, one member of which was suffering from pulmonary phthisis, were found to be almost all diseased. The author learned that the sick man was in the habit of walking in the garden, and it had been noticed that the chickens eagerly seized upon the matters expectorated by him. The chickens had tuberculosis of the liver, and it was found necessary to sacrifice the entire flock.

M. **Jonesco** reported a case of

TUBERCULAR ARTHRITIS,

occurring in a rheumatic individual. It would seem as if the rheumatic affection of the joints had prepared the way for the lodgement of the bacilli of tuberculosis.

M. **Verneuil** said that it had been supposed that there was a sort of

ANTAGONISM BETWEEN RHEUMATISM AND TUBERCULOSIS

He had previously reported hybrid cases similar to that of the last speaker. He thought that in such cases investigation would show that one of the parents had rheumatic antecedents, while the other had sprung from tuberculous stock.

M. **Aguirre**, of Chili, reported the results of his experience with

TUBERCULOSIS IN SANTIAGO.

The mortality from phthisis was twenty-two per cent. of the total mortality among women, and thirty-three per cent. among men. A large proportion of cases were in children, and were the result largely of improper feeding.

M. **Legroux** presented a communication entitled

INFANTILE MICROPOLY-ADENOPATHY AS A SIGN OF TUBERCULOSIS.

It was not uncommon to see, in children between the ages of one and thirteen years, numbers of small, round, movable tumors just beneath the skin, chiefly in the region of the neck. This generalized glandular hypertrophy, which recalled, but was easily distinguished from, the syphilitic adenopathy, was always dependent upon tuberculosis, and those affected with it were at least potentially, if not actually, phthisical. He said that at the last baby-show in Paris, the prize-winner, a fine healthy-looking child, had this multiple micro-adenopathy at the time, and died eight months later from pulmonary phthisis.

M. **Daremberg** confirmed the observations of the previous speaker. He spoke particularly of the fact of the cervical chain of lymphatics being primarily and principally affected. This pointed to the mode of infection in these cases, which was through the tonsils. All of these children had enlarged tonsils.

M. **Leloir** read a paper on

ATYPICAL VARIETIES OF LUPUS.

The first form was characterized by the presence in the skin of small vitreous-looking areas of colloid degeneration. Here and there were minute colloid cysts surrounded by a zone of embryonal cells; there were very few giant cells, and only occasionally was it possible to detect a tubercle bacillus. This he called the colloid variety. In the second form the tubercle was translucent, gelatinous, and very vascular, and small mucous cysts were frequently seen; giant cells were very rare, but the bacilli were seen more often than in the preceding variety. This was the mucoid or myxomatous variety. The third form was denominated

SCLEROTIC LUPUS,

and was a process similar to warty tuberculosis or to fibroid phthisis. The specific micro-organisms are present, but they are extremely rare. These were all varieties of lupus vulgaris, which was but an attenuated tuberculosis.

M. **Bang**, of Copenhagen, read a paper on

HEREDITARY TUBERCULOSIS

in animals. He believed this mode of transmission of the disease was much more common than it is ordinarily assumed to be.

MM. **Hallopeau** and **Wickham** presented a communication entitled

SUPPURATIVE LUPUS,

based upon the report of a case observed by them. The patient was a blacksmith, and, as the disease first appeared in a cicatrix on the chin resulting from the bite of a horse, he thought the disease might be a form of chronic glanders. The skin of the face and the mucous membranes of the nose, cheeks, and gums were involved in an ulcerative process. Bacteriological investigation showed the presence of tubercle bacilli.

M. **Calmette** read a paper on

THE EVOLUTION OF TUBERCULOSIS IN HEALTHY SURROUNDINGS.

His observations were confined to Belle-Isle en-Mer, an island lying eight miles from the mainland. The course of the disease was modified by the healthy surroundings, being very slow. Often the affection would lie quiet for five or six years, then seeming to have acquired more strength, would proceed slowly, without any hectic symptoms. It affected the viscera usually, though sometimes beginning as a broncho-pneumonia. He had obtained good results in the treatment by means of the internal administration of phosphorated oil combined with sea-water.

M. **Arloing** read a paper on the

SUSCEPTIBILITY OF DIFFERENT ANIMALS TO TUBERCULOSIS.

Guinea-pigs, he said, are particularly liable to acquire tuberculosis from inoculation, the induced disease soon becoming generalized. Rabbits, however, which were formerly supposed to respond quickly and readily to subcutaneous injections of tuberculous material, did so with difficulty, and even after the disease had been provoked, the lesions were usually single and scattered.

This paper was discussed by several members, who agreed substantially with the author in his preference for guinea-pigs over rabbits as subjects for diagnostic inoculation.

M. **Valude** then presented a communication entitled

TUBERCULOSIS OF THE SALIVARY GLANDS.

Tubercular lesions of the mouth, he said, are comparatively rare, especially when we consider the large extent of surface in this cavity and its unusual degree of exposure to the action of micro-organisms. An explanation of this immunity had been offered in the supposition that the microbes contained in the saliva were inimical to the tubercle bacilli and hindered their development. He had made a series of experiments to determine the truth or falsity of this theory, and had found that direct inoculations of the different salivary glands were almost invariably successful. The saliva, then, at least the secretion of each gland separately, had no restraining influence on the tubercle bacillus. The immunity of the buccal structures was therefore due, in all probability, to the great number of micro-organisms in this cavity, which, by their continual growth, prevented the development to any undue extent of any one kind.

M. **Jeannel** described, under the name of

ACUTE INFECTIOUS TUBERCULAR FEVER,

an affection characterized by pyrexia without the presence of any local lesions. The diagnosis between that and typhoid fever was often difficult, and indeed it had been asserted that the former was but an engrafting of tuberculosis on the latter. This, however, was not the case. In tubercular fever the temperature rises rapidly, often to from 102° to 104° F. within the first few days, then remains nearly stationary for some days, and finally descends suddenly and irregularly. During defervescence there is profuse perspiration of a peculiar odor, which once experienced can always be recognized. There are no typhoid symptoms, so-called. The difference in character of the two diseases is also shown by the fact that antipyrine has no effect upon the pyrexia of typhoid fever, but exerts a very beneficial influence upon that of the disease under discussion, seeming to conquer it with the same facility and certainty that quinine does malaria.

M. **Thierry**, in speaking of

TUBERCULOSIS IN CALVES,

said that one of the causes for the difficulty of its extermination in regions where these animals were bred for the market was that, in large establishments of this kind, the milk of all the cows of the herd was mixed together before being given to the calves. It was only necessary, therefore, to have one cow with tubercular mastitis in order to infect the whole herd of calves.

M. **Van Hersten**, of Brussels, said that tuberculosis is found in cows in the proportion of four per cent., while among calves not more than one in six or eight hundred is affected. This would appear to demonstrate that heredity plays but a very insignificant rôle in the causation of the disease.

Monday, July 30th—Fifth Day.

At this session the third question, viz.,

THE MODE OF INTRODUCTION AND PROPAGATION OF THE TUBERCULAR VIRUS IN THE ECONOMY,

was proposed for discussion.

M. **Torkomian**, of Scutari, sent a communication in which he described

A TUBERCULAR NODULE OF THE THUMB,

which had developed in his own person in consequence of a prick received during an autopsy made on the body of a man dead of phthisis. The little tumor was removed and no further symptoms were noted.

M. **Verneuil** said that M. Maisonneuve and himself had each had a similar tumor, arising in the same manner and from the same subject. In neither case did any symptoms of general tuberculosis develop.

M. Roussel read a paper on

MEDICAL ANTISEPSIS BY SUBCUTANEOUS INJECTIONS OF ARSENIC AND EUCALYPTOL.

He thought that the most rational mode of introducing antiseptic substances into the human organism was by means of the blood, so that they should not be previously acted upon by the digestive fluids. He had been much pleased with the action of eucalyptol dissolved in vegetable oil, and arseniate of strychnine administered hypodermically. If the bacilli were not destroyed, they were at least weakened. Of one hundred and forty-five cases so treated, thirty-five were apparently cured.

M. Jeannel reported two cases of

INOCULATION OF TUBERCULOSIS.

The first case was that of a lady, who had taken care of her son who had been suffering from pulmonary phthisis. A cold abscess formed in the pulp of the thumb, which was still uncured at the end of eighteen months. The second case was that of a prostitute, who was bitten in the back by one of her companions who was tuberculous. A cold abscess, in which tubercle bacilli were found, developed at the site of the wound.

M. Tscherining, of Copenhagen, related several cases of local tuberculosis following accidental inoculation.

M. Boussakis, of Athens, said that he had seen several cases illustrative of the

CONTAGIOUSNESS OF PHTHISIS.

He had not observed any evidences pointing to an antagonism between tuberculosis and malaria, but had often seen the two affections existing side by side in malarial districts.

MM. Straus and **Wurtz** presented a communication on the

ACTION OF THE GASTRIC JUICE UPON THE TUBERCLE BACILLUS.

Experiments made by them had shown that prolonged action of pure gastric juice upon the bacilli was necessary in order to destroy their virulence. The time required was at least six hours. It was, therefore, useless to expect that the bacilli could be destroyed by this secretion after their introduction into the human stomach. Chickens resisted the action of tubercle bacilli in the stomach much better than man.

M. Landouzy presented a communication on

TUBERCULOSIS IN EARLY INFANCY.

This disease, occurring in infants under the age of two years, differs markedly from the same affection in older children and adults. In babies it tends less to become specially localized, but assumes more of the characteristics of a general disease, the symptoms being chiefly fever and emaciation. As to the question of heredity, he believed that many infants were born with tuberculosis, but that more acquired it through the food ingested. The subject, therefore, of infant alimentation was a most important one, and demanded the most careful study on the part of hygienists.

M. Petresco, of Bucharest, spoke of contagion through the sputum, and the best means of preventing it. The subjects of pulmonary phthisis inoculate themselves by allowing the infectious sputa to enter the alimentary canal. The author had devised a respirator to disinfect the sputum while still in the respiratory passages, the antiseptic substance employed being a mixture of eucalyptol, creasote, turpentine, and iodoform.

M. Jeanselme related several cases of secondary lupus. The affection of the skin had appeared consecutive to suppurative adenitis, and tubercular bone affections.

Dr. Jacobi, of New York, read a paper on

TUBERCULOSIS OF THE THYMUS GLAND.

The gland is most commonly affected in the course of general tuberculosis, but may be diseased primarily.

M. Butel said that

THE TUBERCLE BACILLUS ENTERS MORE EASILY THROUGH THE DIGESTIVE, THAN THROUGH THE RESPIRATORY, APPARATUS.

The same is true in the case of many other diseases. Hence the great part which alimentation plays in the production of disease in children. There were three incontestable facts which were now known to all, viz.: 1. The virulence of the flesh of tuberculous animals. 2. The predisposition of man to tuberculosis, which had doubled since the beginning of this century. 3. The easy entrance of microbes through the alimentary canal.

M. Giorgieri, of Florence, read a paper on

THE HOSPITAL TREATMENT OF TUBERCULOUS PATIENTS.

in which he recommended small pavilions, thorough attention to the disinfection of the wards and of all objects used by the patients, and the care of the sick by attendants who were strong and healthy, and were above thirty years of age.

MM. Cadéac and **Mallet** presented a communication entitled

THE TRANSMISSIBILITY OF TUBERCULOSIS THROUGH THE RESPIRATORY PASSAGES.

They had found by experiments that neither the air in the room nor the breath of phthisical patients was capable of carrying the contagion. They had also determined that inhalation of air containing tubercle bacilli was not productive of tuberculosis, unless the animal was already suffering from bronchitis.

M. Le Dentu reported a case of

TUBERCULOSIS OF THE UPPER MAXILLA,

occurring in a man thirty-two years of age.

M. Guinard related two instances of

PAINFUL AMPUTATION STUMPS IN TUBERCULOUS INDIVIDUALS.

He had amputated on account of tubercular arthritis, taking every precaution to avoid inclusion of the nerves in the cicatrix. Severe pains persisted, and were found to be due to tubercular lesions pressing upon the nerve-trunks above.

Tuesday, July 31st—Sixth Day.

The question proposed for discussion at this session was

THE DIAGNOSIS OF TUBERCULOSIS IN MEN AND ANIMALS.

M. Espina y Capo, of Madrid, read a paper on

THE EARLY RECOGNITION OF PULMONARY PHTHISIS.

The first thing necessary was to obtain a good history, to discover, if possible, the existence of tuberculosis in the family. Mensuration of the chest was of great importance. When the circumference of the thorax at the level of the axilla was less than twenty-seven inches, that at the level of the xiphoid cartilage was not more than thirty-one inches, and the distance between the two nipples was but seven inches, the probability of pulmonary tuberculosis was very great. Further presumptive signs were absence of a clear percussion-note, inspiratory râles, altered respiratory rhythm with prolonged inspiration and forced expiration, a dry and paroxysmal cough followed by a moist one, occasional aphonia, and dyspnœa on exertion. In doubtful cases, where there was spitting of blood, much assistance would be furnished by the sphygmograph in distinguishing between the hemorrhage due to bronchial lesions, and that dependent upon heart disease. Another valuable aid in diagnosis was the thermometer; in a doubtful case an evening rise to 102° or 104° F. was a pretty sure indication of tubercular disease.

M. Arloing read a paper on the

DISTINCTION BETWEEN SCROFULA AND TUBERCULOSIS.

He said that these two conditions gave different results after inoculation, and the latter was often the only means of diagnosing between them. Many cases of cervical adenitis resemble each other closely in their external characteristics, yet they differ markedly in their power of infection. Inoculations made with the products of tubercular ulcers and cutaneous scrofulides were much less uniformly successful than those made with visceral lesions.

M. Nocard said that the previous speaker was correct in his mode of experimentation and in the results obtained, but not in his interpretation of them. They did not show that there were two diseases, but only that there were two forms of the same disease.

M. Verneuil said

THE SUREST MEANS OF DIAGNOSIS IS BY INOCULATION.

Without doubt the seat and behavior of the lesions under consideration were worthy of study, but not every cold abscess was a tubercular one; while, on the other hand, there were seen occasionally supposed acute abscesses which were really

COLD ABSCESSES WARMED UP,

and which were tubercular. The microscopical search for the tubercle bacillus in these cases is often difficult, and is not always productive of results, and the best, most practicable, and surest method was by inoculation.

M. Clado agreed with the last speaker in regard to

DIAGNOSTIC INOCULATIONS.

The best way of making these was by means of a sterilized pipette, introduced with all precautions into the peritoneal cavity. This is more certain than subcutaneous inoculations. The speaker then referred to some observations made by himself upon

THE EFFECTS OF IODOFORM INJECTIONS IN COLD ABSCESSES.

He had examined the pus before and after these injections, and came to the conclusion that the effect of the latter was to destroy the micro-organisms of suppuration.

M. Landouzy said that much could be done in the way of preventing tuberculosis by studying the susceptibility of different individuals. Some were "congenitally bacillizable," others acquired their susceptibility. Small-pox, for example, rendered its victims especially liable to tuberculosis. Of three hundred persons who had had small-pox, but seven escaped phthisis.

THE DIAGNOSIS OF TUBERCULOSIS IN CATTLE

was then discussed by several speakers, most of whom agreed that this was a much more easy matter than the majority of physicians and veterinarians were inclined to believe.

M. Luton read a paper on

COPPER IN THE TREATMENT OF TUBERCULOSIS,

which he recommended most highly. The salt which he employed was the sulphate, and the dose was one-sixth grain, increased in certain cases to three-fourths grain. It was in the early stages more especially that this drug was of the greatest service.

THE THERAPEUTICS OF TUBERCULOSIS

was then discussed by several speakers, the remainder of the time at the disposal of the Congress being devoted to this question. No especially novel modes of treatment were referred to.

The President then put to vote the following propositions, which were adopted as the

SENSE OF THE CONGRESS CONCERNING THE QUESTIONS SUBMITTED FOR ITS DISCUSSION.

1. Boards of health should be empowered to investigate all cases of disease in animals, those which are known to be transmissible to man as well as those which are not yet recognized as of this nature.

2. The Congress expresses its gratitude for the decree which has just been signed by the President of France, placing bovine tuberculosis among the contagious diseases.

3. The seizure and destruction of all tuberculous animals, whatever may be their appearance of health, should be a constant practice.

4. The conclusions of this Congress are applicable to all countries, and should not be considered as referring to France alone.

5. Every effort should be made, by means of circulars, lectures, etc., to warn the laity of the dangers of acquiring tuberculosis by the use of the flesh and milk of diseased animals, and to instruct them as to the best means of avoiding these dangers, and of escaping contagion through various articles used by those sick with pulmonary tuberculosis.

6. Special watchfulness is necessary in the case of dairies, to prevent the contamination of the milk by that coming from a diseased cow.

These resolutions were unanimously adopted.

The next session of the Congress was fixed for the year 1890, and M. Villemin was unanimously chosen to preside at that meeting. The Congress was then adjourned.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 19 *to August* 25, 1888.

Vollum, Edward P., Lieutenant-Colonel and Surgeon. Leave of absence extended two months. Paragraph 17, S. O. 192, A. G. O., August 20, 1888.

Alexander, Richard H., Lieutenant-Colonel and Surgeon. Detailed a member of Board to meet at San Carlos, A. T., August 28th, to select a site for a new post at that place. Paragraph 1, S. O. 44, Division of the Pacific, August 15, 1888.

Smith, Joseph R., Surgeon. Medical Director, Department of Dakota. To inspect Forts Pembina, Totten, Buford, Abraham Lincoln, and Yates, Dak. Ter. Paragraph 4, S. O. 77, Department of Dakota, August 13, 1888.

Heger, Anthony, Surgeon. In addition to his other duties, to attend to the duties of the Medical Director, Division of the Atlantic, during absence of Colonel Charles Sutherland. Paragraph 4, S. O. 170, Division of the Atlantic, August 18, 1888.

Wright, Joseph P., Major and Surgeon. Detailed as a member of Army Retiring Board, Fort Leavenworth, Kan., vice A. A. Woodhull, Major and Surgeon, relieved. Paragraph 10, S. O. 190, A. G. O., August 17, 1888.

Woodhull, A. A., Major and Surgeon. Relieved from duty with Army Retiring Board, Fort Leavenworth, Kan. Paragraph 10, S. O. 190, A. G. O., August 17, 1888.

Ainsworth, Fred. C., Captain and Assistant Surgeon. To proceed to Atlanta, Ga., and inspect the new Army Hospital at that place. Paragraph 18, S. O. 192, A. G. O., August 20, 1888.

Maus, Louis M., Captain and Assistant Surgeon. Having completed rifle practice at Camp S. B. Luce, Fisher's Island, N. Y., to return to his proper station (Fort Schuyler, N. Y. H.). Paragraph 3, S. O. 171, Division of the Atlantic, August 20, 1888.

Owen, W. O., Jr., Captain and Assistant Surgeon, Fort Leavenworth. To report for temporary duty to the Commanding Officer, Fort Gibson, Ind. Ter. Paragraph 1, S. O. 104, Department of Missouri, August 20, 1888.

Mason, Charles F., Assistant Surgeon. Ordered to Fort Washakie, Wyoming Ter., for duty. Paragraph 5, S. O. 190, A. G. O., August 17, 1888.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 10 NEW YORK, SEPTEMBER 8, 1888 Whole No. 931

Original Articles.

ELECTRICAL TREATMENT OF UTERINE FIBROIDS, WITH ANSWERS TO OBJECTIONS AND CITATION OF NOVELTIES.[1]

By G. APOSTOLI, M.D.,

PARIS, FRANCE.

GENTLEMEN: Every therapeutical innovation which runs counter to prejudices and interests meets with opposition, and has to bear the brunt of hastily formed opinions. This has been the lot of my electrical treatment of uterine fibroids, and I am happy that it should be so, since frank and loyal controversy will bring light upon the subject and strengthen my position.

My first object to-day is to bring forward all the arguments that have been set up against my system, to reply to them, and to show that this can be done with success. In order to avoid personalities and to keep this discussion on a footing of scientific courtesy, I shall group these objections without regard to the source from which they come, and let my reply immediately follow the statement.

In the second part of my paper I propose to introduce to your notice some additions I have made to my therapeutical expedients, which will be regarded as of practical importance.

PART I. ANSWERS TO OBJECTIONS. I. CRITICISMS ON THE BOOK OF DR. CARLET.—Many deprecatory remarks have been made upon the histories of my first hundred cases, as reported in the thesis of my assistant, Dr. Carlet. I must notice them separately.

A. It is said that I have confusedly mixed up cases of simple subinvolution, or the enlargements of chronic metritis, with those of fibrous tumors. How could this possibly happen? since the greater part of the women had never been pregnant, and among the rest I had to deal with wombs of enormous size, some even rising above the umbilicus; besides, the most careful examination, both external and internal, combined with hysterometry, left no doubt in my mind as to the nature of the cases. But even supposing a mistake had been made in some rare cases, it could be no cause for regret, for it would only prove that two conditions, chronic metritis and fibrous tumors, equally refractory to ordinary management, are amenable to the same treatment.

B. Judging by the uterine measurements given in my book a large proportion of my cases have but slightly diminished.—It may be true that in many instances the uterine measurement has but little altered. The sound only gives information as to the uterine cavity. The greater part of fibroids, both subperitoneal and interstitial, may coexist with a nearly normal cavity, and consequently may and have undergone reduction without any appreciable modification of the depth marked by the sound. But independent of this question of anatomical change, variable according to the situation of the tumor, we have to look at that of the symptomatic cure, here the most important. For how often do we meet with considerable fibroids of which the bearers have no consciousness, while the lives of other women are put in peril by small and even the smallest tumors. What is it that brings women with fibroids to the consultation-room? Generally because they have pain or hemorrhage. Why are they operated on? Always for the same reason, to save them from the consequences of pain or hemorrhage. Cavil as much as you please about the importance of such anatomical reductions as I have obtained; but so far as concerns the symptomatic cure there can be no doubt, for I affirm that the greater number of my patients have been made and remain well. Is there any other known method of treating these affections of which so much can be said?

C. Many of the reports of my cases are incomplete.—No one knows better than myself that it is so. If I have nevertheless persisted in including these cases in my statistics, it has been with the plain intention of giving a complete view of my practice, so that an opinion might be formed from it of the harmlessness of the electrical treatment which I have introduced.

D. The treatment is long and troublesome.—This I am so well aware of that since the year 1884 I have made every possible attempt to shorten it by increasing its efficacy. It is with this motive that I have gone on gradually augmenting the intensity of the electrical current, and have made many alterations in my mode of procedure. It will be seen, too, in the new series of cases, under treatment since 1884, which I have almost ready for publication, how marked is the progress made, in all respects, since the commencement of practice.

II. MY METHOD IS ONLY AN OLD STORY, AND MANY OTHERS HAVE ATTEMPTED THE CURE OF FIBROIDS BY ELECTRICITY BEFORE ME.—There is some truth here. But one may observe about the same difference between former applications of electricity and my method as would be found between the ancient theriacal quackery and modern therapeutics. Electricity has been used; but what electricity? in what dose? where? how? for how long and how often? All this is unknown and all was empirical. Over and above the many indications I have scientifically established as to the technique itself, the mode of operating, the electrical localization, the choice of poles, the acquired tolerance of the indifferent or inactive pole, there is one fact which gives me a right to claim priority, and that is, that no one before 1882, or before me, had taken an exact measure of the current he employed, or had employed an intensity of power known to be above fifty milliampères.

III. MY METHOD IS DANGEROUS, AND THE DANGER ARISES IN VARIOUS WAYS.—*A. From the intra-uterine application. B. From the making of galvano-punctures. C. From the use of high intensities of current.*

I have been reproached on account of several recent deaths said to be directly attributable to my treatment. To this indefinite assertion I again give the most positive denial, as I did last year in publishing my complete statistics. I prove, too, by figures relating to nearly seven thousand galvanic applications, the innocuousness of my method provided the operative conditions are appropriate, that it be used rationally, and with antiseptic scrupulousness. I will say a word on each of the three sources of danger specified.

A. The intra-uterine cauterization, which is nothing more than a therapeutical hysterometry, might have appeared formidable before the common adoption of the practice of intra-uterine raclage. As that which I do is only a sort of galvano-chemical raclage, there is every reason to regard it as equally beneficent in its action, and my experience more than fully justifies its *à priori* sanction.

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[1] Paper read at the Congress of the British Medical Association, Glasgow, August 8, 1888

B. I put entirely out of the question all abdominal or suprapubic punctures. Any one who is not both gynecologist and electrician might be expected to set down the vaginal galvano-punctures as hazardous. In making them we certainly do come within the risk of doing mischief, which must be guarded against, and which my experience enables me to disclose with exactness.

a. It has been urged as a point against my treatment, that after a number of punctures, when there is free suppuration, or a quantity of necrosed matter in the womb, or in the centre of the tumor, there must be difficulty in keeping off septicæmia. This objection would have some force if there were neglect in following the rules which I have framed, viz.:

1st. To observe a constant and perfect antiseptic practice.

2d. To make the punctures only every eight or fifteen days, so as to avoid accumulations of fetid matter; with temporary suspension of the sittings as soon as there are any threatenings of fever.

3d. To make, without exception, only superficial punctures, not more than half, or, at most, one centimetre deep, so as not to cause any central gangrene, and to admit of an incessant antiseptic treatment.

b. Perforation of the bladder or rectum, followed by fistula, and the wounding of some great blood-vessel, are accidents to be apprehended. I admit that a misfortune of this nature happened in one of my early operations. I now point out the way in which it may be avoided.

1st. Never make a puncture in the anterior cul-de-sac.

2d. Confine the punctures to a lateral, or to the posterior, cul-de-sac.

3d. Make use of a very fine trocar.

4th. Never introduce a speculum through which to make a puncture; and before proceeding to puncture make a minute and scrupulous examination of the part chosen for puncture.

5th. Puncture as near as possible to the body of the uterus, from without inward, making the axis of the instrument correspond with the axis of the organ.

6th. Choose for the seat of puncture the most prominent point of the tumor found in the vagina, making it project more, if necessary, by directing an assistant to press it downward with his hands upon the body above the pubes.

7th. First pass the insulating celluloid sheath through the vagina, and fix it at the spot to be punctured, on the point of the index-finger. Then slide the trocar up the sheath and make the puncture.

c. The high intensities, which I have been falsely represented as using exclusively and abusively, are denounced as sources of danger; and the less tolerance shown by rabbits' than the human uterus, under a galvanic current, has been made the base of an objection. As regards the animal, it affords no grounds for comparison. As regards woman, clinical observation has more than sufficiently proved the perfect impunity with which high intensities can be supported; and more than that, it has demonstrated their utility by establishing the fact of the progressive rapidity with which improvement takes place in proportion as the ascending force of the current increases, if it be well applied and well tolerated. I ought, however, to add that there is a limit to this increase of intensity; and it must be regulated by the therapeutical effect obtained. For the present, I disclaim all participation in recommending what I regard as the abuse of those intensities—such as the administration, said to have been made, of currents of more than five hundred milliampères. Moreover, I feel some difficulty in believing that men, who daily put women under the perils of castration or hysterectomy, are speaking seriously when they denounce my procedures by recounting a series of hypothetical dangers.

IV. MY METHOD IS NOT EFFICIENT.—This objection is presented in a variety of forms:

A. For some, it is useless in the greater number of cases.

B. Others say that the current has no action on fibrous tissue; that its effect is only shown on the uterine tissue.

C. Others, again, if they admit any action, say that it is only temporary and ephemeral; that the tumor against which we direct it remains just as it was, and that relapses are sure to come. I answer:

A. The faults committed in the application of the treatment when it is done badly or incompletely, the neglect, in fact, of all the instructions I have given, ought in no way to bring disparagement upon the method itself. Further, I affirm again, as I have already written, that the method properly used has effected, ninety-five times out of one hundred, not, as I have been erroneously made to say, the absolute removal of the tumor, but:

1st. An anatomical diminution which does not advance so far as the complete dispersal.

2d. The quick and lasting cessation of hemorrhages.

3d. The disappearance of all the symptoms of compression.

4th. The symptomatic restoration of the patient.

If these four clinical results are not witnessed regularly, and in the same order, in all subjects, the fact may be explained in many ways. I will mention some of the chief.

1st. The anatomical regression generally varies, first, according to the character of the tumor, whether soft or hard, being more rapid in the case of soft tumors than in the hard ones. Then, again, a difference is made by the situation of the tumor, the localization of the electric action. The more distinctly this is subperitoneal the weaker will be the influence of the current. But without doubt the general tendency of all fibroids, when skilfully treated with high doses of electricity, is toward spontaneous enucleation, by their disengagement from amidst the uterine stroma. This curative process, which consists in their liberation either through the mucous membrane or the peritoneum, is seen to take place with some interstitial fibroids.

I ought, also, to note here what I have almost constantly observed as the treatment advanced; namely, the occurrence of an accumulation of adipose tissue under the abdominal tegument. This new condition ought always to be borne in mind when estimating the size, or changes of size, in fibroids, by measurement of the circumference of the abdomen. The external measurement, even with a collapsing fibroid, may remain the same simply on account of the recent, and often abundant, quantity of fat developed in front of the tumor. I therefore recommend that, at the commencement of every course of electrical treatment, three measurements of the body should be registered, which may serve for future reference: 1st, The circumference of the abdomen at several points; 2d, the exact thickness of the layers of skin and fat, above, below, to the right and to the left of the umbilicus, taken by means of a graduated compass; 3d, the weight of the patient. I cannot deny that I have in some rare cases been disappointed and failed, the same as happens in all human undertakings. The future may enlighten us about these difficulties, for they all relate either to ascitic fibroids or to fibro-cystic, or to abnormally vascular fibroid tumors. I may add that while certain fibroids shrink without any sphacelation, or any appreciable sero-purulent discharge, others only undergo this change as the result of a more or less extensive necrosis.

2d. The arrest of hemorrhage has also been disputed. Many who hold this opinion do so without ever having made, or seen, an experiment on some tissue to convince themselves of the hæmostatic power of the condensed action of the positive pole, when applied to a cut and bleeding surface. Then, I am asked to explain how it is that results are not constant. I can only say that this depends upon different conditions, clinical, anatomical, and physical. Clinically, hemorrhages are more difficult to suppress in the cases of interstitial and submucous fibroids. Anatomically, the arrest of hemorrhage will be more speedy and certain as the uterine cavity is more narrow and less deep. Physically, the hæmostasis becomes more decided as we augment the intensity of the electrical current, and insure the perfect coaptation of the electrode with the entire extent of the bleeding surface.

To resume, the arrest of hemorrhage by electricity is arrived at in three different ways, either associated or independent of each other. The action of the current, which is a vehicle of force and of chemical action, may be studied either as it is manifested at the poles, or in the interpolar circuit.

a. The polar action of the positive pole is hæmostatic, either at once, or some time afterward: Immediately, if the bleeding surface is totally cauterized by the application of a sufficient intensity; subsequently, after some interval from the commencement of the treatment, if the hæmostatic action has not been powerful enough in the first instance, by the appearance of an atresia, more or less pronounced, of the uterine canal. This atresia, which some gynecologists will not admit, I have the opportunity of seeing almost every day in some one or more of my former patients, although they have not yet arrived at the menopause. In certain women, with a large uterus and an expanded cavity, in which the ordinary sound had moved with great freedom, I have discovered one, two, or three years afterward, that it could not then be introduced, and that the canal only permitted the entrance of a sound of the most diminutive size. Now, this cicatricial atresia (which, however marked it may be, and as a new observation it is interesting to notice this, is not accompanied with dysmenorrhœa) is the physical reason of the postponed electrical hæmostasis, and of the permanence of the results established.

b. The interpolar action is equally hæmostatic in a tardy manner, and in an entirely different way, without the polar action being in any degree implicated. Indeed, there is reason to believe that we may stop hemorrhage, though it must be confessed more slowly, without at all cauterizing the mucous membrane, and by restricting the treatment to galvano-punctures made in the tissues of the tumor itself. The denutrition of the substance of the fibroid will, after a certain time, bring about a progressive stoppage of the hemorrhage, without the mucous membrane having been touched. Either pole may be used for this purpose, though I incline to prefer the negative. It is more to be relied upon because it is more denutritive than the positive. I have, as a matter of experiment, given clinical demonstration of this separate interpolar hæmostatic action, by treating several hemorrhagic fibroids by galvano-punctures only, without any intra-uterine cauterization. I am convinced, however, that the combined use of the two methods will be found more certain in producing the hæmostatic action, in cases where the simple intra-uterine cauterization has shown itself ineffectual.

3d. The cessation of pain and of the effects of compression will vary among patients as much as the causes which produce them. Generally, this takes place coincidently with the retrogression of the tumor. In other instances, on the contrary, it is the initial phenomenon which precedes all others. This may be accounted for either by the relief of the uterine congestion, which is early realized, or by the mitigation of the ovarian neuralgia. There are cases, however, in which this amelioration comes on but very slowly. I have remarked that in these inveterate cases we can generally recognize some ovarian or tubal complication, some inflammatory or suppurative condition of these parts, which is less disposed to yield to electrical treatment.

4th. The symptomatic restoration of the patient is the most striking result of the treatment, the most rapid, and that which most surprises both the subjects of it and their medical attendants. One of the few adversaries of the method has thus expressed himself: "I have been able to assure myself that all the women under treatment have experienced a stimulating influence, very favorable to general nutrition and the recuperation of their forces. They feel more cheerful, more buoyant, more alert; in a word, seem to have more life. Whether it be that the innervation, sensibility, and mobility of the abdomen and pelvis are more happily excited, the patients keep about without difficulty, and walk freely, in a way which was impossible before anything was done for them. The movements are unembarrassed. The tumor no longer distresses by its weight, or contact with the sensitive viscera. With the trunk and the pelvis disengaged from an overpowering constraint, the limbs do their office with freedom." They acknowledge, too, that the digestive functions are well performed, that sleep is natural, that the miseries of bladder pressure have ceased, that constipation is less annoying, and that there is a restoration of active life in all its integrity and intensity.

B. The second reproach of inefficacy is made on the supposition that the current can act only on fibrous tissue and that it has no effect upon the uterine tissue. There is falsity in this limitation of the effect of the current; and the proof is that an action, combined or isolated, may be observed in both one and the other of these tissues. We see cases, in fact, where the uterus itself undergoes no contraction, as may be ascertained by the sound, while examination above the pubes enables us to decide positively as to a diminution of the subperitoneal part of the fibroid tumor. On the other hand, in the simple hypertrophies which follow chronic metritis, or in the non-fibroid hypertrophies of the uterine tissues, there is always a lessening of the uterine cavity under treatment. The action, then, is here only on the uterine tissue, as in the other case it was upon the fibrous tissue; and the process of disintegration, set up by the passage of the current, results in promoting a general retrograde metamorphosis of the muscular, connective, and fibrous hyperplasias.

C. The third reproach, in reference to inefficiency, which consists in a declaration that the effect of the treatment is only temporary and ephemeral, can be no better sustained. It is now six years since I began the practice of this method, and I have regularly and carefully kept an account of the condition of my patients. I can affirm that relapses have been truly exceptional. The very infrequent cases where I have had to administer secondary treatment were those of women who had unadvisedly discontinued their attendance. There has been no difficulty in bringing this secondary treatment to a satisfactory end.

V. My Method is Empirical and Unscientific.—It is said that it wants precision, and that I have given a theoretical explanation of it which cannot be admitted. If my method be empirical, it stands, in that respect, on the same level as the whole of pharmaceutical practice; empirical as the giving of opium which causes sleep, empirical as the use of quinine and digitalis to check fever or modify the circulation. The why and the wherefore of things elude us. What we have to do is to make ourselves familiar with the natural laws ruling the phenomena which come before us. Every organic or inorganic movement, every molecular change excites a corresponding development of electricity, and the process of nutrition, like every other vital action, is subject to this law. Now a continued current passed through the human body marks its presence in two different ways. At the points of entry and exit, that is, at the two poles, in virtue of an electrolytic action inseparable from the passage of the current, we find an accumulation of acids on one side and of bases on the other. This is a fact commonly known, and I shall have to refer to the therapeutical importance of these acids and bases. In the organic substance intermediate between the two poles, the interpolar region as it is called, through which the current spreads in rendering itself from the point of entrance to that where it is discharged, there is a twofold action. The one is contemporaneous with the current itself, the other is posthumous. The contemporary action consists in an exaggerated vital and circulatory activity, favorable to the rapidity of nutritive changes. This will explain the absorption of certain effusions, either interstitial or intra-articular, under the influence of a current directed through them. The posthumous action, enduring after the cessation of the current, occasions that condition known as the polarization of the organic tissues. This is an accepted fact. The organic region, thus occupied by the circuit of the current, is in effect charged as a second battery. It is consequently endowed with a supplementary electro-motive force or tension, which in its discharge prolongs the topical and trophic effects that the preliminary current had begun; and it still further advances the retrograde metamorphoses which we see in non-malignant neoplasms. Yet we encounter some who say that there is no such thing as interpolar action, and that the current leaves no visible or tangible trace of its presence. Who has ever been eye-witness of a current in a nerve-trunk? Who has ever seen the something which is transmitted by the telegraph wires? As it is with many natural phenomena, such, for example, as nutrition, which we only know by its effects, so it is with the current. Let anyone who denies the fact of interpolar action but just apply one pole to the forehead and the other to some part of the body, the hand or foot, and he will at once have sensory evidence of two phenomena which constantly follow: First, the appearance of flashes of light, and secondly, a change in taste of the saliva. How should we account for these invariable phenomena, unless there be an interpolar action of the electric current? Place one pole on the neck, over the pneumogastric nerve, and let the other be held in the hand. You will thus stop many a threatened vomiting. It must be some interpolar action which produces this effect. Indeed, nervous pathology as a whole (nervous, medullary, cerebral, or peripheral) requires ordinarily nothing more as a means of relief than the interpolar action of the continued current. If interpolar action were not a reality, electro-therapeutics would soon become an idle word, for it would be reduced almost to the simple chemical or mechanical effects of polar action; and these we might in a great measure afford to neglect. As we recognize this sceptically treated interpolar action by its unavoidable consequences, so we have, as evidence of its presence, the effects of polar action. On this point, again, I am accused of empiricism; and my accusers merely substitute their erroneous interpretations of the respective action of each pole for the formulas that I have laid down. I have said the negative pole is more irritating, more charring, more destructive than the positive pole. In opposition, I am told that as acids abound more in the human tissues than the bases, we ought to find a greater proportion of acids at the positive pole than of bases at the negative pole; hence the preponderant action, quantitative, of the former. But the fact is overlooked that a current has no caprices, and acts only according to the laws of its nature; that electrolysis or decomposition takes place molecule by molecule, equivalent of acid for equivalent of base, whatever may be the composition of the body under experiment. The only preponderance which one pole has over another is purely qualitative. The dry, positive eschars offer a considerable resistance to the flow of the current, and consequently impede its diffusion. The negative eschars, on the contrary, are softer and more moist, and, only feebly opposing the current, allow of its more easy dispersion. There is no difficulty in convincing one's self of this fact. Take two electrodes of equal dimensions, of gas-carbon it may be, covered with moistened leather, and place them symmetrically on two parts of the body. Of the two poles it is the negative which will first give indications of its activity by the pain it occasions, the eschars and the extent of the eschars which it burns. In the same way after punctures with two trocars actually of the same character, the loss of substance resulting from the fall of the eschar, made by the negative pole, will be much more considerable.

In conclusion, if the electrolytic action is found to be concentrated at the two points of entry and outlet of the current, it is impossible to deny the intermediate dynamical action, which is more powerful than either. It matters little for our purpose whether this intermediate action be directly upon the tissue-cells, or, which is more probable, upon the nervous influx of which it augments the tension, as auxiliary to the normal currents in them. The clinical results are incontestable. There is the same retrogression of fibromes that is often found to take place after the menopause, or the excision of the ovaries, without our being able to furnish any unimpeachable theory to account for the facts.

VI. My Method is of no Use, and there are Better Ways of Treatment.—Let us consider the worth of these other modes of getting rid of fibroid tumors.

A. Mere expectation, or literally doing nothing, aided by repose in bed, is sometimes trusted to as sufficient to assure the retrogression of the tumor and the quiet existence of the patient. This can only be true of a few fibroids, especially after the change of life. But it will not do to lay down an absolute rule, based on these particular cases. Every day's experience shows us that the death of a great many women is the consequence of their tumors, and that others, in large numbers, have their lives embittered by pain and hemorrhage. I admit that some, under the influence of confinement to bed for several months, find a temporary amendment, but I cannot see that this enforced rest ever produces a spontaneous and regular diminution of the fibroid and the disappearance of the symptoms, such as follow the use of my method. Nor can it be maintained that similar improvements under my treatment are mere coincidences, for my patients are not kept in bed, continue their ordinary occupations, mostly come for their sittings to my consulting-rooms, and follow the common mode of life. I believe that much more is to be expected from the influence of the menopause alone, although not as a matter of course; for I have had under my care not a small group of women from fifty-five to sixty-five years of age, who had experienced the disappointment of finding their tumors enlarged considerably, and even doubled in volume, after the menopause.

B. Then it is said that treatment by medicines will give relief and is equal to the cure of fibromes. This assertion will not bear examination. The very multiplication of the remedies eulogized is a proof of their powerlessness. What, in fact, do the recommendations amount to? As for mineral waters patients may go on using them, hopefully and unprofitably, year after year till they arrive at the time of the menopause. Internal medication is very uncertain, and for the most part untrustworthy. Ergot stands at the head of the list of things tried. Independently of the local and general mischief of which it may be the cause, it must be allowed that it more often fails than succeeds. Women come to me showing the marks of ergot injections, to which they had patiently submitted for years, without any perceptible benefit. Before the adoption of my electrical method, one other kind of treatment only had been at all encouraging; it was that of A. Tripier, who places in the uterus pencils of a paste of iodide of potassium.

C. Next, surgery claims the precedence of medicine. First of all there is the minor surgery, which includes intra-uterine raclage, liquid injections, and punctures with the actual cautery. However excellent may the use of raclage in simple endometritis, its sphere of action is limited to the mucous membrane. It has no power over lesions of the parenchyma, none over fibroids. Nothing better can be said of liquid injections. They, too, have special dangers by no means insignificant. As for vaginal cauterizing punctures, their effect is deceptive and temporary. Their action in no way corresponds with that of the galvano-chemical punctures which I employ. These two modes of puncturing have, in fact, nothing in common but the name. They are essentially different. In a cauterizing puncture, even when it is a galvano-thermic cauterization, heat is the agent upon which we depend.

There is no special electrical action. The platinum wire. brought to incandescence by the current, burns and burns only. It conveys no current into the tissues, which are simply cauterized. On the contrary, with galvano-chemical punctures, we have both a local chemical action and a general dynamical action, but no effect of mere burning. The electrical current, going from pole to pole, inevitably traverses all the tissues upon which we intend to operate.

We now come to surgery proper, which assumes to have settled the question magisterially. The exploits of ovariotomists have given a new character of boldness to abdominal surgery. In urging operations, the risk of the life of the patient has been sometimes too lightly considered. In spite of its difficulties, its dangers, the long convalescence which it involves, and always with the presumption that antisepticism will come to aid in lessening the mortality, abdominal hysterectomy has been by some hands pushed too far. To go no further, for figures, than Paris; our Surgical Society has recently published a statement showing that, according to the operators, the deaths from this operation mount up to from forty to fifty per cent. If left to themselves, do patients die at this rate from their tumors? And have we not reason to assent to what Thomas Keith has said, that "abdominal hysterectomy has done more harm than good?" We see, as a consequence, a general disposition to substitute the vaginal operation for that which has been so fatal. True, the loss experienced is smaller, but then comes the drawback of its being practicable only at the early stage of growth; for I maintain that it would be impossible in the case of large tumors. Operative failure in this direction has led many surgeons to discard hysterectomy for the cutting away of the uterine appendages; the intention being to give women the supposed advantages of an induced menopause. But even here there is no guarantee of constant success, for every operator has been obliged to record not only inadequate results, but some cases of death. It therefore becomes a serious matter for consideration, whether, as a point of professional morality, one is not bound to make trial of a system of treatment which I and others affirm to be not only harmless, but effective, before recommending a patient to take the risks of hysterectomy or the certainty of mutilation.

VII. My Method Wants Exactitude and is Uncertain in its Effects.—It has been objected that, however easy it may be to graduate the intensity of the current, and consequently to estimate the equivalent of acid and alkali set loose by its passage, there must always remain an undetermined free residue capable of effecting further cauterization after saturation of the uterine secretions. Thus uncertain excess of cauterizing material is a bar to anything like precision in your procedure. I meet this objection in two ways, by pointing out, first, the mistake made in confining attention only to the polar action; and, secondly, that a wrong idea is formed of the nature of electrical cauterization. This is of primary importance. While ordinary caustics, whatever be their composition, act from without inward at the point of contact, and, after a time, form in the products of mortification a barrier to any more profound penetration, the galvano-chemical caustic acts in a different manner, by setting up a kind of auto-cauterization. The tissues are decomposed by the electrolytic action of the current, and the resulting products are the cauterizing agents. The character of the eschar thus formed is in exact relation to the intensity of the current and the duration of the operation. No acid or basic product is left disengaged, and the tissues cauterize themselves continuously from the beginning to the end of the sitting, without any other limitation, interruption, or suspension of the action, except that which comes from the will of the operator. This cauterization encroaches more and more on the deep layers of tissues, instead of being restricted to the surface, and ending, as imagined, in the disengagement of acids and alkalies in the uterine cavity.

VIII. My Method is Difficult, Costly, and Troublesome.—So far as regards difficulty, there certainly is less than with hysterectomy. I want no assistant, can operate anywhere—at the home of my patient or in my own room, and though the operator must be both gynecologist and electrician, the scientific qualifications are easily acquired. When one has to pay the enormous price demanded for a complete laparotomy equipment, it seems absurd to quibble about four hundred or five hundred frances, the cost of electrical apparatus. It will be seen that the trouble of transport and management dwindle to a mere trifle, when I am able to announce that, at my suggestion, the electricians in Paris are now making perfect batteries, which take up very little room and are quite transportable, the cost being one hundred and fifty or two hundred francs.

IX. My Method is Imperfect.—Here the objections are both to the apparatus and instruments I employ and to the way in which I use them.

A. The apparatus.

1st. The galvanometer of Gaiffe.—Some call it a toy; others say it is not to be depended upon. I have used this instrument for some years and have made my own observations upon it; and I have had it, and others, submitted to the opinion of competent electricians. We find that the galvanometer of Gaiffe is the only one in which the graduation is exact. By testing, I can find an error in the record of only from two to three per cent., which is of no practical importance. It also has the merit of being cheap. Edelmann's galvanometer without "shunt" fails to the amount of 7.05 per cent.; with "shunt" the defect increases to twenty per cent. It registered $\frac{160}{1000}$ ampère, instead of $\frac{200}{1000}$ ampère. An American galvanometer by Waite is of the same construction, and has the same faults as the German instrument. The constants are:

without shunt,		error	6	per cent.	at least.
with	" 10 —	"	32	"	"
with	" 100 —	"	25	"	"

In face of these plain physical facts all theoretical complaints must give way.

2d. The hysterometer in platinum.—Objection is made to its being straight and rigid; and it is proposed to replace it by a sound made of copper which will bend easily and accommodate itself to the passages. Any one who is in the habit of passing a sound, as it ought to be done, without the speculum, will give preference to a sound which is rigid: *a*, Because it enters more readily; *b*, because we can more easily change its position in the uterus; *c*, because it can be made to pass more easily over any obstacles, especially about the internal orifice. Another sound, made of platinum wire coiled round a stem of copper with a point of caoutchouc, has been recommended instead of mine. The insulating end of caoutchouc is bad, since it stands in the way of complete cauterization. The wire also is wrong in that it does not make a good conductor, is kept clean with difficulty, and with so many interstices can scarcely be made aseptic. The sound is too flexible and does not preserve its polish.

3d. Dirty, cold, and troublesome.—Such is said to be the pad of clay which I place upon the abdomen; assuredly I should be pleased to find something better. I have tried several of the substitutes which have been proposed for the clay, but have found none of them to have the same quality of plastic adaptive adhesiveness. Neither do they well guard against the burning of the skin. The women, therefore, have more pain and are more scarred, as I observed in London. The abdominal electrode of Franklin Martin, of Chicago, is the best I have met with, and will perhaps be adopted. It gives us the opportunity of applying it to the abdomen at an agreeable temperature.

4th. The insulating sheath of celluloid.—In exchange for this, we are offered sheaths made of gum elastic, such as used for catheters. which is corroded by many solutions and tears readily. I cannot find that it has any of the qualities of the celluloid which I introduced. This substance insulates perfectly, is aseptic, hard, easily cleaned, durable, not injured by acids, can be plunged, if necessary, into boiling water, and has only the disadvantage of being inflammable.

B. Technique.—For some curious reasons, which I cannot understand, there has been a sort of jealous rivalry in changing the details of my practice.

1st. In regard to intensities.—Some have talked of using currents of five hundred and one thousand milliampères. Now this would be dangerous, and I should say impossible; impossible certainly without chloroform, for in all my experience I have never seen a woman on whom such a dose could be tried—dangerous for the safety of the skin of the abdomen, which must be burned, and from the general mischief which would follow the operation. But knowing the little reliance to be placed in the greater part of the galvanometers in use, I look upon all these reports of excessive intensities as exaggerations.

2d. Dosage uncertain.—As I am supposed to have been rather loose in my dosage of electricity, it has been thought proper to call in the aid of mathematics to regulate matters for all sorts of cases, but especially for bleeding cases. An experiment is made showing that a current of twenty-five milliampères intensity, traversing a positive electrode of platinum, with a surface of one square centimetre, and applied for five minutes to the mucous membrane of the neck of an enlarged uterus, will so condense the structures that no further bleeding can take place, even when they are punctured to the depth of one and one-half centimetre. Hence, it is concluded that success must follow as a constant consequence if we maintain the demonstrated proportions between dose and surface; and it is laid down as a rule that we are to use a current of fifty milliampères for an electrode of two square centimetres surface, and of one hundred milliamperes for one of four square centimetres. This may sometimes turn out to hold good, but not with the precision announced. For who does not know how many sources there are for these hemorrhages; lesions of the mucous membrane, lesions peripheral: *a.* Lesions of the mucous membrane. These vary in extent and depth, in the condition of the blood-vessels, and in the amount of congestion. *b.* Peripheral lesions; such as reflex hemorrhages, hemorrhages connected with the evolution of intra-parietal neoplasms, passive hemorrhages due to disturbance of the peri-uterine circulation, hemorrhages depending upon some affection of the tubes or ovaries. It is evident that, setting aside simple lesions of the mucous membrane, the dosage of electricity, in its application to uterine diseases, must vary according to the circumstances of each case. I believe that the general instructions I have given from experience will serve to guide through most difficulties: Use for a bleeding fibroid the highest intensity of intra-uterine current a patient can bear; if that does not answer, add punctures to the cauterization; should they not be sufficient, put the patient under chloroform and raise the dose.

Such, gentlemen, are the objections made to my method, and such are my answers. I consider my answers perfectly meet the objections. But there is one fact which overrides all verbal quibbles and theoretical irrelevancies. As regards my method, gynecologists muster in two ranks; those who have tried it, and those who have talked about it. The practical men give me their adhesion, and with that I am satisfied. The talkers have had their say, and one of your English proverbs, "An ounce of practice is worth a pound of theory," is enough for them.

PART II. THE NOVELTIES IN MY METHOD OF TREATMENT.—Having thus, so far as I am concerned, cleared the ground of controversy, I pass on to clinical and practical questions. I am far from supposing that we have reached the last stages of the development of the electrical treatment of fibroids. Some modifications, which I proceed to explain, will, I think, be found to mark a decided progress. The two dominating symptoms in these cases are pain and hemorrhage. I will give them separate consideration.

I. PAIN.—I need not enter into details as to the many sources of this pain; it may be either concentrated in the uterus itself, or diffused. We have: 1st. Localized uterine pain, arising from an augmenting interstitial compression, such as is often complained of during the early period of growth, without there being any appreciable bearing upon the neighboring nerves or organs. 2d. Extra-uterine pain, which may depend upon a not uncommon, but often oversighted, partial perimetritis or parametritis. We meet with inflammatory conditions of the appendages; and sometimes with uncomplicated ovarian neuralgia. To relieve this symptom, pain, the almost uniform gynecological solicitude, we have, as I was the first to point out, a powerful resource in faradization. The currents of tension, applied as much as possible in the cavity of the uterus, and under the conditions which I have for some time indicated as to electrodes, and especially the duration of the sitting, are sedative in a high degree. They will be found of almost certain arresting power in simple ovarian neuralgia; calming only in cases of pain from other sources, and of but very little service in the acute and suppurating forms of peri-uterine inflammation. We have then, in my opinion, a most energetic agent with which to encounter this element of pain, in cases of fibroid tumor, in the judicious association of induced and continued currents, under the form of an intra-uterine galvano-chemical caustic. But we are not restricted to the use of these means only. For we have in such cases a supplementary expedient in galvano-puncture, or the direct transmission of a current through the substance of a tumor, using for this purpose the negative galvano-puncture. We may perhaps account for the good effects observed, by the rapid retrogression of the tumor, or in the setting up of a more powerful derivative action. Explicable or inexplicable, the clinical fact remains undeniable, that many of my cases of painful fibroids have been put at ease by the negative galvano-punctures.

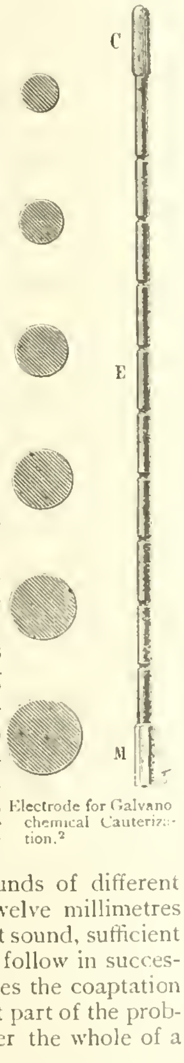
Such was my ordinary practice till lately, when a few instances of failure led me to try the effect of the positive puncture on some patients, in whom the reaction from the negative punctures had caused too great inconvenience or alarm, and on others whose hysterical temperament made the negative punctures insupportable. First I tried with steel needles, but I was thwarted in two ways. First, they oxidized and became immediately useless; and then the oxidation, together with the dry eschar formed around the electrode, created an obstacle, which no one as yet had noted, to the passage of the current, and consequently caused a diminution of the electrical supply. Thus, other things being equal, while a negative galvano-puncture furnished an intensity of one hundred and fifty milliampères, that of the positive puncture did not exceed fifty milliampères. To free myself from this difficulty, I put aside the steel trocars and replaced them by a fine gold needle, which is not acted upon in the same way and will last for some time. The only precaution to be used with this needle is, that it must not be allowed to remain in contact with any mercurial solution, which disintegrates metals, and renders the gold brittle. The vaginal irrigations must, therefore, be made with the carbolic, or other antiseptic mixtures, to the total exclusion of all mercurial preparations. I may say that I have great confidence in these positive punctures for fibroids, especially when we encounter persistent pains; and I even have recourse to them when the pain seems to be connected with a state of peri-uterine inflammation.

II. HEMORRHAGE.—I believe that we may improve our way of treating hemorrhage, and render it shorter and more decisive. We occasionally fail for two reasons: 1st. That all the bleeding membrane inside the uterus is not equally and uniformly cauterized; and, 2d. That we have not used a current strong enough to cauterize sufficiently.

1st. *Irregular cauterization.* — I employ a straight platinum sound, which answers perfectly well in a small uterus with a small cavity. But its action lessens in proportion as the extent of the mucous membrane enlarges. This may be owing either to the instrument moving too freely and coming in contact with only one surface of a large cavity, or to some inequalities of surface such as are found in the hour-glass form of uterus, when the small straight sound touches only isolated points, cauterizing some to the utmost, while others escape altogether. I overcome these difficulties in two ways :

a. After a multiplicity of experiments I have devised a new electrode, which is soft, and not only a good conductor, but harmless and quite aseptic. It is composed of gelosine[1] and can be made to mould itself upon the whole of the uterine interior. It must be previously sterilized either by open boiling and then cooling, or by exposing it in the containing vessel to a temperature of from one hundred to one hundred and twenty degrees centigrade. This matter is then introduced into the cavity of the uterus, so as to fill it, by means of a long piston-like sound of some insulating material, such as hardened caoutchouc or celluloid. The metallic stem of this piston-sound may then be used as electrode, and the current, passing through it, to the centre of the gelosine paste, thence radiates over the whole mucous membrane. There is another way of making use of this gelosine packing. Withdraw the piston-sound when the cavity is completely filled, and plunge a metallic sound, insulated nearly up to the point, into the middle of the gelosine, and make connection with the battery.

b. I succeed in cauterizing the whole of an irregular cavity by progressively increasing the size of the electrodes, so that in the end the entire surface is brought into contact with the conducting body. To do this with sounds of gold or platinum, the only available metals, was a costly affair, and I instructed Gaiffe to make for me a series of seven sounds of gas-carbon,[2] which conducts readily, is little subject to the action of the positive pole, and may be had cheap. I possess therefore a case of seven sounds of different sizes, rising from five millimetres to twelve millimetres in diameter. Beginning with the smallest sound, sufficient dilatation may be made for the others to follow in succession, till it is found that one of them gives the coaptation required. This is the solution of the first part of the problem—the equal spread of a current over the whole of a large or irregular uterine cavity.



Electrode for Galvano chemical Cauterization.[2]

2d. *The uterine mucous membrane insufficiently cauterized.*—The coagulating or hæmostatic action—local and polar—which we seek at the positive pole, under ordinary circumstances, will be strong and efficacious according to the quantity of acid disengaged ; that is, in other words, it will vary in proportion to the electrical intensity. Now, there are two means by which we can regulate the intensity, at the points of entry and discharge of the current.

a. The first is to engage a large number of elements. We may thus apply in certain cases an intensity of current varying from one hundred to three hundred milliampères. But with regard to these degrees of intensity, we must not lose sight of two considerations, the safety of the uterus, and the tolerance of the patient. If a few women are able to bear unflinchingly, without chloroform, as much as two hundred or two hundred and fifty milliampères, there are many more in whom it is impossible to make the dose exceed one hundred or one hundred and fifty milliampères. Now in a uterus of large size, where it would be necessary to introduce an electrode of proportionate length, perhaps fifteen or twenty centimetres long, this latter strength of current would not answer our purpose. For it is with electricity as it is with other natural forces, that power diminishes as the surface is extended. We see this in a water-course, where the mechanical effects of a confined portion of the stream are reduced to insignificance if the bed be much widened.

b. This leads to the adoption of the second and more practical means of attaining the same end. We vary and augment the intensity at the points of contact of the poles without altering in any measure the total interpolar intensity. The surface of the active electrode must be diminished or its density increased. It is understood that, with a greater intensity in an electric circuit, the action of the two poles will be different according to their respective size. Here, then, in varying the extent of the electric surface, we have the means, at will, of rendering the poles active or indifferent. It is easy to make this accommodation in regard to the uterus. We wish to produce a vigorous cauterization, without increasing the general interpolar intensity beyond the point easily supported. Lessen the intra-uterine electrode by one-third, or fourth, or a fifth of its original length, and forthwith the cauterization or topical action at the seat of contact will be made, thus, four or five times more powerful. I therefore lay it down as a rule in severe hemorrhagic cases, where it is expedient that a patient should bear a high dose of electricity without much suffering, that the intra-uterine electrode be reduced to a very trifling length ; though, under such circumstances, it is essential that it be passed from one extremity of the cavity to the other, so that every part of the mucous surface is successively and completely cauterized. I began my operations in 1882 with a metallic sound, bare only at the extremity. In my first essays in cauterizing the mucous membrane of the uterus I had no other. Now I have improved the instrument, and my electrodes of carbon, though of different sizes, are all of the same length, two and a half centimetres. The metallic stem of this instrument is covered with caoutchouc, and on it, at distances of two and a half centimetres, lengths which correspond with that of the carbon electrode, I have slight circular grooves marked. The electrodes are applied as follows :

1st. After disinfection in some strong antiseptic solution, in order to secure full cauterization the instrument is driven as far as it will go ; if possible, to the end of the uterine cavity.

2d. When the electrode is in this position, the highest bearable intensity of current is turned on, and we judge of the necessity of augmenting by the effect of previous operations. The intensity must be increased when the electrodes of larger volume, and consequently of more surface, are taken into use.

3d. The first stage of cauterization being finished, the instrument is withdrawn just as much as the length of the carbon, and in that situation the second cauterization is effected the same as the first, and so on, changing the position of the carbon till all the interior of the uterus is cauterized section by section. To do this methodically, the index-finger is passed into the vagina, and the pulp and nail pressed on to one of the circular grooves of the stem. While, in shifting the seat of action, the other hand retires the sound, the index-finger in the vagina remains immovable, and gives information as to the extent of change of position of the electrode by the touch of the following mark.

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[1] *Gelosine:* Gelosine is the mucilaginous principle recently extracted by M. R. Guerin, chemist, of Paris, from the gelose of the *Gelidium corneum*, a sea-weed of Japan, found in abundance at Singapore.

[2] Electrode for Galvano-chemical Cauterization, one-third of actual size. C, Gas-carbon, two and a half centimetres long, rounded at the extremity. It is fastened by a screw to the end of the metallic stem. It may be replaced by others of the same length, but of different sizes. The diameters, gradually increasing from five to twelve millimetres, are represented by the shaded circles. E, Circular grooves, at regular distances of two and a half centimetres, on the caoutchouc covering of the metallic stem of the electrode. M, Handle of the electrode to which the rheophore is attached.

4th. It is better, if possible, to cauterize the entire cavity at one sitting, letting each sectional cauterization last from three to five minutes, as the gravity of the case and the size of the cavity may show to be proper.

5th. In continuing the treatment, the duration and force of the current must be made to depend upon the effect produced by the cauterizations at previous sittings.

6th. It is well to be aware that, when the cauterization of the neck of the uterus is once made, the electrode, in passing through the internal orifice for further action, will occasion much more pain. I believe I was the first to mention the fact that the neck of the uterus, which is so little painfully affected by ordinary caustics, the hot iron, or the knife, is, on the contrary, very sensitive, and much more so than the body, to the electrical currents, either induced or continued.

I think, in conclusion, I may say that it will henceforth be admitted we have in electricity a most powerful means of safely treating fibroid tumors, and that it will in future be felt as a duty by the surgeon to make use of it before adopting other measures. Carrying out my method as I have directed, I am convinced it will yield to others the same new and interesting results that it has been my good fortune to witness.

5 RUE MOLIÈRE.

THE USE OF LARGE DOSES OF CALOMEL IN PNEUMONIA.

By JAMES McMANUS, M.D.,

BROOKLYN, N. Y.

LOOMIS, in "Pepper's System of Medicine," states: "The mortality-average (in pneumonia) from all the published reports to which I have had excess gives 20.1 per cent. of deaths."[1] Everyone knows that pneumonia is a very fatal disease; and it is further known that the mortality-rate varies greatly. Some observers give the rate as low as two per cent., and others place it as high as thirty to thirty-five per cent. Thus Bennett[2] lost but four cases out of one hundred and twenty-nine; while Loomis[3] lost thirty-four per cent. of two hundred and fifty-five cases treated in the wards of Bellevue Hospital. Wilson Fox[4] says: "In fifty-five cases from the case books of University College Hospital and the North Staffordshire Infirmary I have met but eight deaths, but in all of these the attending circumstances were such as fully account for the mortality." Loomis states:[5] "Between the ages of forty and sixty the death-rate is from ten to twenty-five per cent.; uncomplicated cases will recover." And yet on the same page he admits having twelve deaths in a total of one hundred and thirty-one uncomplicated cases.

From all of these varying statements it appears a hard matter to judge of the exact mortality of pneumonia; and in estimating the value of any special line of treatment the death-rate alone cannot be relied on. In January, 1885, I was called upon to attend a man who was just entering upon the second stage of pneumonia. He had been sick for two days. The night before I was called in he had taken ten grains of calomel. I found him with a temperature of 99½° F., a pulse of 88, and respirations 20 to the minute. He had pneumonia on the right side involving the entire lung. The respirations afterward increased to 28, pulse to 112, and as the end approached went considerably higher, but the temperature never rose above 100° F. Dr. A. J. Rooney saw the case in consultation with me and confirmed the diagnosis. In spite of large doses of carbonate of ammonia, digitalis, and nux vomica, and liberal stimulation, he died on the sixth day of the disease.

The day after his death I read an editorial in THE MEDICAL RECORD (January 24, 1885) entitled "The American Treatment of Acute Croupous Pneumonia," which spoke in rather enthusiastic terms of the use of large doses of calomel in the treatment of pneumonia. After reading the article I could not help feeling that my patient's chances for recovery would have been much better if he had taken thirty to forty grains of colomel instead of ten, and I determined to try the calomel treatment on the first opportunity. Within the next week I was called to two cases of acute croupous pneumonia, both women and mothers of families, aged from thirty to forty. I put both of them on the calomel treatment and each recovered promptly, with an average sickness of about seven days.

CASE I.—Mrs. B——, thirty-two years of age, of Irish parentage, mother of one child, ten months old, had a pneumonia of right lung involving the lower and middle lobes. She had had a severe chill, followed by pain in side, slightly rusty sputa, temperature of 103° F.; pulse, 108; respirations, 36. The patient was just entering fully into the first stage of pneumonia when I was called. I immediately ordered thirty grains of calomel, and then gave her carbonate of ammonia, five grains every two hours. In the morning I found all her symptoms very much improved: Temperature, 100° F.; pulse, 80; respirations, 24. The bronchial breathing was not very pronounced, and slight subcrepitant râles began to appear. The evening of the third day the temperature, pulse, and respiration increased slightly, temperature running up to 101° F., pulse to 88, respiration to 28. The exhibition of the calomel had been followed by only one large so-called bilious stool. On the evening of the third day I gave twenty grains more of calomel. The next afternoon she had a severe sweating, followed by all the subjective and objective symptoms of a resolving pneumonia. She was completely convalescent in ten days.

CASE II. was very similar to Case I. Patient had severe pain in side; temperature, 104° F.; respirations, 40; pulse, 112. Had been taken sick twelve hours before I was sent for. I found dulness at the base of right lung, with bronchophony and bronchial breathing; while a little higher up some crepitant râles were to be heard. I immediately ordered thirty grains of calomel and a mixture containing quinine and ammon. carb. in syrup of tolu and mucilage of acacia, giving a dose of the first two of five grains each. The next morning—about fourteen hours later—I was surprised to find my patient very much better; temperature, 100° F.; pulse, 80; respiration, 20! the pain in the side completely gone, and the signs of the third stage of pneumonia setting in. She had had one natural stool. The next day the husband of the patient called to tell me that his wife was so much better that I did not need to call. I afterward heard that she was out two days after, or on the fifth day of the sickness.

The next case was that of a man—a veteran of the war—of about forty-five years of age. He had been three days sick when I was called, during which time he had been treated by a homœopath. He had pneumonia involving the lower lobe of left lung completely, which was just beginning to involve the upper lobe. His temperature was 104½° F.; pulse, 112; respirations, 44. I gave him forty grains of calomel and five grains of ammon. carb. and two and one-half grains of quinine every three hours.

In six hours his temperature was down to 102° F., pulse reduced to 96, and respirations to 38. The next morning (twenty-four hours after), the temperature had fallen to 101° F., pulse to 88, and respirations to 28. The evening of the fifth day the temperature again went up to 102½° F., the pulse to 100, and respirations to 34, but twenty grains of calomel brought them all down again; on the seventh day crisis set in, and he went on to a slow but uninterrupted convalescence though he was not completely restored to working strength for six weeks.

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[1] Pepper's System of Medicine, vol. iii., p. 343.

[2] The Restorative Treatment of Pneumonia, 1866.

[3] Pepper's System of Medicine, vol. iii., p. 342.

[4] Reynolds' System of Medicine, vol. ii., p. 204.

[5] Pepper's System of Medicine, vol. iii., p. 343.

Since then I have had fifty-nine cases of true croupous pneumonia, at all ages and of both sexes, have treated them all with calomel, and all have recovered promptly, with the exception of four which I shall proceed to describe.

One was a man, suffering from syphilis and chronic alcoholism, who suddenly developed a pneumonia of the right side. He immediately went into the wild maniacal delirium which is familiar in chronic alcoholics with pneumonia. He died on the fifth day of his sickness, but rather, I think, from œdema of the brain than from the pneumonia, for it seemed to me, from the imperfect examination of his lungs which I was able to get before he died, that the pneumonia had begun to clear up. In addition to his other troubles he had a chronic diffuse nephritis, so that it seems to me hardly fair to class his disease as pneumonia *per se*. Dr. James Watt saw the case in consultation with me, and agreed to all of the above.

A second one of the four was a man whom I was called upon to treat on the eighth day of his sickness. He was about thirty-six, and had been treated by a good physician up to that time; but on the morning of the eighth day the man's friends and the doctor had some dispute, and the doctor refused to attend him any longer, so I assumed charge of the case. He died in the crisis the next day, about sixteen hours after I was first called. I gave him only twenty grains of calomel.

The third case was that of a young man, a hard drinker, aged about twenty-eight years. He was treated by someone else for three days before I was called upon. The doctor who attended him believed that he was developing intermittent fever and did not examine his lungs. The diagnosis of pneumonia was confirmed by Dr. Edmister and by Dr. G. R. White.

I gave him forty grains of calomel and had the satisfaction of seeing his temperature fall from 104° F. to 101½° F.; his respirations from 48 to 32; and his pulse from 116 to 90 within twelve hours; but, at the end of the second day after, his temperature went up again to 103° F., and the pulse and respirations became correspondingly increased. More of the lung became involved, and he continued under my care, still suffering greatly, for about three months, when his trouble ran into chronic pneumonia or a fibroid phthisis, from which he is yet suffering, though I was first called to him in May, 1887.

The fourth case which did not recover promptly was a man about forty-nine years of age—a hard and steady drinker—but who had reformed about four months before his pneumonia developed. Calomel was given to him and it had its usual effects on pulse, temperature, and respiration; but it was fully three months before he completely recovered, and then not till he had a change to mountain air.

The success I have had with these sixty-two cases, but, more than all, the effect of calomel on pulse, temperature, and respiration; and the fact that in no recent publication—to my knowledge at least—is the calomel treatment spoken of, leads me to lay my experience before the profession

[illegible] staying the ravages of the disease. I do not believe that such unsatisfactory results will ever follow the course of treatment indicated and outlined above; nor do I believe that tertiary syphilis will ever develop in a single case thus treated.

Mrs. —— came to me two years ago with syphilis fully developed in its secondary stage. Her vulva had been ulcerated and tender for a month, and upon the labiæ were clearly developed chancres. Her person was covered with the eruption, and her mouth contained mucous patches. Her husband had been from home for a year and returned, three months previous to her visiting me, with a "sore" upon his penis. Without knowing its nature he inoculated her. I ordered euonymin with iodide and stillingia, and after continuing these for three months the lesions disappeared. Upon her own responsibility she then discontinued treatment, and there has not since been seen a single development of the disease.

Mr. ——, called upon me three years ago with a perfect Hunterian chancre upon the foreskin of the penis. Without waiting for further developments I placed him upon the alterative pills with iodide and stillingia. The only secondaries that appeared were a few papules upon the forehead and scalp, with alopecia. In three months these had disappeared. He continued the treatment one year, with several intermissions from a week to a month at a time, and he gained [illegible] and his gen-

I give from thirty to sixty grains of calomel not later than the third day of the disease. A smaller dose may be again given later.

Its effects are: It reduces pulse, temperature, and respiration, diminishes the pain, and renders the further progress of the case more comfortable to the patient, and, I firmly believe, brings on the crisis earlier. From such large doses of calomel you will rarely get more than one or two loose, though otherwise natural, stools.

445 Eighth Avenue.

IS A PROLONGED MERCURIAL COURSE ADVISABLE IN SYPHILIS?

By J. S. PRETTYMAN, Jr., M.D.,

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The medical profession, having ceased to question the propriety of a prolonged mercurial course in syphilis, is engaged in ascertaining new methods of administration, for the failures of the past must not be attributed to anything less than the faulty introduction of the remedy into the system. Fumigation, inunction, and alimentary introduction have proven alike discouraging, and now is offered the promised healing through hypodermic medication. To doubt the efficacy of the treatment is heresy; for it is the remedy of the fathers, the remedy *par excellence* of the children's children, the one specific in the disease!

For decades, and even centuries, from generation to generation, in treating syphilis the profession has been taught to depend upon mercury, and notwithstanding the results have proven unsatisfactory, and in many cases disastrous, it has declined to abandon the treatment, or even to investigate other remedies.

That a protracted course of mercury is not devoid of danger none can gainsay, and while we may administer it boldly, even heroically, it is with secret misgivings as to its results. "It is probable that as much injury has been inflicted by the use of mercury in primary syphilis as good has been accomplished by its administration in the constitutional forms of the disease. And when it is considered that every simple sore following a suspected coition was apt to be treated as syphilitic, by mercurialization of the system, it may be a question whether, on the whole, the medicine has not been more mischievous than useful. In regard even to true chancres, although mercurials will sometimes hasten their cure by lessening their induration, and may thereby postpone constitutional infection, it does not in any case prevent that result. In certain states of the primary sore mercury aggravates the disease" (Stillé). Whatever beneficial effect it may have in controlling syphilis is due solely to its alterative properties, and while there are less dangerous drugs combining these qualities and exerting as great an influence over the disease, we are certainly not justified in wholly rejecting these and continually resorting to mercury. Much injury, no doubt, has resulted from the injudicious use of the many salts of this metal, and as there are better forms of treatment, it is full time that the profession should halt in such recklessness; and be brought to consider the demerits of the old methods in connection with the merits of the new.

Admitting all that the most sanguine advocate can claim for the old method of treatment, it is only after months and years of continuous administration that we can hope hand retires the sound, the index-finger in the vagina remains immovable, and gives information as to the extent of change of position of the electrode by the touch of the following mark.

4th. It is better, if possible, to cauterize the entire cavity at one sitting, letting each sectional cauterization last from three to five minutes, as the gravity of the case and the size of the cavity may show to be proper.

5th. In continuing the treatment, the duration and force of the current must be made to depend upon the effect produced by the cauterizations at previous sittings.

6th. It is well to be aware that, when the cauterization

[illegible] that it is without power in this stage [illegible],

and we are thus forced into the position of either acknowledging the inefficiency of a mercurial course, and that the metal has not the specific qualities hitherto assigned it by the profession, or else that the so-called "tertiary syphilis" is not syphilis at all, but some other form of disease.

"Tertiary syphilis," with its putrid flesh and rotten bones, syphilographers claim is non-infectious. With the system thus completely saturated with the poison, every corpuscle laden and bearing it on its way, why should the *tertiary* be non-infectious while the primary and secondary stages are so virulent? Has the disease changed? Its nature has; and does it bring a doubt into our minds as to whether it is syphilis or not? May it not, after all, be the result of a prolonged mercurial course of treatment? for such are the very lesions we find in chronic mercurial poisoning. I quote from the "National Dispensatory" as follows, and how strikingly it confirms the above assertion:

"Among the constitutional effects of mercury are cutaneous eruptions, generally in the form of eczema, sometimes in that of febrile rubeoloid eruption, and more rarely as an eruption of bloody bullæ. Deep, foul, and intractable ulcers sometimes occur; they are most common within the cavity of the mouth and throat, and may prove fatal by hemorrhage or by exhaustion, the ulcerative process sometimes destroying the cheeks and the soft parts of the throat. It appears probable that mercury may give rise to periosteal nodes which sometimes advance to the destruction of the bones. The muscles lose their firmness and waste, the complexion turns pallid and earthy, the gums grow spongy, the hair falls out, the bones and joints suffer dull pains," etc. Isn't this an exact description of so-called "tertiary syphilis?"

Listen also to what H. C. Wood says in his work upon therapeutics; and he is a strong advocate for the mercurial treatment: "The persistent medicinal use of mercury has resulted in the production of a state of the system characterized by great anæmia, emaciation, and general loss of power, with loss of the hair, aching pains in the bones and joints, œdema, fetid breath, diarrhœa, and general disordered secretions; . . . the emaciation, the perverted functions of nerves and glandular tissue, the various skin-eruptions, the altered blood of chronic hydrargyria, all point to a profound impression, affecting the nutrition of every part of the organism."

I have repeatedly heard an intelligent, experienced physician, who has been in practice forty years, declare that he had never seen a case of syphilis advance to the tertiary stage which he had treated from the initial sore, and that he had never prescribed a grain of mercury in the disease. My own experience is in accord with this, and under the vegetable alteratives with iodides I have yet to meet with the first case that has developed beyond secondaries, and these are usually very light.

It is singular that after the disappearance of secondary lesions the disease should remain quiescent for years and then reappear in its most dangerous form. It is not reasonable to suppose that the virus, or microbe, would remain in the system so long a time inactive, and without the slightest manifestations of its presence, suddenly to renew its destructive work.

Consider, in connection with this, the fact of the slow elimination of mercury from the economy, and we have another reason for attributing the lesions to the action of the metal. Mercury has been recovered from the tissues eight weeks after administration, and it is believed by physiologists and therapeutists that it will remain in the system for years.

The magical power of the iodides in tertiary syphilis is appreciated by all, and when we consider that they materially aid nature in the elimination of mercury, we have strong negative evidence confirming the conclusion that "tertiary syphilis" is not syphilis at all, but chronic mercurial poisoning, and that the wonderful effect of the iodides is thus due to their power in assisting the economy to rid itself of the cause.

Administer iodides after a mercurial course, and ptyalism follows. Under other circumstances they do not salivate, and this result may either be attributed to their forming with the metal very soluble salts which are rapidly eliminated through the mucous membranes, or else to their action upon the glandular system, stimulating and aiding in depurating the system. So well, indeed, is this understood that the "mixed treatment" has come into vogue, and many practitioners regularly follow the mercurials with iodides.

If so-called "tertiary syphilis" results from the administration of mercury, it may properly be asked why this development does not occur in all cases where the metal is thus given? For the same reason, we reply, that a few grains of the mild chloride does not always produce ptyalism; for the same reason that a few drops of the liquor sodii arseniatis does not always cause œdema! In many cases nature successfully resists the intrusion, while in others the vital forces are overcome, and the metal remains permanently, to soften and destroy.

In treating syphilis the iodides alone are unreliable, just as mercury is; but in combination with irisin, phytolaccin, euonymin, leptandrin, podophyllin, etc., the results are most gratifying. As comparatively little harm can follow this treatment, it is well to begin the remedies early in the disease, without even waiting for secondary appearances, for we may thus shield many of our patients from the mortification of public exposure.

After the symptoms have sufficiently developed to render the diagnosis secure, I prescribe somewhat as follows:

℞. Potas. iodide.......................... ℥ ss.
Syr. stilling. comp....................... f. ℥ vj.
M.
S.—Dessertspoonful three times a day, half an hour before each meal, in a wineglass of cold water. Also,

℞. Podophyllin............................ gr. x.
Irisin,
Phytolaccin.............................āā ℈j.
M. et ft. pil. xl.
S.—One at 10 A.M., and one at 3 and 9 P.M.

To these may be added sodæ bicarb. ℈j.–℈ij.; it seems to render the resins less irritating and more assimilable. The liver and entire glandular system is thus kept actively at work, and the poison is rapidly eliminated, much of it passing out with the ejecta from the alimentary canal. With an occasional intermission of the pills for a day or two at a time, when the catharsis is excessive, I continue the above course for several weeks, and I have never, in a single case, been disappointed in its effects. In place of the pills I frequently substitute euonymin.

had been treated by a homœ- [illegible] preparation when

involving the lower lobe of left lung completely, which was just beginning to involve the upper lobe. His temperature was 104½° F.; pulse, 112; respirations, 44. I gave him forty grains of calomel and five grains of ammon. carb. and two and one-half grains of quinine every three hours.

In six hours his temperature was down to 102° F., pulse reduced to 96, and respirations to 38. The next morning (twenty-four hours after), the temperature had fallen to 101° F., pulse to 88, and respirations to 28. The evening of the fifth day the temperature again went up to 102½° F., the pulse to 100, and respirations to 34, but twenty grains of calomel brought them all down again; on the seventh day crisis set in, and he went on to mercurial, and it will promptly check the ravages of the disease. It will rarely be necessary to treat a case beyond six months, and the lesions will usually disappear in much shorter time. I append the history of a few cases to show the efficacy of this treatment:

I first examined Mr. —— in September, 1887. His mouth and fauces were covered with mucous patches, such as are generally seen in syphilis about the second or third month. No other lesions were apparent. He acknowledged having been infected, and stated that it occurred two years before. Since then he had been under the care of a distinguished specialist, and he was at that time taking mercury, and had been during the entire two years with but a few short interruptions. A copy of every prescription was shown to me, verifying the statement. I placed him upon the iodide and stillingia compound, as indicated above, with a teaspoonful of the elix. of euonymin between meals and at bedtime. In less than a week the ulcers had disappeared, but the treatment was continued a month. Since this there has been no return of the disease, and he has been under no other treatment.

Four years ago I treated Mr. ——. He was unmarried and twenty-eight years of age. Alopecia was decided, and a syphilitic eruption covered his entire person. His throat was in a dreadful condition, and it was with the greatest difficulty that he could even swallow liquids. This was one of the worst cases I have ever seen, and he had been continuously for four months under the mercurial treatment. In spite of this the disease steadily advanced, and he became discouraged and disheartened. I used the chlorate of potash solution as a gargle, and placed him upon the alterative pills with iodide and stillingia. In ten days his throat had healed, and he was taking solid food without difficulty; in thirty days the eruption had decidedly faded, and in two months was entirely gone. At the end of the fourth month he protested that he was well and wished to abandon treatment. I insisted upon his continuing it, and he did so for another month, when, upon his own responsibility, he ceased to take the medicine. He was engaged and anxious to be married. I explained to him the dangers of such a step, and insisted upon a postponement of the wedding. Through the importunity of the lady he consented to the union, and much to my surprise, and contrary to my advice, in two weeks they were married. In a year and a half their first child was born, and he is now a robust, healthy boy, and has never manifested the slightest indications of the disease. A second child has since been born to them, and this also is healthy and free from the trouble. The father has received no further treatment, nor has the disease reappeared upon him. The mother has never aborted nor shown the slightest sign of having been infected.

Failure is recorded in these cases for the mercurial treatment, and success for the vegetable alteratives with iodides. Two years was more than ample time, under proper treatment, to have wrought a cure, but in the first case mercury proved inadequate, as it has done in thousands of cases before. In the second case the remedy was given continuously, and in large doses, for four months, and it had apparently no beneficial influence in overcoming or in staying the ravages of the disease. I do not believe that such unsatisfactory results will ever follow the course of treatment indicated and outlined above; nor do I believe that tertiary syphilis will ever develop in a single case thus treated.

Mrs. —— came to me two years ago with syphilis fully developed in its secondary stage. Her vulva had been ulcerated and tender for a month, and upon the labiæ were clearly developed chancres. Her person was covered with the eruption, and her mouth contained mucous patches. Her husband had been from home for a year and returned, three months previous to her visiting me, with a "sore" upon his penis. Without knowing its nature he inoculated her. I ordered euonymin with iodide and stillingia, and after continuing these for three months the lesions disappeared. Upon her own responsibility she then discontinued treatment, and there has not since been seen a single development of the disease.

Mr. ——, called upon me three years ago with a perfect Hunterian chancre upon the foreskin of the penis. Without waiting for further developments I placed him upon the alterative pills with iodide and stillingia. The only secondaries that appeared were a few papules upon the forehead and scalp, with alopecia. In three months these had disappeared. He continued the treatment one year, with several intermissions from a week to a month at a time, and he gained flesh and strength, and his general health was decidedly benefited. There has not since been the slightest manifestation of the trouble.

I am now treating a case of syphilis, and have been for three months, in which the disease has been kept so thoroughly under control that not even the immediate family of the patient has ever suspected the cause of the trouble. He has had a few mucous patches in his mouth, with half a dozen papules upon the scalp, and these have at present disappeared, and I do not anticipate a recurrence of the symptoms.

I have also relieved some of the worst cases of psoriasis and chronic eczema with the above treatment in from four to six weeks. In connection with these remedies, I usually prescribe as a local measure the application of a solution of ammonium muriate, its strength depending inversely upon the amount of irritation produced. If this course of treatment is faithfully carried out it will give far better results than the arsenical, or any other that I have ever tried or have any knowledge of. From the fact of the cure following the administration of the iodides, many will assert that the diagnosis was incorrectly made, and that the eruption was but the cutaneous manifestations of syphilis. But this is all nonsense, for I have verified the results too frequently to be deceived. I recall a case of chronic rheumatism which I treated several years ago with potas. iodide. The prescription accidentally came into the hands of a fellow-practitioner, who informed the man that I was treating him for syphilis! I was vigorously denounced by the patient, but he afterward repented and followed out the treatment, and was rewarded by a cure.

MICROBES IN THE SKIN, AND SUPPURATION.—Dr. V. A. Kryloff, who has been investigating, in Professor Ivanovski's anatomical and pathological laboratory in St. Petersburg, the causes of acute suppurative processes, has obtained some interesting results by rubbing antimonial ointment and croton-oil liniment into shaved patches of the skins of different animals. When these substances were rubbed into the skin of guinea-pigs and rabbits, no pustules, as a rule, were produced; but by means of very energetic rubbing a dry gangrene of the skin was caused, in which no micro-organisms were to be found—a condition apparently due to an absence of pyogenic organisms in the skin of these animals. In one case, however, there was a pustulation, and staphylococcus aureus was found. When a similar experiment was tried on dogs, pustulation always followed, and staphylococcus pyogeneus albus was invariably found; this coccus existing, as it would seem, in the skin of the dog, otherwise it would be difficult to explain why other staphylococci were not found. Cultures were also prepared from the normal skin of dogs which, injected into other animals, produced abscesses, and in the case of rabbits proved rapidly fatal. The conclusion that Dr. Kryloff comes to is that the production of pustulation by external irritants depends, in part at least, on the preexistence of pyogenic organisms in the skin. In the case of dogs, he thinks that they must be localized in the deeper layers of the epidermis, as thorough disinfection was a very difficult proceeding; and unless the organisms lying deeply were destroyed, their power of provoking suppuration was not arrested.—*The Lancet*, June 9, 1888.

A PATHOLOGICAL CONDITION OF THE MIDDLE TURBINATED BONE.

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The subject of nasal stenosis has received lately the attention of many laryngologists, and has been the theme of many valuable papers.

The increase of our surgical armamentarium, and the recognition of the condition as a cause of many reflex and direct respiratory and neuralgic phenomena, have given to the subject an interest and an impetus which promise to result in valuable additions to our knowledge of nasal and laryngeal disease.

In 1882, Dr. Bryson Delavan[1] pointed out the fact that true hypertrophy of the turbinated bones, especially of the middle, is a frequent occurrence in connection with deviations of the septum. Zuckerkandl,[2] in the same year, in a work which has become classical, points to the same condition. That deviations of the septum often exist in connection with this hypertrophy cannot be denied after such extensive researches, but it is equally certain to the clinical observer that the hypertrophy exists without any marked deviation of the septum in a great many cases.

Baumgarten[3] and others believe that the turbinated bones, when hypertrophied, are the chief causes of deviation of the septum.

Bresgen[4] declares, and a very short consideration of the subject must convince anyone, that an acute coryza could never in itself, however frequently it might occur, cause a deviation of the septum by a simple swelling of the mucous membrane covering the turbinated bones. Indeed, I doubt very much whether a chronic hypertrophic condition of the mucous membrane can be a *cause*, unless the bony structure itself is stiffened by pathological changes, thus forming a point of support, which the normal bone *cannot*. That a bony hypertrophy can cause a deviation is undoubted.

Beside the researches of Zuckerkandl and Delavan, Bayer[5] and Glassmacher[6] mention bony cysts, and Knapp[7] and Sprengel[8] speak of osteomata which were observed to have indented and pushed over the bony septum from its normal position.

It is not, however, the aim of this article to discuss the causes of deviation of the septum, however much they may be connected with bony hypertrophy of the intranasal structure, but rather to consider the causes, symptoms, and treatment of the pressure exerted by the middle turbinated bone upon the septum, whether due to a true bony hypertrophy or a displacement of the bone from its natural position upward and inward.

We see a great many cases in which the mucous membranes of the septum and of the turbinated bones are in contact, and without a doubt many nasal passages present such an appearance, and do not, as a rule, give rise to subjective symptoms. When, however, there is firm bony pressure, I believe it is always pathological, and sooner or later it will give rise to symptoms more or less severe, and to sequelæ more or less serious.

The normal turbinated bone acts as a delicate framework over which are stretched periosteum, stroma, bloodvessels, nerves, submucous and mucous tissue. The middle turbinated bone and the opposing surface of the septum, with the regions above, are the seat of the olfactory sense.

The variations in its size and form are very great. While Zuckerkandl gives its average length as ten to twelve millimetres on its anterior free border, he says: "The length of the middle turbinated bone undergoes many variations in different persons. I have in my possession preparations with smooth middle turbinated bones, which in their anterior measurements are thirty millimetres broad, while the nasal passages have only a length of forty-one millimetres; consequently the smelling cleft (Geruchspath), and the area over which the branches of the olfactory nerve spread are a great deal larger than in normal cases. An inequality in the size of the middle turbinated bones is not infrequent, and I have observed that *one* may be ten millimetres shorter and lower than its companion. However, other conditions are the causes of this, as deviations of the septum, tumors, etc."

That bony union occasionally takes place between the turbinated bones and the septum as the result of disease, is certain, but these cases are not to be included among those under consideration. The normal turbinated bones being spongy in their structure, and the periosteum being supplied with elastic fibres, are resilient and spring readily into place after being depressed by a probe. Posteriorly, they can be seen in the rhinoscopic mirror standing out as hoods from their attachments. When expiratory efforts are made by blowing through the nose, the inferior turbinated bones being under the lee of the soft palate, do not feel the full force of the air rushing up from below; but not so with the middle turbinated; they, from their position and form, must receive the expiratory blast and rise with it, shutting it out from the regions above to a great extent. The olfactory region being above the lower free border of the middle turbinated, is the reason why foul smells from pharyngeal ulcerations, dead bones, etc., or from fermentations in disordered conditions of the stomach, are not perceived by the sufferer, but made very apparent to his companions. The sense of taste having been proved to largely depend on the olfactory sense, a certain amount of air must necessarily ascend from the pharynx, but that it must take place in a comparatively quiescent condition of the pharyngeal air, a smoker can easily prove to himself, by first sniffing the smoke of a fragrant cigar as it arises from the lighted end, and then drawing it into the pharyngeal space and expelling it through the nasal passages by an expiratory effort. If the elasticity of the middle turbinated bone is normal, the difference in the intensity of the fragrance will be very marked. Anteriorly, the inspired air to a great extent passes almost vertically past the free ends of the inferior, and a certain amount above that of the middle turbinated bones, while posteriorly, the hooded ends direct the expired air out through the middle and inferior meatus. The secretions from the mucous membrane lining the various nasal cavities, and the sinuses connected with them, flow down over the turbinated bones, keeping them moist and evaporating in the inspired air, and dripping when excessive from the nostrils in front, or from the uvula to the base of the tongue behind.

As for the histological changes in the cases under consideration, I have little to say, inasmuch as it is a condition resulting from various pre-existing morbid conditions, and not a disease in itself. There is usually atrophy of the mucous membrane, although it may be hypertrophied. The bones themselves have usually undergone what I presume to be condensing osteitis,[1] though I have not been able to find anything directly bearing on the subject in medical literature. Often it is associated with nasal polypus and polypoid degeneration Occasionally one may observe the condition which Dr. Woakes, from very unwarranted grounds, it seems to me, is pleased to call necrosing ethmoiditis,[2] the name itself, if nothing more, being a misnomer.

I have never seen it before the age of sixteen, having most frequently observed it from thirty to fifty, though I have several cases now beyond that age. Following the

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[1] Archives of Laryngology, vol. iii., No. 3.
[2] Norm. u. Path. Anat. der Nasenhöhle.
[3] Deutsch. Med. Woch., No. 22, 1886.
[4] Wien. Med. Presse, Nos. 7 and 8, 1887.
[5] Centralblatt für Laryngol., ii., p. 237.
[6] Berl. Klin. Woch., No. 36, 1884.
[7] Zeitschr. für Ohrenheilk., xiii., 4.
[8] Archiv für Klin. Chirurgie, xxxv., 1.

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[1] Handbook of Path., Anat., and Histology, Delafield and Prudden, 1885, p. 455.

[2] Nasal Polypus.

rule of all chronic nasal catarrhs, it is much more common in women than men. While agreeing perfectly with Dr. Delavan as to the predisposing causes of the bony hypertrophy, something more must be added to explain the close apposition of the bone to the septum, as in many, if not most, cases the free border of the bone is displaced upward and inward.

The manner of its production I believe to be usually, though not always, as follows: The patient has been a sufferer from chronic hypertrophic rhinitis, which may or may not have gone on to an atrophic stage. The structures of the turbinated bones and their envelopes, undergoing the changes due to their catarrh, lose gradually their natural resiliency. Now, when the patient, already a sufferer from chronic hypertrophic rhinitis, has a fresh exacerbation—a coryza, as they so constantly do—or even when they are not so suffering, but feel the stopping up of the nasal passages from the exaggerated action of the so-called erectile tissue, violent expiratory efforts are made to force the air through and clear the passages of obstruction and of mucus. The air rushing up from below strikes against the hords of the middle turbinated bones, swells them out like sails, and forces them upward and inward against the septum. This is constantly repeated until the damaged organs become permanently fixed in their new position, the bones undergoing changes in the meanwhile by which their further movements are rendered impossible. The turbinated bone and the septum are equally unyielding. Union may now take place between the mucous membranes, but most frequently does not unless there has been ulceration, or the bones and the opposing septum have been wounded by attempts to pass probes, snare, wire, etc., between their surfaces. This is the condition of the middle turbinated bones in these cases when they present themselves for treatment. It is often marked by accompanying lesions, polypi, hypertrophy of the mucous membrane, or the graver condition of ethmoidal suppuration. Many cases, however, present nothing but this abnormal position of the bones and an atrophic condition of the mucous membrane. The contact may exist the whole length of the border of the bone, or only over a portion of it—in the latter case usually posteriorly.

As so often happens the patient may for years have had a chronic rhinitis, producing the well-known atrophic or hypertrophic changes, without having had his attention drawn to his nose by the slight symptoms. On cross-examination we often find that, for a longer or shorter period antedating, patient has noticed at times stopping of the nasal passages, that he has suffered very frequently from coryza, but has not thought much of it. The nasal cavities are so small that the range of symptoms caused by the various forms of pressure is limited. Hence it is that subjective symptoms are of comparatively little value in differentiating their causes. They may be of all degrees of severity, and may be aggravated or masked by coexisting or dependent lesions. The most common and distressing symptom is pain, which may be confined to the bridge or one side of the nose, or may be supra-orbital, or may be referred to the vertex or occiput, and is often a general headache. This pain may be constant and subject to severe exacerbations, but more commonly is more or less intermittent, a coryza always very greatly increasing the pain.

Harrison Allen,[1] in an excellent article on catarrhal headaches, very clearly defines and differentiates this form, and a further consideration would be but a repetition of his work on my part. Other conditions,[2] as said above, may cause the same symptoms.

Scheck says[3] that he has found supra- and infra-orbital and infra-maxillary neuralgias, or migraine, rare in cases of polypus, but frequent in cases of hypertrophy of the middle turbinated bones. Elsewhere[1] the same author speaks of bony cysts as causing by pressure anosmia, trigeminus neuralgia, and other neuroses, and compression of the tear-duct. I have seen one case of simple hypertrophy of the middle turbinated bone causing the latter condition, which was relieved by operation. Scheck's case of chronic spasm of the soft palate[2] was probably due to the same cause.

The reason of pain being such a prominent feature in these cases is that the mucous membrane of the nasal passages, and especially of the septum, is a very sensitive tract. If one wishes to form a slight idea of the pain induced by this condition, let a probe be passed between the middle turbinated bone and the septum, a little above the former, and a moderate pressure exerted upon the septum. If we add to this the exaggerated sensibility caused by coryza, we may have a fair idea of the sufferings of these, by no means rare, victims. I have seen a few cases in which the excessive flow of watery secretions[3] from the nose could only be accounted for by a very slight contact of the middle turbinated bone, which exerted an elastic pressure. By correcting this relief was immediately obtained, although several other means had been tried without success in one case. From the distribution of the olfactory nerve we should expect, and practically we often do observe, decided diminution in the sense of smell. Eye symptoms, conjunctival congestion, and lachrymation, are often noticed.

When we enter upon the field of reflex neurosis we stand upon very uncertain ground. It seems to me that we must wait for the physiologist to teach us more about the sympathetic system of nerves before we can build up theories on any sound basis. What we can say in nasal diseases is, that such and such pathological conditions are occasionally accompanied by such and such remote or near nervous phenomena, and that occasionally, by curing the nasal disease, we obtain an abatement of the so-called reflex symptoms. The error of first love, etc., is a very old one, but a very common one.

Burnton[4] speaks of the influence of the contact of the hypertrophic mucous membrane of the turbinated bones with the septum in producing reflex symptoms, which, he states, suddenly subside if the contact is prevented.

Hack[5] dwells especially on sneezing in connection with various inflammatory conditions of the middle turbinated bones and adjacent portions of the septum. He speaks also of other reflexes in the same connection. His well-known contributions to the subject, "Reflex Neuroses,"[6] may be referred to by those interested in that part of the subject.

A great deal of work has been done by others[7] in this field, but the subject so far has been approached principally from the clinical side, and very little is settled. How uncertain the conclusions are that are drawn is illustrated by the remark of Scheck,[8] that he has found some cases in whom treatment was directed to the evident seat of the neurosis, were cured, some were benefited, while some received no benefit at all.

A mention of two cases will serve to illustrate the forms of reflex disturbance I have noted in connection with bony pressure on the septum, and I do not doubt that other forms exist.

One of the patients was a young woman, aged twenty, who presented herself in a pitiable state of nervous and physical exhaustion after a siege of severe and long-con-

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[1] Phil. Med. News, March 13, 1886.

[2] Schaeffer: Nasenleiden und Reflexneurosen, Deutsche Med. Woch., Nos. 23 and 24, 1886.

[3] Aertzl. Intell.-Blatt, No. 30, 1884.

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[1] Krankheiten der Mundhöhle, pp. 223 and 306. Wien, 1888.

[2] Münch. Med. Woch., No. 22, 1886.

[3] Aschenbrandt: Ueber den Einfluss der Nerven, etc., Monatsschr. f. Ohrenheilk., No. 3, 1885.

[4] Centralblatt für Laryng., etc., ii., p. 424.

[5] Berl. Klin. Woch., No. 25, 1882.

[6] Wien. Med. Woch., Nos. 49, 50, 51, 1882, and No. 4, 1883; Erfahrungen auf dem Gebiet der Nasenkrankheiten, Wiesbaden, 1884; Fortschritte der Med., Bd. i., No. 20, 1883.

[7] Hering, John M. McKenzie, Brébian, Lublinski, Rossbach, Kratschmer, Heymann, Gennaro.

[8] Aertzl. Intell.-Blatt, No. 30, 1884.

tinued sneezing, the paroxysms lasting sometimes for many minutes and often recurring a half-dozen times a day, extending over the period of ten days or a fortnight. Otherwise she was an exceptionally healthy patient, with no hysterical tendencies, and above the average intelligence. Since childhood she had been subject to attacks of sneezing, especially on catching cold, but they had only of late attained such severity as to incapacitate her for work or to confine her to the house. On examination, the left middle turbinated bone was seen to be against the septum, but not pressing at all firmly. On the right side there was, low down, a large cartilaginous spur which prevented a higher view of the nasal cavity. With a Bosworth saw I removed this ; I could then see that the right middle turbinated bone was pressing firmly upon the septum. I awaited the result of the operation on the septum, which was most gratifying for the time. So much so that, after trying with a probe and with a snare to relieve the turbinated pressure, I desisted from further efforts. For two or three months the patient was almost wholly clear of her distressing symptoms, though she still complained of headaches. Gradually, however, the paroxysms of sneezing returned, not in their former intensity, but gradually increasing. By two operations with the electric nasal trephine, I bored through the right middle turbinated bone in two places, removing pieces of very hard, stiff bone from the middle and posterior extremities. This gave her another respite from suffering, especially from the headaches. She has now, in the last few days, presented herself again with a history of a return of the sneezing in a modified form. I propose now to attempt a freeing of the bone throughout its whole extent, and I think with fair chances of complete relief from the most distressing part of the symptoms.

Another case which I have also still under treatment, may illustrate the asthmatic reflex, though the result has not been as encouraging.

A woman, about fifty-five years of age, had been treated for nasal polypi in the left nostril, having suffered for many years from asthmatic attacks when catching cold. She had also ethmoidal suppuration. After clearing away all the polypi in the middle fossa, the left middle turbinated bone was seen, much enlarged, covered with atrophic mucous membrane, and immovably fixed, indenting the septum by its pressure. There was not the slightest improvement from the removal of the polypi, and but slight from a partial removal of the bony pressure, though the headaches and the suppurative process have been benefited. From the age of the patient and the fact that emphysema is present, I cannot hope for much relief by the removal of the suspected origin of this reflex respiratory symptom.[1]

In a case uncomplicated by any of the forms of obstructive trouble, an anterior rhinoscopic examination reveals the middle turbinated bone covered by atrophic mucous membrane, and pressed so firmly against the septum that it is impossible to pass a probe, however thin, between them. A posterior rhinoscopic examination shows the space between the inferior and middle turbines much increased, and the latter high up and against the bony septum, the mucous membrane being pale and atrophic as in front. There is not necessarily any obstruction to the passage of air, as the respiratory region of the nasal passages lies below the middle turbinated bone. Ethmoid suppuration, while very apt to follow a complete damming up of the secretions, is not present in the majority of these cases, as drainage may take place anteriorly or posteriorly ; or the line of contact may be interrupted. Atrophy of the mucous membrane of the septum is occasionally observed below the line of contact, due probably to the pressure on the afferent blood-vessels. In addition to ethmoidal suppuration, we may have as complicating conditions general atrophic or hypertrophic rhinitis, nasal polypi, post-nasal and Eustachian catarrh, adenoid vegetations in the pharyngeal vault, and deviations of the cartilaginous and bony septum. These conditions may be singly or collectively present, and must have their appropriate treatment either before or after the procedures resorted to for relieving the pressure of the turbinated bone on the septum.

I think it probable that the condition may occasionally undergo a spontaneous cure, either by atrophy of the offending bone, or the symptoms may cease from the accommodation of the nerves, both sympathetic and sensitive, to the long and continuous pressure upon them.

It is much more likely, however, to continue indefinitely to cause suffering, or to be the cause of ethmoid and anterior suppuration, by completely damming up the excessive secretions which form on every coryza. It is very difficult to formulate any rule as to what cases should and what cases should not be subjected to operative treatment. The common sense and honesty of the physician must be depended upon for the answer.

When we come to the question of treatment, I wish to confess that I have not yet been able to devise any method by which every case may be successfully treated. Before anything is done, cocaine should be thoroughly applied, so that its maximum constringing power may be exerted. One is then able to see just how much of the apparent pressure is due to hyperæmia. If a flat, smooth probe can be passed with moderate force between the opposing surfaces, benefit can be expected from treatment of the catarrhal condition of the mucous membrane. Where there is a hypertrophic condition of the mucous membrane, alkaline and astringent sprays and douches often yield very good results. The galvano-cautery carefully applied, so that opposing surfaces of septum and turbinated body are not touched at the same time, will occasionally do all that is necessary ; though even with the greatest care adhesions are apt to ensue, when matters are worse instead of better. In atrophic conditions of the mucous membrane, of course, topical applications are of no avail. Nothing is to be gained, but pain is increased, by attempts to stimulate the atrophic membranes to action. Thudichum[1] speaks of using the galvano-cautery to burn his way up to the cribrous plate, but he does not say whether or not he destroyed bone in this way ; but in another connection lauds the cautery both for soft and bony growths. Burning away a hardened and hypertrophic middle turbinated bone is not a method which will recommend itself to the average operator, though the soft tissue can be reduced in this way without danger of too much reaction. Dr. Allen has in a similar condition made use of the finger, introduced into the nasal passages, to force and even break the bone away from its position.[2] Although I have no experience in this method, it seems to me the cases must be exceedingly rare where the average index-finger could be introduced high enough up, and far enough back, to accomplish the desired purpose. When one finds that an attack must be made upon the bone itself, one has a number of instruments from which to choose, and the one selected will be largely the result of individual preference and skill in its use.

I have never succeeded in breaking the bone with a stiff probe, as one made strong enough to do the work cannot be forced between the septum and the bone. Occasionally, the straight or curved scissors devised by Dr. Charles H. Knight, may be of service, but usually only in connection with other means. Several times I have made use of the nasal snare ; occasionally, by means of a probe notched at the end, the snare may be forced between the septum and the bone, and the latter included in the loop. When it has been effectual in removing the bone, I have always had cause to regret the use of the snare. One is almost sure to destroy the whole middle turbinated bone. This result cannot be too strongly deprecated. Greville MacDonald[1] condemns this procedure, so freely resorted to by Dr. Woakes and by Thudichum. It is a mutilation which should only be chosen as the lesser of two evils. Extensive suppurative inflammation of the ethmoid cells, or frontal or maxillary sinuses may require it, in order to remove an obstruction to free drainage and thorough and vigorous applications to the diseased points. A patient who has lost this important structure will be subject to complete or partial anosmia on the affected side, to catarrhal inflammations which may become atrophic, if not already in that condition, and to headaches and pain referred to the bridge of the nose. The operation of the snare, however slowly and carefully it may be done, when the whole bone is removed, may be followed by severe and prolonged hemorrhage, requiring the firmest tamponading with styptic cotton. I have no experience with the galvano-cautery wire in these cases, but it would be extremely difficult in its adjustment, and, minus the hemorrhage, open to the same objections as the cold snare. The instrument for which I have the greatest preference is the nasal trephine operated by the electro-motor. This is an instrument familiar at least to most laryngologists in this country, and described by Curtis,[2] Jarvis,[3] and Seiler.[4] I have used the "Challenge" motor and the battery known as the C. and C. The C. and C. motor is more powerful, but not so convenient and noiseless. Now, with this instrument (nasal trephine), if one were able to apply it in a straight line from one end of the offending bone to the other, the operation would be exceedingly simple; but as a matter of fact, one has to introduce the straight instrument from below and work, at least anteriorly, with the crown of the trephine pointed directly at the cribriform plate of the ethmoid, and often not knowing exactly how far that exceedingly delicate and important roof of the nasal cavities and floor of the anterior cerebral fossa lies above the middle turbinated bone. The latter is in such close relation to the septum, that the height of this roof cannot be ascertained by a probe. Reference to plates and skulls will only show the operator how much the distance varies in the normal skull. Moreover, one must bear in mind that the bone in these cases *is* nearly always higher than normal. The only guide that I have been able to use for gauging a safe distance is measuring on the outside from the margin of the nasal ala below to the inner canthus of the eye above. As the cribriform plate articulates a little above this point with the frontal bone, it is a tolerably safe, if not always an accurate, guide. I have never yet had an accident happen from introducing the trephine too far, but it is always with a feeling of reluctance that I push the instrument in this direction. Cocaine should be thoroughly applied to the seat of the intended operation. It is best done by means of pledgets of absorbent cotton soaked in a twenty per cent. solution. An excess of cocaine in the cotton should be carefully guarded against, lest several drops may trickle downward and backward into the pharynx and larynx, giving rise to hawking and gagging. This may be largely avoided also by causing the patient to bow his head upon the chest, so that the excess may run out anteriorly. When thus carefully applied the anæsthesia is complete, the operation comparatively painless, and constitutional cocaine effects entirely avoided.

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[1] Since this article was written the patient has presented herself very much improved, and freer from asthmatic attacks than she has been for a long time. The flow of pus from the ethmoidal region is much less. Of course she has employed cleansing solutions and kept the nasal passages free of discharge by sprays and douches.

[1] Lancet, August 27, 1887.

[2] Internat. Journ. Med. Sciences, April, 1886, and Proceedings Am. Laryng. Ass., 1887.

First, then, an opening is made through the bone anteriorly, and a second, and perhaps a third one in line, posterior to the first. Then the operator is able to direct the point of the instrument more obliquely and in a posterior direction, thus working more in a line parallel to the line of contact. The operation usually requires two or three sittings, as after the first perforation blood is almost always sure to obstruct the field of operation, and it is safer and better to wait a few days, or even a week, until a clear view can be had. One should avoid as much as possible touching the septum with the cutting edge, but make the perforation just within the edge of the bone, leaving a margin of the bone or periosteum between the perforation and the septum. When the turbinated bone has been sufficiently weakened by this honeycombing process, with forceps, probe, scissors, or snare, the line of contact can be broken and the pressure relieved. The after-treatment requires fully as much attention as the operation itself. The nasal fossæ should be kept clean by carbolized alkaline douches, detached fragments of bone and mucous membrane removed, great vigilance being necessary lest adhesions form. This breaking of the bony framework without a complete destruction of the turbinated structure, while, of course, more difficult of attainment, and less effective in relieving the pressure, I think should always be attempted. The degree of success will depend largely upon the operator, but quite as much also upon the faithfulness of the patient in submitting to repeated manipulations. For, unless advantage is taken of the destruction of the bone, the line of contact broken up, and the bone forced away from the septum by firm tamponading with cotton, or by repeatedly forcing the bone outward, or by cutting away with scissors or snare the infringing portions, the track of the trephine will soon be filled up with a new formation of fibrous, cartilaginous, or possibly of bony, tissue.

I have never found it necessary to put these patients to bed after the operation, although, for a day or two, they may be confined to the house. I have never seen any considerable hemorrhage, though occasionally, for a day or two after the operation, there may be a moderate bloody discharge, which yields readily to astringents or to the pressure of the cotton tampon. Although I have had more satisfactory results from this mode of procedure than from any other, I am well aware how faulty it is, and am ready to abandon it for a better. It is very easy to meet the indications on paper with advising the removal of the obstruction, but I am sure that those who try it in practice will appreciate more explicit advice than is at present to be found in the articles on nasal obstructions. No doubt an external incision along the side of the nose, releasing the ala from the cheek and affording a larger opening through which to work, would greatly simplify matters, but the objections to this are obvious. Even when the operator has not succeeded in removing the bone from its contact with the septum, surprisingly good results are obtained in breaking up the firm bony framework and relieving the unyielding pressure, so that he should not too hastily decide upon the removal of the whole turbinated bone.

CINERARIA MARITIMA IN CATARACT.—The director of the Kew Botanical Gardens reports the following case in the *Pharmaceutical Journal* of May 26, 1888: A physician of Venezuela, who was suffering from cataract and had been operated upon unsuccessfully by an oculist in London, was induced by his relatives to try local applications of the juice of Cineraria maritima, a popular remedy in that country for this disease. Although without faith in the remedy, he yielded to the entreaties of his friends and began the instillation of two drops into each eye three times a day. He was totally blind at the beginning of this treatment, but at the end of four days had a faint perception of light, and at the end of two months could recognize people and could even tell the time with the eye which had not been operated upon. With the other eye he was able to count fingers held before it. The application caused only a temporary burning and increased lachrymation. The physician who was the subject of the alleged cure has not yet, however, come forward to confirm this remarkable statement.

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[1] Nasal Obstruction, 1888.
[2] New York Med. Journal, May 28, 1887.
[3] New York MEDICAL RECORD, April 9, 1887.
[4] Diseases of Throat, p. 250, 1883.

Progress of Medical Science.

Intra-muscular Injection of Mercury in Syphilis.—The inconveniences to which mercury administered by the mouth is apt to give rise, and the uncertainty which exists as to the precise amount that is being absorbed, have led certain practitioners to resort to injection into the tissues, as a more reliable and, withal, a more convenient method of exhibiting the drug. The earlier attempts in this direction were not attended with the success that had been anticipated, inasmuch as they gave rise to so much pain and such untoward sequelæ as to render continuous treatment impossible. Since others, however, undeterred by the suffering in which they were not called upon to participate, carried their investigations further, it was found to be possible to administer the drug in this way without the untoward results which attended its employment in the first instance. In a paper read before the Medical Society of London, Mr. Astley Bloxam gave the results of a very extensive experience with the different preparations that have been suggested. The preparation which, in his hands, has proved the most uniformly successful and free from inconvenience, is a solution of *sal Alembroth*, containing perchloride of mercury and chloride of ammonium, ten drops of which is equal to a third of a grain of the perchloride. This he injects deeply into the muscles of the buttock. The proceeding is said not to be very painful, though as to this the opinion of some of the patients would be desirable, and no abscess has ever been known to follow. Its advantages are, that the stomach is not deranged, that one injection a week is sufficient to keep the patient under the influence of the drug, and that the disease may be cured with some seven or eight grains of the salt, spread out over a year or eighteen months.—*The Medical Press.*

Adhatoda Vasica.—Adhatoda vasica is a plant belonging to the natural order Acanthaceæ. According to Mr. Hooper the leaves have an expectorant and antispasmodic action, and are employed in consumption, coughs, chronic bronchitis, asthma, and other pulmonary and catarrhal affections. It is usually administered with some spice, as ginger or pepper. In Bengal the leaves are smoked as a remedy for asthma, and several European and native physicians have given evidence of some very satisfactory results. A well-defined alkaloid appears to be the most important constituent; it is the bitter principle and active part of the plant. It is soluble in water with an alkaline reaction; ether dissolves it, but less readily than alcohol. Hooper calls it "vasicine." Strong infusions of the vasica leaves added to pond water destroy animalcules. A solution of the sulphate of vasicine was added to some water in a basin containing a live frog, which soon died, as also did leeches. Flies, fleas, mosquitoes, centipedes, and other insects were also destroyed, so that the reputed use of the leaves in destroying injurious weeds in submerged fields appears to be founded on scientific principles. The infusion containing the alkaloid acts upon the vegetable cells in the same manner as certain chemical reagents, by causing shrinkage of their contents and then disintegration.—*The Lancet.*

Dextrocardia.—A case of right-sided position of the heart was recently shown to the Vienna Gesellschaft der Aerzte, by Dr. Gruss. The patient, a young woman, aged twenty, was badly developed, and complained much of dyspnœa and giddiness. There had been some improvement of late years. The pulsations of the heart on the right side of the sternum were noted at birth, and there had always been some cyanosis and feeling of coldness. There was no cardiac dulness on the left side; on the right it began at the fourth rib, extending inward to the right sternal border, and downward, being lost in the liver dulness. Auscultation revealed in the second left intercostal space a distinct systolic murmur, and there was a loud diastolic sound. The murmur was heard in both carotids. The pulse was very small, but otherwise normal. The abdominal organs were normally situated. The diagnosis made was pure dextrocardia and congenital pulmonary stenosis, without malposition of the viscera in general. Von Bamberger concurred in the diagnosis, and remarked that Professor Schrötter had lately stated that no single case of pure dextrocardia had ever been proved, whereas all anatomists of great experience, for example, Rokitansky, Friedberg, Förster, etc., had mentioned such cases, and he himself had seen two. The murmur was due to congenital stenosis, for the acquired kind was extremely rare, though he and Dittrich had described such a case (due to a kick of a horse). The loud second sound excluded the aorta as its origin. He thought also that the great vessels were not transposed; the case had gone on too favorably for that supposition. Professor Kundrat said that the great vessels might be transposed, the position of the septum to some extent correcting the malposition.—*British Medical Journal.*

Phlegmasia Dolens and Œdema of Infants.—Dr. Dumas has recently written a paper on the "Probable Identity of the Œdema of New-born Children and Phlegmasia Alba Dolens." He concludes that this œdema is but one symptom of phlegmasia dolens developed in the course of the first few days after birth (*British Medical Journal*). Its causes, though very varied, are essentially of the same nature as in the adult, and may be divided into predisposing and determining. The principal determining cause is the incomplete establishment of respiration, including pathological and other obstacles which that function may encounter before arriving at its perfect stage of efficiency. The symptoms of phlegmasia are the same in the new-born infant as in the adult, allowing for certain modifications in relation to the special physiology of the first days of life after birth. There is likewise the same pathological anatomy in both cases; but in the child the venous thrombosis is more often situated in the inferior vena cava. The treatment should be alike in both cases, and the same dangers are to be feared in the infant and in the adult, though the relative lesser vitality of the new-born child must always render the prognosis less favorable in its case than when its mother is similarly attacked. All the precautions by which impediments to the establishment of perfect respiration are overcome, including the avoidance of hasty and immediate ligature of the umbilical cord, together constitute the true prophylaxis against the affection in question.

Blood-pressure and Transudation.—Professor Lenaber has recently made a careful study of this subject. His conclusions may be set down as follows: All transudates, without exception, contain albumen in solution, but in less proportion than blood-plasma. The smallest amounts occur in the normal transudates, and in that of cutaneous œdema. The albumens are the same as those of the blood-plasma—viz., serum-albumen, globulin, and fibrinogen; but little is known as to the relative quantity of each of them. The amount of saline constituents is nearly the same as, and often in excess of, those of the blood. All transudates contain such non-colloid bodies as the blood happens to be holding in solution, bodies which never pass out in glandular secretion, such as biliary coloring matter and hæmoglobin. Substances which do not pre-exist in the blood are not met with in transudates, except as the result of decomposition, thus forming a distinction from glandular secretions. Filtration experiments outside the body are of no use in determining the influence of changes in blood-pressure upon transudation. The rise of venous pressure causes an increase in the quantity of transuded fluid and of its albuminous constituents, but does not appreciably influence the amount of its saline constituents. A rise in arterial pressure—*i.e.*, active congestion—appears occasionally to increase transudation; but there is no positive evidence of its producing any change in the amount of albumen transuded, or in that of the saline constituents.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, September 8, 1888.

THE RHYTHM OF MUSCULAR VIBRATION IN HEALTH AND DISEASE.

THE study of the phenomena of muscular contractions, and especially of those finer successive contractions forming normal and pathological tremor, has undergone some important modifications of late years. It used to be taught, and indeed still is taught in physiological text-books, that the ordinary muscular contraction is made up of a fusion of rhythmical contractions numbering about twenty a minute. With the stethoscope placed over a strongly contracted muscle, a musical note of a pitch corresponding to about forty vibrations per second is heard. This was taken to be an over-tone of a note whose vibrations numbered about nineteen per second. Telephonic examinations have apparently confirmed this view. Yet, on the whole there has been much doubt felt of late as to the exact number of physiological contractions going to make up an ordinary voluntary muscular contraction. Horsley and Schäfer have recently asserted, from experiments upon the stimulation of the central nervous apparatus, that the normal muscular rhythm is about ten per second. This is the rhythm found when the cerebral cortex, the white matter, or the spinal cord is stimulated. It may be assumed, therefore, at present, that the weight of evidence favors the view that the normal muscular rhythm is only ten per second.

Charcot has dwelt upon the diagnostic importance of studying the difference in the rapidity of the muscular movements in different forms of tremor. The tremors of slow rhythm are those of paralysis agitans and multiple sclerosis; those of rapid rhythm are: (1) alcoholic tremor, (2) mercurial tremor, (3) tremor of exophthalmic goitre. In the slow tremors the rate is four or five per second; in the rapid tremors it is eight or nine per second.

Drs. R. Norris Wolfenden and Dawson Williams have recently tried to show (*British Medical Journal*, May 19, 1888) that these distinctions must be accepted with some reservation. There is normally, they say, a fine vibration in the muscles of men voluntarily contracted, and the rate of this vibration is about ten per second. In pathological conditions the rate of this normal tremor is always preserved, but its amplitude is increased in various ways, and to a varying degree. In the so-called slow tremors of old age, paralysis agitans, and sclerosis, the apparent rate is five to six per second, but a careful study of properly registered curves shows that the apparent single vibrations are really made up of two, and that the slow tremor is therefore only one of normal rate in which every other vibration is imperfect. The rapid tremors they found to range at nearly ten per second. The conclusion is, therefore, that the special characteristics which clinically distinguish the various forms of tremor are to be traced to two causes: in the first place an exaggeration of the amplitude of the normal vibration; and in the second place to the fusion of vibrations, which has the effect of producing a relatively slow tremor, generally of a rate corresponding to half that of the normal vibration.

It is very probable that the normal muscular rhythm is not always exactly the same. It is well known that it varies greatly in different animals, and in different muscles (light and dark) in the same animal. Pathological variations, therefore, cannot be expected to occur in a very definite manner. As an illustration of this, Gowers found a variation in the tremor of paralysis agitans ranging from 4.8 to 7 complete oscillations per second.

THE LEPER SETTLEMENT ON THE ISLAND OF MOLOKAI.

IT is probably known to everyone that leprosy exists to a considerable extent in the Sandwich Islands, but few, except those specially interested in the subject, know to what an extent it exists there, or what are the measures in force to isolate the sick and prevent the spread of the disease. In the biennial report of the President of the Hawaiian Board of Health we find an account of the leper settlement by Mr. R. W. Meyer, agent of the Board of Health in Molokai, from which the following facts are taken.

The settlement is on the Island of Molokai, to which all lepers are sent as soon as their disease is recognized. On the first day of April, 1888, the number of lepers on the island was seven hundred and forty-nine, of whom four hundred and ninety-two were men and two hundred and fifty-seven women. It is curious to note that among this number were six British subjects, two Germans, one American, one Pole, one Belgian, and one Russian. Custom, and a bad custom it would seem, allows the relatives and friends of the sick to live in the settlement as long as they desire, and to leave it whenever they tire of their surroundings. Of these relatives and friends, called "kokuas," there were one hundred and forty-four. In addition to these there were forty-nine of the original inhabitants of the island or their descendants, called "kamaainas," who had not yet been driven away by their unwelcome neighbors. The entire population of Molokai, at the time of the report, was, therefore, nine hundred and forty-two. Of the buildings on the island, in addition to the cottages of the residents, there are twelve hospitals, two dispensaries, one house for the resident physician, one prison (with accommodations for two inmates), one receiving house for new-comers, one store, and five churches, of which two are Catholic, two Protestant, and, curiously enough, one Mormon. The total number of buildings is three hundred and seventy-four, of which two hundred and sixteen are owned by the sick or their friends.

The lepers, and the children born of leper parents at the settlement, are supplied with rations by the government, and also receive a bill annually which enables them to obtain at the store six dollars' worth of clothing, which is probably sufficient for the necessities of a warm climate. They are allowed to compound their rations for cash, if they so prefer. They also receive each half a bar of soap a month, and to every house or family is given one quart of kerosene oil per month.

There are certain defects in the management of the settlement, which, if leprosy is a contagious disease (and the weight of medical opinion is in favor of that view), are to be accounted very serious and call urgently for remedy. The most important of these is the fact that "kokuas," the friends and relatives of the sick, are allowed to reside on the island as long as they choose, and then to leave whenever they desire to return to their homes. In this way, assuming that the disease is contagious, they spread it about and render null all the efforts made to repress leprosy in the islands. Another reform that is called for is the removal of paid nurses and attendants, and the substitution for them of sisters and others who are ready to devote their lives to the care of the sick, with no thought nor desire of returning to the outside world after having amassed a comfortable sum by the accumulation of their salary. That the management of the lepers, as far as they are themselves concerned, is to be commended, is evidenced by a letter addressed to Father Damien by Dr. Woods, in which he says that, after having visited every one of those places where the disease prevails, he has not found the people so happy, so well taken care of and attended to as the Leper Settlement on the Island of Molokai.

News of the Week.

To Preserve Instruments from Rust.—The immersion of steel instruments for a few minutes in a saturated solution of potassium carbonate, is said to be an effectual preservative from rust.

An Entire Family Affected with Hydrophobia.—A Bohemian newspaper reports that all the members of a family living in Chrcitz, a small village in Bohemia, are suffering from hydrophobia. The father, a peasant aged fifty, was seized with symptoms simulating those of rabies. A physician was called, and while he was examining the man, who lay bound hand and foot on a bed, the daughter rushed upon him and tried to bite his hand. She was found to be suffering from the same affection as the father. Soon after the mother and her grown son were found in convulsions on the floor of an adjacent room, and finally, the maid-servant was seized with similar symptoms. Three physicians from the neighboring town of Kolin and one from Prague were summoned and pronounced the disease to be hydrophobia. At that time the father was already dead. The maid, who was least affected, said that the family had partaken, nine days before, of a goose which had been killed by a mad dog. This is the report as given in the *Deutsche Medicinal Zeitung*, which, however, does not vouch for the truth of the tale.

• Dr. Paul Langerhans, of Freiburg, has recently died in Funchal, Madeira, of pulmonary tuberculosis. He was aged forty.

Myxœdema in Albany.—In the July number of the *American Journal of the Medical Sciences*, Dr. Henry Hun, of Albany, reports four cases of myxœdema observed by him in that city. This is a rather remarkable showing for one city, as the author has been able to collect the reports of only one hundred and fifty cases in all in the medical literature.

The Perils of Medical Men in Russia.—The physician in Russia has not only to suffer from exposure to disease and from the malice of dissatisfied patients, but he sometimes also feels the reproving hand of his paternal government. Recently a Dr. Dreipolkher, an official connected with the hospitals of St. Petersburg, was requested to obtain admission to one of the hospitals for a sick woman. He sent her to several in turn, but they were all full and could not receive her, and she died in consequence of the exposure to cold. The government thereupon banished Dr. Dreipolkher to the Arctic regions of Archangel, probably with a view of making the punishment fit the crime, although the poor man had done his best to obtain shelter and medical care for the woman.

Gonorrhœal Rheumatism, according to Dr. J. B. Webb, attacks with especial frequency the temporo-maxillary articulations, a fact which he regards as one of considerable diagnostic value.

Loss of Life from Wild Animals and Snake-bites is said to have been unusually great during the past year in India. In 1887, no less than 1,203 persons so perished, the number for 1886 having been 1,109.

Iodoform Poisoning.—The absorption of iodoform gives rise to three distinct varieties of toxic symptoms, classified as the eruptive, the cerebral or delirious, and the syncopal forms. The eruptive form is the most common of the three. It is characterized by a reddish pimply eruption on various parts of the body, distant from the seat of absorption, and due probably to elimination of the poison by the cutaneous glands. In the cerebral form the patients may have epileptiform seizures or insomnia with delirium. The syncopal form is by far the most grave. Absorption is followed by a fall of temperature and algidity. In most cases the symptoms disappear on the discontinuance of the drug as a dressing, but it should in any event be employed with caution, as it is also liable to set up local irritation like any other powder. —*Medical Press and Circular*.

The Mother of Henry VII. of England (Margaret Beaufort, Countess of Richmond) was but a little past thirteen years of age when she gave birth to the future king.

Cheese Poisoning.—Many cases of cheese poisoning have been reported this season in Ohio. *The Sanitary Inspector* states that the State Board of Health of that State was, within a short time, notified of several cases, distributed as follows: At Urbana, sixty-five cases; Mansfield, fifty; West Liberty, thirty-five; Mutual, fourteen; Marion, fifty. The symptoms were vomiting, accompanied with much pain in the stomach, and, in many cases, violent purging. The sickness usually lasted from twelve to forty-eight hours, and great prostration was a marked feature, with syncope in some cases; no deaths occurred.

MEDICAL OFFICERS FOR THE STATE MILITIA.—The following official order has lately been issued by Adjutant-General Porter:

GENERAL HEAD-QUARTERS STATE OF NEW YORK.
ADJUTANT-GENERAL'S OFFICE,
ALBANY, August 28, 1888.

General Orders, No. 17.

I. Upon the recommendation of the Surgeon-General, persons appointed to medical offices will hereafter be examined, before being commissioned, by special boards selected by the Surgeon-General and hereby appointed:

For the First Brigade: Major Robert V. McKim, Surgeon 1st Brigade; Major Daniel M. Stimson, Surgeon 7th Regiment; Major Nelson H. Henry, Surgeon 12th Regiment.

For the Second Brigade: Major George R. Fowler, Surgeon 2d Brigade; Major John F. Valentine, Surgeon 32d Regiment; Major William E. Spencer, Surgeon 23d Regiment.

For the Third Brigade: Major Herman Bendell, Surgeon 3d Brigade; Major Lewis Balch, Surgeon 10th Battalion; 1st Lieutenant Daniel S. Burr, Assistant Surgeon 20th Separate Company.

For the Fourth Brigade: Major Roswell Park, Surgeon 4th Brigade; Major Charles G. Stockton, Surgeon 74th Regiment; Major Albert H. Briggs, Surgeon 65th Regiment.

Returns of appointments of medical officers will be referred by the commanding officers of brigades to the boards appointed for their respective commands, and all concerned will be governed by the rules prescribed in General Orders No. 14, series 1887, from this office, so far as the same are applicable.

II. Appointees to medical offices shall be further examined in the standard branches taught in legally incorporated medical schools; the diagnosis and treatment of injuries and diseases to which troops may be exposed; the means employed for the urgent relief, and for the transportation, of sick and wounded, including stretcher drill (see Provisional Manual of Instruction, U. S. A.); camp and personal hygiene; and as to their knowledge of official papers relating to their department.

III. It appearing that there are hospital stewards who are not qualified, according to the laws of the State, to perform the duties required of them, commanding officers are directed to discharge such from the service at once. Hospital stewards should have passed an examination before the State or County Boards of Pharmacy, and have received licenses as pharmacists.

By order of the Commander in Chief,

JOSEPH PORTER,
Major-General and Adjutant-General.

THE YELLOW FEVER.—From the time of the first appearance of yellow fever in Jacksonville up to September 5th, there had been three hundred and twenty-eight cases, with forty deaths. This is below the average mortality of the disease, so that the epidemic may be called a mild one. The authorities are making every endeavor to disinfect the city and to keep it clean, but nevertheless, new cases are constantly occurring, and it seems not improbable that the epidemic will continue as long as it has material to feed upon, or until cool weather comes. The action of Surgeon-General Hamilton, of the Marine Hospital Service, in restricting travel from the infected city, has been rather severely criticised, but we think not justly. The Government has not established a strict cordon sanitaire around the city, but has instituted a quarantine station at some distance from the infected region, where the refugees are detained for ten days. Some of the residents have also been transported by through trains directly to places in the North which are considered safe, and where no objection is raised to their reception. Fumigating stations have also been established for the disinfection of baggage. Among those who have died is Dr. W. L. Baldwin, a graduate of the Albany Medical College, who formerly practised medicine in Geneva and Utica, in this State, but who has resided in Jacksonville for the past nine years. A case of yellow fever has been discovered in Philadelphia, and a schooner with yellow fever aboard is detained at the Delaware Breakwater. The season is, however, so far advanced, that no fear of an outbreak of the disease in any northern city is felt.

HEREDITARY CHOREA.—There is a form of chorea occurring in adults, and even in advanced life, which has not been very clearly delineated. It is peculiar, inasmuch as the only appreciable cause is heredity. In every case one or other of the parents has been afflicted in a like manner, and it differs from the classical forms of chorea in the ability of the patient, by an effort of the will, to procure a temporary cessation of the disordered muscular movements. The malady is insidious in its onset and tedious in its course, and sooner or later the patient manifests symptoms of mental derangement, which causes his career to finish in an asylum. It generally occurs between forty and fifty years of age, and is not amenable to treatment. —*Medical Press and Circular.*

THE ITALIAN SOCIETY OF INTERNAL MEDICINE.—A new medical society has been established in Italy, modelled after the German society of the same name. The meetings are to be held annually in Rome, and the first one will be held in October next. Among the subjects to be discussed at this meeting are Fever and Antipyresis, Diabetes, the Treatment of Tuberculosis, Etiology and Treatment of Pneumonia, and Cardiac Gymnastics in the Treatment of Heart Disease. The Committee of Organization consists of Professors Baccelli, Cantani, Galassi, Maragliano, and Rossoni.

SIR MORELL MACKENZIE is writing his reply to the German doctors, or, as he prefers to call it, the history of the Emperor Frederick's illness. The book will be issued late in October or early in November.

DR. HENRY VAN ARSDALE died at his home in this city on August 25th. He was born in New Brunswick, N. J., in 1814. He was graduated at Rutgers College and at the University of Pennsylvania. About 1838 he began practising his profession in this city, and was actively engaged in it until ten years ago, when he was obliged to retire on account of ill health. Dr. Van Arsdale was one of the first members of the New York Academy of Medicine, and was a member of many other medical societies in this city and elsewhere. The immediate cause of his death was pneumonia. His wife and one son survive him.

American Dermatological Association. — Programme of the Twelfth Annual Meeting, to be held at Willard's Hotel, Washington, D. C., September 18, 19, and 20, 1888. Officers for 1888: President, Dr. I. E. Atkinson, of Baltimore, Md.; Vice-President, Dr. P. A. Morrow, of New York; Secretary and Treasurer, Dr. G. H. Tilden, of Boston, Mass.

First Day.—Tuesday, September 18. Business Meeting (with closed doors), at 9.30 A.M. Report of Council; Appointment of Nominating and Auditing Committees; Proposals for Active and Honorary Membership; Miscellaneous Business. Morning session, at 10.30 A.M. Papers: Address, by the President, Dr. I. E. Atkinson. 1. The Electrolytic Decomposition of Organic Tissues, Dr. G. H. Rohe. 2. The Value of Salicylic Acid in Dermatology, Dr. Heitzmann. 3. Hereditary Dermatoses, Dr. J. C. White. Adjournment at 1.30 P.M. Afternoon Session, at 3.30 P.M. Papers: 4. A Report of Four Cases of Dermatitis Herpetiformis, Dr. J. E. Graham. 5. Dermatitis Herpetiformis, with notes of three cases, Dr. H. W. Stelwagon. 6. Personal Observations on Skin Diseases in the Negro, Dr. R. B. Morison. 7. Note of a case of Filaria Medinensis, Dr. A. Van Harlingen. Adjournment at 5.30 P.M.

Second Day.—Wednesday, September 19th. Business Meeting (with closed doors), at 9.30 A.M. Reports of the Treasurer and Auditing Committee; Report of the Nominating Committee and Election of Officers; Election of Active and Honorary Members; Selection of Time and Place of Next Meeting; Miscellaneous Business. Morning session, at 10.30 A.M. Report of Committee on Statistics; Report of Committee on Nomenclature. Papers: 8. So-called Acne Anthracoide Iodopotassique, Dr. R. W. Taylor. 9. Note Relative to the Vegetative Lesions induced by Ingestion of Some of the Iodine Compounds, Dr. J. N. Hyde. 10. Notes on Some Unusual Cases of Skin Disease, Dr. W. A. Hardaway. 11. A Contribution to the Clinical History of Alopecia Areata, Dr. A. Van Harlingen. Adjournment at 1.30 P.M. Afternoon session at 3.30 P.M. Papers: 12. The Non-identity of Lichen Planus and Lichen Ruber, Dr. G. H. Fox. 13. The Question of Relationship between Lichen Ruber (Hebra) and Lichen Planus (Wilson), Dr. A. R. Robinson. 14. Multiple Pigmentary Sarcoma, Dr. E. B. Bronson. 15. Dermatitis Plantaris and Palmaris, Dr. L. Duncan Bulkley. Adjournment at 5.30 P.M.

Third Day.—Thursday, September 20th. Morning session at 10 A.M. Papers: 16. Raynaud's Disease and Symmetrical Gangrene in Late Syphilis, Dr. R. W. Taylor. 17. The Relations of Framboesia to Syphilis and Tuberculosis of the Skin, with Report of a Case, Dr. P. A. Morrow. 18. Kraurosis of the Vulva (Breisky), Dr. C. Heitzmann. 19. Molluscum Contagiosum, a Clinical Report, Dr. H. W. Stelwagon. Retirement of Old and Induction of Newly Elected Officers. Adjournment at 1 P.M.

A Remedy for Toothache.—Dr. Hofmann recommends the internal use of sodium salicylate, in doses of ten grains every half-hour, for the relief of toothache. As a rule, after two or three doses the pain is greatly diminished or ceases entirely for a time. When the ache is dependent upon caries, the relief obtained is but temporary, and the pain returns unless the cause be removed.

Another Impostor and Borrower is visiting physicians in this city. He introduces himself as a real-estate agent of Elizabeth, N. J., and a brother of a well-known physician of that city. The man is genteel-looking, his manner quiet and dignified, and he appears about dinner time with the story that he has suddenly found himself without enough to pay his fare home, having failed to find a friend who was to supply him. The sum he wishes to borrow, $1, is trifling in itself, but whoever lends it will gain so much by experience for the next man.

Transplantation of Skin from a Corpse.—Dr. Bartens reports, in the *Berliner Klinische Wochenschrift* of August 6, 1888, a case of successful skin transplantation. The patient was a boy, aged fourteen, who was suffering from a loss of the integument of both feet consequent upon a burn. Some skin was taken from the legs of a man, aged seventy-five, who had died twenty minutes before, and was transplanted to the boy's feet. Cicatrization of the ulcers promptly followed.

Rhus Poisoning is said to yield quickly to the local application of fluid extract of Grindelia robusta.

Dr. J. N. Freeman, of Brooklyn, N. Y., died of typhoid fever, August 18, 1888, while on a visit to some friends in Omaha, aged sixty-three years.

"The Annals of Gynæcology."—It has been asserted that a certain food company owned and controlled the *Annals of Gynæcology*. This the publishers of the journal deny. They state that the company in question made with them a liberal contract for advertising, but that the text of the journal is under the exclusive control of the editor, and that nothing in the nature of an advertising puff has ever appeared there.

The Exactions of Medical Study.—A correspondent writes to inquire if he could obtain a diploma in medicine without having to give up his business. He could certainly obtain no diploma that was worth the having unless he devoted at least three years to hard study, to the exclusion of other work. He does not mention what his business is, so we cannot say whether he would or not be obliged to give it up. But if it is a business that demands much of his time, he could not continue at it and study medicine, as it should be studied, at the same time.

One Advantage of being Color Blind.—Dr. M. G. Parker, writing in the *Annals of Gynæcology*, says that one who is color blind is able to focus an object in photo-micrography much better than one with normal vision.

Deaths in Battle.—The Red Cross Society has published some statistics concerning the German losses in the Franco-Prussian war. The total losses in killed and wounded during the war were 98,233, of which 0.7 per cent. was by the bayonet, 1.2 per cent. by the sword, and 98.1 per cent. by firearms. Of the latter 91.6 per cent. was from musketry fire, and 8.4 per cent. from artillery fire.

Methylal in Delirium Tremens.—Dr. Krafft-Ebing asserts that he has obtained excellent results in the treatment of delirium tremens by the use of hypodermic injections of methylal. He says that it is indicated in cerebral anæmia, but is unfit for cases of cerebral excitement due to hyperæmia of the brain.

Society Reports.

BRITISH MEDICAL ASSOCIATION.

(Special Report for The Medical Record.)

Fifty-sixth Annual Meeting, held at Glasgow, Scotland, August 7, 8, 9, *and* 10, 1888.

Tuesday, August 7th—First Day.

Dr. J. T. Banks, the retiring President, occupied the chair and opened the meeting with a few remarks. He congratulated the Association on their meeting in Glasgow, now the second city of the empire, and assured them of a hospitable reception in the ancient university. The past year had been one of prosperity in the Association. One year ago, when he became President, the membership was 11,000, now it is 12,000. He congratulated the Association heartily on the selection of Professor W. T. Gairdner, of Glasgow, as President for the present year, and introduced that gentleman to the Association.

Professor Gairdner on taking the chair said that he would not boast on putting on his armor; it was not the time. It was the occasion, however, for Professor Banks to boast, for his work had been accomplished. Professor Gairdner said that though it was too early to boast, it was not too soon to be thankful for the honor conferred on him by the Association in electing him to the chair.

Dr. George Cameron, M.P., moved, "That the warm thanks of the Association be tendered Dr. Banks for the courteous manner in which he had presided during the past year, and that he be elected Vice-president for life.

Sir George H. B. Macleod seconded the motion, which was carried by acclamation.

Council reported new branches as follows: Perthshire, Nova Scotia, and Cape Town, South Africa. Two others in Tasmania and Malta are about to be formed. The number of members on the register last year was 11,107. During the year 359 resigned, 132 died, 1,649 new members were elected. Present number, 12,265. Income, £28,680; expenditures, £26,060 17*s.* 8*d.*; surplus, £2,619 2*s.* 4*d.*

Relative rank in the army came up in the Parliamentary Committee's report, and received much discussion. The report was adopted.

THE INEBRIATES LEGISLATIVE COMMITTEE

made a lengthy and encouraging report, which was adopted. They had changed the name of the act from Habitual Drunkards' Act to Inebriates' Act. Many declined to be called habitual drunkards, yet acknowledged themselves inebriates, and many were not habitual in their dissipation but periodic. The legislation is now permanent, in place of the temporary act for ten years which has just expired. In Great Britain, as well as in the United States and in the Colonies, the move toward this object has been originated among medical men.

Services were held in the old cathedral, which was crowded to its utmost with the doctors, who

SANG THE ONE HUNDREDTH PSALM

with a will, where King Edward, Oliver Cromwell, and many other noted ones had worshipped. The sermon, by Principal Caird, was a counterblast to modern materialism, and as forcible and cogent in argument as the language was beautiful and refined. He dwelt at some length on the arguments to be deduced from death and the loss of reason, and concluded by two objections absolutely fatal to the materialistic theory of the relation of matter to life. First, the theory was in irreconcilable opposition to the very law of the conservation of energy on which it professed to rest. Further, the fundamental objection to all material theories was that they begged the question at issue.

A resolution, stating it to be the opinion of the Association that Irish and Scotch diplomas should possess the same privileges as diplomas from other divisions of the United Kingdom, which was brought up at the Dublin meeting one year ago, passed unanimously.

THE PRESIDENT'S ADDRESS,

by Professor W. T. Gairdner, of Glasgow, was then listened to by the Association with great interest and profit. The President took for his subject

THE PHYSICIAN AS NATURALIST.

In no other language, he said, besides our own, has the title physician, or physicist, survived and threatened to engulf the term medicine—the art of healing. The physician is regarded as a student of nature. It is hard to find where this idea first took shape.

For a series of interminable ages, from the time, perhaps, of Hippocrates downward to what we call the dark or middle ages, the tradition has continually existed that the healer or physician of the highest class ought to be in every sense of the word a student of nature, a naturalist, or perhaps a man of science; and that he is trustworthy as a healer or physician chiefly in proportion to the confidence reposed in him as a naturalist—that is, an humble, reverential, and exact follower, or student, of nature. That magnificent opening of "Novum Organum" describes man as

THE MINISTER AND INTERPRETER OF NATURE.

He must be, according to Hippocrates, the servant of nature. Hippocrates was the first to observe nature and her works. This term, servant of nature, according to Galen, will only apply to the true healer, and not to the mere druggist, who might be called the enemy and adversary of nature and the sick.

The physician of the middle ages, so far as we can judge of him from literature, while retaining the name, was in a very small degree, if at all, cultivated according to the type. In fact, anything like original research was dangerous on his part, and liable to be punished by imprisonment, perhaps the fagot. I apprehend that the physician of the middle of the seventeenth century in France, unless caricatured out of all recognition by Molière, must have been altogether the most stupid, pompous, brainless formalist that ever in any age of the world practised the art under a learned title. Even down to the last century men of the type of Linacre and Cairns, in the Royal College of Physicians in London, greatly predominated over the

MEN OF SCIENCE AS EXEMPLIFIED BY WILLIAM HARVEY.

The physician *naturæ studiosus* was in danger of being wiped out; but the revival came, and now in the Scottish universities chemistry as a science, and perhaps botany, have never lost a distinctive place in the curriculum medical from that day to this. I wish I could say the same of physics proper—natural philosophy, as we call it—which has been, comparatively speaking, left out in the cold or treated as a step-child. In botany we have at least one opening into the science of observation, which though often depreciated by persons calling themselves practical men, has maintained its ground among us, and has had added to it more or less of zoölogy, of comparative anatomy, and natural history in general. During the hundred years past Scottish universities have been, with more or less success and amid considerable discouragement, laboring on the whole to build up again the great and noble idea of the physician as *naturæ studiosus*, a nature-seeker, naturförscher. It has been claimed that the spirit of modern science is ungenial and hard, even pitiless, and therefore not at all fitted for the ministrations of humanity; that it tends to make the suffering man a mere case, a thing to be observed and noted rather than a man of like passions with ourselves, and therefore to be treated with consideration and sympathy. There may be just a grain of truth in this; yet all the evils inflicted on suffering humanity by the physician as scientist have been but a drop in the bucket as compared with those which have sprung from the too lavish adoption of traditions in which there never was any trace of the scientific spirit at all.

When we consider that most of the great advances of the present day—stethoscope, microscope, laryngoscope, ophthalmoscope, sphygmograph, and electricity—involve applications of pure physics which are neither very remote from practice nor yet very easily mastered by the beginner, and that in the case of electricity and other physical reagents, even heat and cold, etc., we are every day extending the domain of these sciences in therapeutics, and still more perhaps in preventive medicine and sanitary science, their claim for an extended recognition in teaching seems to enormously enhance. I am persuaded that the physical laboratory will become an absolutely essential preliminary step in the education of the physician of the future, and that those who have not undergone this training will be hopelessly distanced in the race.

The want of early training in physics and the natural sciences next received attention. He lamented the unprepared state in which most boys and young men leaving school are as regards the most elementary truths of physical science and the observation of nature. Twelve or fifteen hours per week are devoted to classics, and

TWO OR THREE HOURS ARE CONSIDERED SUFFICIENT FOR SCIENCE

in most schools. This renders more than ordinary care necessary to insure, at the very beginning of the medical education, the preparation in physics which will shortly become all in all to the true physician.

No child is too young to take in the a b c of science—the manner how and the reason why, as Kingsley puts it. Children should not be taken from the age of six from learning of nature, and have their noses poked into books and papers for ten long years, till their eyes become myopic, and their brains suffer a corresponding deformity.

RELIGIO MEDICI

was next considered. *Ubi tres medicis, duo athei*, is a proverb the source of which it is impossible to trace, but which is evidently the growth of the mediæval period. This proverb is a calumny and a reproach. Yet to be accused of atheism in the middle ages might be the reverse of a real reproach to any men or set of men; to be tabooed with atheism has often been a compliment of the highest order.

The physician of the future, he believed, would be much more, instead of less, inclined to make his study of the Bible than hitherto. He will study it in the spirit of modern scientific freedom and historical research, and thus only, it seemed to the speaker, that the reconciliation of science and religion can ever be brought about.

On motion, a very hearty vote of thanks was unanimously passed for the scholarly manner in which the President had addressed them.

WEDNESDAY, AUGUST 8TH—SECOND DAY.

In the morning of the second day of the meeting of the Association, about a couple of hundred gentlemen assembled in the Queen's Rooms, Clifton Street, as guests of the Scottish Temperance League and the Scottish branch of the Medical Temperance Association, who hospitably entertained them by an excellent breakfast. The chair was occupied by Sir William Collins, formerly Lord Provost of Glasgow, and son of a very distinguished teetotaller well known in the temperance world.

SIR WILLIAM COLLINS, after warmly welcoming the visitors, pointed out that in numerous declarations, signed by some of the most distinguished medical men of the day, it had been admitted that

ALCOHOLIC BEVERAGES ARE THE FREQUENT CAUSE OF SEVERE DISEASES,

are not essential to healthy persons, and are sometimes productive of evil even when prescribed medicinally. He therefore thought that the time was approaching when the members of such a humane profession as that of medicine should attempt to aid the efforts of the total abstainers of the laity by themselves abandoning the use of alcohol, and thus influencing the world by their example as well as by precept.

DR. MCKENDRICK, Professor of Physiology in the University of Glasgow, said that the great majority of the medical men present were quite cognizant of all that could be said on the side of abstinence from alcohol; and the value of such banquets, he thought, was that they encouraged the isolated abstainers to resist temptation from without, since union gave force. He hoped that many who were present and were teetotallers would join the Medical Temperance Association. He knew in Scotland of many who practised abstinence, but did not like to join and pronounce themselves. These he urged to pass the Rubicon, and then they would assist others and be themselves encouraged! The day for arguments was almost passed. Action was now needed. The only plea of persons who clung to taking alcohol was for moderation; but what had convinced himself might perhaps prove of use to such waverers. He had said to himself when he took a little alcohol, "You take so little that it is hardly worth continuing to do so, and by giving up this small amount you may be of use to your weaker brethren." He then gave it up and became an avowed teetotaller. The total-abstinence cause was rapidly gaining ground among students, and many of them were total abstainers. These should meet together and encourage each other by discussions.

DR. ALFRED CARPENTER had some years ago addressed a Glasgow audience upon this topic, and had shown that one of the causes of drinking in Glasgow was that twenty-seven per cent. of the population of that city dwelt in one-room tenements. A whole host of diseases were due to the use of alcohol, as anyone could see who took up any casual newspaper and read the coroner's inquests. He warned medical men that if they gave up alcohol they must prepare for a struggle. Many of their patients might follow their advice, abandon alcohol, and then fall back into these habits, because they did not use enough fluids to take away the effete particles. Hence care must be taken to provide a substitute for alcoholic drinks.

At the opening of the afternoon session the President announced that there had been a letter received from the town of Leeds, requesting the honor of a visit from the Association in 1889. After reading this letter it was unanimously agreed that the invitation should be accepted, and that Mr. Wheelhouse, of that city, should be elected as President for the ensuing year.

MR. WHEELHOUSE thanked the Association for the honor it had done his city and himself, and, in the name of his fellow-citizens, promised to do his best to make their visit to his city as enjoyable as they could, and more than that, if possible a scientific success.

DR. CLIFFORD ALLBUTT then delivered an address upon the

CLASSIFICATION OF DISEASE.

It was an addition to a paper he had written on the same subject twenty-one years previously. He had long said to his students at Leeds that pathology contained nothing in it which might not be found in physiology; and insisted that comparative pathology was a word that as yet was scarcely heard. The profession of medicine ought to draw a very much greater amount of its knowledge of disease than it at present did from the study of the diseases of other animals. Nearly all remained yet to be done on this matter, although physicians had received considerable aid from the abler members of the veterinary profession. Disease must be studied in the smallest animals and in the embyro, if it were to be understood and appreciated in its simplest forms. Our present methods of investigation were, to use the words of Bacon, *mera palpatio.* Robert Houdin, the Parisian conjurer, used to mystify the Parisians by nightly illuminating only certain letters of the alphabet in turns, without any method, and something similar was the practice of pathologists in modern times. Modern medicine as yet had no principles, and neither had biology. The complicated nervous system of mammalia had been evolved from far simpler elements, and its diseases in their lower forms would have to be studied. It had been remarked that as civilization advanced the tendency of all human diseases had been to assume the neurotic type. But as the race was less civilized, so were the diseases it suffered from simpler and simpler. As the scale of animated life became simpler, the region approached where fever was impossible. There was no doubt that, in days gone by, the type of disease was much less complicated than it was at present, and that the change in the character of disease which had been explained away was a real thing after all.

When studying the subject of

HEREDITY,

in future, researches should embrace not merely the parentage, paternal and maternal of the patient, but should be far more wide-stretching, and the unity of disease should be kept in mind, since it would be necessary to interrogate as to what the diseases were which had carried off the various ascendants of the patients. The same inquiries must be made concerning the diseases of animals and plants. When a patient was strumous, asthmatic, or phthisical, it was important to ascertain what causes in his ascendants may have contributed to bring about this effect. All sorts of other diseases in the ascendants must be inquired into, since there was a tendency in disease of one kind to be transferred into another kind of sickness. Pathological races occasionally tended to appear and become a menace to the health of the community. It was a curious study to try to ascertain what diseases were caused by the environment, and what might be produced by long-continued custom. The inheritance of short prepuces by the Jews might be partly due to excision. Tabes dorsalis was often due to atavism, but might be caused by syphilis. Dr. Stephen Mackenzie had shown the connection of various skin diseases with other diseases in the parents. Under the name of gouty diathesis might perhaps be included the tendency to glycosuria and piles. It was thus obvious that the very best physical pedigree yet obtained was extremely imperfect. Then, again, the excretion of uric acid by certain persons reminded the comparative pathologist that some animals, such as birds, habitually excreted this substance, so that in this matter some human beings were kinds of birds. An able leader-writer in *The Lancet* had spoken of the connection between osteitis deformans and other affections of the bones, and observed that these diseases might be connected by looking into the history of the family in which they occurred. And so with regard to the diseases of the thyroid gland, it had been remarked that in the fœtus the tissues consisted chiefly of mucin. Thus in the case of myxœdema there was a retrogression of the tissues to the condition in which they were in the fœtus. Changes of function might gradually influence structures. Every vigorous race tended to expand and invade new territories. Hence less vigorous races were weeded out. Artificial selection of parentage might succeed in getting rid of diseased forms. Racial characteristics were very marked and lasting. Dr. Beddoes held that the diseases in the Welsh differed greatly from those of the English; and affirmed that cancer was more common in persons of dark hair than in those of lighter complexion. In Wales there was a more solid type of constitution. Dr. Beddoes asserted, also, that it was more difficult to rear fair-haired children in towns than it was to rear dark ones.

Sir William Roberts had alluded to certain curious types in diseases in the children of a Greek merchant residing in Manchester. The ancient Greeks were remarkable for the purity of their race, which was kept so by preventing the marriage of any but citizens. The Dutch were akin to the English in their types of disease. They tended to live a long time and to suffer from dilatation of the heart and from hemorrhage in the brain. The Scotch were rather inclined to despond. The South Briton accepted his illness well. The Celtic Irishman was voluble and cheery in the midst of disease. There was less nervous disease in Scotland, and scarcely any gout in that portion of the United Kingdom.

Dr. Billings had found that cancer was comparatively rare in negroes. The Irish and Germans in the United States seemed to be most affected by this disease. Hysteria was far commoner in France than in England. It was uncommon in Yorkshire. Negroes had an immunity from yellow fever, and a tendency to suffer but slightly from syphilis. But they had a proclivity to elephantiasis. The poison of beriberi would not attack Europeans, and attacked the Chinese far more frequently than it did the Japanese. It was remarkable that the Tzetze fly did not attack the buffaloes nor human beings, but was fatal only to domestic animals. Nor did it attack dogs fed on meat; but if the dogs were fed on milk they died from the bite. Dr. Bland Sutton had informed him that the quadrumana did not bear a low temperature, but that they did not become affected with phthisis. Rickets was very common in some animals. Ruminants were affected by pneumonia and pearl disease. Dogs had cirrhosis of the liver, syphilis was unknown in the lower animals, and so was gout, and cirrhosis of the liver, save in dogs, was almost unknown among them. Scirrhus was very rare in these animals, and epithelioma almost equally so. Drugs and poisons did not vary gradually in their action on various animals. They varied by leaps and bounds.

THURSDAY, AUGUST 9TH—THIRD DAY.

DR. WILLIAM MACEWEN read an address, taking for his subject some

RECENT SURGICAL INVESTIGATIONS

made by himself. He remarked that until recently the use of the trephine in surgery had been a most rare process, and confined to cases of traumatism. One reason for this was the exaggerated views imported into medicine as to the nature of the brain. As that organ was thought to be the seat of the soul, all attempts to interfere with it were considered as against morality. Nevertheless post-mortem experiences had shown, in many instances, that operations would, in all probability have succeeded in saving life if they had been attempted. But several points still stood in the way. Inflammations often proved fatal in operations on the brain in pre-antiseptic days, and in these days also diagnosis had not advanced far enough to enable the would-be operator to commence his task with sufficient hope. In 1870 Lister, in the Glasgow Royal Infirmary, by his experiments with antiseptics removed one of these obstacles, the chance of inflammation. Compound fractures of the skull were then easily and safely treated by trephining, and raising the broken fragment of the skull. Broca's great discovery of the locality of speech in the frontal convolutions showed that the various parts of the brain had their several functions, and that the brain did not, as was supposed, do all its work by the whole body of it. Dr. Robertson suggested that there were locomotive tracks in the brain; and a new departure was made after the experiments of Fritz and Hitzig in 1869. Ferrier's experiments on monkeys in 1873 gave the finishing touch to the inquiry, and soon abundant proof as to the localization of various lesions came from the observations of Professor Charcot. A case of

CEREBRAL ABSCESS

came before Dr. Macewen in 1876. The diagnosis was made that the abscess existed in the left frontal region. The parents of the child would not allow any operation to be performed and the child died. A post-mortem examination was made after performing the operation as it would have been had the child been alive. A trocar was introduced into the locality marked out, and pus at once flowed freely. This showed that had the operation been permitted the child might have been saved. Seven other cases were then detailed by Dr. Macewen. In one case a diagnosis was made of an abscess in the cortex of the right side of the brain, and on trepaning pus flowed, and the patient recovered. In his third case the lesion was diagnosed as occupying the frontal lobe, and that patient did admirably on the operation being performed after trephining at the spot indicated by the symptoms.

In the fifth case the diagnosis was made that a syphilitic tumor existed in the motor area. This tumor was excised, and the woman recovered perfectly. In Case VII. motor symptoms alone existed, and that case was correctly diagnosed and recovered under operation. All of these cases occurred before 1883. In December, 1884, the first operation of the kind in London took place, and the patient did well. The question whether the diagnosis could be accurately made from the localization of the symptoms might now be answered in the affirmative. Whenever possible, instruments of precision should be used instead of the unaided senses. Thus the dynamometer should be used to test the power of the muscles of the hand. In many cases the diagnosis of the locality was easy enough. Others occur in which there was a good deal of difficulty. In one case the patient, aged thirty-six, had one hundred fits in the day and had motor palsy of the tongue with paresis of the facial muscle and platysma, which were all occasionally subject to convulsions. Eight years previously the patient had had an injury in the head. Dr. Whitelock, of Glasgow, reminded him that the platysma muscle had a particular nerve from a certain locality in the brain. The skull was trephined acting on this supposition, and a cyst was found occupying the spot diagnosed. On incising the brain to remove the cyst a convulsion occurred, but this was the last, and when the patient recovered, no more such convulsions appeared. The arm remained paralyzed, and possibly the cyst had damaged the nerves of the arm. The lesion occupied the left cortical parietal region.

In another case, a girl, aged seven, had severe epileptiform seizures, accompanied with extreme pain localized in the toe of the right foot. This was accompanied by clonic convulsions of the muscles of that foot. The lesion was diagnosed to be cortical, and seated on the upper cortical region. It was concluded that it was tubercular. Operation was performed, and a tubercular tumor the size of a hazel-nut was removed. The patient got rapidly well and had continued in good health. Motor and sensory disturbances guided the diagnosis. A man had delusions and suicidal mania succeeded by terrible pain, which pain, however, he welcomed, because it removed the impulse to kill his wife and children. Immediately after an accident he had suffered from psychical blindness. Thus, he could not tell how many fingers he held up, although he could see them. He wanted to read the Bible, but on opening it he could not understand the words. The diagnosis was that the gyrus was affected. The trephine was used and a piece of bone removed from the region indicated by the motor symptoms and sensory symptoms. The man made an excellent recovery and was soon at work. Such cases of mental blindness he believed were very rare.

With regard to the idea of

REMOVING LARGE SLICES OF THE BRAIN FOR EPILEPTIC ATTACKS,

that was an operation that could not be commended because it tended to produce paralysis of one limb. Removal of an abscess was a totally different matter. Few epileptics would be found to prefer a life-long palsy to these fits. In cerebral surgery it was not enough to localize a lesion, its dimensions must be guessed at. In one case he operated on, the vessels were alone ligatured, as the lesion was too large to touch, and the case was much improved. As to the result of these operations, he had had twenty-one operations of the kind with three deaths, and those who died were in extremis when the operation was performed. Of the eighteen who recovered, sixteen were still alive and in good health. Two of them had died, one of Bright's disease, and the other from acute tuberculosis.

CERTAIN DISEASES OF THE SPINAL CORD WERE USEFULLY OPERATED UPON.

Some people objected to such operations, but they were in error. In one case of paraplegia, from angular curvature of the spine, occurring in a boy aged nine, there had been complete motor and sensory paraplegia. Plach's jackets were useless; the limbs were blue and cold, and urine and fæces involuntarily passed. The laminæ of the fifth, sixth, and seventh dorsal vertebræ were partially removed, and a fibrous neoplasm round the cord was removed, leaving the cord exposed. Twenty-four hours subsequently, the limbs became sensibly warmer, and eight days after the operation the urine and fæces could be voluntarily restrained. The boy now could play at foot-ball, and was quite well. In 1884 a poor girl appealed to him to operate on her for similar symptoms, and he removed portions of the laminæ of the dorsal vertebræ. Four days after the operation she could restrain the urine and fæces. In a year she recovered, and was now well and healthy.

Sir George H. B. Macleod then delivered the

ADDRESS IN SURGERY,

taking for his subject the progress of surgery during the last half century. He referred to the many great men who had lived and taught in the University of Glasgow, and to others, such as Cullen, Black, Hooker, Balfour, and Lister, who had begun their career there and had then gone elsewhere, like the wandering Scottish surgeons of the Middle Ages. The cause of learning had always prospered in Scotland, where one in six hundred attended the universities, while in England but one in five thousand avail themselves of that privilege. After reviewing briefly the progress of surgery during the first third of the present century, he spoke of the two

EPOCH-MAKING DISCOVERIES

of anæsthetics and antiseptics, which in the benefit they conferred upon mankind exceeded even steam and electricity. Concerning the choice of anæsthetics there was still some discussion, but the speaker used and preferred chloroform, which for ease of application, energy, and safety, when properly administered, was unrivalled. Anæsthesia has modified the whole of surgical procedure. The "lion heart" is no longer necessary to the surgeon, and skill and dexterity have taken the place of force. The use of

ANTISEPTICS IN SURGERY

was first made practicable in the Glasgow school. This has increased immensely the value of the surgeon's services. In medicine, also, it seems not improbable that, as a result of the study of the life-history and changes under cultivation of micro-organisms, all zymotic diseases may in time be stamped out. The experience of the Crimean War had led to the paying of greater attention to the construction and organization of hospitals, with the result of improving immensely their hygienic conditions. The speaker then referred to the advances made in operative surgery, and especially to the bloodless method of Esmarch and to the means of arresting hemorrhage by the aseptic ligature and by hot water. In orthopedic surgery the progress had been as rapid as in other branches. Plastic surgery, also, had recorded some of its greatest triumphs during the period under review. The methods of dealing with aneurisms had been multiplied, but their treatment had nevertheless been greatly simplified. In genito-urinary surgery the methods of treating stricture had been greatly improved, and the advances made in lithotrity and litholapaxy were such that the cutting operation might now be almost wholly restricted to cases in which the stone was of great size or extreme hardness. In the surgery of the female organs of generation the progress had been very great, and the same could be said of brain surgery and of the treatment of hernia. Indeed, in all the departments of surgical theory and practice the advances during the Victorian era had been immense, and his only fear was that he had not done justice to it in the limited time at his disposal.

THE PRESIDENT then presented a diploma of the Association, and a

GOLD MEDAL OF MERIT

awarded by the Council, to Dr. Ormrod, of Workington, who had at the utmost peril of his life descended a coal-pit and rescued many men who had been injured in a colliery accident.

FRIDAY, AUGUST 10TH—FOURTH DAY.

PROFESSOR MCKENDRICK then delivered an Address in Physiology, taking for his subject

PROBLEMS OF RESPIRATION.

He gave a most interesting history of the progress of opinion as to the method in which respiration was carried on, commencing with the views of Hippocrates and the ancients, who had no conception of the real facts of respiration. He then referred to the experiments of Sanctorius, professor of medicine in Padua, 1561 to 1636, who constructed a balance and constantly observed what he gained by food and lost by excretion. He stated that in twenty-four hours the loss of weight by the lungs amounted to about half a pound. Dr. Robert Hooke, 1635–1703, mentioned an experiment on respiration which he had made on a dog, where the thorax had been displayed by excision of the ribs and removal of the pericardium. This dog was kept alive by blowing up its lungs in an intermittent manner with bellows. Toward the end of the experiment he cut a piece of the lungs away, and observed that the blood freely passed into and circulated through the lungs, not only when they were kept fully distended, but also when they were allowed to collapse. This celebrated experiment showed that it was the fresh air, and not any alteration in the capacity of the lungs, which caused the renewal of the heart's beat. Hooke's experiment was of great practical result, as it suggested the modern practice of using artificial respiration in impending asphyxia. A gas might either be physically absorbed by a fluid, as was the case in water when the nitrogen and oxygen of the air which pressed on the surface of the water were taken up in certain definite quantities; or a certain amount of chemical affinity might be exercised by the fluids containing the gases, so as to enable them to take up more than water would do. The gases in the atmosphere pressed on the surfaces of fluids with a combined weight of fifteen pounds to the square inch. But the oxygen pressed with a pressure equal to its weight, *i.e.*, twenty-one per cent. of the weight of the atmosphere, while the nitrogen had a pressure of seventy-nine per cent. of the atmosphere on the surface of the fluids. In 1836 Magnus made some experiments with the blood, and came to the conclusion that carbonic acid and oxygen were merely dissolved in it in physical combination. Liebig, however, argued in favor of some chemical combination, and that Dalton's law did not hold in this case. Afterward Professor Kruger, of Bonn, showed that venous blood contained more carbonic acid, and arterial more oxygen.

The speaker then placed some ox-blood into long tubes containing various gases, such as oxygen, carbonic acid, nitrogen, and hydrogen, and, by agitating the fluid, he showed that in oxygen the color of arterial blood was at once assumed. His next experiment was to place some blood in a mercurial vacuum, and on collecting the gases given off it was found that carbonic acid was present by using the lime-water test. To show the presence of oxygen, he used a more powerful vacuum-producer, and, having collected a little gas, he introduced into it some solution of caustic potash, and next a solution of pyrogallic acid. This at once assumed a red color, showing the presence of oxygen in the gas. After these tests, which were shown with the greatest clearness to the audience, Professor McKendrick next proceeded to show how the spectrum was influenced by the presence of blood, and pointed out that there were two dark bands in the spectrum caused by the presence of that gas, which could be made to disappear by permitting the oxygen to be taken up by the hæmoglobin of the blood. After doing this, he again set free the oxygen from its combination with the hæmoglobin, and the dark hues at once reappeared.

After the passage of votes of thanks to the Lord Provost and magistrates of Glasgow, to the ecclesiastical authorities, to the professors of the university, and to various societies, committees, and clubs, the meeting of the Association was adjourned.

Correspondence.

MORE CONCERNING THE CATHETERIZATION OF WOMEN.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Noticing the article, "To Facilitate Catheterization in Women," by Dr. S. E. Josephi, of Portland, Ore., in THE MEDICAL RECORD of August 18th, I wish to say that I have used the rubber tubing in the manner indicated for the past five years, and that I have recommended the use of the same to a number of professional neighbors. As I use the soft rubber catheter about ninety-nine times as often as I do the silver instrument, I will suggest the manner in which the rubber tubing is connected to the soft instrument, and which has been eminently satisfactory in my hands. Make the connection by slipping the distal extremity of the catheter over a section of glass tubing about two inches long and as large as the calibre of the catheter will admit, and then slip the rubber tubing over the other end of the glass, meeting the catheter about the middle of the inserted glass tube. I do not cite this as any remarkable discovery, and should not have thought it expedient to use your valuable space to delineate the procedure, had the article mentioned not given rise to the inference that such procedure was not common with the profession. Very respectfully,

E. J. BARNES, M.D.

HEBRON, O., August 25, 1888.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have read Dr. Josephi's note on his method of catheterization of women. I have for the last ten or twelve years adopted the same plan, and for the very same reasons, and with the same results. I claim no priority in the device—only that so far as *I* am concerned it was original, as it probably was with Dr. Josephi. It is a "wrinkle" that commends itself to the common sense of practitioners. I adopt the same method in tapping for ascites.

C. GREEN, M.D.

HOMER, N. Y., August 24, 1888.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: About the year 1873 a professional friend in Baltimore called my attention to this simple device, mentioned in your issue of August 18th by Dr. S. E. Josephi, of Portland, Ore. The idea was not new to me then, I thought I had invented the device some years before, but as he claimed it as original the matter was dropped.

In "Erichsen's Surgery," 1869 edition, p. 412, I find the following: "The catheter, which should be an elastic one, must be left in the bladder for a few days. It should not be plugged, but have a vulcanized india-rubber tube attached for the urine to escape as fast as secreted." My friend in Baltimore may have originated the device, your contributor from Portland also. I am sure the thought and application to save the gentler sex some shame and mortification was suggested to me by this item, treating upon wounds of the male urethra.

Dr. Josephi deserves credit for publishing the device in the columns of your journal; it will facilitate the work of the doctor and protect the feelings of the sensitive woman.

Permit me to add, life is dear, rubber tubing cheap and hard to clean. I direct the tubing to be cremated after use, burning it myself, if fire is convenient.

Respectfully,
J. M. WORTHINGTON, M.D.

107 CHURCH STREET, ANNAPOLIS, MD.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In a communication published in THE RECORD of August 18th, Dr. S. E. Josephi makes mention of the attachment of a piece of rubber tubing to a catheter when using that instrument to empty the bladder. The plan is a very good one and obviates many annoyances incidental to evacuation of the bladder, particularly after pregnancy. Dr. Henry R. Baldwin, of New Brunswick, N. J., called my attention to this simple procedure some five or six years ago, since which time I have hardly been without a piece of tubing to use at the bedside. I have heard that the idea is not a new one; but what is? So far, however, I have always considered Dr. Baldwin the originator, as I do not know who has a prior claim.

Respectfully yours,
WALTER LESTER CARR.

54 WEST THIRTY-EIGHTH STREET, August 20, 1888.

THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In view of the fact that frequent inquiries are made of the Committee of Arrangements, by medical men and others, in regard to the character of the organization now known as the Congress of American Physicians and Surgeons, which will hold its first triennial session in Washington, September 18th, 19th and 20th, it may be proper to state that several years ago the American Surgical Association passed a series of resolutions declaring it expedient that the special medical societies in the country should adopt some plan of organization by which they should be brought together at certain stated periods, and invited the other societies to co-operate with it in perfecting such a scheme. This invitation was accepted by the several societies, and in October, 1887, a committee of conference, composed of delegates from each of the societies, assembled in this city and agreed upon a plan of association, which was subsequently considered and accepted by the societies constituting the Congress as now organized. This plan consists simply of the agreement that the medical societies named shall hold their usual annual meetings at the same time in this city every third year, and that an executive committee, composed of one member of each society accepting the agreement, shall arrange for one or more general meetings for the consideration of such medical subjects by such physicians and surgeons as it may select, to be followed by such general discussion as time may permit. The present Executive Committee is also charged with the duty of devising and submitting a plan of permanent organization, which will be considered at a preliminary meeting on Tuesday morning, September 18th. There is no membership in the Congress proper. Membership belongs exclusively to the several societies constituting the Congress. Each society prescribes its rules for the admission of candidates, and transacts its business according to its own method. The Congress, as such, does not in any manner interfere with the autonomy of the several constituent societies.

The guests are men of distinction in some special department of Medical Science, who have been invited by some one of the constituent societies to attend its meetings, and perhaps to present a paper on some chosen subject. They are guests of a society, not of individual members. The Committee of Arrangements has not claimed or exercised the privilege of naming guests, nor has it conceded the privilege to individual members. At its suggestion the Executive Committee has invited the heads of the government bureaus of medicine, the president of the last International Congress, and several citizens to whom it was indebted for courtesies. In the event that there should be present from abroad any medical man who may not have been specially invited, the Committee will hold itself bound by ordinary courtesy to include him in the list of guests.

The meetings of the Congress and of the societies will be open to the profession. Any medical man who may choose to attend has the privilege of doing so; but the privilege of taking part in the discussions will be limited to the members, guests, and those who may be invited to do so by the societies respectively. The invitation to attend the meetings and engage in discussion will not, however, entitle one to the privileges of a guest.

Members and visitors must avail themselves of the ordinary excursion rates of railroad fare.

The Postmaster of this city has arranged facilities for the distribution of the mail at the office of registration, in Willard's Hotel. Letters must be addressed to "The Congress of American Physicians and Surgeons."

It may be added that the Committee of Arrangements declines to make any provision for, or to have anything to do with, any exhibit of pharmaceutical preparations and medical and surgical appliances.

I assume the responsibility of making the foregoing statement for the information of those concerned, and to avoid confusion and misunderstanding. And it gives me great pleasure to announce that the meeting in every respect promises to be a conspicuous success. Yours truly,

SAMUEL C. BUSEY, M.D.,
Chairman Committee of Arrangements.

WASHINGTON, D. C., August 27, 1888.

MR. EDITOR: Some complaints having reached the committee in regard to the distribution of invitations to the dinner to be given to the foreign guests of the Congress of Physicians and Surgeons, to be held in this city next month, I must beg the use of your columns to say that this distribution was in my hands.

The Council of the Congress having expressed themselves as averse to any elaborate entertainment on the part of the Congress, it may be said in the first place that this dinner is *unofficial*, and is in the hands of the *members* of the committee, and not of the committee. As it was necessary, after the matter was decided upon, to act quickly in order that proper invitations might be sent to Europe and answered in time, it was not possible to arrange this distribution so methodically as might have been done had the time been longer. It was intended that every member of the Congress, that is every member of any of the constituent associations, should have an opportunity to subscribe. Some circulars were sent directly by me, and some of them by such representatives of the association as I could most readily get at.

It is possible that there may have been some accidental omissions, and it is more than possible that at this season, when so many gentlemen are absent from home, some invitations may have gone astray. Another possibility, which we know to have been in some cases an absolute fact, is that they have been placed in the waste paper basket.

This note is intended as an invitation to every member of all the associations composing the Congress of American Physicians and Surgeons, who wishes to do so, to send his subscription of twenty dollars to Dr. S. C. Busey, 1545 I Street, N. W., Washington, D. C., for a dinner to be given at Willard's Hotel, in this city, on Monday, September 17, at 7.30 P.M.

I am, very respectfully,
ROBERT T. EDES.

WASHINGTON, August 21, 1888.

THE CLIMATE OF FLORIDA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your issue of the 11th inst. I see a reply from Dr. Lewis to my criticism upon Dr. Knight's conclusions with regard to the influence of the Florida climate upon consumptives. I have no desire to enter upon a lengthy or useless discussion upon the subject, and replied to Dr. Knight from a sense of duty. There is so much that is unsettled as regards the influence of climate upon consumption, that I would feel very happy if this one point could be definitely settled, even if it be proved that I am wrong; and I am pleased to hear Dr. Knight endorsed by so able an authority as Dr. Lewis. It strikes me that we are somewhat vague as to what extent of lung may be involved, and as to the intensity of the symptoms developed in the cases in question. Large cavities with severe hectic symptoms are often, if not usually, associated with general tubercular cachexia, and vital organs not open for exact physical examination already involved, particularly the stomach and intestinal canal, diarrhœa and indigestion being a frequent accompaniment of such symptoms. Nutrition is poor; there are pleuritic and intestinal pains; the individual is irritable and in no condition to enjoy anything. This is what I understand to be the condition in question. For patients with cavities and moderate hectic symptoms, fair digestion, and sufficient strength to get around, I am ready to admit that comfort and *perhaps* benefit may result from a residence in Florida. Such persons can engage in outdoor pursuits and enjoy our genial winter climate. But to even this class of cases, I think we should be cautious in expressing an opinion as to the benefit to be derived from such a visit. I have seen many persons come to Florida with "large cavities and severe hectic symptoms," and return disappointed as to themselves, and the record of the Florida climate injured because impossibilities had not been accomplished. I am happy to endorse all that Dr. Lewis says as to the effect of the Florida climate upon the various forms of bronchitis, pneumonia, etc.; but with all deference to the distinguished gentlemen who have entered into this discussion, I feel that I must still maintain my opinion as expressed in your issue of July 14th.

Very respectfully,
C. DREW, M.D.

JACKSONVILLE, FLA., August 22, 1888.

BATTEY *vs.* LAWSON TAIT.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have just seen, on p. 646, Vol. 33, of THE MEDICAL RECORD, the following remarkable statement: "Dr. Battey said that he had modestly, too modestly, remained quiet, and had allowed Mr. Tait to talk about 'his operation,' for he despised this miserable quibbling about priority."

If Dr. Battey is serious in this utterance, why is he always raising the question and attacking me without the slightest provocation? In the *Atlanta Medical Journal*, June, 1887, Dr. Battey made an equally intemperate attack on me, to which I replied in the March number of the same journal. Dr. Battey must have read my reply. Permit me to quote the last sentence of it as a reply to the assertion of Dr. Battey, quoted at the beginning of this letter: "It is far better and wiser not to use such meaningless, and therefore such confusing, phrases. I say there is no such thing as 'Tait's operation,' and—on this side of the Atlantic—there is many a poor wretch who wishes there had never been heard of such a procedure as 'Battey's.'"

I have more than once expressed a strong objection in your own columns to the phrase "Tait's operation." I have never made any claim about an operation, and it is therefore diametrically opposed to the truth when Dr. Battey says I have talked about "my operation." He ought to discuss the principles upon which we operate, and not the persons who do the operation, and if Dr. Battey would spend half the energy in fighting those who oppose the progress of abdominal surgery that he directs against its friends, he might still live to do some great good in the world. I am, etc.,

LAWSON TAIT.

CHOLERA INFANTUM AND THE WEATHER.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In a former short paper (MEDICAL RECORD, July 21st) I referred to a paper by Dr. A. Seibert, on the above subject, which specially interested me, because I had given considerable study to the disease referred to from a statistical point of view. I believe my work ten years ago, so far as the correctness of my tables is concerned, is substantiated by Dr. Seibert's work since. It would be very unfortunate, indeed, if Dr. Seibert's figures had contradicted mine, and I cannot avoid congratulating myself that, statistically, we agree. For these reasons I thought I might, in all honesty and gladness, characterize his paper as "a very valuable addition to tabulated facts bearing on this disease in its relations to the weather," while, at the same time, I refused to accept his methods of reaching certain conclusions, and rejected some of the conclusions he seemed to have reached.

I would offend the intelligence of the reader if I should undertake to show that there is *no* "inconsistency between this praise and fault-finding." I can trust the average reader to see that there is none.

Dr. Seibert's former paper, as well as his late one, and my little protest, being before the reader, I must apologize when I try to point out wherein his argument is "fallacious and misleading."

In the early part of his original paper (March 24th), in speaking of "monthly averages," he says "they are absolutely unreliable," yet he uses "monthly means," and even "means of the six summer months," to prove that "the frequency of summer complaint is independent of the rise and fall of atmospheric temperature." I submit that incompetent evidence cannot prove anything.

He then uses *daily maximums* to show that "very high temperatures do not favor the production of cholera infantum." I have already said "the fact that the thermometer indicates 80° or 90° F. for a moment, or a few minutes, does not make a hot day so surely as when the mercury takes a long rest at a much lower point."

He says, "we are now convinced that hot weather is not necessary" (this after a somewhat extended manipulation of *maximums*, leaving means and minimums out of the account), and directs his attention to a high minimum, and demonstrates the prevalence of the disease under consideration when the minimum daily temperature remains above 60° F. for a number of successive days. This is what he calls "*warm* weather," in contradistinction from *hot* weather. Yet we do not lose sight of the fact that with a persistent minimum above 60° we have a maximum almost always above 80° F.

A play upon the words "hot" and "warm" has no scientific value whatever.

He says "hot weather is not necessary for the epidemic appearance of summer complaint."

This is "misleading," because it *apparently* excludes the agency of high temperatures in bringing on the disease, which would be "in the teeth of his data."

His second conclusion, however, helps us out. “2. *Warm* weather, showing minimum daily temperatures of not less than 60° F., brings on the epidemic appearance of cholera infantum invariably,” but our attention is called *away* from the *daily maximum* in order, I suppose, to keep up the scientific distinction between “warm” and “hot.” The conclusion, however, is correct: “3. Summer complaint loses its epidemic character as soon as the minimal daily temperature remains below 60° F.;” the data sustain this. “4. THEREFORE this disease cannot be brought about by the direct working of high temperatures on the infantile body.” The present data prove the coincidence of persistent high climatic temperature and cholera infantum, the causative relation of the continued high temperature to the disease is substantially sustained by the data; but the question whether the infantile body is affected “directly” or indirectly cannot be absolutely settled by the present data. Yet, reasoning by exclusion, the presumption grows almost impregnable that cholera infantum is a *direct* effect of continued high climatic temperature on the child. The Doctor's *therefore* is “misleading,” because what follows does not grow out of either his data or his argument.

Again, Dr. Seibert kindly criticises me as follows: “If 75° to 80° F. is *hot* weather, then it is strange that so few cases of cholera infantum occur in midwinter, in this city at least; for it is well known that our tenement-house population, as a rule, keep their rooms constantly nearer to 80° than to 70° F. in the winter.” The ticklishness of this idea disappears at once when we reflect that it is a prostitution of the word “weather” to apply it to the reeking mixture of gases—hot or cold—found within the walls of a New York hovel. I am free to acknowledge that I was not aware that advanced pathologists had settled themselves finally in the position that diseases having features of resemblance (diarrhœa, for instance) are pathologically the same disease; but I rejoice in this apparent return to old time simplicity. As to the doctor's sarcastic reference to my remark that the diarrhœas occurring in the cold months are not pathologically related to the disease under discussion, I will allow the reader to judge whether the tapered end (I don't say point) of his sarcasm is more threatening to him or to me.

When Dr. Seibert adds up the July and August mortality in my Baltimore table and compares them, the result surely justifies my surprise that “great authorities” should have overlooked the superior mortality of July as compared with August, from this class of diseases, and I do not feel badly over this. I made no comment on the Baltimore table lest I might be tempted to *juggle* with the figures.

In the exuberance of easy mastery Dr. Seibert then exclaims: “If 334 children die in Baltimore in one month, then, surely, there are 334 *less to get sick* (italics his) the next month.” Just so; but there were 520 *births* in Baltimore in July, 1887, consequently, instead of “334 *less to get sick*,” there were, at least, 186 *more* to get sick. It is not always best to be so “cock-sure,” even on a self-evident proposition.

I suppose it was caution in this direction which led me to use such expressions as “I believe,” and “it seems to me,” etc., for which Dr. Seibert so kindly and patronizingly reprimands me. Yet such modest expressions never play such havoc with a man's viscera as abstruse operations in addition and subtraction are likely to do.

In conclusion, “it seems to me” that Dr. Seibert's statistics prove that *a continued, high, climatic temperature is the essential factor in the causation of cholera infantum*, and I am unable to see that his arguments prove anything else.

The ability to “add statistics” is an enviable acquirement, but the profession has a right to demand that the figures be honestly handled.

Having thus endeavored to pad my gluteal regions against the assaults of Dr. Seibert's disciplinary palm, I can only now express the hope that this friendly discussion may stimulate physicians to a more careful study of a most important subject.

T. CLARKE MILLER, M.D.

MASSILLON, O., August 17, 1888.

THE VAGINAL TAMPON.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In THE MEDICAL RECORD of August 18th Dr. Robert T. Morris describes “the perfect vaginal tampon,” and expresses his great satisfaction in its use. I have for some time made my vaginal tampons of wool and cotton, but I have not yet found what seems to me a perfect instrument, that is, a tampon that fills all the requirements for which this essential to gynecology is used. In the first place, no matter how you make the cylindrical tampon, or how carefully you place it, under certain circumstances it will become displaced, and thus, in a measure, defeat the object of its use. In the second place, a cylindrical tampon, from the very fact of its having a definite form, cannot be made to occupy and adapt itself accurately to the vaginal vault. The ordinary tampon answers some purposes very well, but it is to be regretted that many cases, in which nicety of fitting is essential, cannot be successfully treated by these cylinders of cotton, and still such cases clearly come within the range of those in which the vaginal tampon should be used. And while I agree with Dr. Morris that a combination of wool and cotton—one for its elastic, the other for its absorbent properties—makes, so far as material is concerned, the best tampon, I cannot agree with him in regarding the vaginal tampon which he describes a perfect one. I may say that latterly, both in hospital and private practice, I make my tampons of wool and cotton, but I have no one form in which I combine these materials; the essential, in my opinion, being to have the wool inside, and the cotton outside. Sometimes I find it best to use a piece of wool picked loosely, and laid in a small sheet of cotton, the two materials not even held together with a string. Such tampons I pack the vagina with, and find them very useful in holding the uterus in place. Sometimes I use the cylindrical tampon, but rarely compared with those tampons of no definite shape, believing that after the uterus is replaced the tampon should assume the shape of the vagina, and that if the tampon is used for its medicinal properties, uneven pressure should not be exercised upon the pelvic structures.

With the use of Dr. Wylie's solution (alum, ʒ ij.; boroglyceride, ℥ j.; glycerine, ℥ iij.), which Dr. Morris mentions, I have been disappointed. In my hands it has not only failed to relieve the pelvic and uterine conditions for which its author recommends it, but, in some cases, its use has been followed by so marked an aggravation of pain and local discomfort that I have discarded it from my list of local applications. Boroglyceride alone I find most useful; the same is true of alum, but in combination they have not afforded me the gratifying results that I was at first led to anticipate.

H. I. OSTROM, M.D.

42 WEST FORTY-EIGHTH STREET.

A VAGINAL TAMPON.—Dr. Frank Rattan, of Encinitas, Cal., writes: “The tampon as usually made has not been an entire success in my hands; it is rather difficult of removal by the patient. I have made and used one of late that I think is an improvement on any with which I am familiar. Take an ounce package of ordinary sheet absorbent cotton. It is about three and a half inches wide by half a yard long. Cut in half in two, lengthwise, and sew, with a sewing machine, a seam down the middle. This holds the cotton together like a strip of cloth. It is easily applied and easily removed.”

THE SIXTY-FIRST CONGRESS OF GERMAN NATURALISTS AND PHYSICIANS will be held in Cologne on the 18th to the 23d of the present month.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 11 NEW YORK, SEPTEMBER 15, 1888 Whole No. 932

Original Articles.

REST IN THE TREATMENT OF CHRONIC JOINT DISEASE.

By JOHN RIDLON, A. M., M. D.,

ATTENDING ORTHOPEDIC SURGEON TO ST. LUKE'S HOSPITAL, NEW YORK.

REST may be defined as "a state of quiet or repose; a cessation from motion or labor." As applied to a joint, whose normal functions are motion and resistance to pressure, rest means a cessation from, or absence of, motion and pressure between the articular surfaces. We accomplish this by fixation or immobilization of those parts capable in any degree of producing intra-articular motion, by the removal of the superincumbent weight, and by the counteraction of muscular spasm.

Rest, in the treatment of chronic joint disease, does not necessarily imply rest in bed; nor does it imply a deprivation of sunlight and pure air; neither does the removal of the superincumbent weight necessarily imply the use of axillary crutches; nor the counteraction of muscular spasm imply the use of elastic traction.

Chronic joint disease I understand to be tubercular joint disease, unless otherwise specified. However the trouble may begin—as "traumatic" or "syphilitic," as "strumous," "scrofulous," or "fungoid"—it is at the first, or very soon becomes, tubercular; and it is only of this form of disease that I wish to speak.

Whether located at the ankle ("fungoid disease of the ankle-joint"), at the knee ("white swelling of the knee"), at the hip ("hip-joint disease"), in the spine ("Pott's disease"), or at the shoulder, elbow, or wrist, there can be no question that *tubercular disease* is the result of uniform or closely analogous laws of causation, and should be governed by like principles of treatment.

What, then, are those principles?

The early treatment of chronic joint disease seems to have had no very definite aim beyond temporarily relieving the sufferer. It consisted mainly of longer or shorter periods of rest in bed, and the local application of various medicaments. In 1834, Brodie[1] wrote: "But perfect quietude of the limb is always useful—always safe." In the following year, Harris, of Philadelphia, treated hip disease by fixation and traction, and rest in bed. He used Hagedorn's long splint. The weight and pulley, with rest in bed, but without any attempt at fixation, had been pretty generally used during the exacerbations in hip disease, when, in 1855, Henry G. Davis labored, and the "American method" of treating chronic joint disease was born.

Davis says:[2] "The treatment of Pott's disease and morbus coxarius should be founded upon this principle: Put the system in the best possible state, and remove all obstacles to the restoration of the parts. In Pott's disease we throw the weight, by means of mechanical support, upon the transverse processes of the vertebræ, and keep their bodies at their natural distances from each other; thus removing all pressure, and allowing the whole space affected by the disease to fill up with new material, thereby preventing the deformity which would otherwise take place. In morbus coxarius we separate the diseased head of the femur from the acetabulum, thus leaving the parts 'in a condition to recover so far as pressure might have interfered.' By this means we also get, in both instances, passive motion without friction."

Dr. Lewis A. Sayre[1] adopted the principles of Davis, and to his earnest and untiring work, both here and abroad, more than to anyone else, is due the advancement of the "American method."

Charles Fayette Taylor seems to have accepted the theory, but with some reservations. He did not adopt the "continuous elastic extension" of Davis, but used an apparatus for the hip, knee, and ankle that gave inelastic traction. At least that is my interpretation of Taylor's writings on the subject.[2]

Writing again, in 1867, Davis[3] says: "Most of the modifications of my instrument, made by others, have no guard in the form of an elastic band in the perineum."

This, we think, is sufficient to show that the *principle* of the "American method," as set forth by Davis more than a quarter of a century ago, and as adopted by Sayre and Taylor, and by many others, whatever their *practice* may have been, was "motion without friction," obtained by means of a "portative apparatus." And this is the "method" which is generally believed to dominate the treatment of chronic joint disease by American orthopedic surgeons of to-day. Upon what foundations this belief rests, it shall now be our effort to point out.

After a reasonably careful investigation, I have found but one surgeon who has made a consistent effort to treat chronic disease of all the joints upon the principle of free motion, elastic traction, and removal of superincumbent weight. I refer to Milton Josiah Roberts, of New

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[1] Medico-Chirurgical Review, July—October, 1834, p. 34.

[2] American Medical Monthly, 1859, p. 361.

[1] In the American Medical Monthly, 1860, pp. 297, 298, Dr. Sayre says: "But the most important of all, and on which all prospect of success will depend, is *rest of the joint*, and *perfect freedom from pressure* of the synovial membrane. . . . I have treated a number of cases in this way, after the plan of Dr. Bauer, of Brooklyn, with the happiest results; using as a means of rest and extension his 'Wire Breeches,' an apparatus for the treatment of this disease, in some of its stages, which is far superior to any other I have ever seen or heard of. . . . I have, therefore, come to the conclusion that *perfect rest*, however essential it may be to an *inflamed synovial membrane*, is not only unnecessary to the ligaments, but was positively *physiologically wrong*. As the eye needs the healthy stimulus of light, so does the ligament need the stimulus of *motion*." In his Lectures on Orthopedic Surgery, New York, 1883, p. 269, he further says: "If patients are kept upon a straight splint, . . . and *extension* is maintained in addition to *fixation*, we will relieve our patients from suffering, it is true, and generally arrest the disease; but, unless the greatest care be observed, and in the later stages the patient be frequently removed from the apparatus and passive motion employed, it will almost invariably happen that anchyloses, more or less complete, will be left. . . . There are many cases in which inflammation is so violent, and pain on the slightest movement so intense, that *absolute rest* is required for a time. . . . But *motion* is as essential to retaining a healthy condition of the structure about a joint as light is essential to retaining a healthy condition of the eye. . . . I was led to contrive some plan by which extension could be maintained that would remove pressure from the acetabulum and head of the femur, and at the same time permit motion of the joint."

[2] In Mechanical Treatment of Hip Disease, New York, 1873, pp. 14, 15, Dr. Taylor says: "We find, then, from our premises as well as from clinical experience, that it is *pressure*, or motion *under pressure*, which is the destructive agent in disease of the hip-joint. Hence we derive our two prime indications for mechanical treatment: 1st. To relieve the pressure in the joint due to muscular contraction by temporarily destroying the muscular irritability and contractility. 2d. To protect the joint from weight and concussion.

"*The indication for arresting motion in the joint*, which is well met with the gypsum bandage and similar expedients, *pertains only to a condition of rigid muscular contraction, and consequent increased constant pressure in the joint. But no such necessity exists after the muscular rigidity has been overcome to the degree of entirely removing all pressure from within the joint.* On the contrary, motion without pressure is not only not injurious, but is highly beneficial.'

[3] Conservative Surgery, by H. G. Davis, p. 214, New York, 1867.

York. I do not say he has succeeded, but I do say that he has made a consistent effort, and that his latest apparatus—with box-spring, elastic traction, and woven wire corset—is an admirable apparatus of its kind, and gives one who believes in the principles of Davis no excuse for continuing the use of Sayre's and Taylor's apparatus.

Without any change in the *principles*, we find that, in *practice*, Dr. Sayre uses, for tubercular disease at the ankle and knee, apparatus evidently intended for traction and immobilization;[1] at the hip, a traction apparatus which we are told allows free motion without friction;[2] and in Pott's disease, apparatus that is intended for fixation of the lower dorsal and lumbar spine, while it only removes superincumbent weight in the upper dorsal and cervical spine. This has been more fully referred to by another.[3] In a recent paper,[4] however, we find an apparatus advocated which gives traction and fixation of the patient from his head to his heels.

Dr. Taylor, on the other hand, has very considerably modified his principles and practice, although he uses substantially the same apparatus as he did twenty or more years ago. He does not any longer "believe in the desirability of 'motion without pressure' while inflammation is acute and progressive, using fixation with counter-extension in such cases."[5]

These views, however, are so well and fully stated in Dr. Henry Ling Taylor's paper on the "Hygiene of Reflex Action," that I make no apology for quoting therefrom:

"The spasmodic condition of the neighboring muscles, resulting from the stimuli of the irritated tissues in progressive joint disease, presents a condition opposite to the one discussed. We cut off locomotor stimuli, in the acutest cases, by putting the patient to bed for a month or six weeks, and eliminate, so far as possible, by counter-extension the specially irritating and damaging stimuli occasioned by the rubbing and pressing of the inflamed surfaces. When the recession of the inflammatory action is fully inaugurated, we allow locomotion, with the weight borne on the perineal strap of the counter-extension splint, which takes the pressure from the joint and does not permit the foot to touch the ground, using crutches also if necessary. In the recovering stages it is desirable to permit a certain amount of stimulation, in order to promote nutrition, before the joint can safely bear pressure; we therefore give the joint motion, the amount of which is regulated by proper stops on a jointed apparatus, which still suspends the leg and carries the weight on a perineal strap. In this way the amount and kind of reflex stimulation which the leg receives is carefully regulated according to the indications. The withdrawal of stimulation causes muscular weakness and wasting, which is favorable to the joint in the active stages of disease, but the muscles improve as the joint recovers and the stimuli are readmitted. It is thus seen that bracing a paralyzed leg and a diseased one have entirely different objects and results."

Most of the followers of Taylor, among whom can be found some of the most celebrated orthopedic surgeons in the country, use his original forms of apparatus, and hold the theories and principles which he promulgated more than twenty years ago. With these, "exercise in the fresh air" is the one thing of prime importance; and rest in bed, even for a short period, is dreaded and avoided whenever the patient can in any way manage to get about on his hip-splint.

It would be neither a pleasant nor a profitable task, at this day, to follow down the shifting sands of principles and practice from Davis to the present time. Only two figures in this country stand out with sufficient prominence to seem worthy of especial mention: A. B. Judson, of New York, and De Forest Willard, of Philadelphia.

Judson teaches that all chronic joint disease, affecting no matter what joint, should be treated by fixation and removal of superincumbent weight. And, unlike most of the followers of Davis, he has consistently endeavored so to fashion his apparatus as to attain that end. We do not feel sure, however, that he has accomplished this at the hip. Although his apparatus is far more effective as a fixative apparatus than that of Sayre or Taylor, it is, nevertheless, a long-traction portative apparatus. He believes that traction is an effective means of fixation, and cites a long list of authorities,[1] in support of this view. It does not seem to have been recognized that, at the hip, traction gives fixation only when unopposed by voluntary motion, and when sufficient to overcome involuntary muscular contraction. The following clinical facts seem also to have been overlooked: That a patient in whom there is free, painless motion through ninety degrees, can, while wearing a long traction-splint, flex the thigh on the pelvis to that degree; that flexion, abduction, and adduction not infrequently supervene while the patient is wearing the apparatus, either walking or in bed; that the majority of patients treated by this apparatus recover with the leg flexed and adducted; and that it is possible for subluxation to take place while the patient is wearing the apparatus and resting in bed in a well-cared-for orthopedic hospital-ward.

Of Willard's teaching, I cannot do better than quote the following:[2] "The application of rest as a principle in the treatment of joint disease, although very generally accepted, is yet frequently employed only as an adjuvant of other means of relief, while its proper position is in the first rank, and other means are but subsidiary. . . . Those who advocate the 'motion-without-friction' cure assert that motion is the normal condition of a joint, which statement, while true in regard to normal articula-

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[1] It has not been demonstrated, however, that the apparatus gives any degree of traction upon the bones; and it is certain that it does not immobilize, because it aims only to control the *bones* which go to make up the articulation. To immobilize the ankle, and the muscles that give motion at that articulation, it is necessary to immobilize the knee; and to immobilize the knee, it is necessary to immobilize the hip and ankle. A glance at the muscular attachments will make this evident.

[2] We believe that Dr. Sayre now uniformly uses the long traction-splint. This apparatus is practically the long traction-splint of Taylor, with an elastic, instead of an inelastic, hold-back strap. The Taylor splint is used by many (Shaffer, Judson, and Gibney) to obtain fixation, and although, as it seems to us, it gives neither free motion nor absolute fixation, it certainly is fixative to a very considerable degree during locomotion. During eight years of active orthopedic work in New York City, it has not been my fortune to meet with one patient wearing a Sayre *short* splint.

[3] M. J. Roberts: On Non-uniformity of the Principles of Treatment of Pott's Disease as Taught by Professor Sayre. New York Medical Journal and Obstetrical Review, October, 1882.

[4] L. A. Sayre: On the Advantages of Plaster-of-Paris Dressings as a Means of Spinal Support. New York Medical Journal, June 16, 1888.

[5] In a private letter, in answer to a question on my part, Dr. Taylor's son, Dr. Henry Ling Taylor, writes:

"No. 201 WEST FIFTY-FOURTH STREET,
"NEW YORK, July 11, 1888.

"MY DEAR DOCTOR: You will find the best account of my father's views on 'fixation vs. motion without friction' in the first part of his paper entitled, 'Observations on the Mechanical Treatment of Disease of the Hip-joint,' Boston Medical and Surgical Journal, March 6, 1879. You will find references also in the 'Mechanical Treatment of Disease of the Hip-joint,' William Wood, 1873. Especially at pp. 53 and 54, and the end [?] of Chap. vi., and in the article on the 'Mechanical Treatment of Synovitis of the Knee-joint,' New York Medical Journal, July, 1873, pp 1, 2 and 11 of reprint.

"I have alluded to the subject from another point of view in a paper on the 'Hygiene of Reflex Action,' pp. 9 and 10 of the reprint (Journal of Nervous and Mental Diseases, March, 1888).

"The considerations in the above references apply, with proper modifications for local conditions, to most of the joints of the body, but the mechanical relations in the spine are so different that the same considerations do not apply. Then the only safe principle we believe to be fixation with leverage, progressively modified.

"Very sincerely,
"HENRY LING TAYLOR.

"P. S.—You will see from the references that we do not believe in the desirability of 'motion without pressure' while inflammation is acute and progressive, using fixation with counter-extension in such cases."

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[1] A. B. Judson: On the Fixative Power of Traction in the Treatment of Hip Disease, New York MEDICAL RECORD, July 7, 1883. The authorities referred to are: Lesauvage, Philipeaux, Bonnet, Blandin, Gustav Ross, A. S. Gohier, Martin, Ford, Brodie, Liston, John Watson, Bell, Hilton, E. S. Cooper, J. A. Post, J. H. James, H. O. Thomas, Alden March, Physick, Bauer, Taylor, Yale, Shaffer, Wyeth, and others.

[2] De Forest Willard on Joint Diseases: Treatment by Rest and Fixation, New York Medical Journal, December 5, 1885.

tions, is no more applicable to diseased ones than to inflamed muscles or other tissues. . . . The surgeons who strive most earnestly to obtain a cure with motion are the ones who are obliged to perform the most resections. Decide upon the instrument that will give the most absolute rest, and you will make the best cure. The indications are to fix the joint, protect it from injury, maintain proper position, and yet be light and comfortable. . . . To sum up in outline: 1. Rest reduces joint inflammation more effectually than all the other means combined, often aborting, always lessening, an impending process. Its employment is indicated by nature; its beneficial influence is seen in every domain of medicine; in theory it is rational, in practice it fully proves its power. 2. The more perfect the rest, the greater will be the diminution of pressure, friction, tension, and inflammation, and the less will be the resultant anchylosis and suppuration. 3. The means of securing rest and fixation are exceedingly simple, and can easily be applied by every intelligent practitioner."

Ten years before this, Hugh Owen Thomas, of Liverpool, had first given to the world a system of treating chronic joint disease by fixation. He says:[1] "The treatment introduced to the notice of the profession, in this volume, may be summed up as a combination of enforced, uninterrupted, and prolonged rest; the first gives relief from pain; the second, added to the first, enables the case to steadily progress to a cure; and the third secures that which has been gained." Writing again in 1883, he says:[2] "No writer on, or teacher of, surgery has hitherto advanced any consistent theory with regard to the treatment of articular disease, this being perhaps the cause of the very patent fact, that the mode of practice in the cure of joint disease still remains so varied and divergent. Consequently, as soon as a surgeon reaches a position of vantage where he has opportunities for the treatment of unhealthy joints, he almost invariably introduces a specialty of practice behind which he soon intrenches himself, and from which no amount of reason or evidence is likely to dislodge him."

It has been said that the best commentary upon the "American method" is the remarkable frequency with which its principal advocate has had to perform excision of the hip-joint. It should also be noted that the same gentleman seems to have been seldom called upon to excise those joints which he treats by fixation; and the infrequency of his hip excisions during the past ten years. Dr. Sayre has, since 1854, excised the hip seventy-three times; sixty-nine of these operations were from 1859 to 1879, inclusive.[3] When this is compared with the work of Thomas, who has never found a case demanding excision when treated by proper fixation, and of Judson, who in twenty years' practice as an orthopedic surgeon in New York has "never performed 'the majestic and sanguinary' operation,"[4] it demands the careful consideration of all, whether motion or no motion should be our guiding principle.

Eighteen years ago Dr. Sayre, that Apostle Paul of the New Dispensation, went abroad and did "missionary work"[5] among the heathen. The "method" was tried and universally abandoned. *Thirteen* years ago Thomas first published his theory of treating joint disease by rest and fixation; and the assertion that this is "the old English method which has been tried in this country and found useless," is as absurd as it is false. Among modern surgeons, who take into consideration the pathology of the disease, there are but two modes of treatment: the operative, which seeks to remove at once and completely the tubercular material, and that by rest and fixation. Nearly all who have written on the principles of the treatment of tubercular joint disease during the past three years, have advocated rest and fixation. Besides De Forest Willard, already quoted, we may mention: Henry A. Reeves,[1] Edmund Owen,[2] Herbert W. Page,[3] Howard Marsh,[4] C. N. Macnamara,[5] G. A. Wright,[6] Robert Jones,[7] and V. P. Gibney.[8] This shows the trend of modern orthopedic surgery. So far as I know, no rational explanation has been given for the treatment by rest, other than that each, working for and by himself, has learned the lesson from clinical facts. I will therefore venture to offer the following suggestions, which may indicate the way we are to go:

Motion between two contiguous surfaces implies friction, and the greater the pressure, the greater the friction. Friction implies increase of temperature; and the greater the friction, the greater the increase of temperature. A healthy joint has a slightly higher temperature immediately following exercise than before; and a tubercular joint

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[1] Diseases of the Hip, Knee, and Ankle Joints, by Hugh Owen Thomas. Second edition, p. iii. of preface. Liverpool, 1876.

[2] Principles of the Treatment of Diseased Joints, by Hugh Owen Thomas. London, 1883.

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From 1859 (2d case) to 1868, inclusive	29
From 1869 to 1878, inclusive	40
From 1879 to 1888, inclusive	3

[4] Private letter of Dr. Judson, August 13, 1888.

[5] Dr. Sayre in Europe: New York Medical Journal, 1871, pp. 219 and 435.

[1] "The indications to be fulfilled by these machines are (1) to support the diseased portions of the spine, (2) to remove superincumbent weight, and (3) to prevent increase of deformity."—Bodily Deformities, by Henry A. Reeves, p. 141. London, 1885.

[2] "The mechanical treatment of spinal caries is comprised in one word, *rest*. . . . Plaster-of-Paris jackets, and other forms of support, aim at securing rest while the patient goes about, but this is only the second-best line of treatment, for the rest is less perfect. . . . Rest, and always rest, is the one indication for the treatment of these cases. . . . The treatment [of hip disease] will vary somewhat with the stage to which the disease has advanced, but the principles are unchanging; they are the insurance of absolute and uninterrupted rest for the joint, and correction of the bodily deformity. . . . When in bed the child should *never be allowed to sit up*. . . . Every case of hip-joint disease should from the beginning be treated by means of Thomas' splint. . . . Any splint designed to allow some movement at the joint during the treatment must be wrong in principle and unsatisfactory in practice. The demand for absolute rest for the inflamed joint is as urgent as is the absolute darkness to which the patient with acute retinitis is consigned."—Surgical Diseases of Children, by Edmund Owen. Philadelphia, 1885.

[3] "Whatever be the special plan adopted, one principle, and only one, should underlie it, and that is to secure *rest* for the spinal column. . . . In the early stages of the malady. . . . before deformity exists, whether the disease is slow or acute, or whatever its site, the child should be kept absolutely at rest in bed."—Herbert W. Page on Pott's Disease, in Manual of Surgery, edited by F. Trevis. Philadelphia, 1886.

[4] "Rest, to be efficient, must, as far as possible, be absolute, so that the joint is never moved. . . . The American surgeons have introduced splints intended to secure extension while the child is still allowed to move actively about. These are models of inventive ingenuity, and the object which they are designed to fulfil (that is, of conducting the treatment without confining the patient to the horizontal position) is highly desirable. These splints, however, after having been fully tried, have been generally discarded by English surgeons, on the ground that, not only is it impossible to maintain extension (that is, prevent intra-articular pressure) with them, but that they do not secure adequate fixation (that is, rest) of the joint. . . . It has been found that the mere maintenance of the horizontal position, even for one or two years, in good air, has no prejudicial effect on the general health, and that it is only where confinement is combined with pain and suppuration that the health suffers. Under these circumstances the mortality of hip disease, adequately treated, has fallen from about thirty to five per cent."—Diseases of the Joints, by Howard Marsh. Philadelphia, 1886.

[5] "Probably there was nothing that so forcibly struck those who visited Liverpool at the meeting of the British Medical Association, as the hip-joint cases under Mr. H. O. Thomas' care. Patients in all stages of the disease were shown us. . . . the hip secured by means of his valuable splint and with clog to raise the other foot, so as to preserve the diseased bones from pressure. With crutches such patients could get about, and under treatment of this kind the greater number of these were doing wonderfully well."—Diseases of Bones and Joints, by C. N. Macnamara. London, 1887.

[6] "In the earlier stages of the disease there is a general agreement among surgeons that rest, immobility, and time are the main features in a case. . . . Thomas' apparatus is a very valuable appliance, and is undoubtedly the best splint we have for patients able to be up. . . . The splint is of use in the early stages of the disease, when it is possible to give the child the chance of long-continued and perfect rest with general hygienic measures."—Hip Disease in Childhood, by G. A. Wright. London, 1887.

[7] At a meeting of the Liverpool Medical Institute, January 19, 1888, Mr. Jones, by request, showed upward of twenty cases of chronic joint disease that had been treated by fixation from two to four years. Very many had had the joints laid open, and nearly all had had abscesses; nevertheless all had very considerable motion. Provincial Medical Journal, March, 1888.

[8] "My plea this evening shall be for absolute immobilization of a diseased joint. . . . Rely, therefore, for relief, both from abscess and deformity, upon fixation of, and protection to, the joint."—V. P. Gibney on Diseases of the Knee and Elbow, New York Medical Journal, March 17, 1888.

shows the same conditions in a considerably increased degree. The advocates of the "American method" have sought this increased temperature because increased nutrition is associated with increased local temperature, and have ignored the fact that the inflammatory process is also associated with increased local temperature. They have also advocated motion as a means of maintaining the nutrition and strength of the muscle; and have ignored the fact that the stronger the muscle the greater the muscular spasm and consequent intra-articular pressure. On the other hand, the advocates of rest and fixation have admitted that they were willing to starve the joint; that they sought muscular atrophy and weakness as a means of reducing muscular spasm and intra-articular pressure; and that their treatment lowered the nutrition and the temperature of the joint. This they accepted as being opposed to inflammation. Since, however, it has been established that we have to deal with a tubercular process, a reasonable explanation appears for the heretofore empirical treatment. It has been shown that if the local temperature about a tubercular lesion be raised from two to eight degrees, the tubercular process increases proportionately; and that if the general temperature be increased and maintained for a certain time, the process becomes rapidly fatal. So, also, in animals upon whom inoculation experiments have been made; the law is well recognized that the higher the normal temperature of the animal, the less resistance is there to inoculation, and the more surely fatal the result. The observations of Brush[1] show the normal temperature of the horse to be 99.2° to 100.3°; dog, 99.3° to 101.9°; cow, 100.8° to 101.8°; guinea-pig, 102°; rabbit, 103°; common fowl, 106.7°. Now, if you compare this table with all the recent inoculation experiments on bovine tuberculosis, you will find that the success of such experiments is in direct ratio with the temperatures—that is, commencing with the lower temperature, that of the dog, we will find the resistance lessening as we go up the scale, till we come to the common fowl, with the highest temperature, when there is no resistance whatever. Feeding with tubercular matter is always positive with this bird. Professor James Law gives the temperatures as follows: Horse, 99.5°; dog, 99.5°; cow, 102; and chicken, 107°. There seems to be no doubt that increase of local or general temperature favors the deposit and development of tuberculosis; and there appears an explanation why, without any hereditary taint, tuberculosis of the joints is so often found among the sequelæ of the fevers of childhood, and is so often the unfortunate termination of a prolonged elevation of local temperature due solely to traumatism.

If we may then assume that increased local temperature favors the development of tuberculosis in a joint, the converse should also hold, that a lowering of the local temperature, to or below the normal, hinders or checks the tubercular process, and all the destruction and danger that depend upon it. *Rest*, as defined at the beginning of this paper, does this. It reduces the temperature to or below the normal; it prevents the destructive process of friction; it removes intra-articular pressure from superincumbent weight and muscular spasm; and it relieves pain, and thereby restores normal sleep and normal appetite. Pure air and sunlight, as well as proper food, are things much to be desired, but they do not appear to be of such importance as absolute rest to a joint.

To recapitulate.—The theory of motion in the treatment of chronic joint disease was the result of the old fear of anchylosis; but we have not found recorded an authentic case of anchylosis due to the immobilization of a tubercular joint.

Motion with traction followed necessarily; because no patient could endure motion without traction, unless anæsthetized.

A portative apparatus became a necessity, because patients treated by motion with traction died, unless they had the benefit of good air and sunlight.

The results of the use of the Davis and Sayre splints, or modifications of them, which are claimed as allowing motion, have not been published, although they have, in some form, been in use for thirty-three years.

Motion, as a factor of the treatment of disease of the joints other than the hip, has been universally abandoned; and there appears no good reason why it should be continued at the hip, or in tubercular synovitis of the knee.[1]

Motion without friction between joint surfaces is obviously a mechanical impossibility.

The Taylor and Judson splints came to take the place of the Davis and Sayre splints because they permitted less motion at the hip-joint.

The results of the use of the Taylor splint as a portative apparatus leave much to be desired.[2] It does not prevent rigidity, flexion, abduction, adduction, and shortening, either from erosion or subluxation.

All long traction-splints of which we have cognizance give interrupted instead of "continuous" traction during locomotion; and interrupted traction, while muscular spasm exists, implies motion.

Continuous traction can only be maintained by placing the patient in bed, or upon a patten (under the well leg) sufficiently high to prevent either the foot or the splint from reaching the ground. In practice this is not done.

All short splints that depend upon adhesive plaster, as other similar means for tractive power, fail to prevent intra-articular pressure and motion during locomotion, unless crutches and a high patten be used.

Continuous, uninterrupted traction relieves pain and aids the correction of the deformity in very many cases. In a few cases, however, it causes pain and muscular spasm; and there is much evidence that it can be dispensed with in all cases, provided fixation and removal of superincumbent weight be efficient.

Fixation is necessary in all cases; it must be continued without interruption until the inflammatory process has subsided; and the more perfect the immobilization the quicker and the better the result.

Removal of superincumbent weight must be absolute from the beginning of treatment until the end of convalescence.

Thomas' splints, for the hip, knee, and ankle, are the most effective, known to the author, for inducing fixation. Many, however, have failed in using them, because they have caused their patients to walk about before the muscular spasm had subsided, because they frequently removed them to "test motion," and because they failed to use a patten sufficiently high (four to six inches).

The use of efficient fixative apparatus combined with a longer or shorter period of rest in the horizontal position, absolutely insures a cure, without other deformity than shortening in all joints except the spine; and in the spine it insures against any increase in the curvature, and a diminution and absolute reduction of the curve in very many cases, and, not infrequently, freedom from rigidity.

We are inclined to think that the dangers to the general health from confinement to the horizontal position have been exaggerated, and depend upon unfounded assertion and observation of cases treated without, or with but imperfect, fixation.[3]

In cases of hip disease, after a cure has been effected and the fixative apparatus removed, we favor the use of a modification of Dr. Taylor's Dows-splint, as more convenient and safer for young children than the crutches and patten.

337 WEST FIFTY-SEVENTH STREET.

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[1] E. F. Brush: On Bovine Tuberculosis, New York Medical Journal, March 24, 1888.

[1] Etiology and Pathology of Chronic Joint Disease, by Newton M. Shaffer, American Clinical Lectures, vol. iii., No. vi., p. 175.

[2] The Ultimate Results of the Mechanical Treatment of Hip-joint Disease, by Newton M. Shaffer and Robert W. Lovett, New York Medical Journal, May 21, 1887.

[3] It has been our fortune to treat twelve cases of double hip disease, in bed for prolonged periods, some upward of two years, and not a case died while under treatment.

A CASE OF LEPRA NERVORUM.[1]

By JOHN LORD BABCOCK, M.D.,

DEMONSTRATOR OF ANATOMY IN THE BEAUMONT MEDICAL COLLEGE, ST. LOUIS.

THERE is probably no disease in the whole dismal category of diseases of which so much has been written, and about which such diverse theories have been spun, as leprosy, the most ancient of them all; and there is that in its slow onward march to an inevitable death that may well have filled the mind of ancient and mediæval man with unpitying horror. The very name to most men yet possesses all of the chill dread of ancient days, and I cannot pretend to say how many people in our city would consider it almost suicidal to sit in a street car with a leper.

The history of leprosy from the day when it was considered the curse of God, down through the period of the four cardinal humors of the blood, to the day of the lepra bacillus, would epitomize the history of medicine; but of this long and fascinating story this is neither the time nor the place to treat. I wish first to direct your attention to a few remarks on the subject of leprosy in America.

Leaving out of consideration for the present the disease as existing in Central America, Mexico, and certain of the West India islands, I will limit myself to the endemic foci of the disease in the United States and Canada. The very few and very puzzling cases of the so-called sporadic type I cannot now speak of.

The best known nidus of leprosy on this continent is that near the Bay of Chaleur, in New Brunswick, where a lazaretto has been in existence since 1844.[2] There were in this institution, in 1887, sixteen patients, and six were known to be outside. According to the report of Dr. Taché, Government Inspector, the number of lepers in the district is steadily diminishing, a change which he concludes to be commensurate with the carefulness of the segregation and the improvement in the moral and hygienic surroundings of the people. These cases are about evenly divided between the anæsthetic and tuberculous types, and are chiefly of interest to us on account of the possibilities suggested by the escape of an inmate of the Tracadie lazaretto, who, after a period of unrestrained wandering in New England, finally turned up in Professor White's service in the Massachusetts General Hospital, where for the first time his condition was diagnosed.

There are a few cases of leprosy to be seen from time to time in the principal eastern seaports, which. as far as known, except in the case of Charleston, S. C., are imported from places where the disease is endemic.

In Charleston,[3] between 1847 and 1882, there had been sixteen indigenous cases, including none but positive types.

In Louisiana the history of leprosy is unique and very instructive, and is of special interest to us as bearing on the case in hand. Dr. Jones[4] quotes Gayerre as saying, in his "History of Louisiana," that there were many lazarettos in that province during the Spanish régime of the last century. In the latter part of that century, however, and the early part of this, leprosy gradually disappeared in Louisiana, and the lazarettos were therefore closed and ultimately destroyed. No further cases were reported, and leprosy seems to have been practically unknown there until 1866, when a certain Madame Ourblanc, in Vermilion Parish, whose father had come from Southern France, was observed to be suffering from lepra tuberosa of a very pronounced type. In her case the tubercles ulcerated very extensively and with comparative rapidity. She had four sons, three of whom subsequently had leprosy, the fourth being lost track of. She had also two daughters, one of whom died of an acute disease, the other of leprosy. Up to 1878, there were also developed three other cases connected directly with that of this Madame Ourblanc—one being that of her nephew, another her nurse, and the third a young man who was reported to have slept for some time with one of her sons. Besides these there were several other cases reported in various parishes in the southern part of the State, near New Orleans, Dr. Salomon[1] placing the whole number in 1878 at fourteen. Dr. White[1] reports having a leprous native of Louisiana under his observation in Boston in that year. Dr. Rohe[2] is quoted as giving the history of an American woman who went from Baltimore to New Orleans in 1855, remained in and about the latter place until 1866, when she returned to Baltimore. She developed leprosy in 1869, and died in 1878 or 1879. From a consideration of all of these cases, we must infer that, in and about New Orleans, there is some agency at work which has caused more cases in that part of the country than can be accounted for by the simple fact that New Orleans is a seaport.

There were, up to 1879, twenty-six cases of leprosy reported in Minnesota, Wisconsin, Iowa, and Nebraska, among the Norwegian and Swedish immigrants, who are so numerous in those States, and in whose native land the disease is endemic. Among these, perhaps the most interesting is that of a child, born to a leprous father, which in 1879 was reported by Dr. Hyde[3] to be suffering from tubercular leprosy. If this is true, this is the first case reported in the United States in which the disease has developed in a native child. There have been also several cases reported among the Chinese in California and Oregon, but in regard to these no statistics are attainable.

In St. Louis there have been reported up to date two cases of leprosy, and both within a year. The first of these two was reported by Dr. Hardaway, the case being that of a Chinaman, now in the City Quarantine. The second case was reported by Dr. Ohmann-Dumesnil, at the meeting of the Missouri State Medical Society, in April last, this case being that of a woman who died in June, 1887, from "an uncontrollable diarrhœa." I believe I have the honor to report the third case.

No remarks are ever made on leprosy nowadays, without there being included an expression of their author's opinion as to the infectious or contagious character of the disease.

The first case of leprosy I ever saw was an inmate of Charity Hospital, New York, where he was subjected to no restrictions other than those relating to all the patients in the hospital. The next case I saw while an assistant to a dermatological clinic in New York. This man I saw brought before a general class of students by Professor Piffard, several times. We have no less an authority than Kaposi himself for such treatment of these cases. Dr. Keber tells me that Kaposi had three lepers in his wards of the Vienna General Hospital last year, who were treated on the same footing as all the other patients. Kaposi states:[4] "All experience teaches that leprosy, although very probably based on a bacterial infection, is not, or at most except under very special and rare circumstances, a contagious disease." And again he says:[5] "Leprosy is probably, under special circumstances, contagious, but much less so than syphilis, and there must be presupposed a direct and repeated introduction of the products of leprosy by immediate contact and injury of the skin." I cannot better sum up this part of my subject than by quoting the four conclusions of Neisser,[6] as follows: "1. The bacillus lepræ is the cause of each case of leprosy. 2. The proof of heredity has not been made. 3. The possibility of a direct contagion is without doubt, yet the danger and probability of it are very slight. 4. The existence of spore forms allows the possibility that, without

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[1] Read before the St. Louis Medical Society, June 9, 1888.

[2] A Visit to the New Brunswick Lazaretto, New York MEDICAL RECORD, October 1, 1887.

[3] The Question of Contagion in Leprosy, American Journal of the Medical Sciences, October, 1882.

[4] New Orleans Medical and Surgical Journal, March, 1878.

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[1] Transactions of the American Dermatological Association, vol. iii.

[2] Ibid., vol. vi.

[3] A Clinical Lecture on Tubercular Leprosy, Chicago Medical Journal and Examiner, December, 1879.

[4] Pathologie und Therapie der Hautkrankheiten, 3d ed., 1887, p. 812.

[5] Ibid., p. 813.

[6] Baumgarten's Jahresbericht for 1886, p. 247.

direct contagion from man to man, the infection can take place, but man is to be considered the chief carrier of the virus of leprosy."

The case I have to report to you this evening is that of James B——, married, a native of Ireland, who came to this country at the age of two years, coming directly to St. Louis. He is now forty-one years of age. His family history, as far as attainable, is good.

He himself always enjoyed the best of health until 1866, when he had what he calls a mild attack of yellow fever, in New Orleans, a few months after arriving there, having left St. Louis in that year for the first time.

The next two winters he spent driving a street car in New Orleans, and worked during the summers in a sawmill on the eastern shore of Lake Pontchartrain.

During the next ten years he travelled between New Orleans and St. Louis, spending most of his time in or near the former place, his occupation being that of a mechanic and carpenter. For the last three years prior to 1879, he lived continuously in New Orleans. In 1871 he had a slight attack of gonorrhœa, lasting three weeks. He gives no other history of venereal disease. In 1876, he suffered for eleven months from "swamp fever" on the shore of Lake Pontchartrain. In 1878, he found employment in New Orleans as a yellow fever nurse, and again in 1879. In the fall of that year he returned to St. Louis, where for a time he worked in our Quarantine, which at that time contained yellow fever patients. Since 1879, the man has lived continuously on North Twentieth Street, in our city.

In March, 1881, he noticed that several red spots, about the size of a silver quarter of a dollar, appeared quite suddenly on his face, accompanied with intense itching and burning. On the 18th of that month he was seen by a physician, told that he had erysipelas, and sent to the City Hospital, where he remained until June 20th. The hospital record[1] of the case is as follows: The diagnosis was "Erysipelas (?)." "James Brennan, Ireland, aged thirty-four, admitted March 18th, idiopathic erysipelas of face and arms. Had an elevation above right eye, very red, which varied at different times in height. Under iron internally and fl. ext. ergot topically, erysipelas soon disappeared.

"April 26th.—Patient transferred from erysipelas ward to ward 7 (devoted to skin diseases). The red blotches on the patient's face remained after his transfer. They were painted at different times with iodine and fl. ext. ergot, but these applications seemed to have very little effect. Patient complained also of pains in the soles of his feet, for which we could find no apparent cause. In hope of benefiting this trouble he was given potassium iodide internally and his feet painted with iodine. These remedies, however, have very little permanent effect.

"May 10th.—The red blotches still remain in the face. They are not painful. His principal complaint now is the pain in his feet, more particularly the dorsum following the tendons. Continued the iodide; used no local applications.

"June 20th.—Patient transferred to Dr. G. and was discharged." The patient says that since his discharge from the hospital the pain and numbness in his feet and hands grew better at times, but that they never felt natural, and were painful most of the time, particularly in cold weather. He says that the color of these original red spots gradually faded, and after "about a year" they became distinctly brown, and have remained so ever since. During the last six years he has lost thirty-five pounds in weight, and his strength has gradually left him, so that he has been unable to work at all during the past year and a half. He has been married five years. His sexual desire and power have gradually failed, so that now he has had none of either in two years. On January 17, 1884, he was readmitted to the City Hospital, the records this time showing that the left great toe and all of the right toes were superficially frozen. Discharged February 1st. In July, 1884, a large bulla, filled with bloody serum, appeared on the left great toe, near the point of injury by freezing. This bulla was ruptured, and now a hard cicatrix, ulcerating slightly at two points, marks the spot. Four years ago he noticed that his eyelashes and eyebrows were coming out. The man says that, about a year after he left the hospital the first time, while shingling a roof, he noticed that he could not tell, without looking, whether or not he was holding a nail in his fingers; since then he has gradually lost the feeling in his hands, but he adds—"I am very easy hurted in my back."

The patient says he made several visits at a large dispensary in this city in February and March last, where he was treated ineffectually for a "sore throat" and a "cold." He thinks his sense of taste is not as good as formerly, and he has had no sense of smell in years.

The man came to me on April 20th, to consult me about his general condition, but chiefly in regard to the state of his mouth. I found a destruction of the mucous membrane of the roof of the mouth and of the pillars of the pharynx. I was at a loss to account for such an extensive ulceration, but, be it confessed on general principles, I put him on increasing doses of the iodide of potassium. At his first visit I made no special examination. At his next visit, I questioned him more closely, discovered the general anæsthesia of the hands, examined his face, and made a diagnosis of leprosy. I referred him to Dr. Mulhall, the laryngologist, for an expert examination of the mouth. The doctor suggested a gargle of 1 to 5,000 bichloride, which was ordered and used with happiest effect. Dr. Mulhall writes: "I found in the case you mention great thickening of the septum narium, as well as of the lateral cartilages, so as to produce considerable stenosis. No ulcers existed in the nose. The hard and soft palates, and the anterior and posterior pillars of the fauces, were covered with small shallow, discrete, serpiginous ulcers resembling very much tubercular ulceration." Since that time the man has been seen with me by Dr. Hardaway and Dr. Keber, and on Sunday last I reported him to the Health Department, and he was sent to the City Quarantine.

In order to definitely differentiate in regard to syphilis, I still continued the treatment referred to above, adding $\frac{1}{16}$ gr. bichloride thrice daily. I increased the iodide, giving it in saturated solution drop doses with infusion of gentian. At ninety grains he rapidly developed iodism, so that the dose was reduced to and continued at sixty grains, at which he scarcely tolerated it.

This treatment was kept up systematically for three and one-half weeks, with the result of making his general condition worse and not alleviating a single symptom—unless the improvement of the mouth was due to that rather than to the antiseptic wash, which is not very probable.

His condition at present is as follows: His hair is coarse and thick, beard thin and scattering. He has complete ciliary and supra-ciliary alopecia. His nose throughout is very much thickened, as are his lips. On the right cheek he has an irregular area of white, apparently cicatricial, tissue, and another similar area over the right eye. In the supra-orbital regions of both sides, particularly the right, he presents irregular hypertrophic masses, which, with the absence of the eyebrows, give a peculiar prominence to the forehead, suggesting the condition known as contiasis. Scattered over the face, except in the whitish areas referred to, are many small tubercles varying in size from that of a small shot to that of a pea, one of the largest of which is over the left eye. The skin of the face has a very muddy, faintly maculated appearance, and has a harsh, dry feel. The glands at the angles of the jaw are very much enlarged and are very firm, those on the right side forming a solid confluent tumor. The post-cervical glands are not perceptibly enlarged. The condition of the mouth and nose have been already referred to. His hands present very marked atrophy of the thenar muscles. The palmar surface is covered with a very much thickened skin, which in both hands is ulcerating slightly at several points about the ends of the fingers and palms. The grip of his hands is very much weakened, and there are scattered about, particularly on the dorsum of the hand, a great many small tubercles lying close under the skin. His hands, especially the fingers, always felt cold when I examined them, and their lividity indicated the inefficiency of the circulation. At the middle of the inner surface of the right arm there is a firm, movable mass under the skin, about the size of an almond. The axillary glands are enlarged.

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[1] From the records of the St. Louis City Hospital, kindly furnished me by Dr. Dalton, surgeon in charge.

On all the surfaces of the trunk are irregular maculæ, which are of a distinct yellowish-brown color, contrasting very markedly with the normal color between them. There are two of these spots over the region of the tenth, eleventh, and twelfth ribs, on the right side, which are perfectly round and distinct; the others are more or less irregular in outline, some having a distinct border and others shading off gradually. Some of these maculæ are covered with a fine, furfuraceous desquamation.

The glans penis presents an irregular, hardened mass lying around the meatus, not being raised above the surface, and extending from it for about one-third of an inch. The inguinal and femoral glands are very much enlarged.

While the maculation just described extends down the arms irregularly to the elbows, it does not extend down the leg. The feet have upon them a very few tubercles, and a large, firm, fissured, whitish cicatrix on the left great toe marks the location of the bulla referred to above. He has a varying, but constantly present œdema of the legs and feet, which, however, is never very marked. On his right leg, about six inches above the ankle, are three ulcers, covered with dry scabs and surrounded by brown pigmentation, suggesting an old tertiary syphilide in appearance.

His symptoms referable to the nervous system are as follows: His sense of taste is impaired, and the sense of smell seems to be destroyed. He has an area of anæsthesia, about the size of a man's palm, in the region of the angle of the jaw on the right side, and the sensitiveness of the skin of the face generally, as measured by the æsthesiometer, is very much diminished. He failed to distinguish the two points of the instrument at two inches, the normal point of separation at which they are appreciated being a little less than half an inch for that region. The ulnar side of his right hand has complete superficial anæsthesia extending one-fourth the distance up the forearm to the elbow. The radial side of the dorsum of this hand, as well as the finger-tips, are faintly sensitive to strong irritation. The left hand is completely anæsthetic, and the anæsthesia extends half way to the elbow. He is unconscious of the pricks of a pin or a knife which draw blood, and only experienced slight pain during the excision of a large tubercle from this hand, when I passed a needle deep into the surrounding tissues, while stitching up the wound. The æsthesiometer indicated a complete loss of tactile sensibility in the whole of the left forearm. In this arm the ulnar nerve is very perceptibly and irregularly enlarged, and at its passage over the internal condyle it is as large as a lead-pencil. There is marked hyperæsthesia on the dorsal surface of the body. The man winces and complains at a very slight pressure. There is, however, no increase of the tactile sensitiveness indicated by the instrument. Neither of the man's feet is wholly anæsthetic, although sensation is very dull in both. In both upper and lower extremities he suffers from sharp, stinging, but not constant pains. No enlargement of the popliteal nerve could be detected.

To sum up; the points of interest in the case are as follows:

1. The prolonged history beginning with what Bidenkap, of Christiania, calls the "polymorphous exudative erythema," or the erythema multiforme of Hebra, which resists all treatment, and gradually fades into macular discoloration, together with the acute, long-continued, lancinating pains.
2. The steady increase of atrophy and anæsthesia through a long period.
3. The tubercles, small and large, including the supra-orbital bosses.
4. The marked localized hyperæsthesia.
5. The loss of weight, of special senses, of sexual power, and the ciliary and supra-ciliary alopecia.
6. The glandular swelling and the swelling in the nerves, and lastly, the bacillus, without the demonstration of which the correctness of my diagnosis might be questioned.

I removed from each of this man's hands a tubercle, that from the left hand being about a fourth of an inch in diameter. The smaller tubercle was examined hastily by the teasing process, being stained with methyl violet and decolorized with a mixture of hydrochloric acid and alcohol. Thus prepared, the fragments of tissue were found to be swarming with bacilli, morphologically resembling the tubercle bacillus. This process, however, was merely confirmatory, and absolute demonstration was not reached until the other tubercle had been mounted in celloidin and carefully cut and stained, in which manipulations I had the valuable assistance of Dr. Keber. The bacilli were thus seen *in situ*, crowding certain of the cell-elements, and being also distributed in the tissues without apparent reference to the cell-bodies. I hope to be permitted to demonstrate these bacilli to the Society at some future meeting.

306 North Compton Avenue.

URETHRITIS, ACUTE CYSTITIS, OBSTRUCTION OF THE URETER, HYDRONEPHROSIS, ULCERATION THROUGH THE PERITONEUM, DIAPHRAGM, PLEURA, AND LUNG-TISSUE, AND DISCHARGE OF FLUID THROUGH BRONCHI—RECOVERY.

By Z. T. SOWERS, M.D.,
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The patient, white, male, aged nineteen years, scientific plumber, when two years old began to have periodic attacks of pain, which were presumed to be "stomachache" or "colic." The application of cloths wrung out in hot water usually afforded relief in the course of an hour or so. These paroxysms of pain would occur three or four times a year.

After the child had experienced three or four of these attacks his mother began to notice that his side would swell each time these recurred, "like a ridge between the hip and lower ribs." Under these conditions, an hour or so after the use of the hot applications, he would urinate freely, the ridge would disappear, and he would be free from pain.

When the patient was six years old he was seen by a homœopathist, who pronounced the trouble "inflammation of the spleen." He was under homœopathic treatment for some time.

After coming to Washington he was brought under the observation of a regular practitioner, who pronounced the trouble "neuralgic pains in consequence of the large vein passing through the kidney becoming congested."

Hot applications, in addition to morphine and camphor internally, were prescribed, which always gave great relief. But the relief was only temporary, and desiring a permanent cure they consulted another physician—this time a homœopathist again. Finally the patient drifted into my care, with such results as are indicated in the following lines:

On November 20th the patient called at my office, and was found to be suffering from an attack of specific urethritis. The usual well-known remedies were administered, and with the usual result. Rest had been particularly urged. Nothing out of the ordinary routine of such cases occurred until the 29th of this same month. On the 29th of November, being summoned to see the patient at his home, I found him suffering from cystitis and also bronchitis. Simultaneously with the appearance of the cystitis the urethral discharge ceased.

At this time pain in the region of the spleen and along the course of the ureter (left) was complained of, and, in consequence, hot applications were ordered.

The pain persisting, morphine was administered, and the patient subjected to dry-cupping, and this, in turn, followed by blistering. The granular effervescent lithiated potash was administered very freely.

The quantity of urine being passed during this time amounted to one quart in the twenty-four hours.

A microscopical and chemical examination of the urine at this time, by Dr. D. K. Shute, showed the presence of a very large number of leucocytes, triple phosphates, bladder epithelial cells, and granular débris; also the presence of albumen; no tube-casts; no epithelial cells from pelvis of kidney; no sugar.

In consequence of necessity, the patient had not been able to comply with my recommendation as to rest. He was compelled to work at his occupation—scientific plumbing—in a rather damp place, which latter especially induced his bronchitis. The ordinary remedies for bronchial and vesical inflammation were administered, and followed by satisfactory results. The patient was visited daily. On December 10th a slight fusiform enlargement was noticed in the left lumbar and inguinal regions.

The patient was seen daily by me until December 19th. During this time the tumor was continuing to enlarge very much. The mere fusiform shape of the tumor during this time was becoming less and less noticeable, but on the 19th there was present a large bulging tumor extending from the crest of the ilium to the ribs, and from the lumbar around through the left inguinal and the hypogastric regions to the median line, even encroaching, to some extent, upon the right segment of the abdomen. Fluctuation at this period was easily detected. The constitutional symptoms at this time, as throughout the whole period of illness of the patient, were very slight. No chills, no sweats, scarcely any elevation of temperature.

On December 19th Dr. S. C. Busey was called in as consulting physician, when it was decided to use the aspirating needle for purposes of exploration.

The clinical history of the patient revealing the fact that previous enlargements had suddenly disappeared simultaneously with copious discharges of urine, it was decided in consultation to await developments for awhile.

Consequently, on December 20th and 21st, consultations of observation, if I may use such an expression, were held. On the 22d the parts had become so much distended that, after consultation with Drs. S. C. Busey and D. K. Shute, aspiration was deemed imperative.

Even at this time there was scarcely any constitutional disturbance. The patient being anæsthetized I introduced one of Dieulafoy's large-sized aspirating needles (after a preliminary incision had been made through the integument and fasciæ) midway between the umbilicus and the anterior superior spine of the ilium, carrying the point of the needle obliquely upward, outward, and backward. The needle penetrated the sac of the tumor with great difficulty, in consequence of its great toughness and unyielding nature. One gallon of bloody fluid was withdrawn, which, when subjected to examination by chemical analysis and the microscope, revealed the following characters: A trace of albumen; alkaline reaction; sp. gr. 1.020; a large number of blood-corpuscles; a few spindle-shaped epithelial cells, etc. Unfortunately no examination was made to detect the presence or absence of urea.

On December 22d, prior to the aspiration, the urine was normal in color. That voided after the operation was bloody-looking—resembling very much the fluid drawn by aspiration. This latter fact inspired the hope that, probably, the obstruction being removed, the sack would not refill—and this hope was still further strengthened, inasmuch as there was no apparent increase in the size of the sack, and the amount of urine now being voided amounted to three pints (one pint in excess of what it was previous to the operation). These favorable conditions obtained for four days. During all this time, again, there were no constitutional symptoms. On the fourth day, however, there was a very perceptible refilling of the sac. The amount of urine passed this time amounted to over one quart—still bloody. On December 26th, after consultation with Drs. S. C. Busey, D. W. Bliss, and D. K. Shute, it was decided again to aspirate the patient. Local anæsthesia, by means of cocaine, being very satisfactorily induced, the sac was again aspirated, and one gallon of bloody fluid removed, resembling that previously withdrawn, but being much richer in blood corpuscles, as revealed by the examination made by Dr. Shute. After the tapping a large compress was applied over the sac, and retained in position by Martin's elastic bandage, with the hope that they would aid the expulsion of the fluid and prevent its reaccumulation.

On December 27th consultations were held, and the patient found in excellent condition. On the 28th there was no consultation. On the 29th a consultation was held. No reaccumulation of fluid apparent. Patient in excellent condition.

On January 1, 1888, the fluid was evidently accumulating again, presenting a swelling about the size of an orange, which gradually increased until January 5th, when it reached the dimensions of a small cocoa-nut and remained stationary until January 12th. No pain or fever during this time. Scarcely any soreness in the region of the "tapping" or of the spleen.

On January 11th I saw the patient about six o'clock in the evening, and found him suffering with symptoms of acute indigestion—flatus causing dyspnœa, palpitation of the heart, and a pronounced hacking cough, which were greatly relieved for a time by the application of turpentine stupes and the administration of stomachics.

The symptoms continued to some extent until 12 P.M., when the cough became very violent and was accompanied by the sudden expectoration of about half a pint of frothy, bloody fluid, very similar in appearance to the fluid that had been drawn by aspiration previously, as indicated by microscopic examination. Simultaneously with this expectoration was the complete disappearance of the cocoa-nut swelling and the unpleasant symptoms, such as dyspnœa, etc. The patient, to use his own expression, "thought he had coughed the lump up;" no pain during all this time.

On January 12th I saw the patient, in consultation with Drs. Busey, Bliss, and Shute. We found him in a comfortable condition; temperature, 99° F.; pulse, 100; no pain.

Physical exploration revealed absolute flatness over the entire lower lobe of the left lung and half of the upper lobe. Entire absence of vesicular murmur. No bronchial breathing. A very large number of moist râles were audible in the upper lobe.

The first urine voided after these occurrences was now found to be perfectly clear. And the quantity voided in the twenty-four hours became very large, averaging more than half a gallon, and was normal in appearance.

The fluid expectorated was subjected to chemical and microscopical examination, and found to be like that drawn from the sac by aspiration in all essential respects. A fact of special interest to note is that this fluid was slightly alkaline in reaction.

On January 13th the expectoration continued, still bloody, though much diminished, and the constitutional symptoms continued to be insignificant. The lung gradually cleared up from above downward. There were a large number or moist râles throughout the whole lung.

January 14th.—Gradual improvement; less cough and sputa; less blood in the sputa; lungs were clearing up very rapidly.

January 16th.—Improvement very marked. Lungs entirely clear except at a very small portion of the lower part of the lobe.

January 19th.—Consultation for "scientific inquiry." Lung entirely normal.

January 22d.—Patient called at my office. He had been out riding for one hour in a cab.

January 25th.—Patient went to a ball and danced several hours.

March 7th.—Slight irritation about the neck of the bladder. Passed a slight concretion of uric-acid crystals. Lithiates were administered.

March 10th.—Patient entirely well.

April 12th.—Left for Denver, Col., to reside.

In commenting upon the clinical history of this case, the first inference that necessarily thrusts itself upon my mind is, that there must certainly be a congenital constriction of the left ureter, low down toward the bladder.

The frequent attacks of pain and swelling in childhood, which were, upon the use of hot and counter-irritant applications, relieved, with the simultaneous discharge of large amounts of urine, point, in my judgment, quite surely to this conclusion.

The constriction must have been of such a nature that ordinary "colds," by inducing internal congestion, must have so engorged the mucous membrane of this left ureter as to cause complete occlusion of this small channel of exit for the urine.

In explanation of the tremendous enlargement present in the patient during this last attack, we have the two potent factors—cold, causing congestion, and therefore great swelling of the mucous membrane of the ureter in the neighborhood of the constriction, and, probably a more efficient cause, extension of the inflammation to the congenitally weak point, in consequence of the acute cystitis.

The simultaneous occurrence of these two factors produced such intense inflammatory swelling that the procedure which had been formerly so successful now utterly failed; so that the three influences—continued excretion of the urine (to be referred to shortly), complete obstruction of the channel of exit, and thirdly, both of these conditions obtaining for several days—all conjoined to bring about the tremendous enlargement present at the time of aspiration.

It will be noticed from the clinical history that the color of the urine, previous to the operation, was normal where, after the operation, the urine became bloody—very much resembling the aspirated fluid. How is this to be accounted for? I think as follows:

The inflammatory swelling of the ureter in the neighborhood of the constriction had very much subsided at the time of the operation, so that, as far as this factor was concerned, the urine (bloody) in the dilated ureter (dilated above the point of constriction, of course) was capable of flowing onward into the bladder; but, prior to this subsidence, the bloody urine had accumulated to so great an extent in the dilated ureter that now the element of mechanical pressure was superadded as an obstructing cause.

Of course, when the mechanical pressure was relieved by aspiration the bloody urine from the left ureter was allowed to flow down into the bladder and discolor the clear urine in the vesical organ which had been coming from the right (and healthy) ureter.

A very interesting fact to be noted from the clinical history of this case is that, previous to the aspiration on December 22d, the patient had been passing two pints of clear urine and after the aspiration three pints of bloody urine, which suggestive fact seems to indicate that the left kidney was not only not destroyed by pressure, but, on the contrary, was performing its function quite effectively. Moreover, since one gallon of fluid was withdrawn by the second aspiration, which occurred four days after the first one, the kidney was secreting daily one quart of urine.

Another interesting fact to account for is the presence of blood in the aspirated fluid as well as in the urine after the operation. Evidently, again, the clinical history furnishes a very satisfactory explanation.

On the night of January 11th the patient, after a paroxysm of violent coughing, expectorated a considerable amount of bloody fluid, closely resembling that drawn by aspiration—there occurring at the same time a complete disappearance of the swelling in the side. Evidently an ulcerative process had been going on for some time in the sac as well as through the diaphragm and related structures, in consequence of pressure, which ultimately permitted the contents of the dilated ureter to break through the diaphragm into the lungs. This ulceration was the source of the blood which discolored the urine in the diseased ureter.

Now what explains the fact, noted in the clinical history, that after this occurrence on the night of January 11th, the first urine voided was perfectly clear? It must be this: Simultaneously with the progress of the ulcerative process there occurred localized adhesive peritonitis as well as pleuritis, which prevented the pouring of the contents of the sac into the cavity of the peritoneum or that of the pleura. When the sac ruptured the ulcerated portion was carried by the force of the escaping fluid a sufficient distance into the perforation to subject it to considerable pressure. This pressure was sufficient to control the flow of blood from the open blood-vessels into the fluid contents of the sac; consequently there was no more blood to discolor the urine in the dilated ureter or in the bladder; the bloody expectoration, which continued for a few days, with slight coughing, being accounted for by the ulcerated tissue.

Probably the most interesting fact to observe in the clinical history of this patient is the entire absence of pneumonia after the contents of the dilated ureter had broken into the lung. We know that normal urine is a most irritating fluid. In extravasation of urine from any cause, the most violent inflammation is excited in parts reached by this fluid. It is this fluid that prevents successful plastic operations upon the penis where the mucous membrane of the urethra is involved, etc. Why is it, then, that the urine in this left diseased and dilated ureter did not excite inflammation in the delicate tissue of the lungs? We confidently expected pneumonia of a violent type to occur. How could we do otherwise *à priori?* But neither pneumonia nor any other inflammatory condition arose.

I think the following is the explanation:

It is a well-known fact that all the nutritive processes of the body take place in alkaline fluid. The tissues of the lungs are constantly bathed in alkaline fluid—the plasma of the blood—a fluid which is bland, soothing, and life-sustaining. We have already noted that there was hemorrhage into the contents of the dilated ureter. This hemorrhage was quite profuse, entirely sufficient to impart to the urine a pronounced alkaline reaction. Therefore the fluid that came in contact with the delicate lung-tissue was not the acrid, irritating, acid, normal urine, that does so much harm, but urine that had become perfectly harmless and soothing by being made alkaline in consequence of the large amount of blood contained in it.

I have already stated that the ulcerated portion of the sac was forced into the opening in the diaphragm, and subjected to pressure by which further hemorrhage was prevented. It was by this same means that any of the after-forming acid urine was prevented getting in contact with the lung-tissue.

Very plainly, the clinical history of this case will exclude the presence of pyonephrosis or pyelitis, and just as plainly points to hydronephrosis. Moreover, it indicates a case of hydronephrosis the pathological conditions of which are of long standing, and one in which, strange to say, the kidney had not been destroyed by long-continued (though intermittent) pressure.

ON THE HYDROBROMATE OF HOMATROPIA AS A MYDRIATIC FOR DETERMINING ERRORS OF REFRACTION.

By S. G. DABNEY, M.D.,

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Says Landolt (p. 310, "Refraction and Accommodation of the Eye"): "We very seldom have recourse to atropization for the determination of astigmatism." Fox and Gould ("Diseases of the Eye"—Quiz Compends): "Astigmatism is an invisible and elusive imp of mischief, requiring much keenness and patience to hunt him down. His hiding-place is the ciliary muscle; his disguise, amblyopia. He hates atropia as his father was said to hate holy water. There can be no accurate and exhaustive diagnosis of refractive errors without the use of a mydriatic." The majority of oculists, those in America at least, I take it, are in accord with the authorities last quoted, and must have been surprised at the opposite opinion from so high a source as the distinguished ophthalmologist of Paris. It behooves us, then, to select that mydriatic which will produce most thorough suspension of the accommodation. Our choice for this purpose usually lies between a solution of sulphate of atropia and a solution of the hydrobromate of homatropia. Though the latter is often more convenient for the patient, in that its effect is of so much shorter duration, yet it is often insufficient. Not only may it be impossible to find any correction which will raise the sight to the standard of $\frac{20}{20}$, but, what is still more likely to mislead, we may have perfect vision after its thorough instillation, and be led to believe that no glass is required, or we may find V $\frac{20}{20}$ with a plain spherical, and yet its use be unsatisfactory. It has been my custom to use a fresh solution of the homatropia, of a strength of one grain to the drachm, procured from a druggist of the best repute, and of this to put two drops in each eye every ten minutes in the hour preceding the examination; this method is pursued in all refraction cases in persons under forty-five or fifty years old. In the majority of cases it has proved satisfactory, but in a considerable number it has been afterward found necessary to use a solution of atropia, and I become every day more inclined toward the exclusive use of the latter drug to suspend the accommodation, notwithstanding the inconvenience caused by the long duration of its effects. This inconvenience is largely counterbalanced by the enforced rest thus obtained, often an important element of treatment in itself, and by the greater ease with which the eye becomes accustomed to the appropriate glass.

The following cases are sufficient to illustrate the above remarks; though I might add many others, I think it best to give only a few of typical character:

Case I.—Mr. K——, aged twenty-four, applied to me, January 21st, on account of frequent supraorbital headache and shooting pains through the head; the headache always followed any attempt at reading and any exposure to bright light, and was so severe as to compel him to leave college in Virginia and return to Louisville. He was referred to me by Dr. Franck C. Wilson, of this city. I found each eye possessed V $\frac{20}{20}$ and refused the weakest + glass. After the most careful use of homatropia in the manner above described, V still $\frac{20}{20}$, and no hypermetropia manifest. A few drops of a solution of sulphate of atropia (gr. iv. to ℥ j.) were then instilled and repeated the next morning; examination an hour after the last instillation showed V of each eye scarcely more than $\frac{20}{30}$, and each brought to $\frac{20}{20}$ clear with + .5 D cyl. ax. 90°. These glasses were directed for constant use; the gentleman returned to his college duties, and, as he informs me by a letter recently received, suffered no more from headache or painfulness to light.

Case II.—Miss W——, aged thirty, subject to pain in and over the eyes. Eyes feel tired and objects become blurred on close work. Each eye, $\frac{20}{30}$; Hm + .5 D. Under homatropia best sight obtained with + 1 DS, which gives $\frac{20}{30}$ +. Under atropia + .5 DS $\bigcirc$ + .5 D cyl. ax. 90° $\frac{20}{20}$ clear. These glasses were directed for constant use and relieved the asthenopic symptoms.

Case III.—Dr. H——, aged twenty-one, dentist, complains that his eyes hurt him and objects become blurred after close work; interferes seriously with his operations at the dental chair. V. each eye, $\frac{20}{20}$, and in each Hm of .75 D; the same under homatropia, no glass stronger than this allowing perfect vision; +.75 DS was ordered for constant use and was worn for about six months, when the gentleman returned complaining of the same symptoms, though in less marked degree. Examination under atropia now revealed a hypermetropia of 1.5 D, and its full correction gave entire relief.

Case IV.—Miss P——, aged eighteen, school-girl, finds it impossible to continue her studies from the severe headache induced by any attempt at reading or exposure to bright light. V, each eye, $\frac{20}{70}$, and each brought to $\frac{20}{20}$ with — 1.5 DS; the same condition under homatropia. These glasses were worn first for distance only, and later constantly, but with only partial relief of her disturbances. The patient returned after eight months, saying that she still suffered from headache on any attempt to read or sew. The atropia solution being instilled, the proper correction was now found to be — 1 DS $\bigcirc$ — .5 D cyl. ax. 180°; these glasses giving vision of $\frac{20}{20}$ clear, while those prescribed under homatropia now gave only $\frac{20}{30}$ +. After six weeks' use of the combined spherical and cylinder the young lady returned to say that her headaches had disappeared and she could read, sew, or otherwise apply herself to close work without annoyance.

TUBERCULOSIS TREATED BY TANNIN.

By S. DE JAGER, M.D.,

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I find in The Medical Record of August 4th a report of the treatment of phthisis by tannin. As I myself have used tannin in some cases of pulmonary tuberculosis, it will perhaps be useful to mention the results. A second reason of my speaking about this subject is that, according to what is reported about it in the *British Medical Journal* of April 7th and June 11th, it would seem that this treatment was first introduced by the Italian professor Leccherelli, of Parma, and afterward by Dr. De Viti Demano. I have not the original articles of these authors at my command, and therefore cannot say whether they refer to two French investigators, Raymond and Arthaud, who, more than a year ago, introduced this treatment after experimental researches on animals.[1]

These two investigators tried to find out whether it would be possible to bring into an animal some substance in such a way that tuberculous virus would have no effect if it were injected in the same animal afterward. After some fruitless attempts with iodoform and other things, they tried tannin, as, according to Gohier and Bouley, animals which were fed with tannin did not putrefy after death. They gave rabbits one gramme (gr. xv.) of tannin mixed with their food, during one month or less. Then they were killed and placed in an incubator in which the air was moist and warm. The cadavers were kept in it during a fortnight without the slightest putrefaction.

Encouraged by these results, they inoculated rabbits with tuberculous virus after having fed them with tannin during some time, so that their tissues were, as they call it, saturated with tannin (tannisés). Rabbits which were inoculated with tuberculous virus at the same time, but without being fed with tannin, died of tuberculosis, while those saturated with tannin were still quite healthy. The experiments were also made on patients. A quantity of five grammes (℈iv.) of tannin was given every day to patients suffering from pulmonary tuberculosis, and Raymond and Arthaud saw that, soon after the beginning of the treatment, the symptoms diminished, the cough, the night-sweats, and the general weakness became less, and after a fortnight those whose lesions were not too severe had gained in weight, which gain continued during the further treatment.

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[1] Raymond et Arthaud: Sur les moyens de rendre l'organisme réfractaire à la tuberculose. In the 1st volume of Verneuil's Études expérimentales et cliniques sur la tuberculose.

They conclude that tannin brought into the body must have some anti-bacillary effect, though they admit that their experiments do not prove in the least whether tuberculosis can be cured by it or not. After these experiments it seemed to me worth trying, and so I have used tannin in five cases of pulmonary tuberculosis. One case lasted only five months, and in this, my first trial, it was not possible to give even small quantities of tannin. Vomiting followed directly after taking it, so that I soon stopped this treatment. In the other four cases the patients are all in an advanced stage of the disease, but I am quite satisfied with the effect of the tannin. My experience in these cases does not entirely agree with those of Raymond and Arthaud. I could not detect any influence on the cough or expectoration, nor was there any lasting effect on the night-sweats. But the great advantage of using tannin is the perfect regulation of appetite, digestion, and bowels. Two of the patients came to me in a very weak condition. There was no appetite, the bowels very very irregular, now constipated, now loose. Soon after taking tannin the condition improved immensely. The bowels became quite regular and are still so, in one case after five months, in the other after six weeks, and though formerly they could eat hardly anything, not even take a drop of milk, their appetite and digestion are quite good now and they take large quantities of boiled milk with pleasure. Is it a wonder that patients gain somewhat in weight under such circumstances?

I give the acidum tannicum purum in capsules of 0.25 gm. (gr. iv.) each, and begin with one capsule three times a day, one hour before meals. After a week I change the quantity and give three capsules of 0.50 gm. (gr. viij.) each daily, and increase every three or four days with one capsule a day, till the patient takes two capsules five times a day. If, sometimes, nausea follows, a piece of dry bread taken directly after the capsules seems to have a good effect. I do not think a moment that we have here a specific remedy for tubercular disease, but as tannic acid is, even in those large quantities, relatively harmless, and as it seems to me that it regulates digestion and the action of the bowels in an excellent way, and thus benefits the general condition very much, I think it a remedy worth trying in those cases in which we hardly know what to do. Whether it will be of beneficial influence in beginning phthisis I do not know. I only can say that in my cases I could not detect any influence on the bacilli in the sputa.

Urticaria Pigmentosa.—In a monograph on this disease, containing an exhaustive analysis of previously recorded and several new cases, Dr. Raymond discusses a disease of much interest, first studied in England. This affection of early infancy is characterized by urticarial eruptions succeeded by raised or flat patches of a brown color. It has a variable duration, averaging about ten years, and the author thinks it allied to urticaria, but differing very distinctly clinically and in its pathological anatomy. He concludes that it is a special angio-neurosis, marked by a vaso-motor hyperexcitability, and an independent dystrophy or tropho-neurosis of the dermis, ending in the formation of the peculiar cells described as "mastzellen." The peculiar and characteristic coloring of the eruption, which is so interesting a feature, is thought to be due to the accumulation of "mastzellen" and superadded elements, and secondarily to hematin crystals and pigmentation of the lowest cells of the epidermis.—*The Lancet.*

Clinical Department.

CURE OF HERNIA BY INJECTION.

Dr. John G. Harvey, of Blue Mound, Ill., in referring to the recent article by Dr. Dudley P. Allen on the radical cure of hernia, writes: "I wish to add one case operated on by injection as recommended and used by Dr. Joseph H. Warren. On July 16, 1883, I performed the operation by injection, as directed by Dr. Warren, on Mr. Omer C——, aged twenty-two, of good general health. His was an old inguinal hernia on the left side. I used the following formula:

℞. Fl. ext. querci albæ, ℥ vj., reduced by distillation to	℥ ij.
Alcohol, ninety per cent	℥ ss.
Morph. sulph.	gr. iv.
Tr. veratri viridis	ʒ ij.

Of this I injected about thirty minims with a De Garmo syringe. I then applied a rubber bandage with a compress over the inguinal region. I kept patient in bed five days, after which he attended to his business, as salesman in a dry-goods store, as usual. He wore a soft truss for one year, and at the present writing has had no return of the hernia and is in perfect health. The operation was performed without anæsthetics and caused but little pain or after-trouble."

AN UNUSUAL EFFECT FROM THE USE OF COCAINE.

Dr. S. Mitchell, Jr., of Hornellsville, N. Y., writes: "I presume everyone who has used cocaine to any extent has observed some of its toxic effects. The most recent that I have observed, and one that is entirely new to me, occurred in my practice a few days since, in the person of a married lady, thirty-five years of age, of phlegmatic temperament, whom I am treating for deafness, otherwise perfectly healthy. I applied a ten per cent. solution of cocaine to her right nostril by means of pledgets of cotton, preparatory to reducing an hypertrophy of the middle turbinated with the galvano-cautery. In making the application some of the solution passed into the throat and my patient complained of slight nausea. I used the cautery without causing scarcely any pain; but immediately after the operation she complained of a general lassitude both of mind and body, quickly followed by a sensation of numbness in the right arm, then of the right leg and foot, finally of the whole right side of the body except the head and face. There was no feeling of faintness complained of, nor was there any tremor such as I had previously noticed from the toxic effect of cocaine. These disagreeable symptoms all passed away in the course of five minutes, leaving more of an impression on my mind than on that of my patient. I am quite familiar with many of the peculiar symptoms produced by cocaine, due more often, I think, to some idiosyncrasy of the patient than to an overdose of the drug, and which, I have observed, occur more frequently after applying it hypodermically than otherwise. In another case, a young lady, twenty years of age, where I injected ♏ x. of a ten per cent. solution into one of the tonsils, preparatory to excision, she was instantly seized with an uncontrollable tremor of the whole body, accompanied by hurried respiration and faintness. She recovered quickly by the use of stimulants, and I was able to complete the operation without any further bad symptoms whatever."

Meiopragia is the term proposed by M. Potain to indicate the lessened functional power of an organ. The word is derived from two Greek words meaning to diminish and to do, and signifies, literally, lessened efficacy.

Progress of Medical Science.

THE FORMATION AND CLASSIFICATION OF TUMORS.—Dr. W. Roger Williams publishes in *The Lancet*, a review of his views on the formation and classification of neoplasms. He says that the various pathological new formations originate by reversion of cells which are usually engaged in maintaining the normal structure of the body, to an embryonic state of activity. The morbid products, though themselves redundant, generally represent a reduction or *minus* of the corresponding healthy structures whence they originate, differing from them only in degree. In all of these cases, as in the new formations of embryonic life, the subordination of the local processes to the specific hereditary tendency of the whole appears to be lost or diminished, so that unspecialized cells then manifest their potential reproductive qualities by taking on semi-independent growth and development. In short, there is departure from the definite order, limitations, regular stages, and fixed periods of the normal evolution. The classification adopted by the author is the following:

I. *Archiblastic* neoplasms.	1. Lowly organized—	*Epithelioma.*	Squamous. Cylindrical. Glandular.
	2. Highly organized—	*Papilloma.* *Adenoma.* *Cystoma* (neoplastic.)	
II. *Parablastic* neoplasms.	1. Lowly organized—	*Sarcoma.*	Round-celled. Spindle-celled. Myeloid.
		Myxoma.	
	2. Highly organized—	*Fibroma.* *Lipoma.* *Chondroma.* *Osteoma.*	

Many neoplasms are malignant—that is to say, they have the power of reproducing themselves, either locally after removal, or in distant parts; while others have no such infective properties. Need we assume any specific difference between the two kinds of neoplasms to account for this? Certainly not. Between the malignant and the non-malignant growths so many transitional forms exist that it is impossible to sever the chain otherwise than by arbitrary methods, contrary to the nature of things. Upon what, then, does this difference depend? It must be borne in mind that before any neoplastic action can arise in a part, the normal restraining influence exerted by the whole organism upon its cells, in accordance with the specific hereditary tendency of the whole, must be weakened, modified, or withdrawn. Moreover, it has been found that the product of the evolution of cells thus abnormally emancipated varies according as the emancipation is complete or more or less incomplete. The natural tendency of cells thus completely emancipated is to form new individuals by agamogenesis. But in the higher animals this never happens, because the emancipation is always more or less incomplete; hence in them only new parts, new tissues, and neoplasms are formed. Here the nature of the product seems to depend upon the grade of organization attained by the neoplastic cells. It is well known that in the formation of highly organized structures the cells of the part suffer loss or impairment of their proliferous (reproductive) power, owing to their protoplasm being used up and converted into special tissues. Most non-malignant neoplasms are of this nature; their histological character closely resembles that of the corresponding normal tissue, whence they originate. Such neoplasms lack infective properties because they are highly organized. On the other hand, all lowly organized neoplasms are more or less malignant, and the most malignant are the most lowly organized. Hence it may be concluded that the degree of malignancy of a given neoplasm is chiefly dependent upon its grade of organization. To this cause, and not to any essential difference in nature of the morbid process, the author attributes the different behavior of these two kinds of neoplasms.

Viewing the matter in this light, he can see no probability of there being any truth in the theory that neoplasms are the outcome of general *blood* disease, dependent upon the presence of micro-organisms like tubercle and syphilis. He thinks De Morgan came nearer the truth then any one else when, in the memorable debate on cancer at the Pathological Society in 1874, he said "I can see no analogy between new growth, whether as innocent as lipoma or as malignant as cancer, and the products of true general or blood disease in respect to their genesis and destination. From the first a tumor is a living, self-dependent formation, capable of continual growth by virtue of its own power of using the nutritive materials supplied to it. Nothing like this is seen in any of the blood diseases."

EXPERIMENTAL CIRRHOSIS.—Drs. Straus and Blocq have administered to rabbits, by means of the œsophageal tube, alcohol in doses of from eight to ten grammes, increased to fifteen grammes, with three times the amount of water (*The Lancet*). The alcohol consisted of a mixture of ethylic and amylic alcohol. It was found that the administration had to be continued for some months before marked changes in the stomach and liver could be appreciated. In cases where the toxic effects were more rapid acute gastritis occurred; but where the animals survived these early effects the result was a thickening of the mucosa, especially in the cardiac region. The liver did not become notably affected until after seven months, although very slight changes were perceptible at the third month. The changes corresponded to those of cirrhosis in the human subject, consisting in the accumulation of embryonic cells in the portal zones, without, however, any special relation to the bile-ducts or the branches of the portal vein and hepatic artery. The change was rather a diffuse lesion of Glisson's capsule. As a rule, the liver-cells were strongly marked off from the new tissue, but in places the latter had invaded the lobules and isolated liver-cells, suggesting possibility of a primary degeneration of the parenchyma under the action of the alcohol. Even after a year's duration the new tissue showed no signs of fibrous transformation. The distribution of the infiltration suggested that the cirrhosis is at first monolobular, and that the multilobular character held by Charcot to be distinctive of alcoholic cirrhosis is a subsequent development of the process.

CHOLECYSTOTOMY WITH LIGATION OF THE CYSTIC DUCT.—Dr. Zielewicz believes the chief objection to simple cholecystotomy is, that it, as a rule, leaves a persistent fistula and often lessens the nutrition. He says that the "ideal" operation, cholecystotomy with suturing and return of the gall-bladder, has the danger of the rupture of the line of suture due to over-distention of a still partially elastic bladder. Besides this, if new stones form, the operation must be repeated. It seems that cholecystectomy is less dangerous than cholecystotomy. He cites one case in which he made an incision directly over the enlarged gall-bladder and parallel with the median line. A double ligature was passed around the cystic duct and this was cut between the two. The incision was too free and involved the liver substance, causing free hemorrhage, but this was stopped by the use of iodoform and pressure. The bladder was then freed as much as possible from the liver and stitched to the wound in the abdominal wall. Then it was incised and there escaped some bile and a rough mulberry-like calculus of the size of a walnut. The patient recovered. The author claims this as the first successful case of ligature and section of the cystic duct in a human being. The advantages of this method are:

1. Radical cure without a resulting biliary fistula and its consequences. The gall-bladder is excluded from the organism as in exsection. Its secretion, the product of its mucous membrane, diminishes in time because of the

cessation of the biliary flow, and especially after the cavity has become obliterated by newly-formed granulations.

2. The operation is simple and less dangerous than cholecystectomy and gives the same result.—*The American Journal of the Medical Sciences*, August, 1888.

The Delivery of the After-coming Head.—Winckel, at the recent meeting of the German Society for Gynecology, referred to twenty-one methods of extracting the after-coming head. He considered that procedure best which combined pressure externally with the maintenance of the head in that position best suited for birth.

He accomplishes this as follows: The trunk and arms, when born, are raised. Two fingers of the right or left hand toward which the face looks are placed in the child's mouth at the base of the tongue and flexion is secured. The trunk is then placed upon the forearm of this hand and with the other hand pressure is made through the uterus upon the head.

As Wigand and Martin had previously described this method, he styled it by their names. He had found delivery by this method readily effected with a pelvic antero-posterior diameter of two and one-half inches. Martin had employed it successfully in thirty-three cases, and he used it often in his clinic.—*The American Journal of the Medical Sciences*, August, 1888.

Ovarian Tumors in Pregnancy.—At a late meeting of the Harveian Society (*The British Medical Journal*) Dr. Braxton Hicks reported two cases of ovarian tumor, associated with pregnancy, in which the removal of the tumor had been followed by recovery. In the first, labor had continued thirty hours. The tumor came down, and prevented the head being seized with forceps, and turning was tried and found impossible. The child was finally delivered with long forceps, and was still living. The placenta required removal. The tumor grew rapidly after delivery, and was removed. It was adherent everywhere, and was compound in character, nearly colloid. The patient made an excellent recovery. In the second case there was an ovarian tumor which reached rather above the umbilicus. It was diagnosed to be composed of two cysts. The woman had missed two periods, and it was proposed to wait until after the middle of pregnancy. However, the cyst became tense, with pain, and was removed. The pedicle was found twisted, and the tumor adherent and becoming necrosed. No uterine action came on for two weeks, when an ovum was expelled. The cases showed that when ovarian tumor and pregnancy were concurrent, if the tumor gave signs of irritation, the sooner it was removed the better.

Salicylate of Magnesium in the Treatment of Typhoid Fever.—This salt is easily prepared by dissolving salicylic acid in distilled water and saturating the boiling solution with carbonate of magnesium, when crystals of the salt may be obtained in needles, readily soluble in water and alcohol, and both colorless and odorless. Dr. Huchard gives it in doses of from forty to eighty grains daily, and it is not contraindicated by diarrhœa, since it is but slightly laxative even in large doses. It appears to act both as an antipyretic and as an intestinal antiseptic.

The Local Treatment of Diphtheria.—Mr. R. Sanderson read a paper on this subject at a meeting of the Brighton and Sussex Medico-chirurgical Society (*The British Medical Journal*). He argued that, apart from Oertel's elaborate researches, there was sufficient clinical evidence to show that diphtheria was primarily a local disease. The local lesion should be regarded bacteriologically as a "cultivation" upon human mucous membrane; and *cæteris paribus*—that is, assuming a uniform healthiness of organism—the constitutional poisoning was directly proportional to the area occupied by the cultivation. The diphtheritic membranes were a protecting blanket under which and in which this cultivation throve, and, moreover, were in themselves a mechanical danger, and aided the spread of the cultivation by transplantation and continuity. They should, therefore, be thoroughly dissolved early, and redissolved as soon as reformed. He knew of no solvent better than Finkler's papain, and described the method of applying it. Having thus exposed the cultivation, a germicide should be at once used; he preferred acid. carbolic. ʒ j, glycerine, ℥ j. He maintained that by taking a case early and treating the local lesion rationally on the above lines, the area and consequently the toxæmia could be controlled, and the danger of invasion of the nose and larynx minimized.

The Treatment of Chronic Affections of the Heart.—According to Lichtheim, Oertel's method is a sovereign means of cure for those forms of chronic heart disease whose genesis is due to intemperance in eating and drinking, and to lack of bodily exercise. In those diseases of the heart, on the other hand, due to the dilating influences of immoderate bodily exercises, or other causes, this method is of no value. Bodily exertion is only to be allowed in moderation and when there is tolerable compensation, and it must never be allowed to produce much dyspnœa. This class of cases is to be treated much more carefully than are instances of real valvular disease. The treatment with digitalis, strophanthus, and caffeine remains the principal one for disturbances of compensation. Where the use of drugs fails, the dietetic method is also of no avail. Only in the removal of hydrosis is Oertel's method of real assistance to the treatment with drugs, though it can never take the place of the latter. During the period of intact compensation the use of medicaments is superfluous, and Oertel's method, used in moderation, finds its true field.—*The American Journal of the Medical Sciences*, August, 1888.

The Combination of Syphilis with Carcinoma.—At a recent meeting of the Vienna "Medizinisches Doctoren Collegium" Professor Lang showed a case in which syphilis was combined with carcinoma (*Medical Press*). The first cases of this kind had been communicated by Hutchinson and Langenbeck. Lang had hitherto had the opportunity of observing four such cases. The carcinoma which developed later on, on the syphilitic soil, was each time demonstrated by histological examination. In the first case which he had observed, in 1883, there were besides relapses of iritis and other symptoms characteristic of syphilis, also gummatous ulcerations of the face. Under anti-syphilitic treatment all the ulcerations disappeared, except one, which became transformed into a cancroid of the skin. The second case was that of a man, aged forty-six, who had suffered from various syphilitic ulcerations on different parts of the face and the body. After anti-syphilitic treatment one ulcer, viz., that under the tongue, remained behind, and became also transformed into carcinoma. In the third case a syphilitic infiltration of the lower lip relapsed at the end of a year, and assumed a carcinomatous character. The fourth case was now brought forward before the Society. The patient presents several scars on the trunk and the face, as well as perforation of the palate and loss of substance of the upper lip. She had been admitted into the hospital during the month of January. Most of the ulcerations were at that time covered with a white scab, but the histological examination of this substance did not reveal any sign of importance for the diagnosis. Since the 19th of February current, a small ulceration, which was very indolent, became visible over the hard palate. The part which was excised from it for histological examination was found by Professor Weichselbaum to be epithelioma. Professor Lang remarked that these developments of carcinoma on a syphilitic base had not hitherto attracted sufficient attention.

The Treatment of Colic.—Dr. Capitan recommends a pill composed of naphthaline, ½ grain; iodoform, ⅐ grain; tannin and antipyrine, each, 1 grain, for the relief of intestinal colic.—*La Riforma Medica.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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Published by

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, September 15, 1888.

THE EXTENT TO WHICH LEGISLATION CAN AID MEDICAL EDUCATION.

Mr. W. A. Purrington, the Counsel of New York State and County Medical Societies, read a paper last week before the Health Department of the American Social Science Association, showing the extent to which legislation can go in maintaining a proper standard of medical education. This paper was one of several given before the health department, which had under consideration the necessity of higher requirements for obtaining a medical degree.

Nowhere have the effects of legislation, and its proper limitations, been more ably set forth than in Mr. Purrington's paper. Mr. Purrington sent a circular letter of inquiry to every State and Territory of this country, and also to the British Provinces. Almost every reply expressed approval of some system of regulating by statute the practice of medicine; and the opinion was also strongly given that such legislation as already exists, crude and imperfect though it is, has perceptibly improved the standard of medical education.

Strange to say, there are some opponents to statutory regulation of medical practice who regard it as an infringement of the liberties of the citizen, and therefore unconstitutional; but Mr. Purrington says such legislation is based on principles approved by every judicial authority, and rests on the right of society to self-protection.

The stumbling-blocks in the way of every effort to achieve a wise medical legislation are, first, the ignorance and greed of the believers in, and practisers of, quasi-supernatural methods of treating disease; second, jealousies among the more intelligent adherents to "isms;" third, jealousies between the mother-church of medicine and those of her children that wish to make of their specialties separate professions; fourth, the obstructions from vested interests that consider themselves threatened—the incorporated schools that have some capital invested, and regard their power to confer a diploma operating as a license to practise medicine as their chief stock in trade.

The condition of the statute-books to-day is one of confusion. There are special acts incorporating medical, pharmaceutical, and dental schools, besides acts incorporating medical societies of physicians and of sectarian practitioners of motley nomenclature; general acts regulating the practice of physics and surgery, of dentistry, of pharmacy; and sanitary regulations and laws creating health boards.

Mr. Purrington regards this jumble as in itself an evil, and an efficient cause of the propagation of false ideas. A logical medical law, he says, which of itself will be an educator, will recognize the fundamental principle on which all these statutes are to be defended, that already indicated, the right of the State to protect the health as well as the life and property of the citizen. One health statute will then be enacted and a responsible board created, that will have in charge the arrangements of quarantine and sanitation, and also the licensing of medical practitioners of every sort; for he contends that the dentist and the pharmacist should be recognized as medical men.

He thus sums up what, in his opinion, is all that legislation can do in aid of medical education:

I. By fixing a minimum age under which they (physicians, dentists, and pharmacists) will not be allowed to practise their calling.

II. By requiring of each of them a fixed term of study, of certainly not less than two graded years, leaving to the Board the care of details.

III. By requiring proof by examination or certificate that each candidate for license had studied, before beginning his professional course, at least those branches in which law students are examined in this State before they commence their legal studies.

IV. By declaring that no medical schools (including in the term schools of dentistry, pharmacy, and midwifery) shall be incorporated by special act, and providing a general law for the incorporation of such schools, only upon proof made of the possession by the incorporators of sufficient capital—say not less than a hundred thousand dollars—and a teaching plant, to justify the belief that the school will be capable of exercising faithfully its franchise. Such an act should contain stringent provisions for its own enforcement and for the forfeiture of abused charters.

V. A minimum course of medical study should be prescribed, in which a grade of at least seventy per cent. should be attained on examination. The regulation of all details of the examination should be left to the Board. But the topics in which the examination should be had might well be specified in the statute. It might be well to omit the topics of therapeutics and materia medica, upon which all medical heresies have been begotten by unscientific minds, inferring that one who should creditably pass his examinations in botany, chemistry, physics, anatomy, surgery, physiology, hygiene, diagnosis, obstetrics, and microscopy, especially if his clinical examination should show him to be educated in a true sense to observe and draw sound deductions from observation, might be trusted to form his own conclusions and pursue his own studies as judgment should dictate in the field of therapeutics. The law can have nothing to do with medical theories. The utmost it can do successfully is to prescribe that none shall practise medicine except persons educated in those branches of science that all admit are essential to an understanding of morbid conditions of our species, and possessed besides of a fair general education.

VI. Finally, the law should not recognize any diploma as of itself conferring a right to practise medicine; even if the possession of such document should be required as an antecedent to examination by the Health Board, it should not be allowed to take the place of such an examination. Any scheme of medical legislation will hereafter embrace that great safeguard against imposture and efficient tracer of frauds, the system of registration, where no one is allowed to practise medicine who has not made a public record under oath of his name, origin, and credentials for a license.

THE COMING CONGRESS.

The opening session of the Congress of American Physicians and Surgeons will be held in Washington on Tuesday evening next, September 18th, the opening sessions of the component societies and associations being held on the morning of the same day. Eleven societies are already affiliated to the congress, and two other societies, which have as yet no official relation to the congress, are to meet in Washington at the same time and will doubtless then make application for admission. The societies already represented in the organization are the American Surgical Association, American Association of Genito-urinary Surgeons, American Laryngological Association, American Climatological Association, Association of American Physicians, American Otological Society, American Ophthalmological Society, American Neurological Association, American Dermatological Association, American Physiological Society, and American Orthopedic Association. The two societies which, it is understood, will apply for admission at this meeting are the American Gynecological Society and American Association of Obstetricians and Gynecologists. We really do not see the necessity of two national associations of so similar a character as the last mentioned, and it is to be hoped that some means can be found of uniting them and forming of the two one strong and vigorous society.

The plan of organization of the congress is a novel one in this country, and the wisdom of its originators cannot be presaged with certainty, but must be proven by the result of the meeting. In the case of the American Medical Association, the parent society overshadows, in a measure, the different sections. The latter are subject to the former, and attendance on their meetings varies greatly according to the interest felt in the papers to be presented. The membership is, as it were, a floating one, and each one feels that he is a member of the association rather than of any particular section. In the Congress of American Physicians and Surgeons, on the other hand, the component societies are everything, and the general congress is but a bond of union of an elastic nature, bringing the societies together once in three years and permitting them to meet where they will the other two. Each associate of the congress, therefore, feels a sense of loyalty to his own society, and strives to make its meeting a success, promoting thereby, as it were secondarily, the success of the general congress. It is as an association of federated States, a true democracy, and not as an aggregation of dependencies, the inhabitants of which are loyal subjects of the parent country rather than of the individual colony. The democratic plan is a success politically, and there would seem to be no reason why it should not possess equal advantages in the sphere of science.

But while the tendency of such a plan of organization will doubtless be to stimulate the activity and increase the vigor of each society, there is a possible danger that this may be overdone—that the mass of material presented will be too great for ready assimilation. A too heavy dose of science is like a too hearty meal, it overtaxes the digestive powers, and benumbs rather than stimulates the organism. If the different societies were to meet at different times this possible disadvantage would not exist, and there would be no danger that some really valuable paper embodying original ideas may be overlooked in such a crowd. However, as the congress will meet but once in three years, this disadvantage, if such it should prove to be, will be only an occasional one.

The first general meeting of the congress will be occupied by a discussion on "Intestinal Obstruction in its Medical and Surgical Relations," the debate being opened by Drs. Reginald H. Fitz, of Boston, and Nicholas Senn, of Milwaukee. On the following evening the subject of "Cerebral Localization in its Practical Relations" will be discussed by Drs. Charles K. Mills, of Philadelphia, Roswell Park, of Buffalo, and others. Dr. John S. Billings, the President of the congress, will deliver an address on "Medical Museums" at the closing session.

The meeting promises to be a success, as far as numbers are concerned, and if it is not a success in every other way it will not be through the fault of those who have had the organization of the congress in charge, for their work is deserving of all praise. We sincererely hope that it will be a most successful meeting in every sense, and whether it is or not the readers of THE MEDICAL RECORD will be able to judge from the report which we shall present to them of the work of all the component societies of the congress.

THE YELLOW-FEVER EPIDEMIC.

It is easy to find mistakes after some misfortune has occurred, and the Florida epidemic affords an excellent opportunity to look back and see what might have been done, if only the future had been foreseen.

First of all, the governor, several months ago, refused to call the legislature for the purpose of organizing a State Board of Health, with the especial object of correcting the sanitary imperfections of Jacksonville.

Then, again, we are told that the disease this year originated in a small hamlet called Manatee. There are probably fifteen houses in it. Twenty thousand dollars, or perhaps even $10,000, would have bought all of them and all they contained. If these had been promptly destroyed, possibly the fever would have been checked.

Finally, it seems especially unfortunate that at the outset there should have been so much friction between the Jacksonville people and the Marine Hospital Service. The opinion is that the head of that bureau, though meaning well, was much misunderstood and hampered in his efforts.

CHANGE OF DATE OF MISSISSIPPI VALLEY MEDICAL ASSOCIATION MEETING.—In order to facilitate the most liberal railroad rates, and in keeping with the desire of many important members who wish to be present, the change from September 11th to September 25th has been made by the committee of arrangements and the officers of the cssociation.

News of the Week.

The Mortality from the Yellow Fever at Jacksonville has so far been very light. Up to September 11th the number of cases was 632, and of deaths 78; giving a death-rate of only twelve per cent. In 1878 the death-rate among about 36,000 cases occurring in Louisiana was 16.66 per cent. (Bemiss), and among 800 cases in Charity Hospital was fifty per cent. The most favorable death-rates, however, from this disease run as low as seven to ten per cent.

A Dinner to Distinguished Visitors.—Dr. Fordyce Barker gave a dinner on Tuesday evening, at the University Club, to Sir William MacCormac, Surgeon of St. Thomas' Hospital, London; Mr. Arthur Durham, Surgeon to Guy's Hospital, London; and Mr. Reginald Harrison, Surgeon to the Liverpool Infirmary. There were also present: Dr. William M. Ord, F.R.C.P., physician to St. Thomas' Hospital, London; Professor Horsley, of Cambridge University; Drs. L. A. Sayre, R. F. Weir, W. T. Bull, George A. Peters, and George F. Shrady. Dr Barker welcomed the guests on behalf of the profession of America, which address was feelingly responded to by Mr. Durham, Sir William MacCormac, Mr. Harrison, Dr. Ord, and Professor Horsley. Informal toasts were responded to by Drs. Sayre, Shrady, Weir, Peters, and Bull. The distinguished guests are delegates to the Congress of American Physicians, to be held in Washington the coming week, and cannot fail to add dignity and interest to the proceedings of that body. We can assure them a hearty welcome by the profession throughout the country.

The Coming Congress at Washington.—We shall endeavor in our next issue to give a complete and exhaustive report of the doings of all the sections of the congress to be held next week in Washington. It is to be hoped that the readers of papers will aid our correspondents in promptly obtaining abstracts of papers read and discussed. We shall thus be enabled to publish the entire report in one issue, as has been our plan with other conventions of equal magnitude and importance.

The American Surgical Association.—The following is the programme of the annual meeting to be held in Washington during the coming week: "Excision in Articular Disease," by Dr. John Ashhurst; "The Relation of Micro-organisms to Injuries and Surgical Diseases," by Dr. Nicholas Senn; "Cerebral Localization, the Relation to Operative Surgery," by Dr. Stephen Smith; "Three Cases of Brain Surgery," with presentation of the patients, by Dr. W. W. Keen; "Certain Indications of Trephining, and their Comparative Value," by Dr. J. William White; "The Choice of Operation for Vesical Calculus," by Dr. Hunter McGuire; "Suprapubic Cystotomy," by Dr. John H. Packard; "Forty Years of Chloroform and Ether in Louisville, Ky.," by Dr. D. W. Yandell; "The Surgical Management of Typhlitis and Perityphlitis," by Dr. W. T. Bull; "The Propriety of Surgical Interference in Perforating Typhoid Ulcer," by Dr. J. Ewing Mears; "Report of a Case of Simultaneous Ligation of the Right Carotid and Subclavian Arteries for Aneurism of the Innominate," by Dr. John H. Packard; "Hernia, its Treatment," by Dr. C. H. Mastin; "The Comparative Merits of Tracheotomy and Intubation in the Treatment of Croup," by Dr. George W. Gay; "Pregnancy and Operative Surgery, their Mutual Relations," by Dr. L. McLane Tiffany; "Nerve-stretching," by Dr. N. P. Dandridge; "Nephrectomy for Gunshot Wounds," by Dr. De Forest Willard; "Shock," by Dr. David W. Cheever.

The Programme of the Sixty-first Annual Meeting of the Association of German Naturalists and Physicians has been published. The meeting takes place at Cologne during the week commencing Monday, September 17th. At the general meetings addresses will be delivered by Professors Binswanger (Jena), Weismann (Freiburg), Waldeyer (Berlin), Meynert (Vienna), Exner (Vienna), and Dr. Von Steynen (Düsseldorf). There are thirty sections, including almost every branch of physical and natural science, as well as of medicine. In the Section of General Pathology, papers are promised by Drs. Baumgarten, Benekc, Ribbert, Birch-Hirschfeld, and Anton. Bum; in that of Medicine, by Drs. Naunyn, Leichtenstern, H. Wette, and Ewich; in that of Surgery, by Drs. Witzel, Rosenberger, Tillmanns, and Schimmelbusch; in that of Pædiatrics, by Drs. von Jaksch, Paltauf, and Hagenbach, who take part in a discussion on the Forms of Nephritis following on Acute Infective Diseases; by Drs. Pott and Thomas, on Antipyresis in Infective Diseases; by Drs. Sprengel and Kempermann, on the Operative Treatment of Tubercular Disease of Bones and Joints; by Dr. Unruh, on Post-diphtherial Nervous Diseases; and many other papers. There are also Sections on Gynecology, Neurology, Ophthalmology, Otology, Laryngology, Dermatology and Syphilis, Hygiene, Forensic Medicine, etc.

The Doctors and the Yellow-fever Epidemic.—We take pleasure in quoting the following true and appreciative words from the New York *Sun*: "The whole country has observed with admiration the heroic conduct of the physicians who are battling with the yellow fever in the stricken city of Jacksonville. They have not only remained at the post of duty in the presence of danger, rendering services freely to the needy, but they have striven to surpass each other in deeds of devotion and self-sacrifice. Several of them have fallen victims to the plague during the past two months, and one of the most grievous incidents reported from Jacksonville is the death, on Monday last, of Dr. W. L. Baldwin, who caught the disease from one of his patients in the hospital. Not a few doctors practising in different parts of the country have gone to Jacksonville to render relief to the distressed people, and hundreds of others have nobly offered to follow their example. Truly such physicians are worthy of honor and gratitude from mankind."

The Emperor of Germany.—Dr. Morrell Mackenzie says that Emperor William suffers from chronic strumous otitis media and right hemiatrophy.

Dr. John T. Huddleson died recently in Lancaster, Pa., at the age of eighty-eight years. He was born in Norristown, and studied medicine at the University of Pennsylvania, and was said to have been the oldest living graduate of that institution, though this honor has been claimed for several others.

Mr. Reginald Harrison, of Liverpool, now on a visit, is such an admirer of our country that he is becoming very much Americanized. From a knowledge gained by previous trips throughout the United States, he takes upon himself the responsibility of chaperoning his friends to points of interest. As he expresses it, he boldly inoculates them with the American idea of "length, breadth, and thickness," and has met with most remarkable success. Mr. Durham, of Guy's, is at present a willing patient under his treatment. Both gentlemen are guests of our distinguished townsman, Dr. L. A. Sayre.

The Homœopathic Hospital on Ward's Island is said to be badly managed. There is great difficulty in securing internes, on account of the distance from the city and from the declining belief in the clinical practice of homœopathy pure and simple.

The Mismanaged Morristown Asylum.—Dr. Booth, the conscientious medical director of the mismanaged Morris Plains Insane Hospital, has, after a most crucifying endeavor to right all the wrongs there committed, resigned in despair. The trustees and warden attempted to dictate the treatment of patients. He made a firm protest against the resultant brutality.—*Medical Standard.* Machine politics and local pigheadedness seem to have been at the bottom of the trouble.

Successful Transplantation of Skin from a Leg Amputated Two Hours.—Dr. Stephen Smith, of this city, writes: "You notice the fact in The Record that Dr. Bartens successfully transplanted skin from a corpse, death having occurred twenty minutes before. This incident reminds me that several years since I transplanted seventy-five particles of skin from a leg that had been amputated over two hours, of which number seventy-three lived and grew vigorously."

Removal of a Tuberculous Kidney.—Dr. Mattakouski, of Warsaw, has recently extirpated the right kidney for tuberculosis. The patient had phthisis pulmonalis. She recovered from the operation and was discharged improved.

Vaccinating Against Cholera.—A Russian professor named M. Gamaleia announces his intention to inoculate himself with cholera germs. For some time past he has been experimenting with cholera virus, and he professes to be able to render humanity cholera-proof by "vaccinating" mankind with his attenuated cholera virus. The professor should inoculate himself first and talk afterward.

The Old Story of the Borrower.—A physician residing in New York State writes: "The latest thing out is a man, giving the name of H. Raynor, calls at your office and hands you a card, 'Dr. Lepsie's Improved Combination Microscope, specially adapted for Physicians' Uses. Price, $5.00.' While you are reading the card he goes on to say that he has something here gotten up cheap, especially for physicians' use at the bedside of their patients; something that they can carry in their pockets and use for urinary analysis, etc. In the meantime he takes a prune, or something of the kind that has sugar mites in it, and places some of it on the lens and asks you to look; then a drop of water that has wrigglers in it is given for your inspection. If you hesitate, out comes a 'forty-dollar microscope' of low power, and a drop of the same water is put on and you are asked to compare; with the microscope you see a clear field and only the water and its contents, but with the cheap thing you see all of this, and more too, from the imperfections in the lens. By this time he is in a hurry to take the train or to get to some given point by a certain time, and he has scant time to get there, and he hurriedly makes a sale, or does not."

Doctors will have to stay in their offices continuously if the plaintiff in the following case has any basis for his complaint. We take the account from *The Doctor.* "Theodore P. Jones, of New York, sued Dr. Edward Malone for fifteen thousand dollars damages, claiming that he had neglected his duties as a physician. The case, according to Mr. Jones' story, seems to be about as follows: Dr. Malone, who was attending Mrs. Jones, declared on a certain day that she would probably be delivered of a child before morning. His prediction proved correct, but when Mr. Jones went for the doctor the doctor was not at home. Another doctor was called in. The child was weak and died in a few hours."

An Alleged Solvent for Cataract.—A physician living at Port of Spain writes a letter, published in the *Pharmaceutical Journal*, in which he asserts, from personal experience in his own case, that the juice of a plant called *cineraria maritima* has a curative effect on cataract. His statement is that, in 1868, while in practice at Port of Spain, he began to suffer from impaired vision, which gradually increased. In 1873 he visited Europe for advice, but nothing was done, and he went back. He returned to England in 1878, and a cataract was removed from the left eye by a well-known surgeon, but without any good result. He returned to the colony and had to be led about till February, 1888, when he applied the juice of the above-mentioned plant. He commenced its use on February 7th, and on the fourth day (which the writer is careful to explain was February 11th) he perceived a "faint glimmer of light" in the right eye. After a little while he could with this eye discern figures, and even faces under a favorable light, and tell the time on a white watch-dial. As will be seen, the evidence for the value of the plant is not very strong.

French Justice in a Case of Mistake in Prescription-writing.—A French medical man recently prescribed one gramme of sulphate of atropine instead of a centigramme, the error resulting in the death of his unfortunate patient. The doctor and the chemist who dispensed the prescription have been found guilty of homicide through imprudence, and the former was condemned to pay 600 francs as compensation, and the latter to five days' imprisonment and the payment of 400 francs.

A Case of Yellow Fever in New York.—As we go to press we learn of the death of Professor Proctor, the well-known astronomer, from yellow fever, after an illness of two days. The patient was promptly removed to the Willard Parker Hospital from the Westminster Hotel by Dr. Edson of the Health Board, and the room was properly fumigated. Dr. Conant, the attending physician, recognized the disease in its inception, and the diagnosis was confirmed by Drs. A. Jacobi and Edson. The prompt action of the health authorities in this case shows what can be done in the way of stamping out the disease.

Society Reports.

BRITISH MEDICAL ASSOCIATION.

(Special Report for THE MEDICAL RECORD.)

Fifty-sixth Annual Meeting, held at Glasgow, Scotland, August 7, 8, 9, *and* 10, 1888.

SECTION OF MEDICINE.

WEDNESDAY, AUGUST 8TH—SECOND DAY.

DR. MCCALL ANDERSON delivered the President's address. After thanking the members of the Section for the honor of his election, he proceeded to the consideration of the

DIAGNOSIS AND TREATMENT OF SYPHILITIC DISEASE OF THE NERVOUS SYSTEM.

He quoted from an author in one of the journals, who had said that the majority of cases of syphilis in modern times were mild, and required but little treatment. This he considered as an error, for it was this way of looking upon syphilis as a trifling affair that led to the disease being often almost untreated, whereas, if powerful treatment were used from the first, many patients might be saved from death in after-years from the effects of cerebral disease caused by it. He based what he was about to say upon twenty-four cases which he had collected. When a case of cerebral disease came before the practitioner, he had to make out the diagnosis. This would have to be founded: 1, On the history of the case; 2, on a careful examination of the cutaneous surface of the patient, and on a search for scars or defects in the fauces. Many persons do not like to admit that they have had syphilis, and in many cases they have forgotten all about the early history of the disease, because the infection took place so long ago. Again, cerebral syphilis might be due to hereditary syphilis. In such cases tubercular eruptions or cicatrices had to be sedulously looked for. He had notes of cases where the primary lesion was present thirteen, eighteen, or thirty-five years before the brain disease supervened. In one case of cerebral syphilis, in a man aged forty, he found that the patient had had seven healthy children. He was in a deplorable state, with four sloughing bad sores, when admitted into hospital. He had no history of syphilis, and only presented a rather sallow tinge of countenance to cause a suspicion of the disease. And yet the exhibition of a drachm of mercurous oleate in inunction rapidly restored him to comparative health. Another point in diagnosis was the presence of neuralgia, especially when of an intermittent type, occurring only at night. Sleeplessness was a frequent concomitant of this symptom. Next, the appearance of sallowness was likely to be a possible sign of the disease. The questions of age and sex were all-important. Of twenty-four cases of the disease twenty were men and four women. At or before middle life was the time when syphilitic paralysis most often occurred. Dr. Baffard was right when he said that, excluding a few other causes, syphilis was, at that period of life, by far the commonest cause of hemiplegia. Genuine epilepsy came on in childhood, but syphilitic epilepsy supervened in manhood. Next, the effect of occupation was interesting, and learned persons were said to be more liable to cerebral syphilis than unlearned, yet there was a great deal of syphilitic cerebral disease among the working classes.

A most important point in diagnosis was that various lesions were often combined in syphilitic cerebral cases. Thus one man, aged thirty, had diplopia, epilepsy, and left hemiplegia, and also nocturnal neuralgia. The symptoms in cerebral syphilis were very variable in appearance. Thus a gentleman, in 1886, aged thirty-eight, had first of all slight difficulty in articulating, and numbness of his left foot. Then he could not spell, and became quite aphasic. In this case iodide of potassium did no great good. It appeared that thirteen years previously he had had a hard chancre. He improved greatly under the use of inunction of oleate of mercury. The psychical condition of the patient was an important feature in the diagnosis. The presence of gummy tumors might cause epileptic attacks, and irritability of temper, and insanity might come from occlusion of the arteries. One of the cases was that of a man, aged twenty-nine, who had a dazed and stupid look. He remained unconscious for fifteen minutes on one occasion, and exhibited anæsthesia. There was no history of syphilis, but the inguinal glands were enlarged, and it seemed that four years previously he had had some anomalous symptoms. Mercurial inunction, carried out for thirty days, did this man a great deal of good, and he recovered from the attack. General paralysis of the insane showed, on post-mortem examination, nothing beyond the signs of repeated hyperæmias, and might be caused by syphilis. Where the spinal cord was attacked by syphilis, spinal paralysis ensued.

In 1887 a woman was admitted into hospital who had persistent diarrhœa and retention of urine, which symptoms had lasted for five months. She had constipation, lightning pains, and tenderness over the dorsal vertebræ. There was loss of vision of one eye and the tendon reflexes were abolished. In 1886 girdle sensation was felt as high as the clavicles, and there was almost total anæsthesia. The sexual appetite was absent. Her husband was a soldier, and she had had an abortion soon after her marriage some years before. This patient improved greatly under pot. iod., gr. x., twice daily, and the anæsthesia disappeared. She then was treated with mercury, and was restored to health. The next point in diagnosis was the occurrence of loss of sight or other eye affections. The third and fourth nerves were those most commonly implicated. It had been said that thirty per cent. of all the cases of iritis were syphilitic. The occurrence of minute gummata in the iris was pathognomonic of syphilis. The disease might have a deep hold on the system and cause dimness of the retina or complete destruction of vision. As to the

TREATMENT OF SYPHILIS,

whenever doubt was possible the patient should get the benefit, and be treated with specifics. Of course, even then the treatment may do no good, as it might be far too late to be of service. In all suspicious cases, mercury should at once be administered. Iodide of potassium was sometimes of great service, given in very large doses, *i.e.*, as much as a drachm when necessary. The subcutaneous injection of a weak solution of corrosive sublimate was often a useful way of giving mercury. Mercurous oleate was an excellent remedy, although a little dirty. When mercury was injected, it was as well to freeze the skin first and inject a little morphine before the mercury. The mercurous oleate was best prepared without heat. This plan often removed syphilitic skin diseases with great rapidity. Finally, cases of locomotor ataxia were sometimes syphilitic and curable by mercury. A gentleman, aged forty-three, in 1885 suffered from this disease arising from syphilis, and had been rapidly cured by inunction.

DR. DRUMMOND said he had made a considerable number of post-mortem examinations of patients who had died of the effects of

CEREBRAL SYPHILIS,

and had met with meningeal cloudiness at the base of the brain, with various vascular lesions. There was a peculiar variety of arteritis, the nodular, which he had noticed occasionally; this lesion affected also the retina. Gummatous affections of the pia mater might occlude the vessels. He thought that perhaps the most common affections were gummy tumors of the brain, with super added meningeal inflammation. Insomnia and headache at night were frequently symptoms accompanying cerebral syphilis; but it was too frequently assumed that headache must accompany cerebral syphilis. This was not so. In some cases headache was produced; in others, that symptom was entirely absent. There was often no history of syphilis in cases in which the disease had evidently been the cause of the cerebral symptoms. A gentleman, aged thirty-seven, suffered severely from neuralgia, but was in other respects in very good health. Suddenly he became aphasic, and lost consciousness. He soon after had right hemiplegia, with complete aphasia. There was, however, some mention of the patient having suffered five years before from neuralgia of the fifth pair of nerves. With respect to treatment, mercury and iodide of potassium together were often required.

Dr. Grainger Stewart introduced a patient, a woman, aged fifty-eight, who had suffered for fifteen years past with

A SINGULAR AFFECTION.

There was no avowed history of syphilis, but she said that she had once suffered from rheumatic fever which had lasted for six months, and from ptosis and from polyuria, with fits of giddiness and transient paralysis. These were all probably syphilitic. She had at present good health in other respects, and there were no other nervous symptoms beyond the following very remarkable one, which was that, being blind in one eye, as soon as she closed the other eye she at once became unconscious; her head fell, and she had stertorous breathing. There was limited field of vision in the eye that retained some power of sight. She had been blind in the right eye for sixteen years, and posterior staphyloma was seen, with paralysis of the motores oculi of that eye. Even the shutting off of the sight of surrounding objects, by bringing a piece of paper near the eye, produced this curious symptom. When in this unconscious condition she could be pricked with a pin without feeling the prick. Even pulling down the blinds of the room would set her off. She was forced to go to bed with a candle burning, otherwise she would fall down and injure herself if the light was extinguished as she walked toward the bed. Dr. Stewart had watched the case for sixteen years, and during all that time she had never had any epileptic seizure, and no other illness of a nervous kind except the one described. He feared that a scar was present on some part of the brain, for no remedies had any power in removing the symptom.

Dr. Ross, of Manchester, characterized this as a most unique and puzzling case. It was not hemiopia. In one case of cerebral syphilis seen by him, polyuria was a symptom in company with paralysis of the motor oculi muscles of one eye.

DISEASE OF THE PITUITARY BODY

situated below the optic commissure might produce such symptoms. With regard to the diagnostic value of headache, much caution was needed in explaining this symptom. It was often due to cerebral syphilis; but that disease often exhibited no symptom of the kind. A patient of his had severe pain in the head at Christmas, and three months subsequently syphilitic paraplegia, which was followed by right hemiplegia and aphasia. He had then an attack of melancholia. The early symptoms had occurred fifteen years previously. Dr. Ross then sketched the different nerve-centres of the brain, and gave his hypothesis as to the way in which syphilis gradually invaded one of these after the other. In many instances syphilis of the cortex extended along the vessels until it reached the fissure of Sylvius and the centres of speech. Thus facial paralysis was sometimes the initial symptom, and this was followed by motor oculi paralysis. In the syphilitic affections of the cord the disease often commenced in the region of the lower dorsal or lumbar vertebræ and was followed by paralysis of the sphincters and loss of sexual appetite, with incontinence of urine and abolition of tendon reflex.

Dr. Clouston, of Edinburgh, spoke of

THE MENTAL RELATIONS OF CEREBRAL SYPHILIS.

He said that the most melancholy effect of syphilis was that it sometimes produced acute delirium during the secondary period. This resembled delirium tremens. The patient might die in fourteen days, after suffering from great mental irritability throughout the case and maniacal symptoms. Such cases were absolutely intractable. There was also brain-softening, independent of vascular lesions. The third form of cerebral syphilis was the commonest, and that was slow arteritis, which caused gradual starvation of a part of the brain. In such cases there might be no paralysis and no anæsthesia. Such patients began first to exhibit a want of moral feeling and impetuosity, with suspicious delusions and dementia gradually supervening. There was no headache at the commencement, but gradual starvation of the intellect. Lastly, there were the gross forms of disease of the brain which caused mental alterations. He asked the question whether syphilis could attack the neural tissue. It had been said by Dr. Hughlings Jackson that it could not, but the speaker was not quite sure of this, and thought that in some cases that tissue was affected by the disease.

Dr. Robertson thought that there was no disease of the brain caused by syphilis corresponding with that which caused locomotor ataxia. He adverted to the difficulty which was often experienced in making out that a patient had suffered from early syphilis while he was presenting the symptoms of cerebral syphilis, and he mentioned the case of one patient who strenuously denied any infection of the kind, but on whose penis there was a large scar. Syphilis was especially a disease of the cortex, and therefore, in many instances, pain could be made a prominent symptom if only the patient's head were percussed. On doing so over a spot where there was some syphilitic inflammation, the patient would suddenly exclaim that he felt a dull pain over a circumscribed spot. With regard to treatment, all were now agreed that the use of both mercury and iodide of potassium was indicated in cerebral syphilis; but there was a point that was not often insisted on, and that was as to the value of local blistering in such cases. This was often of very great service indeed, where there was cortical inflammation, and in cases of cerebral syphilis, and also in cases of locomotor ataxia, percussion should be carefully used to map out the spot where the inflammation existed, and that spot should be frequently blistered. This relieved pain in a marvellous way.

Dr. C. R. Drysdale said that the abuse of tobacco and alcohol seemed to him to increase the liability to cerebral lesions in those suffering from syphilis. Sclerosis and gummy deposits were what constituted the lesions in cerebral syphilis, whether affecting the dura mater, the pia mater, or the vessels of the brain. The lesions were usually seen at the periphery rather than at the centre of the brain. The sphenoidal region is most often affected with encephalitis or softening of the brain. The prognosis is grave, because treatment is often begun too late, but some cases are permanently cured by energetic treatment.

Dr. Coghill mentioned a case in which a man suffering from cerebral syphilis was covered with rupia. He was aphasic. This gentleman was supposed to be one of those who were intolerant of iodide of potassium; but on putting him on large doses this was found to be a mistake. Thus for eighteen days he took about six drachms daily of the drug, and this had a marvellously curative effect on his case.

Dr. Byrom Bramwell said it was rare to find gummata in the occipital lobes. Multiplicity of the lesions was of great assistance in making out the diagnosis of the disease, and the age of the patient and male sex were of service also. While it might be true that intellectual work might make the rich more liable to get cerebral syphilis, the poor were more subject to blows on the head and were often affected.

Dr. Dowse, of London, said that syphilis was a very different affair now from what it used to be thought to be twenty years ago. The vaso-motor system of nerves was often affected in syphilis. Dr. Jackson, indeed, spoke of the vessels being first attacked; but it must be remembered that these were under the influence of the organic system of nerves.

Dr. Andrew Smart read a paper on

SOME FORMS OF UNDESCRIBED RESPIRATOY NEUROSES.

This paper was illustrated by a number of diagrams. He cited cases of patients who had exhibited as many as one hundred and fifty respiratory efforts per minute, and two hundred and fifty pulsations of the heart. These symptoms were probably due to vaso-motor spasm.

Dr. R. L. Bowles read a paper entitled

AN INVESTIGATION AS TO THE CAUSES OF STERTOR IN ANIMALS.

He said that the expression "snoring like a pig" was clearly illustrated in the Smithfield Club Cattle Show, where the herbivorous animals, however fat they might be, had no stertor, while the carnivorous pigs were types of stertorous animals. This was due to the peculiarity of the gullet and windpipe in carnivora.

Dr. Drysdale read a paper on

ALCOHOL AS A THERAPEUTIC AGENT.

He said that at the present time, in London hospital practice, a much smaller amount of alcohol was prescribed than formerly. Patients had no doubt often succumbed to overdoses of brandy or wine in acute bronchitis, pneumonia, and fevers. As a rule, patients with typhoid fever did better without alcohol, and children should very rarely indeed take alcohol when they were suffering from febrile diseases. In cases of shock alcohol was sometimes of great service. In fevers, when it was thought best to give alcohol, it should be administered in the form of rectified spirits suitably flavored by the prescriber. The author said that of late years he had been giving less and less alcohol, as he had found other remedies much more useful.

The following papers were also read: Drs. Byrom Bramwell and Milne Murray gave a demonstration of the methods of graphically recording the exact relations of cardiac sounds and murmurs; Dr. Maclachlan showed a patient suffering from Addison's disease; Dr. John Shaehan read a paper "On a Case of Pernicious Anæmia successfully Treated by Arsenic;" Dr. Affleck narrated two cases of Raynaud's disease (symmetrical gangrene); Dr. A. J. Harrison sent a communication "On Further Researches on the Treatment of Tinea Tonsurans." This paper was illustrated by photographs. Dr. Thomas Oliver read a paper "On Clinical and Pathological Bearings of Malformations of the Heart as seen in Patent Foramen Ovale and in Imperfect Ventricular Septum;" Dr. Orlando Jones read a paper "On a New Remedy for some Forms of Heart Disease." Dr. Handford read a communication "On the Condition of the Heart in Chlorosis;" Dr. David Finlay read a paper "On Bronchiectasis Treated by Incision and Drainage," and Dr. S. Coupland communicated a case of subphrenic abscess.

Dr. Theodore Williams read a paper on

THE VALUE OF INHALATION IN LUNG DISEASE.

He said the question was whether our present methods of inhalation reach the different parts of the lungs as well as through the stomach. That substances could be thoroughly inhaled was proved by the fact that the nicotine of tobacco had been found in the urine. Warm, moist inhalations had not been successful in his own cases. The reason appeared to be that the air-passages are not adapted to absorb large portions of water even in the form of vapor. Another reason was the patient's inability to make deep respiratory movements, which would make it possible for the air to reach the alveoli. In regard to antiseptic respirators his experience had not been fortunate. Medicinal inhalations were most useful in the larger bronchi.

Dr. Andrew Smart exhibited some specimens of new respirators. He also explained the action of a new instrument for needle puncture.

Dr. Lindsay said his conclusions closely agreed with those of Dr. Williams. Inhalations were very valuable in diseased conditions of the pharynx and the larynx, but very uncertain in affections of the lungs proper. He had tried steam without being favorably impressed by its effects. Persons who had been steamed generally remained susceptible to colds; but the real controversy on the subject of inhalation ranged around phthisis. His results had been altogether negative. He had seen nothing hitherto to show that drugs so given could affect the seat of the disease. It was very doubtful whether they could destroy bacilli, and if they could it was a question whether they would do much good. Our treatment should be rather to decrease the receptivity and leave the bacilli alone. In phthisis the best method, to his mind, was to improve the general conditions by an improved mode of life, by diet, etc., and in proper cases by judicious changes of climate.

Dr. Ireland said he had begun to study the question of inhalation. It was a popular belief in Germany and other parts, where there were extensive pine forests, that the breathing of the air permeated with the odor of the pine was good for lung diseases. It was believed, moreover, that those who lived in the pine forests were singularly free from chest diseases.

Dr. Coghill had not found his expectations always realized in regard to inhalation. But, although he had not yet been successful, he was more convinced than ever that inhalation would yet play a very important part in the treatment of lung disease. Not the least of its advantages was the increase it gave to the respiratory act, the larger amount of air brought into the lungs, and the expectoration was got rid of with greater facility. There were great differences of opinion in regard to the various methods of inhalation. His opinion was that the oronasal method was not the best.

Dr. Smith referred to cases, not frequent in this country, of

HEPATIC ABSCESS BURSTING THROUGH THE LUNG.

Many cases came to England from tropical countries, and in such cases he had obtained very great benefit from antiseptic inhalation. The effect had been to decrease the discomfort of the patient and to diminish hectic. There was a prevalent error that phthisical cases ought to escape from England. Such cases sent to India during the tropical rains ran a rapid course. To send such cases to India was one of the most fatal mistakes of practical medicine.

Dr. Dennison, of Denver, Col., said he thought it was impossible for the medicated air to get to the point desired. The inhalations went to the healthy lung, and not to the diseased one. The chief benefit of inhalation, to his mind, arose from the breathing of more air. The bacilli could not live in a dry climate like that of Colorado, and the important thing was to get the bacilli into such a climate.

Dr. Gibson recommended dry powder inhalation, and said important results were obtained by this method. In this way a great variety of drugs could be employed in the most efficient manner.

Dr. Brett spoke of the necessity of getting the bad air out of the lungs. He exhibited a whistle which a phthisical patient had been recommended to use, and he was of opinion that it might be useful in making the patient respire. He quoted the remark of an old physician, that "not nearly so many persons would die if they would only expire."

Dr. Williams thought the discussion confirmed his general conclusions. There was a good deal of evidence in favor of inhalation. He had found dry powder inhalation of great service in laryngeal affections; but he doubted whether they went further.

Dr. Caverhill showed a patient exhibiting remarkable symptoms connected with

DISEASE IN THE MOTOR AREA OF THE BRAIN.

The patient was a boy, who, when touched on the head, dropped to the floor. He said an account of this case appeared in the *British Medical Journal* of November 20, 1886. Some new developments, however, had appeared since the case was reported. He had had epileptic fits. The curious thing in reference to the malady was the force with which he seemed to be drawn down when touched. On one occasion a window-curtain touched him on the back of the head, and he at once fell on the window-sill. He fell with such force that one of his front teeth was embedded in the wood of the sill, and it took some force to pull the tooth out. The malady dated from his second year, when, as his nurse was carrying him to the bath with some hot water in her hand, she let him slip. She said he did not touch the ground; but it was possible that she was mistaken in that; another circumstance was that after the accident he had had a dread of running water. There was a sound of water running into the bath at the time.

Dr. Jackson, who had formerly had the boy under his care, said that at one time a change took place. He commenced to have epileptic fits, and while he was subject to them a touch on the head produced no effect.

Dr. Pavy read a paper on

NEUROTIC SYMPTOMS IN ASSOCIATION WITH DIABETES.

He said he had referred to these symptoms at the Cardiff meeting of the Association. He found these symptoms accompanied by disordered nerve-action; they caused great pain, and were often referred to neuralgia. They were also referred to rheumatism and sometimes to gout. Referring to the symptoms of an ataxic patient, he said he was perfectly satisfied that certain symptoms of nerve-action, especially connected with the spine, were very apt to occur in diabetes. He had, for some time past, been led to consider that there was some connection between the two. They sometimes came on together, and sometimes the ataxy came on with the diabetes. Not infrequently there was deep-seated pain. Those pains were generally worse at night. He was inclined to look upon these different symptoms as referable to the condition of the spinal cord. He had found it associated with the milder form of diabetes after the middle period of life. It was really surprising how many persons beyond the middle period were found suffering from these conditions. It was of great service to physicians to be acquainted with the conditions they were likely to come across, because it gave them evidence by which they could recognize the precise nature of what was to be dealt with. He had not found a single case that had resisted iodide of potassium.

Professor Jacobi recommended the use of iodide of sodium as preferable.

Dr. Smart said he had never found this nervous condition supervene until the disease had reached a very acute state menacing life.

Dr. Harrison referred to a case in which the developments resembled those of angina pectoris. There was considerable irritation about the heart. Examination of the urine showed traces of sugar.

Dr. Ross agreed with Dr. Pavy in thinking that these sensory phenomena were met with chiefly after the middle period of life. He thought there was a gouty element. But the reflex was frequent in young people. ometimes the gout was somewhat ataxic. In the after-eriod the sensory affections were very prominent. He had seen one or two cases in which the phenomena were very marked.

Dr. Stacey Wilson read a paper on the

METHODS OF DILUTING THE BLOOD AND THEIR CLINICAL USES.

He described the various methods of injection employed, and recommended as of particular value the method which he had employed, of injection into the muscular tissue of the shoulder. He injected half a pint of normal saline solution. The effect was most marked. The patient vomited freely for a time. Vomiting returned the next day. Another pint was injected. After that recovery was steady, and after a few days all urgent symptoms had disappeared. The injections were made by means of the hypodermic needle. Normal saline solution was all that was needed. Carbonate of soda was sometimes used, but it was painful, whereas the saline solution was not. The injections could be made into one shoulder in the morning and in the other in the afternoon.

Dr. Tomory read a paper on

EAST AFRICAN FEVER,

with special reference to climatic conditions.

SECTION ON SURGERY.

Wednesday, August 8th—Second Day.

Professor George Buchanan delivered the

PRESIDENT'S ADDRESS.

He said that he was the first person in Glasgow to adopt the practice of pure surgery, which he did upon his return from the Crimea. He was joined soon after by Sir Joseph Lister, and Sir G. Macleod followed later. He mentioned. also, that he was the first person in Scotland to be anæsthetized.

The discovery of recent times, which perhaps had caused the greatest interest, was that of the tubercle bacillus, not only because it showed that tubercles was, what it had long been suspected to be, a germ-produced disease; but because it gave hopes that many other similar diseases, such as syphilis, cancer, etc., might also be proved to be bacillar in their causation. It must be remembered that a microbe could live only in a suitable constitution, so that it must be looked on merely as the exciting cause of tuberculosis, cancer, etc. Still, there was a newly discovered error in the environment which would have to be taken account of in hygiene as well as in therapeutics. Operations on the head, chest, and abdomen were now practised daily, which a few years ago would have been considered to be quite unjustifiable; indeed in some, if he might be allowed to express his opinion in that chair, the limit of justifiability had been overpassed.

Mr. T. Pridgen Teale, of Leeds, opened the discussion on

THE SURGICAL TREATMENT OF ABSCESS OF THE LUNG AND OF EMPYEMA.

Within the last few years pulmonary surgery had come to the front. His attention had been specially called to the subject by four cases of suppuration under his care, of which two recovered and two died. In two other cases where suppuration was suspected, he explored freely but without success. Both patients died in a few days, unrelieved. The principal points were as follows: Case I. was reported in the *Lancet* of July, 1884. The patient had pain about the colon, with transient obstruction of the bowels. After the lapse of some months dulness was discovered on the right side of the thorax. He tapped it, and brought away a few drachms of clear fluid. He then introduced the trocar, and this time drew a pint of thin stinking pus. The patient was much relieved, but the dulness returned. He ought not to have taken it for an empyema, but for abscess of the lung, because there was such a difficulty in withdrawing it. He opened up and drained, and the man ultimately made a good recovery. Case II. was diagnosed as abscess of the lung. He found dulness at the lower part of the right side of the chest behind, so he put the patient under ether and inserted a trocar in the posterior border of the axillary line, and a pint of clear fluid was drawn off. As there was still much dulness about the right axillary border, a trocar was introduced, and a pint of pus withdrawn. The trocar passed through the diaphragm into an abscess-cavity situated above the liver. He enlarged the opening through the diaphragm and introduced a drainage-tube. After a period of anxiety, the patient began to rally, and in three months was well enough to address an assembly of more than three thousand persons. So much for the successful cases. In Case III. he found a cavity of the liver, from which he withdrew three and one-half pints of sweet pus. There was an opening through the diaphragm into the base of the pleural cavity. For a week the man did well. Then hectic symptoms set in, and six weeks later he made another opening, between the eighth and ninth ribs, and found a large abscess-cavity connected with the other. The patient died a fortnight later. In the fourth case, notwithstanding a large excision, the patient died in a week. The abscess was found to have burrowed behind the liver and the posterior mediastinum, so that recovery was out of the question. Two other cases had been mentioned to him, one a female dispenary patient, who had suffered from pleuro-pneumonia, with pain and dulness at the base of the right lung, and expectoration of offensive pus. Puncture brought away about an ounce of serum, and a diagnosis was made of abscess of the lung. Puncture in front of the angle of the seventh and eighth ribs, with excision, gave exit to forty ounces of fetid pus, and the patient made a slow but uninterrupted recovery. The last case was that of a farmer, aged forty-one, who had had pneumonia on the left side, and who began to spit pus the next winter.

Then the right lung became bad, and the expectoration of pus became profuse. In March, 1888, he became worse and appeared to be sinking. His chest was then tapped, letting out a quart of pus. He was now comparatively well.

Surgeons were losing their fear of exposing the pleura and the lung, just as they had learned how to deal boldly and safely with the peritoneum. In cases in which the mechanical difficulty threatened the life or impeded the recovery of the patient, the surgeon must decide as to the best means of shutting off air to the wound, while allowing of drainage. The region of the diaphragm was a region in which abscess amenable to surgical treatment often occurred, tending to discharge through the diaphragm or lungs. This kind of abscess might be more satisfactorily attacked through the thorax than through the abdominal wall. The cavity might be irrigated by an antiseptic wash during the early periods, until the pus became sweet, but not afterward. With regard to the question of excising a piece of the rib, the tendency was to reserve it for special cases rather than to make it a general rule of practice.

Sir Spencer Wells related a case in which he had been enabled to observe the effects of

DRAINAGE OF THE PULMONARY CAVITY

after forty years. The patient was an invalid seaman who had long presented symptoms of phthisis. An abscess formed in the right axilla, which was taken for a suppurating gland. It was soon found, however, that the abscess communicated with the bronchial tubes. The case was left entirely to nature, and the man recovered, and when he heard of him a few days since, quite accidentally, he was still strong and well.

Dr. Ward Cousins said a few words, bearing on the simplest forms of operation and the simplest way of performing them. Every case of empyema should be considered by itself and treated accordingly. He had given up aspiration and the use of small drainage-tubes. Most of his cases were young children. He showed a trocar which could be converted into a knife, thus enabling him to cut from within outward. He never used drainage-tubes after the first week or two. In most cases of obstruction to the exit of pus the obstacle was at the orifice, and it was far more comfortable to the patient to dilate than to use a drainage-tube. He was strongly in favor of making several incisions, but did not resort to irrigation. He mentioned cases in which the most distressing symptoms were promptly relieved by incision, even when a fatal result was not averted. He said that the lung might be dilated by properly directed gymnastic exercises, and the tendency to deformity thereby obviated.

Dr. Jessop said the first thing was to observe the presence or absence of pus, and when present, no matter where it was situated, it became their duty to evacuate it. He mentioned a case of carcinoma in the axilla in which he accidentally opened the pleural cavity in two places, but no ill effects followed. The patient left the hospital within a month, none the worse for the pleura having been opened. The last case was one in which he removed a large enchondroma from beneath the left breast of a woman. He found it necessary to remove a portion of the subjacent rib, in doing which he opened the pleural cavity; he found that very little impression had been made upon the lung. He therefore only drained and, so far, the result had been quite satisfactory.

Dr. Duncan said they were all agreed that whenever matter was formed within the thoracic cavity their duty was to evacuate it, but the means to be adopted to bring about the closure of the cavity varied very much according to the case. Adult cases, however, were very different. If asepsis were only maintained, simple drainage proved very satisfactory. There were, however, one or two points connected with drainage which had to be attended to. Only a small portion of the rib should be excised, otherwise the ribs fell together, drainage was interfered with, and pain was caused. Another important point was not to insert the drainage-tube too low down—not close to the diaphragm, for instance. With these precautions most cases, whether of abscess of the lung or of empyema, will terminate favorably. He showed an apparatus which he employed for continuous aspiration. Another class of cases was those in which the empyema had lasted for a very long time, in which the patient was likely to die of amyloid degeneration. In such cases excision of large portions of the thoracic wall had proved very beneficial, and he had obtained great success in four out of nine cases.

Dr. Webb observed that

BOTTLED-UP PUS WAS AS MISCHIEVOUS AS BOTTLED-UP SEWAGE,

and treatment must be directed to letting it out. He believed in free incision and used antiseptics. He mentioned a case in which several free incisions were made and several pints of stinking pus removed. The patient had done well, and now there was very little discharge. There was no longer any dulness, and vocal fremitus was restored. He remarked that carbolic acid, when injected into the pleural cavity, often gave rise to a distinct and disagreeable taste. He had never seen any untoward result follow the opening of the pleura, though he had often seen considerable damage follow unnecessary delay.

Dr. Griffiths, of Leeds, mentioned

A SERIES OF CASES OF EMPYEMA

admitted to the Leeds Infirmary, where they had had no less than fifty consecutive cases, varying in age from one year to fifty-six. He did not approve of excision of the rib unless especially called for. Failure of drainage never resulted from non-excision, and he did not believe the pressure of the ribs upon the drainage-tubes actually took place. He alluded to the various explanations as to how the empyemic cavity filled up, and quoted Dr. Samuel West's experiments to show the tendency of membranous surfaces to adhere together.

Dr. Wakefield, of Oxford, mentioned a case of empyema in which the tube had slipped back into the pleural cavity and the wound had to be enlarged later on in order to get it out. He said that in future cases he should be disposed to remove portions of the ribs, at any rate in adults.

Mr. E. Owen could not see any objection to removing a portion of the rib, and he asked what harm could it do. He indicated a method of avoiding the danger of the tube slipping back by fixing it to a shield. He avoided irrigation unless it were found to be absolutely necessary. He mentioned a case of hydatid cyst pushing up the diaphragm, which he had attacked through the thoracic walls and in which the healthy pleura showed no tendency to irritation.

Dr. Lloyd asked how they were to distinguish between circumscribed abscess of the pleura and abscess of the lung. He thought Mr. Teale's instrument subjected the patient to the risk of diverting a purulent collection into the healthy pleura. He suggested that it was possible to make a large opening without removing a portion of the rib by running the knife along the ribs.

Mr. Teale, in reply, said the point had been established that they need have no fear of opening the pleural cavity even when healthy. This facilitated their action in doubtful cases. He questioned the accuracy of the belief that the lungs would collapse if air was admitted. This belief was based on what occurred in pneumothorax; but the case was quite different. He regretted he could give no more assistance in differential diagnosis. He called attention to two points as rather indicative of abscess of the lung: First, the expectoration of stinking pus; and second, when, on exploring the pleural cavity, they got a clear fluid without pus, showing that the pleura was irritated by the presence of a contiguous abscess in the lung-tissue itself.

Dr. Th. de Valcourt read a paper on

WINTER SEA-BATHS AT CANNES,

in cases of scrofulous disease.

Dr. Murphy, of Sunderland, showed a patient on whom he had performed

GASTROSTOMY

eleven months previously. The patient, a man, forty-seven years of age, had gradually become unable to swallow in consequence of a constriction (cancerous?) of the œsophagus. The man had recovered from the operation without a bad symptom, and now fed himself regularly through the artificial opening. He had gained over twenty pounds in weight. He was still quite unable to swallow even a few drops of milk, but his general health was good. He had no perception of taste when food was passed into the stomach, but he could detect differences of temperature. Dr. Murphy expressed the hope that the suspicion which attached to the operation would be dissipated when it was shown that good results might be obtained, if the operation were not deferred until the vital powers were at too low an ebb.

Dr. Carmichael read the notes of a case of gastrostomy in a woman with stricture of the œsophagus. The difficulty was less in the operation itself than subsequently in preventing leakage of the stomach-contents. This was ultimately attained by means of a tampon of hour-glass form, which could be inflated *in situ*. The patient left the hospital in fairly good health, but died from pneumonia one hundred and two days after the operation. At the autopsy they found a cancerous mass involving the gullet below the thyroid gland.

Mr. Benton read a paper on

THE TREATMENT OF STRICTURE OF THE RECTUM BY ELECTROLYSIS.

He mentioned a number of cases in which the stricture had yielded after a single application and in which the benefit obtained had been permanent. He generally used a twenty-cell battery, each séance lasting about ten minutes, with a fortnight's interval between the séances. The strength of the current was about fifteen milliampères.

Dr. Duncan read a paper on the value of

ELECTROLYSIS IN ANGIOMA AND GOITRE.

He had used it in large port-wine stains, nævi, cavernous angiomata, cirsoid aneurisms, etc., in nearly all of which he obtained excellent and perfect results without any untoward symptoms. He claimed that electricity was the best method of treatment (1) when the growth was extending; (2) when it was desired to avoid scarring; and (3) when the subcutaneous tissue was extensively involved. He had treated eleven cases of cirsoid aneurism with success, and he said this was the only justifiable treatment for that affection. He used a current of from forty to eighty milliampères, but no galvanometer was required where the strength and duration of the current were determined by the effects produced. The negative pole was the more energetic, and should be freely moved about.

Dr. Beaven Rake, of Trinidad, discussed the value of

NERVE-STRETCHING IN LEPROSY,

to combat the nervous phenomena in that disease. He had performed the operation one hundred times on sixty patients. It occasionally produced a good effect in checking ulceration, and relieved pain, but it did not seem to do any good in cases of anæsthesic leprosy. Stretching of the sciatic nerve was the most satisfactory, and that of the median nerve came next.

Sir Andrew Clark was to have read a paper on a case of

CATHETER FEVER,

but he preferred, in place of giving his paper, to describe the case *viva voce*, in order to make it briefer. He said the case he was about to relate was one which was under the care of Mr. George Pollock and Mr. Howe. The subject of catheter fever had been discussed at most societies, but it must be confessed that we remained as yet ignorant of its exact nature and also of its true causation. The patient had been practising as a dentist in London, and, after retiring from active practice, he noticed that he was suffering from irritability of the bladder. The urine had its full percentage of urea, and contained a slight excess of muriatic acid. He was quite healthy, although disposed to gout. Impatient of his irritable bladder, he decided to introduce a catheter, and secured a new red-rubber catheter. He oiled it very freely with a little clock oil of unknown age before introducing it, and when he introduced it he removed an ounce of healthy urine. He felt quite well all the rest of the day, but the next morning he told his wife he felt as if he were going to be ill; and so much did this feeling of malaise grow upon him that he kept his bed. In the afternoon of March 29th, eighteen or nineteen hours after the introduction of the catheter, he had a most violent rigor, lasting two hours. During its persistence the temperature rose to 105° F., and the pulse to 116, and respiration became oppressed. The patient took an opiate with a diaphoretic, but passed a very restless night. In the morning he felt very ill, and his friends sent for Mr. Pollock and Mr. Howe, who found him in an advanced stage of catheter fever. He was very thirsty, and had a frequent desire to pass water, which, when passed, was discovered to be clear, but containing albumin. His heart was acting violently; he had slight headache with some confusion of mind. During the day these symptoms abated a little. In the afternoon he had a second and last rigor. The temperature rose to 105° F., and afterward his condition was one which caused great alarm to his physicians. On the third day the typhoid state continued. The bladder was extremely irritable, the urine had been smoky, and contained over thirty per cent. of albumin. It was found to contain epithelial casts, with much blood and pus. Up to this time there were no bacteria in the urine. He was then ordered small doses of quinine, and it was directed that from time to time, while the condition of the pulse continued, he was to have five drops of aconite. While pursuing that treatment he began to get better, and next day there were signs of this symptom passing away. But the local symptoms continued. He had frequent passing of urine, which now, for the first time, contained bacteria. The typhoid state continued, and finally retention of urine occurred. Then the medical men introduced the catheter for the first time, and drew away a pint of blood and urine, which contained multitudes of bacteria. Next day the patient was much better, the constitutional symptoms now subsided, the tongue was clean, and the bowels were opened. From this time to the 28th of April he was getting well. He had a frequent desire to pass water, and the catheter was introduced twice a day. But on this, the twenty-ninth day, the patient became impatient, and under the affectionate interest of his wife he began to take solid food and left his room. Next day he was very ill. The fever returned, and the loathing for food was as great as before; the local symptoms were aggravated. He was put to bed and diaphoretics were given. Under this treatment he was well again in three days. He remained well until the 26th of May. Again the same thing happened; he returned to solid food and left his room, and in the early days of June he was attacked with febrile symptoms, and once more he had to be put to bed. In three or four days he was quite well, and so he remained up to within a few days ago. Then he emerged from an illness from which none of them believed he would recover, but there remained three defects. In the first place, he was a little weak; in the second, he had a mild vesical catarrh; and in the third, there is a slight kidney affection. The actual mass of urea is less than a man of his bulk should pass. Such was a rough outline of this case of catheter fever. And now came the important question:

WHAT WAS THE CAUSE OF THE CATHETER FEVER?

Before dealing with that question we would call to mind a few important points. Before the introduction of the catheter this man was in average good health. He was aged sixty-five years, and quite well. He had ceased to have daily necessary work to do—the worst thing that could happen to a man! The second point was that the constitutional disturbance was the first thing that attracted the attention of those around him. After the introduction of the catheter he was ill. The third point was the curious order in which the local symptoms appeared. The first was burning pain in the urethra, then the excessive irritation of the bladder, and lastly, the affection of the kidneys. The fourth point was that the constitutional symptoms were out of all proportion to the intensity of the local malady. At one time, on the third day, these were so bad that the patient appeared to be about to die, and yet when everything was examined there was nothing to account for this condition, for at no time had the percentage of urine fallen below 1.5. The last point was that bacteria did not appear at the beginning of the malady. It was not until the third day that the bacteria were found in the urine, and it was not until the fourth day that they were found in very great numbers. What was the cause of the catheter fever in this case? Those who are experienced in urinary disorders say, in the most dogmatic manner, that every man who had catheter fever must have had long-standing urinary disease, and if you had not introduced the catheter at all he would have died very soon notwithstanding. Was that the case in this instance? They had testimony of his good health, that the urine was declared to be healthy before the introduction of the catheter, and thirdly, that there was no evidence of old urinary disease. The only evidence they had was evidence of the existence of a gouty diathesis. The conclusion they came to was that this catheter fever was septic fever, and that in every case in which it occurred its origin might be traced to the introduction of parasites or germs into the blood. In seeing this case from the beginning they took care to investigate this matter. They got the old clock oil. The smell of it was not as pure as it should be. They expected to find an abundant growth of micro-organisms, but their anticipations were falsified. They put along with the oil a drop of urine, and in twenty-four hours the whole was thick. It was quite clear that septic infection—parasitic infection—was not the cause in this case. There was no sort of septic infection which was not parasitic. It had been shown within the last three or four years that in certain conditions organisms were developed, which, when coming in contact with the living tissue begot symptoms of poisoning and fever. But this was quite different from this catheter fever. Was it possible that the catheter fever was developed from one of these poisons instead of from a septic poison? His impression was that the formation of any of these substances could not have been the cause of the catheter fever. Then, if it was not due to previous disease, or parasitic infection, what could it be? Was it pyæmia? Was it due to injury to the urethra? The urethra was painless. He was obliged to fall back upon the explanation he gave at Edinburgh. He would give it as it appeared to him in the mode of development. First, there was the pain and local irritation, followed by the introduction of the catheter. He believed the irritation of an organ or tissue might be brought about, and the greatest changes follow without the patient being conscious of it. The local irritation, felt or unfelt, would be continued to the central sympathetic and organic centres, the provocation thereby to disorderly reflex nervous discharges producing disturbance of the vascular system. Thirdly, connected with these were the pathogenetic nerve-discharges, and the changes of the blood and excrementitious masses of various kinds.

Mrs. Garrett Anderson, M.D., described a case of

INCONTINENCE OF URINE

in a girl of fourteen, who had been under the care of Dr. Annie Clarke, at the Birmingham Hospital for Women. The incontinence was of several years' standing, and dated from an attack of scarlet fever at the age of six, when some ulceration took place leading to a communication between the bladder and the vagina and the formation of adhesions. The condition was ultimately remedied by a plastic operation.

Mr. Jordan Lloyd read a paper on

INFLAMMATION OF THE SEMINAL VESICLES.

This affection was one most common in young adults as a result of gonorrhœa. He mentioned several cases which had come under his notice. There was pain on defecation, and constitutional disturbance, with constant desire to micturate. Examination per rectum showed the presence of a swelling at the base of the bladder, very tender to the touch. Suppuration often followed, and in such cases his plan was to incise through the rectum. All the cases so treated did well.

Dr. Ward Cousins, of Portsmouth, exhibited a new excavator for lithoplaxy and other bladder operations. Mr. Hurry Fenwick read a paper entitled "Notes from the Experiences of Five Hundred and Fifty Cases of Organic Stricture of the Urethra." Dr. Hugo Marcus, of Paris, read a paper "On the Causes of Suppuration" Mr. E. Stanmore Bischof, of Manchester, referred to some forms of osteotomy, and showed an apparatus for fixing the lower limbs after division of the bones.

Mr. Mayo Robson read a paper on a series of cases of

MACEWEN'S OPERATION FOR GENU VALGUM.

He thought these cases arose more from ignorance than from negligence. They were very prevalent in Glasgow and Leeds. He suggested that more attention should be given to house visitations, and that houses for the poor should never be built on the back-to-back principle.

(To be continued.)

Pruritus Pudendi is often relieved, according to Dr. Routh, by applications of peppermint water.

Correspondence.

TREPHINING THE SPINE.

To the Editor of The Medical Record.

Sir: In The Medical Record of August 25, 1888, I find an editorial on "Trephining the Spine for the Relief of Pott's Paraplegia," in which the writer rather strongly discountenances this operation, and thinks that the hope is not justified that operative procedure may give permanent relief. He refers to Ashhurst's table,[1] according to which forty-three cases of resection of the spine have been performed on account of various injuries (not stated), with the result that only four were relieved, while thirty-one (seventy-two per cent.) died, four were not benefited, and the result was unknown in five cases. Lastly, the writer says, referring to the case reported, that it is interesting as showing the inutility, and therefore the unjustifiability, of operation in such cases, etc. The present writer takes the liberty of disagreeing with these sweeping statements, and for various reasons. The forty-three cases referred to are old and useless, in so far as most of them, if not all, date from the pre-antiseptic period. Some of them were done more than fifty years ago. I fail to see why a resection, done *lege artis* and with all proper precautions, should be more dangerous than trephining of the skull, an operation which scarcely any surgeon of experience considers dangerous *per se* in our days. The difficulty lies in the fact that it, in a given case, is almost impossible to decide whether the medulla is crushed (and the operation therefore useless) or simply compressed.

So far from considering the operation useless, I am strongly inclined to the belief that it alone offers any hope of relief from the paraplegia and all the other severe symptoms depending upon the same cause, and the operation itself I consider neither particularly dangerous nor difficult. There is, you know, more joy in heaven over one sinner that repenteth than over ninety-nine just persons that need no repentance, and this sinner's record you can find in *Centralblatt für Chirurgie*, 1886, No. 51, and I shall give a short extract of the case. He was a Norwegian sailor who, five weeks previous to his entrance into the Marine Hospital in Hamburg, of which Dr. Carl Lauenstein is the surgeon, fell forty feet, lay twelve hours unconscious, and since had been completely paralyzed in the lower extremities, with paralysis of the sphincteres ani and vesicæ. He had a gibbosity of the lower dorsal and upper lumbar vertebræ, the processus spinosis of the twelfth dorsal vertebra being most prominent. Dr. Lauenstein applied a plaster-of-Paris jacket for four weeks, but as the patient grew worse, on account of cystitis, operation was performed, and the arches of the twelfth vertebra dorsi and first vertebra lumbalis were removed. The medulla and cauda were found just beneath the arches, adherent to the dura, of which a piece was removed. The wound healed by first intention. Five days later the patient commenced to have some control over his bladder, which gradually increased. Ten days after the operation the anæsthesia commenced to diminish. Inside two months he was able to walk with a stick, and three months later he could walk up and down stairs without support, and was shortly afterward discharged about cured. The paralysis of the sphincteres had disappeared and only the sensibility of the right femur was somewhat lessened. Lauenstein advises not to operate in fresh cases, as there is a possibility that the paralysis may disappear by itself. But in cases in which, after eight weeks, there is no improvement, particularly of the sphincteres, he advises the operation.

One such successful case ought to give this operation quite a stimulus and, anyway, speaks volumes more than a table of unsuccessful cases, operated upon without modern antiseptic precautions. I myself last year performed a similar operation which, although unsuccessful, I desire to add. The patient was a man, aged fifty-two, who entered the Buffalo General Hospital in June, 1887. On June 4th, while suffering from delirium tremens, he jumped out of a second-story window and fractured his back. He was immediately completely paralyzed in both lower extremities, both in regard to motion and to sensibility. The sphincteres ani and vesicæ were paralyzed too. A plaster-of-Paris jacket was applied the same day and kept on for four weeks, but the patient did not improve. A severe cystitis developed, bed-sores made their appearance, and the patient was rapidly failing. As a last measure, the arches of the twelfth dorsal and first lumbar vertebræ were resected on July 5th. The dura was found strongly adherent to the arches, and a piece of it was removed. Through the opening made, about a tablespoonful of the cerebro-spinal fluid was evacuated. The body of the twelfth vertebra was found fractured and dislodged backward into the medullary canal, and the medulla spinalis was found bent in an acute angle over this body and torn more or less. The wound was dressed after Schede's blood-clot method, but the patient survived but two days. The operation showed the injury to be incurable, but the operation itself was harmless. I do not believe that it in any way shortened his life, and in a similar case I should feel strongly inclined to repeat the attempt.

Herman Mynter, M.D.

Buffalo, N. Y., August 29, 1888.

JAUNDICE.

To the Editor of The Medical Record.

Sir: In Dr. Kittrell's article, "Treatment of Catarrhal Jaundice," in a recent issue of The Medical Record, I was struck with the statement that a form of jaundice might result from *suppression*, and that the cause of the bile acids appearing in the urine in a case due to *obstruction*, and not in one due to *suppression*, was their non-formation in the liver when suppression existed, the opposite condition obtaining in obstruction. The latter explanation is correct in all its bearings, but as to the theory of suppression, I am impressed that it is wholly erroneous. This theory was once held by Trousseau, Bamberger, Watson, and other eminent authorities, but it has within late years been entirely abandoned. In order to prove the theory of suppression, it would have to be shown that the bile existed preformed in the blood. Now the most important constituents of the bile are the acids, taurocholic and glycocholic, and the pigment, and it is pretty conclusively shown that these are formed in the liver, and also that hæmatoidin and bilirubin are not identical.

It is true, water, cholesterin, fat, and inorganic salts pre-exist as such in the blood, and are eliminated from the latter by the liver-cells. The biliary salts and the biliary pigment, however, are not found in the blood, but are elaborated by the liver-cells out of the principles brought to them by the blood (Chapman, "Physiology") The experiments of Stein fully corroborate this view. He has shown that if the blood-supply to the liver be cut off, there is no accumulation of the bile-acids and bile-pigment in the fluids and tissues of the body. Thus it is shown jaundice cannot result from suppression.

If jaundice could result from suppression, thus establishing the fact that bile exists preformed in the blood, then the differential diagnosis made by the test of Pettenkofer, employed by Dr. Kittrell, as regards the presence of bile-acids in the urine, would be *nil*, as in such a case the bile would be taken up entire and eliminated by the urine, and the presence of the acids there detected. This is known not to be the case.

The varieties of jaundice now arrived at are two. The one, a cholæmic, results from the presence in the blood of the acids and pigment of the bile; this is the hæmatogenous, anhepatogenous, or hæmoglobinæmic form. The other is the obstructive or hepatogenous form, and results from the absorption of the bile already formed, whose escape cannot be effected owing to obstruction in the hepatic ducts or in the ductus communis chloledochus, or to some vaso-motor influence.

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[1] International Encyclopædia of Surgery, vol. iv., p. 890.

The hæmatogenous variety, the theory of which has replaced that of suppression, is due to the presence of free blood-pigment in the blood. According to Ponfick, this may be as granular, disintegrated red blood-corpuscles or as dissolved hæmoglobin. The cutaneous jaundice is the result of the transformation in the blood of hæmoglobin into bilirubin. It occurs when more blood-pigment is set free than can be disposed of by the spleen, liver, or kidneys.

I trust this will convey only the impression of a disposition to place aright the subject under consideration, feebly as it approaches this aim, and not merely to find fault with the author whose valuable paper contains much that is good. G. M. CORCORAN.

UNIONTOWN, ALA.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 2 to September 8, 1888.

A Board of Medical Officers, to consist of CHARLES H. ALDEN, Major and Surgeon; GEORGE M. STERNBERG, Major and Surgeon; HENRY MCELDERRY, Major and Surgeon; EDWARD C. CARTER, Captain and Assistant-Surgeon, is constituted to meet in New York City on October 1, 1888, or as soon thereafter as practicable, for the examination of assistant surgeons for promotion, and of candidates for admission to the Medical Corps of the Army. S. O. 203, A. G. O., September 1, 1888.

ALDEN, CHARLES H., Major and Surgeon. Detailed as a member of the Board of Medical Officers convened at U. S. Military Academy, West Point, N. Y., vice Major Charles R. Greenleaf, Surgeon, relieved. Par. 2, S. O. 199, A. G. O., August 28, 1888.

CALDWELL, DANIEL G., Major and Surgeon. To report to the Recorder of the Retiring Board in session at Fort Leavenworth, Kan., as a witness in the case of Captain Thomas Sharp, Seventeenth Infantry. Par. 2, S. O. 74, Department of the Platte, August 18, 1888.

CALDWELL, DANIEL G., Major and Surgeon. Having completed his duty as witness before Retiring Board, Fort Leavenworth, Kan., to return to his station, Fort D. A. Russell, Wyo. Terr. Par. 4, S. O. 106, Department of the Missouri, August 24, 1888.

LORING, LEONARD Y., Assistant Surgeon. Granted leave of absence for one month. Par. 1, S. O. 97, Department of Arizona, August 23, 1888.

TAYLOR, MARCUS E., Captain and Assistant Surgeon. Granted leave of absence for four months, to take effect about October 15, 1888. Par. 8, S. O. 196, A. G. O., August 24, 1888.

BIRMINGHAM, HENRY P., Captain and Assistant Surgeon, relieved from duty at Fort Myer, Va., and ordered to Fort Klamath, Ore. for duty. Par. 18, S. O. 196, A. G. O., August 24, 1888.

BALL, R. R., Assistant Surgeon, Fort Riley, Kan., ordered to Fort Lewis, Col. for temporary duty. Par. 5, S. O. 108, Department of the Missouri, August 27, 1888.

SWIFT, EUGENE L., Assistant Surgeon. Upon being relieved from temporary duty at Fort Klamath, Ore., to return to his proper station, Fort Spokane, W. T. Par. 18, S. O. 196, A. G. O., August 24, 1888.

RAFFERTY, OGDEN, Assistant Surgeon. To proceed from Fort Clark to the camp at the Department Rifle Range, near San Antonio, Tex., and report for temporary duty. Par. 3, S. O. 85, Department of Texas, August 15, 1888. Upon conclusion of Department Rifle competition will report to the Inspector of Rifle Practice, Division of the Missouri, for assignment to duty in connection with the Division rifle competition as Camp Surgeon. Par. 4, S. O. 86, Department of Texas, August 17, 1888.

WORTHINGTON, J. C., Captain and Assistant Surgeon. Ordered from Fort Crawford, Col., to Fort Townsend, W. T. S. O. 206, A. G. O., September 5, 1888.

HALL, J. D., Captain and Assistant Surgeon. Ordered from Fort Townsend, W. T., to Fort Niagara, N. Y. S. O. 206, A. G. O., September 5, 1888.

BROWN, P. R., Captain and Assistant Surgeon. Ordered from Fort Niagara, N. Y., to Fort Sidney, Neb. S. O. 206, A. G. O., September 5, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending August 25, 1888.

SIMONS, MANLY H., Surgeon. Detached from Constellation, and ordered to the Naval Academy.

RUSSELL, A. C. H., Passed Assistant Surgeon. Detached from Constellation, and ordered to the Naval Academy.

DICKSON, S. H., Passed Assistant Surgeon. Detached from Marine Barracks, Washington, D. C., and ordered to the U. S. S. Richmond.

CORDEIRO, F. J. B., Passed Assistant Surgeon. Ordered to the U. S. S. Mohican.

FARWELL, W. G., Surgeon. Detached from the U. S. S. Saratoga, and ordered home to wait orders.

DICKINSON, DWIGHT, Surgeon. Detached from the U. S. S. Portsmouth, and ordered home to wait orders.

CRANDALL, R. P., Assistant Surgeon. Detached from the Saratoga; to wait orders.

DUBOSE, W. R., Passed Assistant Surgeon. Detached from the Jamestown, and ordered to the Constellation.

ARNOLD, W. F., Nashville, Tenn. Commissioned Assistant Surgeon in the Navy, August 18th.

LUNG, GEORGE A., Canandaigua, N. Y. Commissioned Assistant Surgeon in the Navy. August 18th.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending September 8, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	66	14
Scarlet fever	60	16
Cerebro-spinal meningitis	2	3
Measles	80	4
Diphtheria	53	18
Small-pox	1	0
Yellow fever	0	0
Cholera	0	0

SUCCI, THE ITALIAN FASTER, is still at work giving exhibitions of his ability to abstain for long periods from food, and submitting his excretions to the physiologists for examination.

The Treatment of Carbuncle.—Dr. F. D. Reese, of Cortland, N. Y., writes: "I have seen in The Medical Record, of late, two or three articles describing and recommending the use of carbolic acid in the treatment of carbuncle. While a student in Long Island College Hospital, the treatment for this disease, as given by Prof. Wight, was to apply carbolized oil to the diseased part and then cover with oakum, which had previously been saturated with the oil. Since I have been practising I have had a few cases of carbuncle which I have treated in this way, and not one has run over two weeks. The disease has yielded to the carbolized oil and oakum treatment as by magic. I have used a twenty per cent. solution."

"Revista Brazileira de Medicina" is the name of a bimonthly journal born in Rio de Janeiro with the year 1888. It is published under the direction of Dr. Azevedo Lodré. If the subsequent numbers fulfil the promise given by the first the *Revista* cannot fail to succeed.

Peganum Harmala.—This is a plant belonging to the rue family, growing wild in Egypt, Spain, and the Crimea, and which is often cultivated in other parts of Europe for its pretty white flowers. The odor of the whole plant is, however, disagreeable. Two alkaloids, harmaline and harmine, have been extracted from the seeds. The former crystallizes in yellow scales soluble in alcohol, but scarcely at all in ether or water; harmine crystallizes in small colorless needles almost insoluble in water, alcohol, and ether. Dr. Paudurel has experimented with an infusion and a tincture of peganum seeds, and has found the drug to be possessed of decided emmenagogue properties, but causing also a slight intoxication similar to that from hasheesh. The dose of the tincture is one-half drachm.—*Gazzetta Medica Italiana.*

A Curious Case of Malingering.—Mr. A. Pearce Gould reports in *The Lancet* of June 2, 1888, the case of a servant girl, aged twenty, who was brought to him for advice concerning a supposed tumor in each cheek. One surgeon, who had seen the girl, pronounced her case a hopeless one, and another had advised excision of the neoplasms. On everting the lip a gray surface resembling a slough was seen, but the introduction of the finger showed that the "tumor" was nothing but a ball of calico cloth, very tightly rolled, placed between the jaw and the cheek. No motive for the deception could be discovered.

Glycosuria from Salicylic Acid.—Dr. F. W. Burton has examined the urine of twelve patients under the influence of salicylic acid, salicylate of soda, or salol, and has found sugar in varying amounts in every instance. He believes that the salicylates act upon the diabetic centre, and that the benefit occasionally seen to follow their administration in diabetes mellitus may be due to the opposite action of small and large doses, as is seen in the case of some other drugs.—*The Lancet.*

Intra-pleural Injections of Sterilized Air.—M. Potain, in a communication made to the Academy of Medicine of Paris, on April 24, 1888, described a method from which he had obtained very satisfactory results in the treatment of pneumothorax. It consists in the complete evacuation of the fluids in the chest and the substitution of sterilized air. This obviates, he claims, the danger attendant upon a rapid evacuation of the pleural cavity, prevents further suppuration, does away with the necessity of repeated punctures, and gives to the lung needed repose, thereby favoring the cicatrization and definite cure of the tubercular lesions.

Hydrate of Amylene.—This substance is a colorless watery-looking fluid, having a sharp taste and smell, which was discovered by Von Mehring and Thierfelder to possess a marked hypnotic action. Its action may be summed up as follows: 1. Hydrate of amylene is a hypnotic whose action can be confidently relied upon when sufficiently large doses are given. Experiments have shown that it is not so strong as chloral, yet stronger than paraldehyde. 2. Hydrate of amylene also acts upon persons who are accustomed to the use of hypnotics, although the dose employed in such cases must be comparatively large. 3. Sleep occurs soon after the administration of the drug, and is not preceded by any period of excitement. The sleep produced is light or heavy, according to the dose given; yet it is always easy to awaken the patient. Upon waking the patient is perfectly sensible and bright, but if not disturbed further will at once fall asleep again. 4. Sleep lasts from two to three hours if small doses have been given, or from six to eight hours under the influence of larger doses. 5. The awaking is similar to that from natural sleep. The patients feel rested and strengthened. No headache or weakness was ever observed. 6. The respiration remains unchanged. 7. The change in the pulse's frequency and in the pressure of blood is no more than that which accompanies natural sleep. 8. The patients were never observed to wake up with a bad taste in their mouths and complaining of a disagreeable smell, symptoms which nearly always follow the use of paraldehyde. 9. Whether or not a habit and tolerance for the drug may be formed remains yet to be seen. As yet, even when the drug has been used continually, an increase of dose was never found necessary. The drug may be given in gelatine capsules, or in fluid form mixed with claret or raspberry syrup and water. The average dose is about half a drachm.—*Therapeutic Gazette*, May 15, 1888.

A Parasitic Monstrosity.—There is now on exhibition in London a boy, aged seventeen, from Oudh, named Laloo, to whose abdomen is attached an incomplete body consisting of the upper and lower extremities, which are, however, entirely separate from each other. The shoulder girdle has the arms attached and shows the nipples. The pelvic extremity presents the buttocks and legs. The pelvic region is covered with hair, and there is a well-formed penis from which urine escapes involuntarily. The anus is apparently imperforate. Both the upper and lower extremities are deformed. The temperature of the parasite is apparently lower than that of its carrier.

Treatment of Urticaria in Infants.—In infantile urticaria, Dr. Deligny recommends the inunction, every evening, of the following ointment; ℞. Chloral hydrar., pulv. camphor, pulv. gum. acaciæ, āā 4 parts; ung. simplex, 30 parts. Rub the first three substances together until liquefaction occurs, and then add the simple ointment. This combination calms the itching, allows the child to obtain sleep, and does away with the scratching which gives rise to such distressing effects in this disease. In the morning the skin should be anointed with a one per cent. mixture of carbolic acid in glycerine of starch. —*London Medical Recorder.*

Treatment of Constipation in Women.—When constipation exists in women who menstruate profusely, as in rheumatic subjects, equal parts of flowers of sulphur and calcined magnesia, mixed with an equal bulk of cream of tartar, will be found an excellent laxative.—*Medical Recorder.*

Diphtheria from a Fowl.—Dr. Hoadley Gabb reports the following case (*British Medical Journal*, July 21, 1888): A fowl with diphtheria was brought to the house of a veterinary surgeon on April 24th, and died on the 29th. The feeding and nursing of the bird devolved on a lad, aged fourteen, who was assisted by his brother, aged five. On the evening of May 11th the writer was called to see the little boy of five, who had been poorly for a day or two. He had enlarged cervical glands on the left side, which had come on rapidly. He was a delicate little fellow, with fair hair and anæmic aspect. The temperature was 103° F.; pulse, between

120 and 130. The fauces were more or less covered with diphtheritic membrane, the left tonsil more especially. Under the administration of biniodide of mercury and iron the throat symptoms cleared up, and the child made a good recovery. On the day after this case was first seen the boy who fed the fowl was very feverish, and had similar patches over his fauces, but not to the same extent as his brother. His throat was painted with boroglyceride. A sister, aged nine, had also a similar explosion on the fauces. Bark and acid and boroglyceride was the treatment. On the 18th the mother, who had nursed them, was attacked, and was similarly treated. They were all kept well up with beef-tea and stimulants.

Chloride of Sodium in Heart Failure. — Dr. Rosembusch gives hypodermic injections of a six per cent. solution of chloride of sodium, to which a trace of caustic potash has been added, in cases of heart failure. The quantity injected varies from two drachms to an ounce and more.

Caffein in Heart Failure.—Dr. de Gempt writes (*Berl. klin. Woch.*, Nos. 25 and 26) in support of the employment of caffein (mostly in the form of the bisalt, "caffeinum natrosalycilinum") hypodermically and by the mouth in cases of threatening collapse, especially in pneumonia. He records several such cases, but, in all, other stimulants, as alcohol, ether, and ammonia, were more or less freely given. The dose of the caffein was 0.35 grm., repeated four or five times a day, but sometimes a larger quantity —*e.g.*, 0.2 grm.—was given. The author says that the drug is indicated in the course of acute pneumonia, as soon as there is evidence of cardiac failure, lowered arterial pressure, great rapidity or irregularity of the pulse. The administration of the drug should be commenced if possible before the onset of collapse ; but even if the latter condition set in rapidly the drug is often of use, and is most urgently indicated. Where there is cardiac debility, and also in the very young or old, caffein may be prescribed from the beginning of the attack. The result of its employment is to cause a diminution in the pulse and respiration rates, an increase of the arterial pressure, with fall of temperature and general improvement. Stimulants are not to be withheld, but are often very usefully given in conjunction with the caffein. The drug has a very rapid action, and in serious cases the effect may be still more quickly produced by administering it subcutaneously. It may be continued for a short time after the pyrexia has abated. Caffein is also indicated in collapse and hypostatic congestion.—*The Lancet.*

Naphthalin Enemata in Dysentery. — Naphthalin has been employed internally by many observers with very satisfactory results in the summer diarrhœa of children, and in other catarrhal conditions of the intestinal mucous membrane which depend probably on the presence of microbes of one kind or another. A Russian practitioner, Dr. Gintergoff, now writes in the *Russkaya Meditsina* (No. 21) that he has found injections of this drug most valuable in the few cases of dysentery in adults in which he has made use of them. He orders seven or eight grains in an ounce of water for a single enema, and finds that this in a very short time relieves the tenesmus and the burning sensation at the anus. The patient is able to obtain rest and sleep, and in some cases is cured without any repetition of the enema. In other cases two or three enemata have to be given at intervals of a few hours. Where needful this treatment is combined with the internal administration of quinine.—*The Lancet.*

In "The Spleen," a poem written by Matthew Green some hundred years ago, occurs the following suggestion for the "blues:"

"To cure the mind's wrong bias, Spleen,
Some recommend the bowling green ;
Some hilly walks ; all exercise ;
Fling but a stone, the giant dies."

The Immortal Daviel.—In our Paris letter, published in the issue for May 26th, the last word should have been printed Daviel instead of David.

Displacement of the Optic Nerve.—A correspondent reports a conversation overheard in a railroad depot between two ladies. The first was relating her sorrows when the second interrupted her with the remark that she knew just how she felt, for she herself had suffered greatly, the optic nerve in the back of her neck being so swollen that she could not turn her head. She had, however, obtained relief from Dr. Blank's magic cure, and off the two went to the nearest drug store for a bottle of the optic-nerve restorer.

Painted and Powdered Children.—Parisian mothers, according to *The Lancet*, are not content to see their children healthy looking, but have called in the aid of dyes and powders to impart what they consider to be a still more becoming complexion.

International Otological Congress. — The next International Congress of Otology will be held in Brussels on September 10th to 16th, under the presidency of Dr. Delstanche. The Secretary of the Congress is Dr. Goris, of Brussels.

A Doctor Awakened by his Night-bell.—A Berlin physician, so states the *Central Zeitung*, was awakened one night by the violent ringing of his bell, and on opening the door found his landlord's servant who had been belated and took this means of gaining an entrance. As neither the servant nor her master seemed to regard the matter as anything out of the way, the irate doctor caused her arrest on the charge of trespass, and the court imposed a fine of seventy-five cents and costs. Several physicians of this city, living in flats, who have had a similar experience, may be pleased to learn of this legal decision.

The Pirogoff Surgical Society has received a grant of land from the municipality of St. Petersburg on which to erect a central medical building. This edifice is to contain a large hall, in which will be held the meetings of all the medical societies of the capital, accommodation for the combined libraries of these societies, and also a surgical ward of ten beds. The building is to be erected upon the Preobrajenski Square.

An Elaborate Dressing for the Umbilical Cord. —Dr. Fagonski, after tying and dividing the umbilical cord, powders the surface of the stump with plaster-of-Paris, covers it with absorbent cotton, strews a little more gypsum over this, and then applies a retentive bandage. In this way he obtains a dry mortification of the stump, and prevents, he believes, all diseases of the umbilicus in infants.—*Vratch*, No. 11, 1888.

The Fatal Dose of Boracic Acid is, according to Gaucher, two and one-half ounces daily, continued for at least ten days.

Migranous Headache is best relieved, according to Dr. Little (*Dublin Journal of Medical Science*, June, 1888), by twenty grains of salicylate of sodium in a wineglassful of water made effervescent by the addition of a dessertspoonful of granular citrate of caffeine. The latter alone Dr. Little has not found efficacious.

Deafness from Stimulation of the Retina.—A curious phenomenon was recently related by M. d'Arsouval before the French Academy of Medicine. After gazing for a few seconds on an arc light of intense brilliancy, he suddenly became deaf, and remained so for nearly an hour and a half. Surprised and somewhat alarmed in the first instance, but reassured by the disappearance of the symptoms, he repeated the experiment with the same result. When only one eye was exposed to the light no very marked effect was produced.—*Medical Press and Circular*, June 13, 1888.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 12 NEW YORK, SEPTEMBER 22, 1888 Whole No. 933

Society Reports.

Congress of American Physicians and Surgeons.

First Triennial Meeting, held at Washington, D. C., September 18, 19, *and* 20, 1888.

TUESDAY, SEPTEMBER 18TH—FIRST DAY—MORNING SESSION.

THE meeting to receive the report of the Executive Committee and for Organization was held at 1 P.M., Tuesday, in the Grand Army Building.

The meeting was called to order by DR. WILLIAM PEPPER, Chairman of the Executive Committee, who spoke as follows:

"On behalf of the Executive Committee, I have to announce the manner in which we have discharged our responsible duty. The present meeting is the result of prolonged deliberation, which began to take shape more than four years ago, before the attention of the medical profession became occupied with preparations for the meeting of the International Medical Congress; but all action was deferred in order that there should not be the semblance of interference with that important meeting. This delay has served to render more conspicuous the necessity for this organization.

"Your Committee venture to hope that their provisions will meet the unanimous approval of the Congress. We have recommended that the sessions shall be triennial. We have jealously guarded against the admission of parliamentary business, since the functions of the Congress are designed to be absolutely or exclusively scientific. We have also guarded the independent sovereignty of each participating society.

"The Executive Committee has reached the conclusion that the selection of the President of each Congress shall be intrusted to the Executive Committee then in office. Close study of the conditions of this Congress has led this Committee to feel that if this organization were to have the effect of favoring the multiplication and subdivision of special societies it would be nothing less than a calamity. We have therefore provided that the admission of new associations shall be secured only by the unanimous vote of the Executive Committee.

"It remains only to add that in exerting the privilege of selecting a President for the first Congress of American Physicians and Surgeons, I feel that we have been guided to the choice of a man, whose admirable personal character, whose high attainments, and whose illustrious services in the cause of literature, of science, and of the entire medical profession, mark him as entitled to this great honor and distinction.

"It gives us, therefore, the utmost gratification to present to you our President, Dr. John Shaw Billings, and to announce that the Congress of American Physicians and Surgeons is now duly organized."

DR. J. S. BILLINGS, as President of the Congress, then took the chair and responded in a brief address.

DR. SAMUEL C. BUSEY, of Washington, then made an

ADDRESS OF WELCOME,

in which he dwelt upon the beauties of Washington, and the advantages which it offered as a place of meeting for scientific societies.

The following

BY-LAWS

were then adopted:

1. This organization shall be known as the Congress of American Physicians and Surgeons.
2. It shall be composed of National Associations for the promotion of medical and allied sciences.
3. It shall hold its sessions tri-annually in the City of Washington, D. C.
4. The officers of the Congress shall be a president, vice-president, a secretary, a treasurer, and an executive committee.
5. The president shall be elected by the executive committee, of which he shall ex officio be a member. He shall preside at the sessions of the Congress. He shall deliver an address.
6. The presidents of the participating societies shall be ex officio the vice-presidents of the Congress.
7. The secretary and treasurer shall be elected by the executive committee. They shall be ex officio members of the executive committee.
8. The executive committee shall be composed of one member from each participating society; and said member shall be elected by the various societies at the next annual meeting subsequent to the Congress. It shall be charged with all duties pertaining to the organization of and preparation for the ensuing Congress, including the election of all officers, and of a committee of arrangements. It shall superintend the publication of the Transactions of the Congress.
9. The expenses of the Congress shall be divided between the participating societies in proportion to their membership.
10. The admission of new associations to participation in the Congress shall be by unanimous vote of the executive committee.

EVENING SESSION.

J. S. BILLINGS, PRESIDENT, IN THE CHAIR.

DR. REGINALD H. FITZ, of Boston, opened the discussion upon

THE MEDICAL RELATIONS OF ACUTE INTESTINAL OBSTRUCTION.

The subject of this paper was the diagnosis and medical treatment of the acute internal, mechanical varieties of intestinal obstruction. The only causes recognized were strangulation from adhesions, vitelline remains, peritoneal slits, pockets, and rings; intussusception, twists and knots, abnormal contents, strictures, and tumors. The evidence presented resulted from an analysis of two hundred and ninety-five cases collected from medical literature since 1880.

The most constant symptoms of obstruction were shown to be pain, vomiting, tympany, and tumor. Stoppage of the bowel was not regarded as the most essential symptom in diagnosis, since frequent loose stools characterize intussusception, and may occur in other varieties of obstruction. Too much attention directed to this symptom leads to erroneous diagnosis, since it is of frequent occurrence in peritonitis, and often results in irrational and injurious treatment. The physician is called upon to decide whether the given case is one of acute obstruction; then where its seat, and what its cause, and, finally, what is to be done. The evidence offered showed that the diagnosis was to be made by excluding the various causes of peritonitis. Its seat in the large or small intestine was to be determined by injections under high pressure when necessary. The variety was for most practical purposes an intussusception, or a twist of the large intestine and strangulation, or gall-stones in the small intestine. The differential diagnosis depended on the relative frequency of these varieties, the age of the patient, the antecedents, and immediate symptoms.

The treatment consisted in the attempt to relieve intussusception of the large intestine by forced injection under anæsthesia, with massage, and to treat obstructing gall-stones by opium, possibly with the aid of laxatives and electricity. All the other varieties of acute obstruction require surgical treatment. The latter treatment is also necessary on or before the third day in cases of intussusception not yielding to forced injections, and in gall-stones when the symptoms become urgent.

Dr. Nicholas Senn, of Milwaukee, then read a paper on

THE SURGICAL TREATMENT OF INTESTINAL OBSTRUCTION.

He claimed at the very beginning that all cases of true intestinal obstruction are, in every sense of the word, surgical affections. Intestinal obstruction is present when, from mechanical or from dynamic causes, the intestinal canal becomes completely or partially imperforate. interfering completely or partially with fecal circulation. It is important that a distinction be made between the cases due to mechanical causes and those due to dynamic causes. In the former the surgeon is expected to modify the mechanical cause, in the other the surgical treatment is limited to diminishing intra-abdominal pressure. Cases of internal intestinal obstruction should be considered in the same light as cases of strangulated hernia. Operation should be performed as soon as the diagnosis is made.

The surgical resources in the treatment of internal obstruction were taken up *seriatim.*

Irrigation of the stomach.—All forms of intestinal obstruction, no matter what the cause, are aggravated by anything that increases the hydrostatic pressure on the proximal side of the obstruction. Irrigation of the stomach relieves this, and also diminishes the intra-abdominal pressure. This measure should always be performed before operation, as it prevents vomiting. An antiseptic solution should be used in the irrigation.

Distention of the intestine with fluids.—The mechanical effects of this measure are limited to the colon, the fluid does not pass beyond the ileo-cæcal valve. Why should we not in these cases resort to the lightest possible substance known, hydrogen gas, which is harmless, readily obtained, and aseptic?

Manual exploration by the rectum is a useful diagnostic and therapeutic measure where the obstruction is below the sigmoid flexure, provided the surgeon has a small hand.

Taxis and massage should be limited to cases where the obstruction is due to intramural causes, and to a few cases of invagination. Uniform, uninterrupted, equable *pressure of the abdomen* is useful in preventing hyperdistention in these cases, especially when dynamic causes are feared.

Enterotomy, so frequently practised in the past, he hoped had become very nearly obsolete. It should only be employed when it is clear that the patient will not be able to pass through the ordeal of laparotomy.

Lumbar colotomy.—In cases where this operation was formerly employed we can often, by uniting the portion of the bowel above the obstruction with that below, by means of decalcified bone-plates, avoid the necessity for colotomy. I have specimens showing that a dilated, congested bowel can be repaired when excluded from the fecal circulation in this way.

The author had, in the past eight months, performed gastro-enterostomy in four cases by this method. In all of these cases the operation was a success, although in one case the patient died because the operation had been postponed too long. Gastro-enterostomy in incurable carcinoma is a safe operation, and one which the surgeon owes to all such patients.

(The time allotted to this portion of the discussion having expired, the speaker was unable to complete his remarks.)

Dr. Arthur Durham, of London, had taken much interest in this subject; there is no class of cases which are more serious or more dangerous than those of intestinal obstruction. He agreed with Dr. Senn that usually in these cases the sooner the surgeon is called, the better. As soon as the diagnosis is made the operation should be performed. In some cases it should be done before a positive diagnosis is reached, and in order to clear up the diagnosis. Under such circumstances the surgeon must be prepared to meet the indications that present themselves. In trying to reach a diagnosis the probabilities in favor of this or that condition, based upon statistics, should not influence us; but the case should be studied on its own merits, and treated on the indications before you. In regard to the injection of hydrogen gas, he suggested the possibility of the formation of explosive compounds, and thought that atmospheric air might be substituted.

Dr. William Ord, of London, admitted that there was often a great deal of difficulty in the diagnosis. He was in favor of the views of Dr. Fitz, and claimed a little time before resorting to operation. In some of these cases, under the use of opium and time, the cause of obstruction had disappeared. Where, however, there is mechanical obstruction the case must sooner or later go into the hands of the surgeon. This time should be a short one. The operation is a serious one, especially in people over fifty years of age. He had often seen the operation performed, and frequently fail in those cases where there was the most reason to expect success.

Professor Thomas Annandale, of Edinburgh, said that these cases of obstruction should be divided into two classes, the acute and the chronic. In acute cases medical measures should be tried, but not continued too long. If the symptoms are urgent, the surgeon should be called at the end of forty-eight hours; the sooner the abdomen is opened the better. In the chronic cases we may wait a considerable time, even until the symptoms become acute; the treatment should then be that applicable to a case of acute obstruction. He had largely given up lumbar colotomy, which he had employed more particularly in rectal obstruction, and resorted to inguinal colotomy, as a simpler and not more serious operation in most cases.

Dr. Senn, in closing the discussion, stated that there was not the least danger in the use of hydrogen gas. He had performed many experiments on animals, and had used the procedure in man. In cases of intestinal perforation it aids the diagnosis, and allows the surgeon to determine whether or not all the openings have been closed. In a recent case of gunshot wound eleven openings near the ileo-cæcal valve were closed, and a twelfth was revealed by the hydrogen gas, at the point where the peritoneum is reflected from the bowel to the bladder. The patient is doing well one week after the operation.

Dr. Roswell Park, of Buffalo, N. Y., read a paper on

CEREBRAL LOCALIZATION IN ITS SURGICAL RELATIONS.

The essay was devoted purely to the surgical aspects of the subject, and omitted consideration of those cases in which operation is dictated by a study of the subjective rather than of the objective features.

Cerebral topographical anatomy. — The areas which most concern the surgeon are those which cluster around the fissure of Rolando. A few bony prominences deserve attention in this connection—that at the point of the nose known as the glabella; the external occipital protuberance known also as the inion; the point of the vertex half-way between these two—the bregma; the external angle of the orbit, the tip of the mastoid process, and the lower border of the alveolar process of the upper jaw. The fissure of Rolando has its upper end about five centimetres back of the bregma, but does not run quite in the middle line; its lower end lies about half a centimetre behind the auriculo-bregmatic line, and a little above an imaginary line projected backward from the superciliary ridge; thus, the lower end of this fissure will be found about six centimetres above and a little behind the external auditory canal, or about an inch behind the bifurcation of the fissure of Sylvius. In regard to the convolutions, it must be stated that lesions of the dura mater overlying motor areas are not always to be distinguished from lesions in the cortex beneath. It is enough for the surgeon that a lesion of some kind can be located with reasonable accuracy. It matters not whether this is an old, irritative lesion, an acute suppurative process between the bone and the brain, or an abscess or tumor of the brain itself. The indication for exploration is just as strong in either case.

When and where can one trephine with safety?—The safest rule is to first apply the trephine over those areas which do not overlie large vascular channels. Afterward, the opening may be extended in any direction, and to any required extent. The greatest hesitation is with regard to opening one of the sinuses. Two dangers attend such an accident: one, fatal air embolism, the other profuse hemorrhage. The former danger is almost a theoretical one, and the other may be overcome by plugging the sinus or closing its wound with a fine needle and suture.

Cerebral and cerebellar abscess.—Bergmann has shown that abscess of the brain has but one result—death, and that the surgeon's knife offers the only relief. So far as we know, there is no such thing as idiopathic abscess of the brain; it is always the result of some external wound of the head, or some extension from diseased surrounding bone. The only exceptions to this statement are to be found in the case of pyæmia or tuberculous abscess. The symptoms of deep brain abscess may be divided into three groups, according to causes: 1. Those which are inseparable from indications of suppuration. Such are those disturbances which may follow any deep-seated foreign body. 2. Symptoms of increased intra-cranial pressure and of disturbed relations. 3. Special symptoms by which the locality of the disturbance may be ascertained so long as the gray matter is undestroyed; the collection of pus may assume large dimensions, and still no intense motor symptoms appear. Local elevation of temperature over the abscess is a symptom of importance when present, but its absence need not negative a diagnosis, if made on other grounds. Wernicke has stated that there is a peculiar disturbance of speech which points to lesion of the temporal region. This is the confusion of correct with incorrect words. In the general diagnosis of cerebral abscess, it is to be remembered that there usually is a latent period which may continue for an indefinite period. The stage of active symptoms is usually ushered in by more or less headache, slight rise in temperature; local or motor symptoms can only be expected when the abscess is in the motor area of the brain.

In operating for abscess of the brain, operators, until recently, have satisfied themselves with incising the dura and doing nothing more. With the introduction of aspirating methods, the hollow needle came to be used for brain exploration. The dangers of this procedure are certainly small. The danger of hemorrhage has been overestimated. A temporary tampon will control deep hemorrhage, while in bleeding from the pia mater the vessels may be sewed with ligatures or serre-fine. In brain-abscess consequent upon middle-ear disease, the best point to trephine, according to Bergmann, is above and behind the ear. Macewen proposes a second counter-opening on a level with the floor of the abscess.

Brain tumors.—The principal features of these growths which produce symptoms are location, size, character, rapidity and manner of growth, and extent to which they affect surrounding brain-tissue. Considered in their surgical relations, we may, with Bergmann, divide them into (*a*) the circumscribed or encapsulated, and (*b*) the infiltrated or diffuse, around which, as a rule, there is a zone of softening. A third class may be mentioned, *i.e.*, those growing from the interior of the cranium, from the bone or dura.

If a reasonably satisfactory diagnosis can be made, it must be indeed an extensive growth of the cranial vault which shall contra-indicate operation. The question of what and how many brain-tumors are operable has been best answered by White. He found, in one hundred brain-tumors met with in the dead-room of Guy's Hospital, that only nine could have been removed—one tuberculous nodule, four sarcomas, two undetermined tumors, one cyst, and one myxoma. Nine per cent. could have been attacked, providing a fairly accurate diagnosis had been made. Of these nine tumors, five were located in the cerebellum, one in the frontal lobe, and one in the extremity of the occipital. It is doubtful whether these seven could have been recognized accurately enough during life to justify operation; while the myxoma was impossible to diagnose. It is thus seen that by no means all tumors which can be diagnosed can be deemed suitable for operation.

Operation for intra-cranial tumors.—The head should be shaved two or three days before operation, washed with green soap and ether, and antiseptic compresses applied. Chloroform should be, as a rule, the anæsthetic, on account of its contracting influence on the vessels of the brain. Morphia, hypodermically, and ergot may be resorted to for the same purpose. The author suggested that after localizing the lesion, a small, disinfected, headless tack be driven through the scalp into the bone at the point determined upon. After the dissection of the external flap, this will point out accurately the point to be first attacked. In order to prevent hemorrhage, the author had found a spray of antipyrine solution (1 to 40) of service. The semilunar flap is the proper shaped one to raise. Its apex should be in such a position as to allow of drainage with the patient on his back. The periosteum should preferably be raised with the flap. The use of the trephine is preferable to the hammer and chisel. Since Macewen has taught us how to preserve the fragments of bone and restore them to their place, his method has been widely tried, and universally commended. The dura mater should be incised around a large part of the area, at a distance of one-eighth to one-fourth of an inch from the edge of the bone. The appearance of the dura is sometimes a guide to trouble beneath. In recent cases, it is sometimes highly vascular; in old cases, it may be yellowish or discolored. Wherever adherent it should be freely excised. Horsley claims that marked protrusion of the dura indicates pathological intra-cranial tension. The color of the brain should be noted, remembering that the cerebellum has normally a different appearance from the cerebrum. Sometimes, when there is uncertainty as to which convolution is the desired one, the battery may be employed. When no indication of lesion is found, further exploration may be conducted with a small aspirating needle, or a blunt probe.

Should a tumor be discovered, the incisions for its removal should be made perpendicularly to the cortex, for the purpose of avoiding hemorrhage and division of the conducting fibres. Removal of a layer of cortex, whether normal or abnormal, does not leave, as one might fear, a prominent gap with vertical sides, since in a short time the depressed portion is made to bulge almost to the level of the intact parts surrounding. In addition, the cut edges are also slightly everted, and if less brain is removed than bone, the edges are extended into the opening in the skull; thus there is a continual normal tendency to hernia, but Bergmann and others have shown that this tendency to hernia cerebri is in inverse ratio to the area of bone removed. Experience has taught that it is wise to remove brain-tissue to an extent greater than was at first considered justifiable. In all operations for epilepsy the portions of cortex nearest the evident lesion should be freely removed.

The matter of drainage must be determined according to the circumstances of the case. An abscess must be drained as long as pus is discharged. After the antiseptic removal of a tumor the cavity should seldom be drained for more than twenty-four hours. The provision for drainage may be removed on the second day, and the wound dressed with reasonable pressure over the flap. Exudation naturally collecting in this cavity, will be retained and will give rise to some pain and disturbance, but so long as the symptoms from this are not severe, the wound may be left with confidence that the fluid will be reabsorbed, and that the pressure will be the best check to protrusion.

Dangers of the operation.—The principal immediate dangers are two: hemorrhage and œdema. Hemorrhage from the pia or from the brain-substance is usually readily controlled, but disastrous hemorrhage may occur from unexpected sources. When there is bleeding a temporary tampon of iodoform gauze may be applied. The dural and skin flaps are laid over this and an absorbent dressing applied. At the end of forty-eight hours this may be removed and sutures inserted.

The second danger, that of acute brain œdema, may be brought about either by increase of intra-arterial pressure or by obstruction of the venous channels of escape. Under this accumulation the brain becomes more sodden. Removal of a portion of the cranium is virtually a diminution of the pressure normally exercised on its contents, and is often followed by reaction with production of excess of fluid.

The author had collected reports of 63 cases, which were presented in summary and in tabular form; 17 of these terminated fatally, although only 5 of these deaths could properly be attributed to the operation; 15 of the cases were abscesses, subdural or subcortical. In 11 cases the lesion was a tumor, exclusive of tubercular nodules. Of cysts, properly speaking, there were 12. The 25 other cases were of a miscellaneous nature. In 3 cases the true character of the lesion was not revealed during the operation, and was only discovered at the autopsy. In 2 cases, in which no palpable or visible lesion was discovered at the time of operating, the symptoms which led to the performance of the operation were nevertheless relieved, though nothing but careful exploration was practised.

Of the 63 operations, 17 were performed by American surgeons. Those who have themselves operated more than once are, with the number of their operations: Macewen, 12; Horsley, 11; Bergmann, 4; Weir, 3; Keen, 3; and Park, 3.

Dr. Charles K. Mills, of Philadelphia, Pa., read a paper on

CEREBRAL LOCALIZATION IN ITS PRACTICAL RELATIONS.

In his introductory remarks, the speaker referred to the fact, that from the clinical observation of practical physicians sprang the conceptions out of which developed the science and art of cerebral localization. Allusion was made to the discoveries of Bouillaud and of Broca, on speech localization; to the announcement by J. Hughlings Jackson, in 1864, that certain convolutions superintended the delicate movements of the hand which were under the immediate control of the mind; and to Hitzig's researches having originated from his observing certain ocular movements during galvanization of the heads of his patients. Brief reference was made to the history of American work in localization; to the investigations, in 1874, of the New York Society of Neurology and Electrology; to Putnam's discovery, that irritation of the white matter beneath definite cortical centres, produced movements similar to those caused by irritation of the centres themselves; to the labors of Wood and Ott on the heat centres, and to the light thrown by these investigations upon the mechanism of fever and the action of drugs upon different forms of high temperature.

Before taking up the surgical aspects of the question, the speaker briefly discussed some of the practical results wrought by cerebral localization, for psychological medicine and medical jurisprudence; for general symptomatology and diagnosis, and for medical therapeutics and technique.

Trephining for cases of insanity, particularly when guided by the rules of localization, was briefly considered. Two of the recent cases of brain operation, reported by Bennett and Gould, and by Macewen, were cited as possibly opening a new field for surgical interference in insanity; the excision of cortical areas as a method of treatment when certain subjective phenomena, such as hallucinations of sight or hearing, can be given a local habitation in the brain.

In turning to the surgical aspect of cerebral localization in its practical relations, the author stated that his remarks would be chiefly concerned with questions of diagnosis. He considered first the forms of disease and injury in which cerebral localization is a valuable aid to diagnosis; and secondly, the topographical diagnosis of the parts of the brain accessible to surgical interference, with some sources of error in such diagnosis. The forms of disease in which such diagnosis has been used are intra-cranial tumors, cysts, fractures, hemorrhages, abscesses, and discharging cortical areas.

In considering the localization of brain-tumors, Dr. Mills referred to twenty cases of autopsies occurring in his own personal experience, in about one-half of which the tumors were in surgically accessible areas, and in at least one-fourth of which successful operations might have been performed. He advocated, from this experience, the excision of old gummata, and also, in special cases, of tubercular growths. The value of localization was shown in cases of fracture, where the extent of the unseen damage could not be told by the position and character of the visible lesions.

Of the different forms of intra-cranial hemorrhage, subdural, cortical, and intra-cerebral were most amenable to localizing diagnosis. The rules for the local diagnosis of these forms of hemorrhage were then given. Dr. Mills advocated the performance of trephining in exceptional cases of hemorrhage into the ganglia and capsules—cases in which symptoms indicated that the bleeding had not broken into and inundated the ventricles. From the sections, the best site for operation in such cases, all things considered, would be in the anterior portion of the first or second temporal gyrus. He favored Hughlings Jackson's suggestion of excising localized cortical areas, even when coarse lesions could not be made out, in cases of spasm beginning locally or deliberately.

The inaccessible areas had been narrowed down by the venturesome surgical explorer, and had become reduced to the middle regions of the base and its bordering convolutions, the corpora quadrigemina, and the pons oblongata.

The characteristics of localizing symptoms were described as phenomena of irritation, destruction, instability, pressure, invasion, and reflex action. Signal symptoms and the serial order of motor phenomena were discussed. Briefly, in certain regions of the brain an accurate topographical diagnosis could be made with great certainty from positive localizing symptoms. These brain areas include the entire motor zone, in which are embraced the motor or emissive speech area, the region of Broca; the visual area in the cuneus, giving lateral hemianopsia, and the intra-cerebral visual tracts, possibly also the angular gyre and the lateral surface of the occipital lobe; in other regions of the encephalon the topographical diagnosis could be made with sufficient accuracy, even for surgical purposes, by the study of the positive symptoms, with, in addition, the application of processes of exclusion and successive differentiation. Particular stress was here laid upon the importance of pressure and invasion symptoms. These areas for approximately certain topographical diagnosis include the cerebellum, the prefrontal lobe, the temporal lobe, and even certain cranial nerve-districts, as the auditory and facial, when the lesion could be localized within the cranium between the superficial origin of the nerves and their entrance into their foramina or canals of exit.

Motor localization had become almost an exact science. The latest physiological research bearing upon the subdivision of the motor area and the light thrown upon the question by surgical operations were discussed. It was held to be imperative for the neurologist and surgeon to have exact knowledge not only of the anterior and the posterior limits, but also of horizontal subdivisions of the motor zone.

The old method of subdividing the motor zone into three elliptical or circular areas, from above downward, was considered insufficient; but the neurologist should be able to locate for the surgeon, from a study of motor phenomena, at least seven or eight positions for trephining, these positions being selected by a close study of the initial or signal symptoms, the serial order of movements, and also of the amount and character of the temporary paralysis after the seizure, and the method of extension of the persisting palsy. Reference was made to operations performed through accurate localization in these areas.

The view of Ferrier as to the localization of the centre for ocular and head movements in the second frontal gyre was concurred in, and observations were cited in its support; when turning of the head and eyes was the starting-point of the spasm this localization was probably indicated. The fact that cortical oculo-motor palsies were not present as a persistent condition, even with definite lesions of the second frontal gyre, was explained by the intimate and peculiar connections of the oculo-motor nuclei at the base; they do not persist for the same reason that paralysis in the upper distribution of the facial nerve is so seldom permanent. He believed that there was a special centre for the orbicularis palpebrarum movements, probably below and adjacent to the oculo-motor centre.

Dwelling upon the sources of error in motor localization the question of reflex spasm; of unilateral convulsions due to uræmia, lead, and other toxic agents; and to hysteria and hystero-epilepsy were briefly discussed. Sufficient diagnostic difficulties are still present to make it important, in the light of the tremendous impetus toward operation, to carefully examine all questions of differential diagnosis. In certain spasmodic affections the resemblance between those clearly of reflex origin and those as demonstrably central, was very striking. Trigeminal epilepsy, whether dural, facial, dental, nasal, pharyngeal, laryngeal, or of whatever local origin, might cause unilateral convulsions or even monospasm. Dural epilepsies are especially worthy of attention, as shown by the researches of Dupuy, Brown-Séquard, Burdon Sanderson, the New York Society of Neurology and Electrology, Duret, Roche Fontaine, and François Franck. Franck has made a careful comparison and contrast of cortical epilepsies with those which are reflex and toxic, including those which are due to irritative lesions of the dura mater.

The author referred to five cases in his own experience in which operations had been performed for epilepsies apparently reflex in character; two in which spicules of bone had been removed from the dura mater; one in which an old inflammatory lesion of the membranes and cortex, from traumatism, was present; and two in which scalp cicatrices were removed. While fearing, with Franck, that we were not always able to make a trenchant separation between reflex and cortical epilepsies, some points of separation were indicated,

True Jacksonian epilepsy, Dr. Mills believed, was sometimes reflex in origin, that is, that it was established by intense, persistent peripheral irritation, and even after the irritation had been removed the cortical discharge continued; herein perhaps lay the explanation of Jacksonian spasm without coarse lesion, and herein, also, perhaps, was to be found the justification for the excision of cortical discharging areas. The author referred to a case in which epilepsy, clearly of Jacksonian type, was just as clearly due to a fibroma involving a nerve-trunk on the palmar surface of the hand, and in which the patient was cured by removal of the growth.

With reference to sensorial localization, cutaneous and muscular, the views of Horsley and Schäfer, with reference to the limbic lobe, were accepted in part. The speaker believed that the evidence was becoming stronger every day in favor of the existence of a zone for the sensations of touch, pain, and temperature, separate from cortical motor areas. Collections of cases, such as those of Starrs, Petrina, and others, which were supposed to indicate that the sensory areas coincide largely with those of motion, were not regarded as overcoming the positive evidence of decided destructive lesions of the cortical motor zone without any sensory disturbance. From a study of his personal cases he had concluded that they did not support the doctrine that the motor and sensory areas coincide. Notes of these cases were given, and also cases from other reporters. He believed with Bechterew, that the loss of sensation in animals, who have had the motor area destroyed, was apparent and not real. Some light had been thrown upon this disputed question by careful examination of patients after operation, particularly when certain definite dural areas had been clearly excised. Reference was made to the cases of Horsley, Weir and Seguin, Lloyd and Dearer, and others. The speaker believed that these observations and experiments pointed clearly to the theory that the motor zones were motor alone in function. His view was that the region for general sensation, including touch, pain, temperature, and perhaps pressure, location, and muscular sense, could be divided into special areas for the various distinct portions of the body, and that these centres lay alongside, and had close anatomical and morphological relations with corresponding motor centres, but that they were not identical with them. He located these sensory areas in the gyrus fornicatus, the hippocampal gyre, the precuneus, and the lateral postero parietal region.

The practical conclusion was that the neurologist and surgeon must depend upon motor symptoms alone in fixing the site for operation in cases where the motor lesions were definite. When positive sensory symptoms were present, they might sometimes serve to aid in locating more exactly the position for operation, but the data were not sufficient for positive reliance.

The question of morphological peculiarities of the human brain was briefly alluded to as having some practical bearing upon the subject under discussion. The position of the so-called angular gyre and aberrations in the parieto-occipital region were more particularly discussed. Even the fissure of Sylvius, the central and parieto-occipital fissures sometimes present considerable variation; but, as a rule, such aberrations were not confusing in operating on the motor region after the methods of Broca, Thane, and others.

Dr. Mills concluded by saying that the discoveries in cerebral localization, with the achievements in antiseptic surgery, constitute the greatest triumphs which adorn the history of the noble science and art of medicine.

DR. M. ALLEN STARR, of New York City, read a paper on

CEREBRAL LOCALIZATION IN REFERENCE TO APHASIA.

It is evident from the statements just made that cerebral surgery has a great future, but is dependent on neurology for its guide. The burden of responsibility for future progress rests upon physicians, for diagnosis must precede operation. The great discoveries in cerebral localization made in the past have been reached by means of the collection and analysis of large numbers of cases of localized disease in man, rather than through physiological experiment. Future advance must be in the same line. Hence the importance, too much overlooked in this country, of recording carefully every case of cerebral disease. And to be properly recorded it must be carefully examined. This is especially necessary in the cases of disturbance of speech.

The history of aphasia presents three epochs: First, that of Broca, in which the fact was established that lesions of the third frontal convolution on the left hemisphere produced aphasia. Secondly, that of Wernick, in which a distinction between sensory and motor aphasia was drawn, and the former was shown in a few cases to be due to lesion of the first temporal convolution. Thirdly, that of Charcot, in which the four mental elements of speech were carefully separated. Charcot says, "A word is a complexus; in it we can discover, in persons of education, four distinct elements: the auditory memory-picture, by whose means we are able to grasp the sense of words heard; the visual memory-picture, which enables us to comprehend the words written or printed; and also two motor elements—the motor memory of articulation, and the motor memory of writing, the first developed by the repetition of movements of the tongue and lips necessary to pronounce a word, the second by the practice of motions of the hand and fingers necessary for writing." Each of these memories being distinct can be lost. The result is disturbance of speech whose forms vary. The loss of visual memories produces verbal amnesia and word-blindness; the loss of auditory memories causes word-deafness; the loss of motor memories of writing results in agraphia; the loss of motor memories of pronunciation produces motor aphasia. Individuals differ largely in the degree of cultivation of each of these memories, and hence suffer differently when affected by their loss; *e.g.*, the literary man presenting far more symptoms than a common laborer, when his memories of things read are lost. Another fact of importance is the independence of speech and thought. Aphasics may retain their musical faculties and may sing when they cannot talk. Thinking, though largely done by the aid of speech, is not dependent upon it. We have memory-pictures of the shape, form, or sound and odor of objects, independent of their names, and unless these are intact in the brain the perception of the object does not produce recognition of its nature or use, and does not awaken the memory of its name. The condition termed apoaxia is found, with aphasia, in some cases, but not in all.

Turning from clinical distinctions to pathology, the localization of the various memories necessary to speech was discussed. Motor aphasia is produced by lesion in Broca's centre, or in the tract from that centre to the cranial nerve-nuclei. If it is due to lesion in the latter, it is temporary and accompanied by other local symptoms. The situation of the lesion producing motor agraphia is uncertain. Word-deafness is due to lesion in the first temporal convolution, and is associated with word-blindness when the lesion extends to the supramarginal convolution and angular gyrus. All the cases of pure sensory aphasia in which the lesion was limited to these parts (forty-one in number) were collected, and a chart of the brain was shown to support the localization stated. The condition of apoaxia was shown to accompany lesions situated in or beneath the angular gyrus.

The integrity of the connecting tracts between the various memory-centres is also necessary to the act of speech. These can be tested; thus repetition after another, copying, writing at dictation, and reading aloud, are acts involving two separate areas and their connecting tract. Lesions of these tracts produce disturbances of speech, some of which Lichtheim has described. But cases have not yet been sufficiently well tested to warrant any conclusions. The necessity of careful examination of all cases, to detect various defects, was dwelt upon, and the speaker closed by indicating how readily accessible to surgical interference the speech areas of the brain are.

ASSOCIATION OF AMERICAN PHYSICIANS.

Tuesday, September 18th—First Day.

Dr. W. H. Draper, of New York, delivered the

PRESIDENT'S ADDRESS.

After a few words of introduction, in which he referred to the avowed aim of the Association, and to the honor conferred upon him in being called to preside over its deliberations, he proceeded to offer

SOME REFLECTIONS UPON THE RELATIONS WHICH SCIENTIFIC AND PRACTICAL MEDICINE BEAR TO EACH OTHER.

We may differentiate the science from the art of medicine, but we cannot practically dissociate them. In their ideal union they are interwoven like warp and woof, built into each other like foundation and superstructure. Scientific medicine, to be sure, is not always practical, but it is ever striving to become so; and practical medicine, though not always in a strict sense scientific, is constantly tending to that end. In medicine, perhaps, less than in any other department of human activity has the distinction between the art and the science been sharply drawn. In spite of this close mutual relation, the worker in the science and the worker in the art occupy essentially distinct positions, and the aim and the methods peculiar to each must be constantly kept in view. The one is a naturalist, the other an artsman. The tendency is to accentuate the distinction. The obvious results of this specializing it is hardly necessary to point out. The observations of the physician have not only suggested to the scientist some of the most interesting problems in biology but some of the most important factors in their solution. Attention was drawn to some of the disadvantages connected with the independent cultivation of the scientific and practical. Science necessarily sometimes draws premature conclusions from its premises. The only competent critic of the practical value of its theorems is the practitioner who tests them. The facts of science are of no more use as materials for practical work than the ultimate elements of our food would be for nutrition; they must first be transformed into new combinations, and then pass through a series of more or less complex changes before they can be made to yield up the force which makes them a power for good and useful achievements. The many beneficent applications of electricity, for example, have not been made by men who were eminent as physicists, but by men who were endowed with a sort of divine instinct for adapting the laws which govern this subtle force to the practical needs of humanity. How to assimilate the discoveries, how to make them all contribute to more exact diagnosis and more rational therapeutics, are the problems which lie in the path and confront the conscience and the resources of the practical physician. It is well to remember that in one sense practical is always in advance of scientific medicine, and that in another it is always in its train. It is always in advance because it is ever referring new problems to science to solve; it is in its train, because it has continually to test and digest the theorems which science suggests for their solution. There is no better illustration of this statement than that which is afforded by the history of parasitism, the latest and most portentous contribution which science has made to the theory and practice of the healing art. The germ-theory of disease may be said to have reformed surgery, but it is not safe to affirm that it may not be forging new errors in diagnosis and beguiling us into dangerous paths in therapeutics. We may well believe that we are on the eve of momentous changes in the healing art resulting from discoveries in bacteriology, but these changes must come mainly from the independent and judicious application of these new ideas to the study and treatment of disease by the practical physician at the bedside. Already the relations of bacteria to the pathology and treatment of fever furnish an illustration of the way in which clinical observation enlarges and compli cates the problem which the pathologist has to solve. Until we know how fever is produced, and whether it is a salutary or a dangerous process, to be antagonized or let alone, we are really in no better position to treat fever rationally than we were before the etiological relation of bacteria to fever was suspected. The fault of medical practitioners in the country is the failure to indoctrinate the principles and demonstrate the practice of clinical medicine, along with the purely scientific knowledge.

We must preserve science so as not to imperil the progress of art, and we must cultivate art as if science were not so much its mistress as its handmaid. We may wisely recall and apply the answer which Iphicrates, the Athenian general, is said to have made when he was hard pressed by an orator before the people to say what he was, to be so proud: "Are you a soldier, a captain, an engineer, a spy, a pioneer, a sapper, or a miner?" "No," said Iphicrates, "I am none of these, but I command them all." So the practical physician may not be a very learned pathologist, an erudite physiologist, a skilful chemist, or an expert bacteriologist, but he must command them all, and it is he who must finally, through the co-operation of all the sciences which they represent, perfect the most beneficent of all the arts; it is he who, in his high position as the servant of humanity, must attain that wisdom which results from combining knowledge with the instinct and the skill for its useful application."

DR. W. W. JOHNSTON, of Washington, read a paper entitled

GEOGRAPHICAL DISTRIBUTION OF TYPHOID FEVER IN THE UNITED STATES.

The paper was based largely upon the answers returned from three hundred and fifty physicians in various parts of the country, and colored maps showing the distribution of typhoid and of malarial fever were exhibited. Dr. Johnston's conclusions are: 1. That typhoid fever has a much wider distribution in this country than is accepted by the majority of medical men, and that its prevalence is very great in all of the regions reviewed in the paper. 2. That the varieties and modifications of type are very numerous, covering a wide range, and simulating types of malarial disease. 3. That the prevailing type is without many, sometimes without any, of the more characteristic symptoms of the disease. 4. That the principal direction in which clinical study can be useful in the present stage of our knowledge is in the collection of cases of undoubted typhoid fever; cases in which the diagnosis is made certain by characteristic symptoms, especially by post-mortem examination, in which there have been phenomena supposed to show malarial infection. 5. By the study of the localities of occurrence of such cases, by the finding of them, perhaps, in non-malarial regions, by the study of the blood and stool micro-organisms. 6. That no true progress can be made until the true value of the malaria-like symptoms are determined.

DR. STERNBERG urged the abandonment of the term "typho-malarial." In reviewing the army statistics he had noticed that "typho-malarial" fever had had a low mortality; he thought it difficult to understand how a complication could tend to diminish the severity of a disease.

DR. OSLER referred to the researches of Laveran, and their confirmation by various observers in different parts of the world, as proof that in the blood-changes we have the means of differentiating between a fever of a malarial and one of a typhoid origin.

DR. JAMES H. HUTCHINSON, of Philadelphia, read a paper on

THE MANAGEMENT OF THE STAGE OF CONVALESCENCE IN TYPHOID FEVER.

With the return of the normal temperature, the physician is prone to overlook the danger. The authorities differ greatly as to the rules laid down for the management of this stage, some advising the administration of solid food so early as the second day after the cessation of the fever; others not until a week or ten days have passed. Dr. Hutchinson favors the continued use of the milk diet with a little milk-toast, and at the end of two weeks butcher's meat. The only objection to be urged against the milk diet are the wishes of the patient and the tendency it occasionally has to produce constipation.

The administration of alcohol may be withheld in many instances; but, on the other hand, it may for the first time become necessary, and no doubt convalescence is often very much hastened by its use. Hupham's tincture he has found useful at this time, together with iron, and pepsin and muriatic acid. Severe cases should remain in a recumbent position for a week after the beginning of convalescence. At first the patient may sit up for a half-hour, the time to be gradually increased. As soon as the patient's strength will permit he should be removed to an adjacent room. Exercise in the open air is to be encouraged as soon as strength is regained. Convalescent typhoid patients are more emotional than in health, and severe relapses may occur from mental excitement. It has been noticed at the Pennsylvania Hospital that after visiting days there is more or less recrudescence of fever. The causes of recrudescence of fever and of relapses, and of some of the least known of the sequelæ of typhoid fever were also considered.

DR. PEABODY, of New York, in opening the discussion, stated that he did not believe that errors in diet were so frequently the cause of recrudescence as was formerly supposed. In regard to ulcers as a cause of diarrhœa, he is of the opinion that their presence has nothing whatever to do with its production, a conclusion derived from the frequent study of cases at the autopsy-table.

DR. ORD, of London, in a general way agreed with the reader of the paper, but thought that one cannot lay down hard and fast rules. One must be guided, in a measure, by the desires of the patient, and must give in to these desires. He referred to a hospital case which ran the usual course up to a certain period in the convalescence, when there was added a more extraordinary range of temperature for days, with delirium and an abiding desire for food. The patient had been allowed milk and beef-tea, and for ten days two eggs daily. She was given boiled sole, and within twenty-four hours her temperature was normal, and convalescence was thereafter uninterrupted. We should study the individual as well as the fever.

DR. KINNICUTT, of New York, remarked that he considered relapse to be very often a result of indiscretion in diet, and that therefore the old way of adhering strictly to a liquid diet was the best.

DR. GEORGE ROSS, of Montreal, then presented a communication entitled,

SOME FORMS OF PARALYSIS AFTER TYPHOID FEVER.

In his introduction, Dr. Ross quoted the remark of Dr. Baly, that "a book on the diseases of convalescence might be one of the most valuable that any physician could write," and stated that it was a consideration of the truth of the remark that led him to write his paper. It is an interesting question how far these sequelæ are special to certain of the acute diseases. It is not to be wondered at that the nervous system suffers after typhoid. The signs of exhaustion of the nervous system are constant, and generally in proportion to the severity of the fever. The nervous disturbance may be general, or some part of the spinal cord or some one or more of the spinal nerves exhibit altered functions. The nervous phenomena almost invariably are both motor and sensory; always in the case of spinal nerves, never in any of mixed. According to Nothnagel, the order of frequency of these affections is as follows: 1. Parts by one nerve, as the ulnar or peroneal. 2. Paraplegia, preferably of the lower extremities. 3. Less frequently, one extremity, either upper or lower, or two extremities in crossed order. 4. Simple alteration of sensibility. The history of a case of paraplegia resulting directly from typhoid fever, and ending in recovery, was given in detail, and also the history of a remarkable case which presented paralysis involving all the limbs, and, in addition, the muscles of the palate.

Dr. Ord began the discussion by stating that he had seen many cases of peripheral neuritis, and also of paraplegia and protracted cases of difficult articulation. In one case there was not only the loss of speech, but also a loss of the power of remembering words.

Dr. Minot, of Boston, thought that the sequelæ might be caused by the germ producing the original disease, or perhaps more likely by the entrance of some other germ. He referred to a case of total dumbness following typhoid.

Dr. Starr thought it a legitimate question whether the neuritis may not be due to alcohol taken either during the course of the disease or previously. Again, cases of peripheral neuritis of one or two nerves may be due to pressure in consequence of position assumed.

Dr. Delafield remarked that we have the experience that the poison of infectious disease produces, as do toxic minerals, acute degenerative processes. There is a variation as to which particular part of the body is affected.

Dr. Frederick Forcheimer, of Cincinnati, read a paper on

FATTY HEART.

The paper was based on a collection of one hundred and twenty-two cases — eighty-eight males and thirty-four females—fifty-nine of whom were below sixty years of age and forty above. The relation of obesity to fatty heart was considered, and the difficulties attending the diagnosis of the affection dwelt upon. Oertel's method of treatment was advocated.

Dr. Wood, of Philadelphia, strongly objected to the indiscrimate use of the method.

Dr. James C. Wilson, of Philadelphia, presented a communication entitled.

CAUSAL THERAPEUTICS IN INFECTIOUS DISEASES.

The paper was based upon an experimental study of the effect of hypodermic injections of calomel in the treatment of five cases of typhoid fever, all severe, and three of pulmonary tuberculosis. In all there was a distinct amelioration of symptoms, and a modification of the temperatures. The drug was given at intervals of four or five days.

Dr. Sternberg gave the results of a treatment of yellow fever that he had ventured to suggest while in Havana recently. The acidity of the contents of the stomach in this disease had led him to prescribe an alkali—bicarbonate of soda. He had received reports of thirteen cases treated by this method in Havana, and all had recovered. In regard to the constipation and the attendant rise in temperature in Dr. Wilson's case of typhoid, he stated that a species of bacillus present in the human intestine produces a fever-causing ptomaine. A rise in temperature may quite as often be produced by them as by the specific germ.

Dr. Peabody spoke of having unsuccessfully used naphtholine during the last year in the treatment of typhoid.

Dr. Jacobi extolled the bichloride treatment of diphtheria, and stated that he believes in no other way can the disease be so successfully handled.

Dr. Frank Donaldson read a paper entitled

THE DIAGNOSTIC SIGNIFICANCE OF THE PRESYSTOLIC MURMUR.

The Radical Cure of Hernia.—Dr. George W. Ridenour, of Massillon, O., writes: "Your correspondent, in his report of my paper read before the Ohio State Medical Society, June 14, gave me the credit of describing the various ways of reducing hernia. The fact is I did not mention reduction in any way, simply reporting thirty-two operations for radical cure."

AMERICAN SURGICAL ASSOCIATION.

Tuesday, September 18th—First Day.

The Association was called to order at 10 A.M. by the President, Dr. D. Hayes Agnew, of Philadelphia, Pa., who delivered the following address.

PRESIDENT'S ADDRESS: THE RELATION OF SOCIAL LIFE TO SURGICAL DISEASE.

Fellows of the American Surgical Association: As the generations fare on, enriched by the results of scientific labor, which pours its tides of opulence into all departments of human thought and industry, there follow through a reactive or reflex influence certain notable changes, not only on the life and manners of a people, but on their physical and mental diseases. The more advanced a civilization the more complex become the problems which surround it. While the accumulation of wealth and the multiplication of appliances for human comfort have in the aggregate contributed to the well-being of the race, yet there is reason to fear that the insatiate and ambitious demands of the masterful leaders in the work of the world, unless conditioned and environed by reasonable safeguards, may acquire their triumphs at the expense of human life. It is a suggestive and a solemn thought that in the victorious march of civilization thousands of victims must perish beneath her chariot wheels. There really seems to be a perpetual antagonism between man's inventions and discoveries and the well-being of a no-inconsiderable fraction of humanity. He reduces the elastic vapor of water to practical use, and is rewarded by seeing countless numbers of human beings blown into shapeless masses by his rebellious servant. His chemistry creates formidable explosives capable of dislodging the solid strata of the earth, and yet, in wicked hands, they become instruments for consummating such diabolical plots as serve to unsettle the peace of a nation. He rears manufactories for fashioning multitudinous fabrics which minister to the comfort and luxury of the race, and yet while the hands of the fabricator are busy manipulating the materials of these industries he is breathing a death-laden air. We send our missionaries to China and the Sandwich Islands to reclaim their peoples from the barbarities of heathenism, and then our commerce to ruin their souls and wreck their bodies. There seems indeed to be an eternal conflict between good and evil.

Considerations like these naturally lead to a very inviting field of study, namely, the relation between the material prosperity of a people and the forms of their disease. What I propose, however, in discharging one of the duties belonging to the honorable office to which, by your kind suffrages, I have been elected, is very briefly to follow one line of this inquiry, that is,

THE RELATION OF SOCIAL LIFE TO SURGICAL DISEASE.

There is no tyranny more exacting or despotic than that exercised by the conventionalities which govern our living. All stages of life, from infancy to old age, are under its domination. It dictates the education, the manners, the walk, the dress, the forms of speech, in fine, the whole being. Beyond all contradiction the behests of fashion are vastly more influential in governing public conduct, than any arguments drawn from the teachings of structure and function.

As a rule, when the conflict is between taste and reason, the victory will be on the side of taste. In nothing is this more forcibly displayed than in the apparel used to protect the body. It is not an agreeable task to peer into the wardrobes or dressing-rooms of our fair countrywomen. I have no special taste for exploring museums of bizarre collections. Indeed, without a key to interpret the curious and ingenious mechanisms for clothing the form divine, such an exploration would be like an archæologist attempting Egyptology ignorant of cuneiform inscriptions. I have, however, some knowledge of human anatomy in its broadest sense, and when I look upon the masterpieces of the human form, whether in marble or on canvas, a Belvidere Apollo or a Venus de Medici, and contrast these with the dressed-out specimens of modern women, I am forced to admiration; not so much at the amazing ingenuity displayed in concealing the divinely appointed form, as at the plasticity and patient submission of mortal clay under the despotism of a conventional inquisition. Were these processes of mutilation and abnormality harmless, did the body consist of a mere mass of protoplasm capable under the application of certain stimuli of assuming normally protean shapes, the subject might be passed over with the feelings of a naturalist, but this is not so. These violations of the laws of structure bring with them serious penal inflections, which, did they terminate with the original offender, might be dismissed with a sentiment of pity, but projecting as they do their baneful consequences to successors, they become proper subjects for criticism.

Let me name a few examples as illustrative of my subject. For some time the profession has been speculating on the causation of nasal and post-nasal catarrh, with its accompanying auditory defects, the growing frequency of which cannot have escaped general observation. Doubtless no single agency will explain the presence among us of this unpleasant disease, yet there are facts connected with this affection which to me are very suggestive. I cannot recall an instance in which I have met with the disease among females belonging to the Society of Friends, Dunkards, or Mennonites. If this, on more extended observation proves to be true, may not the head-dress peculiar to these people be accepted in explanation of their exemption. The bonnet which at one time overshadowed the entire head, as all know, has been gradually shrinking in its dimensions, until it has become a mere shadow of its former self, and offers no protection whatever to the head. As a substitute, I would not insist upon the quaint headgear of the Friend, though I believe that any modification which will protect this part of the body will lessen the tendency to catarrhal inflammation of the naso-pharyngeal mucous membrane.

Muscular restraint.—A legion of physical imperfections arises from muscular restraint. Among these may be mentioned weak ankles, narrow or contracted chests, round shoulders, projecting scapulæ, and lateral curvatures of the spine. The foolish concession to appearance and the unwise partiality of parents for enforced systems of education, the demands of which bear no just proportion to the capacity of the infantile mind, constitute the initial or determining force of these physical imperfections. In many cases the weak ankles of children, characterized by eversion of the feet, thus allowing the superincumbent weight of the body to be transmitted to the latter inside of the proper centre of support, is largely chargeable to the miserable practice of placing on the little ones, long before they are able to walk, boots tightly laced up the limb, some distance above the ankles. The confinement of the flexor and extensor muscles by this constriction prevents that free play of movement which reacts so favorably on all the elements of an articulation, and that, too, at a time when the growing forces are at full tide, so that, when the time arrives for standing and walking, the muscles are unequal to the firm support of the joint. The consequence of this feebleness is soon seen in the turning outward of the feet, throwing the strain on the internal, lateral ligaments, which in turn become elongated through growth, and thus the defect becomes established; but the evil does not terminate here. The calcaneo-cuboid and the astragalo-scaphoid ligaments losing the proper support of the tendon of the posterior tibial muscle, under the abnormal tension begin to yield, and to the deformity of eversion is added that of "flat-foot." That the above is not a mere hypothetical explanation of the ankle defects, I have many times verified by finding the threatening symptoms disappear after liberating the imprisoned muscles and subjecting the enfeebled parts to a judicious massage. Under no circumstance, as is too often the case, should instrumental apparatus be applied, unless in cases where, from neglect, the deformity is thoroughly established and is progressive.

Take another deformity, that of bow leg. On the earliest signs of the unsightly curve, the limb is too often trammelled with irons, and the growth of the muscles arrested, when it is well known that if manual force be systematically applied two or three times a day, the limbs will gradually assume their typical form.

Again, in further illustration of our general text, take as an example a child who, for one long or two short sessions for six days of the week, sits over the study desk, compelled to assume a position in which from the inclination of the body the shoulders fall forward, the head being supported most probably on the elbows and hands. In such a posture, the great serrati de pectoralis major and minor muscles are in a state of relaxation, while the erector spinæ and trapezei muscles are in a state of tension. This change in the position of the shoulders gives the scapulæ over, without antagonism or resistance, to the action of the rhomboidei and the levatores angulæ scapulæ muscles, which acting conjointly cause that projection of the lower angles of the shoulder-blades, which the older anatomists termed "scapulæ alatæ." To all this must be added the very important factor of four to six hours in the school-room and two hours at least of home preparation for the following day's recitations, during which time the respiratory functions having been reduced to a minimum of activity, the muscles of the chest are comparatively passive, and aeration of the blood tardy. Certainly no combination of conditions could be better devised for forming contracted chests and round shoulders. It is not long before the watchful eye of the mother detects the change in the figure of her child. She will probably discover this and take alarm, even when the pale face, the languid air, and the capricious appetite of the child cause no anxiety; and then comes the second act in the drama of physical deterioration, namely, a resort to shoulder braces and stays, in order to accomplish that which the muscles should be taught to do without restraint or encumbrance.

Lateral curvatures.—While it is true that lateral curvatures of the spine depend upon causes both central and peripheral, yet in no small number the deformity is clearly attributable to influences of a social nature. The young column, by reason of the non-union of the epiphyses and diaphyses and the supple character of its ligaments, is extremely flexible. Whatever, therefore, destroys the muscular equipose, however inconsiderable the force, if persistently repeated, changes the centre of gravity and develops primary and compensating curves. For six months in the year, any fine morning groups of young children may be seen plodding along our streets with a miniature library of books suspended from one shoulder. To the already preponderating scale of the balance, add the additional factor, a probably badly arranged light, compelling these little *savants* to assume a lateral inclination of the body in order to obtain the necessary illumination of the subjects of the study, and you have all of the conditions necessary for perpetuating the lateral deformity. "Just as the twig is bent, the tree's inclined." As in the case of round shoulders, so here in order to prop up the falling column, instrumental contrivances are immediately called into requisition. The body is encased in a formidable coat of mail, to be followed by muscular atrophy and permanent distortion of one of the otherwise most beautiful pieces of mechanism in the human frame. It is true that in most educational institutions for the young, provisions are made for physical culture, and these are in some measure antidotal to the evils complained of, but in my judgment do not at all compensate for that free unstudied romp in the open air, untramelled by the hard and fast rules of calisthenics, so fascinating to the young child. Nor does the evil end here. While the forcing process which is to stimulate the mental powers far beyond the real capacity of the immature and growing brain to receive, is in progress, another is inaugurated, which is to qualify, especially the female child, to acquit herself with distinction when the time arrives for entering the great world of society, or, as Thomas Brown would style it, "for the frivolous work of polished idleness." The gait and carriage must be reduced to prescribed rules, the voice toned down to a drawl, or trained to move like a mountain-torrent. The muscular apparatus of the face must be taught to express, not the spontaneous and natural outflow of feeling which wells up unbidden from the magic chamber of the heart, but rather to produce an effect; and so this work of transformation goes on until it culminates in the full-blown society girl. Is it any wonder that under such a scheme of education, conducted throughout by a studied disregard of both the physical and mental constitution, and exercising as it does such tremendous drafts on the nervous system, that the world is becoming filled with a class of flat-breasted, spindle-limbed young women, unfitted for the varied and responsible functions of womanhood, qualifications, too, which, under a different regimen and directed into proper channels, would exert a most potential influence on all the great social and moral problems of the age.

While thus plain spoken on the frivolous methods of living, I do not wish to be understood as being unfriendly to the highest cultivation of the mental and physical powers, if conducted on lines in harmony with the organization, nor to any technique which may conduce to personal grace or elegance of manners, so that the manly or womanly personality of the individual be not sacrificed to the Moloch of sentiment and sham. Indeed, indifference to these things is inexcusable in either man or woman, as not only lessening their influence in the world but in many respects disqualifying them for the highest discharge of the duties of modern life. Valuable as may be the unpolished diamond, yet it is only after the wheel of the lapidary has worn away the dull incrustations that its true brilliancy is revealed, and the gem is fitted to adorn the brow or the breast of beauty.

Bodily constriction.—In the further discussion of my subject, I may next notice the evils of visceral displacement and pressure consequent on abdominal constriction. Whatever may be said in regard to Greek and Roman life, the infinite care which these people displayed in developing and maintaining the very best type of the human form is worthy of admiration. The Ionic "cheton" spoken of by Attic writers and so often represented in the bronzes of Herculaneum, while it would not exactly satisfy the modern idea of dress, was at least free from the charge of interfering with the contour of the human figure. The painters and sculptors of those classic days were reverent students of nature. Their delineations were true to life. Their works furnish us with no hour-glass contractions of the human body. The constriction of the waist operates injuriously on both the supra- and infra-diaphragmatic organs. Any force acting on the base of the thorax and preventing the expansion of its walls concentrates the function of respiration, which should be general, on the apices of the lungs and hence, under these circumstances, the movements of breathing are for the most part confined to the summit of the chest. As the initial seat of tuberculosis is located at the upper part of the lungs, may not the inordinate work entailed on these parts by constriction have some part in hastening such deposits in the female where the predisposition exists? It is this forcing inward of the costal border of the thorax which causes the groove on the anterior surface of the liver, so familiar to anatomists. This pressure cannot fail to interfere with the descent of the diaphragm, and with the functions of the gall-bladder and duodenum, and exercises no small degree of influence in favoring the formation of biliary calculi, females being peculiarly prone to such concretions. The extent to which the liver may be damaged by extreme constriction of the waist is well illustrated by a case quite recently reported in the *British Medical Journal* in which a considerable portion of the left lobe of the liver had been separated from the right, the two being connected only by a band of connective tissue, and which enabled the operator to remove the detached mass without difficulty. The evil effects of this constriction on the viscera of the abdomen and pelvis are most strikingly witnessed in the embarrassed portal circulation, in the different uterine displacements, elongation of ligaments, displaced ovaries, tubal inflammations, hemorrhoids, hernia, and other morbid conditions which either prevent or disqualify the woman for the exercise of the functions of maternity, and which, in addition, through reflex influences, entail a host of functional disorders reaching into every avenue of the body and invading both the mental and moral constitution of the victim. So prolific have these infirmities become that a new department of surgery has been organized for their special management. To what, if not to social causes, can these morbid changes of structure in the pelvic organs, especially of the uterus and its appendages, be attributed? Why should laceration of the cervix uteri be so common an accident? Labor is a natural process, and ought not under ordinary circumstances to be attended by lesion of uterine tissue. I can conceive of no agency more likely to induce that muscular degeneration which predisposes to this accident than the modes and methods of modern living, especially among the inhabitants of great cities. In the expression "modern living" much is embraced. It includes culinary pharmacy, over-feeding and drinking, insufficient or injudicious exercise, improperly heated apartments, and a disproportion between the hours of exercise and rest. Contrast, if you will, the muscles of the hardy, country housewife who, bearing the cares and responsibilities of a dependent family, bustles about the livelong day in-doors and out of doors, eats with a relish her plain and simple fare, repairs at seasonable hours to bed, and sleeps the sleep of the beloved, undisturbed by dyspeptic nightmares, and, rising with the golden dawn, resumes the round of domestic toil with a clear head and supple limbs; I say, contrast this type of a class with that of another, the woman born to luxury and ease, whose capricious and exacting taste taxes the art of the professional caterer, who drags out the morning hours toying with some crazy piece of embroidery or trashy novel, lunches at one, rides out in the afternoon for an airing of two or three hours, returns to a dinner of five or six courses at seven, completes the evening at the opera, the theatre, or the assembly, and, coming home after midnight, crawls into bed weary and exhausted in body and mind, only to rise, with the best hours of the morning gone, for another day of aimless routine life. Can it be doubted that in the first case, with digestion unimpaired, with the products of textural changes consumed by functional activity and eliminated through the proper emunctories, the woman should possess vital resistance and a tone of tissue altogether superior to that of the other, whose habits of living must necessarily favor their faulty metamorphosis?

To these same agencies must be attributed that brood of nervous and hysterical evils for the relief of which the gynecologist too often, I fear, invades the domain of womanhood around which her whole sexual nature revolves, and which, save only in the direst extremity, should be sacred against all operative intrusion.

Late marriages constitute another social evil, the penal inflictions of which involve both sexes alike. Pride and luxury determine long engagements or deferred proposals. Marriage, it is believed, necessarily involves an establishment, a display, a retinue of servitors. The good old notion of two souls being united in wedlock for the purpose of being mutual helpmates and patiently together working up from modest beginnings to affluence seems to be entirely at variance with the modern idea of this relation. In the meantime the young man is betrayed into unlawful sources of gratification, alike destructive to moral and physical purity, the pollution of which incontinence is often subsequently communicated and perpetuated to wife and offspring. I would not dare to say how many cases of this nature have been entrusted to my professional confidence, though, I doubt not, my experience does not differ from that of many of my professional brethren whom I address. It is under such circumstances that many of those infective inflammations of the Fallopian tubes, as salpingitis and pyosalpinx, arise, and which entail the most serious deterioration of health.

The foot and shoe.—It may be thought by some persons that the subject of the foot and the shoe is not of sufficient dignity to appear in a public address. The Romans and the Greeks thought differently. The literature of both people is full of references to the shoe worn by both sexes. So important, indeed, are the feet to the well-being of the body that whatever impairs their usefulness, either for support or locomotion, becomes a positive calamity. Nothing can be more unlike the human foot than the modern shoe. Let anyone leave the impress of his or her foot in the wet sand of the sea-shore, and then place alongside of the imprint a fashionable shoe; that the two were ever intended for each other would scarcely strike a child of the forests. The North American Indian entertains juster notions about clothing this portion of his body than does the civilized denizen of New York or Philadelphia. Compare the moccasin with the shoe of the city belle. Compare the *βανδαιον* or the *πεσδικά* of Pollux and of Aristophanes with the same, and we shall see that the savage and the polished Greek alike understood the value of sound feet in the race of life. It is the imperfect adaptation of the shoe to the foot which constitutes the fruitful source of tired ankles, corns, bunions, overlapping of the toes, and ingrowing nails. Some idea may be formed of the magnitude of the evil from the fact that of eight hundred patients under the care of a prominent chiropodist of Philadelphia, the great majority of the defects were entirely attributable to the high heels and the contracted toes of the shoes. Especially do these physical encumbrances, arising from a blind submission to social laws, operate disadvantageously to our fast women at the beginning of the new dispensation requiring both muscles and brains, and when her friends propose to sweep away all the old traditions and claim for her the earth with all its masculine employments.

Games and amusements which in themselves are proper and praiseworthy, too often become developed into a craze, working both moral and physical mischief. Professor Lauf, himself a professional in the national game of base-ball, has described the pitcher's arm, a condition of over-taxed function, and one in which all the anatomical elements of the upper arm are involved. There is also the tennis arm and the swollen, supersensitive prostate of the bicyclist, both due to the abuse of popular amusements.

Defects of refraction or visual defects constitute another class of affections fairly attributable in many instances to social influences. The number of children who may be seen in our streets any day wearing glasses has become a matter of common observation. It is far from being probable that the most exquisite piece of mechanism, the human eye, came from the Divine Artificer imperfect. Because eyes are young, it does not follow that they are thereby better fitted to sustain prolonged use. Just the reverse is true, and it is high time that parents and educators begin to recognize the fact. The power of the eyes for continued use, like that of other organs of the body, is one of gradation. It moves in the general procession and strengthens with the advance in life, until development has attained to its zenith. Not only so, but the eye being a part of the body, it must suffer or rejoice through the operation of general causes. A bone may have its normal curves changed, a tendon may slip from its appointed groove, or a blood-vessel be destroyed, and yet very little disability be realized; but the eye is made up of such extremely delicate structures and acts according to fixed physical laws, that not the slightest alteration of a curve or the mobility or density of its media can occur without great vitiation of function. To exact, therefore, long hours of study from children of a tender age, involves a degree of functional strain altogether disproportionate to the structural resources of the organ, and by disturbing the orderly processes of nutrition gives rise to hypermetropia, asthenopia, astigmatism and its companion, headache. To prove that the picture is not too highly colored or the causation overstrained, we have only to contrast the children born and reared in those portions of the country not too much dominated by the methods of modern civilization, and who rarely demand a resort to artificial aids to provide for abnormalities of vision. The only remedy for the evil, where infantile scholarship is insisted upon, is the Kindergarten or object system, the most natural and effective plan of impressing the young mind.

Renal disease.—Is there any reasonable explanation drawn from sources of a sound nature for the great frequency of those renal disorders which come more particularly under the care of the surgeon, as crystalline deposits and calculi? For maintaining the general health at the highest physiological standard, a proper quality of food and the proper disposal of tissue-waste are essential conditions. Along with wealth and luxury come the abuses of the table. Americans are fast becoming a nation of dyspeptics. Our country is so rich in the products of every zone, that nowhere else in the world can you find such a variety of foods, animal and vegetable. These foods, manipulated in a thousand ways by the subtle art of the professional cook, almost necessarily betray one into excess, and also create the desire for wines and other alcoholic beverages to aid the stomach in disposing of its plethoric supply. In great cities, which furnish relatively the largest number of cases of renal disease—affecting preeminently the mercantile and sedentary classes—we find just the conditions favorable to their development. The competition of trade keeps the merchant always at white heat. Time is golden and the street-car and other means of conveyance annihilate distance, and the ride is substituted for the needful walk. A hasty lunch at the most convenient restaurant satisfies the inner man until the business of the day is closed, when, weary and worn, he is driven to his home to partake of a course dinner, the balance of the evening to be spent on the lounge with the evening paper or the latest periodical. To the literary man the fascinations of the study and the library charm him away with their siren voices from the fields and the highways, until bodily exercise grows distasteful and repugnant. In the mean time there has been no provision made for the waste or tissue metamorphoses of the body through that great agency, exercise. This tissue-waste accumulates in the blood; the internal eliminating organs, of which the kidneys are chief, are overtaxed, and then follow the evils of malassimilation, and of excretion, in the form of urates and oxalates, often resulting in the formation of calculi.

In conclusion, may we ever hope for a time when the race will realize that these bodies which we wear, which God has so highly honored by his own incarnation, are sacred temples to be kept in harmony with recognized physical laws, and not to be made instruments of mere animal gratification?

DR. JOHN ASHHURST, of Philadelphia, read a paper entitled

A CONTRIBUTION TO THE STUDY OF EXCISIONS OF THE LARGER JOINTS.

The remarks are based upon the records of one hundred and twenty cases, in my own practice, in which excision of the larger joints have been required, and will refer particularly to the operative method, the after-treatment, and the functional value and limitations of applicability of excision in the case of each articulation. The one hundred and twenty cases embrace four of shoulder-joint; nineteen of elbow-joint; forty of hip-joint; fifty-one of knee-joint, and six of ankle-joint excision.

Shoulder-joint.—My four shoulder-joint excisions have all terminated successfully. They all occurred in adults, three times in young persons, and once in an old person.

In excising the shoulder-joint, or, more strictly speaking, the head of the humerus—for the glenoid cavity rarely requires more than superficial scraping or gouging—I have employed the method by a single longitudinal incision; when the parts are matted together by long-standing inflammation, the tendon is difficult to recognize and not seen until it has been severed.

In the after-treatment I attach much importance to the use of the well-known cushion devised by Professor Stromeyer. It keeps the elbow out from the trunk, thus insuring the close application of the sawn humeral shaft to the glenoid cavity, and enables the patient to sit up or lie down at pleasure, without disturbing the dressings.

The functional utility of the limb after excision of the shoulder-joint is, upon the whole, quite good.

Elbow-joint.—Of the nineteen cases of excision of the elbow-joint, six have terminated fatally; two adults died within five days from traumatic gangrene following injuries so severe that amputation would have been the better operation. One died of delirium tremens; two from tubercular meningitis; and one, an old man, from exhaustion in the course of the fifth week.

In excising the elbow-joint I employ a longitudinal incision on the inner side of the articulation, taking care not to wound the ulnar nerve and to retain the attachment of the biceps. As a rule, all the articulating surfaces should be removed, and, within reasonable limits, the more bone that is taken away the better. since flail-like union is less to be dreaded than anchylosis.

Hip-joint.—I have forty times resorted to excision of the hip-joint in thirty-seven patients. Twice have I excised, at intervals. both hip-joints in the same individual, and once have I had recourse to re excision in a case in which recurrent caries and recontraction followed some months after the patient left the hospital. This case terminated fatally from suppurative osteo-myelitis and septic peritonitis at the end of a fortnight. Both cases of double excision did well. Of the forty operations, twenty-eight have been followed by recovery, eleven by death, and one is still under treatment. Of the thirty-seven patients, twenty-five have recovered and eleven died. Should the patient now under observation die, the mortality-rate will be, as regards operations, thirty per cent.; as regards individual patients, 32.4 per cent., a much better showing than the results given by most statistical writers.

The incision employed begins with a straight cut in the direction of the fibres of the gluteal muscle, curves around and behind the trochanter, and terminates again in a straight cut corresponding to the axis of the femur. While affording free exposure to the joint it necessitates but little transverse division of muscular fibres. The head of the bone may be made to protrude and may be removed with the chain-saw, or, under other circumstances, divided by a small saw *in situ*. It is my custom to remove both trochanters and round off the sawn end of the femur.

The functional result of hip-joint excision must be somewhat differently judged from that of excision in the case of other articulations. In most instances the operation is performed only when death seems threatened by profuse suppuration or its consequences, and if the patient is relieved of pain and restored to a fair state of health and comfort the treatment is amply justified. At the Children's Hospital, in Philadelphia, where twenty of the forty operations were performed, the rule is not to operate except in otherwise hopeless cases, and hence our recoveries represent as many lives saved; but, in many cases, excision not only saves life but restores the patient to the active duties of existence. In thirteen of the twenty-eight cases the patient obtained a useful limb, and in two of these the utility is qualified as perfect. The condition which most often calls for this operation is hip disease. I consider the operation suitable in certain cases of gunshot injury. For uncomplicated anchylosis it is not to be recommended, simple osteotomy being here a safer and surer method. Where anchylosis coexists with extensive caries or necrosis, excision may properly be resorted to. I am afraid that the "age limit" for hip-joint excision must still be maintained; in the case of the knee I have ventured to extend the benefits of this conservative procedure to adults, and even to middle-aged persons, and with great success; but excision of the hip-joint becomes an operation of great and rapidly increasing gravity when once puberty is passed. Thus, while I count twenty-five successes and only four deaths in persons under fifteen years of age, I have had only three recoveries and no less than seven deaths in those older. In adults the operation should only be undertaken with a clear understanding of the very great risks by which, under these circumstances, it is attended.

Knee-joint.—I have performed fifty-one excisions in fifty patients, once having employed re-excision for anchylosis with recurrent deformity, in a case in which I had excised the joint nine years before. Once I amputated the thigh, ten weeks after excision, on account of the beginning of failure of health, and a good recovery followed. Of the fifty-one cases but five have ended fatally, a death-rate of less than ten per cent.

In excising the knee-joint I have uniformly adopted the single transverse incision, and have invariably removed the patella. The bone sections are commonly made with a butcher's or bow saw. I take particular care to remove all of the diseased synovial membrane as well as all patches of carious bone. In treating the large bursa beneath the quadriceps muscle, I have endeavored to hasten the cure by making a long incision on the outer side of the limb, and either dissecting the bursa out bodily, or else scraping away its lining membrane with a sharp curette.

The utility of the limb, after successful excision of the knee, is very great. The limb is stiff and slightly shortened, the foot is sometimes a little inverted, but the limb is strong, painless, and enduring, and enables the patient to lead an active, useful life. As a substitute for amputation—and it is as such that I employ it—the merits of knee-joint excision cannot be gainsaid.

The cases in which excision of the knee-joint is indicated are chiefly those of arthritis—particularly of the variety for which years ago I suggested the name gelatinous—of caries, of neglected epiphysitis, etc. The operation may properly be performed in anchylosis with deformity, and also in certain instances of wound of the articulation where the extent of the injury is limited. In most traumatic cases, however, I believe that when any operation is called for, amputation will be found preferable.

Ankle-joint.—I have resorted to this operation six times, although about as often, I have removed the astragalus without interference with the tibia and fibula. Two of the six cases proved fatal from phthisis, one four months, and the other nine months after operation. My impression is that this operation in itself is attended with very little risk.

In excising the ankle-joint I make an external incision curving around, behind, and below the outer malleolus, and carried forward as far as can be done without endangering the extensor tendons, and prolonged upward as far as needful in the line of the fibula. A second smaller incision is made longitudinally over the lower end of the tibia. It is usually desirable to remove the whole astragalus. This is perhaps the most tedious and difficult of all excisions, and the operation may be facilitated by rendering the part bloodless by the use of the Esmarch apparatus. The ankle-joint is the only joint, with the exception of the wrist, in the excision of which the use of this apparatus seems to me to be desirable.

The large majority of my excisions have been performed without any of the so-called "antiseptic precautions," and the wounds have been dressed with simple oiled lint, or with lint saturated with dilute alcohol. For more than a year past, however, I have employed the antiseptic method in almost all my large operations, using also antiseptic dressings in their after-treatment, and I think with benefit; though I am obliged to say that, as regards the ultimate welfare of the patients, I have not noticed any gain. My best series of consecutive successes have been obtained under old methods, and I have not obtained any diminution of mortality by the adoption of the new. At the same time I have seen no ill results which could be attributed to the use of antiseptic measures; their use shortens the period of convalescence, and they have the merit, on account of the infrequent change of dressings needed, that they greatly lessen the surgeon's labor. I know of no cases which require more personal and unremitting attention than those of excision, and it is an unquestionable advantage to be obliged to dress a wound only once a week, or every other week, instead of daily or every other day.

What will be the future of the operation of articular excision? The brightest triumph of conservative surgery, in the hands of Fergusson and his successors, will it keep its place? or, as some of our more enthusiastic brothers prophesy, well-improved methods of dealing with joint disease in its early stages make excision a matter only of surgical history and of antiquarian investigation? It seems to me that, as the introduction of excision did not enable surgeons to abandon amputation for articular lesions, so, improve treatment as we may, and educate the public as we may as to the necessity of being treated early, there will always remain a class of cases in which only by sacrificing a part can we hope to save the whole, and in which excisions of the larger joints will therefore still be resorted to by judicious and conservative practitioners.

Dr. Lewis A. Sayre, of New York: The paper of Dr. Ashhurst has so thoroughly covered the ground that very little is left to discuss. In excision of the hip-joint I have been in the habit of using the wire curve, for the reason that it permits the carrying of the patient into the open air, an object not readily attained when the patient is kept in bed with the ordinary apparatus.

In regard to the antiseptic treatment, which I practise entirely, I think that I may claim that I have used it without knowing it, from the time that I commenced the practice of surgery. I think that my success has been largely due to the practice of pouring into the wound Peruvian balsam, which, from the creasote it contains, is an excellent antiseptic. I have also always arranged for thorough drainage. When I practised my first excision, in 1854, the operation was universally condemned. Some now seem to be going to the other extreme and performing excision of the hip-joint too early, before a thorough trial of local and general treatment has been employed.

Dr. R. A. Kinloch, of Charleston: There is now no disagreement so far as the general question of excision is concerned, but there are still some important questions to be considered. In the first place, the distinction of traumatic from pathological cases amenable to operative procedure, and in the next place as regards the joints which are apt to do best in connection with excision for traumatism and for pathological processes. A consideration of the age and surroundings of the patient is of importance. Probably the best results follow excision in connection with shoulder-joint excision for traumatism. In connection with gelatinous inflammation of the elbow-joint, I have had satisfactory results even where all the material could not be removed. I feel sure that if a few of the principles of so-called antiseptic treatment—cleanliness, thorough drainage, and absolute rest—are adopted, many of the details may be omitted.

Dr. T. F. Prewitt, of St. Louis, insisted on the necessity of getting cases of excision in broken-down children out of doors as soon as possible.

Dr. F. S. Dennis, of New York, called attention to cases of excision of knee-joint for disease beginning in abscess in the condyle. In these cases the abscess-cavity breaks down after recovery, leading to the production of deformity. In these cases he takes away all of the abscess-cavity, saws away a corresponding piece from the tibia, and brings the oblique surfaces together. He employs antiseptic dressings, removing the drainage tubes on the third day, and allowing the first dressing to remain five or six weeks. In excision for injury, only enough bone to allow of free drainage should be removed.

Sir William MacCormac, of London, said he had heard with some surprise that the tendency seemed to be to postpone excision of the hip-joint until all other measures had failed. This is not the practice in regard to any other joint. In England, the disposition is to perform the operation at an earlier period. Another point that he had not heard mentioned in the paper was in reference to the performance of the operation in cases of old dislocation of the joint. He had performed this operation with success in all hip-joint dislocations, and reported the case of a sailor coming under observation three years after the occurrence of dislocation of the hip-joint, which had not been reduced. After the operation he could use the limb perfectly. He had been much interested in the recommendation of Dr. Ashhurst, that a long incision be made to reach the subcrural bursa, a suggestion which he had not heard mentioned by any other surgeon.

Dr. E. M. Moore, of Rochester, had been somewhat surprised to hear a certain amount of indifference expressed toward the use of antiseptic surgery. He had found in his practice the greatest improvement follow the use of antiseptic dressing in these cases of excision. He cited several cases, showing the result obtained.

Dr. John E. Owens, of Chicago, said he agreed as to the value of the wire cuirass, and referred to a modification of this apparatus, consisting in a substitution of a frame of gas-pipe conforming to the outline of the body. On this the body is supported by means of flannel stretched between the two sides of the frame. Extension may be applied if desired, by the use of adhesive plaster, counter-extension being provided for by elevating the foot of the frame. After keeping the patients in bed for thirty days, he tries to get them into the open air. He had found great advantage in keeping up a certain amount of extension after the patient was allowed to get up. By removing pain, this enables the patient to move the joint more freely, and thus tends to favor greater mobility of the part. He thought that there was no comparison between the antiseptic methods and those formerly employed.

Dr. Frederick Lange, of New York, referred to a class of cases in which the disease of the hip began in the tissue outside of the joint, the articulation becoming involved at a later stage of the affection. In these cases he recommended early operation, with the hope that in this way necessity for opening the joint would be avoided.

AFTERNOON SESSION.

Dr. Nicholas Senn, of Milwaukee, read a paper on

THE RELATION OF MICRO-ORGANISMS TO INJURIES AND SURGICAL DISEASES.

The paper was so extensive that in the limited time allotted to its consideration, the author was able to refer to but a few of the points which it contained. At the present time no argument is required to show that many special conditions are due to the presence of bacteria. In regard to the so-called hereditary transmission of disease, the author held that the specific microbes of the specific diseases are transmitted directly from parent to child. In evidence of this, he referred to cases of so-called hereditary osteo-myelitis in newly-born infants. In other cases, while this same origin may be inferred, we have as yet no direct evidence that such is the case. In regard to the question whether or not pathogenic micro-organisms exist in the healthy body, while the results of some observers point in this direction, the results of others are opposed to the existence of pathogenic organisms in the healthy body. The conclusion was that, under certain circumstances, pathogenic organisms might be present. There is proof of this in cases in which, after accidental injury, there is localization of these pathogenic organisms. Acute suppurative infectious osteo-myelitis, following slight injury or exposure, was cited as an illustration of this fact. This localization is favored by certain anatomical conditions. The antagonism among micro-organisms was being considered, when the allotted time of the author expired.

Dr. Roswell Park, of Buffalo, had done some work in this direction. He had examined pus from fifty-two sources, and presented a table showing the number of cases in which pyogenic bacteria were found.

He had also prepared culture-media with various antiseptics in different proportions, including carbolic acid, iodoform, iodine, naphtholine, hydro-naphthol, resorcin, trichlor phenol, creolin, sulpho-carbolate of soda, boric acid, perchloride of iron, antipyrine, antifebrin, and quinine. Almost the only one of these antiseptic jellies, as thus prepared, which has prevented all growths was hydro-naphthol, 1 : 100. This shows that hydro-naphthol can be relied upon as antiseptic. Many of the bacteria grow freely on iodoform jelly, 1 : 100. Those which grew abundantly on iodoform jelly grew slightly on oxide of zinc jelly, 1 : 100. Oxide of zinc was considered a better solid antiseptic than iodoform. The author thought that our present knowledge permitted us to associate certain bacterial forms with definite pathological lesions. In conclusion, he presented the report of a case of abscess of the face in which he found the micrococcus tetragens. So far as he knew, this micro-organism had never before been found in phlegmon in man.

Dr. William H. Carmalt, of New Haven, remarked that there was only one point to which he wished to refer; that was in reference to the alleged microbic origin of tumors. A great deal has been said in regard to the microbic origin of cancers and other tumors. He thought that the division of Virchow's class of granulomas into a class of tumors by themselves, known as infectious tumors, is correct. This class includes tubercle, syphilomes, lepra, lupus, actinomycosis, and myelitis. These growths should be taken out of the class of tumors and assigned to a class by themselves. He had been unable to convince himself that tumors proper have a bacteriological origin.

Dr. Senn, in concluding the discussion, said that the diseases enumerated in his paper included only those in which the specific cause had been isolated, cultivated outside of the human body, and in which the injection of this culture produces identical lesions. When these three things are done, we have furnished positive proof that the disease is due to specific germs. Another class of diseases had been alluded to in the paper, in which there was reason to believe, from analogy, that the affection was due to specific germs, although the three conditions above referred to had not as yet been fulfilled. So far no one had been able to show that the supposed bacillus of syphilis was the specific bacillus. That it is a specific disease cannot be doubted; that it is due to a microbe cannot be doubted, but to establish this positively, experimenters must do what Koch did before he announced the specific origin of tuberculosis. He was finally convinced, from his observations, that tumors, in the true sense of the word, were not due to microbes. He had made tumor-implantations for many years in animals, and in justifiable cases in man, both close to the original seat of disease and at remote points, without obtaining the least evidence of the microbic origin of disease.

Dr. W. W. Keen, of Philadelphia, then read a paper entitled

THREE CASES OF BRAIN SURGERY.

The first case was one of removal of a large tumor from the brain, the second trephining for old depressed fracture followed by epilepsy, with removal of underlying brain-substance. The third was the removal of the cerebral motor centre for the left wrist and hand for epilepsy. The three patients were presented.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Tuesday, September 18th—First Day.

Dr. McArdle, of Washington, made a very happy

ADDRESS OF WELCOME,

during the course of which he pointed out the importance of this meeting.

Dr. William H. Taylor, of Cincinnati, delivered the

PRESIDENT'S ADDRESS.

He acknowledged the high honor he had received, and appreciated the responsibility accompanying the same. As a reason for the existence of the Society, he said that every man who saw in his profession something more than pecuniary profit must have a desire to know the unknown. The united effort of the many is more fruitful than the inharmonious working of individuals; hence the propriety of co-operation, *i.e.*, organization. It may be admitted that the motive of our Association is our own advancement, yet this will bring good to the profession at large, and through them to their clients. The activity of the present decade has given us a new gynecology, and words cannot describe the advances thus made. Never before in the history of the profession have the auguries been so auspicious for the accomplishment of the purposes set before us, as evinced by the cosmopolitan harmony and close association of our profession in all parts of the world, in the facilities for the speedy transmission of every item of interest, of every discovery and every suggestion, and, more important than all else, by the number of devoted workers who, animated by no unworthy craving for worldly honor or love of gain, are delving into the mysteries of the human frame, scrutinizing every group of asserted facts, and counting the few precious stones of truth which are found abundant pay for the toil.

The proper indication for abdominal section, the true position which electricity shall occupy in gynecology, the propriety of hysterectomy, the value of Alexander's operation and its newly devised congener, abdominal fixation for retrodeviation of the uterus, the relative merits of craniotomy, Cæsarean section and induced labor, the best method of dealing with extra-uterine pregnancy, the proper means of securing antisepsis, are all questions fraught with great interest, and merit the most thorough study. Leaving the most important subjects which would come up before the body for discussion, he called their attention to those smaller items which, in the daily routine with most of us, demand our thought, and if they contribute to the welfare of those in our care, are not too trivial for our study.

LAPAROTOMY IS DONE TOO OFTEN,

he said, and with insufficient grounds for so serious a procedure, but this is no reason why the operation should be condemned. Through all history all great advances have had unworthy advocates. Vaccination, anæsthesia, and ovariotomy have been subjected to great animadversions and misinterpretation, and have prevailed. Thus shall it be with laparotomy.

Statisticians and social scientists see in the decreasing fecundity of American women clear evidence of the truth of the charge that intentional abortion is a common crime, but the speaker did not believe that it is so universal an evil. A more demonstrable cause of diminishing fertility was to be found in the social habits and the fashionable education which incapacitate, in whole or in part, the power of completing the process of maternity. We see the rich, who are incapacitated in this way, bearing but few children, while their poorer sisters, who cannot have this education and social habit, are bearing their full share.

A subject demanding careful attention is the inability of mothers to nurse their children. The number of such defective mothers reaches the enormous per cent. of forty with us; much of this is due to faulty methods of dress and life.

TO MITIGATE THE PAINS OF LABOR

is a most worthy consideration, and should receive our attention. Many use chloral early and anæsthetics late in the progress of labor. Many, however, do little to lessen these pains. We should surely be able to divest this ordeal of the intensity of its pain. The speaker said that he hoped, by another meeting, to be able to report on some experiments in this direction.

The beneficent result of comparative study of a given subject is remarkably demonstrated in the case of Cæsarean section, upon which have been grafted so many modifications, nearly all of which have been submitted to the criticism of practical experience and have been cast aside as harmful or at least needless. With this and other examples, no further argument is required to establish the value of a carefully devised system of case-taking and reporting under our supervision.

Grand as has been the success of our profession, we are not to rest here. We can realize the instability of much that cost us great toil. Doctrines and practices in favor at this Congress may be modified or superseded at the next. The lapse of five years takes the bloom off the best text-books, and in ten years they are discarded or have to be wellnigh rewritten. Science knows no sentiment, and we can cherish the achievements of the past only so far as they aid us for the future. Almost every day brings new surprises; so we may confidently anticipate advances and successes which shall as far surpass our present attainments as these do those of the past generation, and happy may we count ourselves that this Association, so auspiciously established, shall contribute to these magnificent and beneficent attainments.

Letters of regret were read from Drs. Harrison, of Liverpool; Apostoli, of Paris; and Pean, of Paris.

Dr. Cordez, of Geneva, read a paper on

ENDOMETRITIS TREATED BY INJECTIONS OF STRONG NITRIC ACID.

He used one gramme in one case; four grammes in another; and four grammes in a third. In order to prevent burning of the vagina he fills the latter with a saturated solution of bicarbonate of soda. The after-treatment consisted of intra-uterine and vaginal douches of weak sublimate solution. Two cases resulted in cure, and one in failure.

Dr. Cordez also read a paper on

PUERPERAL ECLAMPSIA,

in which he advocated bromides and chloral.

Dr. Lapthorn Smith, of Montreal, advocated strongly the immediate induction of premature labor so as to take the pressure off the renal veins, which causes uræmia, which in turn causes the damage to the brain. As soon as we know that the urine is loaded with albumen, he thought that further delay was dangerous. We ought not to wait until the last, when even a breath of air would bring on a convulsion, but start at the beginning, when interference was without danger.

Dr. Clarke, of Cambridge, asked if it was not dangerous to interfere on account of bringing on convulsions.

Dr. Smith replied that with antiseptic precautions it was safe, if done early.

Dr. Price, of Philadelphia, advocated the induction of premature labor after careful preparation with a hydragogue cathartic. He cited several cases where he had thus saved mother and child.

Dr. Potter, of Buffalo, argued in favor of the induction of premature labor, and cited a recent case where the mother and child were saved.

Dr. Clarke, also cited a case where mother and child had been saved by inducing premature labor.

The Chairman explained that Mr. Lawson Tait was suffering from domestic affliction which prevented him from attending.

Dr. J. Price, of Philadelphia, read a paper on

DRAINAGE IN ABDOMINAL AND PELVIC SURGERY.

He said it was better to leave in a drainage-tube in every case, even when there at first appeared no necessity for it; for sometimes after the operation there is an effusion of blood greater in extent than the peritoneum can absorb. He preferred to fill the tube with antiseptic cotton which should be frequently changed. He advocated syringing the abdominal cavity frequently with water through the tube. He deprecated antiseptics in the abdominal cavity, which always cause pain and adhesions. He could not see the advantage of draining through the pelvis.

Dr. Clinton Cushing, of San Francisco, presented a communication on

THE STUDY OF PELVIC ABSCESS.

The most common cause is pyosalpynx, as held by Lawson Tait; or even the forcing of catarrhal secretion out of the distant end of the Fallopian tube into the peritoneal cavity. He cited several cases where it had been undiagnosed for years, and where on opening the abdomen he had found large abscesses. Symptoms: Fever, emaciation, rigors, and night-sweats. The aspirator will often make the diagnosis certain. Prognosis is good, provided it is not tubercular. The pus must be evacuated and the abscess-cavity kept clean. In pyosalpynx the abdomen must be opened. In abscesses of another nature the abscess may be evacuated through the roof of the vagina. He exhibited a dilating trocar, resembling a uterine dilator with a sharp point, to be used in cases where there would be danger of wounding an artery.

Dr. Potter exhibited a drainage-tube with a retaining collar.

Dr. Eastman, of Indianapolis, advocated using a rather large tube, as the pus is sometimes very thick. Bozeman dressing forceps, sharpened, answer admirably for introducing the tube. He followed the old plan of leaving the ends of the ligatures hanging out of the wound. He did not think that permanent drainage was possible. He has done away with ventral hernia by care in adapting the sides of the linea alba.

Dr. Montgomery, of Philadelphia, did not agree with Dr. Price in advocating drainage-tubes in all cases. The necessity for them depends greatly on the condition of the patient. Diminishing the diet helps absorption; and tight bandaging lessens venous oozing. He recommended putting a rubber apron over the dressings with a small slit for the tube to pass through. In some cases he was strongly in favor of vaginal drainage.

Dr. Marcy, of Boston, thought that the drainage-tube often failed to protect the patient. He had not used one for two years, because he has not had a case in which he had not succeeded in making the peritoneum aseptic. When he did use one he would certainly drain through the vagina. His own drainage-tube is a return flow.

Dr. Clarke, of Cambridge, also advocated vaginal drainage.

Dr. Vander Veer also advocated the vaginal drainage; he said that the late Dr. Peaslee owed a great deal of his remarkable success to vaginal drainage. He favored the view of Dr. Eastman regarding the avoiding of hernia.

Dr. Price said that Dr. Cushing's paper was well worth carrying across the continent. He referred to Cæsarean section as the now natural method of delivery. He advocated three or four sutures to the inch, but not tight ones, and to take in twice as much fascia as of skin. He was opposed to aspiration because these troubles are multiple. Even his nurses preferred to nurse a drainage-tube case.

Dr. Montgomery, of Philadelphia, read a paper on

LAPAROTOMY IN PERITONITIS.

He advocated this as the only justifiable treatment in the puerperal form, and especially in peritonitis after perforation of intestine; it is almost sure to be followed by the recovery of the patient. In tubercular peritonitis it is especially successful. Seeing that the only alternative is death he thinks the operation should in all cases be tried.

Dr. Rickett was very emphatic in his approval of this method of treatment. He thought it especially desirable to have the general practitioner recognize the disease early.

Dr. Opie, of Baltimore, also favored the operation in these cases.

Dr. Vander Veer, of Albany, read a paper on

THE RELATION OF THE ABDOMINAL SURGEON TO THE OBSTETRICIAN AND GYNECOLOGIST.

He eulogized specialism, but he held that the best specialists were those who had for many years been general practitioners. He thought that abdominal surgery should be a specialty of its own. He thought that obstetrics had made greater progress in America than in any other country. He advocated resorting to abdominal surgery in cases where formerly craniotomy was employed. He thought that abdominal surgeons, gynecologists, and obstetricians should work hand in hand.

Dr. Gordon, of Maine, said he was now making abdominal sections under the worst sanitary conditions, when they were unavoidable. and with just as good results as though they were done in special hospitals.

Dr. Wathen, of Louisville, read a paper on the

SURGICAL TREATMENT OF THE PERINEUM,

in which he pointed out that it was not the laceration of the skin or mucous membrane which caused the symptoms, it was the separation of the pelvic fascia and the perineal muscles which required to be remedied. He was afraid to use successive layers of buried sutures, after the manner of Martin, because he was not sure of the catgut, and lest the sutures might strangulate the tissues. He did not approve of removing any flap, even when it was redundant. He recommended surgical cleanliness, but not antiseptics.

Dr. Marcy, of Boston, read a paper on the

FEMALE PERINEUM; ITS ANATOMY. PHYSIOLOGICAL FUNCTIONS AND METHODS OF RESTORATION AFTER INJURY.

The paper was illustrated with oxyhydrogen light and screen. The speaker pointed out the points of resemblance between the male and female perineum. He called attention to the function of the vaginal column in fixing the cervix backward while the rest of the uterus floated free by its ligaments. He strongly urged the immediate operation with the fingers in the rectum, and by the aid of cocaine injections. He then reviewed the methods of various operators, and showed that some of them were satisfied with union of the mucous membrane only. The reader showed that he was the first to use buried animal sutures.

AMERICAN GYNECOLOGICAL SOCIETY.

Tuesday, September 18th—First Day.

The address of welcome was a few well-chosen words by Dr. S. C. Busey, of Washington, Chairman of the Committee of Arrangements.

Dr. Busey moved, and Dr. Barker seconded, the suspension of the rules. Passed. Dr. Barker then moved to reconsider the vote of last fall which decided for the Society not to unite with the Congress, and moved that they now do

UNITE WITH THE CONGRESS.

which motion was carried unanimously.

Dr. Busey then moved that the Chair appoint a member of the Executive Committee for the Congress from this Society. This motion then prevailed, and the Chair appointed Dr. Fordyce Barker as member of this committee.

Dr. Howard A. Kelley, of Philadelphia, then read a paper on

PALPATION OF THE URETERS IN THE FEMALE.

This, he thought, was a new and valuable adjuvant in the treatment and diagnosis of diseases of the ureters and kidneys. Calcareous masses resting in the ureters or in the kidneys could be readily determined. Inflammatory conditions could also be made out. Gynecology has opened up to it a whole new realm by this method of studying the ureters. The ureters, he said, could be examined by inspection or by palpation. Free-handed catheterization of the ureters after the method of Professor Karl Pawlick, of Prague, was his favorite method. Pawlick only dilates the bladder with some bland fluid as a preparation. The doctor then went on to give this method in detail. Only yesterday morning he had catheterized a male's ureters without his knowing that he was doing more than making the ordinary examination with the catheter in the bladder.

Dr. William M. Polk, of New York, thought that the slow progress made in the treatment of diseases of the ureters and pelvis of the kidneys was due to the difficulty in getting at the parts. Now the recognition of a distended ureter is comparatively easy. The reason for palpating between the bladder and the vaginal wall is perfectly clear. We can detect the distended ureters through the rectum also. The speaker then recounted his own experiments in this direction. He said we could unquestionably catch the ureter between its visceral extremity and the line of the uterine artery by a properly-shaped instrument, one blade of which would pass into the bladder and the other into the rectum. It is only necessary that the instrument be properly curved. He then discussed compression of the ureters.

Dr. Kelley, in replying, said that what he wished to impress upon his hearers was, that in palpation we have a very practical method of diagnosing diseases of the ureters and kidneys, and in catheterization, of diagnosis and treatment of diseases of these organs.

Dr. T. A. Emmett, of New York, read a paper on

URETHROCELE.

He excluded as a cause the want of support, which was believed in by so many. Urethrocele is often found to exist where there is a large double laceration of the cervix, and often where the woman has borne a number of children. An analysis of a number of his cases of urethrocele would show that it depends on: 1. Rapid delivery, with few but strong uterine contractions. 2. Delayed labor, where ergot has been used, or the forceps. He referred to the anatomy of the parts, and asked them to remember that the female had practically no internal sphincter. It is generally very necessary to thoroughly empty the bladder previous to delivery, yet the presence of a few ounces of urine may act as a cushion, and prevent the pressure from causing injury, while, if the pressure is too severe, the urine will escape. Nature often repairs these injuries herself, and when she does not, the result is a urethrocele. We should not call it a urethrocele when there is a swollen condition of the urethra and no injury has been received. Since 1882, when the author presented his button-hole operation to the profession, his experience has continued to convince him more and more of the benefit to be derived from its use.

Dr. Priestley, of London, England, thought he had described similar if not identical cases in the journals, long before Dr. Emmett. In speaking of these cases he would not venture to enter upon Dr. Emmett's well-known dexterity in all operations upon women. He reported the case of an English lady whom he and Sir Spencer Wells had under their care for some time, and who had been under the care of a universality of doctors, one of whom described it as a sebaceous cyst of the ovary which had descended into the bladder.

Dr. Skeene, of New York, thought that dislocation of the urethra and distention of the middle third were entirely different affections, though they may be due to the same cause. He is inclined to think that the dislocation is the much more frequent of the two. He thinks this laceration must be much more rare than we are given to believe by the paper. He can hardly see where an opening made in the centre of the urethra can restore a dislocation. He thinks it very good for a dilatation of the centre of the canal. Dr. Bozeman, of New York, ten or fifteen years ago clearly defined in the journals the dilatation of the urethra, and recommended, though he did not practise, opening of the middle portion of the canal.

Dr. William T. Lusk, of New York, has had marvellous success in

THE BUTTON-HOLE OPERATION

in the cystic dilatation of the urethra. He would prefer to close up the opening, but can rarely find the woman who will submit to it, as they always fear a return of the trouble.

Dr. Howard A. Kelley, of Philadelphia, referred at length to a case which is reported in full in the *Edinburgh Medical Journal*, which was operated upon by Skene Keith.

Dr. Emmett wished to call the attention of the Society, as did Dr. Skeene, to the entire difference between the sebaceous cyst and dilatation.

Dr. Engleman, of St. Louis, asked if in any of these cases the trouble ever returned.

Dr. Emmett had never known the condition to return after a complete cure unless the injury was repeated.

Afternoon Session.

Dr. R. Stansbury Sutton, of Pittsburg, read a paper on

PELVIC ABSCESS.

He limited his very brief and practical remarks to consideration of abscess following pelvic cellulitis. It was a disease very common among women, and was not confined to puerperal troubles. He spoke of two forms, septic and aseptic. As in many cases we cannot trace the septic origin, we are compelled to call them idiopathic, and lay the blame on "taking cold." Warm poultices were used, he thought, as much from their ancient usage as from the good they did. He prefers a blister, or, if that is not permitted, ice-applications. He endeavored in his paper to give the results of his own experience rather than to collect and collate the literature on the subject.

Dr. William Goodell, of Philadelphia: I have never seen pelvic abscess resulting from gonorrhœa. I have repeatedly found it resulting from septic poisons, and this, I think, is largely the cause of the trouble. It will often be caused by cold during the catamenial period, taking a bath, or, as I have known it to occur, from a woman sitting on the cold door-step watching a procession pass by. The treatment should be to first operate with as little danger to the woman as possible. When I can feel the pus I introduce a blunt instrument, as a pair of scissors. Whenever I can find the little fistulous opening into the rectum, I insert a little probe into it and cut on to this from the vagina, and change the rectal into a vaginal fistula, and the abscess disappears very rapidly. So far I have not failed; but some fistulas are so high up that you cannot do this. In some cases the abscess is so small, and extends so high into the rectum, that you cannot do this. It is my practice, as soon as I can feel an abscess opening into the vagina, to open it. I use bichloride injections, unless when it can pass into the rectum, and thus poison the patient, when I use the permanganate of potassium. If there is an iliac abscess, I search and find it, and, if possible, make an opening into the vagina. The worst cases are where the perineum is full of fistulous tracts. In these cases I try to get two to connect, and force a bichloride solution into them.

Dr. Parrish, of Philadelphia, thought that the aspirator should never be used in pelvic abscess unless for diagnosis. It is never curative. He believed in washing out with corrosive sublimate. He would hesitate to use a solution 1 : 1,000. In many cases it is not safe to wait till a distinct tumor is formed, and open into the vagina.

Dr. T. Gaillard Thomas, of New York, according to his experience has found

THREE FORMS OF PELVIC ABSCESS:

1. Inflammation of the broad ligament. 2. Of the cellular tissue between the vagina and the posterior part of the uterus. 3. The cellular tissue between the bladder and the uterus. Another form is that which is treated as pyo-salpinx. He thinks that the hazardous operation of laparotomy could often be avoided by opening and draining through the vagina. He thinks that many hard tumors, if explored, will show the presence of pus. The man who waits for constitutional symptoms in pelvic abscess will wait a long time. There are but two passages by which pus ought to be let out—through the vagina and the abdominal wall. If the abscess points and clamors for an outlet through the rectum I do not think it should be allowed to do so. I have seen two cases in which the patient died from evacuation through the rectum. Gases and fæces passed in through the opening. The evacuation should certainly not be made in the bladder. I use Goodell's modification of the German dilators, and always insert the drainage-tube. If the abscess is anterior to the uterus I separate the anterior vaginal wall precisely as I do in uterine extirpation. Pelvic abscess is almost always immovable; neoplasms, movable. This is the great diagnostic difference. Yet some pelvic abscesses are very movable, especially those posteriorly situated. Hence many are diagnosed fibroid tumors and cured by electricity. I use bichloride, 1 : 1,000. If the symptoms do not disappear I use stronger, but with fear and trembling.

Dr. W. Gill Wylie, of New York, thinks that cellulitis has always played too great a rôle in the etiology of pelvic abscess. Many abscesses, four out of five, occurring within a year or two after delivery, are due to salpingitis or ovaritis, and our best proof is from those who have opened the abdomen. Great mistakes are made by not distinguishing between those due to septic poison and ovaritis or salpingitis. It is of no use to open the vagina and leave a rotten ovary there. My views are, if you have pelvic abscess, patient dangerous, temperature 101° F., and sweating, I would open the vagina at once, belly at once, and find out just what can be done by the vagina. I have done it often, and if closed soon the danger is small. One patient died in New York, one in Chicago, from using an aspirator in pelvic abscess.

Dr. William Polk, of New York, believed pelvic abscess to be the direct result of tubal disease coming from the uterus along the lymphatics.

ASSOCIATION OF GENITO-URINARY SURGEONS.

Tuesday, September 18, 1888—First Day.

Dr. Edward L. Keyes, of New York, the President, addressed a few remarks of welcome and congratulation upon the past and prospective success of the Association.

Dr. Roswell Park, of Buffalo, read a paper on

PYÆMIA AS A DIRECT SEQUEL OF GONORRHŒA.

The case which the author used as the basis of his paper was one of ordinary gonorrhœa in the male, which had existed for several weeks, when the left knee became swollen and inflamed to a marked degree, and the right knee to a less, and soon after the patient lapsed into the so-called typhoid condition, with delirium, and finally died. Aspiration of the knee-joint had shown that it contained pus. The post-morten examination discovered pus in both knee-joints and an abscess at the left sterno-clavicular articulation. The mesenteric glands and bladder were normal. The prostate and the pelvic veins were not examined. There was sufficient evidence to show it to be a case of pyæmia as distinguished from septicæmia. Bacteria were found of the kinds ordinarily accompanying suppuration. The author thought that the pyæmic infection was the result of their entrance to the circulation through the diseased urethra. No gonococci were demonstrated in the pus contained in the abscesses. Genuine pyæmia is rare in connection with gonorrhœa, and should be distinguished from septicæmia.

The President remarked that he had never seen a case of pyæmic gonorrhœa, and in response to his inquiry, this proved to be the experience of the other members present. The author was not sure whether the patient had had a previous gonorrhœa. The President said that in a previously diseased urethra it was well known that non-infectious causes might excite suppurative urethritis, and he did not see why from such a condition pyæmic infection might not take place.

Drs. John P. Bryson and Edwin C. Burnett, then presented a communication entitled,

CLINICAL OBSERVATIONS ON GONORRHŒA, WITH SPECIAL REFERENCE TO ETIOLOGY, DURATION, AND TREATMENT.

The paper was based upon observations upon one thousand three hundred and ninety-four cases of gonorrhœa. The conclusions from these observations were: (1) That gonorrhœa is a specific disease; (2) the gonococcus of Neisser is an essential etiological factor; (3) the abortive treatment is inefficient and harmful; (4) local treatment of all kinds is not justified in the first and second stages; (5) we recognize in the disease a marked tendency to persist in the chronic stage; (6) the tendency to become chronic and to persist appears to be increased by the use of topical treatment in the first and second stages; (7) the so-called methodical treatment, that is the internal administration of remedies, combined with the proper hygienic and dietary regulations, does most to shorten the duration of the disease; (8) all local applications should be reserved for the third, or declining and chronic stages. The author thought that the failure of bichloride of mercury and other germicide injections to abort the disease, was due in large part to the impossibility of reaching and destroying all the infectious germs which are known to invade deeply the mucous membrane.

Dr. Taylor, of New York, expressed disbelief in the gonococcus of Heisser or of Bumm as the cause of gonorrhœa.

Dr. Sturgis, of New York, entertained the same disbelief.

The President remarked that the "positive evidence," which he possessed on the subject, might be described as negative, and the negative evidence as positive; to wit, no gonococcus no transmission to another of the disease; while, on the contrary, gonococci might be plentifully present in the discharge and not convey the disease to another person with whom there had been contact.

Dr Edward R. Palmer, of Louisville, Ky., read a paper on

RETROJECTIONS IN GONORRHŒA.

Bichloride and hot-water irrigation with a Keifer nozzle twice or three times a day, is the plan preferred by the author. The bichloride should not be stronger than one to ten thousand at the most and usually much weaker—about one to thirty thousand is most likely to prove best; strong injections, as one to five thousand, are likely to do much harm. The value of this treatment is not so great as its advocates have claimed, and it is best when it is used in connection with the ordinary astringent injections —"mixed" treatment, as the author described it, and such astringent injections will usually be found necessary to complete a cure.

Dr. Sturgis had obtained only negative results with the hot water and bichloride retrojections. The "mixed" treatment, he thought, detracted from the value of the results attributable to retro-injection.

Dr. Bangs got favorable results after he had learned skill in using the irrigation. Cold water is as good or better than hot.

Dr. Taylor showed a Keifer nozzle as modified by Bangs, possessing advantages over the original, in his opinion.

The President was in favor of irrigation, and prescribed three or four daily to be used by the patient by aid of his "universal injector."

Dr. F. R. Sturgis, of New York, read a paper on

LOCAL TREATMENT OF CHRONIC URETHRAL DISCHARGES.

He referred to the difficulties encountered by the surgeon in this field. He regarded as chronic a discharge which had existed for more than four or five weeks. Treatment should be directed to relieving the congested and inflammatory conditions. This is one stage. After this comes exudations in the submucous tissue and thickening, not general but at certain points. These inflamed parts keep up the discharge. In addition to this granulations may be formed. The glands alone may be affected. He then spoke of the method of treatment which for several years he had employed. This consists in the application through the short endoscopic tube of solutions of nitrate of silver by means of a cotton-holder to the diseased area. The advantage claimed for this method is that the application can be definitely limited, and that thus a much stronger solution may be used than can be employed with the ordinary method by injection; from twenty to sixty grains to the ounce, or even a saturated solution, thus used causing very little pain or subsequent irritation.

Dr. John A. Fordyce, of Chicago, by invitation, read a paper entitled

THE VIEWS OF DR. OBERLÄNDER, OF DRESDEN, ON THE DIAGNOSIS AND TREATMENT OF CHRONIC URETHRITIS,

with demonstrations of instruments.

Dr. Oberländer advocates the endoscope as an aid in the diagnosis of chronic gonorrhœa, and prefers the Nitze instrument as modified by himself, to that of the new Leiter instrument, as well as all others in which reflected light is used. As the result of his endoscopic observation he has founded a new pathology of urethritis. He describes affections of the mucous membrane, without participation of the glands of Litter; and inflammation of these, with and without obstruction of their ducts. All cases of chronic urethritis are treated by him by means of a modified Otis dilator, covered with a thin india-rubber sheath. The dilatation is carried to from 30 to 40 Charrier. After the dilatation a solution of nitrate of silver (1 to 2,000) is injected through a soft rubber or Ulltzman catheter. He claims in this manner to reach the deep-seated glandular inflammation.

The Secretary read a paper by E. Henry Fenwick, F.R.C.S., of London, England: "The Prognosis of Stricture Based on Thirty Years' Death-record at the London Hospital, and the Practice at St. Peter's Hospital."

Dr. Samuel W. Gross, of Philadelphia, read a paper entitled

CONNECTION BETWEEN MASTURBATION AND STRICTURE.

In over three hundred cases, eighty-eight per cent. of masturbators observed by the author, in which there had not been attacks of gonorrhœa or other cause to account for the condition, organic strictures were found. Of these strictures, eighty-two per cent. were within one-third of an inch of the urethral orifice, the remaining eighteen per cent. were deeper, and situated at various points; some single, others multiple.

Dr. R. F. Weir, of New York, remarked that he had found similar constrictions in young infants. He thought too much stress was placed upon these constrictions in masturbators as pathological products.

Dr. R. W. Taylor, of New York, said that in these cases he had found tumefied bands or constrictions by endoscopic observations.

The President called attention to the existence of normal constrictions in the urethra demonstrated by Weir by means of casts of the urethra, and, more recently, by Antal by the use of his ævo-urethroscope.

In reply Dr. Gross thought there could be no doubt as to the existence of those strictures which he had described at or near the meatus, whatever was said of the deeper ones. In his cases often there was severe pain on passing the bulbous explorer, and bleeding in some, and in some other cases the patient was anæsthetized, so that spasm was eliminated in these cases at least.

Dr. Edward L. Keyes, of New York, read a paper on

THE CURABILITY OF URETHRAL STRICTURE BY ELECTRICITY; AN INVESTIGATION.

The object in making this study is an endeavor to clear up the mists which have hitherto surrounded it, and by unprejudiced personal clinical study to find what results could be obtained. Dr. Keyes' previous acquaintance with electricity in the urethra was a trial of the old method, that of Mallet and Fripier. The result upon ten cases treated in December, 1871, at Charity Hospital was total failure in all. The new method of electrolysis—mild currents at long intervals, the method known most familiarly as that of Dr. Newman—has been tested in the present communication; seven cases from dispensaries form the material from which conclusions were reached. Three were treated by Dr. Keyes, three by his assistant, Dr. E. Fuller, one by Dr. Robert Newman, who kindly consented to accept the case in order that he might demonstrate the efficacy of the treatment by the result; all were total failures. The case treated by Dr. Newman apparently the *most* conspicuous failure. One other case of spasm without organic stricture is mentioned in the paper as having been (possibly) benefited. Another case of the disastrous results of the use of strong currents was exhibited in the person of a patient treated by another physician. His study, Dr. Keyes concluded, of the subject, and the experience it had brought him, digested with all the impartiality he possessed, led him to state that the claim that electricity, however employed, is able to remove organic urethral stricture, lacks the requirement of demonstration.

Several members related their experience with electricity in treating stricture, all of which tended to corroborate the conclusions of Dr. Keyes.

AMERICAN NEUROLOGICAL ASSOCIATION.

Tuesday, September 18th—First Day.

Dr. James J. Putnam delivered the

PRESIDENT'S ADDRESS.

in which he recommended to the Society the adoption of some system of collective investigation by which the daily hospital and dispensary work of members might be better utilized. He referred to the excellent work begun by the British Medical Association in 1881, to the report on collected cases by Sir William Gull at the Copenhagen Congress in 1884, to the facts investigated by the Berlin Medicinische Verein, and to the good work once done for a short time by the New York Therapeutical Society. There were such subjects as the uses of iodide of potash, brain-tumors, functional neuroses, and cranial measurements, in the study of which collective investigation would prove of great value. Another subject of interest would be the effect of small quantities of lead in predisposing to disease. He has found minute quantities of lead in the urine of healthy as well as sick people. In the urine of three out of twenty-three healthy medical students he discovered lead. It might not be detrimental to health, and yet might predispose to neuroses. He recommended a collection of microscopic specimens—brains, crania, etc., or photographs of such—which, kept by the secretary, would prove useful to members who might desire to consult them.

Dr. Philip C. Knapp, of Boston, then read a paper entitled

NERVOUS AFFECTIONS FOLLOWING INJURY (CONCUSSION OF THE SPINE, RAILWAY SPINE, AND RAILWAY BRAIN).

He reported eleven cases, and drew the following, among other inferences: Concussion of the spine, although probable, is a matter of doubt. Muscular strain, spinal irritation, and peripheral neuritis are not uncommon complications. Injuries may give rise to gross mechanical lesions, but also to chronic insidious, degenerative processes, to functional affections, psychoses, and states of hysteria and neurasthenia. Both hysterical and neurasthenic states may be superimposed upon organic disease, thus obscuring diagnosis.

Dr. E. C. Seguin was disposed to agree with the conclusions of the author. The possible deception of patients must be borne in mind. In some cases hysterical or neurasthenic states antedate injury. Subjective symptoms are of doubtful value, because they may be simulated or the result of auto-suggestion. Simulation of the most complex nervous diseases may be produced by the new hypnotism, either through suggestion of an operator or by auto-suggestion, as has been pointed out by Bernheim. He referred to publications of his in 1875 concerning the coexistence of hysteria with organic diseases of the brain and cord. There is no doubt of the reality of neurasthenic conditions following severe physical injuries or moral shocks.

Dr. L. C. Gray said that it would, in medico-legal cases, be necessary to demonstrate clearly to a jury the facts which are learned. It is sometimes hard to discriminate between malingering and actual suffering. People injured are followed up by runners for lawyers, and by them impressed with the dangerous nature of their injuries. Then the slow processes of law force them to remain in a condition of ill-health. They cannot afford to get well for fear of a suit for conspiracy. This develops in the patients a psychical condition worse than hysteria.

Dr. Zenner bore witness to the fact that hysterical symptoms occurred in a great many cases of organic disease. But functional troubles are really due in great part to impairment of the nervous system. He saw a case of tremor lately, following mild lead-poisoning, where two or three applications of hypnotism removed the tremor. Deception by a patient should not lead one to believe that there is no injury present. Pure malingering is very rare.

Dr. Putnam agreed with Dr. Zenner as to malingering. The simulation of hemianæsthesia is so difficult that when present it is a valuable aid to diagnosis.

Dr. Knapp closed by saying that the tendency to auto-suggestion would naturally be greater in medico-legal than in other cases.

Dr. Isaac Ott, of Easton, Pa., read a paper upon

HEAT-CENTRES IN MAN,

demonstrating the fact that in man there are heat-centres in the corpus striatum. He adduced the evidence of disease in support of this statement. Pathological phenomena also make it probable that heat-centres exist in and about the fissure of Rolando.

Dr. Putnam thought it would be well if Dr. Ott would formulate questions for neurologists to answer in looking into their cases. The localization of the heat-centres might be greatly aided in this way.

Dr. Hare was not disposed to agree with the author of the paper. He said that in researches the cells were destroyed, and then it was claimed that a heat-centre was discovered, when in reality it was an inhibitory heat-centre.

Dr. L. C. Gray asked if Dr. Ott had measured the heat through the skull. He thought that the heat-centre might be located in this manner. Cerebral thermometry might be used in this connection. He had shown, ten years ago, a great variation of the temperature of the head even in normal conditions.

Dr. James H. Lloyd referred to a case of his own, with subnormal temperature and a parietal cortical lesion.

Dr. Ott said that the taking of temperature in nervous cases more frequently might be of great assistance in the localization of the heat-centres.

Dr. E. D. Fisher, of New York, then contributed a paper entitled

A CLINICAL REPORT OF CASES OF EPILEPSY FOLLOWING CEREBRAL HEMIPLEGIA.

The author referred to some twenty-eight cases. The etiology was meningeal hemorrhage, thrombosis, embolus, parencephalus, poliencephalitis, and cerebral hemorrhage. Sometimes epilepsy did not follow for some months, or even years, in these cases, and was rather more often of the idiopathic variety than the Jacksonian type. He drew the conclusion that, as these cases were of known cortical origin, and as they resembled clinically the ordinary attacks of idiopathic epilepsy, the seat of origin of both is the same—that it is in the cerebral cortex.

The paper was discussed by Drs. Knapp and Walton.

Dr. Robert T. Edes, of Washington, read a paper on

THE RELATION OF RENAL DISEASES TO DISEASES OF THE NERVOUS SYSTEM.

The author discussed the effects of renal diseases, such as chronic diffuse nephritis, in producing numerous nervous symptoms, such as muscular twitchings, changes in the pupils, headaches, insomnia, stupor, convulsions, etc. He thought we should not call all these the result of uræmia. The retention of urea in large quantities had been proved not to be so dangerous as formerly believed. He would classify the causes of these symptoms of renal disease under the headings neurotic, angio-neurotic, angio-notheutic, angiohydræmic, urotoxic, and uroseptic. There can be uræmia in conjunction with a considerable flow of urine. Epilepsy may coexist with nephritis and give rise to error in diagnosis. True insanity may occur before actual renal disease is discovered, but in his opinion it is not uræmic. Uræmic hemiplegias might be better explained as due to a unilateral œdema than to the poisons affecting one side of the brain.

Dr. F. X. Dercum agreed with the author in a general way, yet thought deductions should be carefully drawn in the present state of our knowledge. We must still regard urea as a dangerous thing. He spoke of the occasional difficulty of diagnosis between apoplectiform attacks and uræmic convulsions. In uræmia there is, as a rule, depression of the temperature. He should try the morphine treatment of Bright's disease mentioned by Dr. Edes.

Dr. Seguin said that patients often present themselves for treatment for headaches, occipital in character or often like real migraine, that these and other paræsthesias of the head were often attributable to uræmia in a prealbuminuric stage of Bright's disease. In such cases there is, as a rule, increased arterial tension and active heart. Casts are often discernible in the urine, but albumin rarely. There are generally symptoms of indigestion. He had often found in post mortems upon cases of dementia paralytica contracted kidneys, and thinks that to this may be due some of those epileptiform and apoplectiform attacks so frequent in this disease.

Dr. L. C. Gray related several cases illustrating the difficulty of making a differential diagnosis at times between certain cerebral diseases and nephritic sequelæ similar in character. He detailed one case of mania coexisting with pyuria.

There was further discussion by Drs. Dercum and Zenner, and the discussion was closed by a few remarks from Dr. Edes.

Dr. C. L. Dana, of New York, contributed a paper on the

CORTICAL LOCALIZATION OF CUTANEOUS SENSATIONS.

The author, from a review of one hundred and thirty-seven cases of cortical lesion, finds a complete identity of the motor and sensory cortical areas. A deeper lesion is apparently more common where there is anæsthesia.

Dr. C. K. Mills thought that though the facts and arguments were strong, Dr. Dana's inferences were not altogether justly drawn. He had recently occasion to go over the same ground. The writer's own four cases did not demonstrate the matter fully. There are certainly large numbers of lesions in the motor cortical area, but without anæsthesia.

Dr. M. Allen Starr believed the localization of cortical centres of sensation to be still an open question. He referred to recent embryological investigations as regards the motor and sensory tracts in the fetal brain, which rather favored Dr. Dana's conclusions. Zuckerkandl's work in comparative anatomy, following in the path of Meynert, is also very valuable. In the selection of pathological cases it is necessary to exercise great care. Many of those he had collected are unsatisfactory. He differed from Dr. Mills, who had stated that lesions of the hippocampus have not been looked for. The hippocampus lies immediately upon the crus cerebri, and a lesion affecting one and not the other was hard to find. This fact vitiates many of Ferrier's experiments and conclusions. He believed the tactile areas of each side of the body were represented on both sides of the brain, as is the visual surface of each eye. Thus, in many cases of hemiplegia the normal hemisphere may compensate for the lesion in the other.

Dr. Seguin strongly favored the cortical localization of sensation. He had seen Schiff remove parts of the cortex in dogs, and the positions assumed by the limbs were only explicable on the supposition of anæsthesia. He had frequently studied the sensory auræ in Jacksonian epilepsy from brain-tumors and other local lesions. Peculiar paræsthesias often precede the spasms. He described the case of subcortical tumors operated upon by himself and Dr. Weir, which is a case that would support the conclusions of Dr. Dana.

After the closing of the discussion by Dr. Dana, the Society went into executive session and the following new members were elected:

Drs. H. R. Stedman, Morton Prince, W. N. Bullard, of Boston; Drs. William Noyes, S. B. Lyon, Frederick Peterson, of New York; Dr. C. H. Hughes, of St. Louis; Drs. E. N. Brush, and William Osler, of Philadelphia; Dr. S. Ayres, of Pittsburgh; Dr. L. W. Baker, of Baldwinsville, Mass.

AMERICAN OTOLOGICAL SOCIETY.

Special Meeting, Tuesday, September 18, 1888.

Dr. J. S. Prout, of Brooklyn, President, in the Chair.

Dr. S. O. Richey, of Washington, read a paper on

THE PRIMARY PHYSIOLOGICAL PURPOSE OF THE MEMBRANA TYMPANI.

He reviewed the anatomical development of the different parts of the ear from the lower to the higher forms of animal life, as change of environment demands some additional structure to aid in the preservation of individual existence. Attention was asked to a parallel in the evolution of the eye, the lungs, and the ear; and it was argued that the primary purpose of the drum-membrane is protection; that transmission of sound-waves is a secondary purpose, and made necessary by the existence of the protective membrane. The membrana tympani exists for the protection of the tissues of the middle ear from the desiccating influence of the atmosphere, and the rigidity that would therefrom ensue. The higher the development of a species, the smaller will the labyrinth be found, and the less fluid it will contain.

With the exposure to the air, consequent upon loss of the membrana tympani, this fluid is diminished by exosmosis through the membrana secondaria and its subsequent evaporation; thus lessening the effect of sound-waves upon the perceptive filaments. In "progressive deafness," or aural atrophy, this same influence is exerted through the Eustachian tube, which is ordinarily of greatly enlarged calibre, and dry with the dry nose and pharynx. The writer's conclusions were:

First. The primary purpose of the tympanic membrane is that of protection to the tympanic cavity from the evaporating influence of the air, to prevent parching and stiffening of the membrana secondaria, the joints of the ossicles, and the tendons of the tympanic muscles.

Second. It being necessary for the protection of the cavity, is modified into part of a transmitting mechanism by the existence of the ossicles and their attachments—a secondary physiological purpose.

Third. A permanent opening of the membrane may, under given circumstances, temporarily improve the function of hearing, but is harmful to the ultimate condition of the organ.

Fourth. The tendency of the membrane to heal is an effort on the part of nature to preserve the function of hearing from the effects of disease, or ill-advised surgical interference.

Dr. Gorham Bacon, of New York, reported a case of

CEREBRAL ABSCESS, FOLLOWING EXTENSIVE NECROSIS OF THE TEMPORAL BONE. OPERATION. DEATH FROM SECONDARY HEMORRHAGE. AUTOPSY.

A man aged thirty had chronic purulent discharge of two years' standing when first seen, September, 1887. Polypi and granulations were removed from the left ear, but there was difficulty in keeping the passage properly open for drainage. There had been extensive necrosis, and a large sinus led upward from the meatus. There was some pain in December, and in January left facial paralysis occurred; and at the end of that month an abscess was opened above and behind the auricle, which was found to communicate with the sinus before mentioned. A drainage-tube was introduced into the opening and brought out through the sinus, and the cavity was washed out regularly with a bichloride solution. He improved and got to walking out. March 7th, he complained of great pain in the forehead and neck, his temperature rose to over 102°, he grew very restless and became aphasic, being only able to answer "Yes, sir!" to everything said to him. Next day he was much the same. No recent paralysis, fundus of both eyes normal, boggy swelling over the left malar prominence and eyelids. There had been no evidence of mastoid involvement, and an incision over this region yielded negative results.

Dr. Robert F. Weir, of New York, saw the case at this time, divided the temporal muscle, cleared out the suppurating tract, and thrusting the finger deeply toward the base of the skull, found a pulsating swelling, which was explored, then opened, yielding a half-ounce of pus. The patient improved, but forty-eight hours later became more stupid again. Then a counter-opening was made over Broca's convolution. No pus was found, but a drainage-tube was carried through the brain-substance and out of the other opening. Again he improved, but forty-eight hours later died of secondary hemorrhage, supposed to be due to injury of the middle cerebral artery in the process of introducing the drainage-tube.

Dr. O. D. Pomeroy, of New York, reported a case of

CHRONIC SUPPURATIVE OTITIS WITH METASTATIC IRIDO-CHOROIDITIS, AND ABSCESS OF THE SIDE OF THE NECK COMMUNICATING WITH THE TYMPANUM.

This occurred in a man of about fifty, first seen in consultation, on account of iritis with firm adhesions. He had the otitis some months before and had been apparently cured, but had for some time been suffering from great soreness in the neck, ascribed to muscular rheumatism. A week later there was pus in the anterior chamber. Paracentesis was done and the incision kept open, but perforation occurred in the upper part of the sclera, and the abscess pointed in the upper lid. Subsequently the eyeball was enucleated, when firm adhesions were found between it and the ocular conjunctiva. A week later there was decided increase in the swelling in the side of the neck, and deep fluctuation could be detected. Previous to this exploratory puncture had given no pus; but now a deep incision evacuated about four ounces. and pressure on the abscess caused it to well up also from the external auditory meatus. This occurred in July of the present year; subsequent improvement was rapid, and the patient is now well.

Dr. C. H. Burnett, of Philadelphia, read a paper entitled

CHRONIC PURULENT INFLAMMATION OF THE TYMPANIC ATTIC,

based on notes of ten cases of the disease, additional to ten cases already published elsewhere. The chief obstacle to cure in these cases is the limited drainage through the membrana flaccida above the short process of the malleus, where the perforation in such cases is usually situated.

The drainage is further reduced by the fact that the disease is in and about the head and body of the malleus and incus, and these act as a dam to the free outflow of matter. This in turn decomposes, keeps up the disease, and renders the patient liable to intra-cranial abscess, or general pyæmia. In treatment, therefore, the chief considerations are cleansing and draining the upper cavity of the tympanum. This is best done by injections, by means of the tympanic syringe, of peroxide of hydrogen, or three per cent. to five per cent. carbolic-acid solution; and by enlarging the perforation and exposing the attic, either by scratching off some of the margo tympanicus, or by excision of the membrana tympani, and removal of the ossicles, *i.e.*, the malleus and incus.

Dr. Samuel Sexton, of New York, read a paper on

EXCISION OF THE DRUM-HEAD AND OSSICLES FOR THE CURE OF CHRONIC PURULENT INFLAMMATION OF THE ATTIC OF THE TYMPANUM.

In most cases of persistent otorrhœa the tympanic attic is the seat of disease, and it is difficult to reach it with remedies. While casting about for a better mode of treatment he had been struck with the recent advances in the surgery of the joints; and reflecting on the resemblance of these cases to those of chronic joint disease, in the chronic muco-periosteal inflammation, caries of the bony walls, and synovitis of the articular surfaces of the ossicles, had been led to try the removal of diseased structures, and the securing of efficient drainage. These cases constitute a large class, the hearing is greatly impaired, the ear irreparably damaged, the parts to be removed are useless and obstruct drainage. Even if temporarily relieved the trouble is liable to break out again, and life is continually endangered. Besides, this treatment will often greatly improve the hearing. Though we may not be able to apply antiseptics here as freely as to joints, we can secure the essential point, free drainage. The operation had been previously described. Even if the chorda tympani nerve was severed no permanent inconvenience resulted.

Dr. Samuel Theobald, of Baltimore, read a paper upon

THE EMPLOYMENT OF BORACIC ACID IN SOLUTION, IN THE TREATMENT OF OTITIS MEDIA SUPPURATIVA.

In the ordinary cases of chronic suppurative otitis media, in which there is usually extensive destruction of the drum-head, he uses boracic acid in powder, applying it by means of insufflation; but in acute cases and in chronic cases in which the destruction of the drum-head is not extensive, and in which a closure of the perforation may be anticipated, he prefers to use a saturated solution of boracic acid. The advantages claimed for the solution in such cases are, that the healing of the perforation in the drum-head is more certain to be brought about when it is used than when the powder is employed, since the latter, by too suddenly drying the ear, and also by the mechanical action, frequently prevents the restoration of the membrane; that in acute cases it is safer, as it cannot obstruct the free escape of discharge from the middle ear as the powder sometimes does; and that it can be applied more effectually than the powder can by unskilled hands. In his own case no serious consequences had ever resulted from the application of boracic-acid powder to the ear; but reference was made to the three reported fatal cases of suppurative inflammation of the middle ear, in which the fatal result was attributed to the introduction of boracic acid, in two by packing, in the other by insufflation. The solution (fifteen grains to the ounce) should be used to syringe out the ear, three times a day if the discharge is profuse, less frequently as the otorrhœa declines.

In office practice it is more convenient, after having cleansed the ear, to instil the solution with a pipette. Cases were related illustrating the good effects of the treatment, especially in acute suppurative otitis media.

Dr. J. Oscroft Tansley, of New York, read a paper on

NASAL DIFFICULTIES IN EAR DISEASE.

The important conditions are: Whole or partial occlusion of one or both nostrils by hypertrophies, preventing the removal of secretions and causing venous congestion by attempts at such removal; deviated septum, œdematous tissue, and hypertrophied tissue in special situations acting in much the same way. Hypertrophied tissue pressing on the Eustachian tube, bands of tissue in the pharynx, apparently cicatricial, atrophic rhinitis with a patulous condition of the tubes, and secretive catarrhs are also important causes. He does not employ the galvano-cautery, for fear of exciting purulent inflammation in ears usually strongly predisposed to such an outbreak. The indications for treatment are: 1. To combat the blood dyscrasia or catarrhal diathesis. 2. To cure the inflamed mucous membrane and restore its normal function. 3. To free the nasal and nasopharyngeal cavities of all obstruction, and encourage nasal breathing, relying mainly on the snare, sprays, and mild astringents.

Dr. W. H. Carmalt exhibited

IMPROVED CANNULAR AURAL FORCEPS AND SCISSORS,

the improvements consisting in a handle that would avoid undesirable motion, a biting forceps, and a pair of cannular scissors.

Dr. Clarence J. Blake, of Boston, had prepared a paper, read by Dr. John Greene, on

THE INFLUENCE OF THE USE OF THE TELEPHONE ON HEARING POWER.

He believed this would be bad, because the very low intensity of the sounds, as demonstrated by experiments, necessitated a very fatiguing effort on the part of the ear, which placed it in a condition in which it was especially liable to injury from the shocks of the metallic sounds of high intensity liable to be heard at any time through making or breaking the circuit.

After a brief executive session the Society adjourned.

AMERICAN DERMATOLOGICAL SOCIETY.

TUESDAY, SEPTEMBER 18TH—FIRST DAY.

Dr. I. E. Atkinson, of Baltimore, delivered the

PRESIDENT'S ADDRESS,

in the course of which many of the more recent advances in dermatology were discussed, and especially the influence which bacteriology has exerted upon certain processes. In pathogenesis, he believed, resides the essence with which the science of medicine must become familiar before it may hope to attain a definite and established position. Pathological anatomy only reveals the effects of influences more or less determinate.

THE SOUL OF PATHOLOGY IS ETIOLOGY,

and we have learned that a correct understanding of disease depends no more upon pathological processes and results than upon pathological causes. A morbific agent may produce widely different results, varying with the locality of its activity. The skin, no less than other organs, presents, in its pathogenesis and pathology, analogies and homologies; as the circumscribed baldness of alopecia of tropho-neurotic origin, and that occasionally observed in the course of syphilis, of the urticaria following dietetic errors, and that observed in malaria, of facial herpes in acute lobar pneumonia and in remittent fever. Eczema may result from local cutaneous irritation, and also from unknown systemic influences. In rubella or German measles, and rubeola or measles proper, we have two morbific principles which we have abundant reasons to believe unrelated, but which produce results that are often almost identical. Suppuration justly claims a high interest for us. Pus, it appears, is only formed in the presence of certain minute organisms, but more recent research makes it probable that not the organisms themselves but their products—ptomaïnes—are the agents which bring about suppuration in the tissues. In the absence of ptomaines, it would appear that pyogenic micro-organisms are incapable of exciting suppuration. In cutaneous suppurative processes most interesting considerations are presented, and we are prepared and partially justified in receiving with credence some recent bacteriological observations attesting the influence of these organisms. Impetigo, furunculosis, and sycosis have been found to be produced by the invasion of staphylococcus pyogenes aureus et albus. The differences in these diseases depending upon the depth to which the bacterium penetrates, and to the varying anatomical structure. The rôle of pyogenic bacteria is no less important in the secondary processes of affections primarily specific. Guttmann attributes the pus formation, but not the contagion, to organisms found in smallpox. The suppurative process thus illustrates that not only may apparently dissimilar morbid actions have a common origin, but that identical results may follow the action of dissimilar causes. Many affections are considered as skin diseases, and are designated as such only because we are unacquainted with the subtle and remote pathological processes of which they are expressions. It is likely that various forms of dermatitis exfoliativa, of pemphigus, of dermatitis herpetiformis, among others, are such. Kaposi vehemently objects to Duhring's dermatitis herpetiformis including in its severest forms the impetigo herpetiformis of Hebra, an affection occurring in puerperal women and terminating fatally in the great majority of cases. He has, however, recently admitted that the affection may attack men as well as women. The varied character of the general symptoms and of the pathological alterations teaches us that the eruption can hardly have a constant and characteristic etiological relation to any defined morbid process. Post-mortem examination shows internal disorders, pyæmic processes, tubercular lesions, cerebro-spinal affections. The lesions have, however, not been constant. If we accept Hebra's opinion that impetigo herpetiformis depends on a reflex nervous and vascular irritation, we may conclude that this irritation may originate in pyæmia, or tuberculosis, or other agency acting upon the trophic centres; and if the impetigo be secondary, it should not be considered as a special disease. Duhring has made it evident that under the designation of dermatitis herpetiformis it becomes possible to group together affections heretofore considered distinct, and that we should admit it to our text-books just as purpura is admitted. Lesions of the cerebro-spinal system have been found after death, seemingly attesting the secondary character of the cutaneous lesion.

Many cutaneous affections are thus seen to have a varying etiology, and the dependence of skin-lesions upon disease of the central nervous system and of the viscera is abundantly evident; but until pathology discovers whether the influences are constant and what is their exact nature, we cannot expect that diseases will be considered so much as what they are as what they appear to be.

Dr. G. H. Rohé, of Baltimore, Md., read a paper on

THE ELECTROLYTIC DECOMPOSITION OF ORGANIC TISSUE.

Many compounds in a fused or liquid state, he said, may be decomposed by passing through them a current of electricity of sufficient strength to overcome the chemical affinity between the component molecules. This is called electrolysis, and a number of laws governing it have been established by the labors of Faraday and others. Thus electrolysis does not take place in solids; bodies must be in a state of fusion or solution. Decomposition occurs only at the surface of the electrodes immersed in the electrolyte. Whenever an electrolyte is decomposed by a current of electricity, the resolved ions have a tendency to reunite, thus setting up an opposing electro-motive force to the decomposing current. This tendency to reunite is commonly termed "chemical affinity." When water is decomposed by a current of electricity into its constituent ions, oxygen and hydrogen, the opposing electro-motive force due to the chemical affinity of these two gases is about 1.5 volt. Therefore, to decompose water, a battery having a higher electro-motive force than 1.5 volt is necessary. Inattention to this fact may account for the contradictory results obtained in some cases where electrolysis is employed for therapeutical purposes. The quantity of the substance which is decomposed is proportional to the quantity of electricity passing through the electrolyte, and is independent of the size of the electrodes and of the time the current passes. The amount of electro-chemical action is equal at all points of the circuit. This law seems to contradict the law that decomposition takes place only at the surface, so that both propositions must be accepted with reservations.

The theory of Clausius is that "every molecule of a fluid moves about in an exceedingly irregular manner, driven by other molecules themselves in a state of agitation. This molecular agitation goes on at all times, independently of the action of electro-motive force." In every compound a certain proportion of the molecules at any instant are broken up into their constituent atoms. The electro-motive force does not produce the disruptions and reunions of the molecules, but, finding them already going on, it influences the motion of the constituents during their intervals of freedom. The amount of this influence is proportionate to the electro-motive force when the temperature is given. The conductivity of electrolytes increases as the temperature rises. Pure water is said not to be an electrolyte, inasmuch as it is a non-conductor, yet most of the laws of electrolytic decomposition have been deduced from observation upon slightly acidulated water, and it seems probable that salt or acid added to the water promotes electrolysis by increasing the conductivity. Galvanic conduction through liquids is probably always electrolytic, and, if this be true, many of the current notions of the physiological action of the galvanic current upon organic tissues require modification. We must assume that every time we use the constant galvanic to relieve pain, to stimulate nutrition, or to perform electrolytic operations, we are performing electrolysis, for the human body may be regarded as a large and exceedingly composite electrolyte. The process termed electrical absorption, electrical osmosis, or electro-catalysis, will properly be ranged under the term electrolysis. Organic tissue is an electrolytic conductor, and a current can pass through it only by electrolytic decomposition of its compounds. Hitherto the human body has been measured electrically simply as a conductor or as a resistance, but it seems to the author much more rational to regard it as an electrolyte. In electrolysis it seems probable that the watery portions of organic tissues, together with certain salts and acids in solution, yield to the disruptive power of the current, and hydrogen, with other electro-positive ions, is set free at the negative electrode, while oxygen and negative ions are separated at the anode.

In the author's opinion there is a "shaking up" of the interpolar compounds. If the current is of moderate strength, improved nutrition will result if the tissues have normal vital resistance. If the current be excessive, nutrition will be unfavorably affected. If the tissues are normal, recovery and repair of slight defects may promptly take place, but in inflammatory infiltrations, new-growths, etc., a molecular disturbance of some extent or continued for some time, the author believes, may produce retrogressive metamorphosis. He is also of opinion that in many pathological products a retrogressive change begun under an electrolytic current is kept up after the current is discontinued.

One case of goitre treated by electrolysis is reported in which the tumor not only grew smaller during the treatment but continued to do so after its cessation, until it has now practically disappeared. The author's experience with electrolysis in fibromata, vascular nævi, and epithelial and papillary neoplasms strongly corroborates that of others. He is led to ascribe this continued effect to a modification of vital activity impressed upon the tissues by the electrolytic current.

The author goes on to describe the strength of current necessary to employ in the destruction of hairs upon the face and new-growths, and drops a good word in passing for electrolysis in the treatment of stricture of the urethra, believing that this method of treatment will become a well-recognized one so soon as we know better how to use it.

Dr. Heitzmann spoke of the favorable results reported in the treatment of keloid. Althaus, of London, first advocated the method for this affection twenty-five years ago, but some years ago, when this distinguished surgeon was in New York, he stated that he had given up electrolysis in treating keloid. Dr. Heitzmann had used it in one case of keloid without very favorable results.

Dr. Morison said that hypertrophic scars, in his experience, were rendered flat and white, the superficial veins were cut off, and the results of electrolysis were altogether good. He had treated keloid in a negro with good results, and could state that he was a firm believer in electrolysis.

Dr. Fox had employed the method in four or five true keloids, and although the results were at first promising, the only permanent good effect was the cutting off of superficial veins, and at the present time he could say nothing very favorable of it.

Dr. Hyde confirmed the views of Dr. Fox. In one case, which seemed favorable for electrolysis, he had been much disappointed, and left it about in the same condition as when treatment was begun.

Dr. Rohé said he had not treated a well-marked case of true keloid, but in hypertrophic scars he had had some results as good as those of Dr. Morrison.

Dr. Heitzmann, of New York, then read a paper upon

THE VALUE OF SALICYLIC ACID IN DERMATOLOGY.

During the past three years he had made extensive use of salicylic acid in the treatment of a great variety of skin-affections, and both on account of its great efficacy, its cheapness, and its freedom from the disagreeable features of such other remedies as tar, chrysarobin, and like preparations which smell disagreeably and stain the clothing, he has found for salicylic acid a wide range of usefulness. The peculiarities of the drug are that it acts upon the horny layers of the skin. With the exception of acetic acid no agent is so active in softening and finally destroying hypertrophied epithelial tissues, and as it is at the same time a valuable parasiticide, a very large field was opened for the drug in dermatological practice. None of us expect that any one remedy will benefit all kinds of skin disease, and in experimenting, "beliefs" and "impressions" must not be taken into account. We must have definite facts and scientific proofs.

The author's observations have extended to twenty-four different varieties of skin-lesion. The remedy can be applied in three ways: 1, As a powder; 2, as a plaster or salve; 3, as a solution. It was first advocated by Lassar and subsequently by Unna, but the author does not think its worth is yet fully appreciated, and its advantages over tarry preparations well enough known. The solution is best made in alcohol, as the drug is not very soluble in water, and from this solution any desirable watery solution can be readily made.

Hyperidrosis is greatly benefited by it. It is now used, as it has been for the past twelve years in the German army, as a deodorizing agent. The regulation application for the soldier's feet is a one per cent. mixture in tallow. The results are very favorable.

Seborrhœa of the face, when combined with acne, rapidly improves under its use, and, in fact, the results may be called brilliant.

Urticaria loses its element of itching shortly after the use of salicylic lotion.

Furunculosis.—In this affection the author knows of no other drug which will destroy the cause of the disease, that is, the staphylococcus pyrogenes aureus. He has had very favorable results from a six to ten per cent. plaster or mull, but it may be used as an ointment. The principal point made is that the drug should be of the purest quality. He used Scheering's (?) preparation, though Merck's is well spoken of. Inferior makes are accountable for the bad results others have had.

Dermatitis herpetiformis. — In one case the drug proved the best remedy the patient had tried.

Lichen planus was found to recover much more rapidly than under Unna's sublimate ointment. The lotion removes the itching and, later on, removes the scales.

Three and four per cent. solutions are here necessary. No arsenic or other internal remedy was employed.

Eczema of all varieties was benefited, and eighty-six cases were treated by it. One-half per cent. was used, to begin with, in pustular eczema and eczema madidans. In infiltrations from six to ten per cent. plasters or mulls are recommended.

Acne, of which there were fifty-six cases, was much benefited by a three per cent. alcoholic solution diluted to one-half per cent. to begin with.

Impetigo contagiosa is cured in ten to twelve days with the paste or gutta-percha solution.

Callosities, clavus, and *verruca* are softened in from twenty-four to forty-eight hours if adhesive plaster be applied over the acid. Papillary excrescences must be subsequently scraped out thoroughly or they will return. The corn will naturally return if the faulty boot be not remedied and pressure removed.

Pruritus of extremities, and pruritus ani of years' standing, was cured by lotions and mulls.

Tinea circinata and tonsurans.—For these it is highly recommended, and regarded superior to Taylor's four per cent. solution of sublimate in myrrh.

Dr. Pye Smith, of London, related a few personal cases and the success he has had with

SALICYLIC ACID IN HYPERTROPHIC GROWTHS

of the hands and other parts. He has found it excellent in removing epidermic accumulations. In ichthyosis, however, it is only of temporary benefit. Furunculosis does not depend upon poorness of the blood but upon local contagion, hence the benefit of salicylic acid. He approves of hardening the surrounding skin at the same time, and for this purpose a rather strong lead-lotion is used. He has also tried salicylic acid in lichen planus with benefit. Dr. Smith then made a few very complimentary remarks about American dermatologists and the favorable impression his countrymen in England had received of the work done in recent years on this side of the water.

Dr. Bulkley had found salicylic acid a great boon to ladies who suffered from excessive and offensive perspiration in the axilla. He prescribes it as a ten per cent. powder, mixed with starch and oxide of zinc. In eczema he thought great care should be exercised, as inflammation might be started up. In papular eczema he had found it a valuable addition to other ointments. In favus he had found it of value in an oily mixture, well rubbed in after epilation. In seborrhœa of the scalp it may prove too drying.

Dr. Fox said castor-oil was the only fixed oil with which it would readily mix. He uses it in a two per cent. solution in eczema, etc.

Dr. Van Harlingen had used it in all the common skin diseases mentioned. In eczema of the leg he applies it in glycerine and zinc oxide and puts on a wet two-tailed bandage from the toes to the knee.

Dr. Bronson thought that as a remedy by itself the drug had its limitations of usefulness. In most cases it is only a preparatory agent for other methods of treatment. The only class of cases in which it is curative are those where it acts as a germicide. In pityriasis and seborrhœa sicca, with accumulations of dead epithelium, it is of value in removing the débris.

Dr. E. B. Bronson, of New York, read a paper upon the use of a new remedy,

ANTHRAROBIN,

in dermatological practice. The drug was first introduced by Liebermann, a Berlin chemist, and recommended as a substitute for chrysarobin and pyrogallic acids, being, like them, a powerful deoxidizing agent. It is a yellowish-white, granular powder, sparingly soluble in chloroform and ether, and readily soluble in alcohol and weak alkaline solutions. It mixes readily with fats to form ointments. Behrend has had satisfactory clinical results from its use in psoriasis, herpes tonsurans, etc. Dr. Bronson has used the new remedy for the past few months, and tested its virtues in a variety of skin affections, using, as a rule, a ten per cent. ointment in vaseline. In eight cases of generalized psoriasis apparent cure took place in about a month. In one case remaining under observation for a few weeks, some guttate spots returned upon the back. The staining produced upon the skin is much deeper than that from chrysarobin, but does not diffuse itself over the surrounding skin as is the case with the latter drug. Scarcely any irritation was produced. In eczema a slight smarting sensation was produced at first. The twenty per cent. ointment did cause smarting. In one case of general eczema its use was abandoned because of the itching complained of. A case of eczema seborrhoicum of many years standing, upon which a great variety of treatments had failed to do more than ameliorate the condition, was much improved after a few days' use of the ten per cent. anthrarobin tincture. Little or no anti-pruritic effect was noted, and no opportunity occurred to try it upon parasitic diseases. The remedy is believed to have parasitic as well as keratoplastic properties, and there is reason to hope that the new remedy may render considerable service.

Dr. Heitzmann thought that anthrarobin had all the disagreeable qualities of the drugs it was intended to replace without having any advantage over them.

Dr. Morrow said his observations had been confined to the cases reported by the reader. The action of the drug had seemed to him to be limited and localized, and no essential difference between it and the drugs of the class to which it belongs were apparent, still the drug might have a future.

Dr. R. B. Morison, of Baltimore, then read a paper upon

PERSONAL OBSERVATIONS OF SKIN DISEASES IN THE NEGRO,

calling attention in a very practical way to the differences which exist between dermatoses in this race and in those of Caucasian origin.

Tables were presented of five hundred cases of skin disease in the negro, covering a goodly variety of affections. Dr. Morison having about fifty per cent. of negroes in his public practice enjoys an excellent opportunity for observation. The skin of the negro he has found less sensitive to heat, poisons, irritants, etc., and seems less liable to skin diseases of a severe type than the whites. The skin of the black is, histologically, more coarse and thick than that of the white. More dense fibres are found. The epidermis is thicker, and slightly yellowish in color. There is no appreciable difference in the thickness of the pigment layer between the true black and the mulatto. Fewer elastic fibres are found in the negro skin, but more subcutaneous adipose tissue.

The table spoken of is divided into those who were true blacks and mulattoes, because the author found that the nearer the color approached to white the less difference is noted in the lesions.

Acne is the first disease on the list, and has only nine cases, all in mulattoes. A corresponding table of five hundred cases in the white. collected during the same time, shows thirty-nine cases. Only one case of acne in a true negro has been observed by the author. No case of rosacea or coachman's nose has been seen.

Ainhum is a disease of the negro race, and the two cases in the table were both in black negroes. One had lost the little toe of one foot, and that of the opposite side was diseased.

Chancre was found to be more indurated than in the white. The only extra-genital primary lesions found were upon the lips, and two cases are given.

Chilblain is commonly encountered.

Chloasma is frequent in the negro. Few apply for treatment. It appears as a loss of pigment, causing a yellowish spot on a dark background. Treatment must be reversed and pigment produced instead of being abstracted.

Elephantiasis arabum usually follows syphilis; two such cases are recorded.

Erythema multiforme appears in small or large spots without redness, but attended with much burning and itching.

Erythema nodosum was seen in two mulatto women. More itching and less pain seemed to exist than in the white.

Acute eczema is less common and less severe. Only nineteen per cent. of cases are recorded, while the "white" table gives thirty per cent. In the female, eczema occurs mostly upon the hands. Infants have a modified milk crust, approaching moist eczema. Chronic eczema in the mulatto does not differ from that of the white.

Favus is rare in the negro. Furunculosis appears infrequent, while herpes facialis is common. In herpes zoster the pain seems less severe and less prolonged, but there is itching. Keloidal growths sometimes follow the eruption. Impetigo contagiosa is indistinct and not characteristic.

Keloid is common, and in two of the three cases seen, resulted from small-pox. In the mulatto it is almost as rare as in the white.

Lupus is rare, although the negro is prone to tuberculosis of the lung.

Molluscum contagiosum gave one case upon the genitals. The contents of the tumors was darker than in the white.

Pediculi capitis appears to be quite rare, and the lesions produced by pediculi vestimenti are slight. The bite of the mosquito and cimex lectularius produces little effect upon the black skin.

Pruritus is much complained of, and itching is quite common in the eruptions of syphilis.

In psoriasis the crusts are yellowish and less shiny; only six cases are given. After the lesion is cured a whitish spot remains for a time. It is readily cured.

Scabies is not very common it would appear, and the lesions less severe than in the white.

Seborrhœa capitis is common.

Syphilis offers many points of difference, besides the pruritus mentioned. The incubation period appears shorter; the chancre is larger and more indurated; phymosis is more common; glandular enlargements more pronounced and more prone to suppurate. The macular eruption may be easily overlooked. Tertiary lesions are commonly noted. Thus the disease is more prompt in its first stage, more violent in its second, and more obstinate in its third.

Tinea tonsurans is common, and the scales appear white.

Urticaria in the black is a mild disease, the wheals are not much elevated, the centre is lighter in color.

Verruca is common, they are usually large, but papilloma appears less frequent than fibroma.

Dermatitis venenata has no case reported in the table, but Dr. Morison has learned that it does occur and is very itchy, but the eruption is slight. The pigmentation of the skin is regarded as the prime factor, according to the author, in causing these diseases in the negro to differ from the same affections in the white. In the discussion Dr. Heitzmann asked if the reader meant that in chloasma there was really a lessening of pigment. He considered chloasma as always referring to an hypertrophy of pigment. If there were a diminution he would regard it rather as a leucoderma. He also considered it remarkable that there should be such itching in syphilitic lesions. Dr. Morrow said he had always found difficulty in making a satisfactory diagnosis, especially in erythematous conditions.

Dr. Bulkley has seen some true cases of chloasma in the negro, but vitiligo was much more common. In chloasma the patches are darkened. Itching is a common symptom in the negro, and an accurate diagnosis aside from that of pruritus is difficult.

Dr. Shirwell was surprised that no cases of lupus were contained in the tables.

Dr. Fox was impressed by the fact that no cases of the acute exanthemata were recorded. In suspected scarlatina the early diagnosis depends upon the throat lesions and the fever course, as the skin lesions are not to be made out, but at the period of desquamation the smooth lustre of the black skin is lost, the surface turns gray and presents an appearance as though pepper had been sprinkled over the body, and parents called this, in fact, the peppery skin.

Dr. Frederich, of Washington, reported that in his practice the same run of cases had been noted as those mentioned in the paper, and his observations coincided with those of the reader. He had recently had two cases of elephantiasis arabum, one being a double case. He had found much syphilis in the negro race.

Dr. Robinson had observed a case of chronic pemphigus and a few of ringworm. He did not think that a sufficient number of cases had yet been collected to serve as a base for just conclusions.

Dr. Atkinson has long felt that a chapter on this subject was requisite, and congratulated Dr. Morison on starting this series of observations. He himself has had a large experience in the treatment of negroes and agrees that acne is uncommon, but calls attention to a condition in young negroes who shave closely. A pustular folliculitis of the beard, each pustule penetrated by a hair, but no infiltration of the surrounding skin and having no tendency to become a typical sycosis of the nonparasitic variety. He has found fifty per cent. of young negroes who shaved closely to be affected. They do not usually apply for treatment, and he has no particularly efficacious treatment to recommend.

He, too, has noted a greater degree of induration in true chancre, and a marked tendency to the development of periadenitis producing great masses in which the outline of the glands is lost; suppuration is common, but not like that of chancroidal bubo, pockets of pus forming and the inflammation involving the periglandular tissue. Scabies, on the contrary, he has frequently observed.

In closing, Dr. Morison said the chloasma noted was not light enough to class as vitiligo, and considered it due to uterine disturbance. Pediculi vestimenti was common. In the Southern schools it was taught that, differing from the white races, the negroes did have pruritus associated with syphilitic eruptions.

AMERICAN ORTHOPEDIC ASSOCIATION.

Tuesday, September 18th—First Day.

After a few remarks by the President, Dr. N. M. Shaffer, Dr. V. P. Gibney, of New York, read a paper entitled

REPORT ON THE TREATMENT OF CLUB-FOOT BY MEANS OF THE THOMAS WRENCH, OR "T. T."

The wrench presented was a modification of that of H. O. Thomas, of Liverpool, and consisted of a modified monkey-wrench, with arms jutting out from the side, which are made to grip the astragalus and plantar arch by a screw movement, and then by the leverage of the handle the foot is twisted and forced into shape. He uses the wrench with or without etherization, and alone, or as an aid to tenotomy. The foot was to be corrected at once if possible (in congenital cases), but the operation should be repeated again, or as many times as may be necessary. Twelve cases were reported in detail, which, after having been treated by manual wrenching and Knight's brace for long periods without a cure, gave, under the use of the above treatment, good results. As after-treatment a shoe, built up along its outer border, was advised. In the older cases two or three operations were necessary; but in the younger usually one sitting was sufficient. Five paralytic cases were not difficult to manage.

Dr. Ridlon, of New York, showed a wrench, also a modification of Thomas', to be used for the same purpose, and as an osteoclast in a badly united Colles' fracture. It differed from the wrench of Dr. Gibney in having the grip-rods straight and in having a spring-grip which could be instantly released by pressing a trigger. It was modified from a "Utility Wrench." The subject was discussed by Drs. Bradford, Steele, Moore, Vance, L. H. Sayre, Whitehead, Hodgen, Ryan, and Shaffer.

Dr. H. Hodgen, of St. Louis, read a report on

MORTON'S METHOD FOR THE IMMEDIATE REDUCTION OF CLUB-FOOT.

A detailed account of eight cases was given, and the following deductions were drawn:

1. Tenotomy for equinus should be made first, and the deformity at once reduced.

2. Immediate reduction of the deformity is the proper procedure. Saves time and pain, and the correction is more certain.

3. Can be used in all cases with safety, but has no advantage over hand pressure of the surgeon in young subjects when the tissues are soft.

4. There is no need of preparatory treatment of the tissues by poulticing.

5. The force should be applied inward, downward, and slightly forward, until the tissues are felt to give way.

6. Plaster-dressings applied with the foot in the position of valgus, and allowed to remain on for two months.

7. The bursa will have nearly disappeared when the cast is removed, and they are not, as a rule, tender.

8. The use of the club-foot shoe for some time, in which pressure can be made in the direction of the crushing force.

9. A marked rise of temperature is not to be expected, and when this and pain are present we must look to the plaster as the cause in a large percentage of these cases.

Dr. E. H. Bradford, of Boston, then read an

ANALYSIS OF TREATMENT OF SEVENTY CASES OF CLUB-FOOT.

He said that the clinical memoranda should include the record of imperfect results and of failures, and if possible an investigation of the causes of failure. A detailed statement of the pathological anatomy of club-foot is unnecessary, as it has been thoroughly investigated and admits of no dispute. As it is well known that there is not only a misplacement of the foot, but also always a distortion of the bones of the foot and shortening of some of the ligaments and soft tissues, including, of course, the tendons. The chief distortion is in the astragalus, the neck and anterior facet being inclined to the side. The treatment requires:

1. A rectification of the misplaced bones.

2. A retention in a normal position until the abnormal facet of the astragalus renders the pressure of new position normal. An examination of the current literature of the subject shows much diversity of opinion as to methods.

The following questions in regard to the treatment are at present unsettled:

1. In what cases is it advisable to correct and treat by mechanical means alone, without the help of any operative interference, even tenotomy.

2. When is tenotomy advisable?

3. Can severe cases be entirely corrected and cured without tarsal resection, or osteotomy?

4. Is tarsal resection, or osteotomy, a justifiable operation?

These questions are answered by the tables of cases, thus:

1. That the cases of infantile club-foot can, as a rule, be thoroughly and efficiently treated without tenotomy, by mechanical correction and mechanical retention alone.

2. That in older cases tenotomy aids the correction, and is not injurious to the permanent result.

3. That resistant cases of the severest type can be corrected without tarsal osteotomy.

4. That in some cases of resistant club-foot torsal osteotomy is needed for perfect rectification, and is not only justifiable, but may be indicated in exceptional instances.

Dr. N. M. Shaffer, of New York, then exhibited a brace for the treatment of varus, applied to the outer side of the leg and foot, and intended to *pull* the foot into position.

In the discussion which followed upon the papers of Drs. Hodgen and Bradford, remarks were made by Drs. Moore, Willard, Vance, and Steele.

Dr. George W. Ryan, of Cincinnati, reported a case of

REFLEX VALGUS

in a boy ten years old. The condition appeared three or four weeks after a reported slight sprain. There was no swelling or pain, and the only symptom presenting was the unusual contracture of the peronei group, which was intensified if it were touched, or any attempt made by means of apparatus to correct the deformity. There were no spinal symptoms, and no other hysterical symptoms; the patient resented treatment, and wished to resume his accustomed play. The treatment which was prescribed was not followed, and no change in the condition had occurred when last heard from, some eight months after he came under observation. The paper was discussed by Drs. Gibney, Vance, Judson, Sayre, and Shaffer.

Dr. A. B. Judson, of New York, then read a paper entitled

A PRACTICAL POINT IN THE TREATMENT OF POTT'S DISEASE.

The author believed that in the unsatisfactory state of the treatment of Pott's disease, it would be well to judge of the efficiency of mechanical treatment by the impression made by the apparatus on the skin covering the projection. He thought the object of treatment was threefold: to fix the diseased bones, to transfer pressure from the bodies to the processes, and to reduce the deformity. If the skin near the summit of the projection becomes thickened and callous, which it does without discomfort if the pressure is carefully increased from time to time, it is to be considered that the apparatus is acting as it ought to, and when the greatest pressure is made compatible with the integrity and comfort of the skin, the apparatus has reached the limit of its efficiency. This rule is less applicable to the treatment by suspension and the plaster-of-Paris jacket. He would not say a word against the plastic apparatus. In the hands of the general practitioner plaster-of-Paris gives relief to many cases which would otherwise have no mechanical treatment. But the orthopedic surgeon can do better by the use of tractable steel modified to fit the varying needs of the patient with the mechanical skill which belongs to practitioners of that class. The author further agreed with Dr. Shaffer in the importance of avoiding, as much as is practicable, the application of water to the skin which is subject to pressure.

The paper was discussed by Drs. Moore, Ridlon, Whitehead, Steele, and Shaffer.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Tuesday, September 18th—First Day.

Dr. R. P. Lincoln, the President, congratulated the fellows of the Association upon the gratifying results of the ten years of harmony and good-will that they have enjoyed as fellow-workers, and upon the appreciation of the same by the profession at large as the reward of their conscientious work and persevering investigations in behalf of science. The Tenth Annual Congress having been declared open, the first paper was read by Dr. G. M. Lefferts, of New York, on

IMAGINARY LINGUAL ULCERATION.

It is, however, very real to the sufferer, on account of the severe pain and distress, and proves most puzzling to the physician as to etiology, pathology, and treatment. It occurs impartially as regards sex, and usually between the ages of thirty-five and fifty. The most marked symptoms are darting intermittent pains along one side of the tongue, usually the left. They extend from the base to the middle third or tip of the tongue, following the line of demarcation between the rough dorsum and smooth mucous membrane below.

These pains are aggravated by talking, eating, or in any way using the muscles of the tongue and pharynx, also by heat, cold, or local irritation of any kind. The trouble is not confined to hypochondriacal or hysterical subjects, but exists as a painful reality where the patient enjoys robust health. Unless irritant applications have been used, physical examination reveals nothing. The author has seen many cases where no appreciable cause could be found, although the wearing pains had caused morbid fears of cancer, syphilitic ulceration, etc., resulting in thorough demoralization of the patient. Experience has taught no satisfactory treatment. Electricity, cocaine, and hypodermics give temporary relief only.

Dr. Bosworth considers local irritation, inflamed papillæ, and hysteria most frequent causes, but is ignorant as to the pathology.

Dr. Ingals had found rheumatism and excessive use of tobacco in many cases the cause; arsenic proved a useful remedy in his experience.

Dr. Frank Donaldson, of Baltimore, reported

A CASE OF SUBGLOTTIC STENOSIS OF THE LARYNX TREATED BY DILATATION.

Mrs. R——, aged twenty-four, married, with four children, and healthy from childhood, awoke one morning with hoarseness from a slight cold. As the throat was not sore, but little attention was paid to it. Months later the voice became stridulous, and in spite of active treatment breathing became more and more difficult, especially at night. Later she was sent to the author as a severe case of emphysema. The slightest exertion caused alarming dyspnœa. He found smooth, well-defined membrane below the vocal cords, and almost including the narrow space encircled by the cricoid cartilage. Could find no trace or history of syphilis in either husband or wife or their families, nor of any injury to her larynx. A course of treatment by careful dilatation caused gradual disappearance of membrane, leaving only a very narrow ring at the site of its attachment. To be successful in these cases requires patience and perseverance on the part of both doctor and patient as well.

Dr. Carl Seiler, of Philadelphia, reported a case of

STENOSIS OF THE LARYNX AND TRACHEA.

This case, a boy aged two, had persistent hoarseness, following a cold, which became more marked during the following year. Found health excellent, and larynx normal, with the exception of small papilla on posterior portion of left vocal cord. Removal was delayed. Saw the case five years later, after tracheotomy had been performed. Larynx was so completely filled by a mass of papillomatous growth that no air could be forced through it. The tracheotomy tube had caused deep ulcerations, and was embedded in a mass of vascular granulations. The boy had a curious method of filling the upper respirative cavities with air, and by forcibly expelling it he could phonate intelligibly, using the pillars of the larynx and tonsils instead of the vocal cords. The removal of the growth was facilitated, during laryngotomy, by using the fingers of the left hand in the mouth for pushing it downward through the larynx. Although stricture had been left by ulcerations about the tube, the patient has been gradually gaining in power of voice and breathing space. He still wears a tube.

Dr. J. Solis-Cohen, of Philadelphia, presented a specimen of

STRICTURE OF THE LARYNX WITH EXTENSIVE CICATRIZATION, FOLLOWING ULCERATIVE TUBERCULOSIS.

An apparently healthy woman, aged forty-five, first noticed slight sore-throat after taking cold. For several years the symptoms increased in severity, until she became alarmed at loss of voice and difficulty in swallowing and breathing. Found uvula and epiglottis gone, and pharynx much deformed by cicatricial contractions. A thick, dense, cicatricial mass partly filled the larynx, connecting ventricular band and ary-epiglottic fold with those of the opposite side. A portion, half an inch thick, was cut out, so as to admit tubes for dilatation. Bacilli and giant-cells were found in it.

The case followed the usual course of destructive ulceration, etc., so that the larynx was presented.

During discussion, the majority of the members did not speak in favor of dilatation, having experienced unsatisfactory results. Where temporary benefit had resulted, the tubes could not be abandoned because contraction would again give trouble. Dr. Rice considered O'Dwyer's tubes useful to control hemorrhage, when operating within the larynx, by keeping blood from the trachea, and a substitute for preliminary tracheotomy.

Dr. Edgar Holden, of Newark, N. J, read a paper entitled

A POSSIBLE SUBSTITUTE FOR TRACHEOTOMY AND INTUBATION IN CERTAIN CASES.

Under this modest heading Dr. Holden read an excellent paper descriptive of a new and safe method of overcoming laryngeal obstruction. A short description was first given of its numerous causes, and of the sudden emergencies that call for the utmost haste in giving free access of air to the lungs as the only means of saving life. A long list of recorded mistakes, accidents, and dangers attending intubation was accompanied by a somewhat similar record in the history of tracheotomy.

The ingenious instrument he presented is obviously so designed as to render most of these unfortunate complications impossible, while operating with greater ease and rapidity. Thin silver blades are introduced through the crico-thyroid membrane and passed between the vocal cords. These are separated by pressing together the two short external extremities, which are at right angles to the rest of the blade and united to each other by a hinge where they rest in the wound. Pressing the outer ends together separates the inner blades between the vocal cords.

Advantages: Easy of introduction and removal; cannot be displaced; breathing through natural passages; no interference with swallowing, etc. Also well adapted for removal of foreign bodies in the trachea.

A drawing was next shown of a very long silver tracheotomy tube, designed by A. Gouguenheim, of France, the lower end having flexible spiral. Introduction easier and injurious pressure avoided.

Dr Clinton Wagner, of New York, presented a communication entitled

RESIDENCE IN HIGH ALTITUDES AS A MEANS OF CURE FOR LARYNGEAL PHTHISIS.

After discussing the comparative advantages offered by the various mountain health-resorts, the reputation of many was substantiated by reports and statistics. Among those thus favored were Colorado Springs, Denver, Lake Tahoe, Pueblo, and various resorts in the mountain-chains of our own coast. Reports from resident physicians were read concerning permanent cures of those under careful daily observation. Cases were mentioned that had been under the author's personal care, and recovered, although destructive ulceration had commenced. Best results where rarefied air is pure and dry, with plenty of sunshine, and admitting of the greatest number of hours in open air, with good food and a few home comforts. Thirty-three per cent. of phthisical patients have laryngeal complications, which are especially benefited by high altitudes, if in incipient stage and before ulceration begins.

During the discussion of the paper, **Dr. Glasgow** said that a large percentage of laryngeal complications were not tuberculous, while in other cases tubercular infiltration appeared in the larynx before the lungs were involved. Extreme altitudes he found disastrous where there were any laryngeal complications; moderate altitude, 3,000 to 4,000 feet, safer, till improvement of the larynx warrants their making the change.

The unfavorable conditions in Switzerland are due to sudden changes in temperature, fog, and dampness. Phthisical cases are hopeless unless an early start is made. Improvement reported in more advanced cases means that the disease is at a stand-still, not cured while they remain, and will return on leaving these favorable localities.

Dr. John N. Mackenzie, of Baltimore, read a paper on

A HITHERTO UNDESCRIBED NEUROSIS OF AURAL APPARATUS, RESEMBLING CORYZA SYMPATHETICA.

Mrs. A——, aged forty-two, has for many years had an affection of the ear resembling the catarrhal condition of the nasal cavity found in hay-fever. Regularly, about June 1st, it attacks one ear only, alternating yearly, as a rule, from one to the other. Begins with itching along the external canal, followed by pain and swellings that nearly close the canal but contain no pus. Canal very sensitive and resents applications. Then soreness is felt in the throat, about orifice of Eustachian tube; pain on swallowing as inflammation extends toward middle ear; tympanum congested. Nothing modifies its course, which is four weeks. Discharge is free, and there is temporary deafness. No trouble appears in throat or nose. Suddenly disappears.

Possibly sympathetic and similar to the inflammation of nasal mucosa caused by irritation of spheno palatine ganglia.

Dr. D. Bryson Delavan, of New York, presented a communication entitled

FURTHER INVESTIGATION AS TO THE EXISTENCE OF A CORTICAL MOTOR CENTRE FOR THE HUMAN LARYNX.

The paper was one of great scientific interest, embodying the result of a large amount of original research and careful investigation, at the dissecting table, of the brain-lesions in those who had suffered from laryngeal paralysis.

Dr. E. J. Moure, of Bordeaux, reported a case of

ACUTE ŒDEMA OF THE SUB-EPIGLOTTIC REGION AND LOWER PHARYNX IN A DIABETIC PATIENT.

The case presented the usual symptoms of œdema in this locality, but there was no apparent cause. It disappeared in three days. Examination of urine showed sp. gr., 1.039, and contained seventy grains of sugar. Considers it the cause of this laryngeal œdema.

Dr. D. N. Rankin, of Allegheny, Pa., read a paper on

PARASITES INHABITING THE HUMAN NARES,

reporting a number of cases.

AMERICAN CLIMATOLOGICAL ASSOCIATION.

Tuesday, September 18th—First Day.

Dr. A. L. Loomis, of New York, delivered the

PRESIDENT'S ADDRESS.

The profession has been stimulated by the work of this Society in climatology. The climatology of old age will chiefly be considered in the address. The body declines, while the mind keeps its vigor much longer, and therefore, if the body be properly taken care of, much mental work may be done, and often of a high order. An important hygienic law is, that the brain be stimulated by pleasurable occupation; also proper food and plenty of fresh air should be available; but it is important that the extremes of temperature, either of heat or cold, should be avoided. The ancients paid great attention to the hygiene of old age. Certain rules should be observed in choosing a climate for old persons. 1. Healthy old age is best passed in moderately warm climates; changes, however, are of advantage, and it is not necessary that old persons should always remain in one locality. 2. They should live in a climate where a great part of the time can be spent out-of-doors. 3. Well-cooked food is of great importance to the aged; it should be simple and easily digested.

Diseases occurring at other times of life may present special characteristics in old age, and we have also diseases, due to degeneration of tissue, peculiar to this time of life. We must consider these facts in choosing a climate for old age. High altitudes are not usually safe for the aged, and it is never safe for them to pass suddenly from a low to a high altitude when they are suffering with phthisis pulmonalis. Localities like Nassau, Cape May, or Newport are advantageous in such cases. Changes of climate are also a prophylaxis against the development of phthisis, and this should be more fully recognized than it is. A person recovering from an acute attack of pulmonary trouble may sometimes escape the development of phthisis by a timely change of climate. Gout and rheumatism, so common to the old, may often be avoided by a trip to California or Florida. Cystitis is often aggravated by a cold, damp climate and is benefited by a change to a warmer climate.

Dr. S. A. Fisk, of Denver, read a paper on

A STUDY OF THE CLIMATE OF COLORADO AS APPLIED TO THE ARREST AND CURE OF PULMONARY DISEASE.

So many cases of the cure or arrest of disease have come under observation that he cannot refrain from making some statements on the subject. On account of there being no large bodies of water on the eastern side of the mountains in Colorado, and the drainage being mostly subterranean, the climate is extremely dry; the elevation of the region resorted to by invalids varies between three thousand and eight thousand feet or more, so that the elevation may be regulated by the needs of the patient. The effects of elevation, of the small amount of humidity, of the large number of sunshiny days, in Colorado, were dwelt upon at length. In the winter months the variations in temperature are extreme, and in certain situations in the summer the heat is often great.

The velocity of wind in Denver, contrary to the frequently received opinion, is not often very great; and in this Denver will compare favorably with the Connecticut Valley. The dust-storms are at times, however, sufficiently severe to be detrimental to invalids if exposed to them. Fogs are almost unknown. He questions if elevation is any assurance of the absence of germ-life. Putrefaction and decay may be found where other appropriate conditions are present, anywhere in Colorado.

Dr. S. E. Solly, of Colorado Springs, read a paper on

INVALIDS SUITED FOR TREATMENT AT COLORADO SPRINGS.

The situation, area, population, and excellent drainage of Colorado Springs were spoken of. The effects of the elevation on the skin, the circulation, the respiration, the digestion, the nervous and muscular systems, were considered. He mentions the danger of elevation in cases of fatty degeneration of the heart muscle.

In persons under thirty years of age, with dilatation of the heart, the greatest caution should be used to live carefully and not to take too much or too violent exercise. When the heart is normal, although its action is at first increased, after a time it invariably returns to its normal condition. He recommends the place for arresting threatened tuberculosis; fibroid phthisis also does well. Renal complications make the change to Colorado risky. Moderate dilatation of the heart in the young is not a positive contra-indication.

Dr. R. G. Curtin, of Philadelphia, read a paper entitled

IS CLIMATE AN ETIOLOGICAL FACTOR IN GRAVES' DISEASE?

He has tabulated over seventy cases, and has studied the subject for twenty years. He found forty cases in fifteen families, and after carefully investigating has concluded that the disease is hereditary. A large proportion of his cases came from Alsace and Lorraine, and he thinks that elevation has an influence on the development of the disease, which might otherwise have remained quiescent, and he believes he has seen instances of this among persons residing in the Alleghany Mountains.

Dr. Geddings mentioned a case of goitre which became severe when taken to a considerable elevation.

Dr. Fisk remarked that the cases he has seen do not lead him to think that elevation is injurious to goitre.

Dr. P. H. Kretzschmar, of Brooklyn, read a paper on

HEALTH-RESORTS *versus* INSTITUTIONS FOR THE TREATMENT OF PULMONARY CONSUMPTION.

We are far behind Europe in this matter. We have not utilized our mineral springs as we could do, considering the number and value of those we have. He strongly advocates the advantages of sanitariums where a careful supervision can be had over the patients. He considered somewhat fully the *régime* adopted in various institutions and the imprudences indulged in at health-resorts.

Dr. Loomis said that he did not believe that health-resorts were of much benefit to consumptives unless they were under the care of a competent physician. All his patients that are sent to the Adirondacks are obliged to give themselves up entirely into the hands of their physicians.

Dr. Solly considered the regulation of the daily life of the patient as the most important part of the treatment, but opposes collecting a large number of patients together.

AMERICAN PHYSIOLOGICAL SOCIETY.

Tuesday, September 18th—First Day.

The meeting of the Society was called to order at noon by the President, Dr. Henry P. Bowditch, of Boston, Mass.

Dr. W. H. Howell, of Baltimore, read a paper entitled

THE ORIGIN AND REGENERATION OF RED BLOOD-CORPUSCLES.

The paper gave an account of experiments made chiefly upon the cat, the object of which was to trace the development of the red blood-corpuscles and the organs which take part in their manufacture, both in the fœtus and the adult. It was found that of the organs which successively take up the function of making red blood-corpuscles the first to take on this activity was the liver, the next the spleen, and the last the red marrow of the bones. At the third or fourth week after birth the liver and spleen no longer give evidence of producing red corpuscles, and from that time on, in the normal animal, the function is confined to the red marrow of the bones. It was found, however, in the adult cat, that the spleen could be made to resume this function at any time by bleeding the animal severely. Under these conditions, apparently, the marrow was no longer equal to the task of furnishing the new corpuscles, and the spleen also took part in the process. Experiments were made upon normal animals and upon animals which had been bled one or more times, with reference to the regeneration of the red corpuscles in the marrow of the adult. The methods used were the examination of the fresh marrow with methyl green, sections of the hardened marrow stained with hæmatoxylin, eosin, and saffrain, and also observations upon the living marrow, examined in the animal's own serum upon a warm stage. The conclusions reached were as follows: The nucleated red corpuscle of the marrow in the adult is derived from a colorless nucleated cell found in the marrow, and shows the same characteristics, with the exception that it contains no hæmoglobin. This cell multiplies by direct division, and hæmoglobin becomes developed in the cell-substance of its offspring, forming thus the nucleated red corpuscle. These are also capable of reduplication by indirect division as long as the nucleus shows a reticular structure, but when this is lost and the nucleus stains deeply and uniformly with methyl green, it is no longer capable of karyokinesis. Its nucleus is then extruded, and there is left a non-nucleated red corpuscle, which later becomes a bi-concave red corpuscle of the circulation. The chief point of the paper was the evidence brought forward to show that, in the transition from the nucleated red corpuscle to the non-nucleated form, the nucleus escapes bodily, and does not disappear within the cell by a process of disintegration. The hypothesis was made that possibly these escaped nuclei getting into the circulation give rise to the blood-plaques.

Dr. H. C. Wood called attention to the fact that in anæmia one finds hypertrophy of the bone-marrow, while, if the lack of red blood-corpuscles is dependent upon under-production, one would expect to find the marrow atrophied.

Dr. Howell replied that there might well be such a vast destruction of red blood-corpuscles at such times, that even the hypertrophied marrow is unable to supply the loss.

Dr. Wood said that in malaria the marrow was generally not hypertrophied.

Dr. William Welch stated that he was at Cohnheim's laboratory at the time that he was studying the condition of the marrow of the bones in anæmia. That he found nucleated blood-corpuscles in all forms of diseases in which anæmia was a prominent condition—in cancer, Bright's disease, phthisis, etc. When anæmia was very marked very many nucleated corpuscles were found.

Dr. Welch thought that at such times the marrow was stimulated to increased activity, but that it was unable to keep pace with the destruction of the red blood-corpuscles. In pernicious anæmia cells are found containing red corpuscles in all degrees of disintegration, and it is probable that they may be responsible for the loss of red corpuscles. The organisms found in malaria which resemble amœba superficially, are really quite different, and ought not to be confounded with them.

Dr. Hare suggested that it was possible that in the diseases mentioned the young cells were manufactured by the marrow, but failed to mature.

Dr. Bowditch urged the advisability of extending the research to the lower animals. The conditions which exist in the fœtus might well be found in adult fishes. He inquired of Dr. Howell whether he had obtained any facts concerning the length of life of the red corpuscles, and, obtaining a negative answer, suggested that the remnants left by the nucleus when it passed out of the cell might be used to distinguish the corpuscle, and be of aid in this study.

Dr. Howell said he had met with nucleated cells for a week after the animal had been bled.

Drs. Henry Sewall and Myra E. Pollard presented a communication entitled

THE RELATIONS OF DIAPHRAGMATIC AND COSTAL RESPIRATION, WITH PARTICULAR REFERENCE TO PHONATION,

which was read by Dr. H. N. Martin.

The paper consisted of two parts, the first of which discussed the relations existing between the different groups of respiratory muscles, and called attention to the fact that they are frequently employed in opposite phases of inspiration and expiration, a class of phenomena which was referred to as complementary movements of respiration.

The writers cited experiments on Indian, Chinese, and civilized women, to show that costal respiration is not, as is generally supposed, peculiar to women, but is the result of the tight clothing worn by most civilized women. The normal respiration of women differs but little from that of men who lead sedentary lives.

They stated that diaphragmatic respiration is most important during quiet when the blood is in the abdominal vessels, for by pressing on the abdominal contents, as it contracts, the diaphragm forces the blood and lymph out of the abdominal cavity toward the heart, and so greatly furthers the circulation. When the blood is in the muscles during violent exertion, costal respiration is most active, both because it favors the aspiration of the thorax, and because it enlarges the chest most, and so gives the needed supply of air.

They pointed out the value of diaphragmatic respiration in changing the air in the lower parts of the lung, and showed that movements of the bottom of the lung must aid in mixing the air throughout the air-passages.

Experiments with the spirometer proved that the vital capacity was greater by costal respiration, which corresponds with the fact that respiration is always costal when there is urgent need of air.

The writers lay great stress on the advantage to man, and more especially to the lower animals, of movements of the chest-wall, which will mix the air in the lungs when the glottis is closed. Coughing, sighing, sneezing, and laughing are complementary movements of respiration, rapid, extensive, and powerful, and they are probably of great use in mixing the inspired air. Complementary movements of the throat and flank of the frog when the glottis is closed have a similar importance.

The second part of the paper treated of

THE RELATION OF THE COMPLEMENTARY MOVEMENTS OF RESPIRATION TO VOCALIZATION.

The results already stated show that phonation by use of diaphragmatic respiration would most economically meet with the needs of the body. The power and quality of the voice depends not so much on the trembling of the vocal cords as on the sympathetic vibration of the air in the resonance chambers above and below the larynx. The function of the thorax as a resonance chamber seems, up to the present time, to have been disregarded, though of the greatest importance; for the chest even seems to have a selective resonance, so to speak, analogous to that manifested by the oral and nasal chambers. The experiments of the writers showed that the tension of the bounding walls of the chest influence the resonance, and that its fundamental note and overtones are altered by changes in the shape and size of the cavity. They found the ascent of the scale to be easier and the tones to be purer when the sound-producing air-current was driven by the contraction of the abdominal muscles and with a simultaneous inspiratory movement of the upper chest. A lower note could be reached, however, when the chest-muscles were the driving force and the diaphragm was progressively depressed.

By graphic methods the changes in the form of the chest and abdomen during quiet breathing and singing were studied. The results of these experiments cannot be well condensed. It was found that increase of the transverse section of the thorax and decrease of its vertical diameter elevated the pitch of its fundamental note, while the reverse conditions lowered it. Elevation of the chest during abdominal contraction is a real movement of costal inspiration, although the air is supplied from below rather than from above. The air is also drawn into the lower part of the chest when the diaphragm descends and the ribs collapse. Such movements favor the interchange of gases within the lung. A few experiments made to see whether during speaking a similar play of the diaphragm occurred, confirmed the conclusions already reached.

In conclusion, the writers state "that while the main vocal blast is supplied by the steady sweep of the diaphragm and the abdominal muscles, the accent which gives life to song and speech is accompanied and supported by a characteristic play of the chest and diaphragm, in which the rapid changes of the fundamental note of the great thoracic resonator adjust it anew for every note sent out from the vocal cords."

Dr. Bowditch expressed much interest in the complementary movements of respiration described by the writers. He said that, as far as he knew, there was great difference in the methods taught of managing the respiratory muscles in singing, and that this paper, and the exact methods of study which it ought to provoke, might well prove of the greatest service.

Dr. Martin expressed a doubt as to the effect which movements of the frog's throat could have over the interchange of gases within the lungs of the frog when the glottis was closed.

Dr. H. H. Donaldson, of Baltimore, then read a paper on

THE HISTOLOGICAL CHANGES PRODUCED IN GANGLION CELLS BY STIMULATION.

Dr. Donaldson said that, at his suggestion, Mr. C. F. Hodge, of the Johns Hopkins University, had undertaken a study of the spinal ganglia. As preliminary work, he teased the spinal ganglia of frogs, and in studying them found two cases where there were typical bipolar cells, such as are found in fish, besides cells with straight and spiral fibres, such as Beale has described, and cells with the ordinary T-process. There were found in addition many cases where the process of two cells united to form a single fibre corresponding to the stem of a T-process. Closely connected with this anatomical relation is the fact that there are from two to three times as many cells in the spinal ganglia as there are fibres in the posterior roots.

The special changes which are observed as the results of electrical stimulation of the ganglia, were obtained as follows:

The animals were all rendered reflex, curare or anæsthetics interfering with the reaction. In frogs, the proximal end of the cut ischiadic nerve, and in cats the proximal end of the nerves forming the brachial plexus, were stimulated electrically, and the ganglia belonging to these nerves examined; the stimulated ganglion on one side being compared with the symmetrical unstimulated ganglion.

It was found, when the cells were compared, that those belonging to the stimulated ganglia had smaller nuclei, the protoplasm was vacuolated and granular, and they stained more deeply. The shrinkage of the nucleus was from ten to thirty-three per cent. of its volume. That this is the direct result of stimulation is indicated by the fact that, in the case of one cat stimulated seven hours, it amounted to twenty-nine per cent.; while in another stimulated for one hour and forty minutes, a diminution of only twelve per cent. was found.

Dr. R. H. Chittenden, of New Haven, Conn., being absent, his paper was read by Dr. W. H. Howell,

ON THE PHYSIOLOGICAL ACTION OF URANIUM SALTS.

Dr. Chittenden's experiments were begun in the laboratory of physiological chemistry at Yale University, and they were addressed to ascertaining the physiological and toxical action of uranium salts. Results previously published had shown the writer that all the uranyl salts, with one or two exceptions, have a more or less marked inhibitory influence on amylolytic and proteolytic action. It was also found that uranyl nitrate, when 0.7 grain of the salt was given in divided doses, caused a rise of temperature and an increase in carbonic-acid excretion.

The object of the experiments described in this paper was to ascertain the effect of uranium salts on proteid metabolism; their toxic action and their influence on the production of glycosuria. The experiments were conducted with great care, and were fully described in the paper.

The collective results show that uranium is an irritant poison, and that it, like other metallic irritants, produces gastro-intestinal irritation of more or less intensity, resulting in most cases in a simple enteritis, but often becoming an acute catarrhal inflammation. As a poison it acts slowly, and one hundred and fifty milligrammes appears to act as vigorously as a gramme. In rabbits the first marked symptom is general weakness with loss of co-ordination, and occasional temporary paralysis of the locomotor muscles. Introduced into the stomach, it checks digestion. It increases proteid metabolism and the excretion of carbonic acid, and causes a rise of temperature. Its effect on nutrition is shown by rapid emaciation. The most marked lesion is seen in the kidney, where it produces acute parenchymatous nephritis. The large amount of albumen found in the urine shows how greatly the blood-vessels are involved. Small doses cause at first an increased quantity of urine, but toxic doses result in complete suppression. A short time after administration of the drug, more or less sugar is found in the urine; this generally does not come until after albumen has appeared. The production of glycosuria is a very characteristic symptom in uranium poisoning. The urine invariably contains large amounts of calcium oxalates, which also points to decided malnutrition and helps explain the marked emaciation so commonly seen. In cases where the poisoning became chronic, the nervous symptoms sometimes predominated, as was shown by loss of sight and power of co-ordination.

THE ASSOCIATION OF AMERICAN ANATOMISTS.

Monday, September 17th—First Day.

A meeting was held in the lecture-room of the Georgetown Medical College, on Monday, September 17th, for the purpose of organizing an Association of American Anatomists. Dr. Harrison Allen, of Philadelphia, was chosen temporary Chairman, and Dr. A. H. P. Leuf, of Philadelphia, temporary Secretary. The organization of the Association was effected, a constitution adopted, and the following permanent officers elected: *President*—Dr. Joseph Leidy, of Philadelphia. *Vice Presidents*—Dr. Frank Baker, of Washington; Dr. F. D. Weisse, of New York. *Secretary and Treasurer*—Dr. A. H. P. Leuf, of Philadelphia. *Executive Committee*—Dr. Harrison Allen, of Philadelphia; Dr. Burt G. Wilder, of Ithaca, N. Y.; Dr. W. B. Towles, of the University of Virginia; and the President and Secretary, *ex officio.*

Dr. Harrison Allen, of Philadelphia, read a paper on

A BIPARTITE CONDITION OF THE MALAR BONE IN THE NORTH AMERICAN INDIANS,

and exhibited three skulls showing this condition. He said that he had found this bipartite condition always present in Europeans, but had not before demonstrated it in the skulls of native American races.

Dr A. C. Bernays, of St. Louis, presented a paper, illustrated by drawings, entitled

THE DEVELOPMENT OF THE VENTRICULAR VALVES OF THE HEART AND OF THE WALLS OF THE VENTRICLES.

It was shown that the valves were solely the result of the growth of the endothelium in their first and youngest conformation. These were called the primary valves and were analogous in form and structure to the semilunar valves.

Later on these endocardial valves enter into a closer relation with the myocardium. The spongy muscular tissue which first constitutes the entire thickness of the walls of the ventricles grows into a close relation with the primary valves. These latter become smaller and cease to exercise their function, while the muscular tissue takes the place of the endocardial valves. By a change of the muscular tissue into tendinous chords and fibrous layers, the permanent or secondary valve is developed. The primary valves are found attached to the free edges of the full-grown valve in the shape of small nodules, which up to the present time were considered by many anatomists to be pathological formations. These nodules are the rudiments of the primary valves.

It was next shown that in the earliest stages, the ventricular walls of the heart were not supplied with blood from the pericardium, *i.e.*, by the coronary arteries. The nourishment of the walls of the heart originally takes place from within, the blood penetrating into the spongy heart-walls from within. As the outer layers of the walls of the ventricles become more solid, their nutrition cannot be carried on from within, and then the coronary vessels begin to spread from the transverse sulcus, over the surface of the myocardium, and to supply the latter with blood from without.

Finally, the very interesting point was demonstrated, that the primary heart cavity was not the homologon of the heart cavity as we find it in the adult. It was shown that this was due to the process of development of the secondary valves, by which means the primary heart cavity becomes very much enlarged by taking into its compass a large part of the original spongy wall of the ventricle. The author closed by explaining many heretofore imperfectly understood points in the anatomy of the heart, on the basis of the embryological facts above mentioned.

Dr. J. L. Wortman, in behalf of himself and Dr. H. ten Kate, presented a paper upon

THE HYOID BONES OF SOME ANCIENT PUEBLO INDIANS.

The study of the human hyoid arch, in its relation to anthropology, has been hitherto neglected, but that it affords characters of more than ordinary interest and importance in the matter of racial distinction the authors had been led to believe from the results of some recent observations which they had made. Anatomical authorities are by no means in accord in their descriptions of the hyoid bone, especially with reference to the time of life when its various elements unite or co-ossify into a more or less complete bony arch. A review of the works of the German anatomists brought out the fact that they were nearly in accord in the statement that the great cornua of the hyoid bone remain free even in old age. The French anatomists, on the other hand, assert that co ossification of the separate elements of this bone takes place at a comparatively early age. Supposing that the conclusions of these German and French authorities were based upon examinations of the subjects of their respective nationalities, the discrepancy can be accounted for only on the assumption that there is a racial difference in this respect. The English anatomists agree in the main with the French rather than with the German authorities.

The authors of the paper had made a study of a number of hyoid bones, the material consisting of a very complete series of ancient American-Indian skeletons from the Gila and Solado Valleys in Southwestern Arizona. In all they collected ninety-seven hyoid bones, taken from young, adult, old, and very old subjects. From the very old subjects, their great age being indicated by synostosis of the cranial sutures, absorption of the alveolar processes, and more obtuse angle of the lower jaw, there were thirteen bones, and of these union of the great cornua with the body was found in three, the co-ossification existing, however, only on the left side. If the statements of many anatomists can be accepted, the very high percentage of free hyoidean elements found in these ancient peoples (belonging to the pre-Columbian period) distinguishes them markedly from other races. If it is ultimately found that this condition of the hyoid is general in the North American Indians, as well as in some other races, it would be interesting to know in what way, if any, it is associated with language. Since the chief function of the hyoid is the support of the muscles of the tongue, one would be led to infer that in those races where rapid talking and much talking was the rule, the hyoidean elements would co-ossify early, while among those peoples who speak slowly, deliberately, and comparatively little, the hyoidean elements would co-ossify late in life, if at all. The complexity and modification of sounds depending largely upon the use of the tongue would also furnish sufficient reasons for early or late co-ossification.

Dr. Forbes had never seen a perfect union between the body and the greater cornua. A point which might have some possible bearing upon the discrepancy between German and French anatomists in regard to co-ossification of the elements of the hyoid arch was that the Germans are singers while the French are talkers.

Dr. Harrison Allen had noted variations in the cornua of the hyoid, the left horn often being longer than the right, sometimes even pressing against the pharynx.

Dr. Weisse said that the authors of the paper had had the opportunity of examining an unusually large number of specimens. He did not believe that the statements of the individual authorities quoted were founded upon the results of a study of so many hyoid bones. It was a mistake to prepare skeletons without the hyoid bone, yet this was almost invariably done. It would be interesting to compare the condition of the joints of the hyoid bone with those of the costo-chondral articulations.

Dr. Frank Baker said that his experience had led him to believe that the greater cornua were almost always co-ossified in aged negroes.

Dr. Wortman said that the question which remained to be solved was whether there was a difference in different races in regard to the co-ossification of the hyoid elements, or whether the anatomists of one or the other nation were wrong. Do the elements of the hyoid bone co-ossify in old age, or do they not? The speaker was not yet in position to answer this positively, for in the specimens examined by the authors of the paper there were skeletal anomalies leading to the suspicion that the instances noted of co-ossification were themselves anomalies. The questions raised in the paper were interesting to philologists as well as to anthropologists. The speaker hoped to be able to pursue his studies in this direction further.

Dr. A. H. P. Leuf, of Philadelphia, reported a case of

ALMOST TOTAL NON-DECUSSATION OF THE ANTERIOR PYRAMIDS OF THE HUMAN BRAIN.

It was a case of dextral cortical hemorrhage and resulting dextral hemiplegia. Death resulted in a few days, and the conditions of the brain were noted at the autopsy. Only a very slight decussation was perceptible upon wide separation of the anterior median fissure at the bottom of the medulla. The speaker simply desired to put the case on record with those of Brown-Séquard.

Dr. Leuf then read a second paper, and showed nearly one hundred and fifty

DIAGRAMS OF DIFFERENT AREAS OF THE CORTEX

of thirty-seven hemispheres, and also two tables showing the variations from the supposed type of annectant gyri. The Sylvian fissure was little subject to change, only one slight anomaly having been observed in thirty-seven. The fissure of Rolando was often found extending into the great longitudinal fissure and sometimes into it and the Sylvian fissure, but never into the Sylvian fissure alone. The occipito parietal fissure was abnormally long in a number of instances; and in one brain fully one inch deep in either hemisphere. Particular attention was called to the present acceptation of the topography of the parietal lobe. The drawings showed that only a very small percentage had the intraparietal sulcus, but the general rule was an arrangement similar to that of the frontal lobe, *i. e.*, a transverse parietal sulcus running parallel with the Rolandic fissure and a superior and an inferior parietal sulcus, the latter arching over the posterior ascending end of the fissure of Sylvius in the same way that the inferior frontal does over the anterior arm of the Sylvian fissure. The table of annectant gyri also showed a remarkable constancy in deviating from the accepted type, except the first, which was typical most of the time. The study of the brains represented by the diagrams had not been concluded; in fact, it was only begun, and the paper was preliminary to one that was to follow at the next annual meeting.

Dr. George McClellan suggested that photography could be made useful at autopsies in recording the cerebral topography, but Dr. Leuf objected that it would be more expensive and require a longer time than by his method, which consisted in carrying around diagrams of the brain-outline with the three primary fissures *in situ.* These could be modified on the spot while the autopsy was in progress, and the sulci added as required. Similar diagrams for the other areas, like the island of Reil and orbital surface, should also be on hand.

GENERAL SESSION.

Wednesday, September 19th—Second Day.

Dr. Charles K. Mills, of Philadelphia, opened the discussion with a paper (see page 312) on

CEREBRAL LOCALIZATION IN ITS PRACTICAL RELATIONS.

Dr. Roswell Park, of Buffalo, continued the discussion with a paper (see page 310) on

CEREBRAL LOCALIZATION IN ITS SURGICAL RELATIONS.

Dr. David Ferrier said that he took special pride and satisfaction in the fact that this subject had been assigned such an important place in this great gathering of the profession in this country. He had long cherished the idea that the determination of the functions of the brain would in time lead to the successful treatment by surgery of some of the most distressing ailments of our fellow-creatures. When he first broached the possibility of this he received little encouragement, but now cerebral surgery had become a distinct branch of the art of surgery. There is a great future for cerebral surgery. We must, however, be cautious lest we do things which our better judgment and larger experience may not consider altogether justifiable. While there have been many successes, yet there had been some failures. He alluded more particularly to cases of Jacksonian epilepsy. The discharging lesion had been removed in many of these cases without permanent cure. Care must also be taken that in curing one affection we do not induce a greater evil. There is yet much to be learned in regard to the functions of the brain, and in regard to the diagnosis of cerebral disease.

Mr. Victor Horsley described briefly the results of his experiments upon the motor region. He believed that here three functions were clearly represented: 1, the representation of the so-called tactile sense; 2, representation of the so-called motor sense; and 3, the great representation of movement. It is found that, morphologically, the large cells in the fourth layer are concerned in the representation of movement, and he could not understand that we should not allot to the small cells in the upper layer the representation of sensation. He had divided the motor region into minute areas, and studied the effect of irritation of these separate areas. He had found that the representation for any part was not limited to one minute portion of the brain, but that there was a focal point where it was strongest, and then it graduated as we passed outward In his different experiments he had met with certain points of difference. These were attributable to the employment of different species of monkeys. He now uses only the bonnet monkey, and, for all practical surgical purposes, the results are perfectly applicable to man.

Experiments performed during the past summer had enabled him to prove that the convulsions of so-called Jacksonian epilepsy were solely due to the cortex, and not at all dependent upon the spinal cord or upon the bulbar spinal system.

In cerebral surgery we practise simply the ordinary rules of surgery. In cutting out the bone, a one-inch trephine should be first used to determine the thickness of the skull. The surgical engine may then be used to cut almost through the portion of bone to be removed. The bone may then be removed with strong forceps. The dura mater should be first separated. If nothing is found and the operation is an exploratory one, the dura mater should be opened. If we propose to use faradism for the recognition of certain areas, it is important that the ordinary antiseptic solutions should not be applied to the brain, for they tend to prevent the response to the electric current.

Parenchymatous hemorrhage may be prevented by the use of morphia. The ligature must be always applied if possible; never pack the wound. In regard to the recurrence of epilepsy in operations performed for the relief of this affection, he considered that the recurrence was due to incomplete operation. In those cases in which he had removed, to his own satisfaction, not only the lesion, but the surrounding brain-substance for at least one centimetre, there had been no return.

He agreed with the previous speaker, that there was danger of doing too much in certain cases.

Dr. M. Allen Starr, of New York, then discussed the question (see p. 313) of

CEREBRAL LOCALIZATION IN REFERENCE TO APHASIA.

Dr. W. W. Keen, of Philadelphia, compared the head cavity to the other cavities of the body. The brain may be considered to be made up of a number of viscera, having separate and distinct functions, and each of which has its own physical signs and symptoms. While we should be careful not to do too much, we should not err in the other direction. The timidity with which the surgeon formerly approached the abdominal cavity was remarkable; the boldness with which we now attack the lesions of this cavity is almost appalling, and the success equally gratifying. This history will be repeated in the case of the brain.

Dr. Robert F. Weir, of New York, had, since 1883, operated in ten cases of brain surgery. Three times for tumor; three for abscess; twice for hemorrhage into the cerebrum where there was no external injury to indicate its locality; once for epilepsy; and once for cerebral pain. In the last case the tumor was so deep that there was nothing to indicate its presence after the brain was exposed. It was one and a half inch below the surface. The growth proved to be a sarcoma. The operation was done last November. The patient is still living, but there are signs of a recurrence of the growth.

Bergmann says that operation should not be performed when the patient is in a coma, or when the tumor is large. Dr. Keen has removed a tumor weighing over four ounces, with recovery, and Mr. Horsley has removed with success a tumor weighing four and a half ounces from a patient in a state of coma. Sometimes, although no tumor is found, the operation causes disappearance of the symptoms by relieving the pressure. This might be applicable in apoplectic hemorrhage where the clot could not be removed.

He said he had gone over the brain to find what parts are accessible to surgical interference. We are able to strip up the longitudinal and lateral sinuses to a considerable extent. The dura mater may be separated for a considerable distance from the bone. He had been able to raise up the frontal lobes so as to see the anterior clinoid processes, and he had been able to feel the foramen magnum.

ASSOCIATION OF AMERICAN PHYSICIANS.

Wednesday, September 19th—Second Day.

Dr. Robert T. Edes, of Washington, read a paper on

THE ABSOLUTE AND RELATIVE VALUE OF ALBUMIN AND CASTS, AND OF RENAL INADEQUACY, IN THE DIAGNOSIS AND PROGNOSIS OF DISEASES OF THE KIDNEY.

The term albuminuria has held a place in medical nomenclature, until comparatively recently, synonymous with Bright's disease. The writer referred to recent and most extensive observations on albuminuria. The varieties of albumin were then considered. Dr. Munn's observations were cited to show that many cases of intermittent albuminuria, when followed out carefully, are found to have developed Bright's disease. Four of Dr. Munn's sixty-nine cases died within three years. Many such are met with in business men of middle-life, and of overweight. The great diagnostic significance of casts, and their variety, was next touched upon. A question of great interest is, whether we can detect a pathological condition of the kidney in the diminution of any of the constituents of the urine. Dr. Noyes' paper in the *American Journal of the Medical Sciences* is of interest in this connection. Long after the presence of kidney disease is established, the daily quantity of urea excreted may be far above the physiological limit. A very badly damaged kidney may, in fact, get rid of a large quantity of urea. Cases in illustration of the fact that the excretion of urea and other solids does not necessarily fall below the physiological limit. The question of food is here of the greatest importance. In conclusion, numerous tables of statistics, bearing upon the question of albuminuria and the secretion of urea, were presented.

Dr. Janeway followed with a paper on the same subject. If we consider first the diagnostic importance of albumin, we are forced to state that, from various circumstances, it is apt to be overrated, and, taken by itself, to be by its presence, or its absence, extremely misleading. Particularly is this true of examinations of single samples of urine, or even of one, or of several days' urine, provided such days are not close together, or, on the other hand, sufficiently separate. Cyclical, or intermittent, or functional albuminuria is the most interesting of the possibilities. In these cases, the albumin being generally present in the daytime and absent at night, is apt to be overlooked by those who examine only the night and morning urine, and detected by those who examine urine passed in their presence, as at the time of an office visit, or in examination for life insurance, or by those making a study of the urine of a large number of individuals. Mistakes are especially liable to occur between this form and those cases of chronic diffuse nephritis which are attended by the intermittent appearance of albumin. An occasional occurrence of a hyaline cast cannot be considered as proof of chronic renal disease, as against cyclic albuminuria. Such casts the writer has seen occur in two cases at considerable intervals, the urine not having shown them at a number of previous nor subsequent examinations. So, too, while ordinarily the percentage of albumin is small, yet in some instances it is large, in one case under the writer's observation reaching twenty-five per cent. by bulk, moist. Neither do the age limits usually set always hold. In one instance functional albuminuria was observed in a child of five years. The varieties of casts were touched upon, and the liabilities to error in microscopical examination pointed out. The paper abounded in brief references to cases illustrative of points made.

Dr. James Tyson, of Philadelphia, presented a communication entitled,

THE RELATION OF ALBUMINURIA TO LIFE INSURANCE.

No system of life insurance is perfect which does not include those who are apparently healthy and those who are not. Certain applicants presenting themselves for examination for life insurance are wrongfully rejected, because of the presence of albumin in the urine. After this introduction the writer went on to mention the different terms used to indicate the particular forms of albuminuria under consideration, and gave his decided preference to the term "functional." Two illustrative cases, which he considers "safe risks" for life insurance companies, were presented. One of the histories was that of a young man, who had been under the observation of many physicians, among them Dr. Stewart, of Edinburgh, the various observations extending over several years. The other, a less favorable family history, and an older man. In both there was final disappearance of albumin. Dr. Tyson went on to sketch the conditions which if observed by competent and well-trained observers, if it were always possible to get such, would enable the companies to save these risks. These are: 1. The applicant must in all other respects present the signs of good health. 2. The albuminuria must be unaccompanied by tube-casts, however perfect may be the health in other respects; albumin and tube-casts conjoined always meaning structural changes. 3. The specific gravity of the urine, that is, the "real" specific gravity (that of the quantity for the twenty-four hours), should not be lower than 1.015–1.025. Great care must be taken to secure the "real" specific gravity, as it would be unfair, to reject the candidate on account of the specific gravity of a single specimen. 4. The signs of hypertrophy of the left ventricle, and the existence of high vascular tension associated with albumin, would exclude the candidate. 5. The age of the applicant is a highly important consideration. It is doubtful whether any person forty years of age with functional albuminuria should be accepted, unless at least he has been long under the observation of a competent and conscientious examiner. 6. The presence of true gout in any case should decide against the person, because gout is always, sooner or later, followed by interstitial nephritis. Finally, retinal changes such as are associated with nephritis, should exclude the applicant. In conclusion, the writer does not claim, of course, that we are in a position to put these conditions in operation, but believes, as we are enabled gradually to secure the desired education and training in medical examiners, the applications of these conditions will be possible. The absence of the albumin from the urine passed on rising in the morning is an important aid in the diagnosis of functional albuminuria, but not an essential one.

Dr. Jacobi opened the discussion on the papers by remarking that, to criticise three papers of such excellence would be impossible, but he would remind the members of the Association of an anatomical fact, which is an explanation of the presence of albumin in the urine of children. There is, at the very beginning of their existence, a discrepancy between the growth of the renal arteries and the growth of the tissue of the kidney. Besides, the capillaries of the kidneys do not permit of the passage of the same quantity of water through them as in adults. Thus there is disproportion.

Dr. Pye-Smith, of London, preferred the term "functional" to any of the other names given to this condition. At the present day there is no physiological ground for believing that the healthy kidney secretes albumin at all. With respect to the tests for albumin, he stated that he had come back to the old test of heat and nitric acid, in suitable proportions. Many of the tests are too delicate and of no practical importance. In insurance cases it does not answer to be too minute or individual. The question of life is not as regards A, B, or C, but whether a hundred persons are likely to live beyond the average period.

Dr. A. L. Loomis, of New York, followed with a paper on

THE CARDIAC CHANGES IN CHRONIC BRIGHT'S DISEASE.

Pathological processes become physiological in that they tend to the preservation of health and the prolongation of life. So long as full nutrition is maintained in the heart, it meets every obstacle to its action with added force. Dr. Loomis then went on to consider that it is a failing and a hypertrophied heart which is to be found in Bright's disease, as in other diseases. Authorities discuss a hypertrophied heart as though of the utmost importance, and make little or no reference to cardiac degeneration in its relation to the cardio-vascular changes in chronic Bright's disease. The writer then reviewed the literature of the subject and the different theories advanced in regard to the cardiac and vascular changes in Bright's disease. He then briefly stated Cohnheim's theory, namely, that the circulation in the kidney, as in all other glands, varies with the demand upon their functional activity. Circulation through the kidney varies directly with the proportion of the parenchymatous elements of the kidney and the excrementitious elements in the blood. Any diminution in the glandular tissue of the kidney at once raises the ratio between the excrementitious materials and the functional powers of the kidney. As a result, when the renal functioning power is lessened in connection with retention of excrementitious materials, the systemic forces generally are projected upon the kidney, in order that the total elimination may remain undiminished.

We thus have two widely different conditions tending to produce arterial tension—conditions which may act singly or conjointly—and affording a rational explanation of the varying amount of cardiac hypertrophy found in apparently similar renal conditions. *First*, a general and primary arterial sclerosis to which both the cardiac and renal changes are secondary; and, *second*, arterial as well as cardiac hypertrophy, which are compensatory and conservative as is cardiac hypertrophy in aortic lesions.

In summing up authorities, while most of the theories as well as clinical evidence thus adduced seem to be directed to establishing a cause for the arterial change and increased tension, it was claimed that many of the facts presented support this proposition, that degeneration of the heart-walls with dilatation of the heart-cavities are the most frequent, and perhaps the characteristic, cardiac changes in chronic Bright's disease. He then presented observations made in a series of cases, typical of the different varieties of kidney and cardiac changes which are found associated in chronic Bright's disease. In connection with these he presented tables in which were arranged, in tabulated form, the renal, cardiac, and vascular changes which were found at the autopsies of forty cases of chronic Bright's disease. In a general review of the cases presented, he reached the following conclusions: As a rule, the more extensive the obliterating changes in the renal arterioles, the greater the degree of cardiac hypertrophy. In two cases where the cardiac hypertrophy was greatest, the only change found in the kidneys was obliterating arteritis in the arterioles. In other varieties of Bright's disease the heart-changes seem to be directly dependent upon the renal disease, or rather upon the toxæmia and faulty nutrition which result from them. In all cases of chronic Bright's disease increased arterial tension and compensatory hypertrophy are present some time during their course. But when the time is reached at which the renal symptoms clearly establish an interference with the function of the kidney, a feeble heart-action and diminished arterial tension will indicate degenerative cardiac changes. The table gave no evidence of acute endocarditis, secondary to renal disease. But chronic endocarditis was present in seven cases. Where a systolic murmur was heard during life, accompanying sudden cardiac dilatation, the autopsy gave no evidence of mitral disease. That rheumatic valvular disease may remain latent for many years, but when Bright's disease is developed in such cases heart insufficiency is immediately developed. His cases gave no evidence that valvular lesions occurred secondary to kidney disease. He presented the statistics of Bellevue and Roosevelt Hospitals, showing that in a total of 164 cases, 43 were complicated by Bright's disease secondary to the valvular disease. The result of the studies seems to indicate that the cardiac changes in chronic Bright's disease have a wide range of variation, and that we cannot predict with certainty the exact nature of the changes which may be present in any given case, except that possibly they are degenerative, and that sooner or later a condition of heart-failure will be reached which may fairly be designated as a Bright's heart. The more marked these are in any case, the more unfavorable the prognosis. We must, as it seems to me, regard Bright's disease as a constitutional disease, in which the repair and waste in all the tissues of the body are imperfectly carried on, and in one way or another the kidney changes are expressive of other visceral and arterial changes, which, combined with the kidney lesion, make up the clinical and pathological history of the disease.

Dr. Delafield, in discussing the paper, objected to two of the propositions advanced by Dr. Loomis, as counter to his experience: 1st, the proposition that cardiac hypertrophy is often developed without any change in the kidney, except in its arterioles; 2d, that the morbid changes in the glandular structure of the kidney are usually associated with changes in the cardiac walls.

Dr. Peabody spoke of the frequency with which the heart is not hypertrophied in well-marked cases of chronic diffuse nephritis. His remarks were based upon a study of two thousand consecutive autopsies performed at the New York Hospital. Perhaps in thirty per cent. of the cases no hypertrophy of the heart had been noticed.

Dr. Samuel C. Chew, of Baltimore, Md., followed with a paper on

THE RELATION BETWEEN CHRONIC INTERSTITIAL NEPHRITIS AND ANGINA PECTORIS.

After stating that there was no systematic account of the relations between the diseases to be found in any of the writers on the subject, he proceeded to consider the question chiefly from a clinical point of view.

Dr. Da Costa, of Philadelphia, Pa., presented a paper on

THE TREATMENT OF VALVULAR AFFECTIONS OF THE HEART.

He began with a reference to the prevailing ideas on the treatment of these affections. The presence of a valvular affection is not the key-note to be taken. The indications on which the true treatment should be based are: 1, The state of the heart-muscle and heart-cavities; 2, the rhythm of the heart; 3, the condition of the arteries and veins of the body; 4, probable length of disease; 5, the general health of the patient; 6, the secondary results of cardiac affection. The writer gave detailed statements in regard to the medicinal treatment of the various forms of heart complaint. The question of the causes of valve disease was considered. The futility of treating valvular disease, the result of rheumatism, after the acute stage of the fever had passed, was pointed out. The treatment of atheromatous disease was also unsuccessful. There is one form of disease in which the happiest results are obtained in treatment, namely, that form called by the author functional valvular disease. Of Oertel's method of treatment he has had no experience. He presented two cases to show how long and how continuously some may take nitro-glycerine. In conclusion, he called attention to the necessity of making periodical examinations of patients affected with heart disease.

Dr. G. Baumgarten, of St. Louis, Mo., read a paper on the

DISTURBANCES OF THE HEART-RHYTHM WITH REFERENCE TO THEIR CAUSATION AND THEIR VALUE IN DIAGNOSIS.

By itself, the condition of irregularity of the heart-rhythm may be considered to be of no great significance, but it is far otherwise when taken in connection with other things. It is desirable to group cases according to the forms of irregularity. These are: 1, mere fluctuation variations; 2, variations in frequency as well as in amplitude; 3, comprises all cases of intermittent, deficient, alternating, and bigeminous rhythm. The condition producing arhythmia of the heart are: 1, affection of cardiac centres in the medulla; 2, reflex influences; 3, the action of drugs on the nervous apparatus of the heart; 4, changes in the heart itself (this class constitutes the majority of the cases); 5, deficient blood-supply; 6, dilatation from heart strain. The condition is more likely to arise in insufficiency than in stenosis of the valve. In sclerosis of the coronary arteries we also have a condition producing a-rhythmia. In conclusion, the writer briefly touched upon the diagnostic value of the various forms of a-rhythmia.

Dr. James K. Thacher read the final paper of the meeting, on "The Treatment of Valvular Affections of the Heart."

AMERICAN SURGICAL ASSOCIATION.

WEDNESDAY, SEPTEMBER 19TH—SECOND DAY.

Dr. Hunter McGuire, of Richmond, Va., read a paper on

THE FORMATION OF AN ARTIFICIAL URETHRA FOR PROSTATIC OBSTRUCTION.

It has been my lot to meet with a number of cases of hypertrophy of the prostate gland, which produce more or less obstruction to the passage of urine. These are conveniently divided into three classes.

1. Cases where the obstruction was due to temporary congestion of an already enlarged gland, which yielded to the ordinary treatment and did not return.
2. A class of cases when the obstruction to the passage of urine was permanent but not great. Attention to the general health, the occasional introduction of the catheter and washing out the bladder were all that the cases required. These cases are, however, never free from danger from exposure, etc., and gradual enlargement may go on and bring about the condition met with in the third class.
3. In these cases the obstruction is great and fixed; micturition is frequent and difficult, perhaps impossible without the aid of the catheter. The introduction of the instrument grows more and more difficult. Offensive residual urine is always present, and the general health suffers greatly. Cystitis, localized or general, is a painful and pronounced symptom. Violent tenesmus of the bladder, provoked by the obstruction, injures the vesical ends of the ureters, possibly a reflux of stale urine is driven into these canals, and ureteritis follows, then pyelitis and pyelonephrosis, from which the patient dies.

The paper was devoted to a consideration of surgical interference in this third class of cases.

In one of the cases of stricture in a man aged sixty-five, the patient had, two years before coming under observation, a second cause of obstruction. A well-organized stricture was found in membranous portion of urethra. Prostate was enlarged, more marked on the left side. Urine showed no evidence of renal disease. An oxalate calculus, three-fourths of an inch in diameter, was also recognized. The high operation for stone was performed. The bladder-walls were found thick, and unyielding, and contracted. The left side of the gland jutted into the bladder one and one-half inches further than the right side. The middle lobe was of the size of the thumb, and almost completely closed the urethra. It was decided to retain a fistulous opening through which urination could take place. This tract was two and one-half inches long, and extended upward and forward. In its passive state it was closed by the pressure of the parts through which it passed. When the bladder became full and contracted, the urine was forced through the fistulous tract. He can now retain water for two or three hours, and has voluntary power both to retain and expel urine.

Case II. was a man aged sixty-nine, who had been cut for stone in 1881. In 1883 I found the prostate enlarged and cystitis present. He was given a gum catheter, and shown how to use it. In 1886 electrolysis was employed without success in trying to reduce the size of the prostate. July 4, 1888, an operation similar to that performed in the first case was done with equally good results. At times he is able to retain urine for six hours. He never has any desire to empty the bladder, no matter how full the organ is.

Dr. John H. Packard, of Philadelphia, read a paper on

SUPRA-PUBIC CYSTOTOMY.

The present paper was supplementary to one on the same subject read by Dr. Packard at the last meeting, and was intended to correct an accidental omission of the views of Sir Henry Thompson. These were now considered, extensive quotations from the works of this author being given. Two cases were reported, in one of which the operation was performed for the removal of a portion of a silver catheter broken off in the bladder; and in the other, for the removal of a piece of rubber catheter, said to have been broken off several months previously. In this case, a stone weighing five hundred and seventy-one grains was removed, in the interior of which was found the *foreign body*.

Dr. S. W. Gross, of Philadelphia, thought that Dr. McGuire was to be congratulated on having introduced a new operation, based upon the mechanism of the bladder, and the physiology of micturition—the formation of an artificial urethra in a new position. The various operations which had been performed for the relief of prostatic obstruction were next referred to, the operations of Harrison, Mercier, Bartinini, and McGill being considered.

Dr. William T. Briggs, of Nashville, thought that perhaps in the cases reported by Dr. McGuire, a better result might have been obtained by lateral lithotomy, provided the stone were not too large to be removed by that route, for he had noted that after incision into the prostate, the gland diminished in size.

Mr. Reginald Harrison, of Liverpool, said that there are two general methods of relieving obstruction due to enlarged prostate, one by attacking the gland through the bladder, and the other through the perineum. In his operation he makes a median or lateral incision through the perineum according to circumstances. The obstructing prostate is next divided with considerable freedom, and a drainage-tube of considerable size introduced. From this operation he gets good results. Perineal lithotomy is preferable to the supra-pubic operation, because the lateral incision gives sufficient room for all manipulations. It gives an ample opening for the removal of a stone of considerable dimensions. It also permits of the more or less permanent drainage which these cases require. He had also, through a perineal opening, used the perineal lithotrite with success. All methods of operation should be remembered, and each employed in those cases where it seems indicated.

Professor Thomas Annandale, of Edinburgh, had come to the conclusion that if an operation is to be performed for the relief of prostatic obstruction, the perineal operation is the best. This allows of examination of the bladder, permits drainage, and probably causes a diminution of the hypertrophy. It enables you to occasionally remove a portion of the enlarged prostate when this assumes a pedunculated form. The speaker exhibited a rubber tube which he had found useful in cases of Harrison's operation when a permanent tube is required.

Dr. A. Vander Veer, of Albany, said that the testimony presented in his paper last year was in favor of the perineal opening so far as drainage was concerned. He had employed Harrison's operation in a number of cases and the results had been such as to impress him favorably.

Mr. Arthur Durham, of London, emphatically endorsed what had been said in regard to operation of stone, that no one operation is applicable to all cases. It is a great mistake to be men of one method, especially in surgery. When we hear a man say that he treats all his cases of fracture in such a way, all his cases of stone in such a way, and all his cases of prostatic disease in such a way, we may be sure that such a man has a very small practice and experience or else is a very great fool. In cases in which stone in the bladder is complicated with enlarged prostate, the perineal incision seems to me to be better than the supra-pubic.

PROFESSOR HINGSTON, of Montreal, believed that the supra-pubic operation was one to be performed only in exceptional cases. These he classified as follows: 1. In those cases of stricture in which the obstruction cannot be overcome in time to relieve the patient of great suffering. 2. In cases of prostatic obstruction. 3. In cases of tumors of the bladder which would interfere with the lateral operation. 4. In cases where the stone is too hard or too large to be removed either by lithotrity or by lateral lithotomy. He had himself removed, without injury to the soft parts, a stone weighing five ounces and five drachms.

Sir WILLIAM MACCORMAC, of London, had performed the operation of supra-cystotomy occ sionally. He had never seen any untoward consequences, and the operation seems to be devoid of all risk. He did not consider that drainage was necessary after this operation. The bladder empties itself freely and the drainage-tube is a source of irritation.

THE PRESIDENT, DR. D. HAYES AGNEW, being called upon, said the ground had been so thoroughly covered that there was little to be added. He agreed with those who held that no single operation was applicable to all cases. The supra-pubic operation may be appropriate in certain cases, while in others the perineal operation is the proper one. In order to avoid the unpleasant consequences which occasionally follow the perineal operation in children, where the prostate is small, I avoid the introduction of the finger into the bladder, and remove the stone with forceps not much larger than the staff.

While there may be no danger in the supra-pubic operation in skilled hands, yet with the inexperienced operator there will be risk of opening the peritoneal cavity. He thought that a number of cases had been reported of rupture of the bladder following injection of the organ after dilatation of the rectum with the rubber-bag.

A paper entitled, "Forty Years of Chloroform and Ether in Louisville, Ky.," by DR. D. W. YANDELL, of Louisville, Ky., was read by title.

The following are the officers of the Association for the following year: *President*, Dr. D. W. Cheever, of Boston; *Vice-Presidents*, Dr. T. W. Richardson, of New Orleans, and Dr. John B. Roberts, of Philadelphia; *Secretary*, Dr. J. R. Weist, Richmond, Ind.; *Treasurer*, Dr. P. S. Conner, of Cincinnati; *Recorder*, Dr. J. Ewing Mears, of Philadelphia; *Additional Members of Council*, Dr. W. F. Peck, of Davenport, and Dr. S. W. Gross, of Philadelphia.

The next meeting to be held beginning the second Tuesday in May, 1889, at Washington. Chairman of Committee of Arrangements, Dr. J. S. Billings; Member of Committee of Arrangements, Dr. J. Ford Thompson, of Washington.

DR. WILLIAM T. BULL, of New York, presented a communication on

THE SURGICAL MANAGEMENT OF TYPHLITIS AND PERITYPHLITIS.

A brief report of the cases operated upon was given and the following conclusions presented:

Our present knowledge justifies the statement that both the cæcum and appendix may be the starting point of an inflammation spreading to the peritoneum or to the peritoneum and cellular tissue of the iliac fossa, constituting a complicated lesion which, for convenience' sake, we may call "perityphlitis."

This may be in its clinical course resolving or suppurative, each marked by definite symptoms in some cases; in others difficult to recognize.

Needle exploration is a justifiable and desirable method of diagnosis, though attended by some risks. These may be reduced to a minimum if care be taken to reserve the practice for cases where the symptoms have lasted several days and where a distinct indication-"tumor" can be made out.

Suppurative perityphlitis may be a spreading or limited (circumscribed) perityphlitis. Both begin with the same set of symptoms, and it is important to discriminate between them in the first twenty-four or forty-eight hours, or even on the third day.

The presence of any of the local or constitutional signs of general peritonitis, justifies the diagnosis of a spreading or generalization, and calls for the performance of laparotomy and the repair of the lesions found.

The absence of these signs, or their strict localization, warrants delay of a varying length. Any time after a week the abscess may be opened by an incision which must reach the pus, whether it be extra- or intra-peritoneal.

In doubtful cases the risk of the operation is less than the risk of the disease.

The propriety of exploring and removing the appendix in recurring cases must still remain *sub judice*.

DR. J. EWING MEARS, of Philadelphia, read a paper on

THE PROPRIETY OF SURGICAL INTERFERENCE IN PERFORATING TYPHOID ULCER.

The present state of our knowledge and our largely accumulated experience, have enabled us to define with a degree of exactness the limits of surgical interference in certain affections of the abdominal organs. The researches of Senn have shown that complete extirpation of the pancreas is invariably followed by death, while partial excision is a feasible operation. We are also able to define the limits of operations in affections of the spleen and kidneys. We may venture to approach the discussion of operative interference in perforating typhoid ulcer with the feeling that here we may be compelled to define a limit to the employment of surgical measures, not without regret at our inability to overcome the barriers which oppose success, but with a desire to maintain always the good repute of surgical science and art.

A clear distinction must be made between the widely different conditions which precede and follow perforation in typhoid ulcer and in ulcerations of the intestinal canal due to other causes. In typhoid fever, in addition to the intestinal lesions, there is a general degenerative process involving all the important organs. In traumatism the general condition of the patient may be good. In inflammatory conditions, while the general system may be profoundly impressed, the lesion may be regarded as local in its nature. In diseases of a chronic character, the system has accommodated itself to the impression made by the morbid affection, and the degenerative changes which may occur are not usually general in character.

A careful search of current medical literature reveals but four cases of surgical interference in perforating typhoid ulcer, in all of which a fatal result occurred. The reports of these four cases were given in detail.

The following propositions and suggestions were offered:

1. Surgical interference is not justifiable and should not be instituted in cases of typhoid fever, in which perforation occurs when the infection process is at its height.

2. In mild cases of the disease in which the pyrexia has not been of high grade, and in which perforation occurs at the end of the third week, or later, when the stage of convalescence is fully pronounced, laparotomy may be performed. Surgical interference in cases of this character is advocated with the hope that, if the method of operation suggested by Lücke—laparotomy

with the creation of an artificial anus—be adhered to, success may be attained.

3. Rapidity of operation will be an essential factor in the achievement of success—through which prolonged exposure of the cavity will be avoided and shock greatly lessened.

Dr. B. A. Watson, of Jersey City, said that in cases where perforation has occurred, the sooner operation is performed the better. He considered that it is safer to make an exploratory incision than to use the needle.

In regard to the paper of Dr. Mears, it covered the ground completely. In those severe cases of typhoid fever where perforation occurs and life is about ebbing away, it would be folly to resort to operation, but in mild cases where perforation occurs the operation should be done early.

Dr. R. B. Bontecou, of Troy, N. Y., had performed the operation in one case of perforation in the third week of typhoid fever; the patient, however, died. He thought that it would succeed in some cases, as in those in which perforation follows imprudence during convalescence.

Dr. O. B. Nancrede, of Philadelphia, thought that the proper place for incision was two inches to the right of the anterior superior iliac spine. He had operated in two cases; in the first there was no pus, but three or four perforations were found; this patient recovered. The second case was that of a child operated on four days ago. The patient had done well since the operation.

Dr. Gordon, of Portland, referred to the absence of symptoms met with in these cases, and cited a case in which the symptoms were not distinct, but in which a pint of pus was found, with general peritonitis and perforation of the appendix. In this case an incision on the right side would not have reached the pus.

Dr. D. W. Cheever, of Boston, reported a case in which strangulation of an old hernia occurred in the third week of typhoid fever, the patient not being seriously ill. A simple incision through the sac was made and the bowel replaced, but the patient did not rally from the shock.

Dr. W. H. Carmalt, of New Haven, referred to a case which had come under his observation with symptoms of internal obstruction. Operation was suggested but refused. The patient died, and the autopsy showed perforation of the appendix and extravasation of fecal matter. The appendix was attached deep down in the pelvis, where there was a small collection of pus. This was reached only with the greatest difficulty, and after turning the intestine out of the abdominal cavity. This abscess was inaccessible to any of the ordinary methods of operation. The careful exploration of the rectum in this case failed to reveal any sign of disease.

Dr. Joseph Ransohoff, of Cincinnati, thought that the general impression that perityphlitis is necessarily associated with perforation, was an error. There are two classes of cases. In one there is a distinct tumor, which in these early operation is by no means indicated. In these cases adhesions have formed and there is a natural tendency to cure. In these cases the abscess finally perforates the abdominal wall, or is relieved by incision. The second class is that in which the symptoms of perforation develop suddenly. In these cases the incision should be median.

Dr. T. F. Prewitt, of St. Louis, thought that there must be many cases of inflammation in the region of the cæcum that never suppurate. He recalled a number of these cases, only two of which had died, one from perforation and the other, an old man, from exhaustion incident to an intestinal affection. In almost all of these cases the patients had had three or four previous attacks.

Dr. Reginald H. Fitz, of Boston, held that the appendix was the seat of disease in the great majority of cases. The symptoms usually enabled the physician to make a correct diagnosis. The use of the exploring needle was not considered advisable. The cæcum can always be readily found by remembering that it is attached to the colon.

Dr. George W. Gay, of Boston, remarked that in the cases on which he had operated recovery had followed in those cases in which offensive pus had been evacuated, while in those where he had found only serum and flakes of lymph a fatal result followed operation.

Dr. J. H. Packard, of Philadelphia, read a paper entitled

SIMULTANEOUS LIGATION OF THE RIGHT CAROTID AND SUBCLAVIAN ARTERIES FOR ANEURISM OF THE INNOMINATE.

The symptoms of aneurism followed a blow upon the chest. The patient died three days after the operation with symptoms of suffocation. No autopsy could be obtained.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Wednesday, September 19th—Second Day.

Dr. Potter, of Buffalo, read a paper on

DOUBLE OVARIOTOMY DURING PREGNANCY—A SUCCESSFUL CASE GOING ON TO FULL TERM.

He related the various incidents of the case, which, however, terminated favorably.

Dr. Vander Veer had had some cases of single ovariotomy during pregnancy, and he thought the operation thoroughly justifiable.

Dr. Montgomery had had a successful similar case. He pointed out that these cases showed that the ovaries have nothing to do with bringing on labor.

Dr. Maxwell, of Keokuk, remarked that Dr. Potter's case had nursed her child, showing that the ovaries have nothing to do with lactation.

Dr. Byron Stanton, of Cincinnati, read a paper on

INDUCED LABOR.

He held that the operation was far less serious than other operations, such as Cæsarean section, and the death-rate to mother and child was diminishing steadily. Diameters of three and a half and two and a half inches are small enough to demand interference. In placenta prævia it was, he thought, better to induce labor, because we would then have to deal with a woman who was not exhausted with hemorrhage. He urged it strongly in albuminuria of pregnancy. He was not so much in favor of it in vomiting of pregnancy. There are three methods of inducing labor, viz.: By medicines acting through the general system, such as ergot, which he condemned; sympathetic methods, such as irritating the breasts; and methods applied directly to the uterus, such as galvanism, doubtful. Tampons to the cervix are useful in placenta prævia; hot-water injections to the vagina, but they are uncertain; tents and Barnes' bags, good; injection of water between the membrane and the uterus; but the best method is the introduction of an elastic bougie which is left in the uterus.

Dr. Opie, of Baltimore, strongly urged interference in albuminuria of pregnancy.

Dr. A. L. Smith, of Montreal, strongly urged interference in uncontrollable vomiting of pregnancy, and he related a case where the patient was at the point of death, and where the operation was followed by immediate recovery.

Dr. Clarke, of Cambridge, advocated the use of an aseptic bougie where there was not urgency.

Dr. Price said that ergot was nearly always followed by laceration of the cervix and perineum.

Dr. Opie, of Baltimore, read a paper on

THE INDICATIONS FOR ARTIFICIAL AID IN LABOR.

He thought the traction-rod forceps alone should be used in the high operation, but never at the inferior strait. All forceps may be divided into high and low forceps; he deprecated the name of the inventor being attached to the instruments. He urged going slowly, rather to follow and help nature, than supplanting her. He pleaded for judiciousness in their use. Forceps were rarely required in the first stage, in which laceration would almost surely follow. To use the forceps for the purpose of curtailing the pains of labor is a very doubtful proceeding. It would be better to use anodynes. Some operators only use the forceps once in three thousand labors, while others have used them once in every three labors. The best rate would seem to be one in sixteen. The reader's rate has been one in ten in private practice, and he felt that he had used them too often.

Dr. Price wished to express his approval of the views enunciated by Dr. Opie.

Dr. Stewart, of Philadelphia, thought that their use had been greatly abused; rarely, if ever, should they be used in the first stage. He presented a pair of forceps with parallel instead of crossed bars.

Dr. Townsend, of Albany, said that the first stage of labor was under the influence of the sympathetic; while the second stage is under the influence of the cerebro-spinal system.

Dr. Clarke, thought that the forceps were sometimes of great advantage when the head was delayed at the superior strait.

Dr. Etheridge, of Chicago, read a paper on the

TECHNIQUE OF VAGINAL HYSTERECTOMY.

Bowels and bladder should be well evacuated, and antiseptic douches for twenty-four hours previously, and a very hot one immediately prior to operation. His method is especially noticeable for his substituting forceps pressure for ligatures, thus reducing the time required for the operation to as little as seven minutes.

Dr. Montgomery highly approved of forceps or clamps for the broad ligaments, as the later are apt to shrink after being tied.

Dr. Vander Veer said the operation was a most desirable one. It was greatly employed by Pean of Paris.

Dr. Burns, of Pittsburg, said he had seen Fritz, of Breslau, perform the operation, using sutures.

Dr. Sharpe, of Chicago, related a case of

INTRAPERITONEAL HEMATOCELE WITH SUPPURATION.

He attributed the suppuration to the use of the aspirator as a means of diagnosis. He performed laparotomy, and removed over a gallon of pus, the patient soon making a good recovery.

AMERICAN GYNECOLOGICAL SOCIETY.

Wednesday, September 19th—Second Day.

Sir Spencer Wells, of London, read a very brief paper entitled

SECOND OVARIOTOMY ON THE SAME PATIENT.

In operating on a young woman in whom he was uncertain whether the other ovary was sound and healthy or not, he has sometimes removed the other ovary and sometimes not. In some cases he had left apparently slightly diseased ovaries in young women, and they have borne children and did not die. The removal of the second ovary does increase to a slight extent the danger of the operation. He always left the other ovary if truly healthy, and removed it if positively diseased. In old women, where the ovary is useless, he was more free to remove the second than in young women who may yet bear children. In one thousand ovariotomies he left the second ovary in a number of women, and these women bore two hundred and twenty-eight children, and only two of the women died. If these second ovaries had been removed these two hundred and twenty-eight children would not have been born.

The paper was discussed by Drs. Thomas, Kelley, and Goodell.

Dr. William Thompson Lusk, of New York, read a paper entitled

THE NEW CÆSAREAN SECTION.

The operation of Sanger has grown wonderfully in Germany and elsewhere. He reported at length his three cases of Sanger operation in Bellevue Hospital, New York, during the past year. The first case was on account of carcinoma of the whole vagina, bladder, and rectum. Craniotomy was out of the question, and as there was too much new-growth, which would be naturally torn away, the operation was done for the child. In the third case the decidua was found in a necrosed condition. It was removed with great care with the fingers, and the uterus washed out. Two babies lived, and the third died in thirty-six hours of trismus. Mothers all lived. He dwelt at length on the importance of studying the indications for the operation. The doctor went thoroughly into the literature and the statistics. Fair treatment of those placed in our charge demands that the comparative dangers of craniotomy and Cæsarean section be placed before the patient and friends, and that they be allowed to decide. The recoveries in this country, not quite forty per cent., are inclined to

PARALYZE THE OPERATOR.

It is a quite important precaution, just before the operation, to know that the fœtus is alive by auscultation. Leopold recommends catgut of a good quality for both general and deep sutures, as this produces less irritation. If a case is operated on after the Sanger method, the surroundings are good, and the nursing is of the proper character, the operation is a credit to Sanger. If the case is one from the country, or in bad hygienic surroundings in private practice, nursing inferior, and probably in the charge of careless, ignorant, and superstitious hands, the operation may be a Sanger, but the recovery is a miracle.

Dr. Howard A. Kelley, of Philadelphia, reported one case in which the child rallied but died of trismus in thirty-six hours. He also reported one other case.

Dr. Henry J. Garrigues, of New York, had performed Cæsarean section twice. He thought that Cæsarean section required much more assistance than craniotomy, and hence sometimes in private practice, especially in the country, should be preferred on this account. If catgut is used we must use a particular kind. The common is unreliable. He agreed with Dr. Lusk on the great importance of turning out the uterus. His first operation is put down as the third operation by the Sanger method; at the time of this operation he did not know that there was such a man as Sanger. He had never read a line of his work. Afterward he heard of him, but could not get his book in New York, and had to send to Germany for it. In his book of two hundred pages there is only one original suggestion, that we cut out some of the muscle before suturing. Sanger has done excellent library work.

Dr. G. J. Englemann, of St. Louis, thought the craniotomy patient generally in a much poorer condition for operation than the Cæsarean patient.

Dr. Polk, of New York, reported two Sanger operations.

Dr. T. Gaillard Thomas, of New York, presented a communication entitled

ETIOLOGY, PATHOLOGY, AND TREATMENT OF FLEXIONS OF THE UTERUS.

He said that he deemed it an honor to be able to read his essay in the presence of one who had done so much in this line—Graily Hewitt, of London. A subject so trite he feared might surprise his hearers, but too much has been done and said about the newer operations in gynecology. He gave the following varieties: 1. Anteflexion of the body, the cervix in the normal position. 2. Anteflexion of the cervix, body in the normal position.

3. Anteflexion simultaneous of both the body and the cervix. 4. Anteflexion irreducible. 5. Anteflexion reducible. At the age of ten, when the uterus is developing to take on the function of puberty, faulty dressing or a long-continued full rectum often brings on this complication. A decided anteflexion between fourteen and fifty is a grave affair. The notion that anteflexion is normal or harmless is fruitful of much mischief. A flexion of the body will sometimes occur so high up that it will be overlooked by one who expects the flexion to occur invariably at the internal os. He then gave some experience from his daily life in the treatment of this trouble, which was of interest. A patient will come to me from Dr. A, who has told her that anteflexion is not an important factor in her case, and has treated her for two years without benefit by means of internal remedies. Dr. B has used injections and electricity: Dr. D, for eighteen months, with like success. Dr. C has diligently inserted medicated tampons and pessaries for a year, and no improvement. They all did the best they could, according to their light, but they did not cure their patient. He who always throws pessaries aside should not be allowed to practise. One who does not know how to use them should be shunned. The profession is divided into two classes—those who know how to use pessaries and those who do not. He prefers glass as an intra-uterine stem in all cases. In his operation he anæsthetizes the patient and then fills the vagina with antiseptic fluid. He then pulls the cervix down into this fluid and holds it there, and makes posterior section. In some cases this posterior section is not sufficient, and removal of the cervix is necessary, after vain efforts to reduce the anteflexion. Would that I could color this essay, he said, with the roseate hue which accompanies many essays, but I cannot. I often even fail to palliate the trouble, yet I have my chagrin soothed by the certain knowledge that I have not put my patient to great expense and danger.

Dr. Graily Hewitt, of London, said he found that in some cases it was necessary to dilate the cervical canal and relieve some contractions. He thought that what Dr. Thomas had said in regard to position embodied the whole truth.

Dr. Priestley, of London, said that the question of flexions was such a mixed one that it was difficult to know what to believe. He wished some one would give us complete statistics as to the occurrence of the trouble and to the results of treatment. Dr. West holds that flexion of the uterus, without congestion or inflammation, does not give rise to any symptoms. We need statistics on this subject, and he who will give us the proper way to treat this trouble will do much for his profession.

Dr. Ely Vander Warker, of Syracuse, N. Y., said that ten years ago he read a paper before this Society and advised the use of the intrauterine stem. He was strongly condemned by Dr. Thomas and others. He was now glad to see Dr. Thomas take back much of his sayings at that time. Had one of his patients then treated with intrauterine stems died, he would not have found one of his colleagues to defend him from the charge of manslaughter, nor could he have found an authority in this country on whom he could lean for support. He was amazed to hear that anyone could not see symptoms after flexion.

Dr. Robert Battey, of Rome, Ga., delivered the

PRESIDENT'S ADDRESS.

He did not treat especially of any scientific subject but rather turned his remarks to the future action of the Society and its general welfare. In accordance with a petition signed by nearly every member of the Society, he had changed the place of meeting from Boston to Washington, so as to be with the Congress. The Society was organized alone for the advancement of science. There was in it no field for the parliamentarian or medical politician. He then took up the subject of our vacant chairs. The membership was first limited to 60, and after two attempts was changed to 100. Fifty-eight is the highest number yet enrolled on our list. In twelve years the membership has grown from 39 to 58; average number, 51. The attendance has grown from 19 to 44, with an average of 29. When we consider that the Society is made up of busy specialists in large and lucrative practice, who cannot leave without a considerable pecuniary loss, I think an average attendance of 29 out of an average membership of 51 is not bad. The attendance at New York was seventy per cent.; in other Eastern cities not much less. In Cincinnati and Chicago the per cent. of attendance was low. Hence the advisability of

MEETING IN SOME LARGE CENTRE OF POPULATION.

Two of our members have been present at all of the meetings, 2 at eleven and 10 at three. One fellow has contributed ten papers, another nine, two eight each. Only three of the older fellows have not read papers, but these have contributed largely to the interest of the discussions. Men grow old, weary, and worn, and we must look to the young for aid. In the past, America has been known as the home of gynecology, and at the present time no country can boast of more good workers in this field. Our Society is like the Federal officeholder in Washington—few die and none resign. Our forty-two vacant chairs might be filled by lowering the standard of admission, but this would be bad policy. They might be filled by invitation, as most good men are modest and do not like to push themselves forward, fearing they might not be welcome. The members in the different States could look up this matter and encourage good men to unite with us. If we do not try to fill up the vacant chairs, had we not better return the limit to 60, the original number? Two travellers find a pebble by the way side. One picks it up, admires its translucency and casts it aside; the other examines it,

SEES THROUGH ITS ROUGH EXTERIOR

the diamond, and polishes it, producing a brilliant jewel. One who in this day locks up in his bosom truths of so great benefit to suffering humanity is not deserving of recognition. In the words of a homely Southern wit, "If our hind-sight was as good as our fore-sight, it would be much better for us." It may be safe to ask if the *ipse dixit* of an operator years afterward can be accepted, concerning a certain operation, or the testimony of a patient after a like lapse of years as to what work was done in her abdomen while she was under the influence of an anæsthetic. Must we allow operators to bring in cases especially cooked for the occasion? Against such doings no honest man can stand. The speaker then discussed the legal side of limitation, and said there was need of a statute of limitation in medicine, to protect a true discoverer from the schemes of the dishonest. There is an unwritten law in the minds of honest medical men which in this day of medical journalism and medical societies prevents the dishonest ambitions of men going behind the records. The address was received with rounds of applause.

ASSOCIATION OF GENITO-URINARY SURGEONS.

Wednesday, September 19th—Second Day.

The following officers were elected:

President, Dr. Robert W. Taylor, of New York City; *Vice-President*, Dr. John P. Bryson, of St. Louis, Mo.; *Secretary*, Dr. Arthur S. Cabot, of Boston, Mass.

Dr. Francis S. Watson, of Boston, Mass., read a paper on

THE OPERATIVE TREATMENT OF HYPERTROPHY OF THE PROSTATE,

with stereopticon demonstrations of specimens, etc.

The author began by an enumeration of the operations in use for relief of the disease. The indications for operation were stated to be as follows: Very frequent urination, repeated attacks of retention, necessary catheterization, purulent or hemorrhagic cystitis, and *failure of palliative treatment.*

The status of expert surgical opinion of to-day was shown by many quotations, which demonstrated the fact that, while one surgeon advocates one operation, and one surgeon another, no one has as yet shown the reasons governing the choice of operation in individual cases. In other words, no rationale underlies the operative treatment.

The object of the paper was stated to be the formation of such a rational basis of treatment. To do this the author had to offer data of two sorts: 1. Anatomical, and, 2, clinical. The anatomical collection consisted of thirty-four specimens.

These were exhibited by the stereopticon.

The author emphasized, as being the three important elements in the choice of operation, anatomically speaking, the distance from the junction of the prostatic and membranous urethra to the most distant portion of the median enlargement within the bladder, which distance, for the sake of convenience, is called the *perineal* distance; second, the form of the median enlargement; and, third, whether the bladder is of small capacity and non-distensible, or, on the contrary, of large capacity and readily distensible. If the perineal distance just described does not exceed two and three-quarter inches in length, the median enlargement can be reached and efficiently treated through the perineum. If the form of the median enlargement be pedunculated or very salient, the suprapubic operation is preferable to the perineal. Upon the distensibility and capacity of the bladder the possibility of performing that operation after the modern method depends. The study of the altered anatomical conditions resulted in showing that in almost every case the median enlargement formed the chief obstacle to urination: that in two-thirds of the cases this portion can be reached successfully through the perineum; that in nearly one-third of the cases the great perineal distance, or the salient form of the median enlargement, made the suprapubic operation that of choice. In other words, that we are compelled to resort to one or another of these operations, according to the nature of the elements recounted above. The clinical evidence made the following showing: Of palliative operations by drainage there were twenty-four cases and twelve deaths (fifty per cent. mortality); of these, suprapubic puncture, with retained cannula, is the most dangerous, and perineal drainage the safest. Of the radical operations there were fifty-three cases, with sixteen per cent. mortality; of these, the perineal operations were the safest.

The author's personal contribution to the subject consisted in the report of two cases of the radical operation, the first a suprapubic prostatectomy in a person aged eighty, who died on the fourth day following operation of acute irritative urinary fever; the second, a case of perineal prostatotomy in a patient aged seventy-four, who made a perfect recovery, and, from being in a state of the utmost misery and danger, was entirely restored to health. The author also showed a perineal drainage-tube of his own device, to drain the bladder after these operations, or other similar ones, and also a galvano-cautery prostatectatome. In conclusion, he stated that, inasmuch as the anatomical investigation had shown that the perineal operation was perfectly practicable in two-thirds of all cases occurring in old people, and as it had also been shown to be clinically the safest that the action in any given case should be to open the perineal urethra and explore with the fingers—the surgeon should complete the operation by this route when possible, but when not, for the reasons already laid down, proceed either at once or later to the suprapubic operation, according to the condition of the patient.

Discussion: In answer to a question, the author said that the portions of prostate removed appeared usually hard and fibrous—sometimes, however, yielding, probably glandular.

THE PRESIDENT thought that a diagnosis as to the operation proper to the case could ordinarily be made without exploratory incision by the use of sounds and the finger in the rectum, to which the author gave assent.

DR. L. BOLTON BANGS, of New York, read a paper entitled

CLINICAL OBSERVATIONS OF DISEASES OF THE TESTICLE.

He reported three cases. The first case was an inflamed, undescended testicle, sent to the hospital for strangulated hernia. When the inflamed spermatic cord was incised, there was escape of pus. On the day following, patient had a distinctly purulent urethral discharge. Points raised were: (1) The novelty of this escape of pus from the cord, and (2) the relation of the urethritis to this condition. Did the orchitis precede the urethritis, or did the urethritis precede the orchitis, the former abating while the orchitis existed, as in ordinary orchitis associated with urethritis?

Second case, presented as a type of chronic inflammation of testicle due to prolonged irritation of the prostatic urethra. The testicle had all the characteristic appearances of a tubercular testicle, and castration was about to be performed, but the author objected, and the patient was relieved by the escape of a prostatic calculus. The symptoms all subsided, and the sinus closed spontaneously.

Third case was that of true tuberculosis of the testicle, complicated by traumatic hydrocele; an interesting clinical feature of the case being the rapidity of the tubercular process and in the large amount of fluid in the tunica vaginalis. A majority of cases of tubercular testicle are curable, but there is a rapidly developing form which is not.

DR. FRANK W. ROCKWELL, of Brooklyn, presented a case in which both testicles had been removed for a

PRIMARY CANCER OF THE EPIDIDYMIS

of the right, followed in three months by a similar affection of the remaining gland. No involvement of the testicle proper, nor return of the growth in side first affected. Diagnosis confirmed by microscopic examination, and the patient was still well at the expiration of nearly two years. The doctor had been able to find no other case on record where the epididymis had been primarily affected, and with the same clinical history, and believed the case unique.

DR. WILLIAM M. MASTIN, of Mobile, Ala., presented a paper on

THE HISTORY OF THE FILARIA SANGUINIS HOMINIS; ITS DISCOVERY IN THE UNITED STATES, AND ESPECIALLY THE RELATIONSHIP OF THE PARASITE TO CHYLOCELE OF THE TUNICA VAGINALIS TESTIS.

This was read by the Secretary, Dr. Taylor. The paper was elaborate and gave a very exhaustive *résumé* of all that has been published on the parasite, and will furnish a valuable source of information for those who may desire to study the subject.

DR. ALEXANDER W. STEIN, of New York, read a paper on

SOME POINTS IN THE DIFFERENTIAL DIAGNOSIS OF BLADDER AND KIDNEY AFFECTIONS,

with demonstrations of cystoscope and other instruments.

The author referred to the importance of recognizing irritation in other parts as expressed in bladder symptoms. Dilatation of the vesical neck will often remove cystic symptoms. Again, the irritation may be beyond the bladder. Stringy, purulent urine may come from the renal pelves. He illustrated this point by a case presenting all the symptoms of cystitis, in which the autopsy showed only a sarcoma of one kidney. The use of the cystoscope in bladder disease was able to render great aid in arriving at a correct diagnosis, revealing the condition of the mucous membrane, presence of morbid growths and their nature, calculi, etc. In kidney disease, lumbar incision affords an important means of differentiation in surgical cases. The difficulties in catheterization of the ureters render this aid to diagnosis of little practical value. The same may be said of the use of other means designed for aiding diagnosis by various instrumental manipulations of the ureters, such as to seize one of them by forceps, etc.

Professor Annandale, of Scotland, emphasized the importance of cystoscopy. He referred, as illustration, to a case of obscure hæmaturia, in which the autopsy showed that it was from a pelvic sarcoma. Here the cystoscope would have disclosed the blood flowing from the corresponding ureter, and would have indicated the location of the disease and have suggested the proper procedure as to treatment.

The President remarked that the effective use of the cystoscope required educated skill. He related a case of pus in the urine in which Freund, by catheterization of the ureters in a woman, diagnosed disease of one kidney, and the other kidney as healthy. He operated on this, and removed the diseased kidney. He discovered, by examination of the supposed healthy kidney, by manipulation through the abdominal incision by which the operation was performed, he thought, at the time, evidence of disease. After the operation the urine became clear of pus, but the patient soon developed uræmic symptoms and died.

Surgeon-Major Keegan, of Indore, Central India (by invitation), presented a paper entitled

LITHOLAPAXY IN MALE CHILDREN.

The author remarked that nowhere had the operation of litholapaxy been more favorably received and made use of than in the British colonies and dependencies. Recently, out of 35 male children under his charge for vesical calculus, 33 were removed by litholapaxy; the mortality was $3\frac{5}{10}$. Very large and hard stones in boys may thus be removed. Fully fenestrated lithotrites are used by the author in operating on boys—No. 6 (2) to No. 10. None of his cases had returned with recurrence of stone. In India litholapaxy is likely to become the conventional operation in ordinary cases of small stone in boys, in the author's opinion.

Dr. Abner Post, of Boston, reported an operation for

ENLARGED PROSTATE AT THE AGE OF FORTY-TWO.

The patient's symptoms had existed since he was twenty-one, and appeared to date from an injury by the caving in of an embankment, but were possibly of longer duration. The patient was unable to pass urine except he assisted himself by inserting the finger in the anus and pressing along the course of the urethra. No instrument could be passed into the bladder. On opening the urethra in the perineum neither instrument nor finger could enter the bladder until a section of the prostate had been made with the knife. The prostate was of stony hardness.

Dr. Post did not believe the enlargement to be of the same character as the ordinary senile hypertrophy. The section of the prostate was successful in re-establishing the power of micturition.

Dr. Fessenden N. Otis, of New York, demonstrated

A PERFECTED EVACUATOR AND AN IMPROVEMENT IN THE METHOD OF REMOVAL OF DÉBRIS FROM THE BLADDER.

The instrument is a modification of his previous evacuator. The modificators are the removal of all stopcocks, the removal of tubing between bulb and globe, and between globe and evacuating tube; thus making the instrument more compact, and the distance from the bladder to the receiver the shortest possible. Introduction of hard rubber in place of metal gives the utmost lightness. The author claims that this presents the following advantages over all other instruments now in use: 1. Perfect trapping of all fragments, without the use of any form of valves, perforated tubes or strainers. 2. The shortest possible route of fragments from the bladder to the receiver. 3. Absence of all stop-cocks between the bladder and the receiver. 4. The ease of filling and perfect control of the amount of water in the bladder during evacuation. 5. Lightness, compactness, power, and facility of manipulation. 6. The fragments being visible from the moment of leaving the tube until removed from the receiver, it can be seen that they do not return to the bladder. 7. Comparatively small cost; fewer joints liable to come loose.

AMERICAN NEUROLOGICAL ASSOCIATION.

Wednesday, September 19th—Second Day.

Dr. F. X. Dercum, of Philadelphia, presented a paper on

A SUBCUTANEOUS CONNECTIVE-TISSUE DYSTROPHY OF THE ARMS AND BACK, ASSOCIATED WITH SYMPTOMS RESEMBLING MYXŒDEMA,

with photographs and microscopic sections illustrating the case. There was a mucous condition of the subdermal tissue, and connective-tissue changes in the nerves and ganglia of the parts. There was some anæsthesia. The thyroid gland could not be felt. There were not the slowness of speech, thought, and movement, and the mental condition characteristic of true myxœdema.

Dr. C. K. Mills stated that he had seen and examined this patient frequently, and related facts in a somewhat similar case, where the face was involved. This patient died suddenly, and no autopsy could be obtained.

Dr. W. A. Hammond said that although he was struck by the analogy between the author's case and myxœdema it was not that disease. It lacked the mental derangement. He referred to his monograph on two cases of this disorder. In one of them half a minute was required to elicit an answer to the most trivial question. Changes in the thyroid gland are necessary to a diagnosis of this disease.

Dr. Putnam thought that cases might present pathological or clinical differences, and that this might be valuable as an example of a transition case or peculiar form of myxœdema.

Dr. Dercum, in closing the discussion, said that Horsley had examined the specimens this morning and thought the case transitional in character, but not true myxœdema. Recent cases have been reported where mental symptoms were not marked. His own had presented some irritability. The thyroid is not usually enlarged but wanting.

Dr. G. W. Jacoby, of New York, then contributed a report of a case of

SUBACUTE PROGRESSIVE POLYMYOSITIS.

The author reviewed the inflammatory muscular disorders. There are only three cases recorded precisely similar to his. His own presented clinical symptoms of progressive inflammation of the muscles, beginning in the lower extremities and successively involving nearly all the muscles of the body; it was characterized by pain, swelling, inhibition of function, with ultimate atrophy of certain groups, ending fatally in two and one-half years through involvement of the respiratory muscles. There was, microscopically, a subacute parenchymatous myositis. He concluded that it was a case of acute primary myopathy, closely allied to the chronic forms known as chronic progressive muscular atrophy.

Dr. B. Sachs, of New York, then read a paper on

MUSCULAR DYSTROPHIES.

The following is a brief summary of his comprehensive monograph: Progressive muscular atrophy, type Aran-Duchenne, is due to spinal-cord disease. The peroneal type bears a close resemblance to this form, and may possibly have the same pathology. Duchenne's form might be termed the hand type, and the peroneal the leg type. Pseudo-hypertrophy is not of spinal origin, and lipomatosis is a mere incident in its course, associated with wide-spread atrophy in various parts of the body. There is a close relation between pseudo-hypertrophy and Erb's juvenile form of progressive muscular atrophy, but no absolute identity. All forms of primary myopathy are occasionally hereditary; hence, hereditary muscular atrophy does not deserve the rank of a separate clinical entity. The type Landouzy and Déjérine is closely related to Erb's form, the involvement of the facial muscles not sufficing for wide clinical differentiation. Pseudo-hypertrophy and Erb's form should be regarded as the two representative forms of primary progressive dystrophies. The latter are distinguished from the spinal progressive dystrophies by the occurrence of true or false hypertrophy, the absence of the reaction of degeneration, and the absence of fibrillar contractions. He would classify muscular atrophies as follows: 1. Amyotrophia spinalis progressive. *a.* Hand type; *b.* Leg type=peroneal form. 2. Primary progressive dystrophies. *a.* Pseudo-hypertrophy; *b.* Erb's form. The papers of Drs. Jacoby and Sachs were discussed together.

Dr. Knapp agreed with Dr. Sachs that progressive muscular atrophy is spinal in origin, that the peroneal type is a form of that, and that pseudo-hypertrophy is not spinal.

Dr. Jacoby thought that it was difficult in some cases to draw a distinct line between the spinal and muscular types. The presence or absence of hypertrophic fibres is usually sufficient for a differential diagnosis between the two, but not always. He believed that in most of these cases there is some embryonal malformation, rendering the muscles liable to molecular changes in later life.

Dr. L. C. Gray was of the opinion that exact inferences cannot be drawn from cases now on record, because they are so contradictory. Pseudo-hypertrophy is probably of peripheral origin, yet there are cases where legitimate doubts may be entertained regarding this, for autopsies by excellent pathologists have revealed spinal lesions.

Dr. William A. Hammond agreed with Drs. Sachs and Jacoby upon their general deductions. He referred to the chapter on pseudo-hypertrophy in his book, which Dr. Sachs had criticised, saying that it was first written eighteen years ago, and rewritten for the last edition four years ago. Even in this short period much had been learned concerning these diseases, and he was ready at any time to alter his convictions when sufficient arguments were presented. It is easier to be critical than to be an explorer. It is not wise to make decided statements upon the still uncertain data in this disease.

Dr. Walton detailed a case of pseudo-hypertrophy with a hereditary history.

Dr. Putnam had prepared the report of a case of hereditary atrophy, and showed drawings and microscopic specimens illustrating the disease. One specimen was from the muscle of a man with progressive muscular atrophy, who had travelled about the country as "the living skeleton."

Dr. Sachs, in closing the discussion, stated that he claimed only to have reviewed the literature of the subject thoroughly, and was compelled to do so critically. Hence he had been obliged to differ to a slight degree from Drs. Hammond and Gray's opinions.

The meeting then went into executive session, and elected Dr. David Inglis, of Detroit, a member.

Dr. James H. Lloyd and Dr. John B. Deaver together contributed reports upon

A CASE OF FOCAL EPILEPSY SUCCESSFULLY TREATED BY TREPHINING AND EXCISION OF THE MOTOR CENTRE.

The operation had been performed in June last, and there had been no epileptic attack since.

Dr. David Ferrier, of London, thought it a little too early to consider the case cured. In some of his own cases of focal and Jacksonian epilepsy, treated by operation, he had been disappointed by the recurrence of the spasms. One case was very similar to this. A spiculum of bone wss supposed to be the cause, and Lister trephined, but did not find anything. The fits continued, and one year later the operation was repeated by Horsley, but without success. The sooner cases are operated upon after the injury the better, as in chronic cases the danger of recurrence is so much greater. From the paresis present, there was probably some organic lesion in Dr. Lloyd's case, although it was not discoverable. One case of his had three thousand fits in fourteen days. Horsley operated upon this, and there has been no recurrence as yet. Such cases as Dr. Lloyd's were very interesting in the light of physiological experiment, showing the similar reactions to faradism of the motor centres in both man and monkey.

Mr. Victor Horsley, of London, mentioned a case of his where epilepsy recurred two years after operation, and another where there was recovery with mental equilibration, not present before operation. All of these cases should be operated upon as early as possible. He was gratified that the use of faradism in diagnosis had been adopted in this country. In testing sensibility we must remember that there is a sense of movement and a sense of a part having been moved, and the two must be distinguished. Dr. Deaver's cutting the flat of the scalp with convexity downward was inadvisable. He had tried it, but found it did harm to cut the temporal artery. Drainage would be equally good and the nutrition of the part better, if the convexity of the flat were backward. He was glad to see the successful use of cocaine in this case to contract the arterioles in the membranes. Recently, Prof. Schäfer and himself had decided by experiment that intermittent irrigation while operating would be more liable to lead to bad results than if continuous, and he consequently uses the antiseptic spray as a means of constant irrigation.

Dr. W. W. Keene stated that he did not use the spray in his cases, and saw no reason for its employment. The washing with sponges was the only irrigating process he required.

Dr. Gray was glad to hear Dr. Ferrier and Mr. Horsley say that cases trephined for epilepsy should not be pronounced finally cured until five years had elapsed. He related a case of his own, with intra-cranial syphilis, trephined by a surgical friend, who unfortunately was not a believer in antiseptic surgical methods. The patient died a few days subsequently of suppurative encephalitis.

Dr. C. L. Dana inquired of Dr. Lloyd if there was absolutely no anæsthesia in his case. Dr. Lloyd said there was very slight blunting when tested by the two points of an æsthesiometer. But Dr. Dana believed that, from the recorded history of the case, it would be fair to conclude that there was some loss of sensibility. The sensory aura was certainly lost, as it disappeared after the operation.

Dr. Mills said he had studied the case of Dr. Lloyd both before and after the operation, and would say that there was absolutely no loss of tactile sensibility.

Mr. Horsley remarked that the best method of testing the sense of touch was to have the patient, with blindfolded eyes, locate the point of touching with the opposite hand. When there is recovery from tactile anæsthesia it progresses outwardly to the periphery.

Hence in the fingers, for instance, the first phalanges recover feeling, then the second, and the tips last.

Dr. Seguin mentioned, in connection with the case recently reported by himself and Dr. Weir, that since last year the epilepsy has recurred and there is more paresis. In this case there is unquestionable tactile anæsthesia of the face, arm, and fingers of the side affected. The temperature and muscular senses are normal.

Dr. Ferrier asked if there was anæsthesia in the leg, where the tumor was, and what was its size.

Dr. Seguin said that sensation was normal in the leg. The tumor was situated in the face and arm centres, and was eighteen to twenty millimetres in diameter.

Dr. Lloyd closed the discussion by stating that he had, a few hours before, received the pathological report in his case, upon the pieces of cortex removed. Dr. Smith, of Philadelphia, had found some evidence of degeneration in the pyramidal cells.

Dr. James J. Putnam, of Boston, then read a paper entitled

OBSERVATIONS AND EXPERIMENTS RESPECTING THE PATHOLOGY OF NEURITIS,

richly illustrated by drawings and numerous microscopic specimens. The author related the history of an interesting case of multiple neuritis.

Dr. S. G. Webber mentioned cases of his own somewhat similar. He had experimented upon rabbits and guinea-pigs by exciting neuritis. He found that most changes in the early stages of neuritis were near the constrictions of Ranvier. On one occasion, when there seemed to be an epidemic of multiple neuritis in Boston, there was at the same time a similar disease with paralysis, etc., among horses in the city; but he had not examined the nerves in any.

Dr. Pye-Smith, of Guy's Hospital, London, asked whether gout had been observed in this country as a cause of neuritis. He had had such a case where there was no alcoholism to account for it. He desired to know if the enigmatical disorder known as Landry's paralysis was as rare in this country as in England.

Dr. Van Bibber related the history of a case of his presenting symptoms such as Dr. Putnam had mentioned.

Dr. Dana, answering Dr. Smith, said he had seen cases of localized neuritis due to gout quite frequently, and also two cases of multiple neuritis which he ascribed to acute rheumatism.

Dr. Putnam said that gout was a rare disease in America, but is well known to cause sciatica and other forms of local neuritis. Neuritis attends rheumatism at times. Landry's paralysis is exceedingly rare here.

Dr. E. C. Seguin exhibited for Dr. J. C. Shaw, of Brooklyn, some microscopic specimens of peripheral nerves in locomotor ataxia, showing neuritis.

Dr. Burt G. Wilder's paper on "The Relation of the Thalamus to the Paracœle (Lateral Ventricle)" was read by title in the absence of its author.

The officers of the Association for the ensuing year were then elected, as follows: *President*, Dr. E. C. Seguin, of New York; *Vice-Presidents*, Dr. C. L. Dana, of New York, and Dr. Philip Zenner, of Cincinnati; *Secretary and Treasurer*, Dr. G. M. Hammond, of New York; *Members of the Council*, Dr. J. H. Lloyd, of Philadelphia, and Dr. M. Allen Starr, of New York.

Is the World Satisfied with the Medical Profession? asks Dr. Cocke in Daniels' *Texas Medical Journal*, and he apparently believes that it is not. As one means of satisfying the world he urges his Texas colleagues to "unite as one man, and at the Galveston meeting make it known, that we will support no man, from senator down to the private secretary of the mayor, unless he declare for reform and high tariff for medicine, and low tariff for everything else."

AMERICAN OPHTHALMOLOGICAL SOCIETY.

Special Meeting, September 19, 1888.

Morning Session.

Dr. Henry W. Williams, of Boston, President Pro Tem.

Dr. David Webster, of New York, read a paper upon

SOME TENOTOMIES FOR THE CORRECTION OF HETEROPHORIA, WITH RESULTS.

He reported forty cases; twenty-five had been operated on but once, in sixteen a second operation was done, and three had previously been operated on by others, making a total of sixty tenotomies. The operations had been done since the beginning of July, 1886. The method was that described by Dr. G. T. Stevens, except that the tendon was always entirely divided. A slight over-correction was usually aimed at and attained. In three cases a slight reduction of the effect was necessary. In a single case he regretted having operated. All operations were done under cocaine, and the eyes tested from time to time, to determine when sufficient effect had been produced.

Among these cases there were four epileptics, none of whom were cured; in one there was a temporary suspension of the fits, and in another they were thought to have been favorably modified. There were two cases of chorea, both of which seemed favorably influenced. In three hysterical males remarkably good results were obtained. Most of the operations were done for headache and asthenopia. The writer had reached five conclusions, viz.: That no person should have a tenotomy done for heterophoria, without inconvenience probably due it; very slight degrees may cause trouble, and should be attended to. All other methods should be tried before tenotomy. The operation should be performed under cocaine, and the eyes from time to time tested to guard against over-correction; and that in properly selected cases, the results are quite as good as are obtained by most other surgical procedures.

Dr. Samuel Theobald, of Baltimore, read a paper entitled

IS ASTIGMATISM A FACTOR IN THE CAUSATION OF GLAUCOMA?

He was convinced that the direction of the meridians of greatest and least refraction determines to a marked degree the amount of asthenopia, etc., attending this form of ametropia. When the meridian of lowest refraction is vertical or nearly so, the asthenopia, headache, and likelihood of pathological changes in the eye are greater than when it is horizontal or nearly so. The slightest degree of astigmatism of this character almost always gives rise to trouble, and if it amounts to not more than 0.25 D. requires to be corrected. The non-asthenopic astigmatic eyes are rarely of this sort, but cases in which the meridian of least refraction approaches the horizontal. Astigmatism in which the meridian of least refraction approaches the vertical are less common, and must be regarded as the wider departure from emmetropia. Because of a more persistent effort of the ciliary muscle to correct it, this form is more difficult to detect; and it will not all be revealed at a first examination, even by the aid of a mydriatic. The writer found this variety of astigmatism in almost every instance associated with glaucoma, so that he was disposed to regard the association as not accidental. Hyperæmia of the ciliary muscle is a common result of astigmatism, especially of this form. This would induce an undue flow of fluid into the vitreous, and if the anterior drainage apparatus happened to be inadequate, a glaucomatous condition would result. Cases of glaucoma with astigmatism of this form, and of astigmatism, mostly of this form with threatened glaucoma, were related.

Dr. Peter A. Callan, of New York, read a paper on the

TREATMENT OF ULCERS OF THE CORNEA.

The ulcers occurring in young persons and children are really phlyctenulæ of the cornea, or neglect of lid friction causing absorption gives rise to an ulcer. The treatment is yellow oxide of mercury salve (two to ten per cent.) placed between the lids once daily; atropia and cocaine if necessary; tonics; open-air exercise; regulation of diet; airy sleeping quarters; smoke-glasses; avoidance of dark room or bandages. The ulcers due to conjunctivitis need no special treatment other than that for the disease causing them. In gonorrhæal ophthalmia, ophthalmia neonatorum, or granular lids, we always redouble our efforts when the cornea is likely to become involved; cutting the canthus, applying leeches or ice, etc. He referred especially to ulcers occurring without apparent cause, due to some constitutional trouble, malaria, syphilis, etc. For these give the remedy for the constitutional ailment, and locally cocainize the eye thoroughly, and clean the ulcer with a piece of absorbent cotton wrapped on a holder, and with the same as an applicator swab the ulcer, leaving no part of it untouched, with a two-per-cent. solution of silver nitrate. This may have to be repeated two or three times in the course of as many days. Bathe the eye with hot water, (120° to 130° F.) three times daily for a half-hour. If much corneal irritation exists, bathe with boric-acid solution, and use atropine and cocaine after each bathing. The point is to get a clean wound; and silver nitrate, besides stimulating repair, is a safer, better means of doing this than any other known to the writer.

Afternoon Session.

Dr. Edward Jackson read a paper entitled

MERIDIONAL ASTIGMATISM.

By this name was designated the defect of the eye which caused a difference between the refraction of the eye at the centre of the pupil, and the refraction at the pupillary margin. It is to be detected and studied by the shadow-test, with which it causes an erect image and an inverted image of the light area to be seen in the pupil at the same time; one at the centre of the pupil the other at its margin. His deductions of practical interest were that it was the lower degrees of the defect that were most likely to interfere with vision; that it was a cause of different refraction in the eye with a contracted pupil from that of the same eye under a mydriatic; and that it was especially apt to cause symptoms of asthenopia in those whose complaints were chiefly connected with near work or exposure to a bright light.

The committee, composed of Drs. Edward Jackson, Henry D. Noyes, and Swan M. Burnett, appointed to consider the

PROPOSITION TO DESIGNATE PRISMS ACCORDING TO THEIR REFRACTIVE POWER,

recommended the indorsement of the following propositions:

1. Prisms ought to be designated by the number of degrees of "minimum deviation" they produce.
2. Where intervals of less than one degree are desired, half-degrees and quarter-degrees should be used.
3. To indicate that degrees of deviation are meant, the letter "d." shall be added. Thus, "prism 2°d." will indicate a prism that produces a minimum deviation of two degrees.

Dr. J. Oscroft Tansley, of New York, exhibited and explained

A NEW INSTRUMENT FOR DEMONSTRATING REFRACTION,

consisting of a box with glass sides, with a magic-lantern attached, and arranged for the adjustment of various lenses. The box was to be filled with smoke, in which the courses of the rays from the lantern would be quite plainly visible.

Dr. W. F. Mittendorf, of New York, reported three cases of

ACUTE COCAINE CONJUNCTIVITIS.

It was to be expected that idiosyncrasy, such as constitutes a bar to the use in certain cases of other drugs, would be found to exist with reference to cocaine. These cases occurred after the use of a four per cent. solution of the drug, and were characterized by swollen, shiny lids, and a profuse acrid discharge. Two of the cases occurred in elderly women, and the third in a man. In one of the women, after relief had been obtained by cessation of the use of the drug, a renewal of its use was promptly followed by a renewal of the trouble. In the man three separate attacks were caused at different times by different applications of the drug. It is likely that the condition is due to a paralyzing effect of the drug on the terminal sympathetic nerve filaments.

Dr. S. M. Burnett, of Washington, exhibited some

APPARATUS FOR DIAGNOSIS OF REFRACTION.

This consisted of a disk of lenses to be used in applying the shadow-test, arranged to be fixed to the wall and adjustable to any height, and readily used for either eye, or swung out of the way when not in use.

Dr. Carl Koller, of New York, read by invitation a paper on

BLEPHAROSPASM.

Although this is only a symptom, it is an important one. Cases might be divided under three heads; viz., the neurotic, the hysterical, and those in which it was a reflex of irritation of the nerve-endings of the cornea and conjunctiva. The latter included the cases of phlyctenular disease. Cocaine, from which he had at first hoped much, had proved useless, exerting but a slight influence when very freely applied. An essential factor in the continuance of the spasm is a fissure that forms at one canthus, usually the outer, making a condition resembling fissure of the anus. The cure here may be effected by division of the muscle, but this is not usually necessary. Treatment of the conjunctival condition, cauterization of the fissure with copper sulphate, and the application of the ointment of yellow oxide of mercury are commonly sufficient.

Dr. R. H. Derby, of New York, reported a case of

MONOCULAR OPTIC NEURITIS,

in which the swelling of the papilla at one time reached seven dioptrics, and light perception was lost. Under large doses of potassium iodide, and mercurial inunctions, the swelling had been greatly reduced, and vision had returned and improved to seven-tenths.

Dr. O. D. Pomeroy, of New York, reported five cases of

REMOVAL OF THE DISLOCATED CRYSTALLINE LENS WITH THE BIDENT.

This instrument, proposed by the late C. R. Agnew, had proved a very satisfactory aid in the hands of the few who had tried it. In all these cases good vision was obtained. Care must be taken not to press the lens too far forward with the bident, and it must be extracted with a scoop or sharp hook.

Pneumococcus in the Saliva.—Dr. Netter has examined the saliva of a number of patients at varying intervals of a few days to twelve years after an attack of pneumonia, and has found Fraenkel's pneumococcus present in sixty per cent. of the cases. The virulence of the micro organism there found seems to increase, within certain limits, in proportion to the length of time that has elapsed since recovery from the disease.

AMERICAN DERMATOLOGICAL SOCIETY.

Wednesday, September 19th—Second Day.

Dr. J. E. Graham, of Toronto, Canada, read a paper upon

A REPORT OF THREE CASES OF DERMATITIS HERPETIFORMIS.

The first two cases were males and the third was a female who died. As a young woman the latter case had suffered from eruptions of a vesicular and bullous character. The day after the birth of her second child the patient developed a bullous eruption at the corner of each eye, followed by lesions upon the face, the size of a ten-cent piece and a quarter, which extended from their borders. Death took place a month after the patient was first seen.

Following this paper, **Dr. H. W. Stelwagon**, of Philadelphia, Pa., read upon

DERMATITIS HERPETIFORMIS, WITH NOTES OF THREE CASES.

But three cases are recorded out of a total of eight thousand, two of which may be said to typically represent the vesicular variety of the disease, the third being of multiform nature, at one time simulating pemphigus, at another erythema multiforme, and at still another herpes iris.

Dr. Hyde, of Chicago, said that we must separate impetigo herpetiformis and pemphigus foliaceus from the cases of dermatitis herpetiformis described in the papers. A long history of eruptive outbreaks is necessary for a diagnosis according to Duhring. He related one case in which there was a history of many returns of an eruption of bullæ-vesicles and pustules, in which extensive exfoliation of the skin of the back had taken place, and the continuous water-bath had been used.

Dr. Bulkley referred to Dr. Atkinson's address, and agreed with him that we must look in various directions for the pathological basis for these eruptions. He had shown a case of typical dermatitis herpetiformis at the New York Dermatological Society. The eruption had lasted for a year, and the patient had died in six months of diffuse internal sarcoma. A second case like those mentioned in the papers had died a month ago of acute congestion of the brain. He would class one of Dr. Graham's cases as a pemphigus. Dr. Stelwagon's first case is typical, and the only phase to which he is willing to accord the name dermatitis herpetiformis, and protests against impetigo herpetiformis being entered under this term.

Dr. Fox said he had seen and treated Dr. Stelwagon's second case, and it had shaken his faith in the identity of these cases. It illustrated how a disease may pass through different phases, and have the features of one disease at one time and of a different disease at another. When first seen this case was erythematous without the bullæ or vesicles which had previously been present.

Dr. Heitzmann said that twelve years ago, he had described a case of impetigo in a non-pregnant woman, but which turned out to be a pemphigus in its later stages. It had been considered a disease exclusively belonging to the puerperal state; Kaposi had since, however, described a case in a man. When Duhring included it in his disease he had been shaky about the correctness of it. He had seen a case with his son which had been called pemphigus, but which they agreed was a true case of Duhring's dermatitis herpetiformis; but if impetigo herpetiformis was included in the term he must disagree.

Dr. Shirwell had seen several cases of a typical nature and had found diabetes present. Under anti-diabetic treatment the eruption had improved, and he thought examination of the urine should not be overlooked.

Dr. P. A. Morrow then read a paper on

THE RELATIONS OF PAPILLOMA TO SYPHILIS AND TUBERCULOSIS OF THE SKIN, WITH REPORT OF A CASE.

Papilloma is a term which has been applied to a variety of papillary growths possessing characteristics in common, but originating under widely differing etiological conditions. Frambœsia may be taken as the clinical type of a variety of conditions possessing similar histological characters. The proliferations are more or less allied to the giant granulations of wounds and ulcers, and it is often impossible to determine whether the process be primary or secondary. The case reported presents a rare and unusual development of the lesions. The patient, a male, aged thirty, had enjoyed good health until some two years ago, when his arm was amputated on account of some disease of the bone. When admitted to Charity Hospital an exuberant growth of papillary excrescences of cauliflower form covered the entire nose, both cheeks, right upper lid, and upper lip. They were of soft consistence, becoming dry and hard when exposed to the air, extremely vascular and of deep raw-flesh color. Itching and pain were marked. The lesions resembled condylomata, and corresponded to a case described by Dr. De Amicis as frambœsia condylomatous syphiloderm. He was first treated with mercury internally, ointments, and a powder containing salicylic acid, gr. x., boracic acid, gr. xx., and calomel, ʒ j., under which improvement took place at first, but the growth extended and a variety of different local applications were employed without any permanent benefit. The disease, it was learned subsequent to this time, had begun as a verrucose tubercle on the side of the nose about the size of a pea, about four months before his arm was amputated, and some months later began to increase rapidly in size and extent. The diagnosis of syphilis was excluded by the character of the initial symptoms, the sluggish mode of development, the nature of the inflammatory element, the absence of other symptoms, and the failure of anti-syphilitic treatment.

Lupus verrucosus and tuberculosis verrucosa cutis were suggested. Aside from the evidence of bacteriology it must be admitted that there is strong presumptive proof of a close connection between lupus and tuberculosis. The statistics quoted by Dr. G. T. Elliot, in a recent paper on tuberculosis verrucosa cutis are very significant. They show that a large percentage of lupus patients are tuberculous, or become so. Again, Rhiel and Paltauf admit the resemblance between a form of cutaneous tuberculosis and verruca necrogenica, the origin of which is generally held to be the accidental inoculation of tuberculous material. The identity is also probable from the demonstrated presence of tubercle bacilli in both forms. Lupus verrucosus and tuberculosis verrucosa cutis present many analogies, and do not differ materially in their typical papillomatous features, and an absence of ulceration is common to both. The author is inclined to believe that the case he reports is one of cutaneous tuberculosis. Dr. Elliot examined sections of the growth and found the tubercle bacilli. Furthermore the genesis, evolution, etc., support this view, and it is probable that the disease for which the arm was amputated was tubercular osteitis. Statistics show that primary tuberculosis is quite common in the bones of the forearm and metacarpus. The nose probably became affected by auto-inoculation, and the papillomatous proliferations have developed without pre-existing ulceration, advancing at the periphery, but fresh foci have also developed at distant points. After the diagnosis of tuberculosis was made, injections of iodoform in oil of vaseline were given, and as the patient objects to operation, treatment is directed chiefly to relief of subjective sensations.

Dr. Fox said he had repeatedly seen tubercular syphilides modified by frambœsia or papilloma, but he could not remember to have ever noted the modifying effects of syphilis upon ordinary skin diseases, about which we hear so much.

Dr. Bronson said he had treated the case which was the subject of the paper, and had regarded it as most likely due to syphilis.

Dr. Sherwell took issue with Dr. Fox in regard to the influences of syphilis upon eczema and other skin diseases.

Dr. Heitzmann regarded the tubercle bacillus as settling the nature of the growth in this case, whether it be called lupus or tuberculosis. He had had an inoculated local tuberculosis upon his own finger (verruca necrogenica). He thought there were few dermatologists who did not admit the identity of lupus and tuberculosis. The papillary tumor is not characteristic of syphilis, but, on the contrary, verruca accuminata are non-syphilitic, while syphilitic warty growths are flat.

Dr. Bulkley said he was inclined to accept the identity of lupus and tuberculosis of the skin.

Dr. Robinson said the question of identity in lupus and tuberculosis of the lung was not proven positively. The objection is that lupus had not been produced by inoculation of bacilli.

Dr. H. W. Stelwagon, of Philadelphia, read a paper on

MOLLUSCUM CONTAGIOSUM,

in which he reviewed the opinions as to the contagiousness of the disease which are held here and abroad. He referred to a contribution from Dr. Allen, which he said appeared to prove that the disease has contagious properties, and his own observations, which cover no less than thirty-two cases, have led the author to change his own views on the subject, although he was not able to inoculate the disease.

Dr. Morrow said he had been struck, many years ago, with the fact that molluscum occurred now and then in several children in the same family, but had never been able to trace the contagion. Analogies have been noted between this disease and warts. The cases reported surely point to contagion, still he has held the opposite view, and regards it still a mooted question.

Dr. Sherwell said he had found it an extreme rarity. He saw a number of cases in an institution, a number of years ago, which had altered his views as to its non-contagiousness.

Dr. Robinson believed in its contagiousness, but had never been able to trace its contagion. He had only seen a few cases out of many thousand children examined; while other observers, as Dr. Allen, who probably had not examined so many children, had reported about fifty cases seen at one time. He believes it in reality a parasitic disease.

Dr. Fox said he had made repeated inoculations, but they were all unsuccessful. So far as he was aware, the only successful result was that of Retzius. It was generally found among the poor in asylums, but he had found it, too, in perfectly healthy, well-cared-for children. He had reported twenty-five cases at the first meeting of this Association. Dirt and dampness may contribute toward its occurrence. He had spoken several years ago of the coexistence of warts and molluscum. He thinks them both contagious, and venereal warts are surely so.

Dr. Allen, on invitation of the Chair, said he had recently seen in the Baretta Museum of the St. Louis Hospital, in Paris, a wax model showing a perfectly typical lesion of molluscum contagiosum, which had been produced upon the arm of an infant by inoculation, and it seemed to him that this, together with the successful inoculation by Retzius, was sufficient to prove that the disease may be transmitted by inoculation.

In closing, **Dr. Stelwagon** said he had noted no connection between common warts and molluscum.

Dr. A. R. Robinson read a paper upon the same subject, entitled

THE QUESTION OF RELATIONSHIP BETWEEN LICHEN RUBER (HEBRA) AND LICHEN PLANUS (WILSON).

In the opinion of this writer the presence of dark-red, round, or irregularly shaped flat papules which show no tendency to become vesicles, justify the diagnosis of a lichenoid eruption, but not of the disease lichen planus. For that diagnosis the clinical symptoms must correspond to those of undoubted cases. In some of the cases in which lichen planus has been described as existing in connection with lichen ruber of Hebra, the lesions did not correspond as regards number, situation, grouping, etc., with those of ordinary lichen planus, and consequently the writer is not prepared to accept the diagnosis. Lichen planus may be present years or months without producing any marasmus, or show a tendency to attack the face, hair, or nails, but these parts are not absolutely exempt. All recent observers seem to regard the lesions as inflammatory in origin and not the result of a parakeratosis; but whether the changes depend upon organisms or a neuritis is a subject for study.

Arsenic is not a suitable remedy. Alkalies benefit some cases. If the diseases be similar etiologically, and arsenic be the drug for lichen ruber, the severer disease, then it surely should control the lesions of lichen planus.

According to Hebra's first description of lichen ruber the eruption consists of millet-sized, isolated, conical, bright-red or brown-red, firm papules situated around hair follicles, and covered on the apex with fine, adherent, dry, white scales; not arranged in groups, extending, new lesions continually forming. When papules coalesce the eruption appears as a red infiltrated patch covered with scales, and having a dry, rough, uneven surface. At the periphery characteristic papules are always present. A number of histories of cases reported by Unna as lichen ruber are quoted to show that from the description they do not resemble Hebra's disease excepting in the form of lesion. If such cases as Unna describes are examples of lichen ruber, we are then all familiar with the disease here, for such cases are not rare, and if left untreated do not assume a dangerous form. In lichen simplex the lesions resemble closely lichen ruber, and care in diagnosis is very evident.

In treating lichen ruber arsenic seems to act with certainty, provided the proper dose can be borne, and seems to be the only beneficial remedy.

The author concludes that from the study of the symptoms, lesions, histology, and prognosis there is absolutely no resemblance between the two forms of eruption. Admitting these differences, as it seems to the author we must, two different diseases must be admitted, unless it can be shown that the one form can change to the other, or that there is a tendency to an association of the two forms upon the same person, or that recurrences show variableness as to form.

The whole symptoms and course must enter into the formation of a diagnosis, and must not depend upon the lesion alone.

AMERICAN ORTHOPEDIC ASSOCIATION.

Wednesday, September 19th—Second Day.

Dr. Royal Whitman, of Boston, read a paper entitled

OBSERVATIONS ON SEVENTY-FIVE CASES OF FLAT-FOOT, WITH PARTICULAR REFERENCE TO TREATMENT.

He said: Clinically flat-foot is an affection, which, in the majority of cases occurs independent of local or constitutional disease. The direct cause is overweight or overwork for feet subjected to mechanical disadvantages.

These are, first, the common habit of turning out the toes in standing and walking, an attitude which brings an increased and continual strain on the weakest part of the foot; second, weakness of muscles from disease or deformities caused by improper shoes. Flat-foot, being essentially a dislocation, should be treated as other dislocations, by reposition and retention in the normal position until by exercise and avoidance of faulty position the muscles may regain their normal strength. In ordinary cases such retention can only be accomplished by some form of mechanical support. A brace should be constructed on principles somewhat as follows: It should be elastic, light, and comfortable; should fit the foot perfectly, and should not interfere with its normal movements or the action of its muscles. A steel brace designed on these principles was shown. In conclusion, it would seem that in many instances flat-foot might be prevented by teaching children that the proper attitude for the feet was with little or no divergence of the toes, an attitude which necessitated muscular activity in standing and walking; and, further, by avoiding improper shoes. The correct shoe should have a sole of moderate thickness approximating the shape of the Greek sandal; in other words, wide enough to support the foot and allow the toes to assume the proper position. The paper was illustrated by charts and diagrams, and was discussed by Drs. Taylor, Gibney, Lee, Vance, Ridlon, Moore, and Phelps.

Dr. De Forest Willard, of Philadelphia, read a paper on

OSTEOTOMY FOR ANTERIOR TIBIAL CURVES.

Rickets, although a constitutional disease, dependent upon mal-assimilation and mal-nutrition, yet exhibits its worst phases in deformities of the bones. The deformities are due to the relative preponderance of organic tissues in the bones, and the failure of the formative cartilage cells to produce true osseous cells. During this stage of softening many portions of the skeleton become disturbed, and when earthy salts are again deposited sclerosis results, and the faulty portions are permanently fixed. Anterior tibial curves are among the most frequent of these distortions.

Treatment.—1. Manual straightening and the employment of suitable apparatus. This may be successful in young children, with the bones still springy, but in all other cases it will utterly fail, and time and money will be wasted. Braces are useful in laterally bowed legs, but not in anterior curves.

2. Forcible Fracture. *a.* Manual; *b.* Instrumental.

a. Manual fracture.—A strong surgeon can usually break the bone of a child under three years of age, especially if the knee be brought into use as a fulcrum, but the point of fracture is uncertain. The result is a simple fracture.

b. Osteoclasis.—The osteoclast applied to the thigh is a definite and comparatively certain and exact instrument in determining the point of fracture; but in the leg the sharp tibial edge renders the employment of much force a dangerous procedure as regards the life of the soft parts.

3. Osteotomy. *a.* Simple; *b.* Cuneiform.

a. Simple section of the bone with the osteotome, although it produces a compound fracture, is, practically, almost subcutaneous, and if done with thorough asepsis is rarely followed by suppuration. It is applicable to all except the very worst cases of deformity, since even sharp angles of bone are speedily enclosed in the calus. Suturing of the divided bone is rarely necessary.

b. Wedge-shaped osteotomy is applied to severer grades of deformity. This operation is much more likely to be followed by suppuration, but with strict asepsis such an accident is rare. Plaster-of-Paris furnishes the most convenient form of splint. Osteotomy offers the simplest, surest, and most satisfactory results in anterior tibial curves. Illustrative cases were described and the details of the antiseptic operation were fully enumerated.

Dr. Ap Morgan Vance, of Louisville, Ky., then read

A CLINICAL REPORT OF EIGHT CASES OF FEMORAL OSTEOTOMY

for correction of deformity resulting from hip disease in five of the cases, and knee-joint disease in the remaining three. He advocated the subcutaneous method as being better than the operation by open wound, stating that he would break a man's femur subcutaneously, with as little misgiving as to the outcome, as he would divide the tendo Achillis. All of the cases reported had practically reached adult life, the youngest being fourteen and a half years of age, the oldest thirty-two years. The operation as done by Dr. Vance is somewhat simpler than that described by others, and is as follows (quoting from one of the cases): The patient was anæsthetized and turned upon his right side. A block of marble, well padded, was pressed tightly upward on the inner side as high as the perineum would allow. The chisel was entered just below the trochanter, the edge of the blade being in the axis of the limb. It was then sunk by steady pressure to the bone, then turned with the edge across the bone, and driven, with sharp strokes of the mallet through until its hard substance on the other side was reached and partly entered. The direction was then changed, and the same amount of cutting done in several directions until sufficient weakening had been produced to insure our being able to complete the fracture. Without removing the chisel, the edge of the padded block was placed opposite it and rested on the table, this acting as a fulcrum at the weakened point. The pelvis being fixed by an assistant, a quick and forcible depression of the lower end of the femur completed the fracture. The point he emphasized in regard to the knee cases is, that it is better to correct by a bone section the deformity in a class of cases which had been very unsatisfactory in any other way unless excision is done.

The President exhibited an

OSTEOCLAST

made by Colin, of Paris.

The discussion of Dr. Willard's and Dr. Vance's papers was participated in by Drs. Gibney, Bradford, Moore, Phelps, and Shaffer.

Dr. Henry Ling Taylor, of New York, read a paper on

THE MECHANICAL TREATMENT OF SENILE COXITIS.

By senile coxitis the author understands a rheumatoid affection of the hip-joint occurring in old people, and characterized by pain, stiffness, muscular spasm, and disability; one never showing a tendency to suppuration. It may or may not be associated with similar trouble in other joints. The point made was, that some of the cases which have resisted the ordinary medicinal and dietetic treatment, and in which the hip-joint disorder is of such a grade as to practically incapacitate them from locomotion, may still be very much benefited, and the comfortable use of the limb restored by resorting to mechanical treatment. Two cases, in females, aged about fifty-seven years, were cited. The patients were put in bed with the long traction splint and sixteen pounds extra weight attached, for four to six weeks; then the jointed supporting splint (Dow's) with perineal strap was applied and worn for about two years.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Wednesday, September 19th—Second Day.

Dr. John Roe, of Rochester, read a paper on

INTERNAL ŒSOPHAGOTOMY, WITH REPORT OF SUCCESSFUL CASES.

In treating strictures of the œsophagus that do not readily respond to attempts at dilatation, the author prefers to operate according to a method devised especially for the purpose of avoiding the dangers attending the forcible stretching or tearing of the dense tissue in performing divulsion, and the comparatively deep cutting in the operation of internal œsophagotomy as usually performed, where one or two incisions must yield all the increase in size needed at the seat of the stricture.

They are necessarily cut or stretched into deeper tissue than when the stricture is dilated by the aid of multiple incisions, individually insignificant, because but a fraction of the effect is demanded of each. The stricture itself has more weak points that must yield to subsequent dilatation, and give more rapid results. The histories of several operations, that had proved most successful, were read for the purpose of demonstrating the satisfactory results obtained by this method of operating and dilating

Dr. Beverly Robinson, of New York, read a paper on

DYSPEPSIA AS REFLECTED IN THE MUCOUS MEMBRANE OF THE UPPER AIR-PASSAGES.

In this discussion, the importance of giving proper attention to the condition of the patient's general health was thoroughly demonstrated by the numerous examples cited. This fact is now more thoroughly appreciated by those interested in special branches. The most successful specialists are not always those who made their choice while yet students and strove to adapt their whole course of study, and even their hospital experience, to that choice, but those who have had careful training in general practice first.

Laryngologists, first of all, seek the main cause of trouble, and are always on the lookout for any condition of affairs that may exert the least undue influence. We must see that the patient's general health is at its normal standard, and that no disease of other or distant organs shall remain neglected.

Catarrhal troubles are sensitive to reflex influences whenever other organs are affected to any extent, and whenever the nutrition and general tone of the system is interfered with. Next to local causes, it is a frequent source of the origin and aggravation of catarrhal trouble. Chronic indigestion presents many examples of this, both through reflex influences or by its disastrous effects on bodily nutrition. Cases daily appear where we must first improve these conditions by tonics, etc., for restoring appetite and digestion. Numerous cases presented, where obstinate catarrhal conditions would not yield, and all methods of treatment failed as long as stomach and alimentary canal were out of order. Other cases brought to notice, where the condition of the alimentary canal was proved to be alone responsible for their origin as well.

Dr. Harrison Allen, of Philadelphia, presented a communication on

THE ANATOMY OF THE NASAL CHAMBERS.

Dr. Allen's anatomical demonstration was most concise and thorough. The whole subject was covered systematically, and thoroughly illustrated on all important points by large numbers of prepared specimens and dissections. The field had been broadened by the amount of original work, the result of which was very manifest in his paper. Many points, to which proper attention had scarcely been given heretofore, were emphasized by the abundant material for demonstration. One fact thus treated was the difference in conformation between the right and left nasal cavities, proved both by specimens of bone and in the flesh. Statistics prove perfect symmetry of cavities and septums to be most rare. Deflection to some slight degree is all but universal. Fewer of these are congenital than has hitherto been proved. The habitual position during sleep is one prevalent cause. Illustrated by specimens of skulls, accompanied by statistics which resulted from the examination of large numbers, and others collected by different observers.

Dr. Thomas R. French, of Brooklyn, read a paper entitled

A PHOTOGRAPHIC STUDY OF THE LARYNGEAL IMAGE DURING THE FORMATION OF THE REGISTER IN THE SINGING VOICE.

By means of lantern slides, a large number of instantaneous photographs of the larynx, while in the act of forming different notes, were thrown upon a screen and analyzed in full by Dr. French. One point shown very clearly was the very sudden and radical change in the form of the larynx and position of vocal cords the instant a break occurred, as higher notes were taken one after another, until the singer was forced to change the tone or quality so as to take the note with greater ease, as when forced to change register from chest to head notes. With lower notes the cords were longer, more lax, and less closely approximated. As each higher note was taken, the cords appeared tenser and with more closely approximated edges. Just before the break would occur, apposition of anterior portion of cords formed a stop and allowed vibrations of the posterior portions only. The instant the break occurred there was a sudden change in the shape and appearance of larynx, through different tension of the muscles; cords again separated whole length, approximating their position as shown while taking lower notes of previous register, and following the same changes of tension and apposition of their edges until next break occurred. After both these breaks the cords repeated their former changes, but in a larynx adapted to higher register. The analytical study of these changes should be of great value to thoroughly scientific musicians.

It clearly explained how the cords were spared the excessive strain of high notes, by this break or change of register.

AMERICAN CLIMATOLOGICAL ASSOCIATION.

Wednesday, September 19th—Second Day.

Dr. E. T. Bruen, of Philadelphia, opened the discussion on

THE RELATIVE IMPORTANCE OF DIFFERENT CLIMATIC ELEMENTS IN THE TREATMENT OF PHTHISIS.

Exact statistics on this subject are still wanting, and it is difficult to decide on the relative importance of different climatic elements. Those elements are most important which fortify the body against disease. In disseminated forms of tuberculosis the climatic treatment is often of benefit. No one climate is beneficial to all cases; some improve most on the seashore, others most in the mountains. Sunshine, however, is always beneficial, and overcrowding should be avoided. Sunshine, plenty of fresh air, and purity of the atmosphere, are the important elements in climate for the treatment of phthisical cases. Porosity of soil is of more importance than dryness of the atmosphere; in fact, the latter usually accompanies the former. Equability is not always of importance, as many cases do well where there are sudden changes of temperature. Pure air, abundance of ozone, absence of dust are important, but rarity is not always beneficial, and sometimes positively harmful. The value of rarity of the atmosphere has been overestimated.

Dr. V. Y. Bowditch, of Boston, continued the discussion. The word phthisis covers a variety of diseases, and this is the cause of considerable confusion upon this subject. Elevation and dryness of soil and of atmosphere are important elements in the treatment of incipient phthisis according to most authors. He questions if the value of elevation has not been overestimated. The importance of sunshine, pureness of air, and dryness are too evident to need discussion, and although some cases do well in moist climates, it is the exception. Sea-voyages, however, are often beneficial. He recommends the establishment of sanitariums in proper localities.

DR. F. I. KNIGHT, of Boston, read a paper on

INDICATIONS AND CONTRAINDICATIONS FOR ALTITUDE IN THE TREATMENT OF PHTHISIS.

An out-door life in a pure air is the most important thing in the treatment of these cases. He discusses the residence of such patients at altitudes of from four thousand to six thousand five hundred feet. He thinks such altitudes are not suited to patients over fifty years of age, nor for patients of a neurotic temperament. In many cases where quiescence in the morbid processes exists, high altitudes are beneficial. Patients with large cavities or hectic symptoms should not be sent to high altitudes. Cardiac dilatation, and in most cases hypertrophy, contraindicate high altitudes; murmurs, however, are not always contraindications. Some persons with excessive bronchial irritability do better at low levels.

DR. W. A. JAYNE, of Georgetown, Col., read a paper on

THE CLIMATE OF COLORADO.

There is an exceptional combination in the climate of Colorado of those elements which enable those living there to spend most of the time in the open air. Those first coming there usually experience increased action of the heart, and sleeplessness and nervousness; but these symptoms usually pass off in a short time. Sometimes faintness is also experienced. While the value of the purity of the atmosphere cannot be overestimated, he attributes its chief value to the rarefaction.

DR. SOLLY opened the discussion on the subject of

ALTITUDE AND CLIMATIC CONDITIONS IN THE TREATMENT OF CONSUMPTION.

He disagreed with Dr. Bruen that altitude was of little value comparatively in the treatment of phthisis. He thinks where there is lack of chest expansion altitude is most beneficial. He does not think active conditions, ulcerations, and hectic are always a contraindication. He has seen cases of ulceration in laryngeal phthisis which have healed in Colorado.

DR. DENNISON, of Denver, thinks that altitude is an important element in treatment of phthisis, not only on account of the rarity of the air but also on account of the cold. The cold air, breathed into the lungs and raised to the temperature of the body, has a mechanical action in the expansion of the lungs.

DR. KRETZSCHMAR, of Brooklyn, thinks that altitude has considerable influence on the development of phthisis. He believes in out-of-door life, but rather in rest than in exercise out of doors.

DR. FISK, of Denver, spoke of the value of sunshine, and said that a greater percentage is usually found at high altitudes than at low levels. He insists upon a long residence in high altitudes.

DR. W. T. FORD, of Utica, thought that altitude was not an important element in the treatment of phthisis, but that pureness and dryness of air and out-door life are the important elements.

DR. TAYLOR, of San Antonio, Tex., thought that altitude was not, but that dryness was, an important element. He instanced the number of cases benefited by residence in Texas at an elevation not exceeding two thousand feet.

DR. BRUEN, in closing the discussion, said that he did not deny the value of the mechanical aids of a high altitude in certain cases, but what he wished to emphasize was that many cases were not proper ones for the high-altitude treatment.

DR. W. T. FORD, of Utica, read a paper on

AN EPIDEMIC OF CEREBRO-SPINAL MENINGITIS IN CENTRAL NEW YORK.

He instanced several epidemics which seemed, when they came on, to take the place of other inflammatory diseases prevailing at the time. The inferences drawn from nine epidemics were that damp, wet weather and insanitary conditions favored the epidemic, and that dry weather, either cold or warm, was unfavorable to its development.

DR. E. TRUDEAU, of Saranac Lake, sent a communication entitled

AN ENVIRONMENT EXPERIMENT REPEATED,

which was read by DR. A. L. LOOMIS. Former experiments of inoculating rabbits in the lungs with pure culture of the bacillus were repeated. Of six rabbits two failed to become infected, and in two the lesions were only local. From a comparison of these and former experiments, it would seem that the amount of virus injected at one time has a considerable influence on the result. He draws the conclusion from his experiments that the best prospect of success in the treatment of phthisical cases lies in placing them in a condition of favorable environment.

DR. SANSOM, of London, thought that we may now consider the bacillus as the cause of tuberculosis. He believes that tubercular lesions are sometimes curable, as, for example, tubercular meningitis. He believes the danger in such cases lies not so much in the presence of bacilli as in the presence of septicæmia, which is so apt to be present.

DR. WILLIAMS, of New York, suggested that the difference in virulence of cases, not only of tuberculosis but of cholera and other infectious diseases, may depend upon some difference in the germs themselves, and that some experiments should be made with reference to this point.

DR. C. C. RICE, of New York, presented the

REPORT OF THE COMMITTEE ON MINERAL SPRINGS.

An attempt was made to make some classification of the mineral springs with reference to their therapeutic results. Over eight hundred letters were sent out to the different springs. The answers, in the majority of cases, were unsatisfactory, often unscientific, and answered by hotel-keepers or owners of the springs. Tables were given of the uses and the mode of using the waters. To obtain more satisfactory results, it is recommended that a committee of two persons in each State be formed, and that further investigations be carried on. As an indication of the work to be done, it may be stated that nine-tenths of the mineral waters of the United States are still unanalyzed.

DR. WILLIAM PEPPER, of Philadelphia, opened the discussion with remarks on the

THERAPEUTIC VALUE OF MINERAL WATERS IN GASTRO-HEPATIC DISEASES.

This country is richer than any other country in mineral springs, but the reliable analyses of these springs are very few. He emphasized their value in removing effete material in these diseases. Gastric atony, catarrh, dilatation, congestion of liver, gall-stones, abdominal engorgement are all benefited by their use. It is important to consider the time and mode of administration. The diet and the exercise to be taken during their administration are extremely important; he recommends when to be given with the water treatment.

DR. A. H. SMITH, of New York, made some remarks on

THE USE OF MINERAL WATERS IN URINARY AND ARTHRITIC DISEASES.

Those waters containing the least amount of mineral matter are the ones most beneficial—examples of which are the Gettysburg water and Clysmic. The frequent use of mineral waters containing much solid matter by persons in health irritates the kidneys and may even produce disease.

DR. W. C. VAN BIBBER, of Baltimore, made remarks on

MINERAL WATERS IN MALARIAL DISEASES.

He recommended the water of the Greenbrier White Sulphur Springs, to be used from two to four weeks.

Two to four glasses should be taken before breakfast; a bath in the middle of the day with a couple more glasses of water, two more in the afternoon, and two more before retiring. He has seen most excellent results. He also recommends some of the Saratoga springs for cases of chronic malaria.

AMERICAN PHYSIOLOGICAL SOCIETY.

WEDNESDAY, SEPTEMBER 19TH—SECOND DAY.

DR. H. S. SEWALL, of the University of Michigan, read a paper prepared by himself and ELMER SANFORD, B. S., entitled

A PLETHYSMOGRAPHIC STUDY OF THE VARIOUS CHANGES OF VOLUME PRODUCED IN THE HUMAN FINGER AND ARM BY VARIOUS METHODS OF ELECTRICAL STIMULATION.

The varying volume of the finger and forearm corresponding to the vaso-motor changes was recorded by use of the plethysmograph. The electrical stimuli were applied directly to the finger, or, in the case of the arm, to the elbow, over the seat of the ulnar nerve. The following forms of stimuli were used, viz., the induced current produced by Bohr's pegged cylinder interrupter, the continuous galvanic current, the interrupted galvanic current, the "gliding" current—*i.e.*, one the intensity of which can be rhythmically decreased or increased at will. The special apparatus employed for this purpose is described in the paper. Only comparatively weak currents were used. The effects obtained were simple dilatation, simple contraction, dilatation followed by contraction, and contraction followed by dilatation.

In general, the form of the current had little influence on the result. The constant galvanic current was an exception, and usually caused contraction, or expansion followed by contraction. It must be noticed, however, that this current was used in greater strength than the others. The feeble gliding current and feeble induction current showed a tendency to produce contraction followed by expansion.

The effect of a current seemed to be proportional to the strength of the subjective sensation, the sensation being influenced more by changes in rapidity of interruption than by the strength of the current. This being stated, it may be said that there was a distinct relation between the strength of the stimulus and the vaso-motor effects produced. Feeble currents, which give only vague sensations, produced the most expansions or contractions followed by expansions, and the least simple contractions or expansions followed by contractions. With increase of the strength of the current the per cent. of the contractions followed by expansions increased, and finally simple contractions predominated. With interrupted currents dilatation was obtained with currents which were too weak to excite sensations.

No relation was found between the rate of stimulation and the activity of the vaso-constrictor and vaso-dilator mechanisms. A slight difference was found between the influence of the anode and cathode over the vaso-motors; the anode tending to cause simple expansion or contraction followed by expansion, while the cathode produced contraction or expansion followed by contraction. This result is probably due to the increased sensation caused by the cathode. The vaso-dilators appear the more subject to fatigue.

In most experiments a double effect was noticed during stimulation, usually contraction followed by expansion, less commonly expansion followed by contraction. After cessation of the stimulation, hyperdilatation was seen more commonly than contraction.

Several of the facts developed make it probable that the action seen in the experiments was reflex, viz., the results were obtained with weak currents; nearly the same results were obtained from finger and forearm; a latent period of one or more seconds preceded the effect; and the results could be largely predicted from the sensations. It is already known that the volume of one arm decreases when the other is dipped into cold water, and that it is increased when the other is dipped into warm water; and the authors found, in addition, that electric induction stimulation of the face, arm, or leg was followed by a contraction, and then a more persistent expansion of the arm. These results are very suggestive of the semi-pathological phenomena of taking cold.

The authors concluded that the vaso-motor disturbance produced by comparatively feeble stimuli is due, not to a direct influence of the irritation upon the motor mechanisms of the part excited, but to a disturbance of the general vaso-motor system caused reflexly.

DR. BOWDITCH agreed with Dr. Sewall that the results which he obtained were due to reflex action. He said that, in the experiments which he and Dr. Warren had made in Boston, they did not see expansion followed by contraction. Dr. Bowditch was sure that the changes which he and Dr. Warren found were not reflex phenomena. The time preceding the change of volume found by Dr. Sewall strongly suggested that the action was reflex. This interval was much shorter than that found by Dr. Bowditch and Dr. Warren.

DR. WARREN stated that in the experiments which he had made with Dr. Bowditch the nerve was cut, and no change was seen in the other leg; therefore their results could not have been reflex.

DR. ISAAC OTT, of Easton, Pa., read a paper on

FEVER.

Dr. Ott's results were based on experiments on animals. Of eight experiments upon the lower animals, five showed increased production of heat, and three showed diminished heat production, while heat dissipation was increased in four and diminished in four. The fever was produced by injecting putrid blood subcutaneously and by the jugular vein. The fever was studied for two days, during day and night. Dr. Ott believes fever to be due to an agent which, either developing within or coming from without, deranges the harmony of the thermotaxic, thermogenic, and thermolytic apparatuses, so that the metabolism of the food and tissues is increased; and this incr변ment may equal that produced upon a full supply of food, but usually is greater than that generated upon a restricted amount of nutriment. The fever agent so alters the relation of heat production to heat dissipation that a high temperature ensues. Exceptionally fever is due to an alteration of the balance between heat production and heat dissipation resulting from a diminution of heat production and heat dissipation. The four basal centres play the most important part in the production of fever.

DR. H. C. WOOD said that the word fever is often used as if it only meant a rise of temperature above the normal, while clinical experience shows that there may be an increased metabolism without a rise of temperature. The temperature of the body depends on the relation of the heat production to the heat dissipation. In fever there is a general increase of metabolism, but this increased waste is often accompanied by a lower temperature, the heat production being masked by the increased heat dissipation. In advanced typhoid not infrequently a sudden fall of temperature is seen. This is no sign, however, that heat has ceased to be produced; it is much more probable that it has been rapidly thrown off. If by fever is meant an alteration of tissue metabolism, we may have fever with high or with low temperature. Dr. Wood urged the danger of carrying over to man the conclusions reached by experiments on animals. He said that there was little reason to suppose that the heat-regulating apparatus was as perfect in fur-bearing animals, for instance, as it was in man.

DR. WILLIAM WELCH remarked that, though clinically it was necessary to take the temperature as a criterion of the febrile state, in physiological work the results of direct calorimetric methods ought always to be controlled by indirect calorimetry, *i.e.*, by the study of the gaseous exchange. He said that the changes caused in an animal by the injection of putrid fluids could not be regarded as true fever. He had seen in his experiments an unaccountable increase and decrease of temperature when putrid fluid had been used, and he doubted whether results obtained by this method were reliable. He said that he knew of no way of producing a fever, such as is seen clinically.

DR. H. U. MARTIN inquired whether in hog cholera, for instance, the temperature rose as much as it was often seen to do in man.

DR. WELCH said that it did not; and when cultures of hog cholera were injected into a rabbit the most conflicting results were obtained.

DR. HARE stated that in two sets of experiments made at different times, in which peptones from the same specimen of pepsin was injected into animals, he had found at one time a rise and at the other a fall of temperature.

DR. BOWDITCH called attention to the fact that though the quantity of food ingested undoubtedly influenced heat production it nevertheless caused no rise of temperature. On the other hand, in fever the high temperatures often seen cannot result from heat production alone, for the metabolic activity would have to be many times that of health, and the whole body would have to be burnt up to supply such an amount of heat. Unquestionably the lessened heat dissipation plays a most important part in the elevation of temperature seen in fever.

DR. R. H. CHITTENDEN, of New Haven, Conn., read a paper entitled

THE INFLUENCE OF ACETANILIDE OR ANTIFEBRIN ON PROTEID METABOLISM.

The paper was based on experiments made by H. C. Taylor, Ph.B. The observations were all made on one healthy man. It is to be remembered that the disease may make the organism more susceptible to the influence of the drug.

The young man was first brought into a condition of nitrogeneous equilibrium, which condition was maintained by appropriate diet throughout the experiment. The excretion of nitrogeneous matter was arrived at by determining the amount of urea and uric acid in the urine. The drug was given in gradually increasing doses, for nine days, at a time which would not interfere with digestion, until a slight approach to cyanosis was seen. In all 13.3 grains were administered. No disagreeable effects on the digestive, circulatory, or respiratory system resulted, though there was decided blueness of the lips and lividity of countenance.

A second experiment on the same man was made in which 13.9 grains of the drug were given in seven days. This also resulted in the same approach to cyanosis. Weinstein considers that aniline is set free from the acetanilide and that it causes a decomposition of the hæmoglobin. The writer was uncertain as to whether this was the cause of the cyanosis observed.

In these experiments the excretion of urea was not greatly affected. In both, however, a slight increase was seen. The writer therefore concluded that acetanilide slightly increases the excretion of urea, but does not greatly increase proteid metabolism. This is also indicated by the lack of corresponding changes in the amount of sulphur excreted. The excretion of phosphorus was also unaffected. The excretion of uric acid was decreased, and this appeared to be the most characteristic effect of antifebrin, so far as its influence on proteid metabolism is concerned. The amount of water excreted was apparently uninfluenced.

Owing to the absence of the writer the discussion of the paper was omitted.

MR. VICTOR HORSLEY, F.R.S., of London, Eng., described to the Society some of the experimental work which he and Mr. Gotch, of Oxford, had done upon

THE PART TAKEN BY THE CELLS OF THE CORTEX AND OF THE SPINAL CORD IN PRODUCING THE MUSCULAR CONTRACTIONS WHICH ARE SEEN TO FOLLOW STIMULATION OF THE CORTEX CEREBRI.

When the cortex is stimulated one sees a tonic contraction of the muscles, which usually lasts while the stimulation is continued. On removal of the stimulus the tonic contraction ceases, and is followed by a clonic contraction. It was thought that if one could study the electrical changes occurring within the pyramidal tracts at some point between the cortex and the spinal centres which correspond to the limb stimulated, one might ascertain whether both the tonic and clonic contractions were due to impulses coming from the cortex. With the aid of non-polarizable electrodes and an excessively delicate capillary electrometer, this was actually accomplished. The spinal cord was cut through at a point above the region containing the centres of the lower extremities and the electrodes applied. After the demarcation current resulting from the injury had been compensated, the cortex was stimulated, and the changes exhibited in the height of the mercury column of the electrometer were recorded photographically. The record showed that in exact parallelism to the mass movements of the convulsed muscle there was a persistent negative variation, lasting as long as the stimulus was applied, and that this was succeeded by clonic or rhythmical variations after a short latent period had elapsed. The variations recorded were not dependent upon a general disturbance of the spinal cord, resulting from the stimulation of the cortex, as was proved by the fact that the column of mercury did not change its position at all when the cortical centres for the upper extremities were stimulated. The negative variations in the pyramidal tract thus revealed the character, and in part the amount, of the influence sent from the cortex down the pyramidal tract. These experiments showed that both the tonic and clonic contractions seen in cortical discharge was the direct result of the activity of the cells of the cortex, and that the spinal cord possessed no autonomical influence on the character of the Jacksonian fit.

DR. H. C. WOOD asked whether the clonic stage was always present in epileptic convulsions.

MR. HORSLEY replied that in experiments it was rare to see tonic contractions without following clonic contractions, but that it was possible that this might be observed clinically. Further, Mr. Horsley said that in their experiments Mr. Gotch and himself had failed to discover changes in the nerves when the cortex was stimulated. They thought that it was probable that the instrument was not sufficiently delicate to indicate these variations. The cross-section of the cord is so much larger than that of the nerve that there is obviously more opportunity for the electrodes to be influenced.

In reply to a question from Dr. Bowditch, Mr. Horsley said that when the nerve was directly stimulated a change was seen in the electrometer, even when a single induction shock was used.

DR. BOWDITCH remarked that the failure to get a change in the nerve when the cortex was stimulated suggested that the influence from the cortex was dispersed and partially lost in the cord.

DR. HORSLEY said that he thought this to be the true explanation, believing the loss to be due to resistance in the anterior cornual corpuscles.

DR. BOWDITCH, after thanking the reader of the paper in behalf of the Society, expressed his belief that the method which had been described by him might be of great service in tracing the course of nerve-fibres.

Dr. Warren Plimpton Lombard, of New York, read a paper on

THE NATURE OF THE KNEE-JERK.

As the result of his experiments, the writer concluded that the theory that the knee-jerk is a wholly peripheral process is untenable, because it does not satisfactorily explain the dependence of the phenomenon upon the spinal cord. He could find no proof that muscle-tonus is continuous, and no proof that the irritability of a muscle to mechanical stimuli is dependent on its tension, both of which assumptions are necessary to the theory that the muscle is stimulated directly by the blow on its tendon. On the other hand, he discovered that the size of the knee-jerk is independent of the tension of the muscle, and that reinforcing actions do not alter the tension or irritability of muscles. In addition to this, he discovered that the blow on the ligament, whenever the subject is the least excited, calls out a contraction of the flexor as well as the extensor muscles of the knee. This contraction of the flexors is not due to direct stimulation of the muscles by a strain brought upon them by the sudden extension of the knee seen in the knee-jerk, because it sometimes occurs actively when the knee has extended very little, and because, although the irritability of the muscles does not alter within short intervals of time, the contraction of the flexors may be present or absent, regardless of the amount to which the knee is extended. These results seemed to the writer to be only explicable on the theory that the knee-jerk is a reflex act. The only argument against this theory is the shortness of the time occupied by the process, and this argument, though important, is far from convincing while our knowledge of reflex times in general is so meagre.

Dr. J. W. Warren, of Boston, read a paper on

THE KNEE-JERK PHENOMENA.

The paper treated of the time relations of the reinforcements of the "knee-jerk." It was the extension of a paper presented by Professor Bowditch to the National Academy in April, and was based on experiments made at the physiological laboratory of the Harvard Medical School. The plan of research was to record a number of knee-kicks with and without a reinforcing squeeze of the hand, in response to a signal given at varying intervals from the blow on the tendon. The comparison of these "normal" and "reinforced" kicks (some twelve thousand having been taken from eight different persons) was exhibited in the form of curves. It was shown that, when the voluntary muscular movement occurred within a few tenths of a second of the blow on the tendon, the result is usually an increase in the size of the kick; but, as the interval becomes greater than 0.3 to 0.4 of a second, the reinforcement becomes negative, the kick growing smaller. This inhibition of the kick persists for some time, but there is a gradual return to the normal, so that for intervals of 2.0 seconds and more the reinforcing squeeze has no marked effect. In these tabulations those kicks were omitted for each interval where the reaction-time of the squeeze was so great as to be suspicious. Another set of curves (made up from observations on two persons) was shown, in which all the reinforcements were grouped with reference to the size of their reaction-times and not according to the intervals. Here again it was shown with greater exactness that, when the reinforcing squeeze is so given that only a brief space of time lies between the act and the blow on the ligamentum patellæ, the result is an increase of the kick, a positive reinforcement; but this gives place to a decrease of the kick as the intervening space of time grows larger, *i.e.*, the reinforcement becomes negative. These curves are of the same character as those resulting from a comparison of the intervals alone. Dr. Warren was inclined to consider that his results were due to a true reinforcement and a true inhibition of the quadriceps, and not to the action of antagonistic muscles; but admitted that the method used, of recording his experiments on a slow cylinder, did not permit a complete exclusion of such an explanation, although a quicker cylinder would doubtless show the influence of the antagonistic muscles if such were in play.

Dr. H. C. Wood said that to disprove one theory was not to prove another. In case Dr. Lombard was right in his conclusion that the tonus theory of the knee-jerk is incorrect, it was no proof that the knee-jerk is a reflex act. The shortness of the time involved in the process must not be lost sight of. The knee-jerk is quicker than true reflexes. It may be that it is not a reflex act, and yet is not connected with the tension of the muscle. It is not unlikely that the irritability of the nerves in the sarcolemma of the muscle is dependent on the spinal cord, and that the knee-jerk is dependent on the irritability of these nerves. Absence of change in the muscle is no proof of absence of change in the nerves.

Dr. Bowditch said that the irritability of the nerve is not lessened for a considerable time after section, yet the knee-jerk is lost immediately.

Mr. Victor Horsley, F.R.S., of London, Eng., said that he thought the evidence to be in favor of the idea that the process is reflex. Apparently, the change from the knee-jerk to clonus is a gradual one, and involves no new process. If this be true, since the oscillations seen in clonus are eight to ten in the second, and the vibrations sent out from the lower centres of the spinal system are also eight to ten in the second, it would seem that both the knee-jerk and clonus were due to the action of cells within the cord. Since the most active knee-jerks are obtained when the spinal cord has been divided high up, Mr. Horsley thought that the reinforcements of the knee-jerk could be best explained as dependent upon a temporary loss of inhibition of the lower centres. He said that we need more information before we can arrive at any conclusion. Mr. Horsley suggested the advisability of studying these phenomena on individuals in the initial stages of anæsthesia. He thought that through such experiments it might be possible to prove the knee-jerk to be a reflex act.

Dr. Lombard said that he thought that the contraction of the flexors, which he had called attention to, threw doubt on Dr. Warren's idea that the small reinforcements which he found were due to an inhibition of the knee-jerk. He admitted that, in experiments which he had seen Dr. Bowditch make on Dr. Warren, he had been unable to detect any flexor contraction, but thought that it might nevertheless have been present, because, in his own curves, he had found flexor contractions recorded in experiments in which he had not seen any indication of a contraction of the flexors. He stated that he was inclined to believe the reinforcements of the knee-jerk to be caused by an overflow of nervous energy from the centres producing the reinforcing action. He called attention to the wide occurrence of associated movements which can be best explained as due to such an overflow. He said that the reinforcement of the knee-jerk appeared to be the result of a positive, and not a negative, influence, and even if it could be proved that there was a withdrawal of inhibition at the moment the reinforcing act was performed, the overflow must also be considered as playing an important part in causing the reinforcement.

Dr. Warren said that he doubted that the small reinforcements which he found were due to a contraction of the flexors, because, as far as he could judge, little or no contraction of the flexors had occurred in his experiments.

Dr. Bowditch said that there was great need of more accurate information concerning reflex times in general. He thought that if a muscle could be stimulated by a strain on its tendon, such reflexes of the muscles of the leg must be called out very frequently, and it might well be that the time involved in the process was less than that of many other reflex acts. He suggested that the overflow theory might explain the negative reinforcements described by Dr. Warren, on the idea that an overflow may be followed by a draining off of nervous energy, so that the process acts at one moment as an overflow and at the next as the reverse. He said that he was inclined to the belief that the knee-jerk is a reflex act, and that the reinforcement is due to an overflow from the centres developing the reinforcing act.

Dr. T. Wesley Mills, of Montreal, Canada, presented a communication, entitled

THE INFLUENCE OF THE NERVOUS SYSTEM ON CELL LIFE.

Dr. Mills expressed the belief that all the nutritive processes of the tissues are dependent upon, and controlled by, the nervous system, the same as function, which is only a phase of the general metabolism, and on account of the scope of the action of the nervous system he would term it a "constant neuro-metabolic influence." The arguments advanced by Dr. Mills to prove the presence and extent of this influence cover so wide a field that no short *résumé* can do them justice.

GENERAL SESSION.

Thursday, September 20th—Third Day.

The closing session of the Congress was held in the Army Medical Museum, which was tastefully decorated for the occasion.

Dr. John S. Billings delivered

THE PRESIDENT'S ADDRESS.

Gentlemen of the Congress: Our articles of confederation require that the President shall give an address. In endeavoring to comply with this regulation I must ask your indulgence, for, while I think I have something to say, I cannot give you such a discourse as would befit the audience, the occasion, and the subject.

The prominent characteristic of the great majority of the societies composing this Congress is that their members have, as a rule, been chosen because they have either made some valuable contribution to medical literature, or have, in some way, rendered aid to the profession; in other words, they are supposed to be men whose labor and thought have not been confined to their own interests, or to those of their own patients. It may, therefore, be assumed that you are all interested in medical science, not merely as a means of giving new modes of diagnosis or of treatment, but also for its own sake, for the sake of knowing, for the pleasure of investigation, and in the hope of helping others, and that, while the majority have devoted themselves more or less to special branches, they have not, in so doing, lost interest in what may be for the general good of the whole profession.

I am here as the representative of the medical departments of the general government, which has need of the best knowledge of all the specialties, and is beginning, in its turn, to do something for each.

The physicians in the government service are all general practitioners, and are expected to have such an education and training as will fit them to deal, alone and without consultation, with the diseases and injuries to which men, women, and children are liable. You have been, and still are, their teachers—in the lecture-room and the hospital before they entered the service—in your text-books, monographs, and contributions to journals or transactions which follow them to their widely scattered posts of duty. They are your warm friends; the more you discover, the greater your skill, the more recognition which your work receives, the better they are pleased.

Within the last twenty-five years the general government has, in its turn, done something for medicine and for you, by founding and maintaining a medical library and museum in Washington under the direction of the Medical Department of the Army.

I have had occasion several times to call attention to the library, which no doubt is that part most immediately useful to physicians, and which has attracted most attention. To-night I propose to speak of the other branch, in whose proper development it is desirable that you should take an intelligent interest, and after giving a brief sketch of the development of modern medical museums we will consider more especially our own national medical collection as it is, and as it ought to be.

The origin of collections of objects of natural history was possibly, as suggested by Beekman, the custom of keeping curious objects in temples; but we have no record of the formation of any collections, specially connected with anatomy or medicine, before the sixteenth century. It is true that human anatomy had been introduced in the schools by Mundinus in 1306, and that no doubt in Bologna, in Paris, and a few other places a skeleton or two was preserved for purposes of instruction; but alcohol was unknown as a preservative before the end of the fifteenth century, anatomical details were of no interest until Vesalius had stirred up controversy with the Galenists, and injected preparations were not thought of until after Harvey's announcement, in 1628, of the discovery of the circulation of the blood.

The introduction of the use of the microscope at the beginning of the seventeenth century, and the collections of preparations for use with this instrument made by Leeuwenhoek and Ruysch, gave a powerful stimulus to formation of museums of this kind. The most famous of these collections was that of Ruysch, purchased in 1717 by Peter the Great, and sent to St. Petersburg. Ruysch was practically the first to prepare injected anatomical specimens for permanent preservation, and, if the stories told of his work are true, he made preparations which have never been surpassed. His museum was a very ornamental one, the bones and skeletons being arranged in various devices, the plants in bouquets, while scattered through the whole were beautifully engrossed sentences from the Latin poets.

The most famous medical museum in the latter half of the eighteenth century was that founded by Fontana, at Florence. This still exists, filling a series of rooms, and consists mainly of wax preparations, beautiful to look at, but inaccurate, and of little scientific value.

During the first half of the present century a number of private collections were formed by anatomists, pathologists, and surgeons. Most of these have become public collections, either by gift or purchase, and the rest have been dispersed or destroyed. There is not in existence, at the present time, any large collection of specimens pertaining to human pathology which is the property of an individual, and is at all comparable to those made by John or William Hunter, Astley Cooper, Howship, Liston, or others. Commenting on this fact Sir James Paget writes me that he does not know of any large private pathological collection, and that he believes the change to be entirely for the better.

The necessities of modern progress in anatomy, physiology, and pathology, have led to the creation of medical museums in all parts of the civilized world. In most of the continental capitals these are connected with universities supported by the State. In Great Britain and in this country they are, as a rule, connected with private, or semi-private institutions for medical teaching. This difference is connected with the relative position which medicine holds in the educational machinery of the State in different countries. Where medical education is furnished by institutions directly supported by the government, the museums, which are a part of the apparatus required, are, of course, also supported by the government.

Evidently the city having the most valuable aggregate of anatomical and pathological specimens at the present time is London, which contains the collections of the

Royal College of Surgeons, of St. Thomas', Guy's, St. Bartholomew's, St. George's, and other hospitals, and of University College, the College of Physicians, and others. The oldest public anatomical museum in London is probably that of St. Bartholomew's, which, in 1726, had a room set apart for the purpose under the charge of John Freke, and which received the private collection of Abernethy. The most important medical museum in the world, and the one which has exercised the greatest influence in giving direction to anatomical and pathological studies, and in serving as a model for the formation of other collections is undoubtedly that of the Royal College of Surgeons of London, the foundation of which was the collections made by John Hunter, purchased by the government in 1799. In one sense it is not a government institution, the funds from which it is now supported not coming directly from government grants; but in another sense it is truly such, since the College may be looked upon as an agent of the government having special charge of matters connected with medical education, as it is the principal examining body for those proposing to practise surgery in Great Britain.

The great value of the Hunterian collection lies in the breadth of its scope, which includes every branch of medical science; but it is pre-eminent in illustrations of human morphology and its abnormities. The museums of the great hospital medical schools are relatively richer in the department of pathological anatomy, specimens of which they have greater facilities for obtaining. Among these there is, of course, a certain amount of duplication of matters of interest; but no two pathological specimens are precisely alike, and the question discussed in the Paris school one hundred and fifty years ago, viz.: "An pro distinctis ægris ægritudines diversæ?" is one that often occurs to a curator as he examines new specimens which differ but little from those already in his collection, but which do differ in some respects, and with regard to which he must decide as to whether, upon the whole, they are worth the trouble and cost of preservation.

Edinburgh and Dublin have also each large and valuable collections pertaining to anatomy and medicine.[1] In Paris the medical museums are those of the Faculty of Medicine, including the Musée Dupuytren, devoted to pathological anatomy, and the Musée Orfila, devoted to human and comparative anatomy, materia medica, natural history, and instruments and apparatus.

Professor Léon Le Fort, to whom I am indebted for data with regard to these collections, remarks that a large proportion of the anatomical specimens of the Orfila museum come from candidates who take part in concours opened for positions connected with the anatomical teaching of the faculty—such as prosectors, demonstrators, etc., each candidate being required to furnish from ten to thirty specimens.

The medical museums of other European countries are connected as a rule with universities, and it is to be remembered that in these the different branches of medical instruction are each both more specialized and more comprehensive than is the rule with us. The professor of anatomy, of physiology, of pathology, has each his own building or institute, and, therefore, each his own museum; and unless this fact be held in view, comparisons between Continental and English, or American, medical collections may give very erroneous results.

With regard to the museums connected with American medical schools I will say little. I am aware that in so doing I put aside a splendid opportunity to enlarge upon the general superiority of all these collections and the peculiar excellences of each, but I think that you all know as much about these as I do, and there is time only for details with regard to the one American museum in which I am specially interested. I will say only that the best museum connected with a medical school in this country is the Warren Museum, in Boston, and that the history of the collections of wax models, upon which several of our museums have expended large sums of money, is very instructive as to how not to do it.

So far as mere number of specimens is concerned, our own national medical collection is one of the eight largest in the world, and is increasing more rapidly than any other.

This collection, known as the Army Medical Museum, owes its inception to Dr. William A. Hammond, one of whose first acts after becoming Surgeon-General, in 1862, was to issue a circular stating that, "as it is proposed to establish in Washington an Army Medical Museum, medical officers are directed diligently to collect and to forward to the office of the Surgeon-General, all specimens of morbid anatomy, surgical or medical, which may be regarded as valuable; together with projectiles and foreign bodies removed, and such other matters as may prove of interest in the study of military medicine or surgery."[1] By the end of the year over a thousand specimens had been collected, and the catalogue printed in 1866 showed that it contained 7,716 specimens. It is not my purpose in this address to trace the history of its development; that must be done elsewhere. It has recently been placed, with the Library, in a conveniently arranged fire-proof building, and on the first of July last contained over 15,000 specimens, besides those contained in its microscopical department, divided as follows:

Comparative Anatomy	1,689
Pathological	8,354
Medals	384
Microscopical Specimens	10,416
Normal Human Anatomy	2,961
Instruments and Apparatus	814
Microscopes	141
Miscellaneous	835

Besides these there are 375 specimens pertaining to normal human anatomy and 726 to pathological anatomy, which are in what is called the provisional series.

It is not, however, by number of specimens that the importance and value of museums of this kind can be judged; and in this case such a comparison would give an exaggerated and erroneous idea of the value of this collection. My object in this address is not to boast of what we have, but to indicate what we want; to point out what a National Medical Museum, arranged to meet the wants and interests of this country, should be, should have, and should do, and to suggest some of the ways in which this is to be brought about.

At first the Army Medical Museum was limited to military medical subjects, but of late years its scope has been greatly broadened, and is now nearly the same as that of the Royal College of Surgeons. It includes human anatomy, physiology, pathology, somatological anthropology, instruments and apparatus, and illustrations of methods of teaching connected with special departments of practical medicine. It does not at present include hygiene or materia medica, except in their immediate relations to the military medical service, and this for reasons which will be stated presently. That our National Medical Museum should be broad and comprehensive in its scope there can be no doubt, its requirements in this respect being quite different from those of collections formed and used more especially for the purpose of teaching medical students. The most practically valuable of these last are those formed by individual professors to suit their own specialties and methods of teaching. They need not, as a rule, be large. I may even say that they should not be large; for the labor of properly preserving a large collection is great, and the student, with his limited time and want of knowledge of what to look for, can examine but few specimens so as to profit by them. For the same reason specimens of rare abnormities, of double monstrosities, etc., are of little use in ordinary medical teaching as given in this country, and are not specially desirable in the museums of our medical schools.

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[1] I am indebted to Sir James Paget for the information given with regard to the greater number of the British museums. I had originally intended to attempt to obtain such data only from four or five of the largest; but on sending my little list of questions to Sir James, he took such a kindly interest in the matter as to send a copy of these queries to a number of other museums, with the request that they might be answered.

[1] Circular No. 2, Surgeon-General's Office, Washington, D. C. May 21, 1862.

You may have noticed that, in speaking of the scope of our museum, I said it included "human anatomy." This phrase does not mean that it has no specimens illustrating the structure of other animals—for it has many, and needs many more; but it means that in this department its main purpose is not to make comparative anatomy an end to itself by exhibiting all known variations in structure throughout the animal kingdom as a basis for their study in relation to development and environment, causation, and results. In other words, it is not an anatomical museum, but a medical museum. The broad field of general biology, including natural history and comparative anatomy, will ultimately be covered by the National Museum, and in our medical collection it will be quite enough to illustrate human anatomy fully, using so much of the structure of the lower animals as will be useful in explaining why certain parts of the human body are thus, and so, and not otherwise. No sharp line of distinction can be drawn between the field of work of the general, and that of the medical, museum. So far as morphology is concerned, they must necessarily overlap somewhat, since both want a certain number of the same specimens, although using them to illustrate different points of view.

The medical museum should possess a series of specimens showing the normal anatomy of the domestic animals, or of animals used in experimental pathology, pharmacology, or physiology, as a basis for comparison with abnormal or pathological specimens derived from the same animals. It is in the section of embryology, illustrating laws of heredity and development, that specimens from the lower animals are most interesting, and this is especially the case in the study of human abnormities and monstrosities. It is quite possible that to some anatomists it may seem that no limitation should be placed to the scope of the museum in this direction, for it is easy to trace some connection between any variation in structure in any animal and some structure, normal or abnormal, in man, but the limitation is placed, with reference to the work of the National Museum, so as to secure the best results.

The kind of specimens most valued for illustrating anatomy in a museum is now very different from what was sought for in the first half of this century. Dried and varnished dissections, showing blood-vessels, etc., are now looked on as nearly useless, and are kept only as historical relics. Elaborate dissections under alcohol, mounted in opaque dishes, with flat glass covers, and sections of frozen bodies, similarly mounted, are what the student and practitioner most desire to see. In our museum there are some excellent specimens of this kind, prepared under the direction of Professor His, of Leipzig; of Professor Cunningham, of Dublin; and by our own anatomist, Dr. Wortman. These, however, are only samples to show how the work should be done. We require several hundred such specimens to illustrate properly regional anatomy in relation to age and sex, while the possible applications of the same methods to the illustration of visceral displacements, hernias, and deformities of all kinds are boundless. As regards physiology, but little can be done by museum specimens to illustrate function as distinguished from form and structure. The so-called physiological series in the Hunterian collection is a series of organs illustrating variations in different families of the animal kingdom or at different ages; in other words, it illustrates ontogenic and phylogenic development. The thing students or teachers of physiology are most anxious to see in a museum are specimens of instruments and apparatus employed in experimental physiology, or in the measurement of the special work of different organs, or in illustrating lectures on physiology. Illustrations of results obtained in experimental pathology often belong quite as much to physiology; as, for example, specimens of results of Gudden's atrophy method.

The Army Medical Museum has only a beginning of such an anatomical collection as I have indicated as desirable. Like all other museums, it is richer in specimens illustrating osteology than in any other branch of anatomy, simply because such specimens are the easiest to obtain and preserve. We are accustomed to think that human anatomy is nearly exhausted as a field for original research, and that, at all events, every important organ or muscle or nerve has been figured, described, and named. Granting this, so far as the adult is concerned, although it is by no means true even for him, we have still to study the development of each of these organs, or groups of organs, as seen at different ages, and, for some of them, in different races. As fast as these points are seen to be of practical interest, either in connection with diagnosis or the surgical treatment of disease, they are investigated; but an ideal museum should furnish the investigator the means for his researches; and it must, therefore, collect specimens without special regard to what is at present known to be their practical interest. The collection of such series of specimens of each joint, region, and organ, as I have in mind, including sections and dissections at different ages, from the earliest appearance in fœtal life to extreme old age in man, and in many cases in the lower animals, is a slow process. Such specimens, and especially such series of specimens, can only be prepared by a skilled anatomist, and there are few such; hence the formation of our ideal anatomical collection, limited though its scope may be, must be a work of time.

There is ample material and scope for original work for half a dozen skilled anatomists for many years to come to supply the demands of this museum for illustrations of human morphology in its various relations, and it is not desirable to scatter effort over too wide a field.

The pathological section of a medical museum is its main feature, being, as Mr. Flower remarks, the section to which, in the eyes of Hunter and his successors, all others form merely the introduction. It is true that to some physicians specimens in this department seem to have little value; but they are balanced by those physicians whose chief interest in a case of disease is to get a post-mortem. No doubt much of the ancient pathology, and some of that which is quite recent, is comparable to the looking in the dark for a black spot which is not there, but those who despise pathology, and devote their entire attention to symptoms and treatment, err as much on one side as those who talk and act as if a knowledge of pathological anatomy could take the place of clinical experience do on the other. I do not know, however, that the doctrine usually preached, viz., that each man should attain the just mean in his views, is a true one. Certainly it is not the principle on which the universe seems to be constructed; the balance is maintained, not by having everything exactly symmetrical, but by excess in one direction balancing excess in another.

To secure pathological specimens in their most instructive forms for museum purposes requires, in many cases, not only considerable variation from the usual routine methods of post-mortem examinations, but very considerable delay in ascertaining the results. If, for example, we wish the best specimens of the results of cerebral disease, the brain must not be removed and sliced up in the usual manner; it should be hardened *in situ* to a certain extent, and its sections should be carefully considered with reference to their preservation in their relations to each other before they are actually made. There is need of a treatise by a skilled pathological anatomist giving such methods in detail from the modern point of view.

One of the most important sections of our museum is that devoted to microscopy, including normal and pathological histology and photomicrographic work. In the cabinets there are nearly eleven thousand mounted specimens, illustrating almost every field of microscopical research. Many of these were made twenty years ago and more, and were mounted by processes which have not given good results, so that Dr. Gray, who is in charge of this section, estimates that about three thousand will be set aside as worthless; but the rest form a very valuable series, to which additions are being constantly made, and materials for which we are specially anxious to obtain. In connection with this section a series of cultures of chromogenic and pathogenic bacteria is kept up for museum exhibits, and also to illustrate methods of work.

While the great majority of the specimens in a medical museum have some relation to diagnosis, prognosis, or therapeutics, the number of those which are of direct interest to the so-called practical physician is not very great. It includes models and casts illustrating dermatology, morbid growths, the results of amputations, excisions, plastic operations, etc., and instruments, apparatus, dressings, etc., of all kinds. Here also may be classed hospital fittings and furniture, means of transportation for sick and wounded, model cases of instruments, emergency chests, etc. Our medical museum has a fair beginning of a collection of this kind, including over a thousand specimens; but many more are needed to make it reasonably complete. If each medical man who devises a stethoscope, a pessary, a speculum, an ophthalmoscope, or an electrotherapeutic appliance with which he is well pleased, would send a specimen to the collection, its increase would certainly be rapid, and it could always show the latest improvement.

An ideal medical museum should be very complete in the department of preventive medicine, or hygiene. It is a wide field, covering, as it does, air, water, food, clothing, habitations, geology, meteorology, occupations, etc., in their relations to the production or prevention of disease, and thus far has had little place in medical museums, being taken up as a specialty in the half dozen museums of hygiene which now exist.

Our own National Museum of Hygiene, is, as you know, under the direction of the Medical Department of the Navy. It is a very interesting collection of sanitary appliances of various kinds; but it is not well housed, is much overcrowded, and its location is so inconvenient that it receives but few visitors, and, therefore, has by no means the educational influence that it ought to have. It should be provided with ample quarters in the immediate vicinity of the National and of the Army Medical Museums, to both of which it would form a very desirable supplement. In our medical museum, at present, military hygiene only is illustrated, and this only in a few branches, such as hospitals, means of transportation of wounded, etc. As regards materia medica, an exceedingly well arranged collection, including about five thousand specimens, has been formed in the National Museum, mainly under the direction of Dr. J. M. Flint, of the United States Navy. The relations of materia medica to natural history, commerce, and the arts, which are subjects belonging especially to the National Museum, are as close as they are to medicine, and I am very glad that our national collection in this branch is where it is, and under its present management. In the Medical Museum we have a collection showing what is supplied in the way of drugs, instruments, etc., to the medical department of our army, and, as opportunity offers, we shall extend this to include the medical supplies of other armies or services.

The extent to, and manner in, which a medical museum should deal with anthropological and ethnological problems are not questions to be discussed in the abstract with advantage, since the answers must differ greatly according to circumstances. In our National Museums the matter has been so arranged that all material relating to anthropometry, or to real or supposed structural differences in man according to race, are cared for in the Medical Museum, while specimens illustrating manners and customs, implements, weapons, clothing, pottery, etc., are taken charge of in the anthropological division of the National collection.

The Army Medical Museum contains what may seem a large amount of material relating to human osteology, and especially craniology, in its relation to North American ethnology, or the history of the development of different varieties of man on this continent; but it is not actually half large enough to permit of drawing definite scientific conclusions from it. The majority of the crania which it contains have been measured to a certain extent, and the results have been published; but many other measurements are desirable to permit of comparison with series taken elsewhere, and even measurements already made must be repeated by later and better methods. We have been trying some experiments with composite photography and superimposed contour tracings as a means of obtaining typical outlines and dimensions for race groups of crania, and these give promise of good results. If the collections of crania of North American Indians in Boston, New York, Philadelphia, and Washington could be brought together, a very much better average representation of the majority of tribes or groups would be obtained than can be furnished by either of those collections taken separately. By composite photography and tracings, combined with uniform methods of measurement, we can practically bring these collections together, and obtain results nearly as satisfactory as if we had them all in one room. We have also fitted up one large room with instruments and apparatus for anthropometry in its widest sense, including psychophysical investigation, and it is intended to make this a complete laboratory for illustration of methods of work.

In London arrangements have been made to have such an anthropometric laboratory in an outbuilding at the South Kensington Museum. The two things have no connection, and it seems to have been placed there because it would obtain more visitors desirous of being measured and tested than if placed anywhere else. In this laboratory, which is, I believe, essentially the same sort of institution as that arranged by Mr. Francis Galton at the Health Exhibition in 1884, and is planned by Mr. Galton, any person can have the regular series of measurements and tests made upon himself for a charge of six cents. There are difficulties in the way of making a charge for such measurements in a government establishment, and there are also difficulties in undertaking to do such work gratis, chiefly on account of the cost. It is, however, so desirable that it should be done, and the data which such observations systematically carried on for a series of years would be so valuable, not only from a scientific point of view, but for practical purposes in connection with life insurance interests, and very possibly with practical medicine, that we should endeavor to overcome these difficulties in some way, and I think it can be done sufficiently, at least, to stimulate private enterprise in this direction. It is possible that we may yet see in large cities establishments of this kind, directed by skilled and reputable physicians having the confidence of the profession, where not only normal but abnormal conditions can be determined; places where the secretions can be tested chemically and microscopically, ophthalmoscopic and endoscopic examinations of all kinds made, the mode of functioning of muscles and nerves determined, and an authoritative record of the results made for the use of the individual, as evidence of his condition, or for the information of his physician. It would require an already established reputation, and much skill and tact on the part of the director of such a laboratory, with absolute refusal to give prescriptions or advice in any shape, to make it fully successful; but it may be done.

An important feature of our national medical museum should be to show methods of research and of instruction for the benefit of the investigators and teachers of the country. This includes instruments and apparatus, and, to a limited extent, illustrations of the modes of using them and of the results; it also includes diagrams, models, etc., used for illustrating lectures. For example, as soon as Koch's researches became known in this country, physicians, and especially medical teachers who visited the museum, asked if we could show them the apparatus used by Koch and Pasteur in bacteriological work, and eagerly examined the few specimens of cultures on solid media which we were able to exhibit. The anatomist comes to the museum quite as much to see methods of mounting and preservation, as to see the specimens themselves; the physiologist does not expect to see function directly exhibited, but he does hope to find information about kymographs and constant temperature apparatus, and he wants to see whether Kühne's artificial eye is so useful for teaching purposes that he ought to get one to illustrate his lectures.

In what has been said thus far, it is chiefly the utilitarian point of view that has been made use of; but this is by no means the whole matter. No art, and no branch of science should form the sole end and object of a well-balanced life, and there are objects in every large museum which are of great interest, though they appeal rather to the emotional than the intellectual faculties of the spectator. There are many specimens in the Army Medical Museum which I would rather see removed than to lose John Hunter's lancet, which has no scientific interest whatever. So also its collection of between three and four hundred medals and tokens relating to medical institutions or distinguished medical men, or commemorating outbreaks of pestilence or the victories of preventive medicine, is one which should be made complete and fully displayed, though it would not be easy to demonstrate its utility to any one unless he were interested in the history of the struggles and triumphs of the medical profession.

The objects of a medical museum are to preserve, to diffuse, and to increase knowledge. Its conservative function is to form a permanent record of what has been demonstrated and to fix the meaning of terms. Even in my brief experience of thirty years, the terminology of anatomy, physiology, pathology, chemistry, and of most of the specialties has greatly changed, and this not only by addition of new terms, but by the dropping of old ones. To get useful results from the older literature we must know the precise significance of the old words, and, in some cases, the best way to learn this is to examine the specimens prepared by those who used such terms in their descriptions. The specimens in our museum which came from the collections of Professor William Gibson and Dr. Frank Hastings Hamilton are especially valuable, because they were the basis of practical teachings, and should be examined by anyone criticising these teachings.

A large proportion of the pathological specimens in this museum illustrate conditions which now rarely occur, forming a group which it is safe to predict will never be duplicated. It is not only that they were gathered during a great war, but that they illustrate the results obtained when antiseptic surgery, as now understood and practised, was unknown. Never again, I hope, will there be brought together such a collection of the effects of pyogenic micro-organisms on gunshot wounds, especially of bone, as may be seen in its cases.

The museum also preserves, for future investigations, objects whose nature or relations are not understood at the time when they are received, and which occur so rarely that the means of studying them by comparison can only be obtained through such preservation.

Upon the function of a museum as a diffuser of knowledge, as a means of education, it is needless to dwell. That it should also strive to increase knowledge is equally certain. This is to be effected by study and comparison of its materials. The results of such study and comparison of a part of the Army Medical Museum collection have appeared in the volumes of the "Medical and Surgical History of the War." Another part will, I hope, soon be utilized in a study of its collection of human skeletons and crania which has been commenced by Dr. Matthews, of the Army. But a considerable part is as yet only in the stage of agglomeration, and our present business is to collect and preserve, leaving to the future its full utilization.

A medical museum is really used, for purposes of study, by very few persons; but through the teaching of those few its lessons are made known to the whole profession. American physicians in investigating a subject do not, as a rule, think of inquiring as to what museums can show with regard to it, simply because they have not had convenient access to large collections and are not accustomed to make use of them. Thirty years ago we were in much the same situation in respect to medical literature; but as the libraries have grown, desire for bibliographical research has grown also, and I think that in like manner, when we have secured a comprehensive National Medical Museum, it will not only be made use of, but will give a powerful stimulus to the formation and progress of other more special collections elsewhere.

What should be the relation of this central national collection to those formed in different parts of the country, either in connection with medical schools, or with museums of broader scope? Certainly they should help one another, and this can be done in many ways. I do not in the least object to a generous rivalry to do the best work, to have the most instructive and the most artistic preparations. That is a good thing. But I would say to the anatomist of a school, when you have made a preparation which is noteworthy, offer to make a copy for the national collection, where it will be seen by the anatomists of all schools and of all countries. To the pathologist of a medical school I would say, after you have secured type specimens for your own collection, put aside other good specimens for the National Medical Museum, which will furnish you materials for the purpose.

On the other hand, the collections of the National Museum are available for study by any proper person, and its duplicates should be used to aid other museums which may be in special need of them.

In common with several of the largest and most important medical museums, more especially those of the Royal College of Surgeons and of the Faculty of Medicine of Paris, the Army Medical Museum has the advantage of being closely associated with a large medical library which is in the same building, and at present under the same direction. The increased utility and attractiveness which this gives to both library and museum is very decided.

It is true that in some other institutions similarly arranged there has been some grumbling as to the proportion of funds allowed to the museum and to the library, respectively, the museum enthusiast claiming that the librarian would rather have one rare old pamphlet than half a dozen entirely new vertebrates; while the bibliophile is sure that the demand of the profession for access to a full supply of books and journals is much greater than that for access to specimens. I can only say, from my own experience, that one who has charge of a library only, will probably not hesitate to take museum funds, if he can get hold of them, to buy books; but that when one person is responsible for both he will endeavor to give each its fair share of the resources at his command.

If we had to choose between having a great national medical library and a great national medical museum, no doubt most of us would take the library, because it would be of more immediate use to us; but no such unpleasant alternative is forced on us. There is no reason why we should not have both, and we must have both.

I have time for only a very condensed statement of the wants of our National Medical Museum. In the first place, it needs the intelligent interest and friendship of the medical profession of this country. To a very considerable extent it has had this; were it otherwise it would not be what it is, nor where it is. But it needs more of it, and it can never have too much. Every medical man in this country should help a little, and provide for the perpetuation of his name as that of a physician interested in the progress of the profession by sending at least one specimen to it. It is omnivorous in its demands for material, as will be seen by the circular which it has recently issued. But I will name as special wants, human embryos, especially those of a very early age, monstrosities and malformations of all kinds in man or in the lower animals; results of old injuries, such as fractures or dislocations, or of surgical operations, such as excisions, stumps, etc.; injuries and diseases of the eye, ear, and nose; new-growths of all kinds; diseases of the brain and spinal cord; and specimens illustrating the condition of bones, joints, brain, larynx, and other organs in extreme old age.

In the second place, it needs a regular supply of funds from the general government. To form and keep in proper condition such a medical museum as this should be, is a more difficult and expensive matter than those not acquainted with such work would suppose, and the gifts of specimens from the profession must be supplemented by ample means for the preparation, preservation, and proper display of these specimens, and also for the purchase of apparatus and typical specimens of foreign work, in order that the museum may be always able to show the latest state of knowledge and the best ways of doing things.

The annual appropriation for the museum at present is $5,000. This is sufficient, except that the printing of the catalogue, of which I shall speak presently, must be an extra charge; but the medical profession should see to it that the amount is not reduced in the rhythmic spasms of partial economy with which some of our statesmen are afflicted.

The third need of the museum is of a series of the right kind of descriptions of its specimens, given on labels and in a catalogue. Unaided by such descriptions, it has for each man that which he can see in it, and no more. One man will see nothing but an old piece of bone, a shapeless mass of tissue bleached by alcohol, a case of old dingy brass instruments. Another will see in the same things a rare joint atrophy, implying curious abnormal nerve influence; a leprous nodule, whose history, if we knew it, would reach back through the lazar-houses of the middle ages to the far East, and whose bacilli may be the lineal descendants of those that vexed Naaman the Syrian; a case of microscopes illustrating the development of that instrument, from the first rough iron tube of the spectacle-maker of Nuremberg to the delicate and complicated instrument through which we now peer curiously into that world which lies within the world of unassisted vision. By our labels and catalogues we must tell men what to see; but to do this we must first see ourselves. The aphorism that a first-class museum would consist of a series of satisfactory labels with specimens attached means a good deal. Something has been done in this direction, as you will see on inspection of the cases; but I often wonder what sort of labels a man who has spent years in investigating the normal and abnormal structure and relations of one organ would write for our specimen of that organ. Such help as this we need; kindly, truthful criticism, the pointing out of errors and of new points of view for this mass of material.

We also need a series of printed catalogues. One of these should be in the form of compact handbooks relating to particular sections of the collection, and intended partly for the use of visitors while in the museum, and partly as a ready means of letting distant friends know what material it most needs in different departments. It should also print a complete illustrated catalogue of the whole collection for the use of the investigators and teachers of the profession. Congress has been requested to grant authority for the printing of such a catalogue by the Government Printer. The material for it is nearly ready, and it would make three volumes each the size of one of the volumes of "The Medical and Surgical History of the War of the Rebellion."

The museum needs earnest and well-trained students to work up its collections so as to advance knowledge, and, at the same time, to display properly the specimens so as to make them most instructive. To all such students we shall endeavor to afford opportunities for this work. Precisely how this is to be effected is not yet clear, but here is abundance to be done, and there are quite a number of men coming on the stage who want to do such work for its own sake, because it gives them pleasure. Sooner or later we shall have half a dozen or more of specially trained men busy in the laboratories and work-rooms of the museum, each engaged on his own problems, and the whole for the common good.

The medical museum hints at matters which lie outside the scope of known physical and chemical laws. Physicians have not, as a rule, been very virulent theologians; their studies and their daily work tend to give them compensation of bias in this particular, and, therefore, in this age of transition in beliefs, it is not so true of them as of others, that "the old hopes have grown weak, the old fears dim, the old faiths numb." In our medical museum yonder may be found abundant illustrations of the results of physical and chemical actions and reactions upon what was once living matter, and was connected with centres of consciousness, of intellect, of emotions which imply something more than ordinary protoplasm or mere metabolism. It brings together strange company. The men who dwelt on the sides of the Andes in the old Aztec days, the men who built cities in the Gila Valley centuries before the days of Columbus, the Esquimaux, and the Indian of the plains, black and white, red and yellow, all sorts and conditions of men are represented in those bony caskets which once held their centres of life and thought; but now are reckoned only as so many crania in the museum catalogue. The great majority of the pathological specimens imply either suffering or death, or both, of the individual from whence they came. Some of them are the results of intemperance, of lust, of folly and crime; but some are the results of unselfish sacrifice for the good of others, true flowers of blood and pain. A large group of them form one of the relics of an acute paroxysm of disease of a great nation. The old pensioner likes to keep the battered ball which crippled him, and so these relics have an interest beyond that which is purely professional. That the nation is not crippled by its loss, takes nothing from their interest, and the fact that we are physicians does not imply that we look upon them from a medical or scientific stand only. Those of the combatants who survive are now better friends than ever, and the museum specimens, coming as they do from the sick and wounded of both armies, and contributed by both Union and Confederate surgeons, enforce the lesson of the unity of the profession and of its interests, as well as that of our country.

Our museum, like the library with which it is associated, includes all the specialties. No physician is so learned or skilful that he can find no instruction there, and no one is so ignorant that he cannot comprehend some of the lessons which it teaches. Taken together, these institutions should contribute in no small degree to our national prestige, for which eminence in scientific work and teaching is an essential element, and if it be remembered that they are only twenty-five years old, and that during that period we have been making medical history at a tremendous rate, surely some incompleteness and crudeness may well be excused or overlooked.

Speaking in behalf of the army medical department, and for the dead as well as for the living who have been charged with this work, I can truly say that we have been very proud of our charge, and that we have done our best, each according to his capacity and opportunities, to make the museum and library such as a great profession and a great nation have a right to demand.

At the conclusion of the address a reception was given to the members and guests of the Congress and their ladies.

ASSOCIATION OF AMERICAN PHYSICIANS.

Thursday, September 20th—Third Day.

Dr. Edward C. Seguin, of New York, presented a paper on

THE RELATION BETWEEN TROPHIC LESIONS AND DISEASES OF THE NERVOUS SYSTEM.

The author excluded from consideration vaso-motor disorders, and diffused or quantitative nutritional changes, partly because he considers them to be a distinct subject, and partly because their study would be beyond the scope of a short paper.

He divided the so-called "trophic lesions" into two great classes. In one the lesions are probably mostly due to the action of extraneous causes, and are preventable. The second class embraces lesions which seem to be directly due to the nervous disease, and which are its necessary and unpreventable results.

He endeavored to show that lesions of the second class, which alone merit the name of *trophic lesions*, occur in organs and tissues which are anatomically continuous, and whose life (or preservation of structure and function) is associated or interdependent.

He concludes that disease of the nervous system produces true trophic lesions when it interferes with the associated or interdependent life of continuous tissues. This proposition he offered only as a partial and preliminary answer to the question under discussion.

Dr. Horatio C. Wood, of Philadelphia, followed with a paper on the same subject. His propositions and conclusions were as follows: 1. It is physiologically proven that the nervous system directly affects general nutrition. 2. Various lesions are the immediate result of previous nerve disease. 3. In various cases the lesions are not preceded by circulatory disturbance. 4. No known vaso-motor condition is capable of causing many of these lesions. 5. Therefore it is absurd to attribute changes to preceding vaso-motor changes.

Dr. Ord, of London, opened the discussion by stating these so-called trophic disturbances might be produced in three ways: 1, Through disease of the spinal cord; 2, through disease of nerves; 3, in a reflex way. In illustration, he mentioned a case of chronic hypertrophic cervical pachymeningitis in which there was a wasting of the tissue in the digits of the affected arm, and osteo-arthritis; also the case of a man who, through violent exercise, had lost power in his arms, and whose muscles underwent extreme wasting. There was also wasting of the skin. In conclusion, Dr. Ord spoke of the swelling of the joints of women approaching the climacteric. Various other reflex disturbances were referred to.

Dr. Henry P. Bowditch, of Boston, considered that much might be gained by studying the subject on simpler lines; that therefore it would be well to limit the question to a consideration of its relation to muscles, for in muscles we have not two sets of nerves anatomically distinct, at least such are not demonstrable; we have not the "anabolic" and "katabolic," or "metabolic" nerves. It were better to confine the term "trophic" to nitrogeneous metabolism of muscle.

Dr. Ferrier, of London, said that the nervous system has a direct influence on the nutrition of tissue, altogether apart from vaso-motor influence. The influence of nerves is amply demonstrated in the case of muscles; whether it be in the case of the skin is not so certain. Possibly there are centres which preside over nutrition. It is an interesting question whether there are "trophic" nerves apart from motor and sensory.

Mr. Victor Horsley, of London, called the attention of his hearers to the recent and interesting investigations of his friend, Dr. Frederick Mott. To Dr Mott belongs the credit of being the first to show that atrophy is a true active dystrophy and not a mere passive change. By cutting of the cauda equina he demonstrated an atrophy of the femur. The whole of its inner surface was lined with osteoclasts.

Dr. Francis T. Miles, of Baltimore, next read a paper on "The Effect of Concussion of the Spine on the Reflexes."

Dr. W. H. Welch reported the results of experiments relating to the

THYROID GLAND OF THE DOG.

performed by Dr. W. S. Halsted in the Pathological Laboratory of the Johns Hopkins University. Extirpation of both lobes of the gland of the dog was found to be uniformly fatal in from two days to three weeks, with symptoms similar to those noted by previous experimenters. A large number of experiments were performed to test the remarkable statement of Munk that these symptoms and the fatal result are not due to the loss of the thyroid gland, but are referable to some undefined injuries attending the operation of removal. Munk found that eight dogs survived the isolation of the gland by ligation of all of the arteries and nerves entering it, provided the wound healed by first intention. In the experiments reported by Dr. Welch, with strict antiseptic precautions the two lobes of the gland were isolated and all their vascular and nervous connections ligated. Under these circumstances the gland underwent coagulation-necrosis, and although in eight cases primary union of the wound was obtained, the animals died with the usual symptoms of extirpation of the entire gland. These results, therefore, are directly opposed to those reported by Munk.

In order to determine whether, after complete separation of the gland from all of its vascular and nervous connections, the gland could by any possibility escape death, a single lobe was isolated in a large number of cases in the manner described. In all instances, however, necrosis of the gland ensued, and at the most a few follicles in the periphery of the gland escaped destruction.

Extirpation or isolation of one lobe of the thyroid gland, in the majority of cases, is followed by the full recovery of the animal without any of the symptoms peculiar to complete extirpation. In these cases of partial extirpation very interesting and peculiar changes appear in the remaining lobe. These changes, which have been in part mentioned by Mr. Victor Horsley but not described in detail, were exhibited in a series of microscopical specimens. Before describing these changes the structure of the normal gland was explained and exhibited by microscopical slides. Attention was drawn to the characters of the interfollicular cells, to the frequent presence of red blood-corpuscles in the normal follicles, to the development of the colloid material, to nodules of so-called embryonic gland-tissue, and to the existence of colloid material in the lymphatic vessels of the gland.

The changes in the remaining lobe after extirpation of one-half of the gland were recognized in about three weeks after the operation, and were well marked and characteristic after six weeks. There appeared, however, to be no definite relation between the time after removal of one lobe and the extent of the changes in the remaining lobe. The following were the most noteworthy changes observed: The remaining lobe of the gland was two to four times its normal size, its poles less pointed than normal. The epithelial cells of the follicles were increased in size and in number and were arranged in polypoid masses or plicated folds around the lumen, which was diminished in size and irregular in shape. Newly formed capillaries made their appearence in these polypoid masses of epithelium. After a time, in some places, the situation of the original follicle seemed to be occupied by a mass of large epithelial cells pervaded by a net-work of newly developed capillaries connected with those surrounding the follicles. By these changes, in two months after the operation the structure of the gland may be so altered that microscopical sections would not be recognized as derived from the thyroid gland. The colloid substance disappeared or was replaced by a filmy reticulum. In places an enormous dilatation of the capillaries took place. Dr. Welch believed that while these changes were probably to be interpreted as functionally of the nature of a compensatory hypertrophy, the term hypertrophy did not fully characterize the anatomical condition. These changes, resulting in a transformation of the normal structure of the adult gland, may perhaps be best interpreted as a return to the embryonic state of the gland.

In seven or eight cases out of fifty unilateral extirpations death occurred within a month, without any complications to explain this issue, and with primary union of the wound. The animals became weak and cachectic, had often ulcerations of the gums, and in two cases convulsions. In these fatal cases the follicles of the remaining lobe were found nearly or quite devoid of colloid material, and filled with small oval or polyhedrical epithelial cells, without regular arrangement and without new formation of capillaries. Small-celled infiltration of the interstitial tissue was absent.

In two cases, after ligation of everything entering the two lobes of the gland, except the main artery and vein, changes were found similar to the hypertrophic ones already described. Both cases developed symptoms like those of total extirpation. One terminated fatally in two months, the other recovered. These cases suggested the possible dependence of the anatomical alterations upon changes in the nerves supplying the glands.

Dr. T. Mitchell Prudden exhibited a set of microscopic specimens of myxœdema.

Dr. E. O. Shakespeare, of Philadelphia, exhibited photo-micrographs of various micro-organisms.

Dr. Jacobi, of New York, read a paper on

THE PATHOLOGY OF THE THYMUS GLAND.

Because of the great length of the paper only a few extracts were given. The literature of the thymus for the last ten or twenty years treats more of its histology and embryology than of its pathology. The author referred to the fact that there is no certain size of the thymus: that indeed a great many different sizes and weights have been taken to be normal by different writers. Dr. Jacobi referred to the very doubtful connection between an alleged hypertrophy of the thymus and a so-called laryngismus stridulus. Still he admitted there are a few cases in which the sudden death of infants could not be explained any better than by the hypertrophy of the gland. Briefly he alluded to inflammations and suppurations of the gland, and to the occurrence of punctated or larger hemorrhage into the tissue, and to the occurrence of malignant growths in the organ. Among them he mentioned endothelioma, lymphoma, fibroma, sarcoma, carcinoma, and myxoma, which have been described; the majority of them, however, are decidedly doubtful, particularly because it can be proven that a number of these pseudo-plasms did not originate in the thymus, but in the thyroid gland, or in a neighboring lymphatic gland. For the last eight months he had given his particular attention to the study of the thymus, with regard to tuberculosis, syphilis, and diphtheria. The material for the microscopical studies has been gathered from different institutions in New York City. These microscopical examinations were made by Dr. Henry Koplik, in the Laboratory of the College of Physicians and Surgeons. A few of the conclusions arrived at in regard to tuberculosis are as follows:

In cases of tuberculosis of the thymus here presented, tubercle tissue appeared in the following forms:

1. As miliary tubercles, composed entirely of small, round, or polygonal cells, with a reticulum basement substance in the recent state. In the later stages these miliary tubercles or granula may, at their centres, undergo cheesy metamorphosis (coagulation necrosis).
2. Miliary granula are also found which show, in their centres, the presence of giant cells.
3. Large, cheesy areas, in the periphery of which we still find miliary tubercles, or granula, composed of giant cells, around which are arranged spheroidal or polygonal cells in a fine reticulated basement substance.
4. In all cases the arteries of the adjacent areas of the thymus tissue were the seat of a typical endarteritis (in some cases obliterating) of a tubercular character.
5. A very careful and painstaking examination of the above forms showed tuberculosis present in all cases. In most of the above forms we had also the presence of the bacillus in the walls of the arteries and arterioles undergoing tubercular changes, and the lumen of the vessels was the seat of obliterating changes.
6. In the thymus, tuberculosis may appear simply as so-called tubercle tissue, an infiltration of the tissue of the gland or organ with spheroidal or polygonal cells, held together by a delicate basement substance; this tissue has no characteristic arrangement; the arteries in such areas may be the seat of obliterating processes. In all of the cases examined by us there were present the characteristic bacillus tuberculosis.

Syphilis results in the thymus in two changes, both in the accumulation of hyperplastic connective tissue, and, as in one case, in the formation of a gumma. Diphtheria results in general parenchymatous degeneration.

Finally, persistent thymus, found in a man, aged twenty-six, was made the subject of extensive studies, and it was discovered that retrograde metamorphosis was in full progress; the parenchyma being in a condition of fatty degeneration, and the stroma being replaced almost entirely by fat tissue.

The time allotted to the paper was mostly taken up by the demonstration of frozen sections illustrating the normal topography of the thymus; also of photographs of the same, and of microscopical drawings of the pathological changes.

Mr. F. S. Eve, of London, made some remarks on the work of Mr. A. Lingard and himself on

SYPHILIS,

an account of which work was published in *The Lancet* of April, 1886. The bacillus found during their investigations they do not claim to be the specific germ of the disease. Mr. Eve also spoke on the tubercular origin of lupus, and referred to studies of his own in this direction. In one instance he succeeded in producing lupus in a rabbit by inoculation of tissue from a case of the disease.

Dr. William T. Councilman, of Baltimore, presented several microscopic and macroscopic specimens illustrating bovine tuberculosis.

Dr. George M. Sternberg, U. S. A., owing to the lateness of the hour, did not read his paper on

RECENT RESEARCHES RELATING TO THE ETIOLOGY OF YELLOW FEVER,

but described the method followed in these researches, which were carried on at Havana, and stated that he had not arrived at any definite result as to the specific etiological element of yellow fever. He had made many cultures from the blood of persons just dead of this disease, as well as from the liver, kidneys, and urine. The results were negative as regards those made from the blood and urine. From the kidneys and liver numerous organisms were obtained, but in no instance did he obtain the micrococcus of Freire. Various tube-cultures were shown.

The Society then adjourned.

Chordee is best treated, according to Dr. Frank L. James, by twenty minims of the tincture of veratrum viride, taken at bedtime.

AMERICAN SURGICAL ASSOCIATION.

Thursday, September 20th—Third Day.

Dr. George W. Gay, of Boston, read a paper entitled

THE COMPARATIVE METHODS OF TRACHEOTOMY AND INTUBATION IN THE TREATMENT OF CROUP,

of which the following were the conclusions :

1. Intubation may be tried in all cases of croup.
2. It is preferable in young children and in cases in which the tube must be left entirely to itself.
3. It may be resorted to for euthanasia, provided the operator is reasonably expert and can do it without producing collapse.
4. Tracheotomy is called for in those cases in which intubation cannot be done, or in which it fails to give relief, or in which the laryngeal tube is repeatedly ejected, or requires frequent removal for cleansing. It may also be required in those cases in which sufficient food cannot be given while the O'Dwyer tube is in position. It is also preferable in cases situated at a distance from a surgeon capable of introducing the laryngeal tube.
5. The tracheotomy instruments should always be at hand in intubation in case of emergency.

Dr. H. H. Mudd, of St. Louis, said that intubation had been done as a precautionary measure in many cases in which tracheotomy would not have been thought of. Some of the good results of intubation are to be attributed to this fact. In most of his cases of intubation where the patient survived he had found it necessary to resort to tracheotomy ; patients have recovered after tracheotomy where intubation has proved unsuccessful.

Professor Thomas Annandale called attention to the value of the introduction of a tube through the glottis in cases of operation about the throat where there was risk of suffocation or of hemorrhage into the trachea.

Dr. Huber, of New York, had performed intubation in ninety-four cases, with recovery in thirty-seven. He does not operate early. He considers the internal use of bichloride of mercury as of equal importance as the intubation. There is occasionally an advantage in using a small tube with the expectation that it will be coughed out, and with it a portion of the membrane, and affording an opportunity for feeding while the tube is out.

Dr. T. F. Prewitt, of St. Louis, in one case of diphtheritic paralysis had, in order to avoid passage of fluid into the larynx, passed a catheter through the glottis and plugged the larynx with a sponge. This permitted the fluid to go into the œsophagus without risk of entering the trachea. After feeding, the sponge and tube were removed.

Dr. D. W. Cheever, of Boston, advocated the disuse of anæsthetics in cases of tracheotomy, provided proper assistants can be secured. The operation is not accompanied with much pain. By avoiding the anæsthetic many of the risks of the operation are avoided.

Dr. L. McLane Tiffany, of Baltimore, read a paper entitled

PREGNANCY AND OPERATIVE SURGERY—THEIR MUTUAL RELATIONS,

of which the following were the conclusions :

1. Pregnancy is a physiological condition and does not contra-indicate a surgical operation.
2. During pregnancy temporary strain may be exerted on some organ, *e.g.*, kidney, inducing impairment of function.
3. A surgical operation upon a pregnant woman is to be conducted so as to avoid inducing abortion, in itself a serious accident.
4. The main cause of abortion after operation is sepsis.
5. The probability of sepsis after operation is increased if the patient is suffering from disease, either temporary or chronic.
6. Abortion may result from operation—shock, perhaps.
7. Hemorrhage does not seem to induce abortion.
8. Union of fracture may be retarded by pregnancy.
9. Recorded cases show that the unborn child receives no evil impress when the mother is subjected to operation.
10. When a surgical operation upon a pregnant woman is under consideration, the function of all the patient's organs must be carefully investigated and regulated. An operation then conducted antiseptically may be expected to result as though pregnancy were not present.

Dr. J. Ewing Mears, of Philadelphia, thought that while pregnancy was to be regarded as a physiological process in the native woman, it could not be considered in this light in the society woman. Another important point to be considered was whether the operation required was one of expediency or of necessity. In the latter case the surgeon must do his duty, let the result be what it may, but whether or not operations of expediency were to be performed on the pregnant woman was a question only to be decided by further experience.

Dr. P. S. Conner, of Cincinnati, reported a case of

SUBCUTANEOUS OPERATION FOR ANCHYLOSIS OF THE KNEE

in a woman who, it was subsequently learned, was six weeks pregnant. The operation was followed by severe septic infection, but this did not interfere with the normal course of the pregnancy.

Dr. William Hunt, of Philadelphia, raised the question whether or not in the case of inevitably fatal injury of a pregnant woman, as from burns, it was justifiable to run the risk of sacrificing the mother a few days sooner, when by so doing the life of the child might be saved, or must we wait until the last breath has left the body before making the incision ?

Dr. R. B. Bontecou, of Troy, reported the case of a

RUPTURE OF AN UMBILICAL HERNIA

in a woman seven months pregnant. The intestines were out four hours. They were then cleaned and replaced. The woman recovered and a healthy child was born one month later.

Dr. L. McLane Tiffany, of Baltimore, thought that in the case suggested by Dr. Hunt there could be no question as to the propriety of operation. By so doing one life may be saved.

Dr. N. P. Dandridge, of Cincinnati, read a paper on

NERVE-STRETCHING.

The following conclusions were presented :

1. That nerve-stretching should be condemned in all forms of central disease, such as tabes, myelitis, etc.
2. That it offers little prospect of relief in tetanus.
3. That it should be regarded as a reliable method in cases of persistent neuralgia and peripheral paralysis of sensation in the extremities.
4. That stretching the facial is indicated in tic-convulsif.
5. That further trial is justified in reflex epilepsy.
6. That stretching the lingual should be tried in painful affections of the tongue.
7. That resection should always be preferred to stretching in the spinal accessory and in the branches of the fifth nerve except the lingual.

Dr. De Forest Willard, of Philadelphia, read a paper on

NEPHRECTOMY,

for—1, gunshot wound of the kidney; 2, tubercular disease of the kidney.

Case I.—Male, mulatto, aged seventeen, was shot July 10, 1887, at such close range as to burn clothing and skin. Symptoms of internal hemorrhage steadily increased.

Abdominal incision was chosen as best suited to arrest hemorrhage, repair injured organs, and remove clots.

The bladder was found full of blood, but uninjured; ureters the same. The huge hæmatocele was found to be retro-peritoneal, filling all the tissues in the loins and downward into the pelvis. The left kidney was traversed by the ball from the centre of the rim to the infundibulum, and the renal artery and vein cut. Aseptic silk ligatures were applied and the organ removed. The ball had passed behind the peritoneum without injuring other organs, and could not be found. No blood or fæces were found in the peritoneal cavity. The site of the extirpation was thoroughly mopped with sublimate solution, 1 : 10,000, made with boiling distilled water and the abdomen irrigated with hot distilled water. The utmost precautions were taken to prevent infection, and all the dressings were thoroughly antiseptic. The temperature during the next four days varied from 99.4° F. to 101.4° F. About twenty ounces of slightly albuminous urine were secreted daily. The skin was kept active, and no signs of uræmia at any time made their appearance. The patient, however, died of loss of blood, shock, and exhaustion, eighty-six hours after the injury. At the post-mortem no blood or pus was found in the peritoneal cavity, and the adhesions between the serous surfaces were very slight. There was no pus at the site of the nephrectomy, and the hæmatocele was perfectly aseptic. The ball had grazed the eleventh rib, passed just below the pleura without entering it, had perforated the diaphragm, left kidney, the renal artery and vein, and the sheath of the aorta just at the origin of the renal artery, being found lying directly upon the aorta. The right kidney was healthy.

Case II.—Female, aged thirty-two; tubercular history of ancestry uncertain; failing in health for ten months. Seven weeks ago, first noticed tumor in right side of abdomen. Has had increasing pain in this region. This is now very severe at times. Has emaciated rapidly. Temperature varying from 99° F. in the morning to 101° F. in the evening. Diarrhœa quite constant. Passes large amounts of pus in the urine. Urine one-sixth albuminous, but contains no casts and no distinctive cell-elements. Tumor, rounded in form, occupies the space from the right renal region forward to linea semilunaris, and vertically from lower margin of liver to line of anterior superior spinous process. Indistinct dulness extending into pelvis. Resonance between liver and tumor. Tumor movable.

Diagnosis uncertain. The size of the tumor and its projection forward determined the selection of the abdominal median incision. The right side of abdomen was found filled with thick sac giving indistinct sense of fluctuation. From it extended downward two elongated masses, one evidently a pus-filled ureter, and the other a mass extending down from the external iliac vessels and passing under Poupart's ligament. Puncture evacuated only a few drachms of pus and did not diminish its size. Tearing open the sac, the kidney was found riddled with multiple abscesses. The vessels, and the ureter low down, were tied with silk ligatures and the kidney removed. The abdominal cavity was irrigated with distilled water, drainage-tubes inserted behind the uterus and into the site of the nephrectomy, and the wound closed with one set of sutures. The woman was exceedingly low during the operation, but rallied so that the temperature rose to 99° F., and she became perfectly conscious. Two hours after operation she suddenly sank, and died.

Post-mortem showed that behind the suppurating kidney and in a separate sac, divided from it by a wall two lines in thickness, was another pus-sac. This sac was three inches wide and the pus had worked its way down the aorta, common iliac, and iliac arteries to Poupart's ligament. If nephrotomy had been attempted this sac might have been drained and the kidney never reached at all. No hemorrhage after operation. Death from shock. The other kidney was enlarged but not diseased.

Dr. David W. Cheever, of Boston, read a paper on

SHOCK.

The operative surgery of our time has annulled pain, arrested hemorrhage, averted septic absorption, but it has not prevented shock. The object of the paper was to inquire whether or not modern surgical procedure had diminished shock, wherein it fails to do so, and to suggest improvement of its defects.

In order to diminish shock: 1, Wait for reaction; 2, never neglect to calm the mental shock by a cheerful word and personal presence; 3, give alcohol a quarter of an hour before anæsthetics; 4, make the anæsthesia short; 5, operate as rapidly as possible; 6, as short dressing as possible; 7, avoid chilling of the patient.

To promote reaction after operation: 1, Persistently and carefully applied dry heat; 2, liquid nourishment combined with a stimulant and a little laudanum by enema; 3, subcutaneous injection of brandy; 4, aromatic spirits of ammonia by the mouth; 5, black coffee and brandy, the stimulant par excellence when it can be retained by the stomach; 6, quiet—a more than horizontal position; sleep—assurance that all is over and doing well.

Modern surgery has won three great triumphs: 1, It substitutes sleep for pain; 2, it averts secondary hemorrhage by animal ligature; 3, it prevents fermentation by germicidal applications; 4, can we add a fourth by stilling the nervous system and averting secondary shock?

The paper of Dr. Cheever was followed by a discussion participated in by Drs. Keen, Willard, Bontecou, Prince, Moore, Lange, Weir, and others.

On motion of Dr. B. A. Watson, the Association extended to Dr. Martin a vote of thanks for his labors in bringing about the organization of the Congress of American Physicians and Surgeons, the successful meeting of which was about terminating.

After extending a vote of thanks to the officers, the Association adjourned until the second Tuesday in May, 1889.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

Thursday, September 20th—Third Day.

Dr. Thomas T. Maxwell, of Keokuk, read a paper on

UTERINE FIBROIDS; THEIR DIAGNOSIS AND TREATMENT.

He carefully went over the pathology and causation of the disease, but was unable to throw any new light upon the subject. He thought the diagnosis was often difficult owing to the frequent presence of retro-displacements. The treatment which he recommended was in internal administration of ergot, although he had tried electricity once, but without having proper instruments, and with indifferent results.

Dr. Hampton Eugene Hill, of Saco, Me., reported a case of

OPERATION FOR AN UNUSUAL CASE OF SUBSEROUS UTERINE FIBROID.

The patient was an unmarried woman, aged forty, short in stature, and much emaciated. The tumor was very large for so small a woman. Abdomen had a very firm feeling. The uterus was about normal in size, and slightly movable. There was a soft, fluctuating mass to the left of the uterus, and to the right a firmer-feeling mass, by vaginal examination. The general impression given led to the diagnosis of an ovarian fibro-cyst. The operation was made on January 3, 1888, with the assistance of Drs. J. E. L. Kimball, and F. E. Maxey, of Saco, and Dr. M. C. Lathrop, of Dover, N. H.

All aseptic and antiseptic precautions were observed. Upon making the abdominal incision, the tissues were very vascular. When the tumor was exposed, it was found to be a solid fibroid. The tumor was firmly adherent to most of the abdominal wall, and the adhesions were a net-work of blood-vessels. The hemorrhage was unusually severe. Twelve pairs of hæmostatic forceps were in use before the operation was fairly begun. Then the vessels were secured by ligation and torsion as fast as they were divided; many ligatures were left on the abdominal wall. The omentum was adherent in a vascular mass over the upper part of the tumor. The pedicle was secured by passing an écraseur chain underneath the tumor, and around the pedicle. The lower end of the tumor was then raised, and drawn downward; and then a broad mass of vessels running into the back of the tumor, from the mesentery, was secured by long forceps, and the tumor divided from it. It was then removed from the abdomen, and the mesenteric vessels secured in three ligatures. The pedicle was ligated with strong silk. A cyst of the left ovary, the size of an orange, was then tied and cut off, the abdomen cleansed with hot water, a drainage-tube left in, and the wound closed, dressed, and the patient placed in bed in a collapsed condition. Brandy had been freely injected under the skin during the operation. Drainage was very free during five days; tube removed in six days. There was an accumulation of fluid afterward. Forty ounces were removed on the eighteenth day, after which the patient improved rapidly and made a good recovery. The tumor measured in length sixteen inches, in width fifteen inches, in thickness ten and one-half inches. The weight was forty-seven pounds. The abdominal incision was extended from near the pubes to the ensiforn cartilage.

Dr. Franklin Townsend, of Albany, opened the discussion on

EXTRA-UTERINE FŒTATION,

with a paper on its pathology.

He carefully explained the theories of a great many leading authorities upon the important question as to the place where fecundation takes place. The bulk of authorities think that fecundation takes place in the ovary or in the tube. Wyder, of Berlin, is one of the minority who think that fecundation takes place in the uterus. The reader thought that in a majority of women the fecundated ovum falls into the peritoneal cavity. As a rule the peritoneal soil is not suitable for the growth of the fecundated ovum, and it dies. In rare cases the peritoneal soil does suffice to nourish the ovum and then we will have peritoneal fœtation. In other cases the impregnated ovum is caught or arrested in the Fallopian tube, which becomes enormously developed in muscle. Sometimes the tube ruptures near the placental site, when severe hemorrhage occurs and the woman dies from shock or from peritonitis. In other cases the fœtation goes on to full term, and is removed either whole, or it dies and the bones are discharged through the rectum or vagina. Many cases have been recorded of ovarian fœtation, where the ovum never leaves the ovary. He then described the conditions of abdominal or peritoneal pregnancy. He then showed a specimen of extra-uterine fœtation which had lain quiet in a woman fifty years, without causing any inconvenience after the first few weeks succeeding the end of the natural period of pregnancy.

Dr. Joseph Price, of Philadelphia, then read a paper on the

DIAGNOSIS OF EXTRA-UTERINE FŒTATION.

Cessation of menstruation not constant. Sickening pelvic pain due to distention of the tube. The discharge from the uterus is not like the usual menstrual discharge, being thinner and lighter in color. He agreed with Mr. Tait that all extra-uterine fœtations were primarily tubal. The diagnosis was certainly difficult. When the fœtus died before the bursting of the tube diagnosis was almost impossible. When the tumor increases the pressure-symptoms are more marked. The rupture may take place into the abdominal cavity or downward, between the layers of the broad ligament, into the pelvis. One pathologist had found eighteen cases of ruptured tubal pregnancy where the cause had not been diagnosed.

The patient may die at the moment, or she may recover from each recurring hemorrhage. When the rupture takes place into the pelvis she genrally becomes a chronic invalid with pelvic abscess.

A diagnostic sign is the unilateral condition of the swelling. The fœtal sounds are exaggerated. Digital examination is essential. The uterus is enlarged, but not nearly so much as in normal pregancy. If she carries the extra-uterine fœtation to term a spurious labor ensues, with a sort of lochial discharge, and then the fœtus is disposed of by nature in various ways.

Dr. E. E. Montgomery, of Philadelphia, read a paper on the

TREATMENT OF EXTRA-UTERINE FŒTATION.

As a rule the patient dies from shock at the first rupture, or else from hemorrhage. In many cases, however, the patient recovers, the blood and fœtus becoming encysted. He believed that electricity offered the best chances of success. It was known that mice placed in a vessel of water could be killed by passing an interrupted current through it. It was easy, free from danger, and was almost certain to put an end to the condition. After four months its use was more doubtful, because it would be better to remove such a large foreign body; we might, however, use faradic electricity for killing the fœtus so as to cause coagulation of the blood in the vessels before operating a few weeks later. He thought that Martin's plan was the best for dealing with the placenta; that is, to make a hole through Douglas' cul-de-sac and pass the cord through it, closing up the abdominal opening of the ruptured sac.

Dr. Walthen, of Louisville, rather sided with Mr. Tait in holding that all extra-uterine fœtations were primarily tubal. He did not believe that an impregnated or any other ovule could form an adhesion to the peritoneal surface. He thought that any pathological condition of the tubes or pelvic organs which would interfere with free movements of the tubes, would lead to retention of the ovule in the tube.

Dr. Baldy, of Philadelphia, said that the differential diagnosis of this condition was simply impossible, unless made inside the abdominal cavity. He related several cases where intra-uterine pregnancy had been diagnosed and when the fœtus was supposed to have been killed by electricity, and where afterward the disease was found to be either an ovarian cyst or a pyo-salpinx. He thought no treatment was so safe or so satisfactory as laparotomy.

In conclusion, he recommended the following plans of procedure:

1. In every form of ectopic gestation, prior to the fourth month, the destruction of life by electricity (faradic current).
2. Between the fourth and sixth months, destruction of life by electricity, and some weeks later laparotomy.
3. In rupture, immediate laparotomy, with removal of sac, contents, and the effused blood.
4. In cases that have passed the sixth month, wait until viability is well established, and perform laparotomy, observing every precaution that separation of the placenta does not occur; close the sac above, or down through the vagina.
5. In case of death of fœtus, it should be removed by laparotomy a few weeks later.
6. Where the fœtus has become macerated and abscess has formed, its sinus should be enlarged, and the fœtal residuum removed.

Dr. Byford, of Chicago, thought that these cases could be diagnosed, although he admitted that the diagnosis was difficult. He related a case where he was about to operate, but having delayed a few days the symptoms began to disappear and the woman finally quite recovered. He counselled delay if the symptoms were not urgent. He was in favor of electricity.

DR. MCMURTRY, of Kentucky, thought the differential diagnosis was impossible before opening the abdomen. He related a case where he had operated, and where the placenta was so enormous and so adherent that when he attempted to remove it the hemorrhage was frightful, and the woman died next day. In future, he would leave the placenta there and drain through the vagina.

DR. JOHN B. DENNER, of Philadelphia, thought that every case of abdominal surgery should be irrigated with hot water, as it stimulated the sympathetic and avoided shock, to say nothing of increased cleanliness. In case of intestinal obstruction, he urged reopening the abdomen. He had no confidence in electricity for this purpose.

DR. VANDER VEER, of Albany, read a paper on the same subject. He thought the diagnosis was in many cases possible. The electrical treatment was advocated before the fourth month. The faradic current was preferable. Galvanic puncture had generally been fatal. Only one case of death had followed the application of the faradic current. The electrical treatment does not give a radical cure as removal by laparotomy. Martin advocated immediate removal as soon as diagnosed. He reported a number of cases which all showed that this was the best treatment, for when left alone, although the woman ultimately recovered, yet they passed through several months or years of severe suffering.

This closed the discussion, which was listened to throughout with the most marked attention, showing that, as several speakers remarked, the subject was becoming familiar to the mass of practitioners, a most desirable consummation, in view of the importance of early diagnosis.

DR. GEORGE ROHÉ, of Baltimore, read a paper on

SOME COMMON DISEASES OF THE SKIN ASSOCIATED WITH GENERAL DISORDERS IN THE FEMALE.

These were urticaria, hyperidrosis, and acnea. He found arsenic very effective in treating them. Chloasma may be removed with one drachm of nitrate of bismuth and one drachm of ammoniate of mercury to the ounce of vaseline. Pruritus could only be cured by removing the cause of the irritation, which in one case was due to smegma retained beneath the prepuce of the clitoris.

DR. EDWARD J. ILL, of Newark, N. J., read a paper on

DERMOID (FIBROID) TUMOR OF THE ABDOMINAL WALL.

This is a somewhat rare disease. It measures thirteen centimetres in length and seventeen in breadth. When it was removed there remained a large opening in the abdominal wall, which was closed by a very large number of sutures, and which healed by first intention. During the operation the stomach, liver, and intestines were exposed. In future, the operator would remove the adherent peritoneum. There was very severe hemorrhage from the capsule of the tumor, but very little from the growth itself, which is very hard and dry. The diagnosis can sometimes only be made under ether. The paper was illustrated with diagrams.

DR. LAPTHORN SMITH, of Montreal, then read a paper on

SOME MINUTE BUT IMPORTANT DETAILS IN THE MANAGEMENT OF THE CONTINUOUS CURRENT IN GYNECOLOGY.

He said that one of the most attractive features of this method was its absolute safety, but at the same time he pointed out that it was only absolutely safe on condition that rigorous antiseptic precautions were taken. He recommended a corrosive sublimate injection, before and after every application, and the placing of an iodoform tampon in the vagina to prevent coitus. He then showed a form of electrode for the abdomen which was superior to Apostoli's and equal to Martin's, but which any physician could make for himself at a nominal cost. He advocated the use of Martin's intrauterine electrode for positive applications, while any form of silver-plated sound would do for the negative applications. For making positive punctures, he said that platinum alone would do, but he thought they were rarely required as the hemorrhage could be controlled easily by means of the positive intra-uterine applications, and then the growth could be arrested and reduced by the negative galvano-puncture. He recommended that punctures should be dispensed with as much as possible, as they were somewhat dangerous, and very good results could be obtained with intra-uterine applications, provided that the two poles were so placed as to bring the growth entirely between them. If the growth were situated in the posterior segment of the uterus, the inactive pole should be placed on the sacrum. The reader of the paper referred to several cases under treatment, in which he had first removed the anterior half of the growth and then the posterior half by this means, and without puncture. He recommended Gaiffe's galvanometer, which was more reliable than any so far made in America, and he pointed out the sources of error in galvanometers. In speaking of the battery, he was strongly in favor of Leclanché's conglomerate cell, owing to its splendid depolarizing qualities; next to that he thought the old Leclanché cell, with porous pot, was the best for steady work. The climbing of the salt could be avoided by well waxing the tops of the jars or having them sealed. He found the Law telephone cell unsuited, owing to its rapidly polarizing, and thus allowing the current to run down. He was not in favor of Gaiffe's collector used by Apostoli, but preferred a Bailey rheostat, by which the strength of the current could be finely adjusted.

With regard to the after-care of the patient, he thought it was very desirable that she should be put to bed immediately after a puncture and be kept there for at least a day. After application at the office, he advised that the patient be allowed to lie on a sofa for at least half an hour afterward, or even longer. The counter-indications were pregnancy, which should be carefully looked for in every case, and any tendency to acute peritonitis and cellulitis, as these conditions were apt to be relighted up by the continuous current. The only accidents he had had after a year's constant use, during which time he had made nearly one thousand applications, was one abortion, and one resetting up of pelvic cellulitis which had resulted in abscess of the broad ligament, from which, however, the patient had recovered. The results in fibroids had been: 1, That in every case bleeding had been arrested; 2, that pain had been removed; 3, that the symptoms of pressure on the bladder and rectum had ceased. In one case, a lady had been confined to her bed for eight days every month for the last twenty years, but after three months' treatment she had passed through a period of normal length and quantity absolutely free from pain. In another case, the canal was so blocked up when he began treatment that no kind of bougie, flexible or otherwise, could be got in, and it required six negative applications before the sound could be introduced into the fundus six inches. After that it passed with the greatest facility, and although she had suffered agony every month for eight years previously, she now menstruated almost without knowing it. He admitted that the treatment was tedious in fibroids, and was only worth the trouble on account of the danger of operative procedure.

He then spoke of the value of the continuous current in dysmenorrhœa without fibroid, in cases of stenosis of the uterine os, in which he recommended the passing of a series of silver-plated graduated bulb-electrodes by means of which the canal could so be brought up to any size. He cited several cases of severe dysmenorrhœa which had been permanently cured by this method.

A number of papers were then read by title, owing to the absence of the readers, and the next meeting-place was announced for Cincinnati, at about the same date next year. A large number of applications for membership were referred to the committee.

The Association then adjourned.

AMERICAN GYNECOLOGICAL SOCIETY.

THURSDAY, SEPTEMBER 20TH—THIRD DAY.

Dr. T. A. Reanny, of Cincinnati, read a paper on

AMPUTATION OF THE CERVIX UTERI FOR CARCINOMA.

His paper covered the statistics of ten years' work from 1876 to 1886. About three hundred cases were seen by him during this period in hospital, private, and private hospital practice. He selected fifty-five of these cases as favorable for operation, the disease not having extended from the cervix, and in which he thought he could remove all the disease. These cases were the basis of his report Medical treatment he considered amounted to nothing. Surgical treatment, if resorted to early, may save some; hence this is the only treatment. If employed early in cancer uteri, removal may prove successful. The importance of early diagnosis and operation need not be dwelt upon. He had been on duty at the Good Samaritan Hospital for eighteen years, and the number of cases which came to him there in the earlier stage was very small. They do not come there till far advanced. It is his belief, after considerable experience, that the diseased tissues can be more thoroughly removed by amputation of the cervix than by total extirpation. The parts posterior are removed more extensively, and these are the dangerous tissues. In total extirpation we do not cut so freely, more attention being given to the operation for the removal of the uterus. Twenty-nine of the fifty-five cases recovered. No recurrence in twenty-six cases. One case recurred after three years, which goes to show that the claim that the patient is cured if there be no return for three years, is not so.

The paper was discussed by Drs. Baker, Boston; Brun, Brooklyn; Emmet, New York; Vander Warker, Syracuse.

Dr. Graily Hewitt, of London, read a paper on

SEVERE VOMITING IN PREGNANCY.

He did not believe in the old saying, a sick pregnancy a safe one. He enumerated as causes: emotion, chronic alcohol, alteration in the position and shape of the uterus. To the latter he devoted his particular attention. He exhibited a large printed table which went very thoroughly into the subject. In cases of anteversion of uterus with impaction, the trouble was a very stubborn one. He mentioned cases where the pessaries were introduced and the vomiting relieved. They were removed, and the vomiting returned.

Dr. Fordyce Barker and Dr. Skeene, of New York, discussed the paper at length.

Papers were also read by Drs. C. M. Green, of Boston, on "A Case of Rupture of the Uterus in Labor at Term, the child born alive, the mother subsequently having a full-term child in normal labor;" and one by Dr. Polk, of New York, on "The Treatment of Pelvic Cellulitis."

The election of officers resulted as follows: *President*, Dr. H. P. C. Wilson, of Baltimore; *First Vice-President*, Dr. William Thompson Lusk, of New York; *Second Vice-President*, Dr. E. W. Jenks, of Detroit; *Secretary*, Dr. Joseph Taber Johnson, of Washington; *Treasurer*, Dr. Matthew D. Mann, of Buffalo; *Members of Council*, Drs. J. E. Janvrin, of New York; A. H. Baker, of Boston; C. R. Dryesdale, of Philadelphia; Ely Vander Warker, of Syracuse.

The next place of meeting was selected to be Boston, time, Tuesday, September 17, 1889.

"The Dangers of Galvano-Puncture in Pelvic Tumors" was an interesting paper, by Dr. Ely Vander Warker, of Syracuse, N. Y. "The Infertility of Women; some of its Causes and Requirements of Treatment," by Henry F. Campbell, of Augusta, Ga. "A Case of Subinvolution cured by Removal of the Appendages," was reported by Howard A. Kelly, of Philadelphia.

Dr. George J. Englemann, of St. Louis, read a paper entitled

THE NEW METHOD OF ELECTRO-THERAPY IN GYNECOLOGY.

He had not attained that success which had been the fortune of Apostoli, the Keiths, and Dr. Baker, but his success had been all that we could justly expect. He spoke more extensively of galvanism as an adjuvant for surgery. He did not think surgery should be supplanted by electricity. A very important factor in certain classes in the electrical treatment was the ability of the patient to go about and attend to the usual duties of life. If a final result to the knife is necessary, the electricity has put the patient in a better condition. Indurations, inflammatory products, interstitial inflammations, and neoplasms are proper subjects for this treatment. He thinks a trial should be made of electro-therapeutics before operation is resorted to. After a very few sittings we are able to decide whether we can proceed with benefit or not. He reported several cases from the Berlin clinic. One thing greatly in favor of the treatment is the favor by which it is held in the opinion of men known to be strongly in favor of surgery, viz., Keith and Martin.

Dr. H. P. C. Wilson, of Baltimore, thought that our success depended on the selection of suitable cases. Not all cases are suitable for electricity. Reported his experience in the clinic of Apostoli. In many gynecological cases, heretofore considered incurable, we will find this treatment productive of much good.

Dr. Graily Hewitt had not had much experience, but thought the electrical treatment would do much good.

Dr. Parrish, of Philadelphia, said that it was well known that the most favorable results obtained by electricity is in the treatment of pelvic exudations. He thinks in these cases there was no suppuration. He questions if there was pus, electricity would harm by delay if not otherwise.

Dr. Gill Wylie, of New York, showed some instruments for the high operation of Cæsarian section.

Dr. H. T. Hanks, of New York, read a paper on

THE EARLY DIAGNOSIS OF TUBAL PREGNANCY AND ITS TREATMENT BY ELECTRICITY,

with a report of two successful cases. The doctor thought that if the diagnosis was made previous to the fourth month the treatment should be electricity, if after the fourth month laparotomy. He lost 2 cases out of 16 after laparotomy, and 2 out of 20 after electricity.

Dr. Matthew D. Mann, of Buffalo, read a paper entitled "The Varieties of Extra-uterine Pregnancy," Dr. J. E. Janvrin one on "The Treatment of Extra-uterine Pregnancy," and Dr. B. F. Baer, of Philadelphia, on "A Case of Extra-uterine Pregnancy."

Dr. Clark, of Calcutta, said that his experience had been limited. It was difficult to gain the consent of the people in India to this operation. He thought the work of American men had proved that electricity could do very much in these cases.

Dr. J. C. Reeves, of Dayton, Ohio, knew of no other subject in gynecology to which this society had added so much. The doctor had reported four cases to this society and every time he had been told that his diagnosis was faulty. Treatment seems to be yet an unsettled question, arguments are presented for and against electricity and laparotomy; we have not yet had experience enough with the destruction of the fetus to feel sure that any bad results cannot occur from the use of electricity from the remaining sac, no man can have a large experience in extra uterine pregnancy, and one thing in favor of the application of electricity is its adaptability to the use of the general practitioner more than is laparotomy. I always have my instruments ready for laparotomy with me when applying electricity, for I think electricity may cause that which it is used to prevent, viz.: the rupture of the sac.

Dr. S. C. Gordon, of Portland, Me., reported a case on which he had operated.

Dr. J. W. Johnstone, of Danville, Ky., believed in the knife and condemned the electricity.

Dr. Englemann, of St Louis, and Dr. Polk, of New York, continued the discussion.

Several papers were read by title and the Society then adjourned.

ASSOCIATION OF GENITO-URINARY SURGEONS.

Thursday, September 20th—Third Day.

It was voted that the next meeting of the Association should be held at Newport, R. I., in May next, but that the day be left to the future decision of the Council.

Dr. William H. Kingston, of Montreal, read a paper entitled

OPERATIONS ON THE KIDNEY.

Operations on the kidney are of recent date. The French were the first to bring attention to this subject, the author the first to operate in America. The operation is now established as a proper one in suitable cases. What are suitable cases? It is difficult to determine in each particular case from the usual circumstances of uncertain diagnosis, as proved by numerous citations by the author of mistakes by many of the most celebrated surgeons of Europe and America. The author mentioned, as an illustration, a case of his in a female, in which he was unable to determine with certainty whether the tumor was of the ovary or connected with the kidney. Operation showed it to be a cystic tumor of the kidney. There was in this case a certain clearness of resonance on percussion at the left of the umbilicus, which led the author to strongly incline to this diagnosis, as this quality of percussion-note is rarely present in ovarian cyst, and is a sign of kidney cyst. The tumor was of the size of the gravid uterus at full term of gestation. The severing and ligation of many vessels, with the difficult ligation of the pedicle, protracted the operation to over three hours, and the patient died from the shock.

The author raised the question of division of as many ribs as may be necessary to render the removal of the tumor easy when the "post-peritoneal" operation is performed, which he employs.

Dr. Frank W. Rockwell reported a case of

NEPHRO-LITHIASIS, COMPLICATED WITH HYDRO-NEPHROSIS,

in which lumbar nephrotomy was performed. Discussion of the preceding paper was postponed until after the reading. Dr. Rockwell, the author, remarked that in one-half the cases so far reported there had been failures to find the stone. The case was that of a man who had passed a calculus as a boy, and within the last few years has had a return of his symptoms. All other treatment failing, a lumbar incision was made, December 29th, thorough exploration of the kidney was made, but the calculus escaped detection. During the next twenty days intermitting discharge of limpid fluid from the wound continued. This now ceased and a small fragment of calculus was passed, the symptoms ceased, and the patient went South. Symptoms of vesical calculus again presented, and on March 17th another and larger fragment came away and the patient recovered. The symptoms of pyelitis and hydro-nephrosis still remain, and the patient was still under observation.

Dr. Charles T. Park, of Chicago, showed a large calculus removed from the left renal pelvis of a patient upon whom he operated by the lumbar route. The symptoms were intermittent attacks of pain in the region of the left kidney, accompanied with discharges of purulent urine. The patient speedily recovered after the operation, and was relieved of his symptoms.

Sir William MacCormac, of London, narrated several interesting and instructive cases bearing on the subject. One was a young man on whom he operated by abdominal incision for supposed stone lodged in one ureter. The ureter was explored through its whole length, but no stone could be found. The patient recovered, and afterward was accepted as a recruit in the English army.

Dr. Lange, of New York, had only performed the lumbar operation. The dread of septic infection deters him from the abdominal incision when there is pus. The speaker described the difficulties encountered in removing fragments of stone when they become snared in the calices of the renal pelvis, and advised, for this reason, care in extracting the stone as a whole.

Dr. W. Gill Wylie, of New York, advocated the anterior operation, because of the greater freedom for action it presented. He had not found it extraordinarily dangerous, and related a case of a woman of seventy who recovered perfectly after removal, by this route, of a renal cyst, involving great difficulties, and in which calculi were found with considerable pus in the pelvis and ureter, and removed.

Dr. Weir, of New York, criticised the abdominal incision as an unnecessary opening of the abdominal cavity for a purpose which could be attained in most cases just as well by the lumbar incision, but he would emphasize the importance of making the incision very free in whatever direction the incisions were made.

Professor Annandale, of Edinburgh, took the same view. He had practised the posterior operation only. The incision could be made large enough to give all the freedom of action required in most cases.

In conclusion, **Dr. Rockwell** said, that it appeared from the discussion which his paper had called out, and which had taken a wide range and was a very complete expression of current views on the subject, that the indications for the operation were pretty well established, and that the posterior operation should always be employed when possible to use it successfully, and that the anterior should be reserved for only those cases where the tumor promises to be too large to remove by the other route, or in which, for any other reason, it was impracticable.

Dr. George Chismore, of San Francisco, Cal., read a paper entitled

EFFECTS OF RAPID CHANGE OF ALTITUDE IN A CASE OF INTERSTITIAL NEPHRITIS IN AN ADVANCED STAGE.

The author remarked that he had been unable to find any reference in medical literature on the points brought out by his case, and that it is important to bring attention to it. The history of the case was carefully given, and an account of the journey from San Francisco to New York, in which the reader accompanied the patient. From this the ill effects of rapid changes of altitude on the symptoms were well brought out, the patient having died soon after his arrival in New York. An autopsy confirmed the diagnosis. The conclusion reached by the author was that he would strongly urge persons suffering from renal disease of the diffuse type, with heart complications, to avoid all journeys involving great and rapid changes in altitude.

Dr. Fessenden N. Otis, of New York, read a paper entitled

RESUMÉ OF AN EXPERIENCE OF SEVENTEEN YEARS IN DILATING URETHROTOMY FOR THE RADICAL CURE OF STRICTURE.

The author remarked upon :

1. The necessity of acquiring knowledge of the nor-

mal urethral calibre before any operative measures were instituted, and then of the exact locality and size of every stricture in a presenting urethra.

2. That there should be an accurate adaptation of surgical procedures to the individual strictures, with intent to remove them through complete sundering at some one point.

3. Claiming this to result when the division had been completely effected by the complete absorption of the stricture so divided.

4. Claiming, further, greatly diminished total risk of operative measures as compared with attempts at more or less complete removal of stricture by any other method. He then referred to his first report of one hundred tabulated cases, comprising two hundred and fifty-eight strictures, where no deaths or grave accidents had occurred, and that in thirty-one cases re-examined—two over three years, twenty-three over one year after operation—freedom from any trace of stricture was demonstrated. From this fact the possibility of radical cure of stricture was then asserted.

Dr. Otis then referred to improvements made in the instruments up to the present date, and the wide spread of the operation, and dilated upon the complete division of stricture, always on the superior surface and in the median line, and claimed that failure to produce a permanent result was due chiefly, if not entirely, to a failure to secure these requirements.

A second series of one hundred and thirty-six tabulated cases was presented, and eighty-two re-examinations reported; recontraction occurred in sixty-seven cases, the intervals being in two cases over five years, in three over four years, in ten over three years, etc.

During the present summer he had had tabulated a third series of four hundred and twenty cases, with results of re-examination in sixty-two cases, in which recontraction had taken place in eighteen cases, the remainder being entirely free from all trace of stricture. Dr. Otis then referred to the first case operated on by him by the dilating urethrotome (in May, 1871), which he re-examined in May last (1888), seventeen years from the date of operation, and found absolute freedom from all trace of stricture, proving completely its radical cure.

Dr. Hingston, of Montreal, did not believe that there is any uniformly fixed relation between the size of the normal urethra and the circumference of the penis. He had not always, but generally had gotten permanent results by Dr. Otis' method of dilating urethrotomy in a class of cases in which formerly the rule had been failure. He took exception to the theory that the passage of urine over the wounded urethra is the cause of urethral fever.

Dr. Otis, in answer, said that he thought he could convince Dr. Hingston in regard to relative size of the urethra and penis, if he would accompany him in the examination of a number of normal urethræ.

Mr. Charles Williams, of Norwich, England, presented a paper (by invitation) on

STONE IN THE BLADDER IN CONNECTION WITH SPLENIC LEUKÆMIA.

The case illustrated the rapid accumulation of uric acid crystals, in connection with splenic leukæmia. Other cases were related by the author, of a similar nature, on eminent authority.

Mr. Reginald Harrison, of Liverpool, read a paper entitled

PERINEAL LITHOTRITY.

The great advantage that lithotomy possesses over lithotrity is that it permits the operator to ascertain the condition of the bladder and prostate, and to satisfy himself that every particle of the stone is removed. Thus relapses are explained as more frequent of lithotrity. He gave statistics to support his position. The author expressed the opinion that if the advantages of litholapaxy could be combined with those of lithotomy, so far as the latter applies to exploration of the bladder by the finger, that much advantage would follow in certain cases, in which recurrence after lithotrity might almost with certainty be anticipated. For this purpose perineal litholapaxy seemed to be well suited, securing, first, digital exploration; second, rapid evacuation; and third, drainage. This could be accomplished without encroaching upon the neck of the bladder. Gouley, in 1873, mentions such a procedure.

The author has employed a modification of this operation in four cases. In three the prostate was large and drainage was important; in two of them litholapaxy had previously been performed; in the fourth case the stone was very large. The patient was eighteen years of age, and the stone phosphatic, and was thought to be proper for litholapaxy. The stone was seized and crushed by the lithotrite, but as the blades could not be approximated sufficiently to allow the locking of the instrument, perineal lithotrity was proceeded with. The membranous urethra was opened and the finger passed into the bladder, the stone found being large as supposed. A strong pair of forceps were introduced into the bladder, with which the stone was crushed and extracted. The finger showed that the bladder was free; the latter was washed out with a bichloride solution, and a large drainage-tube inserted and kept in four days and then withdrawn. The patient was well, and up on the eleventh day, passing urine by the urethra. Though the stone weighed three ounces it was broken up and removed in five minutes. The other three cases were dealt with similarly. In conclusion the author thought that perineal litholapaxy would be found of considerable advantage, and would tend by its use to lessen the number of recurrences which follow litholapaxy.

Discussion: Dr. Bryson remarked that he had already mentioned before the Association three cases in which he performed the same operation and for the same indications as described by the author of the paper. Dr. Keyes had also performed the operation. A distinction was to be made between perineal lithotrity and perineal litholapaxy. In the former, the neck of the bladder being dilated rendered the latter impossible, where the stone was small the latter was easily successful, or by reducing a larger stone to sufficiently small fragments.

Dr. Henry G. Mudd, of St. Louis, reported

AN UNUSUAL CASE OF URETHRAL CALCULUS.

The interesting feature was the large size and location of the calculi. The largest (two hundred and eighty-one grains) was situated in front of the bulb, and seven or eight smaller ones in the membranous portion of the urethra. Several small stones were found in the bladder lying in pockets. The urine had been forced around the stones in the urethra, and the author thought the stone was small when it first found its way into the urethra and received accumulations by the urine passing about it. It had existed for years, at least, in the position from which it was removed.

Dr. Arthur T. Cabot, of Boston, reported a case in which the bowel ended in the urethra of a child four weeks old. Relief was obtained by operation.

Dr. J. Nevins Hyde, of Chicago, presented a paper on "Syphiloma of the Vulva."

The President, Dr. Keyes, then vacated the chair with appropriate words, and called upon Dr. Taylor to assume the presidency of the Association, to which he had been elected for the ensuing year.

The Association then adjourned.

A Confusion of Names.—A young physician, by the name of Macewen, has recently died in Glasgow, and several of the Paris and Vienna papers, misled by the name, have published more or less elaborate obituary notices of the well-known surgeon, Mr. William Macewen.

AMERICAN NEUROLOGICAL ASSOCIATION.

Thursday, September 20th—Third Day.

Dr. G. L. Walton, of Boston, presented a paper on

DISLOCATION OF THE CERVICAL VERTEBRÆ,

relating two cases in which there was spontaneous recovery, and giving histories of several other similar injuries.

In the discussion which followed **Dr. Webber** reported the case of a stout man who fell from a chair, upon his shoulder, thus giving his head a severe jerk. He was picked up paralyzed in both legs and partly in both arms. In thirty-six hours the paralysis of the legs began to improve, and passed off altogether within a few days. The arms recovered imperfectly, and he suffered intense pain in them, for which morphia was given for months. This was probably the cause of the constant nausea present. He believed that there was a dislocation of the cervical vertebræ in this case, with spontaneous recovery.

Dr. L. C. Gray referred to a case of dislocation of the third cervical vertebra, which he had reported eight years ago. A young boy fell down a flight of stairs. There was paralysis of the upper and paresis of the lower extremities, and difficult deglutition. It was reduced under ether, and in a week the boy was well. He then had the misfortune to fall in the same manner and again dislocate his neck. It was again returned to its place, and he was perfectly well when last seen, one year after the accident.

Dr. James J. Putnam thought that the permanent atrophy in one of Dr. Walton's cases might be explained by mechanical injury or hemorrhage in one of the nerves at the point of origin.

Dr. Walton had been very uncertain as to the cause of this, but had believed it due to compression.

Dr. Bannister, of Kankakee, gave the details of a case, with atrophy of the arm and tongue, following a cervical pachymeningitis.

Dr. E. D. Fisher also reported a case of dislocation of the neck, occurring many years ago in one of his patients, an old woman, who had permanent paraplegia and wasting of the arms.

Dr. Landon C. Gray, of New York, then reported upon a case with

TYPICAL SYMPTOMS OF DISSEMINATED SCLEROSIS, THE POST-MORTEM EXAMINATION REVEALING ONLY LEPTOMENINGITIS.

This patient was under observation for three years. He had intention tremor, nystagmus, scanning utterance, exaggerated patellar reflexes, and later apoplectiform attacks, violent emesis at times, and increasing dementia. There were no sensory disturbances, no neuro-retinitis or other changes in the cranial nerves. The autopsy showed leptomeningitis diffused over the convexity of the cerebrum. Careful search failed to discover any sclerotic patch in cerebrum or cerebellum. There were peculiar varicosities in the cerebral nerve-fibres. A case similar to this had been described by König, of Berlin, last year.

Dr. Webber remarked that epileptiform seizures were very rare in typical disseminated sclerosis.

Dr. Bannister thought the case one of general paresis where a meningo-encephalitis is common.

Dr. Fisher mentioned a case of his of general paresis where there were epileptiform seizures and an intention tremor.

Dr. Gray said that in his case the attacks were apoplectiform with rise of temperature.

Dr. C. K. Mills stated that the symptoms in such cases were due to the localization and not to the nature of the lesion. The tremor was caused by want of normal relation between the motor impulses and conduction. Sclerosis might exist in many portions of the nervous system without producing tremor, but in certain places it will always do so. A leptomeningitis over the motor areas would be apt to give rise to tremor. Leptomeningitis is very common in general paralysis.

Dr. Blackburn, of the Government Insane Asylum, Washington, then exhibited, by invitation, some preparations of brain by an original method. A brain, or any part of it, is first hardened by any of the current methods, such as chrome salt solutions, alcohol, or chloride of zinc, then dehydrated thoroughly in alcohol, and subsequently placed for three days in a saturated solution of Japanese wax in chloroform. This wax is a concrete oil obtained from a Japanese tree. The specimen is then placed for three days longer in melted Japanese wax, kept in a molten state over a water-bath. It may then be removed, drained, and allowed to dry. It now suffers no change from exposure to the atmosphere, and may be used for demonstration of the coarser morphology, and perhaps even of the finer. Some of the specimens presented had been in service for two years.

Dr. S. Weir Mitchell, of Philadelphia, read a paper on

ANEURISM OF AN ANOMALOUS ARTERY, CAUSING ANTERO-POSTERIOR DIVISION OF THE OPTIC CHIASM AND BI-TEMPORAL HEMIANOPSIA,

which was read by **Dr. F. X. Dercum**. The case had been seen by the author six months before death. The color-sense was normal. There were no changes in the fundus, and no mental disturbance. The patient died suddenly. The aneurism was formed by the two carotids, was the size of a lemon, and lay in the eroded cavity of the sella turcica. The anterior communicating artery was absent, otherwise the circle of Willis was normal.

Dr. Frederick Peterson, of New York, presented a paper entitled

A CONTRIBUTION TO THE STUDY OF MUSCULAR TREMOR.

The author exhibited some fifty myographic tracings of various tremors taken with the Edwards' sphygmograph. The myograms were from the supinators and pronators, the carpal extensors, interossei, and head in paralysis agitans, and from cases of multiple sclerosis, delirium tremens, neurasthenia, alcoholism, morbus Basedowii, and hysteria. He found the rate of oscillation to be from 3.7 to 5.8 per second in paralysis agitans; from 4.6 to 6.3 in multiple sclerosis; 8.7 to 12, in exophthalmic goitre; 7.6 to 7.8 in hysterical tremor; 8.5 to 11.2 in alcoholism; about 7.4 in neurasthenia, and from 5.6 to 6.8 per second in delirium tremens. The rapid tremors correspond almost exactly with the normal innervation rhythm of ten per second, while the slower tremors are the result of fusion of two or more motor impulses from the cortex. He also presented tracings of ankle clonus from a case of lateral sclerosis, the rhythm of which was six per second. The pathology of tremor was discussed, and a short review of the literature of myographic study given.

Dr. Sinkler asked if the author had ever attempted to get tracings of the ankle and knee clonus, when both were present, to determine whether they were synchronous or not.

Dr. Peterson said that he had not.

Dr. Putnam stated that he had made curves of ankle clonus at one time by means of a myographic apparatus devised by himself.

Dr. Dercum asked for particulars as to the mode of application of the instrument when obtaining tracings.

Dr. Peterson explained the difficulties in the way of making the myograms, because of the intentional characters of many of the tremors, and the fact of their being developed only when the fingers or hands are extended. He generally seats the patient and himself, with the arms of the patient against a table, and his own elbows upon some fixed support. But none of the obstacles alter the rate of vibration or materially change the peculiar characteristics of certain tremors.

Dr. Hare described at some length a kymographion devised by a Philadelphia mechanician under the supervision of Dr. Weir Mitchell, some years ago, for the study of ankle-clonus and other muscular movements.

Dr. Philip C. Knapp, of Boston, detailed the histories of three cases exhibiting certain

POST-HEMIPLEGIC DISTURBANCES OF MOTION IN CHILDREN,

after which **Dr. J. H. Lloyd**, of Philadelphia, communicated the report of

A CASE OF TUMOR OF THE CERVICAL SPINE.

The patient died three days after the operation. The surgical report of the case was presented by **Dr. John B. Deaver**, of Philadelphia. At the autopsy there was found a condition of ostitis in the vertebra and some pachymeningitis.

Dr. E. O. Shakespeare, who had made a microscopic examination of the cord, reported to the Association the result of his investigation. On the anterior portion of the cord was a small protrusion about the size of a grain of wheat. The chief lesion was hemorrhagic extravasation with slight focal myelitis in this portion of the cord.

Dr. C. K. Mills thought there would be great difficulty in making a differential diagnosis between such a lesion and one higher up, as the symptoms would necessarily be so much alike. The local pain was no doubt due to the local inflammation in the membranes. The complete paralysis of arm and leg in this case, with the absence of facial paralysis, would assist materially in the diagnosis. The case was one of physiological importance, because the lesion had been so well studied clinically and pathologically. As to operating in such cases, the question for the neurologist to decide is not only as to the safety of opening the membranes, but also as to whether the lesion can be reached by operating.

Dr. Dercum desired to know what relation there was between the lesion in the cord and the ostitis. There seemed to be in the report no apparent connection between the two.

Dr. Putnam inquired if there was any extinguishment of pain or temperature sense, because he saw the lesion extend through the antero-lateral portion of the cord.

Dr. Lloyd, in closing the discussion, said that the case seemed much like one of ordinary hemiplegia, and had, in fact, been sent to his ward as such. It was several days after that he discovered the swelling in the back of the neck. He then studied the case carefully and made the diagnosis of a tumor compressing one side of the cord. The gradual onset of the disease seemed to point almost conclusively to that. There was no tactile anæsthesia on the sound side. He had not especially tested the pain and temperature senses, but knew that the patient felt pinching and warmth. The lesion was too far above the cervical enlargement to affect the trophic centres of the arm. All of the nervous system above the lesion was normal. He had no particular theory to account for the ostitis, pachymeningitis, and the hemorrhagic extravasation with myelitis, but surmised that there was primarily disease of bone, due, probably, to injury, and that the ostitis extended, by contiguity of tissue, to the meninges and cord. The operation had been sanctioned by Dr. D. Hayes Agnew.

Dr. Putnam asked if the nerve-roots had been examined with reference to sclerotic processes, and was answered in the negative.

Dr. Wharton Sinkler, of Philadelphia, then read a paper on

HEREDITARY CHOREA.

He gave a general review of the literature of the subject, and added the histories of two choreic families which had come under his observation. He reached three conclusions as to this form of chorea: First, that it is hereditary; second, that it generally becomes manifest between the ages of thirty and forty; and, lastly, that it is as a rule incurable, and there are concomitant mental changes tending toward dementia.

Dr. Knapp reported a case having many symptoms in common with hereditary chorea.

Dr. Mills stated that he, also, had seen recently a case of Huntington's chorea—a woman whose father, and young daughter, a few years old, were all affected similarly.

Dr. Gay, of London, in allusion to the derivation of the term "megrims" used by common people to designate this disease, said that there is a choreic disease in horses, which in England is called the megrims.

Dr. Brush stated that among the people of the lower classes in Connecticut and Long Island, the term "megrims" was applied to drunkenness or any similar condition in men.

The names of Dr. David Ferrier and Mr. Victor Horsley were proposed for honorary membership in the Association, and the meeting was adjourned.

AMERICAN DERMATOLOGICAL SOCIETY.

Thursday, September 20th—Third Day.

Dr. R. W. Taylor read a paper on

LICHEN RUBER AS OBSERVED IN AMERICA, AND ITS DIFFERENTIATION FROM LICHEN PLANUS.

Prior to 1874 nothing was known in America of lichen ruber except the knowledge derived from Hebra's description. Lichen planus was well known in England, and we first learned to know the disease from the writings of Wilson and Fox. The Germans, at this time, knew nothing of lichen planus. At this time a series of typical cases of lichen planus were published in America. In this country lichen ruber is a very rare disease, and there are few opportunities for its study.

Dr. Taylor has had under observation two characteristic cases, in one of which the disease ran its course twice. A study of these cases should convince anyone that lichen ruber is a distinct morbid entity. Sixty-four personally recorded cases of lichen planus serve as basis for a table of differential diagnosis. The case reported was one of a female, aged thirty-seven, who came from Europe in 1884, and had her first attack at once. In March of the present year the patient came under the author's observation with an eruption which had begun as a group of pimples on the neck, and spread downward. At the date of writing, the disease has existed six months. He divides lichen ruber into three stages: 1. Stage of isolation of the papules; 2. Stage of coalescence of the papules; and, 3. The resulting chronic infiltrated, pigmented, and scaly stage.

When the papules are fully developed, numerous, and distinctly clustered in groups, they may perhaps be mistaken for a short time for lichen planus, particularly if they occur on the inner surfaces of the arms and near the wrists, on the abdomen, or on the antero-inner surface of the thighs or legs. Under no other circumstances can a trained observer confound the two diseases.

In inveterate cases, such as Hebra first observed, the whole integument may become transformed into a harsh, nutmeg-grater or file-like tissue. Particular attention is called to the condition of the nails, which are dull white or dirty yellow, rough, serrated, and four times their normal thickness. There is no concomitant nail affection in lichen planus. The paper shows that in America lichen ruber presents the same characteristics as in Germany, but it has not yet been seen here in the deadly form first described by Hebra. The disease has only one short stage in which it can, by any possibility, be mistaken by a trained clinician for lichen planus. Lichen ruber slowly but surely tends to extend; lichen planus remains indolent and localized. The first is attended by emaciation and possibly death, while the latter, as a rule, has no systemic reaction.

Dr. G. H. Fox read a paper having for title

THE NON-IDENTITY OF LICHEN PLANUS AND LICHEN RUBER,

in which he reported a number of cases to illustrate his position in maintaining that the two diseases are distinct and should not be confounded.

Dr. Sherwell said lichen was the most important subject brought before the Society, because of the still open questions and the attention the question is now receiving. There is a large consensus of ideas as to the non-identity of the two diseases. He believes absolutely in the non-identity. Clinically, almost all the facts go to prove this. He had seen a few typical cases of lichen ruber. In lichen planus the general health is not profoundly affected, while in the other the marasmus and ill-health lead to death.

Dr. Bronson thought the thorough manner in which the subject had now been presented would go far to settle the question, or at least aid in its study. He had long believed in the non-identity. Presuming that the diseases were alike in their pathological anatomy, the clinical features are so unlike that they must be looked upon as distinct.

Dr. Bulkley thought it a strong point that no one had ever seen the one disease developed or engrafted upon the other.

The old lichen simplex he believes in, but many cases of lichen ruber were probably in olden times included under it. He thought the paper of Dr. Robinson one of the finest he had ever heard upon a dermatological subject. He has reported two cases with lesions first appearing upon the glans penis. He believes thoroughly in the non-identity.

Dr. Atkinson agrees with those who have spoken. He has never treated lichen ruber.

Dr. Heitzmann said lichen is a term used in various ways. He thought Hebra had called these cases of lichen planus chronic eczema in the early days. Now he himself is convinced that the disease differs from lichen ruber. Eczema papulosum surely differs from lichen ruber planus.

In all cases of lichen planus he has used salicylic acid, with curative effect.

Dr. Robinson said, regarding pathological anatomy, that he had omitted this from his paper, making the difference not only upon this, but the clinical history and results of treatment.

He would not consider it proof of the identity if a single case of lichen ruber should develop lichen ruber. Arsenic has not much effect on lichen planus. He has been unable to cure with it, but has cured certain cases with iodide of potassium and colchicum in a week's time.

Dr. Taylor said he had microscopic demonstrations to substantiate his views. He did not believe the two diseases were interchangeable. The case of lichen ruber now under observation is typical. The nails have been lost twice in her previous attacks. He thinks she will recover from this, as from the other two attacks.

Dr. Bulkley then read a paper on

DERMATITIS PLANTARIS AND PALMARIS.

The term, he said, had not been hastily applied, but used to indicate a definite inflammatory condition. After reviewing the various dermatoses affecting the palms and soles, it was pointed out how the affection now described differs from them.

Notes of three cases are given; one in which there were several relapses. In the first case the palms had peeled repeatedly over a period of many years. It was preceded by malaise and indigestion for a week previous to the desquamation, such as is seen in scarlatina, leaving a red painful, denuded surface. The soles peeled as well in some attacks. The other cases were attended with burning or tingling sensations before the desquamation, and signs of impaired health were usually present. The temperature of the palm was found higher than that of the back of the hand. Borax lotion and astringent ointments were used with benefit. Duhring regards this condition as a localized dermatitis exfoliativa, but the author cannot accept this view. The data are too few for conclusions, but the cause must be looked for in the nervous system. The neurotic element was marked in two of the cases. There was no marked perspiration.

Dr. Heitzmann said we all meet with unusual cases. He had recently had a case in which the palms had exfoliated since childhood, but there was perspiration and augmentation of hairs upon the backs of the hands. He had named it dermatitis exfoliativa.

Dr. Hyde had a cast of the entire palm, which had exfoliated complete, just as Dr. Bulkley had one of the entire sole.

He had read a paper last year with the same title describing similar recurrent disorders.

The change in the hairs is very remarkable in some of the cases. He regards the condition as an external evidence of central trouble.

Dr. Morrow thought a central nerve-trouble was present. The term dermatitis exfoliativa was sometimes applied to pityriasis rubra, which he regarded as an unfortunate use of terms. As the exfoliation had extended to other parts in one of the reported cases, the designation did not cover the picture. He had seen such cases due to drugs.

Dr. Bronson said there is a peculiar form of inflammation attended with desquamation which he thought had been properly named in the paper.

Dr. Atkinson said he had seen cases due to the action of quinine, and asked if it had been excluded. Cases had been observed in which complete exfoliation could be produced at will by giving quinine. Effects of drug-ingestion should always be excluded.

Dr. Bulkley said there was a remarkable slowing of the pulse in one case, and white corpuscles were found in excess in the blood.

Quinine was excluded in one case, but one patient took it, as the patient was improving. He had seen cases of exfoliation due to quinine, but this is a distinct condition.

Other papers were read by Dr. A. Van Harlingen, of Philadelphia, on "Note of a Case of Filaria Medinensis," illustrated by a colored plate; one by Dr. R. W. Taylor, of New York, on "So-called Acne Anthracoide Iodopotassique;" and one by Dr. C. Heitzmann, of New York, on "Kraurosis of the Vulva (Breisky)."

The Association adjourned, to meet next year at Young's Hotel in Boston.

Dr. Graham, of Toronto, Canada, was elected President for the ensuing year.

AMERICAN ORTHOPEDIC ASSOCIATION.

Thursday, September 20th—Third Day.

Dr. Benj. Lee, of Philadelphia, read a paper on

HÆMATOMA ORIS AS A SIGN OF INJURY TO THE SPINE IN THE SUPERIOR CERVICAL REGION.

This condition consists in a gradual swelling of the organ, non-inflammatory in its nature, slightly painful and sensitive, or not at all so, which, as it progresses, destroys completely the natural shape of the ear, obliterating all the convolutions, until it looks as much as anything like a great purple egg-plum attached to the side of the head. After an indefinite period the tumefaction begins to diminish, the skin loses its tenseness, and shrivels, and the final result is a shrunken, seamed, and distorted member. Not infrequently the ear bursts and a considerable amount of blood is discharged. As to the cause of this curious pathological change, which is so well recognized that it has come to be called the "insane ear," authorities differ. (The authorities were then given.) The author's own conclusions are: First, that this curious pathological condition is idiopathic, never traumatic. Second, that the local tissue-change which makes the extravasation possible, is dependent upon a degenerative alteration in the nerve-centre which controls the circulatory apparatus of the auricle, involving or not the larger arterial branches.

The paper was discussed by Drs. L. H. Sayre, Vance, and Ketch.

Dr. A. J. Steele, of St. Louis, reported

TWO KNEE-JOINT EXCISIONS,

the first in a lad with chronic fungoid and suppurative joint disease, which had been going on from early childhood; the second in a young woman, with right-angled anchylosis of nine years' standing, resulting from injury, and doubtless subsequent acute synovitis. In the first case the joint was rapidly going on to destruction, and the constitution breaking down; in the second the inconvenience in walking prompted measures for relief. The results in both cases were good. Photographs were shown.

Drs. Whitehead, L. A. Sayre, Ridlon, and L. H. Sayre took part in the discussion of the paper.

Dr. R. W. Lovett, of Boston, then read a paper entitled

AN EXPERIMENTAL STUDY OF FIXATION AND TRACTION IN HIP-DISEASE.

American traction-splints are criticised by English surgeons on the ground that they afford imperfect fixation. With a view to ascertaining how much fixation traction alone affords, some experiments were made upon a healthy child. It was found that with four pounds traction, exerted by means of a hip-splint with one perineal band, in walking 35° of motion took place. With the highest endurable traction (eight pounds) 15° of motion took place. Evidently, then, traction alone cannot afford fixation to a diseased joint. It does not seem likely, either, that it separates the joint surfaces, inasmuch as in the case experimented upon the power of the thigh muscles was roughly estimated to be thirty-six pounds. With all their force when set in muscular spasm, they would pull the head of the bone against the acetabulum with more than that power, and the antagonizing force is only eight pounds at most. Experiments as to distraction upon the cadaver do not reproduce the clinical conditions, inasmuch as muscular spasm, the most important factor of all, is left out of account.

A hip-splint providing fixation as well as traction was shown, being merely a slightly modified combination of the English Thomas splint with the American traction-splint. Its best use is in bad cases where any joint motion does harm, and in cases where deformity is present, inasmuch as it is possible to correct the deformity while the child goes about on crutches. The paper was discussed by Drs. L. A. Sayre, Ridlon (who showed a body-piece attached to a long-traction hip for the sake of giving better fixation, and an easy means of giving abduction or adduction), Bradford, Park, Steele, Moore, and Shaffer.

Dr. R. W. Whitehead, of Denver, then read a paper on

THE OPERATIVE AND MECHANICAL TREATMENT OF SOME JOINT DISEASES AND INJURIES,

with especial reference to the hip-, knee-, and elbow-joints, with illustrative cases.

The putting of a crooked leg into a straight splint was deprecated in the strongest terms. In hip-disease with deformity, in certain cases tenotomy was used with *brisement forcé*, and the subsequent application of a traction splint. The result was good, with motion. Another case was reported where there was anchylosis at the hip-joint. The treatment was the same as above mentioned. Other cases were reported where tenotomy and *brisement forcé* were not used, and good results were obtained by weight and pulley, or with the long-traction splint.

Cases of partial resection of the knee-joint were then related. It was pointed out that when subluxation of the tibia backward occurs, the condyles of the femur become abnormally elongated by growth, so that reposition is impossible without at least a partial resection. It was believed that so far as possible the ligaments should be respected, and that the patella should not in very many cases be removed. A felt splint with an arrangement for giving traction and counter-traction, as also an apparatus for the elbow-joint was described. Many photographs were shown. The paper was discussed by Drs. Lee, Moore, Ridlon, Shaffer, and Phelps.

Dr. V. P. Gibney, of New York, read a paper on

IMMOBILIZATION IN ARTICULAR DISEASE.

The question which the author put was, Whether fixation of a joint, about which disease of the bones exists, is detrimental, or contributes in the least to permanent impairment of the functions of the joint? The author believed the function of an organ in health is modified in proportion to the impairment of that organ. The consensus of opinion, as expressed by the leading surgeons of New York City, within the past two or three years, is to the effect that the best possible results in elbow-joint injuries are obtained by perfect immobilization after the part has been placed in normal position. In the use of plaster-of-Paris dressings for the knee the author's experience is that the better the fit secured by the plaster dressing, and the longer kept uninterruptedly applied, the greater was the disappointment at not finding the expected anchylosis; in other words, the range of motion was increased by the prolonged fixation. Whatever anchylosis occurs in a joint which has been subjected to immobilization occurs by reason not of immobilization but of the nature and intensity of the inflammation, and of the inefficiency of the apparatus employed.

Dr. R. W. Lovett then exhibited the following appliances, from the Children's Hospital, Out-Patient Department, of Boston:

A series of modifications of Taylor's back-brace for cervical Pott's disease; perineal bands; extension head-piece for plaster-jacket; flat-foot plate; outside Taylor shoe; Bradford frame; Thomas' knee-splint with screws for adjustable length, and apparatus for measuring for it; apparatus for double infantile paralysis.

Dr. Ridlon, of New York, exhibited a box for shoe in using Thomas' caliper-splint; and Thomas' knee-splint, modified for infantile paralysis.

Dr. Samuel Ketch, of New York, read a paper entitled

REMARKS ON LATERAL CURVATURE AND ITS EARLY TREATMENT.

He brought out especially the relationship of habit, puberty, and other supposed etiological factors to this deformity. The former was considered as being rather a result than a cause of the deformity, the author stating that he had never seen a case of rotary lateral curvature resulting solely from habit. Puberty he considered as being in itself no direct cause, it being simply a period of life at which the deformity already existing progresses more rapidly and is brought into greater prominence by coincident events, such as greater alteration of form, dress, etc. In the matter of treatment he considered early diagnosis of the greatest importance, and that this disease principally is one of early life the author thought proven by his investigations reported in an article entitled "Remarks on Lateral Curvature, with Special Reference to its Occurrence in Children," published in The Medical Record, April 24, 1886. It is then at this time, between birth and seven years, that we should look for and begin to treat these cases in order to bring them to a successful issue. The author, as a rule, deprecated the use of an apparatus in very young children, relying principally on exercises, gymnastics, posture, and recumbency.

The paper was discussed by Drs. L. A. Sayre, Lee, and Whitehead.

The following papers were read by title: "An Effectual and Inexpensive Method for the Mechanical Treatment of Pott's Disease," by Dr. C. F. Stillman, of New York; "Acute Epiphysitis in Infants," by Dr. Dillon Brown, of New York; "Description of an Apparatus for Measuring any Inequality in the Length of the Lower Extremities," by Dr. T. G. Morton, of Philadelphia; "The Surgical and Mechanical Treatment of the Deformities of Spinal and Cerebral Paralysis," by Dr. A. Sydney Roberts, of Philadelphia; "Double Hip-Disease, a Report of Fourteen Consecutive Cases, with some Conclusions," by Dr. John Ridlon, of New York; "Distraction of the Head of the Femur as a Result of Continuous Extension," by Dr. E. G. Brockett, of Boston.

The following officers were elected for the ensuing year: *President*, Dr. E. H. Bradford, of Boston; *First Vice-President*, Dr. Benjamin Lee, of Philadelphia; *Second Vice-President*, Dr. V. P. Gibney, of New York; *Secretary and Treasurer*, Dr. R. W. Lovett, of Boston.

The Association then adjourned.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Thursday, September 20th—Third Day.

Dr. Charles H. Knight, of New York, read a paper on

CONGENITAL BONY OCCLUSION OF THE POSTERIOR NARES.

Total occlusion is extremely rare, especially when caused by congenital bony tumor. Reference was made to reported cases, and especially that reported by Dr. Jarvis, of New York. The whole literature of the subject had been thoroughly worked up. Treated by perforating with nasal trephine, run by electro-motor, and subsequent use of galvano-cautery, it showed great persistence in closing after each operation, but soft tissue instead of bony. Sense of smell greatly improved, even when temporarily closed. There still remains a tendency to dryness of mucous membrane on that side of the nose. In operating and diagnosing was aided by examining with the finger behind the palate.

Dr. Allen reported a case of bilateral occlusion where he operated with large drill.

Dr. C. C. Rice, of New York, presented a communication entitled

ANTISEPTIC NASAL SURGERY.

His experience is that there are present in the nose, heat, moisture, foreign matter, extract from air containing numberless germs, and, in fact, every condition to favor decomposition and the infection of any cut surface. Tissues, in swelling after operating, block up the nose, interfering with drainage and enclosing small fragments of soft or bony tissue that are almost certain to decompose; tissue also partly severed and still hanging to wound; excessive bleeding also tempts one to pack the nostril, which, along with use of persulphate of iron is almost certain to show symptoms in from eight to twenty-four hours. Hard to use antiseptic dressing as wet by constant discharge.

He mentioned a large number of cases where blood poisoning had resulted to a dangerous degree, some of which had been reported. Has frequently seen temperature rapidly run up to 103° to 104°F., with intense nervousness, headache, etc. Remove tampons, if used, and douche thoroughly from both anterior and posterior nares with solution of hydrogen dioxide, boracic acid, salicylic acid, or bichloride of mercury. Fifty per cent. of cases operated on have same temperature. Erysipelas is comparatively common after operations in nasal cavities. Advocates the thoroughly douching out of nostrils with a quart or more of antiseptic solution, and take as much care with the sterilizing of instruments and hands as is usual with surgeons. Above all, thorough cleanliness. Never tampon nose even with antiseptic packing. Prefers liquid medication to powders. Never take away more tissue than necessary.

A lengthy discussion indorsed the vital importance of antiseptic nasal surgery.

Dr. Charles E. Sajous, of Philadelphia, read a paper on

THE TREATMENT OF SOME FORMS OF HOARSENESS.

The plan of treatment was to remove thickening and vascularity of cords, not by severe surgical interference, but by means of chromic acid fused upon aluminium applicator. A very small area was treated from time to time, till the whole surface had been freed from the dilated vessels. Successful cases were reported.

Dr. J. C. Mulhall, of St. Louis, read a paper, entitled

THE CURE OF FALSETTO VOICE.

The case reported was cured, not by medication, but by mental impression and patiently teaching the patient the proper use of the laryngeal muscles, to produce a lower register for speaking. He was greatly aided by putting the head in such a position as to interfere with the production of higher notes.

Dr. A. W. MacCoy, of Philadelphia, reported

A CASE OF SARCOMA OF THE TONSIL.

Mulatto girl, aged forty-five. First appearance as simple case of follicular tonsillitis. Three weeks later large fissure appeared at the centre with adherent slough. Several weeks later began to change color at centre (grayish white), with loss of tissue and œdematous margin. Soon red growth appeared behind soft palate, spreading to Eustachian tube and posterior pillar of the pharynx, with thin processes extending over posterior wall of pharynx. The next extension was to infiltrate the palate and uvula, causing sloughing. Between the sixth and seventh month swallowing was difficult from infiltration at base of tongue. At eighth month growth more rapid, involving gums and cheek, so that mouth could not be closed. Submaxillary gland and lymphatics involved. Deglutition almost impossible, and interference with breathing threatens resort to tracheotomy. At tenth month great loss of weight and rapidly failing. Died in carriage while being moved by a relative contrary to advice. No autopsy was obtained. Donovan's solution was used, increasing dose to fourteen drops three times a day without gastric disturbance.

In one thousand cases of throat tumors recorded during a number of years in four London hospitals, and reported by Dr. W. R. Williams, only nine primary tumors of tonsil, and but one sarcomatous.

Dr. S. W. Langmaid, of Boston, exhibited

A SPECIMEN OF LARYNGEAL PAPILLOMA FROM A CHILD.

The papillomatous mass was large and attached to both cords. The larynx was for the most part filled by the growth.

Dr. Franklin H. Hooper, of Boston, presented a communication entitled

THE EFFECTS OF VARYING RATES OF STIMULATION ON THE ACTION OF THE RECURRENT LARYNGEAL NERVE.

Experiments were tried on dogs and cats by galvanizing both recurrent laryngeal nerves, and varying both the intensity of the current and the number of vibrations.

When the vibrations were between twenty and thirty per minute, the vocal cords were separated unless strong current. When between twenty-eight and forty they were closed in front and separated posteriorly.

An intense current closed them even when there were but twenty vibrations. Cuts required double the number of vibrations to cause closure.

Dr. F. H. Bosworth, of New York, presented

A REPORT OF CASES OF PHARYNGEAL AND LARYNGEAL PARALYSIS DUE TO BULBAR LESIONS.

Three causes of laryngeal paralysis: Injury or irritation to terminal filaments; injury to, or pressure on trunk of recurrent laryngeal; irritation of central origin in medulla. Improbable that it can be due to any but last cause when the paralysis is bilateral. Difficult to find any case where pressure on both recurrent laryngeal nerves. Cases mentioned where the bilateral paralysis was forerunner of locomotor ataxia, or soon had other forms of paralysis make their appearance. Forty or fifty cases he had on record, which were verified by post-mortem examination, and the cause found to be bulbar lesion or clot. He has found no evidence of there being a laryngeal centre in the cortex.

Dr. E. Fletcher Ingals, of Chicago, read a paper on

SUBGLOTTIC LARYNGEAL ENCHONDROMA.

This affection has only twice been treated successfully by endo laryngeal operations. Dr. Ingals gave in detail the history of a case which had been greatly benefited by the occasional application of strong chromic acid. On account of business engagements the patient had been very irregular in attendance. In all, but six applications had been made, and at irregular intervals of from one to five months, and had caused a reduction in the size of the tumor from 7 mm. in height, and 12 mm. in diameter, to one tenth that size. The author felt confident that it could be completely eradicated by a few more applications. The chromic acid was fused upon an aluminium applicator, and a small section of rubber tube slipped over it, and so cut as to leave only the end and a small place at the side. Thus surrounding tissues were protected.

Dr. W. H. Daly, of Pittsburg, followed with a communication entitled

MILD MEASURES IN THE TREATMENT OF INTRA-NASAL HYPERTROPHIES.

Accident caused the adoption of the following line of treatment: A case had become frightened and refused further treatment, as the first cut was being made in removing, with serrated scissors, a large anterior turbinated hypertrophy. The incisions had bled freely at the time. The patient made a hurried escape and was not seen for a year, when it was found that the hypertrophy on that side had contracted to normal size. Now treats similar cases by making small punctures from time to time so as to allow bleeding to extent of one to three ounces. The results have been most excellent, especially where the tissue was very vascular and soft rather than true hypertrophy. The author fears galvano-cautery on account of occasional disagreeable results, while milder measures prove more satisfactory.

THE AMERICAN CLIMATOLOGICAL SOCIETY.

Thursday, September 20th—Third Day.

Dr. J. T. Whittaker, of Cincinnati, read a paper on

CONDITIONS WHICH TEND TO RENDER THE ATMOSPHERE OF A LOCALITY ASEPTIC.

He reviewed the opinions of authors as to the agency which the air has in carrying the germs of disease. The air of different localities varies a great deal in the number of micro-organisms, the air of cities containing more than that of the country. The air at sea, at the distance of a little over a hundred miles, is absolutely free from micro-organisms except in the presence of a land-breeze. The large number of micro-organisms found in dwelling-houses would lead us to infer that infectious diseases are usually, if not always, contracted in dwelling-houses. The conditions necessary to make the air in a house aseptic were considered. He recommended furnaces which should take their air from the top of the house.

Dr. Johnson, of Chicago, remarked that one of the difficulties of producing an aseptic atmosphere is, that what will destroy one micro-organism will not destroy another. He spoke of the danger of large numbers of micro-organisms found in health-resorts.

Dr. Taylor, of San Antonio, spoke of the prevalence of septic diseases in localities where people are shut up in their houses for a great part of the year.

Dr. Daly, of Pittsburg, doubts if it is best to take the air for furnaces from the tops of houses. He considered the house described by Dr. Whittaker was an ideal house which could never be built, but he recommended the careful examination of houses as they exist.

Dr. Wilson, of Philadelphia, said that dilution was the true means of rendering the air of our houses aseptic. There is more apathy than there should be about the ravages of pulmonary consumption, which are more formidable than even the epidemics of the middle ages, and we should take proper precautions against the spread of consumption.

Dr. A. H. Smith, of New York, remarked that he believed the time would come when the physician who neglected to take proper precautions to prevent the infection of healthy persons by consumptives would be considered as guilty as one who exposed his patient to the small-pox without vaccination.

Dr. Frank Bosworth, of New York, made remarks on

THE RELATION OF THE NASAL AND NEUROTIC FACTORS IN THE ETIOLOGY OF ASTHMA.

He does not believe in the spasmodic origin of asthmatic attacks. He believes that the disease is a neurosis, according to the theory of Weber. The serous exudation of the nasal and bronchial mucous membranes are reciprocal, the exudation of one adapting itself to the exudation of the other; anæmia of the one also being associated with anæmia of the other. On account of the sympathy between the two membranes, certain conditions of the nasal membrane may cause attacks of asthma.

Dr. E. L. Shurly, of Detroit, spoke of a series of experiments on dogs to produce asthmatic paroxysms, and these led him to discard the spasmodic theory of asthma. He does not believe in the nasal origin of asthma. The majority of nasal passages of asthmatics that he has examined in the past four years he thinks have been healthy.

Dr. Daly, of Pittsburg, emphasized the difference in experimental researches on animals and the conditions of disease in human beings. He believes there are a certain number of cases of hay asthma which can be cured by placing the naso-pharynx in a healthy condition, but this is not so in all cases.

Dr. A. H. Smith, of New York, thinks the causation of asthma is a many-sided question. Not only the swelling of the mucous membrane, but interference with the circulation of the blood through the lungs, may have something to do with the asthmatic attack. The frequent good results of operations on the nose in such cases has much impressed him of late years.

Dr. Beverley Robinson, of New York, thinks that nasal disease may have a causative relation to asthma. He remarked, however, that he had seen many cases of nasal obstruction in those who had never had asthma.

Dr. Bosworth said that, of 80 of his cases of asthma, 42 had been cured and 30 much benefited by nasal treatment alone. In 5 of these cases the result was unknown, and only 3 were not benefited. He thinks this a strong argument in favor of the nasal cause of asthma.

Dr. J. L. Wilson, of Philadelphia, read a paper on

CLIMATE AND BRIGHT'S DISEASE.

Renal disease prevails most where the heat for the greater part of the year might be called temperate. Change of climate in chronic Bright's disease is of great value, and is, perhaps, as important as in consumption. Little notice is taken in text-books of the change of climate. The dangers of abrupt changes of climate or of long journeys by rail must not be overlooked.

Dr. Taylor, of San Antonio, emphasized the value of change of climate in Bright's disease in going from the Northern to the Southern part of the United States.

Dr. Solly, of Colorado Springs, said sending cases of Bright's disease to high altitudes was usually dangerous, but he had seen cases do well in Colorado. He believes the chief point to be thought of is the action of the skin and the effect the climate will have upon that.

Dr. Loomis remarked that his advising change, or not, in these cases has depended upon the condition of the heart; when we have signs of heart failure we are risking the lives of our patients by sending them away.

Dr. M. K. Taylor, U.S.A., read a paper on

CLIMATIC CHARACTERISTICS OF TEXAS.

It is impossible, within the limits allowed, to do justice to so large an area of country as Texas. The rainfalls and the elevation of different parts of the State were dwelt upon. He mentioned the dryness of the air in some sections, which equals that of the Nile region. The average number of days in which the thermometer goes below zero at San Antonio is fourteen in the year, and there is rarely any dew.

Dr. J. J. Levich, of Philadelphia, read a paper on

WEAK HEARTS AS AFFECTED BY CLIMATE AND TEMPERATURE.

He believes the strain brought upon the heart by severe exercise may produce effects which last often for a long time, and this condition he calls, for want of a better name, weak heart. After considering the symptoms he insists upon the importance of recognizing the condition early. The most important part of the treatment is to avoid the cause, and change of climate. He recommends small doses of nux vomica. Although digitalis in proper cases is valuable, he says a word of caution against its improper use; it is not well to give it in these cases.

Dr. A. L. Loomis remarked that there were cases of heart failure for which there is apparently no cause, but he believes that in most of these cases there is dilatation, most frequently of the right side, and this dilatation is not necessarily permanent.

Dr. J. M. Anders, of Philadelphia, read a paper on

TEMPERATURE AND RELATIVE HUMIDITY, AND THEIR RELATIONS TO HEALTH AND DISEASE.

He drew a number of conclusions upon the subject of his paper.

Dr. I. H. Platt, of Lakewood, N. J., read a paper on

SUGGESTIONS REGARDING THE MANAGEMENT OF PHTHISICAL PATIENTS UNDERGOING CLIMATIC TREATMENT.

The benefits of climatic treatment depend, first, upon choosing the proper climate, and, second, upon the proper regulation of the life. He considered what we should seek for in change of climate and the mode of life to be adopted by the patients wherever they may be sent. He deprecates the association of a large number of patients together. He considered the construction of the houses in which patients should live.

Dr. W. Matthews, U.S.A., read a paper entitled

FURTHER CONTRIBUTIONS TO THE STUDY OF CONSUMPTION AMONG THE INDIANS.

The rate of consumption, especially scrofulous, among Indians is high and is increasing, which may be accounted for by the change of life among those who have given up their wild life and are living on reservations. Scrofula is common among these people.

Dr. D. M. Cammann, of New York, read a paper on

OBSERVATIONS ON THE USE OF TEREBENE.

He found terebene useful in bronchial affections. It lessened the expectoration and rendered it more watery. It seldom disordered the stomach. It was found to be more useful in cases of emphysema and bronchitis than in cases of phthisis. It is diurectic as well as expectorant, relieves flatulence, and seems to have a resolvent action on pleuritic adhesions.

The Association then adjourned.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 9 to September 15, 1888.

Page, Charles, Colonel and Assistant Surgeon-General, Medical Director of the Department. Will proceed to Forts Riley and Hays, Kan., near Denver, and Forts Crawford, Lewis, and Lyon, Col., and return on public business. The travel enjoined is necessary for the public service. Headquarters Department of the Missouri, Fort Leavenworth, Kan., September 7, 1888. S. O 114.

Norris, Basil, Lieutenant-Colonel and Medical Director. To proceed to Fort Klamath, inspect the Medical Department at that post, and upon completion thereof return to Headquarters, Department of the Columbia, Vancouver Barracks, W. Ter. S. O. 103, September 3, 1888.

Caldwell, Daniel G., Major and Surgeon, is granted two months leave of absence, from September 14, 1888. A. G. O., S. O. 210, September 10, 1888.

Ainsworth, Fred. C., Captain and Assistant Surgeon, will, by direction of the Secretary of War, proceed to Kennebec Arsenal, Augusta, Me., on public business connected with the Medical Department of the Army; on completion thereof will return to his station in this city. A. G. O., S. O. 211, September 11, 1888, Washington, D. C.

Banister, John M., Captain and Assistant Surgeon, is granted two months leave of absence, with permission to apply for an extension of one month, to take effect when his services can be spared. A. G. O., S. O. 211, September 10, 1888.

Strong, Norton, Captain and Assistant Surgeon. By direction of the Acting Secretary of War will report in person, at 11 o'clock A.M., October 18, 1888, to Brigadier-General John R. Brooke, President of the Retiring Board, in session at Omaha, Neb., to give testimony in a case pending before the Board. Upon completion of this duty he will return to his proper station. By paragraph 9, S. O. 212, A. G. O., September 12, 1888.

Jarvis, Nathan S., First Lieutenant and Assistant Surgeon, is granted one month's extension of leave of absence, on Surgeon's certificate of disability. A. G. O., S. O. 210, September 10, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending September 15, 1888.

Lung, George A., Assistant Surgeon. Ordered to Receiving Ship Vermont, Navy Yard, New York.

A Druggist in Lewiston, Me, is said to have received the following order: "Mister Druggist: Please send ipe cac enough to throw up a four-year-old girl."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, September 22, 1888.

THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

THE first triennial meeting of this Congress, which was held in Washington during the present week, has been an unqualified success, as regards both the number and professional standing of those who took part in it, and the scientific character of the papers read and discussed at the meetings of the component societies.

Although the different societies held business and scientific meetings on the morning of Tuesday, the Congress itself did not spring into existence until later.

At one o'clock on the afternoon of that day a meeting was held in the main hall of the Grand Army building. It was called to order by Dr. Pepper, Chairman of the Committee of Arrangements, who declared the Congress formally opened, and introduced the President, Dr. John S. Billings. After a few words by the President, an address of welcome was made by Dr. Busey, Chairman of the Committee of Arrangements. Then the by-laws were read and adopted, and the members dispersed to attend the meetings of their respective societies.

The Congress at its birth was composed of eleven societies, and has admitted at this session the American Gynecological Society. Two new national societies, the American Pediatric Association and the Association of American Anatomists, were organized during the session, and have made application for admission to the Congress. The American Association of Obstetricians and Gynecologists has also made application for admission.

The social feature of this Congress was less prominent than it usually is on such occasions, but this could not be otherwise, for the general meetings were held in the evening, thus occupying the time with scientific work. Nevertheless, ample opportunity was given for enjoyment. On Monday evening a dinner was tendered to the guests of the Congress. On Tuesday evening there was an informal reception held at the close of the general meeting. On Wednesday afternoon a reception was given to the members by the President and Mrs. Cleveland, and on Thursday evening, after the address of Dr. Billings, the associates and guests, with their ladies, met in a social reunion in the building of the Army Medical Museum and Library.

The number of registered associates of the Congress was nearly four hundred, and there were many more who were in attendance at the meetings, but were not members of any of the component societies. The foreign guests were conspicuous for their numbers as well as their high scientific reputation.

The organizers of the Congress have every reason to be proud of their work, and the wisdom of their action has been amply justified by the brilliant success of this meeting.

News of the Week.

THE NEW YORK POLYCLINIC.—Dr. Charles Stedman Bull has been elected Professor of Ophthalmology, and Dr. Henry N. Heineman, Professor of General Medicine. No other changes have occurred in the Faculty.

THE AUTOPSY ON PROFESSOR PROCTOR produced negative results, as Drs. Prudden and Biggs testify that advanced decomposition prevented the recognition of the usual pathological lesions of yellow fever. They are of the opinion, however, that the clinical history was that of yellow fever.

THE YELLOW FEVER in Jacksonville, Fla., continues on the increase, and is reported to be of a very malignant type. The recent unfavorable weather tells very seriously upon the mortality. The total number of cases to date is 1,464, with 185 deaths. The disease is spreading in Hendersonville, S. C., and has appeared in Decatur and Mobile, Ala., in Jackson, Miss., and Atlanta, Ga.

THE HOMŒOPATHIC CHARITY HOSPITAL TROUBLE.—The President of the Medical Board of this hospital, Dr. E. Guernsey, desires us to state that there is no difficulty in obtaining internes, notwithstanding the high order of entrance qualification demanded, and that the institution is in a prosperous condition.

SALICIN AND BROMIDE OF POTASSIUM IN TETANUS.—Dr. Butlin reports, in the *British Medical Journal*, a case of traumatic tetanus, occurring in a man, aged twenty-six, cured by large doses of salicin and potassium bromide. The drugs were given in doses of twenty grains each, every two or four hours.

IODIDE OF POTASSIUM IN PSORIASIS. — Dr. Haslung reports fifty cases of psoriasis treated by large doses of potassium iodide. Of these cases forty were cured, four were considerably benefited, and in six no improvement was noted. The duration of the treatment varied from seventeen days to eleven weeks.

CAMPHORIC ACID is recommended by Max Reichert in the treatment of various affections of the skin and mucous membranes. He has obtained very satisfactory results from its use in tonsillitis and laryngitis, and in eczema of the hands and acne. He employs solutions of one-fourth to six per cent. in alcohol and water, the weaker solutions being for acute cases, the stronger for chronic affections.

AMAUROSIS FROM A CARIOUS TOOTH.—Dr. Riva reports the case of a woman, aged thirty, who was wholly blind in one eye. She suffered from a carious tooth on this side, and after its extraction the vision was restored. —*Revista de Ciencias Médicas.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 13 New York, September 29, 1888 Whole No. 934

Original Articles.

A REVIEW OF SOME POINTS IN GYNÆCOLOGY.[1]

By S. C. GORDON, M.D.,

PORTLAND, ME.

THOMAS said several years since that the treatment of diseases of women was largely surgical. Since then there have been very rapid strides in the same direction. In fact, the same may be said of almost any one of the various branches of the entire domain of medical science. They have all become more or less surgical.

Dr. E. M. Moore, in his "Address in Surgery" before the American Medical Association in May, 1888, used the following language: "At present it seems as if the future of the profession must be largely surgical. With a single bound the limitations set by the physician have been put aside. The surgeon opens the various cavities of the body, not only to repair injury, but to remove the results of morbid processes. If the physician fails to rectify the abnormal chemistry of the spleen, the surgeon removes it; if nephritis or pyelitis with organic disease of one kidney, bearing the patient down, the surgeon takes it away. If disease of the bowel obstructs, he cuts it out and joins the healthy ends of the cut. If the lungs are the seat of abscess, he punctures and drains them. If the brain has an abscess pressing on and endangering life, he punctures, drains, and renders the wound aseptic. It is difficult at this moment to define the possibilities of modern surgery. It is a fit representative of the time we live in; the combination of science and action."

But when we come back to the branch of medicine known as gynæcology, what do we find, in the treatment of diseases peculiar to women, that could not be classed strictly as surgical, aside from the general medication required by patients exhausted by long-continued suffering? And here the specialist should have, and must have, to be successful, a skill in general treatment which can be obtained only by a clinical experience in general practice.

The routine of frequent "applications" and so-called "local treatment," by the various remedies used, is deservedly falling into disfavor, and physicians are finding out, what many of their patients found out long ago, that they are doing but little good, and in many cases very much harm. In cases of pelvic exudate and chronic passive congestion, the results of inflammation, displacements, etc., much can be done by judicious men, by painting the vagina thoroughly with tincture of iodine, or, what I like much better, iodized phenol, and the local depletion by leeches, or scarifying glycerine packs, and the hot douches used for a reasonable time.

But all these modes of treatment are surgical. Intra-uterine applications, as they are ordinarily made, have, in my opinion, done incalculable harm.

Under the most favorable circumstances, pelvic inflammation is extremely liable to follow their use. To do this in one's office and then allow the patient to walk or drive home is, I believe, highly dangerous. A very large proportion of the cases of pelvic abscess I have ever seen have been due to intra-uterine applications of some stimulating remedies, manipulations by sounds, dilatation by tents or some other form of dilator without the use of anæsthetics.

I am very nearly a convert to the views of Emmet, who practically believes that no application should be made to the uterine canal with an intention to cure disease existing there. In the first place, I find but few cases where disease exists there, and when found it is either an attack of inflammation, which does not tolerate local applications, or the result of such an attack, which is easily and rapidly removed by leeching, scarifying, and stimulating or vesicating remedies applied around the uterus.

If any disease in the cavity is found, such as thickening from passive congestion, with granular degeneration, I always make the treatment a surgical operation by etherizing the patient, dilating slowly but thoroughly for ten or fifteen minutes, curetting, and applying either pure carbolic acid or the iodized phenol. Any attempt to remove fungous growths from the uterine cavity should be done thoroughly or not at all. And to do this thoroughly one should always have his patient anæsthetized. I am well convinced that the shock consequent upon doing these things without ether is often the cause of inflammation, which would not ensue if the patient did not suffer. I fear the profession are not fully aware of the importance of the foregoing propositions, while I am satisfied that they are gradually becoming convinced that the former indiscriminate use of caustics and stimulating applications to the uterine cavity, together with the needless use of the sound, has been productive of much more harm than good, and are fast giving them up, with a consequent decrease of pelvic inflammation and abscess.

In this connection I would strongly urge the importance of an early opening and draining in all cases of pelvic abscess. I am sure this should be the practice in cases of abscess wherever found. The former teaching, that in certain localities abscess should be allowed to take its own course, has been all wrong, resulting in long chronic invalidism and death. In cases of long standing where the abscess-wall has become thick, I have found nothing so beneficial in removing the exudate as the iodized phenol and hot douche—always, of course, draining when practicable.

The phenol acts especially well in all those cases where are found posterior displacements of the uterus and appendages, with strong adhesions which prevent replacement and cause so much local suffering and reflex symptoms. These are among the most difficult cases that the gynæcologist encounters, and the exercise of the soundest common sense and of the most extreme care is required in properly treating them.

Haste and violent efforts at replacement may cause inflammation that will almost surely result in abscess or firmer adhesions. In a very few of these cases I have succeeded, by Schulter's method, in forcibly rupturing some of the adhesions, adjusting the pessary, and accomplishing a cure.

In a majority of cases, however, persevering in the use of the phenol, packs both moist and dry, pessaries worn for a few days at a time, very large and very hot douches, with care as to the general health, we can do much in way of relief and even cure. Care must be exercised in the use of hot douches, otherwise a state of chronic congestion will ensue; I am sure they have been much abused by being kept up too long. With all our efforts, seconded by the patient, under the most favorable circumstances, we shall find a large percentage of these cases, due to pelvic inflammation and other causes which produce organic changes in the uterine appendages, and in time induce reflex or hysterical symptoms, that get no relief from suffering even. And here is where the operation for removal of the appendages must be resorted to. The most faithful and persistent treatment, however long pursued, neither changes the local condition nor gives relief to the nervous or general neuralgic symptoms. The patient leads a miserable life of pain and nervous exhaustion, which frequently terminates in insanity—which at least grants the patient an oblivion to physical suffering.

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[1] Read before the Maine Medical Association, June 13, 1888.

I have now operated forty times for removal of the uterine appendages for the relief of this class of invalids, and I can say with the utmost sincerity that I should not, in a single case, hesitate to advise the same thing under similar circumstances.

A very large majority of the patients are to-day thoroughly cured, and they bless the day they submitted to the operation.

Five have died, three or four are as yet unimproved, and perhaps may never be any better. They are certainly no worse, either physically or mentally, but even in some of these I do not despair, as the element of time has not yet had its full effect.

It is time that the profession should cease to condemn an operation which has done so much as this has for a class of women who have been an opprobrium to medical science, at least in the eyes of the public.

These sufferers have wandered from one physician to another, into and out of hospitals, from which they have been dismissed with the hope that they will be better when menstrual life ceases, or with a hint that they are better, if they could only think so. To my mind this is simply an apology for professional ignorance—as if any woman or man enjoys being miserable. Shame upon such teaching! It is unworthy a humane and intelligent profession like ours. We know better, and let us have the courage of our convictions, instead of making apologies for what we know to be right, in deference to some self-asserting wiseacres and an unintelligent public, who, on the slightest pretence, forsake the regular profession and run eagerly after the last fad, be it homœopathy, spiritualism, Christian science (which has neither Christianity nor science to commend it), or any other form of mind-cure.

I believe the profession generally, and in our own State particularly, are fast coming to a full sense of the importance of some more radical measures for treating this unfortunate class of cases. Reflex symptoms have a diseased centre, if we can only find it, and it is not scientific or humane to say that a patient who has lingered in this way is simply hysterical, and could act better if she tried. Much better find the centre and remove the disease, or remove the organ if it cannot be cured. Always try the former first.

Cancer of the uterus has long been another *bête noire* of the profession, while the public have been asking, "Is there no remedy for this terrible disease?"

The sentiment has now become crystallized in the profession that cancer is in the beginning a local disease, and the result of this belief is early removal of all growths of a suspicious character. Believing that cancer of the uterus is no exception to this rule, the advanced men are now making vaginal hysterectomy with far better results, both as regards operation and cure, than we have ever had by any other means.

From February 10th to April 15th, last, I made the operation three times, with two recoveries and one death.

Time alone can tell how valuable it will prove in these two cases, but so far they have done well—no signs of return.[1] I feel much safer than if I had made any other attempt at either relief or cure. So far as I know, these are the only cases of vaginal hysterectomy for cancer in this State. I am hopeful for the future of this comparatively new surgical operation.

In September last, I made a laparotomy for extra-uterine pregnancy (tubal). The diagnosis was made several days before by Dr. Hitchcock, of Rockland. I operated fifteen hours after rupture, and although peritonitis had developed it at once ceased, and the patient made a rapid and perfect recovery. I am sure, had I seen the case before rupture and been sure of the diagnosis, I should have advised operation at once. I can see no reason for delay, and the mortality attending the cases heretofore reported certainly justifies us in saying that the chances for life are much greater from laparotomy, immediately that a diagnosis is clearly made, than by fœticide by electricity or waiting for rupture.

This being the second recorded successful case in this country, we await further statistics before we can demonstrate it.

One other operation of the kind in this State was done by Dr. S. H. Weeks, within the past few months, but too late to save the patient.

I believe that the importance of making an early diagnosis, in cases of obscure symptoms of pregnancy, will awaken the profession to a more careful consideration of them, so that we shall soon adopt the idea that primary laparotomy will be the rule.

Even should electricity prove to do all that is claimed for it, there will be in many cases a foreign body in the abdominal cavity, where it is at all times liable to undergo decomposition, thus endangering the life of the patient constantly. Admitting that electricity is sure to kill the fœtus, it has been shown that it does not surely stop the growth of the placenta, so that under the most favorable conditions we have a foreign body which almost every wise and prudent man would feel unsafe about so long as it remains, and, were it anything else but a product of conception, would unhesitatingly advise removal. It seems then only a question of diagnosis that should cause any hesitation as to the best method of treatment.

My experience with saline cathartics early after abdominal section, especially if any signs of peritonitis appear, leads me to indorse the plan most cordially. In any event, I am satisfied that the former practice of keeping the bowels locked up for a week is detrimental to rapid recovery. Within the past year I have used a hot boracic solution, or, in absence of this, hot water to wash out the abdominal cavity after all sections. In many of the cases, especially where the patient was exhausted either before or during the operation, it has, in addition to its cleanly property, acted as a good stimulant.

Two years ago I reported to this Association my use of catgut for nearly all operations upon the uterus, vagina, and perineum. I had then not dared to try it alone for complete laceration of the perineum. Within the last year, however, I have made the operation for a bad case of complete laceration with catgut alone, and am very much pleased with the result. The patient suffered no pain, required no opiate, and the parts healed admirably, without even a drop of pus. I have no occasion now for silver wire for any kind of suture whatever.

For several years I have operated upon cases of lacerated cervix without submitting the patient to any prolonged preparatory treatment, so strongly insisted upon by Dr. Emmet.

Believing the condition ordinarily found to be one of chronic passive congestion of the cellular tissue, rather than chronic inflammation, and that hemorrhage resulting from the operation is by far the best remedy to relieve this condition, an early operation seems to me to be indicated.

In cases complicated by adhesions from exudate, a different course may be followed for a time, but in those not so complicated the prolonged hot-water douches serve only to increase the congestion and aggravate the symptoms. Valuable as the remedy is in proper cases, I feel certain it has been overdone. I have used electrolysis for uterine fibroids in three or four cases within the past year, and I am quite sure it has been beneficial in reducing the size, and have but little doubt that it has controlled hemorrhage; and yet I have seen cellulitis arise from it, and fear its use unless carefully measured, so as to have it under control.

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[1] I examined the first case July 7th, and find her in robust health and no local trouble whatever.

A SYSTEM OF DRILL FOR AMBULANCE CORPS.

By WILLIAM D. DIETZ,

ASSISTANT SURGEON, UNITED STATES ARMY.

In the regular army and in the national guard of the various States, notably New York, a great deal of interest has of late been manifested in the organization of ambulance corps. A Hospital Corps has recently been established in the army, whose members belong exclusively to the hospital department, and are not, as were hospital orderlies formerly, details from the various line organizations of the service. Besides the Hospital Corps in each company, troop, and battery of the army, four men are designated as Company Bearers, whose duty in active service is to give first aid to the injured and assist in their transportation from the battlefield. The Hospital Corps and Company Bearers are drilled by medical officers in the various methods of transportation of the wounded, and are also instructed by means of lectures in the preliminary treatment of such emergencies as may arise in the service.

A "Provisional Manual of Instruction for the Hospital Corps, U. S. A., and Company Bearers," has recently been issued to the Army Medical Department, with directions that the drill described therein be submitted to the test of practical experience, and that such modifications as might suggest themselves be noted. The drill hereinafter detailed is a modification which, to the writer's mind, commends itself on the score of simplicity.

Drill of Hospital Corps and Company Bearers.—The Hospital Corps and Company Bearers for the purpose of drill are formed as one detachment. With the tactics of said formation, mounted or dismounted, we may here dispense; suffice it to say that in dismounted drill the detachment is formed in single rank, with the Senior Hospital Steward on the right of the line, and the Junior and Acting Stewards in the line of file-closers together with the supernumeraries. Fours are counted to designate the various bearer squads. If the left squad is incomplete it may be posted in the line of file-closers.

Bearer Drill.—The detachment being in line at a halt, the instructor designates by their numbers the squads which are to be instructed in litter or ambulance manipulations. The Stewards he puts in charge of such squads as are not supervised by an officer, or assigns them to various duties in the field. An incomplete squad may be utilized as dummy wounded, or its members may be ordered to practise in transferring patients to litters or beds, or in improvised means of transportation. No. 1 of each set will be chief of squad, and will give the commands necessary to manœuvre it. The men of a squad, as soon as detailed for a specific drill, are known as *right file* (who is the chief), *right centre*, *left centre*, and *left file*.

Bearer Drill with Hand-litter Manipulation.—The chief of the squad designated to practise with a litter, procures the litter, prepares and fixes it for use, sees that the braces are securely buckled, and places it lengthwise on the ground, the end opposite and two yards in front of the centre of his squad, and then resumes his place.

The chief now commands: 1. To your posts. 2. March. At the second command the right and left centre men take position between the front and rear handles of the litter, the right centre in front, the left centre in rear, the right centre passing by the right. The left file takes position on the left of the litter, opposite its centre and one yard from it, passing by the left. As soon as the chief sees that the others have their proper posts he takes his own on the right of the litter, opposite its centre and one yard from it. All face to the front. As soon as the men have taken posts at the litter they are known as *front*, *rear*, *right*, and *left* man, according to their positions at the *front*, *rear*, *right*, or *left* of the litter.

The men having taken posts at the litter, the chief of squad commands: 1. Prepare to lift litter. 2. Lift Litter. The first command is executed by the front and rear men adjusting the braces, if any, about their shoulders, and seizing the handles; the second, by their lifting the litter in position to be carried. The right and left men stand fast. If, owing to difference in height of carriers, the litter is not horizontal, the chief of squad will direct the change in the length of the braces to correct the inequality.

He now commands: 1. Forward. 2. March. At the second command the squad step off with the left foot, the carriers marching with the litter in a position as nearly horizontal as possible, taking short sliding steps to avoid jolting and to secure a smooth and uniform movement of the litter. The side men march on their respective sides.

In case the chief desires that, in stepping off, the carriers break step, he commands: 1. Forward. 2. Break step. 3. March. At the third command the carriers break step, the front man stepping off with the right and the rear man with the left foot. The side men step off with the left.

Directed by commands: Litter right (or left); Litter half-right (or half-left); or, Incline to the right (or left); 2. March, the bearers carry the litter to its designated destination.

To halt the litter the chief commands: 1. Litter. 2. Halt; and to rest the bearers adds: 3. Lower Litter. 4. Rest. At the third command the litter is slowly and steadily lowered, and the carriers release themselves from the braces (if any); at the fourth command they stand at ease. To resume the attention he commands: 1. Squad. 2. Attention, the posts at the litter being resumed at the second command.

Transfer of Patient to Litter.—The litter having been brought up to the wounded man, the chief commands: 1. Litter. 2. Halt. 3. Lower Litter; these commands being so given as to place the litter *in front of the feet or head* of the patient (whichever be the more practicable position) in the direction in which he is lying. As soon as the litter is lowered the bearers release themselves from the braces, and the chief of squad commands: 1. To patient. 2. March. At the second command the front and rear men, who are to lift the patient, take position facing each other on opposite sides of the patient near his haunch bones, *passing by their right and left respectively*. Of the other two men, the *left* man attends to the wounded part, the *right* man attends to the litter, etc. Everything being in readiness, the chief commands: 1. Prepare to lift patient, when the carriers stoop down and pass each one hand under the back of the patient near the shoulder-blades and lock them by grasping each other by the wrist; the other hands are now passed under the upper part of his thighs and clasped. Everything being ready, the chief commands: 2. Lift Patient, when the bearers rise slowly, and when upright, at the command, 3. Forward, 4. March, they march by short steps until the head of the patient is over the pillow on which it is to rest. The chief then commands: 1. Squad. 2. Halt, followed by, 3. Lower Patient, when the bearers slowly lower the patient on to the litter.

The commands for marching and halting may be omitted, the bearers standing fast, and the right man slipping the litter under the patient. The right and left men now see that the patient is in a comfortable and secure position, the head properly supported, and the wounded part accessibly placed. The rest of the movements are executed according to the directions already given. The side men, in marching, attend to the patient's wants, safety, and comfort. If he is carried head first they will be better able to observe his features, ward off insects from his face, and protect his eyes from the sun. Should he have been carried feet first and it is desired to change his position to head first, or vice versa, the chief orders the squad to halt and lower litter. He then commands: 1. Squad. 2. About. 3. FACE, which executed, he orders the litter to be lifted and marched to the point designated. After the about face the *front* of the litter has, of course, become the *rear*, the *right* the *left*, and vice versa. Similarly, the *front* man has become the *rear* man, the *right* the *left*, etc.

To Change Bearers on the March.—The chief commands, 1. Change posts. 2. MARCH. On the second command the front and the right, the rear and the left man, exchange posts and duties, the chief, however, still retaining charge of the squad.

To Transfer Patient from Litter to Litter or Bed.—This is done in the same way as from ground to litter, the bearers always observing, as far as practicable, the rule that the head of the patient be brought to the foot of the bed or litter to which he is to be transferred, and that the direction in which the patient is lying correspond to the long axis of the bed or second litter.

General Rules to be Observed in Hand-litter Operations.—1. A litter should never be carried on the shoulders. Only the men of the Hospital Corps should be instructed in carriage of litters up and down stairs, and in the exceptional circumstances requiring raising of the litter to the level of the shoulders. 2. Crossing ditches, fences, walls, etc., should be avoided, if possible, in marching. 3. If, as in going up or down a hill or stairs, the horizontal position of the litter is impracticable, the inclination downward should be toward the feet of the patient, except in cases of fractured thigh or leg, when the head should be lowest to prevent the weight of the body from pressing upon the injured part.

Bearer Drill with Ambulance.—Under direction of the chief, the squad will march to the ambulance and be brought to a halt facing the rear of the ambulance—the centre of the squad two yards behind the centre of the ambulance. The chief then commands: 1. To your posts. 2. MARCH, when the right and left centre men stand fast, the chief arranges the interior of the ambulance and puts the litters in position, while the left file mounts the box to assist the chief and attend to the wants of patients. After completing these duties the chief and the left file resume their positions in the squad. In case the ambulance has no permanent driver, the left file will act as such. The medical officer may now inspect the ambulance, notifying the chief when the inspection is completed. On the march the squad will be two yards behind its ambulance, or the right file and right centre on the right, and the left centre and left file on the left, or all on the right or left, according to the condition of the road. When there is no immediate necessity for their services, all the bearers may be marched at the head of the ambulance column.

To Take a Litter from the Ambulance.—The chief commands: 1. Take. 2. LITTER. At this command the right and left centre men step back so as to be five yards in the rear of the ambulance, and the chief (with the aid of the left file, who mounts the box) takes a litter from the ambulance, prepares and fixes it for use, and places it lengthwise on the ground two yards in front of the centre of the squad. The chief and left file then take their positions in the squad. This done, the principles of hand-litter drill are followed, the fact being borne in mind that as soon as the men have assumed their posts on the litter they become known as *front*, *right*, *rear*, and *left man*, according to their positions at the litter. If the left file has to officiate as driver, the right man will assume, in addition to his own, the litter duties of left man.

To Load the Ambulance.—The litter is halted and lowered by appropriate commands, so given that the head of the patient will be toward and close to the rear of the ambulance. If the patient has been carried head foremost, the squad will be facing the rear of the ambulance when the litter is lowered, and the chief of squad then commands: Prepare to load. But if the patient has been carried feet foremost, the squad will be found facing away from the rear of the ambulance when the litter is lowered in proper position; hence the chief, before directing: Prepare to load, commands: 1. Squad. 2. About. 3. FACE, which being executed he commands: Prepare to load, as in the previous case. It is to be again noted that when the about face is executed, the rear of the litter becomes the front, the left the right, the rear man the front man, the left man the right man, and vice versa.

At the command, Prepare to load, the *right man* takes post at the *right front handle* of the litter and faces the litter, the *left man* takes post at the *left front handle* and faces the litter, the *rear man* remains between the *rear handles*, and the *front man* mounts the *box*. All being in readiness, the chief commands: 1. Raise litter. 2. PASS IN. At the first command the bearers stoop, take hold of the handles, and slowly raise the litter to the level of the rollers on the floor of the ambulance, being careful to keep it in a horizontal position. At the second command, the front handles of the litter are slowly and gently placed on the rear rollers and passed in, the man between the rear handles pushing and following the litter, halting and occupying the space between the men at the front handles. During this operation the men at the front handles attend to the folding of the litter legs, and the man in the ambulance sees that the litter fastenings are properly adjusted. Should there be but three bearers with the litter—one having remained with the ambulance as driver—the front man takes the vacant space at the side of the litter when the order, Prepare to load, is given.

To Unload the Ambulance.—The men of the squad being at their posts in rear of the ambulance, the chief commands: Prepare to unload. At this command the *right file* places himself at the *right* and the *left file* at the *left* of the litter to be withdrawn, both facing in, the *right* centre man loosens the litter fastenings *in the ambulance*, the *left centre* man steps *between* the *handles* of the litter to be withdrawn. If there be but three men to unload the ambulance—one of the bearers officiating as driver—they will take position around litter to be withdrawn as indicated, viz.: the right file of the three to the right, the left file to the left, and the centre man between the handles. All being in readiness, the chief commands: 1. Pass out. 2. LOWER LITTER. At the first command the man between the handles takes hold of them and draws out the litter, the men on the right and left stand fast and support the poles until the front handles are reached, and adjust the litter legs properly. Care should be taken to preserve the horizontal position of the litter at the level of the rollers. At the second command, the litter is slowly and steadily lowered to the ground.

The patient having been carried to his proper destination, the squad will return the litter to the ambulance, and unload the other, if required, after which they will break ranks, or will fall in line and await further orders.

Bearer Drill with Arms and Horses.—In case the bearers are encumbered with rifles, the latter will be carried by the side men. When a patient is to be transferred from the ground to a litter, the left man, who attends to the wounded limb, turns all the guns over to the right man, who is responsible for their safe keeping. When the patient is being carried, the side men will take the guns as before. Before loading the patient into the ambulance, the rifles must be stacked. If the squads are mounted, they will dismount, and the left file of each squad will take charge of the squad horses. In the litter drill the three men will operate on foot as above indicated, the single side man performing the duties of two side men. In the ambulance drill, the three men will operate as already detailed, the ambulance having a permanent driver. In manœuvres in improvised methods two squads may be combined, the left file men taking charge of the horses, while the others, as a squad of six, operate under direction of the medical officer.

In conclusion, the writer desires to express his indebtedness to the Provisional Manual of Instruction, but is of the opinion that, by discarding numbers in his drill, he has simplified the rules for transfer of patient from ground to litter, and for the loading and unloading of the ambulance. In the bearer drill with ambulance, he is thus enabled, under "Prepare to load," to give a rule which (unlike that of the Manual) holds good whether the patient has been carried head or feet first, or whether the bearers have or have not changed posts on the march.

REMOVAL OF THE UTERINE APPENDAGES, WITH UNFAVORABLE SEQUELÆ — TWO ILLUSTRATIVE CASES.

By D. TOD GILLIAM, M.D.,

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THE wonderful impulse given to abdominal surgery in the last decade, and the phenomenal success attending it have led to such a multiplication of cases and such a diversity of features as to cause the exclusion of detail in all except the most remarkable. The result is, that announcements of successful cases are usually supplemented by the simple remark that the patient made an uninterrupted recovery, while, on the other hand, unsuccessful cases, when reported, at all, are given in full. Hence, to one not entirely conversant with the run of such cases from a large and varied experience, any untoward symptoms that may arise in the course of a case in hand are invested with an ominous significance, simply because he has been accustomed to find them associated with the unsuccessful cases. This often gives rise to a great deal of mental distress to the one having such cases in charge, and reflexly to the patient and friends. Much of this may be obviated by a proper interpretation of symptoms. It occasionally happens, also, that operations are done at a distance, and the patient left in charge of a local physician, who feels keenly the responsibility of his charge, and seeks in the books and medical journals those details which his lack of personal experience renders necessary. It is the knowledge of a case of this kind, wherein the physician in charge put in many anxious hours ransacking books and periodicals for the interpretation of certain symptoms, and which, after all, he could only find in the history of unsuccessful cases, that actuates this communication.

In dealing with cases of abdominal section the rule of prognosis, as enunciated by Tait, should never be lost sight of, which is, in effect, that the temperature taken alone is of little significance, but, on the other hand, the pulse is the true index of the patient's condition.

Tait avers, and I have found it to be the case, that a thermal excursion of from 4° to 6° F. is not infrequent after abdominal section, and is of itself comparatively unimportant. If, however, the pulse be rapid and thready the prognosis is affected accordingly. In cases running to a fatal issue the pulse-rate *progressively* increases until, as Tait very aptly expresses it, it runs out. A pulse, however, that varies from time to time, being now fast and now slow, is not of the same gravity, although a very rapid pulse, unless plainly of nervous origin, is always a source of anxiety.

I append the history of the two following cases, taken from my note-book of the current year, not because they are unique, but for the opposite reason that they are representative of a class of such cases as do not make an uninterrupted recovery.

CASE I.—Mary McC——, aged thirty-five, married, sterile, a long sufferer from ovarian dysmennorhœa of the most aggravated type, had been under treatment at Philadelphia and Pittsburg, respectively, without avail. At both places, according to her statement, the removal of the uterine appendages was discussed but abandoned. She was practically a wreck in that she was incapable of physical exertion, was compelled to forego the marital relation, besides being a constant sufferer. On examination I found a very firm mass occupying the cul-de-sac, and extending to the left, which was fixed and very tender. To this I gave the interpretation of inflammation and agglutination of the uterine appendages, and in its firmness and fixation found, as I thought, an explanation why the operation had not been undertaken before. The patient was importunate, however, and, having been prepared, I made an exploratory incision. The parts were matted and unrecognizable, the mass being exceedingly firm. Notwithstanding, I proceeded with the operation, and after an hour and a half's hard work succeeded in disengaging the greater part of both tubes and part of the left ovary. At this stage I was compelled to abandon further effort, and the patient, after thorough cleansing, and the introduction of a glass drainage-tube, was put to bed profoundly collapsed. Under external and hypodermic stimulation she rallied very slowly, complaining of great pain, and soon commenced to vomit, which she kept up for seven days. Her temperature ran up and down through an arc of four degrees, and the pulse varied from time to time, but at no time got above 135.

The glass drainage-tube seemed to annoy the patient greatly, and with its withdrawal, on the seventh day, a marked improvement was at once noticeable. After this her recovery was slow and uneventful, convalescence being retarded by stitch-hole abscesses and a purulent discharge from the tube-tract. Three months subsequently she was happily engaged in her household duties, had resumed her marital relations, and was *menstruating* painlessly. The above is one of those instances in which even an incomplete operation broke the chain of morbid action, and restored the patient to health. Instances are not wanting in which a simple exploratory incision has redounded greatly to the benefit of the sufferer.

CASE II.—Ida M——, aged twenty-seven, single, menstruated at thirteen, had retroversion at sixteen, had partial hemiplegia at same age, and chorea six months later, which continued two years and then improved. Two years ago last August the symptoms became worse, and she had an epileptiform convulsion, since which time these attacks have been growing in frequency and intensity. Convulsions are preceded by a pain and immobility of the right arm and right side of the tongue, and, as she says, can be stopped by standing on her head. If not thus prevented, unconsciousness gradually supervenes. She thinks the uterine supporter, which she wears constantly, when properly adjusted, prevents the convulsions, as in its absence they are much more frequent. By nature bright and vivacious, she is gradually lapsing into fatuity, and has become morose and irritable. I saw her first on July 26th, and found the uterus partially retroverted and heavy, both ovaries occupying the cul-de-sac, large and tender, but not adherent. Pressure on the ovaries gave rise to the prodromes of convulsive seizure, but was not carried to the extent of provoking one. When told that the removal of these appendages might be necessary to a cure, she eagerly accepted the alternative, and said her physician had sent her to me for that purpose. Menstruation being imminent, I deferred the operation until the next intermenstrual period, but was compelled to operate on the fourth day after the flow had ceased.

Accordingly, on August 6th, at 10 A.M., the ovaries and tubes were removed without difficulty any further than, the abdominal walls being thick and the pedicle short, it was almost impossible to bring the parts to light for ligation. In transfixing the pedicle I suppose a vessel was punctured, which, not being discovered at the time, gave rise to a small but persistent hemorrhage. She was put to bed in good condition, the drainage-tube being inserted on account of the bloody suping.

At subsequent visits it was found that the patient slept much of the time, but was restless and anxious when awake. The tube at each visit was found filled with bloody serum, and was as often washed out. The pulse ran from 99 on the evening of the first day to 120 on the second, 116 on the third, 98 on the fourth, 110 on the fifth, after which it, with many variations, gradually dropped to the normal. The temperature varied from the normal to 102° F., which latter temperature occurred on the evening of the fourth day. On the morning of the third day I found that she had got at and withdrawn the drainage-tube, and was more comfortable and cheerful, though apprehensive lest I should reprimand her. In this as in the other case, the tube was a source of great discomfort to the patient, and I concluded to leave it out. At 1 P.M., pulse 116, temperature 100.8° F., face flushed, expression anxious, complains much, gets only cat-naps, abdomen tender and tympanitic. She has a sanguineous flow from the vagina, equivalent to a normal menstruation. I ordered tablespoonful doses of salts in hot water every three hours, using mustard over the stomach to insure retention. She has vomited once or twice daily since the operation. I had in mind to open up and irrigate in case this did not relieve. At 8 A.M. next morning I found her looking and expressing herself much better. Four doses of salts had been given, one of which was rejected but immediately repeated. No action of the bowels. Pulse, 98; temperature normal. Abdominal distention much abated; dressing not soiled, and therefore not changed. A serous transudation had, however, set in toward the bowels, as she during this day had numerous liquid defecations. From this time on the case ran evenly, and on the sixteenth day the wound was healed. She has had no recurrence of her former trouble, and is now being weaned from her accustomed nervines and stimulants. On examination of the ovaries no corpus luteum of menstruation was to be found in either, notwithstanding she had just emerged from the menstrual period, thus giving additional support to the tenure that menstruation and ovulation are independent processes. Several large follicles were observed in both ovaries, one of which was apparently about mature. I will take this occasion to say that I have about concluded to abandon the use of the drainage-tube altogether, and instead, when drainage is indicated, to leave an open way into the abdominal cavity by the use of two strips of sheet-lead, one on either side, which can be easily separated, and a flexible tube introduced for purposes of irrigation.

ARTERIAL CHANGES IN PHTHISIS.—Dr. Pina has examined microscopically the arteries in ten young subjects who died of phthisis in Professor Manassein's wards in St. Petersburg. The results noted were very constant, and are thus briefly described in a "preliminary communication" published in *Vrach*. The arterial changes were generally identical with those of chronic fibrous endarteritis. Connective tissue was found in the inner coat of vessels where in a normal condition it does not exist—the brachial, the radial, the ulnar, the femoral, the popliteal, the anterior tibial, the temporal, and the coronaries of the heart. Again, in arteries where the intima ordinarily contains connective tissue the amount was very markedly increased. The greatest and most important modification was found in the coronaries, in which the layer of connective tissue in the internal coat frequently occupied the whole field of the microscope. The changes were least marked in the middle of the brachial, in the arch of the aorta, and in the pulmonary arteries. In the middle coat atrophy of the muscular fibres was found, together with connective tissue, in places coexisting with changes in the internal coats, the two processes going on together. Dr. Pina does not go into the theory of the pathology, but contents himself for the present with stating facts. Further investigations are required, he says, dealing with the arterial changes in subjects who have died of other wasting diseases, and in those of a phthisical habit who have died from some other disease. The preparations made were all shown to Professors Vinogradoff and Manassein, so that the facts, as far as they go, may be taken as being well authenticated.—*The Lancet*, June 16, 1888.

A CASE OF EXTRACTION OF PARTIALLY ABSORBED CALCAREOUS LENS, COMPLICATED BY SYNECHIA POSTERIOR, WITH RESULTING VISION OF $\frac{20}{20}$.[1]

BY DAVID WEBSTER, M.D.,

NEW YORK.

ON March 15, 1888, Miss Cora C——, aged twenty-three, came to the Manhattan Eye and Ear Hospital, having been referred to Dr. Agnew and myself by a New York ophthalmologist.

Her left eyeball was shrunken, tender on pressure, and had, for some time, been more or less painful, while in the right eye were the chalky-looking remains of a mostly absorbed crystalline lens, with a discolored and apparently atrophic iris attached to the membranous mass behind it by strong adhesions. Vision = ability to count fingers at two feet, with good visual field.

Cora gave a history of loss of sight of her left eye from a blow of a whip-lash at the early age of two years. She saw well with her right eye up to the age of fourteen, when a painful sympathetic inflammation set in, producing cataract and causing loss of all but perception of light.

At the age of sixteen she went to Cincinnati and placed herself under the care of an eye surgeon there, who, in reply to a letter from Dr. W. H. Way, House-Surgeon of the Manhattan Eye and Ear Hospital, writes as follows: "The girl was then totally blind, one eye being disorganized and cicatricial, and the other cataractous. The story of the girl was that when two years old her father whipped her and injured her eye. Afterward the other got inflamed and became blind. When she entered the clinic she could not go from one room to another without a guide. After an operation and six or eight weeks' treatment she could see enough to take care of herself, distinguish colors, etc. The cataract was liquid (soft) and was freed from its capsule with a needle sent through the cornea. The lens was like that of congenital cataract. I had no hope of the traumatic and cicatricial eye," etc.

A year and a half ago a second needling was done on the right eye by a Buffalo eye surgeon, by which the sight was considerably improved.

On March 16th Dr. Agnew enucleated the atrophied eyeball, and, upon opening it, found a small calcareous lens, and in the choroid a large calcific plate. While the patient was still under ether he performed an iridectomy upon the right eye, removing a portion of the iris outward and slightly upward, that being the direction in which the pupillary margin seemed most free from adhesions.

March 24th.—There has been very little reaction in the right eye, and the stump of the left is healing kindly.

March 31st.—The patient is doing well. Dr. Agnew says he will not be in a hurry to operate on her again.

April 27th.—Having dropped in cocaine and cleansed the eye with a solution of the bichloride of mercury, I introduced a Knapp's knife-needle and severed two or three of the adhesions, one of which, in the form of a string, was in such a state of tension that when cut it separated with an audible snap. Before withdrawing the instrument I tried to puncture the pupillary obstruction with it, but so tough was the mass that it receded before the point of the knife-needle, and I had to withdraw it without having made an opening in the cataract. There was considerable blood effused into the anterior chamber from this operation.

April 28th.—The blood has been absorbed from the anterior chamber. There has been very little pain or reaction.

May 14th.—Having placed the eye under cocaine I made a small opening through the cornea, near its nasal periphery, with a Graefe's knife, introduced a sharp hook, and caught the membranous mass by its temporal border and tried to draw it out of the opening, but the membrane was too thick to come out of so small a wound, and so slipped off the hook and was left behind.

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[1] Read before the American Ophthalmological Society on July 19, 1888.

May 22d.—The eye has improved constantly, there being some partially clear pupillary space.

June 6th.—Having again thoroughly anæsthetized the eye with cocaine, I made a wound at the supero-nasal border of the cornea, as for iridectomy, using a keratome bent on the flat, and introducing a pair of back-toothed iris-forceps. I seized the infero-temporal border of the cataractous mass, and turning it over on itself pulled it out of the eye, and putting it on the stretch cut it off with scissors close to the cornea. The attached portion of the mass receded, leaving a clear pupil. No vitreous escaped. This operation was followed by some pain, lasting several hours. On the fourth day after the operation the patient again complained of pain in the eye. It was soon relieved, however, by the application of iced cloths.

June 18th.—Fundus normal; no floating bodies in the vitreous, but the remaining portion of the pupillary membrane extends backward horizontally, and flaps up and down with the movements of the eye. This membrane was thick and tough, and probably consisted of capsule, lens matter, and plastic exudation, all of which had undergone degenerative changes.

June 22d.—Vision = $\frac{20}{20}$ W + $\frac{1}{3½}$. Reads Jaeger No. 1 with + $\frac{1}{2¼}$.

June 26th.—Discharged wearing the above spectacles.

This case scarcely needs any comment. The completeness of the history would make it interesting even if the result had not been so unexpectedly good. In all my experience, extending over nearly twenty years, I never before saw an eye whose vision had been reduced to perception of light by sympathetic inflammation have the sight restored to $\frac{20}{20}$ by operative interference.

MEDICAL CASES IN THE COURTS.

By HENRY A. RILEY, Esq.,

NEW YORK.

In a recent volume of New York Reports is found the interesting case regarding the necessity of proving the identity of a murdered person in order to secure a conviction. The case was that of Frank Palmer, convicted of the murder of Peter Bernard, in Clinton County, in 1885. Upon an appeal to the General Term the conviction was reversed and a new trial ordered. The case then went to the Court of Appeals, where the original conviction has been sustained, and the decision of the General Term reversed.

The Court of Appeals says that if the law be as the General Term has declared it, a murderer may always escape if only he shall so mutilate the body of his victim as to make identification impossible, or shall so effectually conceal it that discovery is delayed until decomposition has taken away the possibility of personal recognition; and it will follow that the tenderness of the Penal Code has opened a door of escape to that brutal courage which can mangle and burn a lifeless body, and has put a premium upon and offered a reward for that species of atrocity. The Court states that the rulings of the common law have not been changed by the Penal Code, and a number of cases are cited to show what has been the law in the past. In an old English case, cited in Wills' "Circumstantial Evidence," it appeared that a human body had been burned, but enough remained unconsumed to show that it was the body of a male adult, and its further identification was founded upon circumstances an important part of which was the finding in the possession of the defendant of numerous articles belonging to the murdered person. In a case in 3 Parker's "Criminal Reports," it appeared that a body with marks upon it had been washed ashore. It was said to be the body of Captain Palmer, for whose murder the prisoner was being tried. No direct evidence of that identity was or could be given; but the criminal fact of a death by violence having been fully established, the identity of the remains was proved by circumstances. Personal recognition had become impossible, and identity was established by an inference from resemblances. The height of the deceased was shown, an unusual length of face and a widening of the end of the little finger, to which, in a general way, the body corresponded.

But a more important fact was that the captain had imprinted his name upon his arm and leg, and, in the same portions of the body found, the skin had been cut away, except that on the leg the letter "P" remained visible. In a case found in 35 Texas, 97, there was no direct proof of the identity of the deceased, but his clothing, hat, and papers were identified, and his wagon and team, and even his dog were found in the prisoner's possession. In a North Carolina case, 7 Jones, 446, the identification was exceedingly slight, consisting merely of some articles of feminine attire found beside the bones. The general rule thus established by the common law, the Court of Appeals states, has not been changed by the recent Penal Code in this State. This being the fact, it will be of interest to know what evidence was thought sufficient to prove identity in the case under review. The Court says: "That the body found was that of Peter Bernard was established beyond reasonable doubt. The prisoner was a witness in his own behalf. He shows that he and Bernard were in the locality where the body was found at about the date of the latter's disappearance. His own declarations show that he had no doubt of the identity of the body found.

"He explains the possession of a twenty-dollar bill which in some manner he got from Bernard, but the explanation is not at all probable or satisfactory. The evidence of persons who claim to have seen the deceased after the date of the murder was probably honest, but quite certainly mistaken. He was a total stranger to them and their comparison was founded on a photograph.

"In the case of Webster there were five persons who honestly believed that they saw Parkman alive after he had in fact been killed. Upon the who lecase we see no sufficient reason to distrust the conclusion which the jury reached. The grade of crime of which the prisoner was convicted was murder in the second degree, carrying with it only confinement in the State prison for its punishment."

In a late case in a Michigan court where the crime of rape was under consideration, the defendant's counsel offered to read from "Beck's Medical Jurisprudence," but the judge declined to allow this in the presence of the jury, saying that the jury could be excused temporarily if it was thought best to present to him any argument based on the text-book. This decision was subsequently made one of the grounds for asking a new trial, but the appellate court decided that, as the medical books had not been made evidence in the case, it was not proper for counsel to read special extracts, and the decision was sustained.

A most important point in proving the crime of murder is the establishing of the fact of an intent to commit murder, and of the time necessary to form this intent. An interesting charge to the jury was given in the recent King case by Judge Lacombe of the United States District Court. Judge Lacombe is a cultivated man of wide reading and his charge shows these characteristics. He says: "As to the duration of that period no limit can be arbitrarily assigned. The time will vary as to the minds and temperaments of men and as to the circumstances in which they are placed.

"The human mind acts at times with marvellous rapidity. Men have sometimes seen the events of a life-time pass in a few minutes before their mental vision. Rear-Admiral Sir Francis Beaufort was once nearly drowned. During the brief period of apparent unconsciousness after he sank for the third time, his mind reviewed every event of his past life. His account of his experience, quoted in Miss Martineau's 'Biographical Sketches,' is very interesting. 'The course of those thoughts,' he says, 'I can even now in a great measure retrace. The event which had just taken place; the awkwardness which produced it; the bustle it must have occasioned; the effect it would have on a most affectionate father; the manner in which he would disclose it to the rest of the family; and a thousand other circumstances minutely associated with home were the first reflections that occurred. They took then a wider range; our last cruise; a former voyage and shipwreck; my school, the progress I had made there, and the time I had misspent; and even all my boyish pursuits and adventures.

"'Thus travelling backward, every past incident of my life seemed to glance across my recollection in retrograde succession; not, however, in mere outline, as here stated, but the picture filled up with every minute and collateral feature. In short, the whole period of my existence seemed to be placed before me in a kind of panoramic review, and each act of it seemed to be accompanied by a consciousness of right or wrong, or by some reflection on its cause or its consequences. Indeed many trifling events, which had long been forgotten, then crowded into my imagination, and with the character of recent familiarity.' If this mental action continued until he was fully restored to consciousness, the time consumed was about twenty minutes. Admiral Beaufort, however, was always convinced that it lasted only during submersion; if so, all these events swept before his mental vision in the space of two minutes. Thought is sometimes referred to as the very symbol of swiftness.

> "'Haste me to know't that I, with wings as *swift*
> As *meditation*, or the *thoughts* of love,
> May sweep to my revenge.'—HAMLET, Act i., Scene 5.

"There is no time so short but that within it the human mind can form a deliberate purpose to do an act; and if the intent to do mischief to another is thus formed as a deliberate intent, though after no matter how short a period of reflection, it none the less is malice. Malice in the old definitions is spoken of as express or implied. That, again, is a distinction which is a delusion and a snare. Practically, jurymen never deal with express malice. There is no express evidence of malice given to them. Malice, as I have told you, is an intent of the mind and heart. There is never presented to a jury direct evidence of what was the intent of the man's heart at the time."

It may be remembered that not long since, in this journal, I made reference to an interesting case in a New Jersey court, which held that an undertaker's establishment, in a well-settled part of the city of Camden, could not necessarily be considered a nuisance *per se*, and that there were no special circumstances connected with the particular establishment which entitled it to the interference of a court of equity. A somewhat similar case has recently been before the Florida Supreme Court. The counsel for the complainants argued that a livery stable closely adjoining a hotel could not be otherwise regarded than as *prima facie* a nuisance. But the Court decided against this view, and said: "It will be found that the cases in which livery stables have been held to be nuisances, either in equity or at law, are cases where the proof established the fact; in some instances the Court withholding their final decision until the fact could be tested by actual experience. It is not to be understood that this conclusion involves a decision that the stable may not become a nuisance. The complaint as to noise from the stamping of horses, if the wooden floor is taken out, as the answer says it will be done, is removed; and there only remains the question whether, from noisome smells or other discomforts produced by the use of the stable, there will arise a case for the interposition of equity. While it is easy to anticipate disagreeable results, it cannot be said, as a matter of fact, that these will necessarily follow to the extent of a nuisance. Considering the improved methods of the day, the dealing with various offensive appurtenants in and about dwelling-houses and hotels, so that little discomfort is experienced, it is not unreasonable to suppose that proper appliances in the management of a livery stable may produce similar good results."

Questions concerning the liability of owners of cattle suffering from contagious diseases, for misstatements in regard to their condition, are occasionally before the courts, and, in a recent case in Missouri, cattle were sold which had the Texas fever. This disease is not easily detected except by those familiar with it, and the point raised was whether the seller must refund the price. It was held that the concealment was a fraudulent device on the part of the seller and that the usual maxim of *caveat emptor* did not apply. In another case the action was for fraud in the sale of an unsound horse. The Court had instructed the jury that if the buyer relies upon his own judgment and observations and the seller makes no representations that are untrue, or says nothing, the buyer takes the property at his own risk. This instruction was held to be erroneous, the Court saying, if the seller knows of a latent defect in the property that could not be discovered by a man of ordinary observation he is bound to disclose it.

In a case in New York State a flock of sheep were sold and they afterward turned out to have the disease called "scab." Here it was said that if the defendants knew that the sheep were diseased it would have been their duty to have informed the purchaser.

In another case, a horse was sold which was unsound from the loss of teeth, but this was also held to be a latent defect which would ordinarily have escaped the attention of buyers of horses, and the concealment was a fraud upon the purchaser.

A CASE OF SUPERFŒTATION.—Mr. James Arthur, of Durham, England, writes to *The Lancet*: "On May 23d I was called to Mrs. D——, aged twenty-six, in her fourth confinement. The vagina was occupied by a large bag of membranes, which I immediately ruptured, and found two feet presenting. While preparing to grasp them, my attention was drawn to a small body between the two feet, and about the size of one of them. It seemed to loosen its attachment, and came away without any force. Thinking it might be a polypus, I laid it aside and proceeded with the labor, which was easy—a seven months' child, and nothing unusual about it. On getting a light (it was then late, and delivery had been performed almost in the dark), I found the small body to consist of a perfect fœtus of not more than eight weeks, with two inches of umbilical cord attached. It was much flattened transversely, judging from its position, owing to pressure between the other child and the promontory of the sacrum. Unfortunately, the placenta was removed before I had time to examine it and ascertain if there were two. The mother had no sanguineous discharge whatever during the period of gestation. A friend to whom I showed the specimen suggested blighted conception of one twin, but this is negatived by its fresh and perfectly normal appearance. I have no literature on the subject, and, being in the country, have no opportunity of consulting any."

A STOMATOLOGICAL SOCIETY has been established in Paris, the object of which is the scientific study of diseases of the mouth, including those of the teeth and alveolar processes. The head is now fairly well filled with specialties, but as the Society of Stomatology has neglected to include the tongue and the lips specifically among the subjects of its study, we may yet hope to see glossological and cheilological societies spring up in the near future.

Progress of Medical Science.

On the Functions of the Uvula and Epiglottis.—Dr. Spicer has published a paper on the functions of the uvula and epiglottis (*The Lancet.*) The various functions of the uvula in deglutition, phonation, articulation, respiration, and secretion, as set forth by different authorities, are discussed, and then the author describes an important function which had hitherto escaped detection, namely, that the uvula served during normal (nasal) breathing as a conductor, guide, or dripping-stone to convey the nasal and lachrymal secretions out of the breathway on to the lingual tonsil, there to undergo reabsorption into the circulation. These fluids were delivered on to the base of the tongue in a plane anterior to the epiglottis. From the lingual tonsil the unabsorbed portions trickled into the glosso-epiglottic fossæ, and thence into the pyriform sinuses or hyoid fossæ, along the lateral grooves of the epiglottis. It was mentioned that two previous authors had considered the uvula as a conductor or dripping-stone to convey mucus, etc., into the larynx for lubricating purposes, or to the base of the glottis, where it is accumulated until swallowed or hawked up. Common experience taught us that such intrusion of fluids into the larynx as was assumed, caused cough and spasm ; these views were hence, in part, the antithesis of the one expounded. The functions of the epiglottis were next considered, and it was pointed out that the balance of evidence was against any deglutition function of the epiglottis, but in favor of its movements and position having an important connection with the pitch, intensity, and the quality of the voice. The author described the epiglottis as a permanent vaulted dam, which kept the salivary fluids, etc., as well as those conducted by the uvula from the nose, out of the larynx, and which shot them off laterally (if not absorbed by tonsillar tissue) into the pyriform sinuses along the grooved spouts of the epiglottis, which projected over those sinuses normally. Clinical observations and experiments bearing on these views, and tending to show their correctness, were given in detail.

Suprapubic Cystotomy.—Dr. Eigenbrodt has published an elaborate study of this subject, of which the *American Journal of the Medical Sciences*, August, 1888, contains the following résumé : Inflation of the rectum by the rubber bag is not advised, as the peritoneum is readily avoided without such a procedure, and as the method is not devoid of danger. When the suprapubic percussion-dulness of the full bladder can be recognized, no more fluid need be injected. Over-distention is never necessary, nor previous treatment of cystitis or contracted bladder. The incision should be transverse ; if extensive, slightly convex downward, so that the extremities may correspond in direction with the inguinal canal. On reaching the deep fascia and abdominal muscles, it is most important to continue the operation as close to the pubic bone as possible, operating as though the object in view were the cutting away of the soft parts from the upper and posterior portion of the symphysis. Trendelenberg, by pressing with the fingers of his left hand against the sheath of the exposed muscles, so stretches their attachments to the bone that a touch of the knife frees them, and the danger of wounding the deeper-lying soft parts is avoided. A few muscular fibres of the pyramidales are divided, but the two recti are not wounded.

The extent to which the fasciæ and tendons are separated from the pubis depends upon the room required for subsequent manipulations. For the extraction of an ordinary stone, an incision one and one fourth to one and three-fourths inch in extent is sufficient. For tumor operations, or the removal of very large stones, two and a half to three and one fourth inches will be required, and both recti will be completely separated from the pelvis. The fasciæ and tendons having been cut from the pubes, the prævesical cellular tissue is exposed, usually containing much fat. The knife must now be laid aside, the second and third fingers of the left hand thrust in the prævesical space, dorsal aspect to the bone ; the index and middle finger pressed down well behind the symphysis till the region of the neck of the bladder is reached, then bending the fingers, all the soft tissues lying anterior to the bladder, especially the peritoneal fold, are drawn carefully upward ; the bladder is now exposed, and can be safely incised, the fingers of the left hand readily keeping the peritoneum out of the way. Tenacula are by this procedure unnecessary. If a very large incision into the bladder is required, the peritoneum can readily be separated from that viscus for a considerable extent with the fingers. In the manner described, even a bladder which has not been injected is, in a few minutes, exposed and safely opened. Elevation of the pelvis greatly simplifies the operation, and in this position the patient should always be placed. After the completion of the operation, the bladder is thoroughly washed out with a weak sublimate solution (1:3000 to 5000), a T-formed drainage-tube is placed in the bladder, carried over the symphysis, through the central portion of the external wound ; the extremities of the superficial incision are closed by a few sutures passed through the skin, and iodoform gauze is loosely packed in the open wound about the drainage-tube. If the superficial incision has been extensive, drainage should be provided for at both extremities of the wound. If a very large bladder-incision has been made, a few sutures may be inserted to lessen the size of the wound, but complete closure by suture is not yet justified by statistics. Suturing of the bladder with loose antiseptic packing of the parietal wound, as advised by Kraske, Ultzmann, and Mikulicz, is yet *sub judice*. Trendelenberg removes his drainage-tube in from one to two weeks ; in uncomplicated cases three to four weeks sufficed for a complete cure. In cases of marked cystitis or pyelitis with alkaline urine a long-standing fistula results, lasting, at times, if the condition of the urine be unchanged, for life. In Trendelenberg's cases there was no instance of urine infiltration or cellulitis. In one case only was there burrowing of pus—the patient, a feeble old man, dying of exhaustion thirteen weeks after the operation.

Of Trendelenberg's thirty-eight patients seven died in the course of treatment. No death can be ascribed directly to the operation. Three perished of intercurrent disease more than one month after the operation, two of carcinoma (four and five days after the operation respectively), one of delirium tremens (twelve months after operation), and one of burrowing of pus and profuse suppuration (two months after operation).

Against König's dictum, "The perineal incision must remain the natural operation for the lighter cases, the more dangerous high operation being reserved for the severe cases," the author contends that before operation it is often impossible to tell how difficult the case may be, and shows by reference to Trendelenberg's cases several instances in which history and examination would have proven the case amenable to the median operation. The conditions on opening, however, proved that none but the high incision could have carried the patients safely through. All of Trendelenberg's uncomplicated stone cases made a safe and rapid recovery ; and Assendert, who has done the high operation one hundred and two times, lost but two patients, one from causes not connected with the operation. All of his patients were young. The high operation takes its place as beyond all other procedures in the treatment of diseases of the bladder-walls. All of Trendelenberg's tumor cases were carcinomatous. If such tumors were promptly recognized and treated, a relatively good prognosis could undoubtedly be given. An early symptom is slight but frequent admixture of blood with the urine, often not observed because not accompanied by marked pain. Such bleeding, having no obvious cause, should always suggest a bladder-tumor, and lead the physician to make a most thorough and patient search for confirmation of the diagnosis. If this necessitates an operation, the high incision should be made at once, when, on confirmation, the operator can proceed directly to extirpation. This should be accomplished with scissors and sharp spoon, or by excision of a part of the bladder-wall; bleeding being stopped by cautery. Tubercle of the bladder gives rise to symptoms much like those of tumor, and can often be diagnosed only by visual inspection after opening the bladder. The high operation alone enables the surgeon to do this satisfactorily and undertake the radical extirpation of the diseased areas. Finally, the high operation is commended as most suitable for posterior catheterization, when, through traumatic stricture with great periurethral inflammation and cicatrization, or false passage with infiltration, or rupture of the urethra, the ordinary means of procedure (ordinary catheterization, the median operation, etc.) are no longer available.

SIMPLIFIED ANTISEPSIS.—The present tendency of surgery is undeniably in the direction of doing away with the unnecessarily cumbersome apparatus of ultra-antisepticism. Professor Kocher, of Berne, has even gone so far as to demand that catgut be discarded altogether, since its use may be followed by unpleasant results. Sterilized wounds are the modern chirurgical desideratum. Kocher accomplishes his object of securing asepsis about as follows:

1. The ceiling, floor, and walls of the operating-room should be thoroughly washed with soap and water and dried. Then three tables, carefully cleansed in the same way, should be brought in. One of these is to serve as the operating-table, one to hold the instruments, and one to hold the various other utensils. 2. A half-dozen thoroughly-cleansed and boiled bowls and basins should be on hand to hold the antiseptic solutions, also some bottles for the same purpose, and a large quantity of hot water, which must have been boiling two hours previously. 3. Soap and brushes are to be ready to wash and scrub the skin, hairs, and hands of all who take part in the operation. Also large sheets of impermeable material to cover the patient, the instruments, and the bandages. 4. For the preparation of the antiseptic solutions a quantity of concentrated solution of carbolic acid in a measuring-glass and a sufficient quantity of sublimate are needed. 5. Besides the instruments, there should be a glass containing glass drains in one-per-cent. solution of sublimate, and another vessel of the same solution containing fine silk-thread wound on glass spools, sponges in a five-per-cent. carbolic-acid solution, and, finally, a large quantity of unprepared bandages, lint, and gauze.—*Correspondenzblatt für Schweizer Aerzte.*

THE TREATMENT OF FIBRO-MYOMATA COMPLICATING PREGNANCY AND LABOR.—According to Dr. Phillips fibromyomata may induce labor, cause peritonitis, obstruct the passage of the fœtus through the pelvis and cause fœtal malpositions. The placenta is often adherent to the tumor; uterine contraction and involution are interfered with, and the disintegration of the tumor may cause sepsis.

Fibro-myomata in the body of the uterus disturb pregnancy. These tumors, when in the lower uterine segment, may ascend; when in the cervix fibro-myomata impede delivery.

Phillips has found three hundred cases collected by Lefour; he adds fifty-nine cases in which the tumor complicated pregnancy or labor in which laparotomy was not performed, and forty-seven cases in which it was.

Before the fœtus was viable, abortion was produced in four cases, which recovered. Myomotomy (abdominal section and removal of fibroids by ligature) was performed five times, with two recoveries; this operation is indicated when the tumor is accessible, and causes great pain by distention. Müller's ablation (abdominal section, with removal of tumor and uterus) was performed nineteen times, with twelve recoveries. The stump was treated extra-peritoneally in thirteen cases, with nine recoveries; intra-peritoneally in six cases, with three recoveries.

During fœtal viability labor was induced nine times, with three maternal and seven fœtal deaths. Playfair reports three cases in which the tumor was successfully pushed up during labor; others have not been so successful. Mundé removed successfully a large cervical fibromyoma *per vaginam* during labor.

Phillips has collected thirty-three cases of Cæsarean section for this complication, up to 1880, with a maternal mortality of 84.8 per cent. Since 1880 there have been thirteen Cæsarean operations and thirteen Porro operations *with equal maternal mortality*, 69.22 per cent.; the fœtal mortality was slightly less by the Cæsarean operation. The mortality rate by Müller's ablation was 36.8 per cent.

The statistics of Lefour's cases show that the forceps, embryotomy, version, and spontaneous birth resulted in maternal mortalities from twenty-five per cent. to fifty-five per cent.; fœtal mortality averaged seventy-seven per cent.—*The American Journal of the Medical Sciences.*

MENTHOL IN SURGICAL PRACTICE.—Dr. Girard, of Berne, Switzerland, claims very good results from a mixture of equal parts of menthol and iodoform, in the form of a dry powder, in fourteen cases of scraping out and resection of tuberculous bones and soft parts, the wound being either rubbed or plugged with the powder. In every instance the wound healed more rapidly and kindly, and generally the whole course of the case seemed to be more favorable than in another series of similar cases where iodoform alone was employed. As far as Dr. Girard's personal experience goes, menthol causes but trifling local irritation and pain, while it is said to be the best deodorizer in regard to iodoform.

DOUBLE NEPHRO-LITHOTOMY.—At a meeting of the Royal Medical and Chirurgical Society (*The Lancet*), Mr. Herbert W. Page read a case of double nephro-lithotomy, in which lateral and median lithotomy had been previously performed, with remarks on sympathy between the kidneys. A man, aged twenty-two, entered St. Mary's Hospital, in November, 1886. For ten years he had suffered pain in the region of the left kidney, with occasional attacks of left renal colic. In 1882 he began to pass gravel and to suffer from irritability of bladder, and in 1885 a small calculus was removed from the bladder by lateral lithotomy. Symptoms of vesical calculus soon recurred, together with pain in the left loin, and his general health became much broken. His urine contained pus and occasionally blood. Left calculous pyelonephritis was diagnosed in addition to stone in the bladder, and this was accordingly removed by median incision on December 4, 1886. On the 15th the left kidney was exposed in the loin and two small calculi were removed from a large suppurating cyst. The amount of pus, however, did not materially lessen, and towards the end of January he began to have pain in the region of the right kidney, from which it was soon suspected that the pus now came. On February 18th he was attacked with violent pain in the right loin, with rigors, vomiting, and high temperature. At the same time the pus almost entirely disappeared, and his urine dropped from forty-two to twenty ounces. It was believed that this urine was furnished by the left kidney only. The symptoms increased and there was fulness in the right loin. On February 25th the right kidney was exposed; it was found much enlarged and surrounded by fetid pus, and there was an opening into the pelvis from which an abscess had probably burst into the perinephral tissue. No stones were found. He did well after this operation. The urine steadily increased in quantity, the pus diminished, and his pain ceased. He left the hospital on May 26th, and a few days afterward he passed four small calculi per urethram. From that time he made steady progress toward recovery. The case is of interest from its bearing on the question of sympathy between the kidneys, and it was suggested that in this case the right kidney had in all probability contained calculi, though without giving rise to symptoms, for some considerable time, and that its condition was revealed by the operation on its fellow. In support of this view the author referred to a case recently under his care in which the presence of calculi was first made known after the operation of hysterectomy, undertaken by the late Dr. Meadows. Reference was made to other cases in which there was a somewhat similar sequence of events. From another point of view, Mr. Page considered this case of importance in its bearing on nephrectomy and preliminary abdominal exploration. Nephrectomy, as time proved, would have been in this case a very wrong thing, but he had never felt quite satisfied that abdominal exploration, by which he would have found an apparently useless left kidney and a right kidney so enlarged as to be presumably fit for all future needs, its calculi being, moreover, so small as to elude detection, might not there and then have led to nephrectomy. The patient would have been placed thereby in a position of infinitely greater danger when at a future day the right kidney was in its turn *hors de combat.* The case thus demonstrates with how many precautions and with what consideration abdominal exploration for the examination of kidneys must be made.

SUPRAPUBIC PROSTATECTOMY.—Mr. Atkinson, at a meeting of the Leeds and West Riding Medico-Chirurgical Society (*The British Medical Journal*), gave an account of two cases in which he had removed portions of the gland by Mr. McGill's process. In the first case a farmer, aged sixty-six, was admitted to the Leeds Infirmary with a five-years' history of repeated attacks of retention, requiring catheterism, the urine drawn off containing blood. The last attack occurred two days before admission. The bladder was much distended; there was a free urethral hemorrhage, and the prostate was much enlarged. A catheter drew off dark chocolate-colored urine with numerous clots. The urine was regularly drawn for eight days and the bladder irrigated. The rectum was distended by a bag containing twelve ounces of water, and the bladder injected with ten ounces of boracic solution, and opened over the pubes. A growth about the size of a cricket-ball was found to spring from the right lobe of the prostate. There were two openings into the bladder, one below and behind the growth, the other, which seemed to be a false passage, through the centre. The mucous membrane being incised, a considerable portion of the growth was enucleated in several portions. There was free hemorrhage, and the patient's condition caused some anxiety for a few days after the operation on account of vomiting, diarrhœa, and great weakness, but he made a good recovery, and was discharged well twelve weeks after the operation, passing urine freely by the natural passage.

CASE II.—A man, aged seventy-one, had had symptoms of enlarged prostate two years and retention for four days before admission. The bladder had not been emptied for two days and was much distended. A catheter withdrew fifty ounces of deeply blood-stained urine. After six days of regular catheterization and irrigation of the bladder with astringents without restraining the hemorrhage, turpentine was administered successfully as regards the hemorrhage. The bladder was opened, and two large masses were found projecting into the viscus on each side of the urethral orifice. A small pedunculated growth, projecting from the mesial surface of the left enlargement, was removed with scissors (this appeared to block the urethral orifice), and the two larger masses were enucleated by the fingers. There was little bleeding. The bladder was at a later period drained by a long tube into a vessel placed under the bed. The patient did well for a month, and he was allowed to get up. Six days after he was seized with acute pleurisy, of which he died. The local conditions, however, were quite satisfactory.

REMOVAL OF VESICAL TUMOR THROUGH THE MALE URETHRA.—According to the Vienna correspondent of *The British Medical Journal*, Professor Antal exhibited before a Vienna medical society a patient from whom he had removed, in June of last year, a papilloma situated at the fundus of the bladder by a modified "high operation." The wound healed by first intention, and the patient recovered. In six months after operation hæmaturia again came on, and the patient also stated that in December he noticed that small "bits of flesh" passed with the urine. In January, 1888, the patient was again admitted under Professor Antal, who found, on cystoscopic examination, that a pedunculated tumor with a nodular surface, and situated on a swollen and relaxed mucous membrane, was present near the opening of the bladder. The examination further showed that at the place from which the tumor had been removed a year previously there was only a white patch; hence there was no recurrence of the first growth. He introduced a straight forceps through the urethra into the bladder, and succeeded in tearing off the tumor, together with the pedicle. The parts of the tumor which had been thus torn off were in part removed by the forceps and in part by the catheter. Repeating these manipulations several times, the whole growth was got away. Microscopical examination of the tumor showed that it was a "papilloma fimbriatum" (Thompson). The case was interesting from the etiological point of view, as the patient had suffered from gonorrhœa and inflammation of the neck of the bladder, and the causal connection of this condition with the development of the tumor could not be doubted. This was the first case, within the knowledge of Professor Antal, in which the male urethra was used for the removal of a tumor.

INTRA-PLEURAL INJECTIONS OF STERILIZED AIR FOR PLEURITIC EFFUSION FOLLOWING PNEUMOTHORAX.—At a recent meeting of the Académie de Médecine M. Potain spoke at length on the above subject. A man in the third stage of phthisis entered the hospital with a pneumothorax, ten months ago, and to-day he is completely cured of the latter disease, and the tuberculous affection seems to have been greatly ameliorated. The man was twenty-three, and the fever, which ran high at the *début*, fell completely at the end of a fortnight. The effusion was very considerable, reaching as high as the subspinous fossa of the omoplate. Thoracentesis was clearly indicated, were it not for certain reasons which might have rendered the liquid—up to the present limpid—purulent, and consequently endanger the existence of the patient, already very precarious; as by such means the lung which had been compressed, and in this manner holding in check as it were the process of tuberculization, would, in regaining its volume, by expansion give free access to the march of the primitive malady, and the result would be fatal to the patient in a very short time. It was for these reasons that M. Potain adopted the method which he was about to explain to his colleagues. He drew off the entire quantity of the liquid, but he took care to replace it as he proceeded with air, in order to avoid the dilatation of the lung. Ten years ago such a treatment would have been considered as very rash, but it was now well known that air was only dangerous in proportion to the germs it contained, and that when deprived or purified of those germs it became completely innocuous. M. Potain performed thoracentesis in the usual manner, and introduced the air through cotton and a bottle of a strong solution of carbolic acid, which rendered it effectually sterile. The effusion returned at the end of six weeks, when the operation was renewed, the cannula used being double, to allow simultaneously the exit of the liquid and the entry of the sterilized air. Four times the operation was performed, and M. Potain thought that it was time to draw off the air and the rest of the liquid; but immediately the patient was seized with pain and suffocation, and the air had to be renewed. However, in a few weeks all trace of effusion had disappeared, the lung expanded, and the man became rapidly convalescent. Two other patients were treated in a similar manner, one of whom got well, while the other was greatly benefited.—*Medical Press.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, September 29, 1888.

THE SPREAD OF TUBERCULOSIS BY THE FLESH AND MILK OF DISEASED ANIMALS.

OF all the questions discussed at the Congress for the Study of Tuberculosis, held recently in Paris, the one which received the most attention was that concerning the spread of tubercular disease through the ingestion of the flesh and milk of diseased animals. It was conceded by most, if not all, of the speakers that the danger of infection through the milk of tuberculous cows is a very real one.

It is believed, indeed, that the milk is harmless, even though the cow be tuberculous, provided only that the disease have not invaded the mamma. But when it is remembered that the diagnosis of tubercular mastitis in the cow, in its early stages at least, is very difficult, if not impossible, it will be seen that this belief offers but little assurance of safety. Furthermore, the milk supply of cities is almost always a mixture of the milk from a large number of cows, and the presence of one diseased animal in the herd is sufficient to infect the entire product of the dairy.

This subject is one that has only recently attracted much attention, but that it is of vital importance needs no argument to demonstrate. Most of the laity, however, and even many physicians, do not yet appreciate its gravity, and we feel that the Congress has done good service in emphasizing the danger of infection from raw milk, and in insisting upon the necessity of boiling it before it is given to infants to drink.

As to the possibility of infection from eating the flesh of tuberculous animals, there was not such unanimity of opinion among the speakers. M. Nocard, whose opinions are worthy of consideration, believed that the flesh of tuberculous animals might be eaten with impunity, provided the disease were confined to the lungs or other internal organs. Of course, the flesh of cattle with general tuberculosis should be condemned as unfit for food, but the muscular tissue, except that immediately surrounding diseased glands, of animals in good condition but with local tuberculosis, might be ingested without danger.

The views of this speaker are strengthened by the results of some experiments made by Professor Bollinger, of Munich, and published in the *Münchener Medicinische Wochenschrift*, No. 30, 1888. He inoculated a number of guinea-pigs, by intra-peritoneal injection, with the juice expressed from the flesh of tuberculous cattle, but did not succeed in a single instance in producing the disease in them. The author says, however, that he used great care in these experiments, and suggests that meat prepared for the market, even if it were itself sound, might be rendered dangerous through accidental contact with diseased tissues in the slaughter-house.

M. Nocard admitted that there was a possible source of danger in the occasional ulceration of a caseous mass and discharge of its contents into a blood-vessel. The virus is then disseminated through the tissues. The bacilli lose their vitality and are, as it were, digested in the muscles; but this occurs only after some days, and if an animal should happen to be slaughtered just after such an irruption of bacilli into the circulation, the flesh might be dangerous.

M. Arloing was the principal speaker on the side of the "contagionists." He had tabulated the results of the inoculation experiments of several observers, and had found that the disease was communicated in twenty per cent. of the cases. He calculated that an ox or cow of average size, dressed and ready for the market, weighed seven hundred pounds. Allowing half-a-pound of meat for an individual at a meal, it was thus possible to infect one thousand four hundred persons by a single animal. Of course, such wholesale infection is merely a theoretical possibility, and would never occur; yet he believed that the danger was sufficiently real to demand radical measures in the seizure and destruction of the flesh of tuberculous animals. Cooking, he said, could not be relied upon to destroy the virus, for the temperature of the inner portions of a rare roast of beef might not be over 140° F., and this was not enough to destroy the tubercle bacillus.

In view of the large business interests involved in the decision of this question, and of the fact that it did not seem yet to have been conclusively proved that the flesh of tuberculous cattle contains the bacilli of tuberculosis, some of the speakers at the Congress advised caution in the expression of an official opinion. The Congress, however, did not take this conservative view of the matter, but decided that "the seizure and destruction of tuberculous animals, whatever may be their appearance of health, should be a constant practice." To this proposition there were but three dissenting voices. One of this minority, Dr. Corrado Massa, a veterinary surgeon of Genoa, protests against this action in a letter to the *Revue Générale de Clinique et de Thérapeutique*, basing his protest on the grounds that it is impossible always to diagnose with certainty tuberculous lesions in slaughtered cattle; that even if tubercle bacilli be present, they are destroyed by cooking; and that the inhabitants of Italy already have so little beef that to deprive them of part of what they have, on the supposition that it is diseased, would be to sow broadcast the germs of misery while attempting to destroy those of tuberculosis.

It is possible that the Congress was somewhat hasty in giving its official sanction to such a radical proposition, for the question cannot yet be said to be closed. But its action will doubtless be productive of good, nevertheless, for it will give a stimulus to new experimentation, and thus we shall approach nearer to a correct appreciation of the danger to which mankind is exposed from this source.

PROPOSED YELLOW-FEVER LEGISLATION.

We are informed that a bill has been introduced in Congress offering a reward of $100,000 for the discovery of the cause and cure of yellow fever, and another for the appointment of a commission to observe and report upon the facts relative to the malady at Jacksonville, and the best method for preventing or suppressing it.

The latter bill is a wise and timely one. But a law providing for the award of a $100,000 prize for the discovery of "the cause and cure of yellow fever" is but a useless proffering of money. The cause of yellow fever may perhaps be discovered, its cure probably never. Modern science prevents infectious fevers by quarantine, disinfection, and vaccination, but a cure is not known for any of them. The wiser plan would be to take the $100,000 and place it in the hands of men capable of thoroughly investigating the disease.

THE COUNTY SOCIETY AND THE WATER SUPPLY.

We are surprised at the action of the Medical Society of the County of New York, at its recent meeting, regarding recommendations for increased water supply. Why the Society should commit itself on the question in such a way it is difficult to understand. Of course it will amount to nothing more than a useless attempt to endorse a private enterprise under the guise of a well-considered scientific opinion.

THE USE OF PILOCARPINE IN MIDDLE-EAR DISEASES.

The treatment of syphilitic and other affections of the internal ear by means of pilocarpine was recommended several years ago by Politzer. He stated that the drug was of benefit only in recent cases of these diseases, and that if no results were manifest after the lapse of eight or ten days its employment should be discontinued. He also asserted that dry catarrh of the middle ear, among other affections, was not benefited by pilocarpine. The therapeutic effect of the drug has been ascribed to the resorption of inflammatory exudation in the internal ear as a result of the increased action of the sweat and salivary glands.

In the *Archives of Otology* for June, 1888, Dr. W. Kosegarten, of Kiel, reports a few cases of aural disease treated by subcutaneous injections of pilocarpine which would seem to show that the field of usefulness of this remedy is less restricted than Politzer, and others after him, have supposed. This author was more persistent in his use of the drug, not abandoning it after eight or ten applications, and he was rewarded by obtaining good results, not only in chronic labyrinthine disease, but in dry catarrh of the tympanum. He made it a condition that the patients should submit to a course of treatment of at least six weeks' duration, injections of one-sixth grain of pilocarpine being made daily, when possible. If the treatment were well borne, and if any improvement were perceptible at the end of this time, the injections were continued, and usually with benefit.

His observations on the cases so treated led him to the belief that the favorable effect was due to a more active circulation in the tympanum, with consequent absorption of the inflammatory products and increased elasticity of the sclerosed tissues and adhesions. "It seems evident," he says in concluding his report of these cases, "that injections of pilocarpine also have a decided influence upon the mucous membrane of the middle ear, and therefore, in chronic processes of the middle ear accompanied by affections of the labyrinth, this remedy acts not only upon the internal ear, but that it can also exert a favorable influence upon the middle-ear process. By means of returning hyperæmia, which may even cause exudation, there ensues pliability of the sclerosed tissues and moistening and softening of adhesions, and in this way the unyielding conducting apparatus again becomes more capable of vibrating; where exudations had become deposited their absorption was brought about, as could be observed in the membrana tympani of a patient. The reason Politzer found the remedy inefficient in these affections was because he discontinued treatment too soon, for in these chronic processes we cannot accomplish anything except by long-continued action."

THE CRIME OF A MEDICAL JOURNALIST.

Not long ago we were called upon to record the melancholy fact that our esteemed contemporary, the *Meditsinskoye Obozreniye*, had been seized by the Russian authorities, and an entire edition confiscated, because of the publication of something that did not meet the approval of the censor. And now it is our mournful duty to chronicle a similar misfortune that has befallen the *Prager Medicinische Wochenschrift*. The editor of this journal had been rash enough to admit to its columns a letter "in which it was sought, through invective, to bring into contempt the order of the high royal-imperial governorship of Bohemia, and at the same time to incite to hatred against the State Court as regards the execution of its decrees"—or words to that effect. For this high crime the edition containing the objectionable matter was confiscated, and the editor was ordered to publish the indictment on the first page of the next issue of his journal. This has been done, and now all that remains for us is to express our regret that we should be deprived of even one number of so valuable and entertaining a journal, and to assure the editor of our deepest sympathy.

Amalgamation of the Dublin Medical Schools.—After several sittings, the Council of the College of Surgeons have agreed upon a scheme for the amalgamation of the School of the College with the Carmichael and the Ledwich. This will be submitted to a special meeting of the College for approval, and will, it is expected, meet with some opposition from those who have been "left out" in the proposed appointments. It has, of course, been found impossible to find places for all, but an effort has been made to meet such cases by compensation. Dr. Thornley Stoker will voluntarily retire from the Chair of Anatomy, and Dr. Mapother from that of Physiology—each receiving compensation.

Blue-lined Writing-paper is almost universally manufactured both in this country and Europe. The School Commissioners at Mainz have, upon medical advice, decided that the blue lines are bad for the eyes, and ordered that all school writing-paper shall be ruled in black.

News of the Week.

ECHOES FROM THE CONGRESS.—A reception was tendered to the members of the Congress of Physicians and Surgeons on Wednesday afternoon from four to five o'clock.

There was a general complaint among members of the Congress that the hotels of Washington had extraordinarily high prices and extraordinarily bad fare. It is a poor hotel man who thinks he can blind an American doctor as to the quality of what enters his stomach.

The Potomac water achieved a high reputation for its cathartic and enteralgic properties. A large proportion of eminent guests were made the victims of an interesting and probably bacillary diarrhœa. Its true nature deserves attention from the local and acclimated bacteriologists of our National Capital.

It was generally conceded by all the members of the Congress that for steady continuously gesticulated oratory the region of the Great Lakes took the palm.

The query has arisen: Since the recent Congress was so successful, why should it not come oftener than once in three years?

THE YELLOW FEVER.—At date of writing there had been 2,134 cases of yellow fever at Jacksonville, Fla., with 221 deaths. In the last four days the death-rate has been extremely low, not over two or three per cent. The fever does not seem to have reached an epidemic form at any place except Jacksonville. Some cases have occurred in a few of the smaller towns of Florida, also in Jackson, Miss., and Montgomery, Ala. The mortality from the epidemic has on the whole been comparatively slight. So far there have hardly been 300 victims.

FOREIGN VISITORS.—Among the distinguished medical men now visiting this country are Drs. William Ord, Sansom, Graily Hewitt, Pye-Smith, David Ferrier, Mr. Reginald Harrison, Mr. Victor Horsley, Mr. Durham, and Prof. Esmarch.

DR. WILLIAM C. PRYER, of New Rochelle, one of the most prominent physicians of Westchester County, died on September 24th, after a prolonged illness, at his residence in that village. Dr. Pryer was born in New York City, in 1834, and after being graduated from Columbia College, took up the practice of medicine. About 1850 he went to New Rochelle, where he remained until his death. During the war he was engaged as a surgeon on David's Island. He was a sufferer for many years from hip disease.

DR. LEWIS A. SAYRE'S CLINIC, at Bellevue Hospital, on Wednesday afternoon, was the occasion for a very pleasant remembrance on the part of the students. Mr. Reginald Harrison, of the Liverpool Infirmary, and Mr. Durham, of Guy's Hospital, London, were present and made remarks. Mr. Harrison was expected to perform a perineal section, but being prevented from so doing by the patient having a chill, he gave a very interesting and instructive description of his operation for prostatotomy, already familiar to our readers. Mr. Durham followed with the history of a unique case of pharyngotomy performed by him in Guy's Hospital for the removal of a jug-handle accidentally swallowed by a thirsty patient. Dr. Sayre, in his own impressive manner, described the early symptoms of hip-disease, as illustrated in a patient, and applied his extension-splint before the class. The case illustrated the advantage of such a mode of treatment in a striking and gratifying degree.

RECEPTION TO PROFESSOR ESMARCH.—Dr. Robert F. Weir and Dr. William T. Bull tendered a reception to Professor Esmarch at the New York Hospital on the 26th inst. It was largely attended by representative medical men from this and other cities.

A RECEPTION TO DR. GRAILY HEWITT was given by Dr. W. Gill Wylie on September 23d, at his private hospital.

CHANGES IN THE GERMAN UNIVERSITIES.—Professor Bardenheuer has succeeded the late Professor Budge, at Greifswald. Professor William Biedermann has succeeded Professor Preyer, at Jena.

A BILL HAS BEEN introduced into the Senate of the United States which authorizes the President to cause the Secretary of the Treasury (through the Marine Hospital Service) to make and promulgate such rules and regulations as in his judgment may be necessary to prevent the spread from one State or Territory to another of cholera, yellow fever, small-pox, or plague, and to employ as many inspectors and other persons as may be necessary to carry the regulations into effect. It also makes it a misdemeanor, punishable by fine and imprisonment, to violate the regulations that may be promulgated by the Secretary.

SALARIED PHYSICIANS FOR DISPENSARY SERVICE.—The Trustees of the Eastern Dispensary in this city are about to hold examinations for the purpose of filling the following positions: One Attending Physician to the Department of General Medicine, one Attending Surgeon to the Department of General Surgery and two District or Visiting Physicians. The Attending Physicians will be required to render two hours daily service at a salary of $400 per year, and the District or Visiting Physicians are to serve two and one half hours daily at a yearly salary of $500.

MURDER BY A LUNATIC.—The *Memphis Medical Monthly* states that a Mr. J. Mack Brown, and Dr. F. M. Usher, while on their way to Hot Springs, stopped at a hotel in Memphis city. While sitting quietly in the rotunda, R. A. L. Lane, a man about thirty-five years of age, walked into the hotel, went back to the rear, returned in a moment, looked over the register, turned around and walked to where Brown and the doctor were sitting, and fired two pistol-shots at the former. The manslayer then twice hissed the query: "You will have me arrested, will you?" The wounded man died almost instantly. Lane walked slowly toward a side entrance of the hotel, and was arrested. After his arrest, in reply to inquiry, he stated that his mind had been troubling him for three or four days, and that he felt he had to kill somebody. The spirits prompted him to do so. The people around him were mind-readers; they had been reading his mind, and it must be stopped. The spirits told him he must kill someone. After eating his supper, he got two pistols and walked out upon the street, intending to shoot the first man he saw. The lunatic's family physician, Dr. N. Erskine, testifies that he had sworn to the man's insanity two years before, but that he had not been committed.

THE INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA.—The second session of this Congress will be held in Melbourne on January 7–12, 1889. There will be sections on Medicine, Surgery, Hygiene, Forensic and State Medicine; Anatomy and Physiology; Pathology, Obstetrics, and Gynecology; Diseases of the Eye, Ear, and Throat; Psychological Medicine and Pharmacology; and sub-sections on Diseases of the Skin and Diseases of Children. The International Centennial Exhibition will be open during the session. The organizers of the Congress have exerted themselves to the utmost to make the meeting a scientific success, and have every reason to believe that it will be. A hearty interest is taken in it by all the medical societies throughout Australasia. A cordial invitation has been extended by the officers of the Congress to the members of the medical profession in the United States to visit Melbourne at this time, and to participate in the work of the Congress. Such visitors are assured a hearty welcome, and will be associated in all the work of the Congress. Application has been made to the steamship companies for special rates, and free passes will be given to visitors from abroad over all the railways in Victoria. Notice of contributions should be sent to the Secretary in time to be received on November 15th, and it is requested that an abstract of the papers to be read be forwarded at the same time. The Secretary of the Congress is Dr. H. B. Allen, of Melbourne.

THE EULOGY OF AGNEW, BY THOMAS.—Of the many tributes which have been offered to the lamented Agnew none have equalled the graceful and touching eulogy by Dr. Gaillard Thomas at a recent meeting of the Academy of Medicine. Thomas was fortunate in having such a friend, and so was Agnew. Everyone will agree with us after reading the address, now for the first time published in pamphlet form.

DR. J. M. DACOSTA, the Middleton Goldsmith lecturer for the present year, declined to receive any compensation for his lecture, and requested the New York Pathological Society to apply the amount ($100) to any purpose which might seem desirable. The matter was referred to the trustees, and they decided that the most fitting tribute to Dr. DaCosta's generosity would be to purchase some microscopes for the use of the Society, and requested the speaker to procure them. He has succeeded in getting two microscopes, one having an Abbé condenser and a one-fifth objective, the other having no condenser and being of a low power. The microscopes will be engraved with an inscription to the effect that they were the gift of Dr. DaCosta.—*College Clinical Record.*

CIRCUMCISION—It has been decided by the Jewish authorities of Berlin that in future the rite of circumcision shall only be performed by duly qualified medical men.

A STERILIZED MILK DAIRY.—A Russian doctor has established a dairy farm near St. Petersburg for the express purpose of supplying sterilized milk, free from microbes, for the use of hand-fed infants.

THE OXFORD MEDICAL SCHOOL.—The *British Medical Journal*, September 8, 1888, is pleased to observe that this great university is striving to wipe out the reproach which, but a short time ago, it fully deserved, of being a "lost medical school." In the course of last winter a lectureship of Materia Medica was established, an annual sum having been previously voted by Convocation for the salary of the lecturer. The first course was given during last summer term. The instruction given comprises lectures on the chemistry of the Pharmacopœia, besides practical work in chemical pharmacology in a laboratory which has been specially fitted up for the purpose. A most competent teacher has been found in the person of Mr. Wyndham Dunstan, Professor of Chemistry to the Pharmaceutical Society. Ever since Dr. Burdon-Sanderson went to Oxford, he has been untiring in his efforts to revitalize its withered medical faculty, and it is gratifying to see that his energizing influence is making itself felt. There is really no reason why Oxford should not be as flourishing a medical school as the sister university has become under the care of Professor Humphry and Dr. Michael Foster.

DEATH DUE TO MERCURIAL INUNCTIONS.—Two cases of dysentery with fatal results have been reported by a German physician. It appears that in both instances the blue ointment was used to excess. In one case over a drachm a day was rubbed in, and in the second, four and a half drachms a day were consumed.

A NEW MEDICAL COLLEGE IN BROOKLYN.—Brooklyn, N. Y., has a new institution, called "The College of Physicians and Surgeons of St. Mary's Hospital of the City of Brooklyn."

PROTESTING AGAINST THE PROPOSED "DICTIONARY OF MEDICAL SPECIALISTS."—The *Hospital Gazette*, in its issue of September 8, 1888, is pleased to see that the *Lancet* has also protested against the publication of the specialist dictionary. It justly points out that such a compilation cannot evidently be intended for the use of medical men, since everyone knows well enough beforehand to whom he should send cases requiring special treatment. All it can do is to enable the public to go a step further in repudiating the assistance and advice of the general practitioner before consulting the specialist. In other words, it is merely a barefaced attempt to advertise a class of men who, in many instances, never miss an opportunity for self-advertisement as it is. The specialist is, or should be, essentially the assistant of the practitioner, and not his *remplaçant.*

DAMAGES FOR SYPHILITIC INFECTION.—By a recent decision of a Paris court the parents of a child suffering from hereditary syphilis, which communicated the disease to its nurse, were condemned to pay $400 damages to the woman. Each of them had also to pay a fine of $20. The decision was grounded on the clauses of the Code providing for the punishment for wounds or other injuries inflicted through carelessness. The parents were aware of their child's condition.

ABANDONMENT OF INTUBATION AT LEIPZIG.—Professor Thiersch has given intubation in diptheritic laryngitis a thorough trial, extending over a period of some months, but with no results, so that he has now resumed his former treatment—tracheotomy, with which his percentage of recoveries is about fifty. He ascribes his lack of success, as compared with American surgeons in the matter of intubation, to a different type of the disease, thinking that in his cases the membrane is thicker and tougher and the constitutional symptoms severer.—*Correspondent Western Medical Reporter.*

INSUFFICIENT VACCINATION IN PARIS.—Out of the five thousand children born every month in Paris, only a thousand are vaccinated by the medical officers appointed for that purpose (*The Medical Press*). The remaining four thousand infants are therefore either vaccinated by private practitioners or not at all. Seeing, however, that more than half the population apply for and receive gratuitous medical attendance, and that half the burials are gratuitous, it is very unlikely that all the four thousand are vaccinated at the cost of the parents. It may fairly be assumed that a large proportion are not vaccinated at all, and that is why small-pox exists as an endemic disease at Paris, and does not disappear, as it has done, to a great extent, in Germany.

A HIGH TARIFF FOR CORPSES.—The transportation of bodies for purposes of burial or cremation is never a very cheap undertaking; but now it appears that custom duties are to be levied on dead bodies to such an extent that it may be cheaper to live than to die. The Italian authorities have recently exacted $75 as an import duty for a body crossing their frontier, and a second $75 was charged for carrying the ashes back again, after cremation of the body. This looks like extreme protection for home corpses.

UNSAVORY PEPTONES.—It is stated on good authority that the excrements of dogs are now collected in Paris, and worked up into "peptones" and powdered "extracts of meat." Paris still leads the world in some things.

A GERMAN Society of Dermatology has just been founded. All German-speaking doctors will be eligible for membership. The meetings of the Society are to take place during the Whitsuntide vacation every year in a town in Germany or Austria. The provisional committee consists of Professors Caspary, of Königsberg; Doutrelepont, of Bonn; Kaposi, of Vienna; Lewin, of Berlin; Lipp, of Gratz; Neisser, of Breslau; Neumann, of Vienna; and Pick, of Prague. The dues have been fixed at 10 marks (which is equivalent to $2.50 of our money) per annum.

A GARBAGE CREMATORY FOR PHILADELPHIA is said to be contemplated. New York should follow the lead of cities like Chicago, Montreal, and others, and erect one or more of these life-saving buildings.

PROFESSOR HOFMEIR has received and accepted a call to the Chair of Gynecology and Obstetrics at the University of Würzburg. He is only thirty-three years of age, but he is the son-in-law of the late Carl Schröder.

A MEDICAL DRAMATIST.—A play from the pen of Dr. G. H. R. Dabbs, of Shanklin, England, will be produced under the auspices of Mr. H. J. Leslie at a special *matinée* at the Prince of Wales' Theatre early in October. The title of the piece, which is said to deal somewhat largely with medical matters, is "Blackmail," which would appear to justify the assumption that the play is rather sensational.

A FOREIGN ESTIMATE OF INTUBATION.—The Swiss correspondent of the *British Medical Journal* writes as follows: "At a meeting of the Société Vaudoise de Médecine, Dr. Irwin H. Hance, of the New York Hospital for Children, made a communication on O'Dwyer's intubation of the larynx, based on eight hundred and six American cases, with 27.4 per cent. recoveries. Referring to Hance's paper, Dr. E. Thomas, of Geneva, says that he has assisted in eleven cases of intubation performed by Dr. D'Heilly in the Hôpital Trousseau in Paris. Only two of the eleven recovered. On the whole, as the matter stands at present, Dr. Thomas believes that the procedure has only two distinct advantages, namely—1, it is bloodless, and hence readily consented to by parents; and, 2, it allows the child to breathe air previously warmed in the oral cavity as under normal conditions. In its present imperfect form, however, O'Dwyer's procedure is thought to have many inconveniences and difficulties, which will, for some time at least, prevent it from superseding tracheotomy. 'Undoubtedly,' Dr. Thomas says, 'the latter operation is far from easy, but it requires less complicated instruments. The practitioner's eye can guide his bistoury all the while. The operation can be performed just as rapidly as perhaps intubation, while the after-management is easier. In addition, the curative effects of the intubation remain yet to be determined.'"

A HAPPY LAND.—There is not in France a medical school which has a professor of gynecology, nor is there in the whole country a special hospital for the diseases of women.

DR. HARVEY JEWETT OF CANANDAIGUA, N. Y., died suddenly at his home on the night of September 4, 1888. He had been engaged in the active practice of medicine for fifty-six years, and passed away in his sleep from sudden heart-failure, after a day of unusual professional activity. Dr. Jewett was president of the Medical Society of this State in 1883. He was known to many of the profession by his advocacy of the more general use of apocynum cannabinum as a diuretic in dropsy, to which he directed attention in a paper read before the State Society in 1869.

THE STOLID CHINAMAN.—Making allowance for some exaggeration, there is probably an undercurrent of truth in what a writer in the *North China Herald*, of Shanghai, says as to the absence of "nerves" in the Chinese. "To the average Celestial it is a matter of indifference how long he remains in one position. He will write all day like an automaton, he will work from morn to eve without any variation, and apparently without any consciousness of the monotony. The Chinese school children will undergo an amount of confinement, unrelieved by recesses or changes of work, which would drive a western pupil to the verge of insanity. Even Chinese infants are said to remain as impassive as 'mud gods.' To the Chinese exercise appears to be superfluous, and they can sleep anywhere. With a brick for a pillow the 'heathen Chinee' can lie down on his bed of stalks, or mud bricks, or rattan, and sleep the sleep of the just, with no reference to the rest of creation. He does not want a darkened room, nor does he require others to be still. The 'infant crying in the night' may continue to cry for all he cares; it does not disturb him. In the case of most working people, and also in that of many others, position in sleep is of no sort of consequence. It would be easy to raise in China an army of a million men—nay, of ten millions—tested by competitive examination as to their capacity to go to sleep across three wheelbarrows, head downward like a spider, their mouths wide open, and a fly inside."—*British Medical Journal.*

Pepsin as it Should Be.—As generally presented, pepsin consists of the real ferment incorporated with mucus and peptones, and unless prepared in a certain manner it will absorb moisture and putrefy. Such a specimen emits a nauseous odor, and has little or no digestive power. The best manufacturers have succeeded in securing a product which is non-hygroscopic, free from peptones, very soluble even in pure water, and capable of dissolving from 1,500 to 2,000 times its weight of coagulated egg albumen. Two grains of such a pepsin in twenty drops of dilute HCl and water is about as sure a remedy in certain forms of gastric derangement as we can ever hope to have. In order to disguise the odor and taste of the older preparations, it used to be the fashion to saccharate pepsins. With the perfected and purified products this is not essential. The failure of many to obtain good results from pepsin is due to the facts above mentioned. In order to demonstrate the worth of a given specimen, it is only necessary to go to a little very instructive trouble and perform the test as described in the U. S. P., or works on physiology. Where saccharated preparations are used, allowance must be made for the fifty per cent. of sugar which they contain. There is no excuse nowadays for any material variation in the activity of a given brand of pepsin. It should be assayed and brought up to the standard strength before leaving the manufactory, and that strength should be that of which a given and convenient bulk is capable of exerting a decided effect.—*Dr. Fowler*, *Dietetic Gazette.*

Obituary.

THOMAS T. SABINE, M. D.,

NEW YORK.

But few of the noted medical men who have passed away within the past year have been more universally regretted than Professor Thomas T. Sabine of this city. Although an invalid for nearly the whole period of his professional life, he proved how much faithful and arduous work could be accomplished under trying circumstances of physical disability. No one can appreciate such a trial more thoroughly than the medical man himself, who is convinced that his disease is incurable and that he must stubbornly work his way without hope. There is no heroism superior to this. Dr. Sabine bravely faced such an issue, and kept busily engaged in his beloved pursuit until the inevitable came and the galling harness dropped with him. Born and educated in this city, he graduated from the College of Physicians and Surgeons in 1864, after which he served in the house staff of the New York Hospital. At the completion of his term in that institution he was attacked with pulmonary hemorrhage, which laid the foundation of his life-long invalidism. With a power of endurance and indomitableness of will strangely at variance with his slender frame and bodily weakness, he accepted and filled the onerous positions of hospital surgeon at Bellevue and St. Luke's Hospitals, and also the chair of anatomy in the College of Physicians and Surgeons. As an operator he was conscientious, bold, and brilliant, and as a teacher he was impressive and thorough, and had the rare faculty of making the study of his subject a pleasure as well as a profit. Socially he was much beloved by his friends, uniting, as he did, a Christian resignation with a love for truth, honor, and fairness in all things, which rounded out a truly lovable character.

Society Reports.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, September 24, 1888.

Laurence Johnson, M.D., President, in the Chair.

NOMINATIONS FOR OFFICE.

For *President*, Dr. Laurence Johnson (declined), Dr. Alexander S. Hunter; for *Vice-President*, Dr. L. Bolton Bangs, present incumbent; for *Secretary*, Dr. C. H. Avery, present incumbent; for *Assistant Secretary*, Dr. William E. Bullard, Dr. Charles E. Bruce; for *Treasurer*, Dr. J. S. Warren, Dr. H. E. Cramptom; for *Censors* (five to be elected), Drs. J. Leonard Corning, Laurence Johnson, M. N. Miller, William Stevens, Daniel Lewis, W. E. Bullard, Andrew F. Currier, and Robert Campbell.

John R. Bartlett, Esq., read a paper on

ADDITIONAL WATER-SUPPLY TO NEW YORK CITY, INDEPENDENT OF THE CROTON WATER-SHED.

There was much misunderstanding regarding New York's water-supply. The average annual rainfall in this latitude was a known quantity, stated to be about 43.08 inches, and the minimum to be about thirty inches. It was not safe to base estimates on more than the minimum rainfall, since not more than that amount could be relied upon under all conditions for supplying a large city with water. About sixty per cent of the annual fall on the Croton water-shed was lost by evaporation, absorption by vegetation, and percolation through the ground. This left forty per cent. of thirty inches, the minimum fall, which could be relied upon with safety. This amounted to a sheet of water twelve inches in depth, covering an area, on the Croton water-shed, of three hundred and sixty-one square miles. One square mile of water twelve inches in depth amounted to about two hundred and nine million gallons; this gave for the daily supply about two hundred and seven million gallons. If the average rainfall of forty-three inches were taken, it would give for the daily supply about two hundred and ninety-three million gallons. Two hundred and fifty million gallons a day would be ample for the needs of this city at present if we had it, but this amount could not be obtained for a number of years, not before six years after work should have been commenced on the Quaker Bridge dam and the reservoirs, and when these storage reservoirs should have been completed years hence, the population of the city would have been very greatly increased. It was now estimated to increase at the rate of about seventy thousand persons yearly. In other words, an ample supply of water from the Croton water-shed could never be obtained for the city of New York, and it was futile to wait for what never could come.

Mr. Bartlett then turned his attention to the Passaic water-shed, a small part of which lay in Rockland and Orange Counties, New York, the remainder in New Jersey. It was much nearer to the city than the Croton water-shed, had a much higher elevation, being from one thousand to one thousand five hundred feet above tide-water; its water came from forest-clad hills, the soil absorbed little of it in its downward flow, and it was very pure. The area was eight hundred and seven square miles, which gave for use about seven hundred million gallons a day. This quantity was amply sufficient to supply Newark, Jersey City, and other cities in New Jersey, and the lower portion of New York City. The company which he represented had secured the necessary riparian rights, and proposed to carry the water to a reservoir in the Orange Mountains, from which it could be distributed to the several cities through a system of pipes, with a force sufficient to raise the water to the tops of the highest buildings in the down-town portion of New York. If necessary, it could be conducted into this city under a head-pressure of three hundred feet. It would pass beneath the Hudson River in pipes laid in a tunnel, which could be completed within three years. The company asked the city to pay nothing until the water was delivered, and then the cost would probably be about the present rates. But the advantages would be far beyond the present system, since the water would come with sufficient pressure to be used in extinguishing fires, in manufacturing, and in quantity sufficient to flush the sewers and cleanse the streets. The need of an additional water-supply from a sanitary point of view, was made evident by the fact that the death-rate in New York City was greater than that of Bombay or Calcutta. A brief review of the water-supply of Rome and other cities was given, showing the importance the ancients attributed to a plentiful supply of pure water.

After a little discussion on the paper, DR. DAVID WEBSTER said he had had several conversations with Mr. Bartlett on his proposed method of supplying the city with water, and had become deeply interested in it, and hoped his project might be carried through; and he thought it would aid Mr. Bartlett in getting the consent of the city authorities, if the Society would adopt certain resolutions which he would offer, and he would be glad to see them adopted unanimously:

Whereas, The present scarcity of water in this city is causing great inconvenience as well as serious apprehensions for sanitary and other reasons; and,

Whereas, The new aqueduct will not materially increase the present supply of the Croton water-shed until the storage reservoirs shall be completed, six or more years from now; and,

Whereas, The upper portion of the city, with its rapidly growing population, will soon require all water that can be secured from that source; and,

Whereas, The present insufficient quantity of water endangers the safety of the city and promotes the spread of scarlet fever, diphtheria, and other diseases; therefore, be it

Resolved, That this society has listened to the explanation of the plans proposed by John R. Bartlett, Esq., for furnishing the city of New York with an additional supply of pure water, from a source independent of the Croton water-shed; that it approves the same, and urgently recommends it to the city authorities having the matter in charge.

DR. THOMAS H. MANLEY opposed the resolution, for, although he had not heard the entire paper read, he believed when the new aqueduct should be completed, the city would have an ample supply of water; such, at any rate, had been the opinion expressed by some very competent engineers. Moreover, it would be impracticable to deliver water into this city under the pressure proposed by Mr. Bartlett without a revolution of our plumbing system; the pipes would burst. He did not think it well to commit the Society to a plan of this kind. The meeting was not representative, in that it was not as full as it might be, had it been known that it was proposed to endorse this plan. He hoped the matter would be laid over.

DR. J. L. CORNING heartily endorsed the scheme. The company did not ask anything of the city until it should have complied with the contract and delivered the water.

DR. MORRIS thought the Society had nothing to do with the question of water-supply for suppressing conflagrations, but it should have something to say about the present insufficient amount of water, which was adding to the death-rate from disease. Fully seventy-five per cent. of the tenement-houses could not get water under pressure from 7 A.M. to 6 P.M. He was in favor of an increased supply of water. The question of getting water from Lake George would never be entertained by the city, because of the too-great cost.

A member asked whether the Society was aware that some years ago, a company offered to bring water from Lake George on the same terms that this company proposed to do, and it was rejected.

DR. E. C. HARDWOOD could see no objection to the resolutions, and thought the Society should be in favor of a measure which would add to the water-supply of the city. He would be in favor of pumping water from the Hudson with which to extinguish conflagrations and to flush the streets.

DR. COLE had the greatest regard for the author of the resolution, but he was diametrically opposed to it. It had been said that it meant little; that the Society did not endorse this particular scheme in adopting the resolution; that was nonsense. Should the resolution be adopted, it would mean that the particular scheme proposed was endorsed, and that the Medical Society of the County of New York favored a water-supply of the city by a private corporation. We expected within three years to have an increased water-supply of as pure water as any city had. He doubted whether the private corporation could carry out its plans as proposed. It had been thirteen years since the tunnel was started under the Hudson; this company proposed to build it within three years. Once a company proposed, as had already been stated, to bring water from the Adirondacks, from Lake George—perfectly pure, limpid water—buy its own right of way, and deliver it to the city in unlimited quantity on the same terms as Mr. Bartlett proposed, *i.e.*, to be allowed to charge the citizens the present rates. The gentlemen who read the paper represented a private corporation, and they wanted to make money. He objected to the resolution.

DR. TANSLEY and DR. TUTTLE spoke in favor of the resolution, and some of those who had favored its passage explained that they understood the resolution to mean only that those who voted for it favored an increased and ample water-supply for the city.

The resolution was adopted, with several dissenting voices.

The paper by DR. PAUL F. MUNDÉ, "The Value of the Operation of Shortening the Round Ligaments of the Uterus, Based on the Results of Twenty-one Cases," was read by title.

A proposed amendment to the by-laws, to be voted upon at the next meeting, is as follows: It shall be the duty of the comitia minora to provide for the annual publication of a Medical Directory of the City of New York.

Back volumes of the Transactions of the Medical Society of the State of New York can be obtained of the librarian of the Academy of Medicine, for twenty-five cents each.

"DYNAMIC" COMPOUNDS OF GOLD.—A specimen of the quasi-scientific methods of certain French therapeutists is given in the accounts recently published of a "discovery," by one Dr. Addison, of a mode of dynamically compounding arsenic and gold. This preparation we are told, as though it were something surprising, "possesses the valuable therapeutical properties of both substances. Gold, it is well known, is used in different preparations (gold iodide, auric acid, etc.), with excellent results, in the treatment of diseases of the skin, syphilis, amenorrhœa, etc. Arsenic is successfully employed in hysteria, scrofula, rheumatism, irritable forms of tuberculosis, and in other affections. Its action is strengthening and antiphlogistic. It moderates fever, and acts as a sedative. Dr. Addison's dynamic arseniate of gold, which is destined to render great services in the treatment of cutaneous affections, secondary and tertiary syphilis, different forms of cachexia, nervous diseases, etc., is employed in progressive doses, from one to thirty milligrammes. It is highly digestible." There is probably not a sound clinical observation showing that gold possesses any special therapeutic efficacy in any disease.

AMERICAN RHINOLOGICAL ASSOCIATION.

Sixth Annual Meeting, held at Cincinnati, O., September 12, 13, *and* 14, 1888.

WEDNESDAY SEPTEMBER 12TH—FIRST DAY—MORNING SESSION.

THE Association met at the Gibson House, and was called to order by the President, Dr. C. H. von Klein, of Dayton, O., at 10.15 A.M.

DR. A. B. THRASHER, of Cincinnati, Chairman of the Committee of Arrangements, delivered a neat, timely, and extemporaneous address of welcome, in which he expressed very great pleasure in giving the members of the Association a hearty welcome on behalf of not only the Committee of Arrangements, but of the entire medical profession of the central city.

PRESIDENT VON KLEIN delivered his address, which was devoted principally to the progress of rhinology and the distinction it had attained as a specialty during the past few years. An academic training was indispensably requisite to a medical education. Broad culture produced exalted ideas and inflamed the student to become a hero in the conquest of nature.

DR. J. E. SCHADLE, of St. Paul, read a paper on

CHOREA OF THE SOFT PALATE,

caused by the hypertrophy and hyperæsthesia of the mucous membrane covering both inferior turbinated bodies.

That the origin of not a few reflex nervous disorders can with a certain degree of exactness be traced to the presence of morbid conditions of the naso-pharyngeal cavities, is a question no longer doubted. Some forms of headache and of spasmodic asthma are in many instances the outgrowth of a nasal polypus, a turbinated thickening, or a septal deformity. These reflex neurotic disturbances disappear soon after appropriate measures of treatment have been directed toward the removal of their cause.

CASE I.—The patient first came under the observation Dr. Baker, of St. Paul. The only thing complained of was a constant contraction and relaxation of the levatores palati. Each contraction carried the uvula upward and backward till it came in contact momentarily with the upper and back part of the pharynx. The relaxation and separation of the moist mucous membrane surfaces caused the sound. The noise was like that produced by a rapidly ticking watch, and of the same frequency. The young lady was in excellent health, all the bodily functions being well performed. Dr. Baker's treatment was: ℞., Zinci bromidi, ʒ j.; syr. simplicis, f ℥ j. M. Sig.—Ten drops in water four times a day, increase one drop each day until the dose nauseates.

This not producing the desired result, he gave tr. physostigmatis in doses ranging from fifteen to thirty drops. After continuing this for a time, he abandoned it and prescribed fluid extract of cimicif. rac., in doses of f. ʒ ss. to f. ʒ j. every four hours.

July 7, 1887, galvanism was begun. Eight cells of the McIntosh battery were used, the positive pole with a sponge electrode being placed at the back of the neck; the negative pole with a metal-tipped electrode was applied to the palate, just above the uvula. The sittings were of five to ten minutes' duration, and the number of cells increased to eleven. Examination showed enlarged tonsils, with evidence of throat and nose disease.

The patient was examined by Dr. Schadle on the 16th of April, 1888. She suffered from constipation and flatulency quite frequently. The heart's action is more or less excited; the heart beats tumultuously when ascending a flight of stairs, a hill, or some other elevation. She complains in a marked degree of obstructed nose breathing. Voice is impaired, especially when attempting to produce head-tones, as in singing. The principal affection complained of, and for which she was referred to him, was the spasmodic movement of the velum palati.

A faucial examination reveals distinct rhythmical choreiform movements of the velum palati, accompanied by a peculiar clicking sound, distinctly audible for a distance of twelve or fifteen feet from the patient. Anterior rhinoscopic examination reveals chronic hypertrophy of the inferior turbinated bones, and, in a more marked degree, of the middle one, the presence of whose redundant tissue exerts pressure on the septum and produces obstruction of the middle meatus.

The treatment was mainly surgical. The first impression entertained was that possibly the enlarged pharyngeal tonsil might have been a source of the trouble, and that a thorough removal of it would do away with a foreign element constantly coming in contact with the opposing surface of the velum palati, and exciting thus into action clonic spasms. Snaring was impracticable. By the use of Cohen's post-nasal cutting forceps and the electro-cautery he reduced the growth in its entirety, a procedure which was followed by cessation of the choreiform movements, which remained absent for a period of two weeks, when they suddenly returned during a spell of nervous excitement from which the young lady was suffering. Attention was next directed to treatment of the nasal passages. The pathological changes found in them offered a theory for a reflex cause of the affection. Cocainizing the intranasal mucous membrane generally produced relief for half an hour. With a view to reducing the hyperæsthesia and hypertrophy of the turbinated bodies, he employed the electro-cautery, thoroughly burning the affected parts. The trouble at once ceased. Nose-breathing displaced mouth-breathing, and the dry sensation and sticky secretions of the pharynx gradually disappeared. The functional disturbances of the heart and shortness of breath passed off, while the general nervous system gained tone. Patient can now speak and sing with a clearer voice; the head-tones are improving daily. Beyond a doubt a cure has been produced, the permanency of which has already been severely tested.

DR. JOHN NORTH, of Keokuk, in opening the discussion, said he was very much pleased with Dr. Schadle's paper, and more particularly with the results obtained by his treatment. The case had been in the hands of excellent physicians previously, who had overlooked the nasal trouble, and it was especially interesting to rhinologists to learn that the cause of the trouble was found to be in the nose, and that by applying treatment to the nasal passages relief was obtained.

DR. J. G. CARPENTER, of Standford, Ky., was convinced that the subject of rhinology was ignored more or less by general practitioners. When a patient presents himself to him with a bronchitis, laryngitis, or asthma, he invariably examines the naso-pharyngeal chambers, and usually finds the starting-point there in many affections, and by treating the nasal chambers other troubles subside.

DR. A. G. HOBBS, of Atlanta, regarded the paper as an exceedingly interesting one. He had never encountered such a case in his practice, nor seen a description of one that at all approximated it.

A paper on "A Short Criticism on the Prevalent Methods of Treating Diseases of the Upper Air-passages," by Dr. R. W. Wilcox, of New York City, was read by title.

AFTERNOON SESSION.

DR. T. F. RUMBOLD, of St. Louis, Mo., read a paper on

THE ETIOLOGY AND PATHOLOGY OF NASAL DISEASES.

The etiology of a disease is of the greatest import. A perfect understanding of its causes and its mechanism is the goal of the pathologist. To be able to define, with some degree of clearness, the various changes that take place, from the first cold in the infant, through the various stages of chronic rhinitis, not merely giving the symptoms or a cursory description of its morbid anatomy, but by studying its causes and the course that the injurious impressions take to reach the ultimate region where we see the manifestations of abnormal action, is to do much toward directing its hygienic and therapeutic management.

Speaking of hereditary predispositions, he would ask the question: "Does heredity have anything to do in causing rhinitis?" The negation to this question is given in the description of a primary cell and the mechanism of rhinal inflammation. He had long been convinced that heredity, as a cause of disease, is an erroneous theory. It is a daily occurrence for a patient to express fear concerning the condition of his lungs, because of having a relative who died of lung trouble, fearing that the disease may have been inherited. About the first thing many physicians ask such an individual is: "Have you had a relative die of consumption?" On receiving an affirmative answer, a significant nod of the physician's head is all that is wanted to make the poor frightened fellow think of death. All that is required to shorten the life of a person thus afflicted is to thoroughly frighten him and then maintain his mind in this condition; his appetite and sleep will soon be seriously disturbed, which will surely diminish his weight and strength.

The histological facts concerning cell-life will prove a successful contravention to the theory of heredity. We know life only in combination with organized substance. A living cell is composed of finely granular matter, and has a pale, slimy appearance that is called protoplasm. The cell usually contains a structure resembling a vesicle, called a nucleus; the form of this may be round, oval, or irregular. In the interior of the nucleus are small bodies called nucleus corpuscles; it also contains nucleus substance and nucleus juice. In its natural stage it develops on its surface a distinct membrane. The cell, according to Virchow, has a threefold vital activity. He distinguishes one of these as *nutritive*, that is, displaying activity toward its own preservation; another as *formative*, or showing an activity in its own propagation; and, lastly, as *functional*, that is, its behavior in its outward relation to other parts. During the life of a normal cell, under normal circumstances, it displays no other kind of activity. Its component parts render it incapable of any other kind of activity, consequently there are no changes, except the physiological changes; nor can any combination of these three activities result in disease. If the cell maintains its normal surroundings, it will live out its physiological life and disappear according to the laws of its own existence. Nothing can change these activities, except what comes from without. The nature of the surroundings influences every cell, whether singly or joined with others. These surroundings may be favorable or unfavorable to one or all of these activities. But the influence of heredity must come from within, if it comes at all. But the law of the cell's life contradicts this, and there is no avoiding this law; no cell can be influenced, except from without; all inside influences are normal influences. To some extent the cell is uninfluenced by its surroundings by virtue of its own inherent vital force; but this range of independence is very limited. If the external conditions of the cell deviate from the normal, then disturbances of cell-activity show themselves at once. The deviations from the normal action may be but slight, or may end in death.

"The Influence of Morbid States or Conditions of the Body on Local Diseases" was the title of a paper by Dr. H. Christopher, of St. Joseph, Mo.

There are several disposing causes and conditions of a constitutional character which are intimately connected with local diseases, and which are to be considered in their treatment. The principal of these are:

1. Diatheses or constitutional tendencies, with local manifestations or points of eruption (malignant).
2. Constitutional tendencies, attended or not by local morbid action of a non-malignant character, as the strumous habit or rheumatic diathesis.
3. Constitutional disturbance affecting the functions of certain organs, which in turn give rise to morbid action in others.
4. Abnormal action or deranged function of certain organs, giving rise to morbid action in other organs uniformly or contingently, as in metastases or functional action of the heart from functional derangement of the digestive organs.
5. Purely local morbid action, as in local inflammations and non malignant tumors, and some diseases of the skin.

All these states of the body, excepting the first and last, are not infrequently found to exist with local inflammation of the nasal, pharyngeal, and aural cavities, and to influence and determine in no small degree their management.

Dr. John North read a paper on

THE RELATION OF NASAL DISEASES TO OTHER DISEASES, INCLUDING THE BRAIN AND NERVOUS SYSTEM.

He began by saying that there is no organ in the entire body that has been so neglected as that of the nose. Obscure and obstinate diseases have not yielded to treatment because it has been directed to the effect of nasal reflex troubles, and not to the nose, the cause of the trouble.

In 1886 he attempted to show that neurasthenia was frequently the result of chronic naso-pharyngeal catarrh, and in support of the theory he reported several cases of neurasthenia that yielded to treatment applied to the naso-pharynx.

In a paper read before the Association at Washington, 1887, he claimed that catarrh, or rhinitis, as it is usually called, was not an inflammation, but a condition produced by a paresis of the ganglia of the sympathetic nervous system supplying the parts. Without doubt asthma is caused by vaso-motor paresis causing a dilatation of the vessels. It is a well-known fact that disease in one part or organ will cause, through the agency of the sympathetic nervous system, derangement in another organ, even in remote portions of the body.

Drs. McKenzie, of Baltimore; Daly, of Pittsburg; Rae, of Rochester; Seiler, of Philadelpnia; Schadle, of St. Paul; Bosworth, of New York, and others in this country, besides a number of European rhino-laryngologists, have reported cases of asthma and hay fever dependent upon the diseased condition of the nasal cavities.

Dr. Thomas F. Rumbold read a paper on

THE EFFECT OF NASAL INFLAMMATION ON THE MIND.

The normal condition of the mind depends upon a normal supply of blood to the normal brain. An abnormal supply of blood, even to the healthy brain, will produce an abnormal condition of the mental faculties. Dr. Rumbold had noticed for many years that in every patient who had suffered an attack of cold in the nasal passages, olfaction was almost completely obtunded, with the mental powers more or less lowered in their capacity. It follows that if an acute inflammation in the nasal passages is accompanied by mental manifestations, that mental incapacity of a more severe character must accompany a chronic rhinitis. Clinical observation has shown that this is the case.

Dr. J. G. Carpenter, of Standford, Ky., read a paper on

THE ETIOLOGY AND PATHOLOGY OF ACUTE CATARRH.

Among the most prominent causes he mentioned occupations attended with much dust, smoke, excessive moisture, or dry, dusty atmosphere, going about insufficiently clad, the evil results of the ordinary slippers, etc. Seal-skin sacques, while they were very beneficial in cold weather, are capable of doing great evil when worn imprudently. Pathologically, acute catarrh is divided into three stages: 1. The dry stage, attended with hyperæmia, redness, heat, tumefaction, and pain of mucous membrane, the latter presenting a red, dry, or dark-red appearance. 2. Moist stage, supplementing the first, there is transudation of serum, diapedesis of the white corpuscles into the connective tissue, cell-proliferation, and organization of lymph. The mucous follicles and glands are enlarged and distended, and excessively active. 3. The purulent stage, the presence of pathological conditions with denudation of the epithelium and presence of a raw surface, and the excessive mucous secretion is changed to a muco-purulent or purulent one.

THURSDAY, SEPTEMBER 13TH—SECOND DAY, MORNING SESSION.

The Association was called to order by the President at 10 o'clock.

DR. R. S. KNODE, of Fort Wayne, Ind., read a paper entitled

INTRANASAL OBSTRUCTIONS.

He said of all the mucous surfaces that of the nose is perhaps the most sensitive to irritating gases, vapors, and dusts of different kinds, as well as sudden changes of atmosphere, and it makes but little difference what the condition of the atmosphere may be to the one exposed, whether loaded with dust, an odor offensive or fragrant, hot or cold, pure or irritating, the nose must receive it, filter and purify it, warm and moisten it for the lungs.

Intranasal obstructions may be temporary or permanent, partial or complete, owing to the extent of inflammation or injury that produces them. Temporary occlusion is usually the result of some one of the forms of acute rhinitis. From whatever cause, with proper hygienic measures, the membrane usually regains its natural condition in the course of a few weeks. This, however, is not always the case. Occasionally from a very severe attack, or from the effects of repeated colds, we may find the membrane overwhelmed with plastic material; a loss of nerve-power, a pale, flabby, wrinkled condition somewhat resembling polypus, but more sensitive to the touch, and completely filling up both cavities of the nose. In this condition he had found nothing to act so promptly as to first use a one per cent. solution of cocaine, applied with a probe and cotton, and followed with mildly stimulating solutions of chromic acid, gr. 10 to ℥ j., after which the vaseline treatment should be used. If stenosis should return, a second application of the acid may be made, or slippery-elm plugs slightly moistened with a weak preparation of cocaine and listerine.

Dr. Knode's paper was followed by the report of a case of

ENLARGED TONSILS WITH PECULIAR SYMPTOMS RELIEVED BY THE GALVANO-CAUTERY SNARE,

by E. G. KEGLEY, of Cedar Rapids, Ia.

CASE.—Mr. B——, aged forty-three, consulted him in January, 1888, with regard to a trouble which he termed "druleing." The patient presented the appearance of one suffering from hay fever. His eyes were red and swollen, with excessive lachrymation, constant flowing and wiping of the nose, with the addition of a constant spitting of a clear fluid. On examination he found the nasal mucous membrane highly congested, and completely closing the nasal passages. The patient's mouth was constantly filled with saliva, and tonsils enormously enlarged, filling completely the back part of the mouth and throat. These spells were very common and lasted from one to two weeks. During the attacks he had no appetite; could not sleep because of a choking sensation and hot water in his mouth. He had consulted the best doctors in the country, but had derived no benefit from their treatment. Dr. Kegley watched the case through this attack, and told him to report himself when another made its appearance. In the meantime he saw him between the attacks and found the membranes of the nose normal, but the tonsils were very much hypertrophied. He therefore urged the patient to have the tonsils removed. He saw him again in about a month in another attack, but could do nothing for him. He then lost sight of him for a year, when patient returned and said he was ready to submit to anything. He was now suffering from a very severe attack. Dr. Kegley proceeded to cocainize the tonsils and removed them both at one sitting by means of the galvano-cautery snare, the patient declaring he experienced no pain to speak of. He saw the patient the next day, and he said the trouble had ceased almost simultaneously with the removal of the tonsils. He has had no further trouble.

AFTERNOON SESSION.

DR. A. G. HOBBS, of Atlanta, Ga., presented a paper on

THE SURGERY OF GUMMATOUS GROWTHS OF THE NASAL CAVITIES,

and reported four cases.

Case I. was brought to him to be treated for stenosis of the nasal passages. She was a young married woman, who had had syphilis for three years. The usual treatment was adopted, no syphilitic symptoms having shown themselves during the past year. An anterior examination revealed a purplish-red growth which filled the right nasal space completely, and pressed itself into the left cavity till the stenosis was almost, if not quite, complete. From the history of the case and the appearance of the growth its gummatous nature was suspected, hence it scarcely occurred to Dr. Hobbs at this time to attempt its removal by any surgical means for fear of producing a destructive ulceration. She was placed upon increased doses of iodine of potassium together with biniodide of mercury. This treatment was continued for four weeks without any marked benefit. Dr. Hobbs cocainized the nasal passages with a five per cent. spray as thoroughly as possible, then attempted to introduce a Blake's snare, but found it impossible to engage the tumor in the loop. A cutting spoon was introduced and several large masses of the growth cut away. The hemorrhage was very little. When the flow had ceased, she could breathe through the left nostril. Four more sittings, at intervals of three days, were necessary to remove the entire growth. The attachment was by a broad pedicle at the posterior part of the septum, which he seared with the galvano-cautery when the last particles of the growth that could be seen had been extracted. The patient was furnished with a spray apparatus; no ulceration followed. Six months afterward there had been no recurrence, and patient had regained her health completely. She was kept on antispecific treatment during the six months.

Case II. was one of hypertrophic nasal catarrh Jarvis' snare was used; operation same as in preceding case.

FRIDAY, SEPTEMBER 14TH—THIRD DAY, MORNING SESSION.

DR. A. B. THRASHER read a paper on

THE SURGICAL TREATMENT OF NASAL CATARRH.

He said there are forms of nasal catarrh that can only be benefited, and not cured, by medicinal treatment. When we have mechanical obstructions to the lumen of the nares of a hypertrophic, hyperplastic, or neoplastic character, surgery offers the most direct path to the removal of the difficulty. These are the cases of nasal catarrh which have passed from one doctor to another, have used all the advertised remedies, so called, and have at last concluded that nasal catarrh is incurable, and it is of no use to treat it.

Since the cavity of the nose is open to inspection, directly and indirectly, it is rather curious that surgeons have been so slow to invade this region. They will cut with impunity into the abdominal cavity and remove or examine the contained viscera; or open the thorax and tie an artery or evacuate an abscess; or even cut into the brain-box to elevate a depressed bone or remove a tumor, and yet stand with folded hands and do nothing to check the symptoms caused by a neoplasm springing from the middle turbinate, or a hypertrophy at the pharyngeal vault. This is not so curious when physicians stop to think that the removal of a growth from the posterior middle turbinated body requires more manual dexterity and tactile skill than to open the abdomen, thorax, or even the cranium itself.

When a simple enlargement of the turbinated body is encountered, which it is desirable to reduce or remove, what is the best method of procedure? There are cases in which the application of a chemical caustic answers the purpose admirably well. The Woakes' gouge or plough will do the work, and by the aid of cocaine will do it rapidly and painlessly.

In uncomplicated cases of chronic hypertrophic rhinitis the conditions to be met are: (*a*) Obstructions to lumen of nares, and (*b*) abnormal condition of mucous glands. The causal indications would at once suggest a removal of the redundant tissue. The means employed should look to the accomplishment of this end with the least resulting scar surface, so that the natural condition of the epithelial covering might be as nearly as possible simulated. To reach this result he had met with the most marked success in the use of the galvano-cautery knife. He first anæsthetizes the part with cocaine, then introduces the knife to the posterior part of the hypertrophy, turns the sharp edge toward the tissue to be cut, heats the knife white hot, and cuts deeply, drawing the knife forward. The result is a deep linear scar in an antero-posterior direction through the hypertrophic tissue. He cuts deeply enough to destroy a portion of the submucous erectile tissue. When this cut heals the result is a narrow linear scar, and by the natural contraction of the cicatricial tissue the surface becomes in time practically obliterated.

OFFICERS FOR 1889.—*President*—Dr. John North, Keokuk, Ia.; *First Vice-President*—Dr. A. G. Hobbs, Atlanta, Ga.; *Second Vice-President*—Dr. A. B. Thrasher, Cincinnati, O.; *Secretary* and *Treasurer*—Dr. R. S. Knode, Fort Wayne, Ind.; *Librarian*—Dr. N. R. Gordon, Springfield, Ill.; *Members of Council*—Hiram Christopher, M.D., St. Joseph, Mo.; J. G. Carpenter, M.D., Standford, Ky.; Thomas F. Rumbold, M.D., St. Louis, Mo., and J. G. Sinclair, M.D., Cincinnati, O.

Next place of meeting, Chicago, Ill.

PULMONARY ARTERY WITH TWO VALVES.—At a meeting of the Royal Academy of Medicine in Ireland, Dr. A. W. Foot exhibited a specimen of a pulmonary artery with two valves of equal size, and presenting no abnormal appearance other than unusual size. The heart exhibited was taken from a man, aged sixty-nine, who had long been subject to aortic regurgitation. Alluding to the rarity of this defect in the pulmonary valves, Dr. Foot observed that the only other example he knew of in Dublin had been found by Dr. Graves in a man, aged sixty-six, who died of pneumonia and pericarditis. In five museums in London Dr. Peacock had been able to obtain only nine specimens of two-valved pulmonary artery. Numerical irregularities in the semilunar valves were much more often observed in the aorta than in the pulmonary artery. Dr. Bewley said he once saw a similar form of aortic valve. It was taken from a man who had suffered from a nervous affection of the heart. There were two large flaps, each a good deal larger than the aortic flap, and between these a very small third flap, measuring between a third and a fifth of an inch across. They were all perfectly healthy. During life the aortic sounds of the heart had been perfectly healthy. Dr. Foot, in reply, said the formation of two ordinary-sized flaps, with a small one between them, was a well-known one. In the museum there was a pulmonary artery with four valves.—*British Medical Journal*, June 16, 1888.

BRITISH MEDICAL ASSOCIATION.

(Special Report for THE MEDICAL RECORD.)

Fifty-sixth Annual Meeting, held at Glasgow, Scotland, August 7, 8, 9, *and* 10, 1888.

(Continued from page 304.)

SECTION OF DISEASES OF CHILDREN.

WEDNESDAY, AUGUST 8TH—SECOND DAY.

DR. CHEADLE, the President, introduced a

DISCUSSION UPON RICKETS,

its etiology and prevention, its connection with syphilis and scurvy. Rickets, he said, was a general disease, and every one agreed that it was caused by bad nutrition. Congenital syphilis also had been assigned as a cause, and lack of fresh air, etc. It was not right to say that rickets was a phase of hereditary syphilis. Nor was it at all tenable to say that the disease was hereditary, for rickety children might be the offspring of perfectly healthy parents. Bad food, bad ventilation, and want of light certainly favored the disease, but these were not the only factors, for some children brought up in great squalor and ill fed did not become rickety, and some children of the comfortable classes were so. The quality of the food was apparently of more consequence than the quantity, and it was known that hand-fed children were very prone to the disease. Women who became pregnant while suckling were apt to cause rickets in the infant. Defective food, then, was the main cause of rickets, and it was especially seen in children fed on farinaceous food. It was not the presence of the starch, but the absence of other ingredients that did the mischief. Diet which was wanting in animal fat was peculiarly apt to produce rickets, and so was food devoid of nitrogenous elements. The abundance of fat in milk pointed to that fluid as an admirable preventive and cure of rickets. When children got plenty of this they soon were cured of their rickets. The young lions in the Zoological Gardens, London, used to be so rickety that they could not be reared. Now they were fed on flesh and milk, and got cod-liver oil, and for the first time in the history of British-reared lions they were in good health at the age of fifteen months. In addition there was probably a paucity of phosphate of lime in the diet of rickety children. As to the question put, whether enlargement of the liver and spleen was always present in rickets, he thought that this was only when rickets was combined with hereditary syphilis. The treatment of rickets should be rather dietetic than medicinal. Cream, or milk containing cream, was far more useful than cod-liver oil, although that was of benefit. Raw meat was of more service than iron.

PROFESSOR RANKE, of Munich, agreed with these views. There was no clear connection between scurvy and rickets, and as to syphilis, the great majority of the rickety children in Munich were not syphilitic.

DR. JACOBI, of New York, said that there was a certain degree of hereditary possibility from all kinds of constitutional disease. Digestive diseases of children were all apt to lead to rickets. Cow's milk, he thought, was often contra-indicated, for it differed greatly from that of women. He advocated the use of phosphorus in rickets, but it must not be given in salts of phosphorus. As to cod-liver oil, that could not be taken in America in summer. Twenty years ago rickets was rare in the United States; but since the great immigration of Irish, Germans, and Poles, it had begun to be common.

DR. CARMICHAEL, of Edinburgh, said that rickets was far from being very uncommon among the children of the well-to-do. In adipose rickety children the fat appearance marked the rickets to the popular eye. Now if children of the rich became rickety, a faulty diet must be the cause of it. Deficiency of fat in the diet was one great cause of the disease. In Edinburgh many of the children of the poor were brought up on the bottle, with Swiss milk or diluted cow's milk, and in both of these there was too little fat. He much approved of cod-liver oil by the mouth and in inunction.

Dr. Ashby, of Manchester, thought hereditary tendencies had a great place in the causation of rickets.

Dr. E. Owen, of London, thought that the worst cases of rickets were in children brought up on tinned foods. Rubbing in cod-liver oil was useful. Such children should be kept very clean. A great many cases of rachitic deformities in which the saw and chisel were used might be treated by far gentler means.

Dr. James Finlayson, of Glasgow, said it occurred to him that some points in

THE HISTORY OF RICKETS IN GLASGOW

were worth notice. The disease was formerly very uncommon in Glasgow, but now the reverse was the case. Glasgow was to be pre-eminent for rickets. Why was this? About thirty years ago there was a great accession of women operatives in the factories, and concomitantly with this an immense growth of the population. Children consequently were now ill fed, and it had been very difficult for children to get much milk of late years. Buttermilk was especially difficult to get, since it no longer was milk churned, but drunk in the form of new milk. Hence oatmeal and buttermilk, which were formerly much consumed by the poor, were no longer accessible to these children as before. Then, again, there was terrible overcrowding in Glasgow, and the children of the poor never saw the green fields as they used to do. This was the cause of the increase of rickets far more than the absurd cause alleged by some, *i.e.*, the introduction of Loch Katrine water, which was said to have too little lime in it.

SECTION OF PUBLIC MEDICINE.

Wednesday, August 8th—Second Day.

A DISCUSSION ON THE DISPOSAL OF SEWAGE AND ON SEWAGE FARMS

was opened by a paper from **Dr. Dyke**, of Merthyr-Tydvil, on the sewage disposal at Merthyr, South Wales. That gentleman narrated that in 1860 experiments were first made at Merthyr on the purification of the sewage, and Mr. Bailey Denton wasc alled in to consult on the best method. He advised that the sewage should be treated by downward intermittent filtration, and accordingly some land was prepared for this purpose. It was found that the workmen employed in no way suffered in health during the preparation of the sewage farm. Hence for seventeen years twenty acres were used for the filtration of the sewage of Merthyr—three hundred thousand gallons daily. This scheme was found to work so well that wide irrigation was then had recourse to, and forty acres of land were employed for a time. Lastly, two hundred and sixty-two acres were utilized by the Local Board, most of this being ordinary grass lands. The sewage was strained and then passed over the land, when potatoes, marigolds, and grass—twenty-six tons per acre—were the crops raised. The surface of the land became dry in a few hours. A rate of 4*d.* in the pound at first was needed, but latterly a profit of £983 per annum had been obtained. The population served by the farm was about one hundred thousand inhabitants. About one gallon of sewage per square yard was daily purified, and in the filtration beds the depth of soil was six feet, and three feet in the other or broad filtration. The question had been put whether such a plan was generally feasible for cities. The author of the paper replied in the affirmative.

Dr. Murray, of Forfar, mentioned that Forfar had always had considerable difficulty in its sewage disposal. To the west of the town lay the loch, a mile long, and for one thousand years the sewage of that town had drained into that piece of water, which was very deep. The town sloped downward to the loch. The soil was a light loam, and there was a natural drainage system. Latterly a nobleman, who came to reside in the neighborhood, objected to the pollution of the lake, and Mr. Bateman's advice was sought to know what to do with the sewage. He advised the town to filter the sewage through forty acres of soil by downward filtration. This was carried out: the sewage was lifted fifty feet and a good filter area secured. Grass, cabbage, carrots, and potatoes were raised, and it was found that the water did not freeze in winter, as it was warmer than the atmosphere. The general health of the persons living at the farm was excellent, and there was no effluvia noticed.

Dr. Carpenter, of Croydon, said that at the Leamington Congress in 1865 he had called attention to

THE SIMPLEST METHOD OF TREATING THE SEWAGE OF GREAT CITIES.

The best of all processes was that entitled broad irrigation. At the International Congress in London in 1881 he submitted some general propositions, which were, briefly, that the application of the sewage of a town with water-closets to the land is not injurious to the inhabitants if only the sewage were fresh, applied intermittently, and the effluent rapidly removed from the fields. The judicious application of sewage to suitable soils cleans the effluent and fits it for discharge into any ordinary stream, provided not more than two hundred and fifty persons be calculated to the acre. Vegetables grown on such sewage farms are quite wholesome, and no parasites are found in the animals fed with the grass of these farms. The cause of this was because the pathological germs were destroyed by the germs in the soil. Sewage farms might be carried on with perfect safety close to farms. It was a wise policy for a nation to encourage such farms in order to raise supplies of meat and milk. To be financially successful the rainfall should be separated from the sewage, and the crops employed to rear stock on the farm. It was well to have the sewage farm as near as possible to the city to be served; but if the water was running it might flow for twelve hours, even in summer, without losing its freshness. The utilization of the sewage on land near Croydon had been now carried out on the same land for nearly thirty years, commencing with thirty-six acres in 1851. It was found that this was too little, and three hundred acres were secured. The subsoil of the irrigated district is almost unaffected three feet below the surface, for the crops take away the manured part, and thus the soil can purify as well as ever, if only the cropping were incessant, the land being allowed to rest every now and then. The sewage should pass over the land rather than through it, and a sewage farm bears deep ploughing better than any other, and grows larger crops. The land at Beddington cost about £300 per acre, or £250,000 altogether, and yet the rate had been only 2*d.* in the pound. The capital was being paid off, and in forty years from the last loan Croydon would stand rent free on the farm; how unlike London; with its useless sewage-tanks at Barking and Crossness. The only mistake was when the Norwood farm was overtaxed with an excess of sewage. Dr. Angus Smith's report to the Local Government Board in 1879 was to the effect that this way of treating sewage was in every respect the best. As to the question of parasites, this had been thoroughly disproved, and the late Dr. Cobbold had at once withdrawn his opposition when he looked into the evidence. Croydon now utilized seven hundred acres for its sewage farms, and the only mistake was that the corporation did not keep enough stock on their farms, and hence they depreciated the value of their grass and other produce.

Dr. C. R. Drysdale read a paper on

THE BERLIN AND PARIS SEWAGE FARMS.

He said that the only rational and satisfactory way of treating the sewage of cities was by agricultural utilization of the sewage in suitable areas of fit soils, as was done in Berlin and Paris. The chief requisites of sewage irrigation are that the sewage shall quickly reach the fields in a fresh state, and that the soil shall be such that six hours after irrigation no one would know that it had taken place. Chalky and marshy soils are excellent for the purpose.

Dr. Whitelaw, of Kirkintilloch, read a paper on the sewage farm near that town, and several others presented communications on the same subject.

Dr. Christie read a paper on

CHOLERA AND ITS FOSTERING CONDITIONS IN THE ENDEMIC AREA,

written by Dr. W. J. Simpson, Medical Officer of Health, Calcutta. Dr. Simpson gave a full description of Calcutta, Howrah, and the suburbs, dwelling especially on the water-supply, the tanks, the drainage, the construction of the streets and houses, native and European; and the sanitary system generally. Calcutta, to the south of the native towns, he stated, is well built, the streets are wide and straight, the houses are large and have gardens attached; there is a liberal supply of excellent water, the drainage and cleansing are good, and that portion of the city compares favorably with the better parts of London. With a few exceptions, northern and native Calcutta is densely crowded, the streets are narrow and irregular, the drainage is bad, only the better and middle class have a fair supply of water; the poorer class have a very scanty water-supply, and depend upon the water in the tanks. The native town is studded with wells and tanks. Neither Howrah, with its 100,000 inhabitants, nor the suburbs of Calcutta, with their 250,000, have any public water-supply, with the exception of the wells and tanks. The insanitary condition of Howrah, without a public water-supply, and without building regulations, is surpassed by the suburbs, which have no public water-supply, no drainage, no building regulations, nor any effective conservancy arrangements. As a general rule, Europeans resident in Howrah get their water from Calcutta by carriers, and they avoid the well and tank water. The personal habits of the natives are cleanly. As a religious duty they bathe at least once a day, the women more frequently, and this is done, when convenient, in the river Hooghly, but generally in the tanks near their houses or huts. The tanks are thus defiled by the excretions of the body, by the washing of dirty clothes, frequently of clothes soiled by excretions of the sick, by human ordure due to the practice of children and others defecating on the banks of the tanks, and by the drainage and soakage from the surrounding huts and houses. Thus the water in the tanks, except during the rainy season, varies in quality from moderately polluted up to concentrated sewage, and this is the only water-supply practically available for large numbers of the native population.

Dr. Littlejohn introduced a discussion on

THE DISEASES COMMON TO MAN AND THE LOWER ANIMALS.

Dr. Littlejohn was sorry to say that he had just had a telegram from Professor Fleming, who was to have read the opening paper, regretting that sickness prevented his being present. He called therefore on Professor Waller, of Edinburgh, to inaugurate the discussion, and that gentleman said that anthrax was in front of all the diseases which came under discussion, but on this there was a certain amount of legislation already. Tuberculosis was a more debatable ground, and his opinion was that it should be included among the contagious diseases. It was one of the greatest pests both of man and beast. He himself had no doubt about the communicability of the disease from animals to man, and back again from man to animals, in every possible shape and form. It was undoubtedly communicable both by injection and inhalation. Of thirteen animals slaughtered in Edinburgh slaughter-houses, two or three months ago, on account of pleuro-pneumonia, six were affected with tuberculosis, so that his hearers might have an idea of the spread of the disease among dairy animals. Again, eighteen animals were slaughtered with the same result. Tuberculosis existed among poultry and ran a rapid course, and he believed it might be transmitted by eggs. Soon after he came to Edinburgh, in 1871, he lost a child, he believed, from drinking the milk of an animal which was tuberculous, and a member of the Privy Council had a similar record. It was not clearly proved that the disease arose from eating the flesh of such animals, but it was probable. Many dissection-wounds probably were bad from the injection of tubercle matter. He urged that a royal commission should be appointed to consider this question.

Dr. Farquharson, M.P., thought it was established that pearl disease and human tuberculosis were identical. There should be but little difficulty of detecting disease of the udder in cows. The question was a most alarming one. He recently, in the House of Commons, asked Mr. Ritchie whether he would not direct the Local Government Board to investigate this question. The reply was that they had no staff adequate to carry it on. Government wanted squeezing, and this should be done.

Professor Crookshank, of London, said that tuberculosis and actinomycosis were both possibly communicated from the cow. The idea had lately been broached by the medical department of the Local Government Board that scarlatina originated from the cow. He believed that if the facts which had come to light from the investigations of other inquirers had been known to Mr. Powers and Dr. Klein, these hypotheses of scarlet fever being of bovine origin would not have been started in the Hendon inquiry. A full report on this subject had been presented to both houses of Parliament, and would speedily come into the hands of the public.

Dr. Burst, of Edinburgh, spoke of the divergency of opinion as to the identity or non-identity of small-pox and cow-pox. If this was a difficult question, that of scarlet fever was more so.

Dr. Edington, of Edinburgh, thought that the evidence of the communication of scarlet fever from cattle was as yet unproved. Dr. Klein had, indeed, put forth a microbe as being the cause of scarlet fever, but he had not shown that this microbe was the origin of scarlet fever in the human race. With regard to his own investigations, he had spent a very long time on the investigation of this question, and had had as yet no one who had been good enough in this country to try to verify his conclusions. A gentleman in the United States had asked him for a slide containing the microbe which he considered to be the cause of human scarlet fever. This had been sent by Dr. Edington, and inoculation of guinea-pigs with it had, in one instance, produced a febrile condition with falling of the hair.

Dr. Tomkins, of Leicester, said that it was supposed by some persons that cases of malignant pustule (anthrax) in cattle were extremely rare in this country, but in this he thought they were mistaken. In 1883, there had been a case of malignant pustule in Leicester, where the patient had been infected by coming in contact with the flesh of some diseased cattle. The discussion, he thought, should have been rather more narrowed, and it would have been better to confine it to one subject, such as the communication of tuberculosis from animals to man. It was most remarkable what a large number of animals brought to the slaughter-houses in large cities suffered from pearl disease. No less than fifty per cent., in some cases, were found to contain pearl disease. There was a great deal of evidence that tuberculosis was derived from such animals, and it was certainly highly probable that this was the case. The same remark applied to scarlet fever. He held that it would be most important that the Local Government Board should issue a committee to investigate the possible communicability of tuberculosis from the meat and milk of such diseased animals; and he was indeed sorry to hear from Dr. Farquharson that the Local Government Board had no funds at its disposal for such an inquiry. For although, doubtless, there were many willing and able private experimenters in all of our cities, yet the inquiry was an expensive one and required larger funds than they could command.

Mr. William Brown, of Carlisle, read a paper on an outbreak of

TYPHOID FEVER ASSOCIATED WITH AN INFECTIVE FEVER IN COWS,

which he had witnessed in the neighborhood of Carlisle.

Dr. Heine, of Bradford, was then called upon by the president of the section, and while he did so he begged to tender to that gentleman the sympathy of the members of that section in his unmerited deprivation of his office of medical officer of health for Bradford. Dr. Heine thanked the meeting for this sympathy. With respect to the communicability of scarlet fever, he referred first of all to Dr. Klein's investigation, and observed that it had in no way been proved that the microbe which that gentleman had alleged to be the cause of scarlet fever in cows, could produce that disease in the human race. Scarlet fever had been very prevalent in Bradford, and as the medical officer of that city had power to isolate the sick, and to cause the shutting up of sheds where there was a supply of milk which was producing scarlet fever he had been enabled to study this question well of late in Bradford. He had seen fifty-five cases of scarlet fever, arise in one week in Bradford, but at that time there was absolutely no affection in any of the cows in the district. There had in all been four hundred and fifty cases of the disease in that epidemic. He had found that a great number of these patients were obtaining their milk supplies from one source, but on visiting the cow-houses of that milkman, he had found no trace of disease among the cows. In one case where a milkman supplied a certain number of customers, he had found a child lying sick with scarlet fever in the room where the milk cans were. In another case there was scarlet fever in the house of a milkman, but he refused to send his child into the hospital appointed for that purpose. That man supplied twelve hundred persons, and only one case of scarlet fever occurred among his customers. In the case of another man who supplied ninety families with milk, although there was sickness in his family, none of the customers were attacked. A farmer in the county also supplied many customers in Bradford, and in his house was a child sick from scarlatina, but no one was infected by the milk sent from that farm. From these facts he could not help thinking that it was not clear that scarlet fever was derived from cows suffering from the disease, and it was also likely that the disease was very rarely spread by milk.

Dr. Carpenter, of Croydon, was of opinion that

TUBERCULOUS MEAT SHOULD BE CONDEMNED

as unwholesome. A man in Croydon had been much aggrieved when his meat was condemned as being unfit for food, and called in several witnesses from London to show how commonly pearl disease was found among cattle slaughtered in London. In some instances as many as eighty per cent. of all cattle killed had been found to be tuberculous. Fortunately, cooking appeared to be capable of taking away the danger arising from the presence of the germ of tuberculosis contained in such meat. With respect to the question of scarlet fever, he would like to make some remarks which might be suggestive to those who had mysterious outbreaks of scarlet fever to account for. Scarlet fever had broken out in a school near Blackheath, and the school was at once closed and the children sent home. The fever still continued among these same children, but did not spread to other children. On inquiry he found that this school communicated with the great sewer at Deptford, and was the only opening into that sewer for nearly a mile. The children in that school had for some time been exposed to the influence of the fetid air from that drain, and their health had been lowered thereby, and they had become fitted to receive the scarlatinal germs, while children in their neighborhood escaped.

Professor MacFagin, of Edinburgh, adverted to the communicability of tape-worm from animals to man. With respect to the communication of anthrax, that was a rare event in the case of human beings, although the disease was, of course, inoculable in both cases. He had no cognizance of the communication of anthrax to man by the eating of the flesh of cattle affected with the disease. There had been a small epidemic of anthrax near Edinburgh, and some cattle and twenty sheep had died from it, but no human being had been affected. With respect to scarlatina, a previous speaker had said that there was much evidence that scarlet fever might be communicated from cows to man, but he demurred to this statement. Within the last month, Dr. Armstrong, of Newcastle, had said he had failed to find any connection between the communication of scarlet fever by milk. With respect to Dr. Edington's discovery of the microbe of scarlet fever, he must remark that the cultures made by that gentleman had produced no effect when inoculated upon calves. As to tuberculosis, it was certainly a very common disease among cattle. He should, however, estimate that instead of fifty or eighty per cent., it would be more likely to speak of five per cent. of the cattle, since very few young cattle had pearl disease. There could be no doubt but that the identity of the two diseases had been established. Abdominal tuberculosis, however, was uncommon in the human species, which did not coincide with the hypothesis that tuberculosis was often obtained from the flesh of diseased animals.

Dr. McVail was of opinion that the evidence for scarlet fever originating in the cow was great. Professor Ane, in the case of the Hendon disease, had gone to the place far too late, and this invalidated his evidence.

Principal McCall, of Glasgow, asked whether tuberculosis could be communicated from food supplies. It was a very terrible thought to think that such a high percentage of cattle suffered from pearl disease; but fifty per cent. was far too high a figure to give for cattle slaughtered in Glasgow; twenty-five per cent. was far more near the truth; and tuberculosis was rarely seen, except in animals kept in byres where there was little ventilation, and where one cow infected its fellow. The cow-feeders blocked up the windows of their houses for cows, and thus spread the disease. Tuberculosis was much more infectious among cows than in the human race. In one case he had seen eleven cows with pearl disease out of thirty-seven slaughtered. Some of these were almost rotten, and yet they were giving milk supplies to the children of Glasgow. These, however, were exceptionally bad statistics. Tuberculosis sometimes occurred in animals of great value. In one case he had recently seen miliary tubercle in the bone, and abscess in an ox which had walked six miles to market, and was sold for £23. As to the communicability of scarlet fever from cows, he had seen one instance where cows had an eruption on the teats, and where scarlet fever was in the neighborhood. There had been falling of the hair from the whole body. A gentleman who examined the animal found a micrococcus in the blood. He had not made up his mind upon this point. Dr. Wharry said that it was out of the question to talk of a percentage of fifty, as applied to cattle slaughtered, as suffering from tuberculosis. Such cases only occurred in old cows. In Cumberland, hosts of cattle had no trace whatever of tuberculosis, and it was a mistake to talk about the disease being so very prevalent among cattle. He thought it unproved that any disease in the cow existed at all comparable with that of human scarlatina. He held that dairymen should be required to notify the presence of scarlet fever in their families.

Dr. C. R. Drysdale read a paper on

INDIGENCE AS A CAUSE OF HIGH DEATH-RATES,

in which he maintained that good ventilation and sewerage were not the only essentials to the health of a community. Insufficient food, shelter, and clothing were also potent factors in the causation of disease.

SECTION OF THERAPEUTICS.

Wednesday, August 8th—Second Day.

Dr. C. R. Drysdale read a paper on

THE SO-CALLED ABORTIVE TREATMENT OF SYPHILIS.

As early as 1701, a writer named Nicholas Andry alleged that all the virulent diseases were caused by the ravages of invisible beings, that syphilis was one of these diseases, and that the way in which mercury acted in the cure of syphilis was by killing these animalcules. This idea has been revived, and has received much countenance by the splendid discoveries of M. Pasteur and his coadjutors; so that it is possible that a real way of syphilization may be discovered, whereby some poison more inimical to the existence of the microbes causing syphilis may be introduced into the system, and thereby the disease may, like hydrophobia, be arrested in its progress. Has mercury or iodine the power to abort syphilis in its early days? That these substances are both capable of destroying germs outside the body is known from their action in destroying pediculi, the itch insect, and, in the case of mercury, in its power of preserving puerperal women from the invasion of disease-producing germs when used as local applications.

The value of iodoform in chancroid is well known. It is now alleged, as was before said by the late Mr. Solly, and this time by an unequalled observer, Mr. Jonathan Hutchinson, that mercury does possess this germicidal power, and that when small doses of mercury and chalk are given to a patient with hard sore, or the initial lesion of syphilis, it is rather easy to prevent all further symptoms of syphilis from appearing; in fact, it is not difficult to abort the disease. He contends that the reason why our predecessors failed to accomplish this is, because they gave so much mercury that the drug could not be given for any length of time, so that in the intervals some of the syphilitic germs again spread and multiplied. If this were verified it would indeed be a boon to the thousands who are destined to fall victims to that terrible disease. But before accepting this conclusion, it is well that it should be discussed, and all conflicting evidence explained away. Firstly, then, there were a number of comparative experiments on the treatment of syphilis, made by Professor Boeck, at the Christiania Hospital, which are narrated in his work "Recherches sur la Syphilis." That observer treated one thousand and eight cases of chancre by means of mercury, with the result that two hundred and forty-two of them, or twenty-five per cent., became affected with secondary eruptions. He then treated five hundred and twenty-two similar sores without mercury, and seventy-seven, or fourteen per cent., became affected. Both Professor Boeck and Professor Hutchinson are what is called unicists, *i.e.*, both of them believe that chancroids are mitigated chancres, or contain some of the properties of syphilis. This was not the view of the author of this paper, who considered that chancroid had as little to do with syphilis as scabies had to do with ringworm. In 1883, Sir Spencer Wells said, at a meeting of the Royal Medical and Chirurgical Society, that mercury was no preservative from secondary symptoms, and Dr. Diday, of Lyons, in 1882, read accurate notes of seventy-five cases of syphilis, forty-nine of which had been treated in the chancre period without, and twenty-five with, mercury (protoiodide pills). He also alleged that mercury in this form, given in the hard sore, did not prevent secondaries. The author, captivated by the germ theory of syphilis, had also, in the Rescue Society's Hospital of London, treated all his cases of syphilitic sore with doses of one-sixth of a grain of green iodide, and then with one-grain doses of mercury with chalk for lengthened periods; but had always been able to detect some slight symptom of syphilitic infection, such as roseola or mucous tubercles, on his patients. Of course, he admitted that his dose may not have been the right one.

Professor Isodor Neumann (*Wiener Med. Blätter*, 1886) has recently made a similar experiment, using inunction in the chancre period as an abortifacient. Although as many as 55 inunctions were made in one case, 80 in another, 32 in another, 33 in another, 55 in another, and 47 in another case, all the patients ultimately had mucous tubercles on the fauces. But Professor Neumann found that mercury hastened the disappearance of the chancre, and postponed the appearance of the secondary symptoms. So far, then, other observers do not appear to coincide with the conclusions of Mr. Hutchinson. A still more important allegation has been made by Professor A. Fournier, of Paris, *i.e.*, that by prolonged courses of mercury in the early period of syphilis the occurrence of tertiary syphilis may be prevented in a large number of cases. His colleague, Dr. Lancereaux, however, denies this, and Dr. Jullien's statistics show that most cases of severe tertiary syphilis at Paris had taken long courses of mercury. Dr. Keyes, of New York, holds that the best treatment of syphilis is by giving very small tonic doses of the green iodide, such as one-sixth of a grain, several times a day for months and even years, in all cases of syphilis. He contends that such small doses tend to increase the number of blood-disks, and the author of this paper can testify, from his own experience in the Rescue Society's Hospital, to the innocuousness of long-extended experiments with such doses. But as to whether they prevent tertiary symptoms is another matter, which it is difficult to decide about. No one, on the contrary, of any experience doubts the very great power of iodide of potassium over gummy deposits, either accompanied or not by mercury. Hence, in affection of the bone and soft parts in tertiary syphilis that drug should be liberally used, and inunction may be added in cases of cerebral syphilis, where every hour is of consequence to the patient. In short, the abortive treatment of syphilis admits of question, and hence, although mercury be used at all times in syphilis, it should be used in the small doses recommended by Hutchinson, etc., *i.e.*, in doses of one grain of mercury and chalk, hoping that this may tend to destroy the germ, or even nip it in the bud.

PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, May 18, 1888.

Dr. George F. Shrady, President, in the Chair.

Dr. George L. Peabody reported two cases of

CHLORATE OF POTASH POISONING

with demonstrations of specimens. [See Medical Record p. 57.]

Dr. A. H. Smith said that for many years he had used chlorate of sodium instead of chlorate of potassium, because the former salt was less depressing to the muscular system.

He thought that in certain forms of stomatitis the chlorate seemed to be of value locally applied. In prescribing the sodium chlorate it is necessary to be careful in writing it out or one will get chloride of sodium.

Dr. Peabody, in response to a question, said that he did not think that chlorate of potassium could under any conditions in the body liberate its oxygen. He did not agree with Dr. Smith as to the innocuousness of the sodium salt, but admitted that larger doses were required to cause toxic effects.

Dr. A. Brayton Ball read a paper entitled

SOME DIFFICULTIES IN THE DIAGNOSIS OF TYPHOID FEVER.

[See Medical Record p. 225.]

Dr. W. H. Draper thought that the statistics given by Dr. Ball proved what he thought to be a fact, viz.: that continued malarial fever was a very rare disease in this locality. He thought that the efficiency of quinine was an almost infallible test in distinguishing the two disorders.

Dr. A. H. Smith said that he had seen a good many cases where there were no abdominal symptoms or spots;

and he accepted such cases as typhoid. But if such cases terminate in five or ten days it is very hard to be positive as to the diagnosis. The speaker cited a case in point. Such cases approach very closely those that one sees in children, *i.e.*, cases of fever that come on suddenly and last only twenty-four or forty-eight hours. He thought that typhoid came on more rapidly now than used to be the case.

With reference to the diagnosis from acute tuberculosis of pulmonary type, he thought the increased frequency of respiration was an important fact.

Dr. Draper thought that many of these cases that apparently came on suddenly with a chill have really had prodromal symptoms.

Dr. Ball cited the case of a clergyman who preached on the day before his chill and had felt perfectly well up to the day of chill.

Dr. Kinnicutt spoke of an illustration of the complication of articular symptoms with typhoid fever. Dr. Kinnicutt could confirm the value of Ehrlich's test in diagnosticating the fever. The speaker added that he had recently seen a typical case of typhoid fever in a child four months old.

Dr. Gibney said that he had recently observed also a case illustrating the combination of articular symptoms with typhoid.

Dr. Robinson said, with reference to the class of ephemeral fevers such as Dr. Smith had referred to, that the French described them under the term synochal fever. He thought that the presence of free pigment in the blood was sometimes a help in the diagnosis of the malarial types of fever.

Dr. Dana reported the results of the

INTERNAL USE OF MENTHOL

in migraine and other painful disorders. He gave the drug in doses of gr. v. to gr. xx., ter in die, or every hour. It might be administered in capsules, or, better, in a twenty per-cent. alcoholic solution dissolved in a wineglass of hot water. It was particularly useful in attacks of migraine, anæmic headaches, and supra-orbital neuralgias. Sphygmographic tracings were shown illustrating the stimulant action of the drug on the heart.

Variolous Periostitis.—Four cases of variolous periostitis have been observed by M. Barié. The bones most frequently attacked were the left tibia, the radius, and the humerus. The periostitis generally appeared five or six weeks after the onset of the small-pox, and manifested itself first by severe pain, limited to one part of the skeleton. There was no redness or heat of skin; a sort of swelling, "hard œdema," might be found over the seat of pain, but no fluctuation. Probably its pathology is identical with the periostitis following on, or supervening in, typhoid fever.—*The Lancet.*

The Influence of Bromide of Potassium on the Elimination of Urea.—Dr. Cesare Agostini reports, in *Lo Sperimentale* for May, 1888, a number of experiments made to determine the effect upon the excretion of urea of bromide of potassium given in varying doses, and comes to the following conclusions: 1. Bromide of potassium slows organic metabolism, as is evidenced by the diminished elimination of urea which takes place during its administration. 2. Such diminution is not, however, proportionate to the size of the dose prescribed. 3. After prolonged use the organism becomes tolerant of the drug, and this effect is no longer observed. 4. But this tolerance diminishes or disappears upon the discontinuance of the bromide. The author believes that large and continued doses of bromide of potassium are compatible with perfect health, and that the emaciation and anæmia sometimes observed to follow its administration are due solely to the local action of the drug upon the digestive organs, and not to any permanent effect upon metabolism.

Correspondence.

THE IMPERFECT VAGINAL TAMPON.

To the Editor of The Medical Record.

When the host who was entertaining one of our statesmen apologized for the whiskey, saying that it was poor, the guest objected and said that it might be poor for whiskey but no whiskey could properly be called poor. So when Dr. Ostrom, in The Medical Record for September 8th, objects to the qualifying adjective which I employed when describing a vaginal tampon in a previous number of the journal, I am tempted to respond and to say that, while the tampon in question is not perfect as a universal corrector of the ills of woman—thereby differing from Lydia Redham's compound—it is, nevertheless, as nearly perfect in the way of tampons as anything that I expect to employ. It is easier to apply the tampon with a speculum at the bedside than it is to apply it with the pen at the desk, and I probably in the former article failed to give the idea that, while the apparatus described was typical, its varieties may differ widely. It may be made with projections and curves; it may be round or flat, hard or soft, large or small, and yet present the essential features of the type. The skill of the maker of any given variety of the tampon in winding it into shape with the silk thread will determine the degree of comfort which the patient may expect to receive from its application.

Concerning the employment of Wylie's solution, I have met with cases like Dr. Ostrom's in which the mixture seemed to act as an irritant, but, on becoming *en rapport* with the patient and increasing or decreasing the relative amount of some one of the ingredients, I have not had difficulty in making the solution act as a helper, and it usually acts in a very decided way.

I have usually noticed that unpleasant results following the application of the tampon and the solution in question were due to some fault in the method of using them, and a later experience has enabled me to avoid a repetition of earlier errors.

A man can put on his own hat a good deal better than anyone else can do it for him, and descriptions galore would not help any; and a physician can use his favorite medicines and apparatus with greater satisfaction than others can derive from their use in the same ways.

Robert T. Morris, M.D.

133 West Thirty-fourth Street, N. Y.,
September 10, 1888.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 16 *to September* 22, 1888.

By direction of the President, the Army Retiring Board at San Francisco, Cal., convened by War Department order dated July 20, 1886, published in S. O. 168, July 22, 1886, from Headquarters of the Army, is dissolved. Par. 1, S. O. 217, A. G. O., September 18, 1888.

By direction of the Acting Secretary of War, the leave of absence granted Major Alfred A. Woodhull, Surgeon, in S. O. 148, June 27, 1888, from this office, is extended fifteen days. Par. 14, S. O. 218, A. G. O., September 19, 1888.

By direction of the Acting Secretary of War, Captain Robert J. Gibson, Assistant Surgeon, is relieved from duty at Alcatraz Island, Cal., and will report in person to the President of the Army Medical Examining Board, New York City, on October 16, 1888, for examination for promotion. On completion of his examination Captain Gibson will proceed to Fort Trumbull, Conn., and report for duty to the commanding officer of that post, reporting by letter to the commanding general, Division of the Atlantic. Par. 13, S. O. 217, A. G. O., September 18, 1888.

By direction of the Acting Secretary of War, First Lieutenant Edward R. Morris, Assistant Surgeon, is relieved from duty at Fort Thomas, Ariz., and will report in person to the commanding officer of Fort Shaw, Mon., for duty at that post, reporting by letter to the commanding general, Department of Dakota. Par. 14, S. O. 217, A. G. O., September 18, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending September 22, 1888.

CABELL, A. G., Passed Assistant Surgeon. Ordered to the Naval Hospital, Chelsea, Mass.

BAKER, J. W., Passed Assistant Surgeon. Detached from the Naval Hospital, Chelsea, Mass., and to the Palos.

LEACH, PHILIP, Passed Assistant Surgeon. Detached from the Palos, and granted six months leave abroad.

SIMONS, M. H., Surgeon. Detached from Naval Academy and wait orders.

HARMON, G. E. H., Surgeon. Ordered in charge Naval Academy.

PICKRELL, GEORGE McC., Assistant Surgeon. Detached from the New Hampshire and to the Ossipee.

ARNOLD, W. F., Assistant Surgeon. Ordered to the New Hampshire.

HENRY, C. P., Assistant Surgeon. Detached from the Ossipee and granted sick leave.

CORDEIRO, F. J. B., Assistant Surgeon. Promoted to Passed Assistant Surgeon.

SPEAR, J. C., and RHOADES, A. C., Medical Inspectors. Placed on the retired list, September 14th.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending September 22, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	55	13
Scarlet fever	80	16
Cerebro-spinal meningitis	1	1
Measles	93	9
Diphtheria	44	12
Small-pox	3	0
Yellow fever	0	0
Cholera	0	0

THE STUDY OF MALARIA AT ROME.—A proposal of Professor Celli's, to establish in the malarious region that encircles the city of Rome a number of meteorological stations for the special study of the fever and its climatic conditions, has been favorably received by the Central Meteorological Council and by the Board of Public Health at the Ministry of the Interior.

CRAMPS IN THE LEGS.—Dr. R. W. St. Clair, writing on this subject in *The Medical Age*, says that when he has a patient who is subject to cramp, he always advises him to provide himself with a good strong cord. A long garter will do if nothing else is handy. When the cramp comes on, take the cord, wind it around the leg over the place that is cramped and take an end in each hand and give it a sharp pull—one that will hurt a little. Instantly the cramp will let up, and the sufferer can go to bed assured that it will not come on again that night. For a permanent cure he recommends galvanism, the negative pole being applied over the seat of the cramp, the positive pole on the thigh.

MEDICAL INCOMES IN KANSAS CITY.—A certain prominent physician of Kansas City asserts that he is making $20,000 a year, cash, from his practice. What was the name of Sapphira's husband?

THE MANAGEMENT OF PUBLIC HOSPITALS.—A correspondent, named Mrs. Rees, writes to the *Epoch*: "It has been my lot on three several occasions to experience the hospitality of public institutions, twice as patient for many months in paying wards, once in close attendance upon a dying child. In each one of these cases my personal experience has been the same—devoted attention by nurses and attendants, experienced skill, more or less valuable, on the part of the physicians, unutterable discomfort from details owing to careless or wilful mismanagement by the hospital warden, matron, or superintendent. For the guidance of those interested in the question as to why constant complaints arise against public institutions, I will cite one instance in my own experience. Its value for the public lies in its absolute truth. I spent fifteen hours in the accident ward of one of New York's best hospitals, by the bedside of a child who had been run over. The greatest sympathy was felt in the case, and all the resources of the hospital were called into requisition. The sufferer was placed upon the only vacant bed in the sudden accident ward, and surrounded by some six or eight young students, the house-surgeon apparently in command. By the light of a tallow candle they made the examination, and squabbled a good deal over it. One of them plumped himself down several times upon the bed, but desisted upon my remarking that had he ever suffered he would probably be more careful. After the examination had been conducted to their satisfaction (their comments having been made without the slightest regard to the fact that the patient was perfectly conscious and that his mother was in attendance), they withdrew, first laughing and then squabbling, but principally interested in a jocular conversation with a bright-looking nurse. I suppose my looks betrayed a little astonishment, as when they had left the ward the house-surgeon (a refined and intelligent young man, to whom I owe a deep debt of acknowledgment for unvarying courtesy during the night that followed) came to me and said, 'I hope you will excuse our roughness here; the fact is, we *are not accustomed to patients of your class.* I have spoken to the nurse, and she will be quieter in the future.' I replied to the effect that I imagined patients of all classes felt much alike. We settled down to a night of anxiety, in anticipation of amputation on the morrow. The patient was perfectly conscious; my own concern was to shield him as much as possible from the distressing sights and sounds inseparable from a crowded ward. One instance of my care will suffice. I spent my time in *picking bed-bugs off the pillow and mattress* before he should see them. The night orderly stood for some minutes watching me. Then he said apologetically: 'This 'ere bed ain't been slept in a great while. 'Tis the hot bricks brings 'em out (it was a frosty night in November); but, you see, we don't often have gentlefolks here!' Even in that hour of anxiety I could not suppress a smile. Are only gentlefolks worthy of quiet and the absence of vermin? At six o'clock the night nurse, leaving the ward, withdrew the hot bricks, and no others were brought until after eight o'clock, when the visiting surgeon made his rounds. It was a very cold morning and the patient was chilly. These are very simple facts. The question is, who was to blame for them? I could multiply them, but it is not necessary. They suffice to point the moral: *It is the things for which no one is responsible* that render our institutions a reproach to our intelligence."

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 14 New York, October 6, 1888 Whole No. 935

Original Articles.

URETHRAL IRRITATION IN THE MALE AS A SOURCE OF DISEASE.[1]

By LE GRAND N. DENSLOW, M.D.,

PROFESSOR OF GENITO-URINARY DISEASES AND DISEASES OF THE SKIN AND SYPHILIS, ST. PAUL MEDICAL COLLEGE, ST. PAUL, MINN.

Nearly thirty years ago, Dr. Marshall Hall claimed that irritation of peripheral nerves would produce, through centric disturbance in the spinal cord, many disorders of the economy of apparently distant origin. Since that time his claim has been sustained by thousands of cases observed and reported, bearing upon almost every organ of the body, so that to-day it is no longer a theory, but an accepted fact, based upon an overwhelming amount of clinical proof.

We know that the gynecologists, oculists, aurists, neurologists, and, lastly, but not least, the rectal surgeons have not been behindhand in their appreciation of this; thereby ridding humanity of an almost incalculable amount of pain and suffering, with both honor and profit to themselves.

On the other hand, the general practitioner, together with the general and the genito-urinary surgeon, has, with a few rare exceptions, not given this matter of reflex irritation sufficient attention; nor do I think have they appreciated the extent of the untrodden ground yet to be explored by the study of this subject as an etiological factor in both functional and secondary organic diseases that come under their observation.

This being the state of affairs, the opinion of a few of our most eminent physicians may not be amiss at this point.

Sir Henry Thompson says: "I have given complete relief to distressing symptoms of very long continuance, the cause of which was not suspected, by dividing an internal meatus. I have met," he further states, "with three marked examples of a similar kind, in which the very simple operation necessary was followed by complete disappearance of urinary difficulties, which had been long regarded as of an extremely obscure character."

M. Civiale writes: "Independent of its local sensitiveness, the urethra possesses another kind which may be termed sympathetic; also, when this sensitiveness is aggravated it may awaken sympathetic responses in every organ and function of the body." In many cases sympathetic phenomena were manifest in the lower extremities, particularly in the soles of the feet. Again: "It is not rare to observe that slight encroachments upon the urethral calibre induce marked difficulty in micturition; those at the meatus having this effect not less than those located further in." Again: "Strictures seldom exist for a long time without exciting a series of disorders of the genito-urinary functions, and consecutively in remote parts of the body; among them gleet, retention of urine, and difficult micturition. That which has struck me forcibly in dividing a meatus, only slightly contracted, is the sudden and complete change effected in the general condition of the patient. The constriction which seemed barely to impede the flow of urine is no sooner divided than all morbid symptoms vanish. The urethral walls which were rigid, hard, and unelastic, immediately recover their normal condition. An effect so prompt, through means of which the significance is plain, shows that the slightest obstruction in the urethra is able to produce the gravest symptoms, local and general." Civiale also states that obstructions in the urethra will set up reflex irritation sufficient to produce paresis.

Otis' opinion is so well known that it is hardly necessary to mention it, but to him is due the honor of being the greatest investigator and enthusiast in this field in this country.

Beard says, in his book on sexual neurasthenia: "What lacerations of the cervix and perineum, irritations, congestions, and displacement of the uterus and ovaries are to many female nervous symptoms, such are phimosis, redundant prepuce, varicocele, irritable testes, urethral contractions, and, above all and pre-eminently, irritation and congestions of the prostate and prostatic urethra, to many male nervous symptoms."

Hammond, in his book on impotence in the male, cites a large number of cases where grave nervous disturbances, such as loss of memory, melancholia, and general neurasthenia, were directly due to irritations in the urethra, and were generally relieved by appropriate treatment.

Beard records some forty-three cases illustrating so-called neurasthenia, in almost all of which excessive venereal indulgence is set down as the cause. These cases cover a wide range and are illustrations of almost every class of disease set down in the following table. He believed that spinal and cerebral exhaustion was the source of most of these troubles; whereas, undoubtedly, the urethral irritation was the true seat of the disease, as many of them were promptly relieved by attention to this particular locality.

Gross cites several interesting cases of mental depression that were relieved by attention to the contractions in the urethra.

Brown-Séquard, in 1874, related a very interesting case that presented all the rational signs of advanced cerebral disease, one he considered quite hopeless, that was relieved by an operation for phimosis, and the treatment of an inflammatory condition of the glans penis. To quote his own words, he said: "So rapid was the recovery that within six weeks from the date of the operation he presented himself at my office perfectly well in every respect."

Dr. Sayre, in 1870, before the American Medical Association, reported several cases of partial paralysis of the lower extremities, due to the same cause. He says of one case, from the very date of operation the child began to improve, and without other treatment made rapid and complete recovery. In another of his cases of paralysis of the lower extremities associated with urethral irritation, causing dysuria and painful erections, appropriate surgical treatment resulted in a complete recovery in six weeks.

From what has already been said, the importance of the subject is so apparent that I will offer no apology for calling your attention briefly to this almost inexhaustible subject. So far as I know there has not as yet been any definite classification of disorders due to this cause. I would therefore submit to you, this evening, a crude one with a few illustrated cases. I am well aware that it is very defective, and that in many instances a case could, with equal propriety, have been placed in any one of several, or in more than one class; the attempt has merely been to place them where they might be considered from the stand-point of the most prominent symptom, as a matter of convenience and aid to their study.

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[1] Read before the Minnesota Academy of Medicine, at Ryan Hotel, St. Paul, Minn., March 3, 1888.

CLASSIFICATION.

1. Cerebral.......	Headache.		Anthrophobia.
	Mental depression.		Epileptiform convulsions.
	Defective memory.		
	Melancholia.		
	Excessive irritability.		
	Brain exhaustion.		
2. Spinal.........	Partial paralysis.		
	Formication.		
	Pain,	Back.	
		Testicles.	
		Urethra.	
		Legs.	
3. Cerebro-spinal..	Cardiac irritability.		
	Dyspnœa.		
	Sweating of the hands and feet.		
	Syncope.		General alopecia.
4. Sympathetic....	Acne.		
	Congested conjunctiva.		Functional eye troubles.
5. Digestion......	Dyspepsia.		
	Anæmia.		Impaired nutrition.
6. Genito-urinary..	Gleet.		Spasmodic stricture.
	Urethritis		Impotence.
	Irritable prostate.		Cystitis.
	Prostatorrhœa.		Organic disease of the kidney.
	Spasm of the ureters.		Uræmia.

Heading the list, in the first class, we have headache, well illustrated in the case of a young man who came under my observation about a year ago, suffering from a slight gleety discharge, which had existed for several months. He had had no venereal trouble. Upon examination I found a highly sensitive condition of the urethra for the first inch, associated with a contracted meatus. This was slit up to the normal size, with the result of curing the gleet before leaving for home, which he did in a few days. He remarked to me that for months he had been annoyed by very severe headaches, occurring almost daily and which frequently incapacitated him for business; but that since the operation they had ceased. At my request he has since written me at intervals of several months, each time stating that he has not had any recurrence of his head trouble.

Mental depression associated with anthrophobia and sensitive urethra is quite common. Such a case I now recall in which there was a sensitive urethra with a meatus measuring twenty-four, occurring in a prominent member of the bar of this city; there was great mental depression with excessive irritability and defective memory; to such an extent that he remarked that it was with the greatest reluctance he would now accept an important case. Division of the contraction was followed by complete relief from all these symptoms. I afterward learned that the patient had been suffering for some fourteen years with an aggravated case of acne of the shoulders and back; he applied to me several weeks afterward, stating his acne had disappeared, and wished to know whether, in my opinion, the treatment could have had anything to do with it. I think these two cases are particularly important, proving as they do in both instances that the moral effect of the operation, as has been claimed by some, could not by any possibility have influenced the cure in either case; either the headaches or the acne, as they were not spoken of at the time.

A case of well-pronounced melancholia I have never treated in this manner, but Hammond and Otis both have recorded them.

I have met in this city a very pronounced case of what might be called brain exhaustion, in a merchant, a very hard worker, who applied to me for relief, complaining of a loss of seminal fluid during defecation, accompanied by a constant "tired feeling," as he expressed it; and inability, without effort, to conduct to his satisfaction as formerly, a large business, requiring considerable mental activity. Although there was no loss of memory, his head, as he said, felt tired. I found a small meatus, together with several deeper contractions, and an exquitely sensitive condition of the entire urethra. The meatus was divided, together with the other strictures, with great relief, but the symptoms did not entirely disappear until a second operation, as a slight contraction took place after the first.

In this connection, I would say that I would not despair of giving relief from any symptom that appeared to have its source in the urethra, until the canal is perfectly free from obstructions and had regained its normal sensibility.

Otis has reported the cure of a patient suffering from epileptiform convulsions by the simple passing of sounds.

The following case, occurring in my own practice, will speak for itself: June 15, 1885, G——, printer, had gonorrhœa seven years ago, lasted a month before he was entirely well; had connection with dissolute women several times every night for two weeks. About that time, one day he fell in a fit, biting his tongue, etc. These attacks have occurred almost daily, and sometimes every day, until the present time. He has frequently fallen from his stool while at work. His last attack occurred yesterday; the stream of urine very small. Upon examination, normal urethra should be 34, meatus only 29, strictures at 2, 3, 4½, and 5½ inches; the latter only admitting a number seven. Following the examination, he had severe attack just after leaving my office. The next day I divided the meatus and introduced French bougies for the next week, for the relief of the lower stricture. His general condition was so bad that I refused to perform urethrotomy at that time. Within a few days a twenty-two could be easily introduced in the bladder, and although I treated him for a number of weeks, he did not during that time have another epileptiform attack. Finding that he was relieved he dropped out of notice, as he refused operation which I considered necessary for a radical cure.

In the second class, commencing with partial paralysis of the lower extremities, I reported a case in THE MEDICAL RECORD some time ago, occurring in my practice in this city, in an apparently very strong man. There were several strictures in the pendulous portion of the urethra, together with contracted meatus. He was entirely relieved after the first operation.

I have already spoken of very pronounced cases reported by Sayre and Otis.

Pain is a very common symptom, and as to its situation, I think it occurs in the legs most frequently. It is generally referred to the inner aspect of the thighs, occasionally reaching as far as the knees, and not infrequently the feet. The next situation is the back; generally in the lumbar region, radiating over the buttocks and along the sides. The third and most frequent is in the testicles; and the last, and consequently the one the cause of which is most likely to be overlooked, is the urethra itself. When occurring here it is not generally such as would be produced by an active inflammatory condition, but rather neuralgic in its character. I have classed with the latter the pain, or rather the pressure and weight, frequently complained of in the perineum.

Formication is generally referred to the scrotum or inner aspect of the thighs.

Otis, Beard, and Hammond all reported cases of cardiac irritability and dyspnœa. It has not been my good fortune to meet with these symptoms.

In the next class that I have called sympathetic, we have sweating of the hands and feet as the symptom complained of. This very frequently amounts to such an inconvenience as to need attention. I have recently met with a case of sweating of the hands that was greatly relieved by division of the meatus, but as there has been some contraction following the operations, the cure may be expected when this difficulty is overcome, as it probably will be after another operation. In this connection it is worth mentioning that occasionally there is a case where contraction is prone to occur to such an extent as to require several operations; these, fortunately, are rare, one operation generally sufficing. I do not attempt to explain this complication, as all cases receive the same after-treatment.

Otis reports a case of complete unconsciousness following the passage of a sound. I have frequently noted great pallor and prostration under similar circumstances.

Acne is undoubtedly, in many instances, caused and kept up by an abnormal condition of the urethra. Sherwell, of Brooklyn, was the first to demonstrate this, in a paper read before the American Dermatological Society some five years ago, when he reported two severe cases cured by the mere passage of the sound, in which no venereal disease had occurred and where only a sensitive condition of the deep urethra existed. Since that time it has been my privilege to meet numerous cases where relief was afforded by attention to the genitals.

Congestion of the conjunctiva, and also numerous functional disorders of the eye, are known to be produced by venereal excess, probably from the fact that this would cause a congested and abnormally irritable condition of the prostatic urethra.

A very interesting case of general alopecia which came under my observation is worthy of special mention. S——, aged thirty, single, no venereal disease. During the past year the hair, which is of a very extensive growth over the entire body, has been falling rapidly; upon removing his underclothes they are found to be lined with fallen hairs. The skin over the entire body is, to all appearances, in a perfectly healthy condition. Thinking the trouble must be reflex, and in lieu of any other definite knowledge of the causation of this disease, I examined the urethra and found it normal, with the exception of excessive sensitiveness in the prostatic portion. From this time the sound was passed every other day. On March 1st, two weeks after treatment commenced, a very perceptible diminution in the number of hairs falling was noted. On March 15th, or one month after commencing sounds, but few hairs could be found on the clothing. On March 31st, after six weeks' treatment, the hairs of the entire body were firmly embedded and none could be found on the clothing. In September of the same year, five months after seeing the patient, he reports that he has had no return of his trouble. This is the first and only case ever reported where general alopecia was treated through the urethra. The result followed the treatment so rapidly, and proved so effective, that I will leave others to form their own opinion as to the cause of the trouble in this individual case.

The next class I have placed under digestion, and it is as yet, I think, a *terra incognita*. It comprises a group of so-called dyspepsia, anæmia, and impaired nutrition; or, if we may allow the term, cacotrophy. Several of the writers mentioned, more especially Beard, allude to dyspepsia as the result of urethral trouble.

The last class is genito-urinary. Where these organs are directly involved the true cause has, as a matter of course, been most frequently recognized. However, where the conditions are rare, but few, and in some instances individual cases only, are upon record. The relation of gleet and stricture is well known. But where a slight contraction of non-venereal origin is associated with gleet, it is not so frequently recognized. I have met with numerous cases where a catarrhal condition of mucous membrane of the urethra existed sufficient to produce a very susceptible discharge, which was undoubtedly kept up from this cause alone. Irritable prostate and prostatorrhœa are very frequently associated with irritability due to contractions in the anterior portion of the urethra. Otis particularly refers to this, and I could well attest it with cases.

Spasmodic stricture is a frequent accompaniment of the condition just mentioned, and I believe that many deep urethrotomies have been performed where division of the meatus or other contractions would have sufficed. It is unnecessary here for me to more than refer to the celebrated discussion on this subject that occurred a few years ago between Dr. Sands and Dr. Otis. In fact, the knowledge of this within the last few years has reversed the statistics as to the seat of the relative frequency of organic stricture. Formerly the greater number were thought to occur in the deep urethra, and to decrease in number toward the meatus, until Otis demonstrated that exactly the opposite state of affairs existed.

Of impotence I have had numerous instances where the division of the meatus was followed by prompt recovery. I will cite but one case where the history will show that all other cases can be eliminated: O——, aged forty-two, married, good habits, uses neither liquor nor tobacco, in perfect health; complains that he has been impotent for eight years, and that the condition came on gradually. (I mean by impotence, entire absence of erection of the penis, and total inability to introduce the organ within the vagina.) Upon examining the meatus, where the normal condition should have measured thirty-four it was only sixteen; otherwise urethra was normal and not in the least sensitive. The meatus was incised to thirty-five. That same evening an erection occurred, and the patient within ten days was pronounced cured This occurred five years ago. I have recently heard from this patient, and he assures me that at present there is very little indication that further treatment for his old complaint will be necessary.

Under cystitis I will refer to the histories of two cases; one occurred in the practice of Sir Henry Thomson, the other with Dr. Otis. As to the former case, "Sir Henry J——, aged thirty-four, suffering from painful, prolonged, and frequent micturition for five years, compelled to pass water from three to five times every night, and every two hours during the day. Has severe pains in the back and loins, and general ill-health; urine purulent and alkaline; habitual retention and partial engorgement of the bladder. Upon examination of the meatus, the seat of a cicatrix, due to a former chancre, admitted only a small probe; the opening was enlarged by incision and twelve ounces of urine drawn off, although he had just passed water. The relief was almost instantaneous; in a week it was complete. He has had perfect immunity from his urinary complaints ever since."

The report of Dr. Otis' case is as follows: "Age sixty-four; general good health; has been obliged to urinate almost hourly for the past ten years; strain small. Within three weeks began to suffer pain from the straining in passing water. Urine bloody and loaded with pus and mucous; was unable to attend to business. Prostate normal; meatus twenty-four; this was incised to thirty-one and no further obstruction of the bladder found at this time. Further examination for calculus was made by Drs. Otis and Marion Sims. The day following the operation he could hold his water for two hours and all the pain had ceased. Twelve days after the operation the pus had entirely disappeared from the urine; he could ride and walk without discomfort; had resumed his business and was not obliged to void urine oftener than every three hours."

These cases are sufficient to demonstrate the grave conditions that may be set up in the bladder from an apparently slight cause. Knowing, as we do, the short step from an aggravated cystitis of this character to organic disease of the kidney, it seems hardly necessary to demonstrate further possibilities in this direction; however, I cite one case that Dr. D. C. Black has noted: "Spasm of the bladder occurring from sympathetic irritation from the urethra, that resulted in complete closure of the orifice of the ureters, producing retention of urine in the ureters and pelvis of the kidneys." Dr. Otis also speaks of such a case, where he believes that death resulted from uræmia, due to the rude introduction of the catheter through a narrow stricture in the anterior portion of the uræmia; forcible and painful contraction of the bladder followed immediately with complete suppression of urine.

and the patient died uræmic. Twenty-four hours after, on post-mortem, the bladder was found empty, with the exception of a few drops of blood and mucous. It was closely contracted and free from disease; the ureters were normal; the kidneys were engorged with blood but gave no evidence of disease.

I have presumed upon your time to this extent with this array of facts (the limits of the paper not allowing of more than a brief mention in any individual class of cases), in the hope that it might arouse a further interest in the importance of a more thorough and systematic study of the conditions under consideration, and hoping that it might elicit a discussion that will add to our now comparatively meagre knowledge of the subject.

SULFANOL—THE NEW HYPNOTIC.

By B. SACHS, M.D.,

NEW YORK.

The medical public has come to look with suspicion upon every new hypnotic, and the more highly a drug has been praised for its hypnotic qualities the more sceptical we are certain to be. This is not unnatural in view of the many disappointments most of us have experienced with paraldehyde, urethan, amylen-hydrate, hypnone, and the like. Sulfanol is the latest applicant for medical favor, and appears to possess qualities which entitle it to a fair trial.

The main facts regarding sulfanol are already well known; the articles of Kast,[1] its discoverer, of Rabbas,[2] of Schwalbe,[3] and of Wendt,[4] have informed us that it bears the beautiful chemical designation diaelthylsulfondimethylmethan; that it belongs to the group of disulfons; that in doses of 1.0 to 3.0 or 4.0 it has a decidedly hypnotic action, and that it differs from other hypnotics, not to say narcotics, in restoring the natural desire for sleep. The experience of the German authors mentioned above has been highly satisfactory, even Schwalbe obtaining good results in sixty-six per cent. of his cases.

My own experience with sulfanol is limited to about sixty trials on fifteen patients.[5] These cases include a considerable variety of troubles, and a fair number of those troublesome cases of functional insomnia on the treatment of which I wrote a short article[6] about a year and a half ago. Limited as my experience has been, it is sufficient to show that this new hypnotic is a valuable addition to the Pharmacopœia, but that it is not infallible; and what drug is? The drug was administered, as a rule, in 2.0 doses, to be taken one-half hour before bed-time.

The following are a few of the histories (condensed) of patients in whom the drug was exhibited. I place the cases of functional insomnia at the head of the list.

CASE I.—J. R——, male, aged forty-seven, merchant; general neurasthenia from overwork and over-indulgence in alcohol and tobacco; has not slept well during the past year; is extremely restless and has heavy dreams; marked tremor of the tongue and fingers; knee-jerks lively if not exaggerated; severe palpitation (fatty heart); has been under treatment since June 3, 1888; was given no hypnotics until August 13th; took two grammes one-half hour before bed-time; was asked to take sulfanol on alternate nights; reports that he sleeps from twelve, midnight, to 6 A.M., without awaking, after taking powder; other nights quite as restless as before; has taken powders six times.

CASE II.—A. S——, merchant from Texas, aged forty-one; man of good habits; not addicted to alcohol or tobacco; no sexual excesses, but excessively hard work for years; has not been sleeping well for many years; never more than three hours' sleep; statement corroborated by his wife. August 21st, was given 2.0 sulfanol; reports that he has slept better than in five years; refreshing sleep, no dreams; has taken powder five times on successive nights, never sleeping less than eight hours after taking powder. Has gone South, with instructions to take powders if absolutely necessary.

CASE III.—L. V. H——, manufacturer, aged thirty-nine, hard worker and excessive sexual and tobacco indulgence; all symptoms of spinal neurasthenia; in addition, troublesome insomnia for two years past; 2.0 sulfanol one-half hour before going to bed sufficient to induce sleep for six hours, refreshing and without dreams; no headaches on awakening; three trials; insists on discontinuing drug from fear of contracting habit.

CASE IV.—G. F——, tobacco merchant, aged about forty-three, under treatment for a year or more for "tobacco heart." Met with severe accident (fell down elevator shaft), but escaped with contusion of hip and knee; severe nervous shock; complained of great pains for first three days; did not sleep a wink the first night after accident; second and third nights slept five hours continuously each night in spite of pain, which continued during day-time. Drug discontinued.

CASE V.—Miss K——, aged twenty; general nervousness and anæmia due to chronic intestinal catarrh; is wakeful all night (mother states that patient never sleeps more than two hours all told during night); sulfanol given in 2.0 doses three nights in succession; no improvement in sleep; drug discontinued. General condition has now improved; sleeps better.

CASE VI.—Miss F——, aged thirty-five; under treatment for several years for all sorts of neurasthenic and hysterical symptoms; has attacks of neuralgic pain all through body; these attacks most apt to come on at night; has frequently taken chloral, morphine, and other narcotics with little success. Complained of insomnia (without pain) while in mountains; was given powders of 2.0 sulfanol; slept well (five hours) first three nights; after that, drug lost its effects entirely.

CASE VII.—Mr. Fl——, aged forty, merchant; overwork and excessive sexual indulgence; symptoms of general neurasthenia, including sleeplessness. Has made three trials of sulfanol, and finds that refreshing sleep makes quite a different man of him; sleeps all night (about six hours). Further cases of this sort need not be given in detail. No disagreeable after-effects were noted in any of the above or in similar cases.

CASE VIII.—Mrs. J. N—— (Polyclinic patient), aged fifty-five, widow; mental depression with insomnia; headaches; loss of appetite; is afraid that sleeplessness will affect her mind. Slept well three nights after taking sulfanol (2.0) each night. Not heard from since.

CASE IX.—Mrs. K——, aged fifty-five; married thirty years; several children; one epileptic attack in early childhood; has had periodical spells of melancholy depression every two years for the last twenty-three years. Each spell lasts about fourteen days, during which time patient does not sleep at all; is restless and fearful lest she should become insane; tædium vitæ; has made one suicidal attempt during one of these spells a few years ago; is now (September 5th) in a similar attack; no hallucinations or delusions, but generally depressed, uneasy, and of slow mental action; tells her tale with reluctance; is averse to taking drugs, as they are all poisonous; was finally induced to take sulfanol, 2.0; did not sleep more than three hours; was given a second powder of same dosage on awaking and then slept seven hours continuously, but next morning woke up feeling dizzy and heavy in head—this feeling passed away during day;

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[1] Berliner Klinische Wochenschrift, No. 16, 1888.

[2] Ibid., No. 17, 1888.

[3] Deutsch Med. Wochenschrift, No. 18, 1888.

[4] New York MEDICAL RECORD, May, 1888.

[5] The drug is still very expensive, the usual dose, 2.0, costing about twenty-five cents; for this reason I have prescribed it in private practice chiefly, and have been able to test it upon one patient only in my department at the Polyclinic. It was originally manufactured by Bayer, of Elberfeld, but another preparation by Riedel, of Berlin, is now in the market. Riedel's preparation looks better, but I am not willing to state that one is superior to the other, both preparations having exhibited the same qualities.

[6] Medical News, May 18, 1887.

second night could not be induced to take powder, and was as restless as formerly (husband's report); has taken powder four times more, one powder each night being sufficient to procure five hours' sleep. Two weeks later patient was much improved; is evidently "out of her spell" again. Hyoscyam., gr. $\frac{1}{100}$, was tried twice; "sleep not as good nor as long," was the report.

Case X.—J. D——, aged sixty, clerk; severe pain, accompanying herpes zoster, along entire distribution of ulnar nerve; insomnia in consequence of pain; tried sulfanol, 2.0, repeated after three hours, two nights in succession—no effect whatever; third day of treatment, pain undiminished; had to resort to morph. sulph., gr. $\frac{1}{4}$, dissolved in mouth; patient slept well (at least four hours continuously) and was kept on morphia.

Case XI.—Mr. C. L. G——, aged thirty-two; case of typho-malaria with fever temperatures up to 105°F., pulse varying between 90 and 110; no abdominal symptoms. Takes an average of twenty-five grains of quinine during twenty-four hours. Very restless in consequence of elevated temperatures. In addition to quinine and antifebrin (gr. v.), when fever rose above 104°F. patient has received 2.0 sulfonal nightly five days in succession late in evenings, and invariably procured at least four to five hours' sound sleep (nurse's statement). No headaches in the morning, and no perceptible effect upon quality of pulse; no gastric distress after taking powder. Patient was not ordered to take powders in third week of the disease, but was given leave to take powder if very restless. Has taken seven powders since, never more than one a night; drug appears to have lost some of its force. Of late patient has obtained not more than three hours' continuous sleep from 2.0 sulfanol. Larger doses were not administered.

These histories will, I believe, suffice to show what the virtues of sulfanol are, wherein it is superior to other hypnotics, and in what respects it is, to say the least, somewhat disappointing.

1. These cases prove that sulfanol is valuable in cases of functional (neurasthenic) insomnia. In those cases in which insomnia is often the most distressing symptom, it appears to justify the claim of its discoverer that it restores the natural desire for sleep, two grammes being sufficient to bring about this result; Cases V. and VI. being exceptions to this rule.
2. It is easily tolerated by the stomach; does not produce headache, except in large doses of 3.0 and more; has no effect upon the circulation, and can be given in cases of irritable and fatty heart, and apparently in cases of fever (cf. Cases I., IV., and XI.), in all of which respects it appears to be superior to other hypnotics.
3. It has very slight or no narcotic virtues.
4. With some patients the drug appears to lose its effect if frequently administered.

If a larger experience than I have had will prove sulfanol to be a safe hypnotic in fever cases all medical men will recognize it as a great boon. In the treatment of insomnia accompanying mental troubles its success is assured; in the treatment of neurasthenic insomnia it promises very well indeed, and the treatment of this trouble can be inaugurated by the exhibition of this drug; but if the condition is to be permanently cured I hold to what I stated in the paper referred to above: "We are in need, not of additional hynotics, but of more effective means of regulating cerebral circulation."

September 20, 1888.

Three Cases of Pseudo-hypertrophic Paralysis in one Family.—Dr. Carlo Borsari reports in his graduation thesis (Naples, 1888) the case of three brothers, Pastorelli by name, aged respectively six, eight, and eleven years, who were suffering from pseudo-hypertrophic paralysis. The cause of the affection could not be determined, as there was a clear family history of entire freedom from any nervous or muscular diseases.

"THE TEA-LEAF EYE."

By H. V. Würdemann, M.D.,

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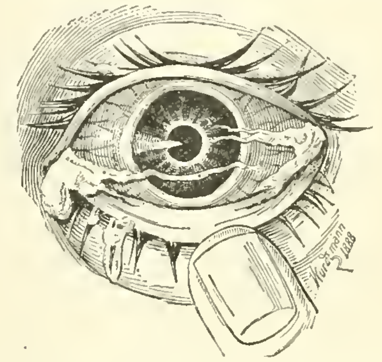
A peculiar pathologic condition of the eye exists among the lower classes of the South, especially the negroes. I refer to the affection usually known among physicians who have treated such cases as "The Tea-leaf Eye." The muco-purulent form is most common. Many of the laity believe that the best treatment for ocular irritation is a large poultice, preferably one of tea-leaves, applied upon the eye "*to draw out the disease.*" Even some of the medical profession, possibly of little experience in eye diseases, have advised such a poultice for conjunctivitis. Eyes that have been treated in this manner are easily recognized. The effects of one of these engines of destruction have but to be seen to be remembered for a lifetime.

The "Tea-leaf Eye" is on the increase as the hot weather approaches. The number of cases is at its maximum in midsummer. This may be accounted for by the fact that, when aided by outside heat, a poultice causes a much greater relaxation of tissue and increase in the contents of the blood-vessels. It sometimes happens that a poultice of tea-leaves, applied in mild cases of conjunctivitis, has actually produced a cure, by reason of its astringent properties. But if, as is usually the case, it has been frequently applied, or left on too long, it acts as any other poultice; the astringency is counteracted by the irritant and relaxing qualities. This is of course aggravated by the higher temperature of summer.



The Tea-leaf Eye at stage of Conjunctival Inflammation. (From nature.)

The most common symptoms produced by the poultice, when the ill effects are felt, are increased irritation, photophobia, lachrymation, and congestion. The vessels of the conjunctiva, especially the ocular, become engorged. The posterior conjunctival arteries and veins are first affected, then the deeper vessels, as the epi-scleral branches of the anterior ciliary vessels and epi-scleral plexus of veins; often ecchymoses are formed in the sub-conjunctival tissue. Then chemosis begins, and the ocular conjunctiva presents a pathognomonic, brick-red appearance. The blood-vessels are not so distinct as in catarrhal conjunctivitis. The exudation is characteristic, being muco-purulent, the mucus being in greater quantity and occurring in stringy masses, which are often seen upon the cornea. The small amount of exudation in comparison to the great congestion and chemosis is notable. The swollen conjunctiva encroaches upon and extends over the limbus, as in a typical case of purulent ophthalmia. The swelling gradually extends to the palpebral conjunctiva, though it is here less in amount. The lids in some cases become so greatly swollen that they cannot be opened or everted except by force.

If the poultice is still regularly applied, the inflammation extends and destructive changes occur, such as purulent infiltration of the corneal tissue, which may result in sloughing of the entire cornea. Inflammation being now of a high degree, this condition follows the course of purulent ophthalmia, resulting in inflammatory changes in the cornea, uveal tract, retina, choroid, etc.; in fact, a pan-ophthalmitis is quickly developed.

Patients usually apply for treatment when the conjunctival inflammation is at its height; luckily for them, before corneal infiltration has progressed to any great extent. In nearly all cases the eye is saved by treatment, and brought back to its normal condition in from one to three weeks. The illustration represents a typical case as well as is possible in black and white.

The treatment usually followed at the Washington Eye and Ear Infirmary has been much the same as for purulent ophthalmia. The utmost cleanliness is observed by careful syringing with lukewarm water. Solutions of cocaine and atropine, cold compresses, varying solutions of silver nitrate, leeches to the temples, and rest in a darkened room. Care has also been taken to warn patients of the contagious character of the exudation. The use of suitable laxatives and frequent bathing are of course advised. The after effects, as keratitis, choroiditis, etc., are treated by the usual remedies.

Cases occur throughout the year, but the following from the Infirmary books for July, 1888, are typical.

CASE I.—July 3d, W. S. H——, colored male, aged twenty-three, field hand on tobacco plantation, ignorant and uncleanly. Pan-ophthalmitis followed by leucoma. History: In early part of June "caught cold" in both eyes and applied a tea-leaf poultice which was renewed several times; no gonorrhœa. Present condition: Great photophobia and lachrymation, chemosis, and congestion. Treatment: Relieved in two weeks by cleanliness, leeches to the temples, cold compresses, cocaine and atropine solutions, and nitrate of silver locally. August 6th, leucoma now disappearing under calomel insufflations and Pagenstecher ointment.

CASE II.—July 13th, M. J——, colored female, aged ten. Keratitis. History: In April a tea-leaf poultice was applied during two weeks for conjunctival irritation, with the result of producing intense redness of eye, which was relieved by cold. Present condition: Conjunctival congestion and keratitis. August 6th, improved.

CASE III.—July 16th, L. T——, white female, aged fifteen. Keratitis. History: In May a tea-leaf poultice was applied for conjunctivitis, which was aggravated by this treatment. Present condition: Conjunctival congestion and keratitis. August 6th, improved.

CASE IV.—July 23d; E. B——, female octoroon, aged five. Muco-purulent conjunctivitis. History: "Caught cold" in right eye about 10th of July, applied a tea-leaf poultice, which produced intense congestion and swelling of lids. Present condition: Chemosis of ocular conjunctiva, and congestion, with œdema of lids. August 1st, discharged, cured.

Other curious poultices are used on the eyes by the lower classes. Potatoes, yeast, liver, meat, and slippery elm are common materials. The two cases below are unusual.

CASE V.—June 3, 1887, M. P——, colored female, aged twenty-two, servant; pan-ophthalmitis. History: Applied at infirmary in April for keratitis of left eye, which was relieved in a few weeks, leaving a leucoma. The latter was gradually disappearing when she became dissatisfied, and, taking the advice of a friend, applied a poultice of lady-slipper flowers, the cypripedium arietinum. She stayed away from the infirmary for ten days, and returned in great anxiety with pan-ophthalmitis and threatening rupture of the cornea. The patient was treated at her home, but in vain, as the cornea soon sloughed and sight was irretrievably lost. When seen several months afterward the eyeball was atrophied.

There were no sympathetic symptoms in the right eye and no history of gonorrhœa.

CASE VI.—July, 1886, L. B——, male mulatto, aged forty, laborer in ice-house. Pan-ophthalmitis. History: Contracted a general cold which settled in his eyes. He then applied poultices (for two weeks) of the leaves of the jimson-weed, the datura stramonium. An attack of pan-ophthalmitis, in which the sight was lost, was the result. When seen about a year later both eyeballs were atrophied.

These cases exhibit some of the dangers from poultices applied to the eye by unskilled hands.

August 10, 1888.

ERYSIPELAS OF THE LARYNX—INTUBATION—LARYNGOTOMY.

By T. D. MERRIGAN, M.D.,

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ERYSIPELAS of the larynx is an infrequent occurrence. This is evidenced by the meagreness with which works on laryngology refer to it, and by the scarcity in the number of recorded cases. Mackenzie, in the latest edition of his book, cites four cases. Vol. xxxi., No. 17, of THE MEDICAL RECORD, contains an article by Dr. Delavan, entitled "Erysipelas of the Upper Air-passages," in which a case is described. Vol. xxxii., No. 11, contains the substance of a paper by F. Massei, of Naples, on "Primary Erysipelas of the Larynx." The paper was read at the last International Congress. Dr. Stockton, of Chicago, in discussing the paper, mentioned a case in which he had performed intubation of the larynx with a successful result.

This affection generally occurs by an extension of the morbid process from the exterior to the larynx, by way of the mucous membrane lining the nares and buccal cavity.

Rarely, it primarily attacks the interior of the larynx and thence extends from within outward.

The following case occurred in Charity Hospital: Nicola ——, aged thirty-three, Italian, laborer. On admission (May 17, 1888), was wildly delirious; temperature, 104° F.; pulse, 130, and respirations, 38 per minute. (No previous history could be obtained.) The face and scalp were enormously swollen, so that the features were unrecognizable.

Cloths wet with a hot solution of corrosive sublimate (1 to 2,000) were applied, and renewed as soon as they were getting cold. A gr. xv. dose of antipyrin was administered; tr. ferri chlor., ℳ xx., quinin. sulph., gr. v., t.i.d., and free stimulation with brandy were also employed. Under this treatment the patient rapidly improved.

On May 31st several collections of pus which had formed in the scalp and back were evacuated. From this time on the patient seemed to get better, the incisions healing by granulation.

The patient remained in the ward assisting the orderly, and frequently renewing the hot applications with which other patients, sick with erysipelas, were being treated.

July 14th, over a month after the erysipelas had disappeared from his face and scalp, he began to complain of some discomfort and difficulty in swallowing. There was a slight change in the voice at this time; it became hoarse and harder in quality.

These symptoms, at the time, were not deemed of any importance, and a gargle of potassium chlorate was ordered. The next day the patient was not any better; the dysphagia and hoarseness had increased; pain over the larynx was complained of; the glands at the angle of the jaw were enlarged; there was a throbbing headache; flushed face; increased temperature and rapid pulse. Flaxseed poultices were applied to the outside of the larynx.

July 16th.—The parts over the thyroid cartilage had become swollen and very tender. The pharynx was normal in appearance.

Laryngoscopic examination.—The epiglottis was very much swollen, intensely congested, and immovable; there was considerable tumefaction at its base; the ary-epiglottic folds were swollen, of a dark-red color, and almost closed the opening of the glottis; the vocal cords could not be seen. But a momentary glimpse of the larynx could be obtained at each insertion of the mirror, on account of the restlessness of the patient from the intense agony he was suffering.

A loud, high-pitched whistling note was heard at every inspiration. Expiration was not as difficult. A hoarse, croupy cough was present, which brought up from the larynx a thick tenacious mucus. A severe pain was felt in the epigastrium. The dyspnœa increased. Terror was depicted on the countenance; face livid and bathed with a cold sweat; eyes prominent, watery, and bloodshot; the extremities were cold; the voice had sunk to a whisper; the pulse was feeble, rapid, and small. An O'Dwyer tube was introduced, and this was followed by violent coughing and discharge of glairy mucus. Vomiting occurred in a few minutes and the tube was expelled. It was immediately reinserted, and this time it was retained. The breathing became easier, but still there were violent attempts at coughing. The patient was in an almost exhausted condition. Magendie's solution of morphia, ♏x., and brandy were administered hypodermically, and bottles of hot water applied to the extremities. The tube was retained all night. The patient slept some, but had occasional paroxysms of coughing. The next morning, during a fit of coughing, the tube was expelled.

Breathing was improved in the absence of the tube, and for that reason it was not replaced. The throat was sprayed with liq. ferri sulph. (gr. xvi.–℥ j.). The apparent improvement was only temporary. At 4 P.M. I was called hurriedly, and found the patient in a condition similar to that of the day previous. The pulse was 130, feeble and small. The O'Dwyer tube was introduced, but could not be placed so as to be retained. The ary-epiglottic folds had swollen enormously, preventing the tube from taking a proper position, so that as soon as the finger was removed from its head it came up.

It was introduced a number of times, but as often rejected. The patient was quickly growing worse. During inspiration there was marked retraction of the supra- and infra-clavicular and the supra-sternal regions, the epigastrium, and the lower ribs. The respiratory murmur was scarcely audible behind between the scapulæ. The face was becoming purple. He was throwing himself about in a frenzy in his efforts to obtain breath.

Refusing to allow further attempts at introducing the tube, and as suffocation was imminent, laryngotomy was decided on as a *dernier ressort.* The temperature was 100° (in the axilla), pulse 140, feeble and irregular. ♏xv. of a four per cent. solution of cocaine was injected along the median line for three-fourths of an inch above and below the cricoid cartilage. Local anæsthesia was perfect, and the usual steps of the operation were gone through without any pain. Hemorrhage was inconsiderable, and readily controlled by compresses wrung out of hot water. The crico-thyroid membrane was opened and the tube introduced. The introduction of the tube was followed by a severe fit of coughing, and a large quantity of mucus was expelled. All the unfavorable symptoms rapidly subsided, the cyanosis quickly disappeared, and the breathing became easier.

Magendie's solution, ♏x., and brandy were given hypodermically, and a steam spray was directed across the opening of the tube. One hour after the operation the pulse had grown stronger and was 102 per minute.

July 18th.—The patient slept a good deal during the night, but was frequently awakened by the cough. Tr. ferri chlor., ♏xxx., with glycerine four times a day. Tr. belladonnæ, ♏x., was given, with the effect of diminishing the amount of secretion and quieting the spasmodic cough. Examination of the larynx showed an increase of the swelling; the opening of the glottis was but a chink; the ary-epiglottic folds had a dark-red angry-looking appearance; the epiglottis was swollen, stiffened, and curved upon itself; there was very slight redness of the pharynx, tonsils, and uvula. Temperature, 99.8; pulse fairly strong and regular, 84 per minute. A slight red blush had appeared at the lower part of the wound. Urine, sp. gr., 1.018, no albumen or casts, reaction acid; heart and lungs negative; bowels regular.

July 20th.—The edges of the wound had become swollen, dry, and red; the redness extended for about an inch on either side. This was controlled and caused to disappear by painting the edges with tr. iodinii. From August 2d the general condition gradually improved, the patient remaining out of bed during the entire day, taking nourishment and seeming well but for the condition of the larynx. The spray was discontinued, July 28th, owing to the retching it occasioned whenever it was used. Potassium iodid., gr. xv., t.i.d., was given with a view of absorbing the exudation. The larynx showed no sign of resolution. The granulations on the surface of the tracheal wound grew large. An exceedingly fetid pus was discharged from the trachea every time the tube was removed. Breathing through the larynx without the tube was tried a number of times. On some occasions breathing could be carried on for a short time, but at others he was unable to breathe at all. The voice lost some of its hoarseness, but never became normal. Frequent laryngoscopic examination showed not the slightest diminution in the thickening of the epiglottis and ary-epiglottic folds. Occasionally severe dyspnœa would occur from the plugging of the tube with mucus, but this would disappear when the tube was cleaned. The temperature ranged from normal to 100.4°; the pulse varied from 72 to 96 per minute. When dyspnœa would occur, it would increase in rapidity; respirations, 20 per minute.

On August 15th, while the inner tube was being cleaned by the orderly in charge of the case, the patient, suddenly and without any warning, frantically seized hold of the outer tube, tore it from its place in the larynx, threw it across the ward, fell back, and before a physician could be summoned the patient was dead. He was feeling very well previous to this sudden termination.

Autopsy.—The thoracic and abdominal organs were normal, except for a few old pleuritic adhesions. The parenchyma of the lungs were in a healthy state. The edges of the wound and the soft parts about it in the interior of the trachea were in a sloughing condition. The cricoid cartilage was in a state of necrosis, very much thinned, especially its anterior portion; it was freely movable and completely detached from all the soft parts, which formed a cylindrical shell about it. There was a large amount of exudation into, and thickening of, the epiglottis, its base, and ary-epiglottic folds. The latter were in accurate apposition, acting as a valve and completely closing the glottis to the entrance of air.

SWEATING OF THE FEET.—Dr. Legoux uses a mixture of glycerine two and one-half drachms, solution of perchloride of iron one ounce, and essence of bergamot twenty drops, in the treatment of bromidrosis of the feet. The feet are bathed frequently in cold water for two days, and, on the third day, are painted with this mixture. The painful sense of heat gives way to a feeling of refreshing coolness, the moisture becomes less apparent, and with it disappears also the disagreeable odor. The applications are to be continued night and morning. The author obtained by this means the cure of a case, which had resisted all other treatment, in two weeks.—*Gazette Médical de Picardie.*

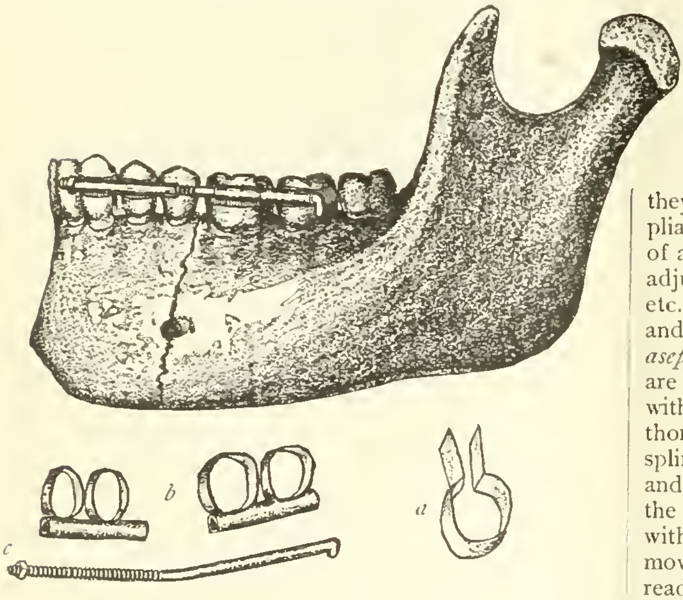
FURROWS ON THE FINGER-NAILS.—Dr. E. G. Roberts, of Fair Haven, Vt., writes: "The brief notices in THE MEDICAL RECORD on the above subject have greatly interested me, as they recall a similar condition in my own case some years ago. In May, 1876, when a student, I suffered from a severe attack of varioloid, and when convalescing I noticed a very marked transverse furrow on all my finger-nails, which remained until that portion of the nails grew out. I do not remember whether the toenails were similarly affected or not, but shall be more observant in the future."

AN ANCHOR-SPLINT FOR FRACTURE OF THE JAW.

By CHARLES G. BROWN, M.D.,

MINNEAPOLIS, MINN.

It has been my misfortune to have to treat three cases of fracture of the jaw, and my privilege to assist in the treatment of several others. Not until one has such a case does he fully appreciate the difficulties to be encountered and the inefficiency of the methods spoken of in our text-books. In the treatment of fractures in all localities our success is in direct ratio to our recognition and antagonization of the physiological contraction of muscles, restoring the lost balance of action and thereby securing rest in proper position. In fracture of the femur the contractions approximate the ends of bone, and by the pressure cause absorption, or if the fracture is oblique, sliding by of the ends, in either case resulting in shortening of the bone; while in fracture of the patella the fragments are separated so effectually that seldom, if ever, anything more than ligamentous union results; not because the structure of the bone is different, but because of the difficulty in securing anchorage sufficient to resist the contractions of the extensor muscles.



When we consider the great range of occlusion of the jaw, we can appreciate the variety of displacements which may occur in fractures of this bone; the muscular movements are complex and delicate, none being very strong except the masseters on either side. The broken fragments can, as a rule, be reduced and held in position with but little force, if it be applied in the *right direction*. By taking a skull in the hand, and drawing a line from the symphysis to the centre of either condyle, it will be seen to represent the *resultant* of all the normal forces to which the corresponding half of the jaw is subjected. Now, if we apply the usual bandage it will be seen to cross this *resultant force line* at an *acute* angle, whereas, to be effectual, it should cross it at a *right* angle, which would bring the opposing point in front of the nose instead of the top of the head. It is my purpose, in this brief paper, to call attention to a principle which it is believed will be efficient in maintaining the proper force in the proper direction.

My friend, Edward H. Angle, D.D.S., of Minneapolis, has perfected a system of appliances for correcting irregularities of the teeth, consisting of metallic bands, pipes, screws, springs, etc., applied to the teeth in such a way as to be neat and efficient. (See Haskell's "Compendium," and Guilford's "Orthodontia," now in press.) It is proposed to utilize a portion of his system, that of anchorage, in retaining fractures of the jaw. The principle will be more readily understood by reference to the accompanying illustration.

Two or more firm teeth are selected on either side of the fracture, and carefully banded with German silver made into a loop and slipped over the teeth; the band is grasped with flat-nosed pliers and drawn snugly about the teeth; a burnisher will be of assistance in getting a close fit; the band is now removed and presents the appearance shown at *a*. The ends are now clipped off and soldered. The bands are again slipped over the teeth and a piece of hollow tubing or joint wire one-half or three-fourths of an inch in length, one on each side of the line of fracture, is placed against the bands and marked at point of contact. The bands are again removed and the pipes soldered to them as shown at *b*. A traction screw made of *hard-drawn* German silver, and shown at *c*, is passed through the tubes and the nut started. A rubber dam is next applied to the teeth to keep them thoroughly dry, and the appliance slipped over the teeth and cemented in place by oxyphosphate of zinc. After it has thoroughly set, the nut is tightened until the ends of the bone are brought into place; additional strength may be acquired by attaching a similar rod on the lingual side. The whole being immovably cemented to the teeth (if properly done), it will readily be seen that the force is applied from the full length of the teeth, which prevents their tipping, and a firm anchorage is secured by means of which the fragments of the broken bone are held immovably in position—a *Malgaigne splint*, if you please, except that the *hooks* are not foreign bodies. The teeth do not tip and loosen as when they are simply wired together at the top. The appliance can be made and adjusted with the assistance of any competent dentist, and does not require frequent adjustment as where the interdental splint or bandages, etc., are used, and which are so annoying to the patient and monotonous to the surgeon. Last, but not least, it is *aseptic*. Owing to the closely adhering gums these fractures are usually compound, and the discharge of pus mixed with increased flow of saliva, food, etc.—which cannot be thoroughly and frequently removed when the interdental splint is used—the mouth becomes a hot-bed for bacteria and foul odors; to this is frequently added sloughing of the skin under the jaw from bandage pressure. While with the anchor-splint this is avoided, the patient can move the jaw, keep his mouth clean, take food more readily, and free from sepsis; thereby better maintaining his health, and finally securing better occlusion of the teeth than by the methods commonly practised.

Congenital Absence of both Eyes.—Dr. Menacho recently described the case of a little girl, of thirteen months, the subject of double anophthalmia. The eyelids, lachrymal apparatus, and orbits appeared to be well formed, but there was no eye on either side, a simple cavity being seen on separating the lids. This cavity was invested by the conjunctiva, which apparently rested on some firm fibrous basis, in which movements could be detected as if they were rudiments of the ocular muscles. In the thickness of both inferior eyelids a kind of bursa or cyst could be felt, that on the left side being the larger, and having a whitish coat like the sclerotic, which could be seen through the conjunctiva posteriorly, where it was thin and transparent. This became tense during crying, and the child was observed to press it frequently with her hands and then to smile, a phosphene or subjective sensation of light being probably thus produced.

Hot Water in the Treatment of Carbuncles.—Dr. J. C. Abernethy recommends the use of compresses dipped in boiling water for the cure of carbuncles (*The Medical Age*, June 11, 1888). He first employed it when he was himself suffering from a carbuncle, and found that it not only relieved the pain almost instantly, but promoted a rapid cure.

COCAINE CONJUNCTIVITIS.

By CHARLES J. KIPP, M.D.,

NEWARK, N. J.

While it is well known that the long-continued use of alkaloids like atropine, duboisine, and eserine occasionally produces inflammation of the conjunctiva and swelling of the conjunctival follicles, the fact that cocaine sometimes, though rarely, causes a similar conjunctivitis, has not, so far as I know, been brought to the notice of the profession. Since the introduction of cocaine into ophthalmic practice I have used this drug alone, or in combination with other alkaloids, in very many cases, and sometimes continuously for many weeks, for various affections of the eye. Up to six months ago I had never seen a case in which a conjunctivitis followed the use of this drug; but since then I have had three cases of follicular conjunctivitis clearly attributable to its use. For my present purpose it seems unnecessary to give a detailed description of the diseases for which the cocaine was prescribed, and I shall therefore content myself with the statement that in one case it was given for the purpose of allaying the irritation due to spasmodic entropion, in one for an ulcer of the cornea, and in the other for an irritable condition of the conjunctiva resulting from exophthalmus. The last case I reported at the last meeting of the American Ophthalmological Society, and the occurrence of the cocaine conjunctivitis was mentioned only incidentally. The patients were all over seventy years of age, and had no conjunctivitis before the cocaine was used. In all, the use of the drug had been continued, without my knowledge, for a period varying from two to four months. All used a simple solution of cocaine, ten grains to the ounce of distilled water. The drug used by these people was obtained from reliable apothecaries of different towns and produced no marked irritation when first instilled. How soon after the commencement of the instillation the conjunctivitis appeared I am unable to state, as I had not seen the patient for many weeks at the time I discovered the presence of the conjunctivitis.

The picture presented was essentially the same in all the cases. Burning and itching of the eyes and moderate dread of light were the symptoms chiefly complained of. The lids were somewhat puffy but not red, and slightly excoriated at the corners. There was considerable secretion of the thin viscid fluid, not unlike the mucilage from the conjunctival sac. Purulent secretion was not noticed in either of the cases. The ocular conjunctiva was slightly œdematous and of a dirty yellowish color. Greater changes were seen in the palpebral conjunctiva. This was swollen and of a reddish-yellow color throughout, and its surface was closely studded all over with translucent elevations (follicles), mainly of the size of sago-grains. The follicles were perhaps most numerous on the swollen retrotarsal folds. The condition of the palpebral conjunctiva was indeed very much like that caused occasionally by the long-continued use of atropine, except in this that the color of the conjunctiva was yellowish red instead of bright red. The swelling of the retrotarsal folds was the same. In all the cases the upper and the lower lids were affected alike, and both eyes presented the same appearance. I discontinued the application of the cocaine solution at once, and ordered instillation of a half per cent. solution of sulphate of zinc twice daily, and under this treatment the follicles disappeared in the course of six weeks. All signs of conjunctivitis had disappeared when I last saw the patient.

Catha Edulis is the name of a plant found in Eastern Africa from Abyssinia to Port Natal. It possesses stimulating properties similar to those of coffee, but apparently more pronounced. It does not, however, contain any caffeine, according to Flückiger, but another alkaloid to which he has given the name of katine. The Mohammedans are said to chew the leaves, the juice of which produces a wild sort of intoxication.—*Der Fortschritt.*

Clinical Department.

A CASE OF PNEUMONIA WITH DELAYED RESOLUTION — ABSCESS OPENING EXTERNALLY—RECOVERY.

By BENJAMIN EDSON, M.D.,

BROOKLYN, N. Y.

While cases similar to the following do sometimes occur, they are perhaps sufficiently rare to warrant their being reported and made a matter of record.

Gertrude H——, aged eight; a strong, fat, and healthy child, was attacked with pneumonia about May 20, 1886. The treatment during the first five weeks was said to have been vigorous and varied—just what I do not know, nor is it material to this report of the case. I first saw her, June 25th, following. She was then reduced to a mere skeleton. For nearly three weeks she had lain upon the right side, in a half-reclining position, with the head bent forward and the knees drawn up to the abdomen. Transversely across the anterior aspect of the legs just above the knees, as the result of the long and severe tension, were a number of wide, white lines, not unlike *linea albicantes.* There was a harassing, partly suppressed cough, with but scanty expectoration of frothy mucus and a little thick, yellow sputa.

Examination revealed consolidation of the lower and middle lobes and the anterior portion of the upper lobe of the right lung, with, as a matter of course, exaggerated respiration on the left side. By direction of the attending physician the surface of the chest over the *left* lung had been repeatedly painted with tincture of iodine until it was so raw as to render examination difficult and distressing. To all appearance the child was rapidly sinking, and the prognosis was most unpromising. Attention was given to modifying the irritating cough, and especially to stimulating the appetite and sustaining the strength of the patient. The subsequent course of the disease may be traced by the following extracts from notes of the case.

June 29th.—Temperature, 102½° F.; pulse, 150; respiration, 46. Passing but little urine; traces of albumin; feet greatly swollen; solution of potass. bitart. to be used freely as a drink.

July 2d.—Temperature, 102° F.; pulse, 150; respiration labored and variable; drowsy; kidneys have acted but once and slightly in twenty-four hours; face, abdomen, and legs swollen to their fullest tension; great depression.

July 4th.—Slight improvement; kidneys doing a little better, but their action is far from satisfactory. The child is taking some food with a relish.

July 5th.—Projecting between the first and second ribs, three-fourths of an inch to the right of the sternum, is an abscess about the size of a hickory-nut. Its walls are thick and firm, expanding and contracting somewhat at each inspiration and expiration. It is deemed best not to disturb the abscess, for the present at least. The patient eats ravenously. The diet embraces steak and potatoes, bread and butter, clam fritters, mince pie, bananas, oranges; in fact, nothing edible seems to come amiss, and no restraint is exercised in regard to either kind or quantity of food taken.

July 8th.—Is still eating well, double the quantity of an ordinary laboring man. Coughs considerably. Temperature still high.

July 10th.—Another abscess, larger than the other, has appeared one and a half inch below the right nipple. The wall is red, thin, elastic, distending much at each inspiration. Evidently rupture must soon occur. It was decided, however, not to open the abcess at present.

July 11th, 6 A.M.—Lower abscess opened spontaneously, discharging, as estimated, between one and two pints of pus. Whenever the child coughed the matter spurted in a stream to a considerable distance. When the bulk of it had been discharged, the air at each respiration passed freely through the opening into the cavity, and through a communicating bronchus and the trachea. The adhesions of the chest-walls and pleura were complete, no pus escaping internally. The upper abscess disappeared. For some hours the child was almost in collapse. At this point, and here only, stimulants were freely given. Later in the day she began to rally, and the ravenous appetite was again demanding supplies for the exhausted system. Absorbent cotton soaked in listerine was placed over the opening and renewed from time to time as found advisable.

July 13th.—Temperature, 101° F.; pulse, 138; respiration, 40. Cough has entirely ceased; abscess still discharging abundantly; free passage of air through the opening. The character of the discharge is so satisfactory that it is not deemed advisable to attempt to wash out the cavity with an antiseptic solution. General condition slightly improved.

July 18th.—Temperature approaching normal; abscess still discharging freely; kidneys acting properly; dropsy has disappeared; gaining strength.

July 28th.—Is up and out in the yard; discharge about two ounces in twenty-four hours; air still passing through the opening.

August 16th.—Improving rapidly; discharge but nominal; very marked sinking in of the chest on the right side, and lateral curvature of spine; she has the appearance of a hunchback. Began the practice of moderately deep inspirations several times a day, with the hope that enough sound lung-tissue remained to eventually fill the chest and overcome the deformity.

November 20th.—Is substantially well. Spine nearly straight, and chest filling out satisfactorily. Attendance discontinued. Recovery may be considered complete.

At the present time she is strong, hardy, and active, and there is little to indicate the serious ordeal through which she passed. Very little medicine was given, and it seems as though she actually *ate* her way through. It is not quite certain that even the stimulant that was given in the critical period might not have been dispensed with without serious detriment. Had the abscess been opened even but a few hours before the time it actually did break, the operator would naturally have taken to himself credit for contributing to the favorable result.

From the advocates of antiseptic treatment may come the criticism that without it the patient was exposed to serious risk. In that respect these notes of the case may be misleading, for a study of the *patient* from day to day and hour to hour led me to the most conservative policy; and I am satisfied to accept the result as vindicating the methods pursued.

A good constitution, generous diet, and active digestion, with symptomatic treatment, accomplished all that could have been attained by the most rigorous and active measures.

A CASE OF ACQUIRED ATROPHIA UTERI.

By C. M. HANSEN, M.D.,

CROOKSTON, MINN.

It is a well-established fact that an atrophy of the uterus can develop after parturition, not only following a severe puerperal sickness or caused by tuberculosis, but also after a completely normal childbirth or abortion. In these cases the atrophy develops gradually, almost without symptoms, during or shortly after the confinement, but is later accompanied by different nervous troubles, abdominal pains, psychic depression, and hysteria. The menses cease and the uterus and ovaries are found in various degrees of atrophy.

I wish to refer to these more common cases of puerperal atrophy before I report the following case that has had quite a different course.

On April 1, 1888, I was called to a young girl who had suffered from incessant vomiting for more than two months, in spite of regular medical treatment. I found her apparently moribund, and emaciated to such a degree that a nine-year-old boy, who was present, could make his fingers of one hand meet round her thigh just above the knee. She had bed-sores on the hips and os sacrum and scorbutic spots on the chest and the legs. She was fully conscious, had no pains except headache, but she was extremely weak and was absolutely unable to retain any nourishment, and had hardly been able to retain any for about two months. The excretions had in the last days been passed involuntarily. Temperature, 97.5° F.; pulse rapid and very weak. In the urine a few clear casts, no albumen nor sugar. The lungs were normal; the heart-beat was in the right place, the first sound being accompanied by a strong anæmic murmur. The abdomen was deeply depressed and the spine very prominent in front; in the right epigastric region the abdominal aorta presented itself like a pulsating tumor. The anæmic murmur was very pronounced over this part, so that at first sight it simulated an abdominal aneurism. No thorough examination of the generative organs was made, only enough to exclude the possibility of pregnancy. I tried at once the stomach-tube, and succeeded in giving her a little buttermilk and whiskey, which she retained without vomiting afterward. As this strengthened my suspicion that her disease, however severe, was of functional origin, I applied the faradic current, as strong as she could stand it, in the cardiac and epigastric regions of the abdomen, and ordered the electricity to be applied three times daily for about ten minutes each time.

The patient, Sigrid M——, aged twenty-one, came from Norway to Minnesota in the spring of 1887, and was engaged as girl in a hotel. She was of healthy parentage, robust, and had never been sick. Her menses had always been regular, without any pain. In the fall of 1887 she passed two of her periods, and went therefore to a Frenchwoman, who produced an abortion. The abortion was accompanied by a severe hemorrhage, and she was confined to her bed for about fourteen days, but had no fever. After her sickness she obtained an easier place, where she could not possibly overwork herself. *She was perfectly healthy at that time*, only a little weak, and her digestive functions were in good order. But the menstruation did not reappear, and she has never had any sign of them since. In the latter part of January she began to feel sick, and had headache and vomiting, worse in the morning. The vomiting increased in vehemence and did not yield to any diet or medicine. She was confined to bed during the two following months with incessant vomiting, till she had reached the condition wherein I found her, April 1st. She was nursed in a quite comfortable house and had her own brother to attend to her.

Against all expectations she began to recover from that day; the next day she could take buttermilk without the stomach-tube, and was able to retain this and other light food. She then began to gain flesh, and the scorbutic spots disappeared. That there was no local disease of the stomach is evident, as one week after my first visit she could enjoy beefsteak with pickles and coffee. On May 1st she could stay out of bed the whole day. She still suffered occasionally from headache and was subject to slight hysterical fits, but these too have now—in the last days of July—quite disappeared, and she is in a good way to regain her former health, being fully able to work. Her courses have never returned. Of medicines she has only used whiskey and tinct. ferri. muriat.; the electricity was disposed of as soon as I was sure of her improvement. The anæmic murmur has disappeared, the sounds of the heart are clear, and the abdomen is natural.

The recto-vaginal examination shows a complete atrophy of the corpus uteri. The portio vaginalis is of about natural shape and size, and it is continued upward into a narrow, spool-shaped body, that can be traced out to the left side of the broad ligament. A real fundus uteri cannot be felt. The ovaries are felt as small bodies in normal places. There are nowhere any traces of inflammation, and the bimanual examination was made without any pain. The edge of the os uteri is soft and slightly curved in on the left side, possibly caused by the abortion.

The first impulse in this uncommon case would be to diagnose the sickness—that could only be considered as functional—as an excessive anæmia, caused by the hemorrhage of the abortion, the consequent atrophy of the womb being caused by the anæmia. Against this I must state that she was quite healthy for about a month after she recovered from the abortion, and even then the symptoms of her sickness gradually appeared.

My view of this case is that the atrophy of the corpus uteri developed as a direct consequence of the puerperal involution of the uterus, on the same anatomical basis as in the more common puerperal atrophies, to which I referred above, but with unusual rapidity, and accompanied by very exaggerated nervous symptoms. If my view be right, we have in this case, both as to origin and course of the disease, an interesting analogue to a serious case of vomiting during the first months of pregnancy, the same nervous phenomena being produced by the rapidly decreasing as by the rapidly increasing uterus.

Whether the treatment had any effect, or whether I just came to the patient at the moment that the degeneration had terminated, I cannot say. I did not make any thorough examination of the generative organs before she had got nearly well and had recovered from the state of nervous excitement in which she was during the first time of her convalescence. It is my wish to draw the attention and the criticism of the members of the medical fraternity to this case, and would be glad to hear the opinions of others regarding it, as I have been unable to find any similar case reported in the works I have at my disposal.

A CASE OF UNCOMPLICATED DISLOCATION OF THE CARPAL SCAPHOID BONE.

By NOLAN STEWART, M.D.,
BURDETT, MISS.

On the night of May 27, 1888, N. A. H——, white, male, aged twenty-four, called to see me to have his left wrist examined.

He furnished this history: He was driving through a large grove that night in a gig, a companion being with him. The road was quite rough, the soil being of the variety known here as "buckshot." It is low, and when wet is very sticky and tenacious. Vehicles passing over the road in that condition leave many sharp projecting clods, which dry and become as hard as a brick. The horse was trotting at a gait somewhat faster than the average, when one of the two wheels struck a stump, overturning the gig and throwing out the two occupants.

The man's wrist was very much swollen, but I could detect a tumor upon the dorsal surface.

I satisfied myself that there was no fracture of any bone in that vicinity, and concluded that the tumor was due to a dislocation of one of the carpal bones. The deformity, as before stated, was discernible, though largely concealed by the swelling.

I noticed an abrasion of the integument upon the anterior surface where it had struck upon one of the sharp masses of earth. The body fell upon this hand. The parts being so much swollen, and knowing a simple dislocation of this bone, the scaphoid, to be very rare, I directed the employment of active antiphlogistic measures until morning, when I could satisfy myself of the correctness or incorrectness of my diagnosis, viz., luxation of the carpal scaphoid. I saw my patient at my office next morning, when I found that the swelling was greatly reduced, and so was enabled to make a satisfactory examination of the parts. I then confirmed my diagnosis. I could easily define the outline of the scaphoid bone, and the deformity resulting from its dislocation was well displayed now that the swelling was reduced.

The signs of luxation were present, deformity, preternatural immobility, and ability of the parts to maintain their normal position when brought into place, as was afterward shown.

I made traction upon the hand, at the same time carrying it as far as possible to the ulnar side. I then made firm pressure upon the tumor, when to my satisfaction the scaphoid resumed its proper position. I applied an appropriate dressing. The parts remained tender for quite a while, but at this time the functions of the wrist are well performed and no protracted inconvenience has resulted from this unusual form of dislocation.

BALSAM OF PERU AS A SURGICAL DRESSING.

Dr. A. H. Rockwell, of Mancelona, Mich., writes: "About three years ago I read an article in some medical journal (which I am unable to find) on balsam of Peru as a surgical dressing, in which the author claimed that he had obtained very flattering results, the wounds healing kindly and without suppuration. The cases in which it was used were those involving solution of surface continuity from injury. Since reading the article I have used balsam of Peru in a number of cases, mainly cases of fingers and hands, cut and bruised in our saw-mills and factories. I have amputated fingers, sewed up cuts and lacerations, dressed mangled and bruised fingers and hands, and have used balsam of Peru as a dressing, and they have healed quickly, with very little suppuration or inflammatory action, and in many cases almost absolutely without either. In cases where the tissues are bruised and mangled, where we would expect a good deal of sloughing, the tissues, instead, become dried and hard, and, after the wound has healed, separate and become detached in much the same way that a scab separates from the surface of a wound that has healed beneath it. I have also noticed that the balsam has a hæmostatic effect, being quite an effectual agent. I have watched the progress of wounds with this dressing, which is applied on lint or cotton, and it seems to me that the process of healing more nearly approximates nature's method. *i.e.*, healing under a scab, than with any dressing with which I am acquainted. The advantages which may be claimed for it are, it furnishes perfect protection (it practically seals the wound), is clean, has a pleasant odor, does not require to be frequently renewed, for there is almost entire freedom from suppuration, and the results in my hands have been uniformly and eminently satisfactory."

China Grass as a Wound-dressing.—Mr. H. B. Hewitson, in *The Lancet*, adds another to the long list of materials for surgical dressing. He says: "China grass is a soft, silky, very highly absorbent fibre, used in various manufactures. The combings form an elastic silken wool which, when treated with four per cent. of salicylic acid, provides an excellent antiseptic absorbent surgical dressing. It is also relatively much cheaper than, so far as I know, any of the usual dressings used in surgery. I have now given it an extended trial, and supported by the opinions of most of my medical friends. Its chief value is the way in which it absorbs discharges from a wound, rendering it very dry, and preventing the poulticing of the wound, as it were, when bathed in discharges under less absorbent materials. A considerable quantity is required in cases where the discharges are free, and it is perhaps well to interpose some open-meshed gauze between the dressing and the wound, so as to prevent the China grass from sticking to the wound when removed. I have also observed that under the pressure of bandaging the material still retains its absorbent qualities, and does not cake when properly teased out before use."

Progress of Medical Science.

The Uselessness of the Hypodermic Employment of Iron.—The Paris correspondent of *The British Medical Journal* writes that M. Hirschfeld has lately discussed the question of the hypodermic injection of ferruginous compounds, in a thesis for the Doctor's degree. After a short review of the various works which have appeared on this subject since 1872, when Professor Rosenthal, of Vienna, first employed iron preparations in hypodermic injections, the author proceeds to describe his own experiments at the Hôpital Cochin. His observations have led him to conclude that the method of administering iron preparations by means of hypodermic injections is excessively painful to the patient, and inefficient in its result. In defending the system of administering iron compounds internally, M. Hirschfeld quotes the opinion of Professor Hayem, who states that he has hardly ever met with a patient who could not take iron salts.

Tubercular Disease of the Ear.—Dr. Habermann recently made a communication on tubercular disease of the ear to the Verein Deutscher Aerzte of Prague. He had seen eighteen patients affected with tuberculosis who suffered from hardness of hearing and otorrhœa. In nine of these cases he detected the presence of tuberculosis of the auditory apparatus; in seven, purulent otitis media; and in two catarrhal swelling of the mucous membrane of the middle ear was present. He described two of these cases in detail. In a child, aged one and a half, there was tuberculosis of the mucous membrane of the middle ear, beginning at the isthmus tubæ and reaching as far as the antrum mastoideum. There was no perforation of the membrana tympani. This case was remarkable on account of the localization of the affection. Various parts of the mucous membrane of the middle ear were found to be affected with tuberculosis, and evidence was thus given of the spread of the disease in the middle ear by infection from contact. The possibility of infection of the ear taking place through the Eustachian tube was, by such observations, rendered more probable. By way of illustrating infection by contact in such cases, Dr. Habermann showed the membrana tympani of a man, aged thirty-one, which presented a large perforation at the anterior part, and three small perforations at the posterior one; the latter were due to the fact that the membrana tympani was attached at that point to the mucous membrane of the promontory, which was affected with advanced tuberculosis. The second case which he described particularly referred to the condition of the internal ear, as the middle ear had already been completely destroyed by caries. The disease, in this case, had supervened in the middle ear, a year and a half before the patient's death; later on it gave rise to perforation of the wall of the labyrinth, and to extension of the disease into the internal ear. Proof of this was afforded by the fact that the morbid process in the internal ear had already, in part, undergone retrogressive metamorphosis, when the progressing carious process of the bone led to a new affection and destruction of the structures of the internal ear.—*The British Medical Journal.*

Tympanites Treated by Puncture.—At a meeting of the Hunterian Society (*The Lancet*), Dr. R. J. Ryle read a paper on a case of tympanites treated by puncture through the abdominal wall. The patient, a man aged forty-six, came under treatment in October, 1887, with vomiting, paroxysmal pain, and constipation of about ten days' duration. Examination of the abdomen showed considerable fulness, but no tumor was felt, and examination per rectum revealed nothing. Enemata and O'Beirne's tube gave no information. Colotomy was proposed, but declined by the patient; therefore puncture of the intestine to relieve distention was resorted to as the only treatment which promised relief. Eight punctures were made, with considerable relief to the distention, but with the result of setting up an attack of violent preistaltic contraction about half an hour afterward. Three days later it was necessary to puncture again in three places, and two precautions were used to prevent peristalsis—viz.: (1) Hypodermic injection of morpho-atropine, and (2) use of a larger aspirating needle. A very large quantity of gas was evacuated. No violent peristalsis followed. Forty-eight hours later the bowels opened. After a fortnight symptoms of obstruction returned, and puncture again became necessary, the same precautions being taken as on the former occasion, and in the course of the following three weeks puncturing was four times repeated. Great temporary relief was gained, but the patient gradually sank and died. A post-mortem examination showed an annular stricture of the first part of the rectum, but no evidence of peritonitis or extravasation of fæces, and, with the exception of certain small black spots, no trace of the puncture was visible in the wall of the bowel. The points of interest in the diagnosis of this case of chronic obstruction were then discussed, and secondly those of the treatment by puncture. As to the latter, the relief afforded by this procedure was of value, for three reasons: 1. As checking the respiratory and circulatory difficulties consequent on extreme distention. 2. As diminishing the direct risks of distention—viz., rupture and peritonitis. 3. As favoring the re-establishment of the normal intestinal action. The chief mode, however, in which puncture tended to produce evacuation of the bowel is by exciting brisk peristalsis, and this is a result which, as in the present instance, may require to be guarded against. As to the dangers of intestinal puncture, it is impossible to state that there are none; thinning or ulceration of some part of the bowel may convert a puncture into a rent. The same might happen from movement of the impaled bowel, or liquid fæces might be conveyed from the needle to the peritoneum. But a much less hypothetical danger seemed to be the rupture of the diseased bowel by the violent peristalsis set up by puncturing, or if the puncturing is very free. The reality of this risk is shown (possibly) by the history of a case of Dr. Bristowe's, recorded in the "Pathological Society Transactions" for 1872; and still more clearly by a case recorded in 1878 in the *British Medical Journal* by Dr. Coupland and Mr. Morris, in which rupture was due to peristalsis caused by puncture. If this view of the danger be correct, the proceeding comes to resemble the administration of ergot during labor, and the cases most suitable for the treatment would seem to be those characterized by healthy bowel and an absence of insuperable obstruction, such as sometimes occur in obstetric practice or after abdominal operations. Perhaps, too, as has been suggested by Dr. Galabin, this treatment might be of use in commencing peritonitis. The beneficial effects of simple relief of tension in checking the progress of inflammation are shown in periostitis and cellulitis, and probably a few needle punctures would be less dangerous than continued distention to the peritoneal coat. From similar considerations he suggested its employment in enteric fever, more especially if, as was probable, excessive peristalsis can be prevented by opium.

Syphilis and Cancer.—Professor Lang, of Vienna, read a paper recently on the "Coexistence of Syphilis and Cancer." But little attention had been hitherto directed to the fact that syphilis sometimes formed the predisposing soil for the development of cancer, or that both diseases might be combined with each other. Setting aside some observations of comparatively little value which had been made by ancient authors on the subject, it was especially Hutchinson and Langenbeck who, before Professor Lang, had directed attention to the simultaneous occurrence of syphilis and carcinoma. The speaker had observed such a combination four times. The first case was that of a patient who had been admitted in 1883 under his care when he was at Innsbruck. Besides an old-standing iritis and other symptoms of syphilis, he was suffering from serpiginous and gummatous ulcerations on the nose, the cheek, and the angles of the eye. Most of the ulcers healed under antisyphilitic treatment, except one, which gradually changed its character and assumed the form of an "ulcus rodens," that is, a flat carcinoma of the skin. The patient was transferred to the surgical clinic, where he underwent an operation, and microscopical examination proved the simultaneous existence of both syphilis and carcinoma. The second case was that of a patient, aged forty-six, who had previously been treated for recent syphilis by Professor Lang. There were syphilitic infiltrations of the floor of the mouth and under the tongue, and, moreover, various syphilitic infiltrations over the occipital bone and the body. All these lesions subsided under the influence of a common antisyphilitic treatment, except the infiltrations of the floor of the mouth, which became transformed into cancer. The third case was that of a man, aged about thirty, who presented a syphilitic ulcer on the under lip. The ulcer disappeared under antisyphilitic treatment, but relapse and transformation into carcinoma occurred a year later. In all these cases the correctness of the diagnosis was proved by the anatomical examination. The fourth case was shown to the Society. The patient had extensive scars, ulcerations as well as infiltrations on the forehead, loss of the entire nose, loss of substance on the upper lip, ulceration and perforation of the hard palate, perforation of the soft palate, and cicatricial retraction of uvula. On admission of the patient into the clinic of Professor Lang, in the middle of January last, some of the ulcerations were covered with a white tallowy mass, which led Professor Lang to suggest the presence of a combination of syphilis with carcinoma. The microscopical examination, however, revealed only the presence of pus corpuscles and products of decomposition. The infiltrations on the right side of the forehead later on slightly diminished, but from four to five weeks later a vegetation on the anterior end of the ulceration of the hard palate appeared, the character of which was incompatible with that of syphilitic ulceration. A part of this vegetation was excised, and the microscopical examination of it, which was made by Professor Weichselbaum, showed that it was "epithelial carcinoma."—*The British Medical Journal.*

Smoker's Vertigo.—At a meeting of the Académie de Médecine, M. Decaisne spoke on the vertigo of smokers. He said that numerous experiments have proved that nicotine contracts the muscular coat of the vessels, and that vertigo was due to the exaggerated contraction of the arteries of the brain. The patient experiences a feeling of emptiness in the head, so much so that he seems as if about to faint. Everything turns round, and his ideas become confused. M. Decaisne found that these phenomena were chiefly found in smokers above fifty, and especially in those who smoked habitually before meals. He had known several of these persons to be treated for cerebral congestion, and even disease of the heart, with the result, as might be supposed, of increasing the symptoms. The treatment consisted in absolute abstention from the weed, and some slight laxative with bitters.

Case of Traumatic Aphasia Successfully Treated by Trephining, and Removal of a Blood Clot from the Interior of the Cerebrum.—At a recent meeting of the Royal Academy of Medicine in Ireland (*The British Medical Journal*) Mr. C. B. Ball read notes of the following case: F. B., aged twenty-six, admitted September 1, 1887. He stated that he had been struck on the head with a penknife ten days before coming under observation. He presented himself at another hospital immediately after the accident, but his case was not considered sufficiently urgent for him to be detained as an in-patient. Since the accident he had difficulty in using the right word, as, for instance, he said he had a "man" in the side of his head when he meant "pain." He said that the difficulty of speaking and pain in his head had increased considerably during the last few days. Upon examination a small scab was found adherent to the scalp, over the squamous portion of the left temporal bone; this, when detached, showed a cicatrix apparently extending deeply through the temporal muscle, but the wound was quite healed. Classifying the symptoms presented by this patient during his stay in hospital, it was found that his motor aphasia was to the extent of being unable to name articles which were shown to him correctly, while in speaking he constantly used wrong words or parts of words. Although he was able to write his name correctly, and with rapidity, and copy writing, he was unable to write from dictation, or to write sentences which he originated himself; his attempts to do so did not show a single properly formed character. Word blindness: When given a book to read he said the words ran into one another, and then he could not make them out. Word deafness: When asked questions his answers were sometimes so irrelevant as to suggest that he had not appreciated the meaning of the query correctly; and when told to put out his tongue he opened his mouth only, but when he was set an example he at once protruded the tongue. This was frequently tried with the same result. There was no paralysis whatsoever to be detected of any of the voluntary muscles when he came under his observation; and, judging from the fact that immediately after the accident his case was not considered sufficiently grave for admission into another hospital, there could not have been at that time any overt paralysis. Five days after his admission his symptoms had so much increased that it was determined to operate. A flap was turned down, including a portion of the temporal muscle, and containing in its centre the cicatrix; this disclosed a wound of the squamous portion of the temporal bone, of a size and shape likely to be produced by a small blade of an ordinary penknife, held horizontally, with the back of the knife toward the patient's back, and the edge looking directly forward. A medium-sized trephine was now applied, and a circle cut out, containing in its centre the cut in the bone; this was attended with some difficulty, as the lower part of the circumference was exceedingly thin, while the upper portion was tolerably thick; the piece was removed without injury to the dura mater by the trephine. It was found that the knife had perforated the dura mater and brain. The wound in the dura mater was enlarged, in doing which the large posterior branch of the middle meningeal artery was divided, and gave some little difficulty to control; this vessel had very narrowly escaped injury by the penetrating knife. A sinus forceps was gently passed along the brain wound, and the blades separated, when dark-colored blood presented, which was gradually extruded by the internal brain-pressure. Some more fragments of clot were removed by the sinus forceps, and by a stream of weak perchloride of mercury solution from a syringe. A drainage-tube having been introduced, the flap was replaced and held in position by deep sutures, including the temporal muscle. On the evening of the same day the patient was much more rational, and carried on a long conversation, with very few mistakes in his selection of words. Next morning he was again more aphasic, and it was found that the drain had become blocked. Upon freeing it a considerable quantity of fluid, containing broken-down blood clot, was removed, and his power of speech improved. He made an uninterrupted recovery, and regained completely his power of writing, reading, and speaking. In this case he believed the knife penetrated the superior temporo-sphenoidal convolution, traversed the fissure of Sylvius, and probably injured Broca's convolution, and that his symptoms were due to a blood clot in the fissure of Sylvius, which was breaking down, and which was evacuated by timely surgical operation.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, October 6, 1888.

THE PERCENTAGE OF INCOMPETENT GRADUATES FROM MEDICAL COLLEGES.

THE *Journal of the American Medical Association* gives an interesting summary of the work of the Medical Examining Board of Virginia, and deduces therefrom some conclusions which are worthy of wide attention.

The Examining Board in question is a body authorized by law to license practitioners of medicine after they have passed a satisfactory examination. The Board does exactly what it has been the effort of the medical profession of this State to do—an effort which has been defeated by the selfish policy of the medical colleges.

Since the organization of this Board, January, 1888, there have been 223 applicants in all, 49 being rejected—21.97 per cent. Of the applicants 212 were graduates; 45 were rejected—21.69 per cent. There were 11 non-graduate applicants, 4 of whom were rejected—36.36 per cent.—and 2 had not completed their examinations at the time of the report. In a table are given the names of 27 colleges from which applicants have come before the Board; excluding the University of Heidelberg, we have 26 American colleges; 13 of these sent 51 applicants, all of whom passed; 13 others sent 156 applicants, with an average of 34.73 per cent. of each rejected—more than one-third.

Our contemporary adds: "Counting first and second applicants, we see that 228 graduates were examined, and 54 failed—23.68 per cent. From 1877 to 1887 inclusive, there were 36,097 graduates from medical colleges of the United States. They held documents that are considered as entitling to practise in the majority of our States and Territories. But according to the above figures, if these 36,097 had gone before an efficient examining board, 8,300 *would have been rejected!*"

If we may judge by the work of the Virginia Board, then nearly one-fourth of the graduates of our American Medical Colleges cannot pass a reasonable examination by an unprejudiced Board, and are not fit, so far as examination-tests show, to practise medicine.

This is an unpleasant showing, and one which speaks severely against the carefulness and conscientiousness of our medical institutions for teaching.

It may be said that the best material does not go before this Virginia Board, and that if it were to examine all the graduates of each college, the percentage would be lower. Such an objection is justifiable so far as it goes, but the fact remains that one-fifth of the medical graduates who go to Virginia to practise are found incompetent.

It is well known that an effort has been made by the Faculty and Students of the Medical College of Virginia to change the law so as to exempt Virginia graduates from its provisions. This is a confession of weakness unworthy, as it seems to us, of the colleges of that State. If the local institutions cannot educate students sufficiently to pass the Board examinations they had better go out of the business. As a matter of fact their record is a good one, and does not call for the effort they are making to weaken the force of a good law.

If the Virginia Board continues its work as faithfully as in the past, it will do an immense service to medical education, not so much through its careful examinations and purgation of the plethoric mass of annual graduates as by the example of a successful application of the principle that the licensing power should be taken from the colleges and placed in the hands of an independent board.

THE YELLOW FEVER MICROBE.

IT is well known that Dr. Domingos Freire, of Rio Janeiro, has for several years contended that he has discovered the microbe of yellow fever, cultivated and attenuated it, and used it in making protective inoculations. It is also part of history that M. Paul Gibier was sent from Paris to examine into these alleged discoveries, and that Dr. Sternberg was sent by the United States Government for the same purpose. Both gentlemen reported that Freire's discoveries amounted to nothing, that his methods were faulty, his observations inaccurate.

Dr. Domingos Freire has recently made a reply to his critics, an abstract of which we find in the *Medical Times*.

Dr. Sternberg is dismissed in a foot-note, in which Dr. Freire says that the American sojourned but a short time in Brazil, at a time when there was no epidemic; he examined but one sporadic case, and made no autopsy; in fact, he had not the materials with which to form an opinion of even mediocre value. Dr. Sternberg, he adds, supplies the lack of arguments by distorting the facts, and inventing imaginary calculations and coarse sophisms, in order to uphold his preconceived idea that this vaccination against yellow fever is chimerical.

This is a somewhat severe indictment of a $10,000 commissioner, and it is certainly quite out of accord with Dr. Sternberg's known character and previous work. We can say personally that we have not observed any coarse sophisms in the doctor's works.

But it is to M. Gibier that Dr. Freire devotes most of his attention. That gentleman, though repudiating Freire's discovery, announced that he had himself found a microbe which might be the germ of yellow fever. He says, "I have isolated, from the black contents of the intestine, by a particular process, a micro-organism whose culture let fall in less than twenty-four hours a deposit of thick, black flakes and powder. The sides of the culture-tubes are blackened by the secretions of the microbes. I have inoculated with a drop of this culture the intestines of guinea-pigs, which die in twelve to sixteen hours, with the intestine extremely congested, and containing a blackish and sanguinolent matter." All these results Freire claims to have obtained already. On page 203 of his book entitled, "Doctrine microbienne de la fièvre jaune et ses inoculations préventives," published in 1884, he says: "A large number of cultures have presented a black deposit, which we have shown to our students and to Brazilian and foreign physicians. When Professor Rebourgeon, in the laboratory of the faculty, repeated our experiments and researches, he had occasion to verify for himself the truth of this fact, curious and full of interest for the pathogeny of yellow fever."

This paragraph shows, perhaps, that Freire had isolated the same microbe, but not that he really appreciated its life history.

He claims, however, that in addition, Finlay at Havana, and Matienzo at Vera Cruz, independently found and cultivated the same microbe.

Dr. Freire's pamphlet is an interesting one, and it will, no doubt, elicit interesting discussions.

HOMICIDAL PARANOIA AND THE WHITECHAPEL MURDERER.

For some weeks past a certain district in London has been the seat of a series of frightful murders. The victims have always been women, and these were prostitutes of the lowest class. The crimes have been committed at the dead of night, and always in nearly the same fashion, the neck being cut, and then the victim disembowelled, and in some cases the uterus taken out. Six murders have so far occurred, and the author of the crimes has not yet been discovered.

Beyond all question the work is that of a lunatic. Such forms of insanity are rare, but not unknown. The subjects are cases of monomania of a primary or degenerative character. The general term paranoia includes the type, but those murderers are paranoiacs who are affected with morbid and bestial propensities of the lowest and most revolting nature. The insane murderers who do the kind of work that has been accomplished at Whitechapel are of the same class as those who have sexual aberrations or cannibalistic and necrophilic propensities. Indeed the Whitechapel murderer seems to show a form of necrophilis—a name given to the propensity to violate dead bodies, and sometimes associated with the propensity to murder.

Some five years ago our readers may remember that a long series of murders was committed in Westphalia by a lunatic. In all cases the victims were young girls, who were violated and then killed in the most horrible and revolting manner.

Homicidal mania is a very common symptom and occurs in many forms of insanity. It is sometimes the result of a delusion, but more often springs from an overwhelming impulse or an imperative feeling passing suddenly beyond control. Homicidal maniacs of these types kill without premeditation, or at least without any careful planning to escape punishment. Their crimes are single.

With the homicidal paranoiac it is different. Murder causes in him a distinct delight. The sight of his slaughtered victim is a source of exquisite material enjoyment. He has no delusions, he has simply a horribly brutal appetite to gratify and no moral feeling to interfere with its indulgences. He understands the nature of a crime intellectually and appreciates its legal consequences. Hence he develops sometimes an extraordinary cunning in evading the just consequences of his acts.

The problem of what to do with these monsters is generally settled practically by the intense horror and anger excited by their deeds. Though lunatics, they are hung, either by lynch law or through the agency of the proper courts. Perhaps it would be more just and humane not to kill such congenital criminals. The problem is a difficult one, and involves the purely social question: What method in the end is for the best interests of society, to kill or to imprison for life? As society develops humaner instincts and broader views of the nature of crime, and of the crookedness born into certain persons' minds, no doubt imprisonment will be the fate of most of the unfortunate moral monsters whose crimes shock and infuriate us. At present, however, the Whitechapel murderer, if found, will, we fancy, find but little mercy in the civilized city of London.

THE CLASSIFICATION AND CAUSES OF IDIOCY.

A great deal more attention has been paid to the subject of insanity, its cause, prevention, and increase, than to that of idiocy. Yet there are in this country nearly as many idiots as insane, and the rate of their increase has been nearly as rapid. The following figures show this. Total number of idiots in the United States: 1850, 15,787; 1860, 18,930; 1870, 24,527; 1880, 76,895.

The number of idiots, as given by the census, at one time equalled that of the insane. The latter class, however, is now slightly in excess, owing to the excess of adults in our population. But the existence of one idiot (scientifically so classed) to every six hundred and fifty-two persons of developed mind, should awaken a somewhat larger interest in these unfortunates than has heretofore been the case.

There are, according to Dr. Down, three forms of idiocy: The congenital, the accidental, and the developmental.

The congenital form includes those cases in which the defect in the brain is the result of progressive family deterioration; hereditary taint increased by intermarriage until the climax is reached. The health of the mother is an important factor in causing these types. Violent emotions, chorea, epilepsy, and eclampsia may be of the gravest import to the offspring. Periods of political excitement, wars, etc., all increase the roll of feeble-minded children, and the effect in certain instances has been demonstrated with almost mathematical accuracy. Severe emotional disturbance even in the father may lead to a similar result, but apparently with less certainty. Alcoholism, as might have been expected, is responsible for a very tangible share of mental and physical degeneracy, and in Norway, after the removal of the spirit duty, insanity increased fifty per cent., and congenital idiocy one hundred and fifty per cent. Syphilis is not, it appears, an important factor, but phthisis is said to exercise a very marked influence, existing as it did in twenty-five per cent. of the fathers and twenty per cent. of the mothers.

We must remember, however, the very great frequency of phthisis in all classes.

Quoting from an analysis of Dr. Down's lectures in the *Medical Press*, we find that the influence of trades and professions is possessed of especial interest. Out of four hundred cases with fair social antecedents, the lecturer found that seventy-five per cent. were the children of merchants, county gentlemen, officers in the army and navy, and members of the titled aristocracy; no less than twenty-five per cent. were the children of members of one or other of the three learned professions. It is comforting to know that while three per cent. were the offspring of lawyers, and four per cent. of members of the medical profession, no less than eighteen per cent. were the children of members of the clerical profession. On the other hand, the legal profession gives birth to eleven per cent. of the present men of eminence, the medical to nine per cent., and the clergy to only four per cent.

With regard to accidental idiocy, Dr. Down is known to place much stress upon accidents at the time of labor. He says that, while instrumental interference *might* have caused about nine per cent. of the cases, in more than twenty per cent. there was a history of suspended animation or a hitch of some kind at birth. Prolonged labor and consequent pressure, is a much more potent factor than mechanical injury from the use of instruments. Sunstroke, the administration of opium, and sexual excitement wilfully induced by nurses to keep their charges quiet, are all responsible for a part of the number, but meningitis and encephalitis doubtless lead to a large proportion of the cases.

Cerebral hemorrhages are also elements of some frequency in causing feeble-mindedness.

Of the developmental variety, or those whose intellectual development is arrested during dentition or at puberty, Dr. Down says: These are the cases which break down by over-excitement in babyhood and by "over-pressure"—that is, pressure too great for them with inherent want of stamina at second dentition and puberty. Such cases are the more important, seeing that with due care they may in many cases avoid the breakers on which their intelligence would founder.

THE FIELD OF THE GENERAL PRACTITIONER.

A GREAT hue and cry has been raised by our English exchanges over the attempt to publish a "Dictionary of Specialists." We take it that the dictionary will be little more than a medical register of the different specialists, giving the qualifications of each. Such a publication irresponsibly issued would no doubt be open to great abuses, and we do not venture to argue against the storm of aggrievement and invective roused by the proposed publication. There is always something a trifle amusing, however, in the ponderous way with which our English brethren receive a shock to their sense of the conventional, even if, as in this case, there is good cause for its being disturbed. One would think just now that the foundations of British Medicine and Morals were being sapped through the calculated malice of an amateur lexicographer.

The evils and abuses of specialism which are again being heralded by our esteemed contemporaries are patent to everyone, and they have been often enough discussed in these columns. Sometimes, however, it seems as though needless attempts were being made to frighten the general practitioner into an idea that the time is coming when all medicine will be specialized and the family doctor be left without a field for his work.

Such a state of things is impossible, as will be seen by a little reflection.

If one looks over the lists of causes of death he will see that the infectious fevers produce one-fourth of all the mortality, each death representing five to ten cases of sickness; he will find that phthisis and bronchitis produce nearly one-fifth, pneumonia a twelfth, Bright's disease a fifteenth, of the annual deaths. One-third of this mortality also occurs among children under five years of age, too young to be very much specialized, while about one-twenty-fifth of cases of severe sickness are obstetrical. Practically, all acute illness, all obstetrics, pædiatrics, and a large proportion of accidents, injuries, and minor chronic ailments must remain under the domain of the general practitioner.

There is certainly field enough for him.

The worst evils of specialism now are those resulting from the fact that too many are rushing to these narrower channels, forgetting that the field is small and must remain so.

THE ALKALINE TREATMENT OF YELLOW FEVER.

IT is a fact true of yellow fever, as well as of all self-created fevers, that treatment must be individualized, and must be more or less symptomatic. Any attack of yellow fever cannot be regulated by any measure at present known. Experienced physicians will feel some doubt of the value of any routine line of treatment, no matter how well supported by theory and statistics. Dr. George M. Sternberg, however, has ventured to propose a special treatment for yellow fever based on certain pathological and physiological considerations (*Therapeutic Gazette*).

It is well known, he says, that in yellow fever the urine and the vomited matters are highly acid. The intestinal contents, also, have usually a more or less decided acid reaction. A microbe, therefore, capable of multiplying in the stomach and intestine in this disease must be able to grow in an acid medium. But aside from this theoretical reason for prescribing alkalies, the highly acid condition of the secretions furnishes an indication for such a treatment, and Dr. Sternberg therefore proposes the following formula:

℞. Sodii bicarb.	10 grms. (gr. 150).
Hydrarg. chlorid. corrosiv.	2 ctgm. (gr. $\frac{3}{10}$).
Aquæ puræ.	1 litre (1 quart).

M. Sig.—Fifty grammes (about oz. $1\frac{3}{4}$) every hour; to be given ice cold.

The house-physician at the Garcini Hospital has sent a record of twelve cases treated by the alkaline and bichloride method, and it appears that all of them recovered. While these twelve cases were being treated, and a little before, eight cases were treated in the same institution by other methods, and five of the eight died.

It is admitted that the bichloride in safe doses does very little toward intestinal antisepsis, and the formula above given is not a rational one, so far as intestinal disinfection is concerned. But the results, so far as reported, are creditable to the alkaline method.

News of the Week.

Professor Charcot's Fee for treating the Emperor of Brazil was $8,000.

Railway Surgery.—We have a unique specialty among medical journals in the *Journal of the National Association of Railway Surgeons*, devoted to the interests of railway surgery.

Yellow Fever in the Year 1887 was present in Mexico, Brazil, Central America, Cuba, Jamaica, and at Tampa and Key West, Florida, but chiefly at Guayaquil, Havana, Key West, and Santiago de Cuba. The total number of deaths during the year was 1,270. Of these 147 occurred in Florida. The loss of life from yellow fever in Florida, during the recent epidemic, has not been quite double the loss of the year before.

The Yellow Fever Epidemic at Jacksonville is on the decline. Up to October 4th there have been 2,896 cases and 270 deaths.

Dr. Abner O. Kellogg, for many years first assistant physician at the Hudson River State Hospital, Poughkeepsie, died at Kentland, Ind., on September 21st, from paralysis. He was born in Madison County, N. Y., about seventy years ago. Dr. Kellogg was in general practice till 1861, when he was appointed first assistant at the Utica Insane Asylum. He was appointed at Poughkeepsie in 1870.

Mesmerism and the "North American Review."—An excellent example of the pernicious activity of bumptious ignorance is shown in a recent article in the *North American Review* on mesmerism. The contributors to this journal are supposed to write with some authority, but the author of the article in question seems quite unacquainted with the recent work and conclusions of scientific men. Nor does he seem to be aware of the harm which articles upon this subject, written without caution, may produce. Any work which would encourage experiments in parlor hypnotism deserves to be severely condemned.

Weighing Thoughts.—A correspondent of the *American Practitioner* writes from London that Professor Mosso has been studying the variations of the circulation in the hand and head by means of the plethysmograph. His observation of the changes in the amount of blood in the hand during various kinds of mental activity are old and of no especial significance. In addition, however, he now has a balance on which the horizontal human body may be poised. With this he has found that one's thoughts may be literally weighed, and that even dreams or the effect of a slight sound during slumber turns the blood sufficiently to sink the balance of the head. The changing pulse even told him when a professional friend was reading Italian, and when Greek, the greater effort from the latter duly affecting the blood-flow. The practice of weighing one's words has been advised since antiquity; that of weighing the thoughts is perhaps fully as important. It would be a great help to editors and presidents of medical societies if an article sent in could be indorsed: "Weight of thoughts embodied, 1 gramme and 20 milligrammes." A minimum weight-limit might be established for original articles. A great future lies before Professor [Mosso's plethysmographic horizontal balance.

A New Hospital.—The papers announce with much flourish the completion of a new homœopathic hospital at Detroit, Mich., at a cost of $100,000. The sum mentioned does not go far in hospital building and maintenance. It is unfortunate, however, that even such an amount should be wasted in giving support to a dogma already practically extinct in intelligent communities.

The New York State Medical Association holds its fifth annual meeting at the Hotel Brunswick, in this city, October 9th and 10th.

Medical Colleges and the License to Practise.—Dr. William Osler, of Philadelphia, sends to the *Journal of the American Medical Association* some forcible remarks regarding the subject of separating the licensing and the teaching powers. "It is not a function of the university to grant the license to practise. That the M.D. degree carries this privilege is a modern usurpation, which does not extend to degrees in other faculties. It is a function of the State, to be exercised either directly, as is done in Germany, or indirectly, by the profession organizing and appointing suitable examiners. The struggle is between the colleges and the profession, and I would refer anyone who may feel doubtful as to the issue of the fight to an address which I delivered in 1885, when President of the Canada Medical Association (*Med. News*, 1885, ii.), in which I sketched the organization of the profession in the Provinces of Ontario and Quebec, which led, in the former Province, to the complete subjugation of the schools. You may be surprised, sir, at these sentiments from a dyed-in-the-wool school-man, but I feel convinced that the future of medical education in this country lies largely in the establishment of State Boards, such as exist in Virginia and North Carolina, which shall (1) control the entrance examination, (2) regulate the curriculum, and (3) grant the license to practise."

In Honor of Esmarch.—The last meeting of the Medico-chirurgical Society, held October 1, 1888, was unusually well attended, in honor of Professor von Esmarch, who had received and accepted an invitation to address the Society. After the close of official business, supper was served and impromptu toasts were proposed and responded to. Among those who made remarks may be mentioned Dr. L. Weber, the President of the Society, who toasted the honored guest of the evening. Professor von Esmarch. The latter briefly expressed his thanks and appreciation of the honor conferred upon him by the Society's invitation. Drs. Sayre, Detmold, Heitzman, and Jacobi also spoke. Dr. Lange read a number of poems specially composed for the occasion, and humorously eulogistic of Esmarch.

The Specific Bacillus of Syphilis.—Julian Markuse, in the *Vierteljahresschrift für Dermatologie,* gives the results of his studies of the secretions in one hundred and sixty-one cases. He examined especially the Lustgarten syphilis bacilli and the smegma bacilli. Although these are apparently identical by ordinary methods of research, Markuse found what he considers a differential stain. He thinks, therefore, that these two bacilli are distinct.

THE CHINESE PHYSICIANS are the homœopaths of the East. The *Sei-I-Kwai Medical Journal* states that in Japan it is still thought by some Japanese, especially old men and women, that children should be treated by Chinese physicians, because their treatment is generally mild.

UNTIMELY.—A contributor to the September issue of the *Therapeutic Gazette* advocates Florida (*quoad* Orlando) as a health-resort.

FREE WHISKEY AND THE INCREASE OF IDIOCY AND INSANITY.—In Norway, after the removal of the tax on whiskey, insanity increased fifty per cent. and idiocy one hundred and fifty per cent.

THE PANCREAS can be entirely removed from dogs without loss of life or especial disturbance of functions, according to Dr. G. Martinotti. Signs of increased work thrown on the intestinal glands are found.

THE ABUSE OF LOCAL TREATMENT OF THE UPPER AIR-PASSAGES.—Two articles, touching upon the subject of the excessive operative zeal of rhinologists, have recently appeared in the *British Medical Journal*. Dr. F. de Havilland Hill says: "It appears to me that a good deal of unnecessary tinkering with Nature's handiwork is done to the septum. Some surgeons seem to think that unless the septum be perfectly straight, measures ought to be taken to rectify its faulty position. When one reads that in the space of two years one specialist has operated on one hundred and sixty-six patients for deformities of the nasal septum, in private practice alone, I think you will agree with me that in all probability his zeal for the rectangular was greater than his judgment. This is on a par with what took place when attention first became directed to displacements of the uterus—every trifling departure from the normal position was thought to require a special pessary, and to be the cause of innumerable ills; now, however, common-sense is reasserting itself, and it is allowed that the uterus need not be in exactly the same position in all women." Doubtless there has been a somewhat excessive amount of operating on the nose. Fortunately, however, even where the operations fail, very little, if any, harm can be done.

IRISH POLITICS AND THE MEDICAL PROFESSION.—*The Lancet* states that in some parts of Ireland the political agitation, and the doctrines underlying it, are having a very injurious effect on medical practice. People are apt to think that they should receive medical relief as a State right. This has long been provided for in the dispensary system of Ireland as regards the people that, by any pretence, can be regarded as poor. But it is now complained that people who heretofore have had a feeling of pride and independence, and who would go to the medical man of a district as private patients and gratefully compensate him for his services, now apply for the "red ticket" and accept gratuitous medical attendance. The Irish have long been the main-stay of free dispensaries in this city. Other nations, notably the Germans and Italians, are now pressing them hard.

PASTEUR'S INOCULATIONS FOR RABIES have not been very fortunate of late. Since June seven persons who had been bitten by rabid animals (in most cases cats) and subsequently inoculated have died.

MEDICAL CONGRESSES IN ITALY.—There is a perfect epidemic of medical congresses in Italy at present. Gynecologists, ophthalmologists, hygienists, hydrologists, have met and listened to each other's eloquence, and exchanged compliments, and recounted their triumphs to their admiring friends. The great Medical Congress which is to be held at Rome in October will be the first of its kind; and Dr. E. Maragliano and his lieutenants are sparing no pains to make it a success. About the same time another hygienic congress will meet at Bologna.—*British Medical Journal.*

EVERYONE WILL SYMPATHIZE with the extraordinary and unjust suit which has been brought against Dr. Samuel C. Vander Poel, of this city, recently. Some weeks ago, the accounts state that Dr. Vander Poel diagnosticated the illness of a little daughter of Charles Dawson, of Syracuse, N. Y., who was spending some time with his family at the Larkins House, Watch Hill, L. I., as scarlet fever. Mr. Larkins, the proprietor, relying on the diagnosis of another physician, denied that the child was suffering from the disease, and the Dawson family remained at the hotel. The other guests, hearing of Dr. Vander Poel's diagnosis, left the place. Mr. Larkins immediately brought suit in Rhode Island against Dr. Vander Poel for twelve thousand dollars damages. Dr. Vander Poel says that his diagnosis was correct and that he has been sustained by the Board of Health of Westerly, R. I., and some prominent physicians. We understand that Dr. Vander Poel intends fighting the suit.

THE POISON IN THE CIGARETTE.—Dr. William L. Dudley, as the result of some carefully conducted experiments upon the combustion of cigarettes (*Medical News*), concludes: 1. That carbonic oxide is the most poisonous constitutent of tobacco smoke. 2. That more injury results from cigarette than cigar or pipe-smoking, because, as a rule, the smoke of the former is inhaled. 3. That cigarette smoking without inhaling is no more injurious than pipe or cigar-smoking. 4. That the smoke of a cigar or pipe, if inhaled, is as injurious as cigarette smoke inhaled. 5. That the smoke from a Turkish pipe, if inhaled, is as injurious as that of a cigarette inhaled.

THE "OMAHA CLINIC" is the title of a new monthly journal edited by Dr. J. C. Denise. Nebraska now has two medical colleges and one medical journal. The journal is a good one.

A CODE OF ETHICS FOR DENTISTS.—At a recent meeting of the British Dental Association, Dr. Flack read a paper on "Dental Ethics" in which he advocated the establishment of a code of ethics. Whether this is to be a new code or an old code appears to be a matter for furture deliberation.

PHEBO-SCLEROSIS is a systemic condition analagous to arterio-sclerosis. It has recently been studied by Dr. Sack, of Dorpat, who finds it much more frequently present than has been supposed. It stands in close relation, etiologically, to arterial sclerosis.

HEADACHE AND SALT.—Dr. Rabow has found that an attack of migraine may often be averted by a teaspoonful of table salt taken upon the first appearance of the premonitory symptoms.

Society Reports.

SEVENTH INTERNATIONAL CONGRESS OF OPHTHALMOLOGY.

Held in Heidelberg, August 8, 9, 10, *and* 11, 1888.

PROFESSOR DONDERS, OF UTRECHT, PRESIDENT.

(Special Report for THE MEDICAL RECORD.)

WEDNESDAY, AUGUST 8TH—FIRST DAY.

AT the opening session PROFESSOR DONDERS delivered the

PRESIDENT'S ADDRESS

in both German and French, each sentence being read first in one language and then in the other. He recalled the advances made in ophthalmology in recent years, mentioning particularly the labors of Graefe and Helmholtz.

DR. JAVAL, of Paris, presented a communication on

OPHTHALMOMETRY,

and showed a modification which he had made in the ophthalmometer of Helmholtz, with the object of making it of greater practical utility. In his instrument one of the glass plates was fixed, and the rod with three mirrors was replaced by a gas-pipe with three holes giving three flames. The drum registering the movements of the plate had been enlarged, and it was possible to read directly in dioptrics the value corresponding to the displacement of the plate. The final modification had been the substitution of the glass plates by a birefracting crystal, which gave a more distinct image.

DR. DUFOUR asked what were the relations between corneal astigmatism and total astigmatism of the eye, and also whether the curvature of the cornea varied with the blood-pressure and with the heart's action.

DR. JAVAL replied that he had noticed a rhythmical modification of the corneal curvature synchronous with the radial pulse. As to

THE RELATION BETWEEN CORNEAL AND TOTAL ASTIGMATISM,

the first most commonly represents the second. There are, however, two exceptions: 1. In irregular corneal astigmatism there exists also irregular crystalline astigmatism. In this case the crystalline has undergone a slight rotation around its vertical axis. 2. In young persons corneal astigmatism is wholly or in part masked by an astigmatic contraction of the crystalline. The total astigmatism is then much less than that of the cornea, but it becomes equal to it after the thorough use of atropine. Accommodation in astigmatics takes place in two stages: there is first a slight effort of accommodation, and then rotation of the crystalline around an axis situated in the frontal plane, in order to correct the corneal astigmatism.

DR. GRAEFE, of Halle, read a paper on the

ACTION OF THE INTERNAL RECTUS MUSCLE

in associated lateral movements and in accommodative movements of convergence. He thought there was a distinct nervous centre for the production of each of the two sorts of movement executed by the internal rectus muscle, viz.: convergent or accommodative, and associated lateral movements. This belief is strengthened, he said, by clinical facts, since it is not uncommon to see one set of these movements abolished while the other remains unaffected.

DR. LANDOLT supported the reader of the paper in this view, and said that he had formerly reported cases of tabes in which there was abolition of convergence, with normal associated lateral movements.

DR. SAMELSOHN, of Cologne, referred to a case of congenital strabismus of the left eye, which he had seen, in which the associated movements to the left were normal, but those to the right were abolished. Convergence was possible, and so were the movements to the right of each eye separately. There was no diplopia.

DR. LANDOLT then read a paper on

NON-PARALYTIC STRABISMUS.

The absence of binocular vision and of accommodation predisposes to this affection. Among the exciting causes are the relation that exists between convergence and accommodation, the want of harmony between the retina and the motor system of the eye, abnormally wide separation or deformity of the orbits, and faulty insertion or defects in length or strength of the motor muscles. On the boundary line between this form of strabismus and the paralytic variety is that accompanying neurasthenia, hysteria, locomotor ataxia, and other affections of the nervous system. Recent cases may often be relieved by the stereoscopic exercises of Javal. In convergent accommodative strabismus, rest to the eyes, mydriatics, and convex glasses are especially indicated. Tenotomy is to be practised only when the antagonistic muscles are strong, and care must be taken lest exophthalmus result; the author preferred advancement of the tendon. In divergent strabismus mild measures are less efficacious, and it is necessary to resort earlier to operation. Tenotomy is indicated only in moderate degrees of strabismus, when the muscles are normal, and advancement of the internal recti is to be recommended when the muscles are weak. Vertical strabismus often accompanies marked degrees of lateral deviation, and disappears when they are cured; or, on the other hand, it may be caused by too active treatment of the latter.

DR. SCHWEIGGER said that binocular vision was sometimes present in the cross-eyed, as could be demonstrated by forcing the eye into its natural position under the influence of cocaine.

DR. JAVAL said that simultaneous vision might exist in both eyes in cases of strabismus, but this was very different from binocular stereoscopic vision.

DR. KNAPP favored muscular advancement, which left the eye with greater motility and did not expose to the danger of post-operative exophthalmus. Care must be taken, however, to carry the sutures in the episcleral tissue to the edge of the vertical diameter of the cornea. If there is found to be over-correction, one of the sutures can be removed early on the second or third day.

DR. SCHWEIGGER said that over-correction was not to be feared, as there was a natural tendency to return to the normal position in the course of time.

DR. DE WECKER said that he did not practise muscular advancement any more, but in certain cases he resected a portion of the muscle.

DR. REYMOND, of Turin, then read a paper on

THE ETIOLOGY OF STRABISMUS,

referring particularly to the influence of the relative amplitude of accommodation, and of convergence in the production of this condition.

DR. STILLING, of Strasburg, followed with a communication on

THE RELATION OF REFRACTION TO CRANIAL CONFORMATION.

The elongation of the eyeball, producing myopia, is caused by the pressure of the muscles, especially of the superior oblique. When the orbital vault is low this pressure is greatest. The author has found, from a long series of observations, that the orbital vault is low in myopes and high in hypermetropes. The former have a wide face and square head; the latter an elongated and narrow face.

DR. SCHMIDT-RIMPLER said that the development of the orbit might be secondary to that of the eye. The results of many examinations of the eyes of students in Marburg were not in support of this theory.

DR. WEISS had made measurements of the orbit on the living and the dead, and had often found these confirmatory of the author's views. But in anisometropes there is usually no difference between the two orbits.

THURSDAY, AUGUST 9TH—SECOND DAY.

DR. GAYET, of Lyons, read a paper on

THE TREATMENT OF CATARACT.

He began with the assertion that cataract could be cured only by operation, and that it was useless, therefore, to waste time with medical measures. There are three forms of operation of use in the cure of cataract, viz.: 1. Discission; this is suitable for soft cataracts, and its field of usefulness is growing more limited as the method by extraction is becoming perfected. 2. Displacement, or reclination, which is almost never indicated. 3. Extraction, which is the most generally useful method, and to which all others must in time yield. In the present state of science the extraction must be made without the capsule, but attempts at removal of the lens with its capsule are scientific, since this is an ideal after which we have a right to strive. Extraction necessitates opening the cornea in the region corresponding to the anterior chamber. The exact location of the wound cannot be settled by any fixed rules, for all positions have their advantages and their disadvantages. The opening should be large, better too large than too small. Iridectomy, as a rule, is not necessary. The discission of the capsule should be made at the same time as the opening of the cornea, and with the knife. The expulsion of the crystalline is effected by the combined pressure of the fixation forceps and of the curette. In clearing the pupil of fragments no instrument should be used, a stream of water directed on to the wound and eddying around in the anterior chamber, alternating with massage, suffices to remove all débris and render the pupil clear. All these manœuvres are rendered easy of performance by the use of cocaine, and certain in their results by antisepsis. The only accident that is to be feared is the entanglement of the iris. This may be caused by spasm, by reflex glaucomatous tension, or by the swelling of the fragments remaining. The first cause is to be avoided by the exercise of the most scrupulous care, and the third by observing the precaution to remove as completely as possible all debris. It is impossible always to foresee and prevent the operation of the second cause. Opacity of the capsule that remains is a frequent complication, and one that is to be dreaded, for secondary operations are uncertain and dangerous.

DR. SCHWEIGGER, of Berlin, read a paper on

THE HISTORY OF CATARACT OPERATIONS.

He said it was impossible to compare justly the methods of Daviel and of Graefe, since the employment of cocaine and antiseptic measures had, of late years, profoundly modified the results of all operative procedures. He reported 168 cases, occurring in his own practice, of extraction without iridectomy, but with cocaine and antisepsis, all of which were successful. He thought that iridectomy was dangerous to vision.

DR. DE WECKER always used eserine, which prevented glaucomatous complications, but advised against the use of atropine, which might cause increased intra-ocular tension.

MR. CRITCHETT, of London, recalled the results obtained by his father in the employment of these two methods, viz. : with and without iridectomy. He believed that the latter was the more sure.

DR. GALEZOWSKI, of Paris, advised, in order to avoid hernia of the iris in Daviel's operation, puncture and counter-puncture in the sclerotic, and then closure of the eye, which should be left undisturbed for six days.

DR. KNAPP, of New York, favored the operation for cataract without iridectomy. He compared the eye to a steam-boat, and iridectomy to the safety-valve which should be called upon to act but very rarely.

MR. JESSOP, of London, presented a communication on

THE PHYSIOLOGICAL ACTION OF THE INTRA-OCULAR MUSCLES.

Like the muscles of the intestines, and of the blood-vessels, these also have two sets of nerves with opposing functions. The short ciliary nerves excite contraction of the iris and myosis, the long ciliary nerves dilatation of the pupil and mydriasis.

DR. COCCIUS, of Leipzig, read a paper on

THE RÔLE OF THE TENSOR MUSCLE OF THE CHOROID.

During accommodation, the posterior surface of the crystalline lens vibrates more or less rapidly, these movements being especially pronounced when there is liquefaction of the vitreous. The vitreous body feels first the influence of the tensor muscle of the choroid, and it thus compresses the crystalline, inducing in it a change of form.

DR. DE WECKER then presented a communication on the

TREATMENT OF PERSISTENT LACHRYMATION,

by means of removal of the palpebral lachrymal gland, which he believed to be the one that secreted the tears excited by emotional causes. He had performed the operation twenty-five times, and in all had succeeded in causing a complete cessation of lachrymation, while the lubrication of the conjunctiva was still perfectly performed.

DR. GRUENING, of New York, said that profuse lachrymation was often due, directly or reflexly, to affections of the nose, and the cure of these not infrequently sufficed to correct the hypersecretion of tears without the necessity of resorting to extirpation of the palpebral gland.

DR. EVERSBUCH, of Erlangen, in cases of inveterate lachrymation, removed the orbital gland through a cutaneous incision in the fronto-palpebral fold. In order to prevent subsequent ptosis, he united the orbicular muscle to the frontal periosteum by sutures. He suggested that the operation proposed by the last speaker might expose to the danger of xerosis of the cornea.

DR. COHN, of Breslau, showed some

PHOTOGRAPHS OF THE FUNDUS OCULI

obtained by means of a flash light. He said that it was very difficult to obtain good photographs of the fundus.

DR. HOWE, of Buffalo, thought that the difficulties of photographing the fundus were not invincible, and he exhibited some views which he had taken a year ago.

DR. KNAPP said that some quite good reproductions of photographs of the fundus had been published in the *Archives of Ophthalmology*. Instantaneous photography was no new thing in America.

DR. CRAINICEAU, of Bucharest, read a paper on

THE ETIOLOGY OF MYOPIA,

in which he reported the results of examinations made by him of the eyes of school-children in Bucharest and Buda-Pesth, showing that myopia increases in frequency and amount from the lower to the higher grades in the schools. He advocated the adoption of a uniform system of examination.

DR. DÜRR, of Hanover, reported five cases of

MEGALOPHTHALMIA,

in which he had found that the superior oblique muscles presented a greater obliquity than normal, and where the muscle passed around the globe there was a well-marked groove on the surface of the sclera. The result of this was compression, more or less marked, of the vasa vorticosa.

Friday, August 10th—Third Day.

Dr. Priestly Smith, of Birmingham, read a paper on

GLAUCOMA.

Glaucoma is the pathological increase of intra-ocular tension with its consequences. The increased tension is the main element of the affection, and a glaucoma without augmented intra-ocular pressure is merely a glaucoma which happens to be seen during a remission of this tension. The causes of this increased intra-articular pressure are to be found in: 1, The state of the secreting organs; 2, the condition of the emunctories; and 3, the humors of the eye. The vitreous and aqueous humors are secreted by the ciliary portion of the uveal tract. The aqueous escapes through the angle of the anterior chamber—the "angle of infiltration;" the vitreous escapes through the pupil, but very slowly as compared with the aqueous humor. The tension remaining the same, it is obvious that a serous fluid will escape much less easily from the anterior chamber than a physiological saline solution. Now the principal elements in the increase of intra-ocular tension are: 1, Hypersecretion for the ciliary processes; 2, obstruction in the angle of infiltration; and 3, serosity of the humors. The first is occasionally the exciting cause of an exacerbation, but the glaucomatous process cannot be attributed to a continual hypersecretion. Obstruction at the angle of infiltration is present in most cases of glaucoma, yet it exists in some cases in which this condition is not found. Serosity of the humors is present in several forms of glaucoma, and is the chief element in its production when the affection is secondary to serous iritis and to keratitis complicating iritis. When the cause is evident the affection is called secondary glaucoma, but when the cause is not discoverable it is called primary glaucoma. Leaving out of consideration the cases of serosity of the aqueous humor, it has been shown that in all forms of secondary glaucoma the iris is pushed forward. In acute primary glaucoma the base of the iris is pushed forward by the swollen ciliary processes, and in many cases these latter are pushed out by the crystalline and the zonula of Zinn. The chief predisposing cause of glaucoma is a narrowed circumlenticular space, and the predisposition to the affection consequently increases with age, since the crystalline enlarges with advancing years. Smallness of the cornea seems likewise to predispose to primary glaucoma. Measurements made with a keratometer on the eyes of two hundred and twenty-seven individuals showed an average diameter of 11.52 mm. In fifty-two persons suffering from primary glaucoma the average diameter was 11.02 mm. Senile changes in the vitreous, offering an obstacle to filtration toward the anterior chamber, should perhaps be reckoned among the predisposing causes, and perhaps also, though in less degree, rigidity of the sclerotic and senile degeneration of the vessels. The exciting causes are all those influences which produce congestion. The steady progress of glaucoma is due to the fact that compression of the veins of the choroid gives rise to congestion of the ciliary processes and compression of the angle of infiltration.

Dr. Snellen, of Utrecht, followed with a paper on

THE TREATMENT OF GLAUCOMA.

In posterior glaucoma (when there is diminution of the anterior chamber), myotics are useful, but in anterior glaucoma (enlarged anterior chamber) they are injurious. The opposite is true of mydriatics. Sclerotomy is indicated in all cases of increased intra-ocular tension; it gives exit to the serous humor, frees the periphery of the iris, and re-establishes the disturbed circulation. The section from without inward with the lance-knife is preferable to section in the opposite direction with the cataract knife, since there is thus less danger of prolapse of the iris. The myotics are indispensable in sclerotomy, since they favor the escape of the serous humor, cause contraction of the uveal tract, and dilate both the canal of Fontana and the sub-choroidean space. Excision of a segment of the iris is of only secondary importance, but it is indicated when there is a serous accumulation behind the iris. Schön has said that exaggerated efforts of accommodation constitute an efficient cause of glaucoma, and it is well, therefore, to avoid all excess in this direction. Absolute glaucoma demands enucleation, both on account of the pain and because of the possible existence of tumors of the choroid. Enucleation is preferable to exenteration.

Dr. Schön, of Leipzig, presented a communication on

ACCOMMODATIVE EXCAVATION SIMULATING SIMPLE GLAUCOMA.

He had observed several cases, especially in hypermetropes, in which there was an excavation of the papilla resembling that of simple glaucoma.

Dr. Straub, of Utrecht, read a paper on

THE CHOROID CONSIDERED AS AN ELASTIC ORGAN,

in the normal and the diseased eye. The muscular tissue throughout the body is that which possesses the greatest elasticity, and it is indispensable in resisting tension. The muscular organ in the eye is the choroid, and it is this, and not the sclerotic, that sustains the intra-ocular pressure. When the elasticity of this membrane is destroyed, a venous stasis takes place, the fluids of the eye increase in volume, the zonula is projected forward, and there is a tendency to glaucoma.

Dr. Wahlfors, of Helsingfors, read a paper on the

MEASUREMENT OF INTRA-OCULAR PRESSURE.

He said that the tension increased when there was blood stasis.

These papers were followed by a general

DISCUSSION ON GLAUCOMA.

Dr. de Wecker was opposed to the use of the lance-knife in sclerotomy. He preferred a straight cataract knife, and had never seen prolapse of the iris follow the operation.

Dr. Pflüger, of Berne, said that glaucoma might be of syphilitic origin. He advised against iridectomy in this disease.

Dr. Leber, of Göttingen, had found an obstruction, probably inflammatory in character, in the angle of infiltration in a number of enucleated glaucomatous eyes which he had examined.

Dr. Galezowski, of Paris, advised posterior sclerotomy by means of two incisions extending to the choroid. These incisions, made externally above and below, are easy of execution and without danger.

Dr. Samelsohn, of Cologne, opposed sclerotomy, and did not believe that it was of any value.

Dr. Schmidt agreed with the previous speaker concerning the inutility of sclerotomy. He had seen a case of syphilitic glaucoma cured by specific medication.

Dr. Hess, of Prague, presented a communication on

THE ARTIFICIAL PRODUCTION OF CATARACT WITHOUT RUPTURE OF THE CAPSULE.

He had caused cataract artificially by means of electricity from the discharge of a Leyden jar.

Dr. Bernheimer, of Heidelberg, read a paper on

THE OPTIC CHIASM IN MAN.

He had observed the presence of direct and of crossed fasciculi, but the fibres of the two mingle with each other.

Dr. Schmidt-Rimpler, of Marburg, reported a case of

PARTIAL OPTIC ATROPHY IN CEREBRAL HEMIANOPSIA.

Dr. Howe, of Buffalo, read a paper on

THE INFLUENCE OF FLIES IN THE PRODUCTION OF EGYPTIAN OPHTHALMIA.

This is not a granular ophthalmia, such as is generally described, but a periodical suppurative conjunctivitis. The disease is transmitted through the medium of common house flies, as is shown by the facts that the epidemic appears and disappears simultaneously with the flies; that the disease is most prevalent in the cities, where the flies are most numerous, and is absent in the desert, where the flies are not found; and that cultures demonstrate the presence of the pathogenic microbes on the legs of the insects.

Saturday, August 11th—Fourth Day.

Dr. Leber, of Göttingen, read a paper on

THE IMPORTANCE OF BACTERIOLOGY IN OPHTHALMOLOGY.

Most inflammations of the eye have a microbial origin, and owing to its exposed situation the organ is very accessible to micro-organisms coming from without. But it also, though more rarely, suffers from microbial infection from within. Sympathetic ophthalmia is probably due to the presence of micro-organisms which are carried along the lymphatic spaces. To this group of infections belongs also infection of the orbit and of the cavernous sinus following enucleation. Foreign bodies in the eye, copper especially, cause purulent inflammation without the intervention of microbes.

Dr. Sattler, of Prague, said that there are three principal groups of

MYCOTIC AFFECTIONS OF THE EYE.

The first group comprises diseases in which the infective germs exercise their injurious effect through an intact surface; these are: Acute purulent conjunctivitis, trachoma, diphtheria of the conjunctiva, and acute infectious catarrh. In the second group a solution of continuity is necessary for the entrance and development of the germs; these are: Primary syphilitic chancre of the conjunctiva, tuberculosis of the conjunctiva, and suppurative processes. The third group embraces those diseases in which the microbes gain entrance through the blood and lymphatic channels.

Dr. Chibret, of Clermont-Ferrand, read a paper on the use of

CYANIDE OF MERCURY IN OCULAR ANTISEPSIS.

The instruments should be placed in a one per cent. solution of this substance five minutes before they are to be used. The eyes should be bathed in a 1 to 1,500 solution of the same drug.

Dr. Deutschmann did not regard sympathetic ophthalmia as due to any specific infection, and believed that any of the microbes of suppuration might excite it.

Dr. Knapp thought there was no danger of ophthalmia after traumatisms, provided the instruments were thoroughly sterilized, and all antiseptic precautions were observed.

Dr. Mazza Andrea, of Geneva, reported the results of some experiments on animals to determine the

MODE OF ORIGIN OF SYMPATHETIC OPHTHALMIA.

He had injected staphylococcus into the vitreous body, and had never found the micro-organisms passing beyond the papilla. The only cases in which they were found in the optic nerve were when they had been injected directly into it.

Dr. Dor, of Lyons, related a case of

SYMMETRICAL COLOBOMA OF THE TWO UPPER EYELIDS.

He rejected the theory of amniotic bands in the production of the affection, and thought it was due rather to an arrest of development.

Dr. Knapp, of New York, read a paper on the

NOTATION OF THE MERIDIANS IN THE EMPLOYMENT OF CYLINDRICAL GLASSES.

He described the French, American, and Anglo-German systems of notation, expressing a preference for the latter.

Dr. Landolt proposed to extend the system of notation of spherical and cylindrical glasses to prismatic glasses as well.

Dr. Haab, of Zurich, read a paper on

AFFECTIONS OF THE MACULA LUTEA,

describing the traumatic, anæmic, and senile forms of maculitis.

It was voted to hold the next Congress in Edinburgh. Then, after a few words by the President, congratulating the members on the work done, and thanking the citizens of Heidelberg for all the favors which they had extended to the visiting physicians, the Congress was adjourned.

THE MEDICO-CHIRURGICAL SOCIETY OF GERMAN PHYSICIANS.

Stated Meeting, October 1, 1888.

L. Weber, M.D., President, in the Chair.

In opening the meeting the Chairman extended a hearty welcome to the honored guest of the evening, Professor v. Esmarch, of Kiel, who not only had consented to be present at this session, but had kindly agreed to read a paper on a very interesting topic.

Dr. W. Freudenthal read a paper

ON THE ETIOLOGY OF HERNIA,

in which he claimed that there was a distinct causal relation between the development of hernia and naso-pharyngeal disease, especially of the catarrhal variety. He had collected trustworthy statistics from many sources, which all tended to show that the frequency of hernia corresponded with that of nasal affections. He did not believe that nasal reflex had anything to do with the establishment of rupture, but gave a mechanical explanation of its origin, viz., augmented force of intra-abdominal pressure and the increased frequency of its employment.

America he alluded to as pre-eminently the land of nasal catarrhs, and America was also the country where hernia was quite common. In this particular he took issue with certain contrary statements that had appeared in The Medical Record, tending to show that hernia was less frequent here than in other countries.

Professor F. von Esmarch was then invited to deliver his address. He prefaced his remarks by paying a graceful compliment to American hospitality, which in his travels in this country had everywhere been prominently brought home to him. He also apologized for not having prepared an elaborate paper for this occasion, and begged the members to accept in place thereof some

CLINICAL REMARKS ON ARTICULAR NEUROSES.

He commenced by saying that articular neuroses, like all nervous affections, were observed in America in large numbers. But in Europe, also, these affections were by no means very rare.

Sir Benjamin Brodie had well described them under the name of hysterical affections of the joints. Stromeyer had also classed them with the group of disturbances comprised under the name of hysteria. They had often been spoken of as neuralgia of joints. He preferred the more general term of neurosis, for neuralgic pain was not always a prominent feature of these cases. He narrated

A VERY TYPICAL CASE

of this kind which had come under his observation at Kiel, in the time of Stromeyer. A woman applied to the latter at his clinic, with a swelling of the leg that resembled ordinary tumor albus. She related a story of suffering extending over years, and as she was growing constantly worse, she clamored for removal of the offending member by amputation. Stromeyer, however, feeling convinced that the affection was a neurosis, through moral suasion induced the woman to rise and walk about, thus using a leg which had before been apparently totally useless. A cure speedily followed. This case, happening many years ago, had greatly impressed him, and being on the look-out for such cases, he had come to observe a large number of them. He had collected and described many of these in his monograph on the subject; and since writing that little book he had seen a still larger number of affections of this kind.

Regarding the symptomatology of articular neurosis, he stated that a great variety of signs were observed. There might be contractures, scoliosis, dropsy of the joints, puffiness that came and went, urticaria-like wheals over the painful joints, and other symptoms simulating entirely different maladies. Yet the underlying condition was a pure neurosis. The affection was frequently seen in neurasthenics, a term which America had given to the medical world, and men were by no means exempt from the disease.

The immediate exciting cause was often a traumatism. A patient would fall, or be struck, and the ensuing pain and swelling would not disappear in the natural way after a lapse of time. Rest and antiphlogistic treatment were apt to be advised by the attending physician; but the patient would go on from bad to worse. Other physicians, mistaking the true nature of the disorder, would employ counter-irritants, hot baths, anti-rheumatics, and a variety of things, which generally had little or no effect. It was only when the neurotic character of the disease was made out that a well-directed moral and psychic treatment would promptly effect a recovery.

Articular neuroses were often seen which depended upon uterine disease, and their origin was, of course, like that of all reflex disturbances of the nervous system. He remembered a very striking case of this kind, where the patient was apparently suffering from morbus coxarius, a diagnosis to that effect having been made by a physician.

In a general way, it might be said that

THE DIAGNOSIS WAS OFTEN QUITE DIFFICULT

to make, more particularly in the early history of these cases. Articular neuroses often looked like true inflammatory affections, and might easily mislead the unwary. On the other hand, those who saw many cases belonging to this category, were in danger of going too far in an opposite direction, *i.e.*, that of regarding other articular diseases as neurotic in origin. He himself had to confess to errors of that kind.

There was generally, however,

A NOTICEABLE DISPROPORTION BETWEEN SUBJECTIVE SYMPTOMS AND OBJECTIVE SIGNS.

One or more circumscribed areas of extreme tenderness were often observed. The slightest touch would produce apparent agonies in the patient. The diagnosis was greatly aided ex juvantibus et nocentibus. If a patient with supposed rheumatism, for example, was only made worse by rational anti-rheumatic treatment—if she had gone the rounds of the doctors and came to you with the history that everything made her worse—a strong presumption in favor of articular neurosis existed.

The facial expression of these patients was often peculiar, like that of many belonging to the neurotic type. The case that he had already alluded to, of a lady who applied to Stromeyer for amputation of the leg, was recognized by Esmarch twenty years later, merely from the peculiarity of her facial expression.

The treatment of these disorders was largely of a psychic kind. Moral suasion, properly employed, was very effective. The patient must be encouraged and made hopeful. It was sometimes sufficient to tell bedridden patients to rise and walk, and insist on their doing so. A typical case was narrated in illustration of this statement.

He was aware that serious operations, such as exsections of joints and amputations, had been done in cases of articular neurosis. The speaker mentioned the case of a girl, in whom he had laid open the hip-joint, although he had felt almost certain that the disease was neurotic. The patient had symptoms of apparent coxitis, that yielded to treatment by extension, the application of cold, etc. When put on her legs again, the former symptoms quickly returned and a marked febrile movement developed. It was finally decided to lay open the hip-joint, and all the structures were found perfectly healthy. The operation was done under the usual antiseptic precautions, and the result was satisfactory, for the neurosis was cured. The speaker had found that exercise in place of rest was very useful in these conditions. Warm baths generally did harm, but cold bathing or sponging, or the cold douche, were very useful. Sea-bathing often proved highly beneficial. Concerning the employment of drugs or electricity the speaker gave no information.

Dr. Detmold said that he recalled a typical case of elbow-joint neurosis. The patient appeared to have about her a

SENSITIVE ATMOSPHERE.

When several inches away from the joint, objects or the physician's hand would cause her to scream with pain.

Dr. v. Esmarch mentioned a characteristic and familiar phenomenon in this connection. A patient with a tender spot, the slightest pressure upon which produced intense pain, should be engaged in conversation. By thus distracting her attention the tender spot might be firmly pressed without eliciting any manifestation of pain. But this would immediately return if the patient became aware of the fact that her tender spot was being pressed.

Dr. Lange stated that articular neuroses were frequently observed in this city, and their true nature was often not recognized. He had had occasion several times to correct the diagnosis of other physicians, and by radically changing treatment and giving a different prognosis to bring about recoveries where others had failed. He would say also that pathological changes might be present, and yet the case be one of neurosis. Indeed, long-standing cases often did show articular atrophy due to the inaction of the joint. The surroundings of a patient and the circumstances attending the development of the disease often afforded a clue to the diagnosis. He had observed patients that seemed to have two souls, as it were, the one suffering and the other eagerly watching the ordeal of pain. In young men, especially those addicted to masturbation, these neuroses were often seen. He instanced a case of this kind where boxing the ears had led to recovery. These neuroses assumed a great variety of disguises. He recalled a case of apparent genu valgum that had come under his observation.

Business men who had troubles and anxieties were very apt to suffer from these affections. A condition which gave rise to mistakes was articular syphilis, and it was often difficult to make a correct diagnosis.

Dr. v. Esmarch remarked that men sometimes complained of a feeling of extreme weakness of the limbs, rather than pain. He described the case of a merchant who met with a sudden reverse of fortune and who had this feeling of inexpressible weakness. On the return of affluence he promptly recovered. He also took occasion to point out, in this connection, how important it was to save such patients from sympathizing friends and relatives, a point that had been very properly emphasized by Weir-Mitchell.

Painless Tooth Extraction.—Drs. Hénoque and Frédel, in a communication made to the Biological Society of Paris, state that the extraction of a tooth may be rendered painless by spraying the neighborhood of the external ear with ether. The anæsthesia of the trigeminus so produced extends to the dental nerves, and thus renders the production of general anæsthesia needless.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 27, 1888.

Frank Ferguson, M.D., Vice-President, in the Chair.

Dr. J. J. Griffiths presented a specimen, on behalf of a candidate, showing the engagement of the omentum in the lateral perforations of a glass drainage-tube.

Dr. H. J. Boldt presented a specimen of

ABSCESS OF THE UTERUS, PUERPERAL PYO-SALPINX, AND INTRA-PERITONEAL ABSCESS.

The patient, J. G——, aged twenty-two, married for five years, had been referred to him by Dr. L. Weiss. She had had three children and no miscarriages. The last child had been born four weeks before the speaker saw the case. The labor was normal. Two hours after delivery the woman had a chill, which was followed by a high temperature and profuse sweating. The axillary temperature varied from 103° to 105° F. There was constant pain over the lower portion of the abdomen, the uterus was large and flabby, and on either side of it was felt a fluctuating movable mass, supposed to be the distended Fallopian tube. The case was thought to be one of septic salpingitis following delivery, a diagnosis which was strengthened by the facies of the patient.

Abdominal section was decided upon, but the patient died in collapse a few hours later. The operation was very difficult on account of the very dense adhesions which had partly been diagnosed before operation. On the right side the tumor felt proved to be the distended Fallopian tube, which ruptured while separating the adhesions, discharging the purulent contents into the abdomen. On the left side, however, the tumor which was thought to be the distended tube proved itself to be an encapsulated intra-peritoneal abscess, which also burst during the operation; the Fallopian tube, although inflamed, and in consequence considerably enlarged, presented nothing unusual. The ovary was very intimately attached to the uterus, so that removal would have been impossible without injury to the uterus itself. Drainage was used.

At the autopsy the remaining tube was found firmly occluded about three-fourths of an inch from its uterine extremity. In cutting through the anterior uterine wall, an abscess was found in the substance of the muscular structure, which contained about two drachms of pus. The cavity of the abscess had the shape of a round canal, traversing nearly the whole breadth of the uterus, and situated in the upper half of the body; it was entirely shut off from connection with any other structure, and was regarded as the result of an infarction by the speaker. The diameter of the abscess canal was three eighths of an inch. The cavity of the uterus measured three and one-half inches. The large size and flabby condition of the uterus, the speaker regarded as partly due to the abscess in the muscularis.

Dr. Ferguson had recently seen an abscess in the wall of the large intestine, occurring as the result of occlusion of the artery by an embolus. The abscess had ruptured into the lumen of the gut, but this was probably the result of manipulation post mortem. The case was one of malignant endocarditis.

Dr. H. P. Loomis presented a specimen of

PATENT FORAMEN OVALE,

in a man fifty-three years of age. The man had always been troubled with shortness of breath and cyanosis. He said that his mother had told him that he was a "blue baby." He had lived in Switzerland until ten years ago, when he came to this country. Since coming here he had been much worse and had been unable to work. Physical examination showed a dilated heart with an indistinct murmur, which was later resolved into a mitral regurgitant.

At the autopsy there was found an infarction in the lower lobe of each lung, one of which was old, the other recent. The heart weighed a pound and a half, was flabby, dilated, and had very thin walls. The interauricular septum was thinned, and at its lower portion was a perforation admitting a quill, which was, however, closed by a valvular flap of tissue which seemed to be competent to prevent the passage of blood. The kidneys presented a classical picture of infarctions, some comparatively recent, others older.

Dr. Loomis also presented other specimens showing

MASTOID DISEASE, PACHYMENINGITIS, AND MULTIPLE VISCERAL ABSCESSES.

Owing to the patient's limited command of English it was impossible to obtain a satisfactory clinical history. It was, however, learned that he had suffered for about a week from intense hemicrania accompanied with a discharge of pus from one ear. Soon after the pain ceased the left arm and leg became cold, and then gangrene appeared in the hand and foot.

At the autopsy the mastoid cells were opened and were found to contain a few drops of thick pus. There was pachymeningitis on the same side, and suppurative thrombi were seen in the lateral sinus. The axillary artery was occluded at its point of junction with the brachial, and there was suppuration along the course of the arteries. Pyæmic abscesses were found in the lungs and spleen.

Dr. Ferguson, referring to the first specimen presented, said that he had seen a number of cases of patent foramen ovale in adults in which there had been no heart symptoms during life. In every instance there was a flap of tissue present serving as a valve. He thought the condition of the heart-walls, which were thin, flabby, and fatty, was sufficient to account for the later symptoms of dyspnœa and cyanosis in this case.

Dr. Ferguson then exhibited a microscopical slide of a section through the mucosa of the stomach of a man who had died of pernicious fever, showing the

MALARIAL PIGMENT.

The vessels were filled with the pigment, looking as if they had been artificially injected. The man had been brought to the hospital in a partially comatose condition, and never rallied sufficiently to give a clear account of his illness. All that could be learned was that he had had a bilious attack for three days, and was found on the street in a nearly unconscious state. He gradually grew worse, the temperature toward the end being 106°, and died three days after admission. The diagnosis was made *intra vitam* by the examination of the blood. A large amount of pigment was found in all the organs, but especially in the brain and stomach.

The Society then went into executive session.

The Late Dr. Agnew's Charities.—In his eloquent eulogy on Dr. Agnew, Dr. Thomas spoke of his constant generosity to the poor and to all kinds of charitable enterprises. He adds: "After thirty years of brilliant professional success, of uninterrupted health, of industry, of frugality, beyond making simple provision for the needs of those immediately dependent upon his labors, he died comparatively poor in this world's goods. Is the reason far to seek? In revealing this I violate no confidence, for this is the climax of his fame, the cap-sheaf of his career, the crowning glory of his life, to which his children point with pride! Had it been otherwise, a want of symmetry would have disturbed the perfect rotundity of his career. As it is, the fair proportions of a beautiful record are left free from blemish and without spot. His income was immense, and he steadily invested it; some will say wisely; for he put it out of reach of moth, of rust, and of thieves."

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

CHOLERA INOCULATION—HYDROFLUORIC ACID IN TUBERCULOSIS—CONGENITAL EPISTAXIS—SACCHARIN IN ALIMENTARY PRODUCTS.

PARIS, August 31, 1888.

A RATHER sensational subject, that has been occupying the public mind both in and out of the profession, is the reputed discovery of a cure for cholera by inoculation. At the meeting of the Academy of Sciences of August 20th, M. Pasteur read a communication for Dr. Gamaleia, of Odessa, in which the author gives an account of the procedure he had adopted, which is similar to that practised by M. Pasteur for hydrophobia. Dr. Gamaleia had studied M. Pasteur's method in Paris, and his experiments with the choleraic virus upon animals have, according to him, proved successful. Dr. Gamaleia's method is based on his discovery that pigeons inoculated with the blood of guinea-pigs which have been inoculated with cholera virus die from "dry cholera," with detachment of the intestinal epithelium. That which is still more important is that the microbe appears also in the blood of pigeons which have succumbed. When the virus has thus passed through the pigeon, it acquires such intensity, that one or two drops will kill pigeons in from eight to twelve hours, and even destroy guinea-pigs. But when a pigeon was inoculated with the uncultured virus in the breast and in the abdomen, it became refractory to the cultivated virus of the highest intensity of virulence. If the culture-broth be heated to 120° C., for twenty minutes, to destroy with certainty all the microbes which it contains, it is observed that the heating had left a very active substance in the sterilized culture, which contains a toxic substance which determines the characteristic phenomena in the animals experimented on. M. Pasteur, who evidently concurs in the value of the results obtained by Dr. Gamaleia, hopes that whole populations may be saved by this method from the dire disease, and referred Dr. Gamaleia's communication to the committee which has a prize of 100,000 francs at its disposal for a cure for cholera. Dr. Gamaleia has expressed his readiness to repeat the experiments at Paris, in presence of a committee of the Academy of Sciences, and to try on himself the inoffensive and, what he considers, sufficient dose for human inoculation. He stated that he was also ready to undertake a journey into any countries where cholera prevails to prove the efficacy of his method. M. Pasteur readily accepted the offer, and it has been arranged that the experiments should be carried on in his laboratory in November next. It is to be hoped that these experiments will prove more trustworthy and effectual than were the inoculations with which a few years ago Dr. Ferran's name was associated. It will be remembered that from the investigations pursued in Egypt by the French Cholera Commission, one of its members, the lamented Dr. Thuillier, fell a victim to the disease, notwithstanding the anti-choleraic inoculation which was practised on him.

Drs. Grancher and Chautard have instituted a series of experiments on the action of hydrofluoric acid in tuberculosis. These experiments, practised on rabbits inoculated and with variable degrees of dilution, have given appreciable results with only a certain degree of concentration—inhalations at sixty and eighty per cent. The following are the conclusions of the authors as published in the *Bulletin Medical:* "It would appear that these experiments do not justify all the hopes that observations of favorable cases in the human species had given rise to, unless that, by an indirect action on the secretions and on nutrition, the vapors of hydrofluoric acid favorably influence the progress of tuberculosis. We do not believe that one can legitimately hope to reach and destroy in the depths of the economy, by the vapors of hydrofluoric acid, the tubercle bacillus, which these same vapors attenuate, but do not kill in 'vitro,' after a contact prolonged for more than four hours." But, add the authors, all attempts to combat the agent of pulmonary phthisis are legitimate, and the vapors of hydrofluoric acid, which are well tolerated by the greater number of patients, are, at least, a means of attenuation, if not of the destruction, of the tubercle bacillus.

In a work just published by Dr. Yoal, of Mont Dore, entitled "Genital Epistaxis," the author studies the etiology of spontaneous epistaxis, idiopathic of adults, which are ordinarily put to the account of plethora or of anæmia. Without denying the intervention of a diathetic state (rheumatism, gout), Dr. Yoal thinks that in certain cases bleedings from the nose are due to excitement of the genital organs, excitement either physiological showing itself at the age of puberty, or pathological and resulting from vicious habits. In support of this view, the author shows by numerous citations that from the most ancient times it was admitted that there exists a veritable sympathy, an intimate correlation, between the apparatus of reproduction and that of olfaction. The recent works of Bigelow, Voltolini, Kiesselback, John Mac Kensie, etc., on the structure of the pituitary membrane, and the presence of erectile tissue in the nasal fossæ, have conduced to the necessity of attributing an important rôle, in the mechanism of the production of these hemorrhages, to the exaggerated turgescence of the cavernous bodies. Starting from these principles, and supported by his own personal observations, Dr. Yoal divides the different forms of epistaxis into five groups: 1. Traumatic and ulcerative. 2. Dyscrasic. 3. Mechanical. 4. Vaso-motor. 5. There exists an intimate relation, a veritable sympathy, between the nose and the apparatus of reproduction.

At its meeting of August 13th the Council of Public Hygiene approved the following conclusions of a report submitted by Drs. Brouardel, Pouchet, and Ogier, on the employment of saccharin in alimentary products in a hygienic point of view: 1. Saccharin is not an aliment and cannot replace sugar. 2. The employment in alimentation of saccharin or of saccharinated preparations, suspend or retard the transformation of amylaceous or albuminous substances in the digestive tube. 3. These preparations have, therefore, for effect to profoundly trouble the digestive functions. They are of a nature to multiply the number of affections designated under the name of dyspepsia. 4. The employment of saccharin is too recent for the consequences of an alimentation in which would enter daily a certain quantity of saccharin to be all determined, but it is for the present established that its employment has a pernicious influence on digestion, and the reporters feel justified in concluding that saccharin and its divers preparations should be proscribed from alimentation.

Dr. H. Frémy is charged with a mission to the United States for the purpose of visiting the public and private establishments of that country devoted to the treatment of tuberculosis.

MIDDLE-EAR DISEASE AND ROOSA'S INHALER.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: If you will kindly allow me a few lines of your valuable space I will reply to Dr. H. P. Allen's criticisms on an article published in your issue of August 11th, entitled "Four cases of Acute Inflammation of the Middle Ear from the Use of Roosa's Bulb Nasal Inhaler." The title of the article was incorrectly published. The original manuscript reads "From the *Abuse* of Roosa's Bulb Nasal Inhaler." Dr. Allen probably inferred that I wished to cast reflection upon the little instrument, such was not the case however.

I have been associated with Dr. Roosa in the Manhattan Eye and Ear Hospital for the past five years, personally attached to his clinic for three of those years. It was he who taught me the use of the inhaler, and I thoroughly know its uses and appreciate its merits.

In the four cases referred to by Dr. Allen, the nasopharynx was cleansed with a Dobell spray previous to inflation, as is my custom always to do. I make no applications to the nares or pharynx before thoroughly cleansing the passages. Neither do I attempt to blow the fetid secretions of the pharynx into the orifices of the Eustachian tubes, as one must do if he does not cleanse the passages first.

I have inflated hundreds of ears after this manner and never had an accident yet. As for the iron and glycerine, the application was made so far back it could not possibly have reached the Eustachian orifices.

I do not think Dr. Allen is at all conversant with the inhabitants of our Croton water. I would respectfully call his attention to reports made to the New York County Medical Society and articles by Dr. Prudden.

The paper in question was discussed at the New York Academy of Medicine by Knapp, Webster, Corning, Moore, Weeks, and Andrews, none of whom gave any such theory as that advanced by Dr. Allen, but, on the contrary, some were kind enough to say that the conclusions were so well drawn there could be no doubt as to the cause, and I would dislike very much to know that others doubted the theory. If physicians would report more of their casualties in the practice of medicine, the rising profession would have less cause to learn things from sad experience.

FRANK W. RING, M.D.

101 PARK AVENUE.

New Instruments.

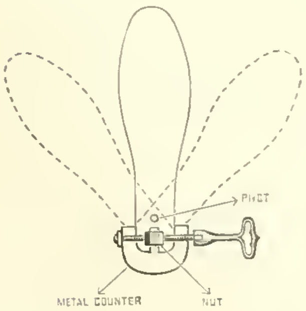
IMPROVED FORM OF CLUB-FOOT SHOE.

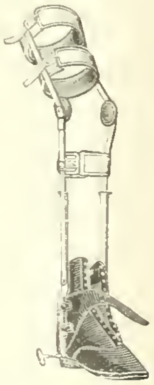
By THOMAS G. ALLEN, M.D.,

BUFFALO, N. Y.

THIS shoe is designed to correct the milder cases of talipes without operation; to be worn immediately following the division of tendons and fascia, or when the plaster-of-Paris dressing is removed. The arrangement secures to the foot as nearly a normal position as possible.

I was led to the construction of a new form from the inability of the ordinary club-foot shoe to hold the foot without so much false motion, after it had been placed in a corrected position; and from a desire to improve upon the unsightly appearance of a shoe with an open toe-end, divided uppers, metal pieces on the outside, springs, rubber tubing, chains, and such burdensome apparatus so embarrassing to the wearer.





A laced shoe of calf-skin is made over a straight last according to the measure of the foot. Instead of the usual metal piece at the metatarso-phalangeal joint of the great toe, I use a piece of sole leather or copper on the *inside* of the shoe. The leather sole is divided crosswise, about one-fourth of an inch back of the anterior part of the heel, and this joint is covered by the last layer of the heel.

Abduction and adduction of the sole and foot is produced by turning the key just above the heel. A glance at the diagram will better explain the mechanism.

An inner sole of sheet-iron has the heel end slotted so as to hold a nut. In front of this slot is a pivot upon which the lateral movement is obtained by the travelling of the nut against the side of the slot when the screw is turned. Any amount of lateral motion can be accomplished by this means.

To lessen the medio-tarsal outward rotation, I have used the strap shown in the cut, and have had the leather-sole bevelled from one-eighth to one-half an inch in thickness. In cases of varus this assists in breaking down the high arch of the foot.

The screw movement for the lateral motion occurred to me some two years ago, but as far as I am aware, to Mr. Henry Herrmann, a manufacturer of surgical instruments of Buffalo, N. Y., belongs the credit of first using this mechanical device. And I would here thank that gentleman for his able assistance.

I do not claim that this shoe answers for all cases of such deformity, the judgment of the surgeon is to be governed by the character of his case. But after repeated trials during the past two years, I have arrived at satisfactory results, and do claim for my contrivance the following advantages: 1. Neatness; not unsightly. 2. Screw movement for lateral motion. 3. Metatarso-phalangeal piece placed inside instead of outside. 4. Upper leathers not divided, or open. 5. Sole divided within the heel. 6. Shoe vise-like in action. 7. Bevel of sole and heel in cases of varus, to restrain medio-tarsal rotation. 8. A perfect club-foot shoe, appearing as an ordinary laced shoe.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 23 to September 29, 1888.

STERNBERG, GEORGE M., Major and Surgeon. By direction of the President, will proceed to Decatur, Ala., and to such other points in the infected districts of the Southern States as he may deem necessary, to continue his scientific investigations of yellow fever. Par. 8, S. O. 224, A. G. O., Washington, September 26, 1888.

Under authority from Headquarters of the Army, A. G. O., dated September 22, 1888, Major CHARLES B. THROCKMORTON and Batteries K and M, Second Artillery, comprising the garrison of Jackson Barracks, New Orleans, La., will proceed at once, by sea, to New York Harbor, and upon arrival there will take post at Fort Wadsworth, New York Harbor. A small guard of enlisted men will be left at Jackson Barracks. Major JOHN W. WILLIAMS, Surgeon, will accompany the troops to New York Harbor. Major HARVEY E. BROWN, Surgeon, will remain at Jackson Barracks. Par. 12, S. O. 202, Headquarters Division of the Atlantic, Governor's Island, New York City, September 26, 1888.

WHITE, ROBERT H., Major and Surgeon. Granted leave of absence for one month, with permission to apply for an extension for one month. Par. 7, S. O. 199, Headquarters Division of the Atlantic, Governor's Island, New York City, September 22, 1888.

WILSON, GEORGE F., Captain and Assistant Surgeon. By direction of the Acting Secretary of War, granted leave of absence to include May 3, 1889. Par. 14, S. O. 223, A. G. O., September 25, 1888.

WOODRUFF, EZRA, Captain and Assistant Surgeon. By direction of the Acting Secretary of War, granted leave of absence for six months, on surgeon's certificate of disability, with permission to leave the Division of the Missouri. Par. 5, S. O. 223, A. G. O., September 25, 1888.

MATTHEWS, WASHINGTON, Captain and Assistant Surgeon. By direction of the Acting Secretary of War, detailed as a member of the Army Medical Examining Board appointed to meet in New York City, October 1, 1888, by special orders No. 203, September 1, 1888, from this office, vice Major George M. Sternberg, Surgeon, hereby relieved from his detail as a member of the Board. Par. 3, S. O. 224, A. G. O., Washington, September 26, 1888.

HOFF, J. VAN R., Captain and Assistant Surgeon, upon the recommendation of Captain Daniel Weisel, Senior Medical Officer, Camp of Instruction of the 5th Cavalry, assigned in charge of active operations of the hospital corps in that camp. Par. 2, S. O. 121, Headquarters Department of the Missouri, Fort Leavenworth, Kan., September 22, 1888.

WILSON, GEORGE F., Captain and Assistant Surgeon. Resignation accepted by the President, to take effect May 31, 1889. Par. 15, S. O. 223, A. G. O., September 25, 1888.

By direction of the Acting Secretary of War, the following named officers of the Medical Department will report in person, on October 9, 1888, to the President of the Army Medical Examining Board, Army Building, New York City, for examination for promotion: Captain BENJAMIN MUNDAY, Assistant Surgeon; Captain WILLIAM O. OWEN, JR., Assistant Surgeon. Upon the completion of their examination to rejoin their stations. Par. 15, S. O. 225, A. G. O., Washington, September 27, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending September 29, 1888.

HUDSON, ADRIAN, Medical Inspector. Ordered for examination preliminary to promotion to Medical Director.

BATES, NEWTON L., Medical Inspector. Ordered for examination preliminary to promotion to Medical Director.

COOKE, GEORGE H., Surgeon. Ordered for examination preliminary to promotion as Medical Inspector.

BRADLEY, MICHAEL, Medical Inspector. Ordered as member of Naval Examining Board.

WELLS, HENRY M., Medical Inspector. Relieved from duty as member of Naval Examining Board.

SIMONS, MANLY H., Surgeon. Ordered to Widows Island Naval Hospital.

HEFFENGER, A. C., Passed Assistant Surgeon. Detached from Naval Hospital, Widows Island, and wait orders.

SAM JONES ON "FAITH CURE" AND "CHRISTIAN SCIENCE."—"I'll tell you where this faith cure comes in. There's an old brother and a sister who have been taking all the nasty, quack patent medicines on the market for the last ten years. Somebody comes along and prays over 'em, and they quit using the patent medicines, and they are well again. They say it was faith that cured. It was faith. It was faith which caused them to quit taking old patent nostrums, which cured them. I don't say I belong to the Christian Science crowd, or anything of that sort; but I thank God that by the side of my sick wife I may kneel down and pray that the remedies given by the physician may prove effective. I don't pray over the supernatural. I pray over the pill."

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending September 29, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	74	22
Scarlet fever	72	14
Cerebro-spinal meningitis	0	1
Measles	53	7
Diphtheria	60	17
Small-pox	0	0
Yellow fever	0	0
Cholera	0	0

ILLEGITIMACY IN MASSACHUSETTS.—The last report of the Massachusetts State Board of Health makes a bad showing for the morality of the Bay State. The percentage of illegitimacy has steadily increased in the last ten years from 1.12 to 2.03 per thousand in 1886. In the distribution the factory districts were found to claim more than their due proportion.—*Sanitary News.*

SCULPTORS' CLAY IN THE TREATMENT OF MASTITIS.—Dr. E. L. Maïzel mentions in the *Vrach* (No. 21) that he has for some time employed modelling clay as an application in mastitis, with excellent results. The idea was obtained from Dr. S. Lukashevich, who employed white modelling clay in epididymitis. Dr. Maïzel has made use of it in twelve cases—seven of parenchymatous inflammation, of which only three suppurated; and five of phlegmonous inflammation, of which only one went on to form an abscess. The pain was rapidly alleviated and the fever diminished by this treatment, which, if commenced sufficiently early, appeared to cause the inflammatory process to terminate in resolution without the formation of pus. When abscesses had formed and broken, the wound rapidly healed, and the indurated lobules returned to their normal condition without suppurating, the clay proving a much less troublesome treatment than Kiwisch's plan of starched bandages, and much less painful than the application of collodion, as recommended by Latour and Sprengel, being at the same time quite as satisfactory in its results. This method is especially suitable for country practice, as white modelling clay is a very common and cheap substance, and patients take to the treatment very kindly, the application being always grateful to them. The capacity for heat possessed by clay being considerable, it answers the purpose of ice-bags or cold compresses, and is greatly preferred to them by the patients. The method of application is simple enough. The breast is first washed with a sponge and a piece of soft gauze applied to it. Another piece of gauze is then cut to the proper size, an aperture being made for the nipple, and an even layer of well-mixed clay, free from lumps, spread over it. This is then applied to the breast over the first piece of gauze, and secured by a bandage passing over the shoulder of the opposite side. The dressing is renewed night and morning. This kind of treatment is also applicable in distressing fulness of the breasts, when for any reason the patient cannot suckle the child. The secretion is arrested and the fulness and tenderness often disappear in the course of twenty-four hours.—*The Lancet.*

A SAD ACCIDENT.—One of the Western dailies reports the case of a man who, in falling a distance of fifteen feet broke four of his ribs, "one of which protruded through the flesh into the placenta."

CHLOROBORATE OF SODIUM, which has been brought forward as a new and efficient antiseptic, is said to be a simple mixture of borax, boracic acid, and chloride of sodium.

Barium and Digitalis.—Salts of barium, though they have been occasionally employed therapeutically, have never been very generally recognized as really useful therapeutic agents, either in this country or abroad, partly, perhaps, from a want from knowledge as to their effects both on physiological and pathological conditions. This knowledge Dr. A. Bary, of Dorpat, has recently endeavored to supply, to some extent at least, by making a large number of investigations on the action of barium salts on animals, as well as by collecting recorded cases of the therapeutical employment of the drug or its accidental effects as a toxic agent in the human subject. The salt he mainly used was the chloride, a substance with which every one is perfectly familiar in the laboratory, if not in the dispensary. The chief action of barium appears to be on the heart, showing great similarity to the action of digitalis, and somewhat less to that of physostigmin. Thus it was found, by experiments on frogs, that in small doses barium increased the action of the heart muscle, and in large doses set up peristaltic movements, arresting the heart finally in systole, this arrest in systole being a tetanic spasm of the heart muscle, and being capable of being brought to an end by agents which paralyze muscles and by mechanical distention by fluid pressure, but not by the electric current or by atropin. In very acute poisoning, either by large doses or by the direct application of the chloride of barium to the heart, the frog was found, even after the heart had stopped, to be capable of jumping. Again, the isolated apex was caused to beat by barium, being finally arrested in systole. The arrest caused by muscarin and chloral was brought to an end by using this salt. It was found that arrest in diastole could not be produced under its action by stimulation of the vagus or of the sinus venosus. The effects of barium on the arrest caused by muscarin, and the want of result from irritating the vagus, were found not to be due to any paralyzing action of the salt on the vagus. The foregoing effects are as nearly as possible identical with those produced by digitalis, differing also only in a slight degree from those of physostigmin. In warm-blooded animals barium in small doses slows the pulse independently of the inhibitory apparatus; in large doses it first accelerates the pulse, probably by stimulating the accelerating nerve, and finally slows it, in consequence of weakness of the heart. The blood-pressure is greatly increased by barium. Like pilocarpin, barium increases in a marked manner the secretion of saliva, but only when it is injected into the veins, this activity being immediately checked by atropin, differing in this latter respect from physostigmin.—*The Lancet.*

The Margaret Williamson Hospital.—In Shanghai, in the year 1885, was opened a hospital for the relief of Chinese women and children. It is under the control of the Woman's Union Missionary Society, of America, and originated in a fund left for that purpose by the late Mrs. Margaret Williamson. It is under the charge of Drs. Elizabeth Reifsnyder and Mary Gale, and Misses Elizabeth McKechnie and Elizabeth Andrews. The first report of the work, for the two years ending December 31, 1887, has just been issued. The greater part of the work is done in the dispensary, where as many as three hundred prescriptions have been filled in one day, and over three thousand patients treated in a single month. It is proposed soon to add to the capacity of the hospital by the erection of a new ward, which will bear the name of the late Dr. S. Wells Williams, the funds for the purpose having been bequeathed to the Mission by that well-known sinologue.

The Experiences of a Young Medical Witness.—"Once, when younger than now, it was my fate to figure in some such rôle in a divorce case, in which the wife sued her rich husband for a legal separation and alimony. One of her grievances was that he charged that, at marriage, she had gonorrhœa, with which she infected him. My evidence, given with the earnestness and zeal of one strong in the faith that she was a pure, slandered, wronged woman, was to the effect that, shortly before marriage, she was under my treatment for leucorrhœa, an ailment that even an expert might mistake for gonorrhœa; that a husband cohabiting with a wife thus afflicted might take on non-specific urethritis, and I gave it as my unqualified opinion that such were the conditions in the case pending. Well, she got her divorce, but the presiding judge refused to grant alimony, whether by reason of, or in spite of, my medical testimony that functionary never stated. Not long afterward, one who stood high as a nice moral young man called to see me, a picture of wretchedness and woe. He said there was something seriously wrong with his 'private parts,' he could not imagine what. Upon examination, an effort was made to relieve his mental anguish by the assurance that he could soon be relieved, as it was only a plain uncomplicated case of old-fashioned clap. This announcement was a shock and surprise. He said it could not be—it was impossible. In total disregard of these protestations, it was suggested that he had better tell where he got it, as such information might have an important bearing on treatment; whereupon, after a little hesitancy, he lifted up his voice and said: 'Well, Doc, I never fornicated with but one woman in my life, and never would have touched her had you not given her so excellent a character when a witness in her divorce case.' Thus the wretch made me a party to his woes, and, as soon as cured, skipped away into the unknown, after beating me out of my fee.

"Such is (professional) life in the far West." —Dr. H. J. Crumpton in *Medical Reporter.*

Like a Bird.—Dr. Wm. R. Lowman reports the case of a pregnant woman, two months advanced, who was frightened by a buzzard. Two weeks later she aborted. The fœtus was about three and one-half inches from tip of toe to end of neck. It was about the size of a robin and resembling that bird very much in contour—even to the skin, which was of that "fine goose-skin" variety, so characteristic of the winged family of animals. The umbilical cord was normally attached to the body and the placenta, which was somewhat larger than a half-dollar silver coin. The feet had the three main anterior digits, and the sudsidiary digit posterior with its long claw. The membranes were almost perfect. The freak was examined by Drs. W. C. Wannamaker, O. R. Lowman, and Dr. Lowman.

Saccharin in Cystitis.—In a paper read before the Royal Academy of Medicine in Ireland, Dr. James Little reported a case of chronic cystitis with ammoniacal urine occurring in a lady nearly eighty years of age. Decomposition of the urine was prevented by quinine and boric acid in fair doses, but the patient's stomach became so irritable that she could no longer take the remedy. Washing out the bladder was impossible, on account of the pain caused by the passage of the catheter. In this extremity Dr. Little bethought himself of saccharin tablets, and ordered the patient to take six daily. In three or four days the urine, which had been so offensive that the attendants were sickened by the odor, became purified, and although it still contained pus did not again become ammoniacal.—*Dublin Journal of Medical Science,* June, 1888.

Chicken Blood in Leucocythæmia.—Dr. Czartoryski reports, in the *Pacific Medical and Surgical Journal* for June, 1888, the case of a child suffering from the last stages of leucocythæmia. She was reduced to the last extremity, and seemed to be almost *in articulo mortis.* Fresh chicken blood was ordered, and as the father of the child was a cook in a restaurant, the treatment was easily carried out. On the first day the patient drank the blood of two chickens, and the amount was gradually increased until the blood of ten chickens was taken daily. The child immediately began to improve, and in seven months was apparently perfectly restored.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 15 New York, October 13, 1888 Whole No. 936

Original Articles.

DISEASES OF THE EXTERNAL AUDITORY CANAL.

ABNORMALITIES—HYPERÆMIA—OTITIS EXTERNA CIRCUMSCRIPTA—OTITIS EXTERNA DIFFUSA—OTITIS EXTERNA DESQUAMATIVA—CERUMINAL ACCUMULATIONS—SEBORRHŒA—ASPERGILLUS.

By SAMUEL SEXTON, M.D.,

NEW YORK.

THE following remarks, being practical deductions from a considerable number of cases seen in the writer's practice, will, it is hoped, not be without interest for the general practitioner for whom they are more particularly intended.

ABNORMALITIES.—These include, under arrested development, absence of the external auditory canal, closure (atresia) by membranous or osseous tissues, abnormal width and congenital contraction. There may be also excessive development of this part of the ear, owing either to a thickening of the cutaneous lining or due to irregular development. A considerable number of persons have very large canals; the drum in such cases is much exposed to the free entrance of foreign bodies—water, draughts of air, and loud sounds. Where the meatus is large the Eustachian tube may also be of unusual size, thus favoring extension of disease per tuba by continuity of tissue, or by direct entrance of air or fluids through the tube. It is, at all events, very probable that the tympanum, in these cases of large canals and tubes, is very frequently more liable to attacks of disease from both directions. Among the many thousand cases of aural disease observed and recorded by the author were 411 with very large meatus, and concerning which notes were taken. Of these, 260 were males and 151 females. Among this number chronic catarrh of the middle ear occurred in 207 cases, acute catarrh in 24, and subacute catarrh in 18; while there were 77 cases of chronic purulent inflammation of the middle ear, and 47 of acute purulent inflammation. Collections of cerumen were found in 86 of this number, and otitis externa existed in 19 cases. A correspondingly large drum-head was usually present in these cases.

HYPERÆMIA.—Hyperæmia, or inflammation of the dermic layer of the inner end of the canal, is very common in processes of the same nature occurring in the middle ear. Dermatitis of the external auditory canal is of much more frequent occurrence than of the auricle. Irritation of the nerves in sympathetic relation with the ear—especially of the mouth and pharynx—is a cause of hyperæmia, and may even set up a genuine inflammation. Thus dentition, caries of the teeth, ulcers of the mouth or pharynx, enlarged tonsils, naso-pharyngeal disturbances, and polypoid growths in the nose, etc., conditions constantly met with, are causes of hyperæmia, which, when long continued, may lead to serious alterations in the nutrition of the parts affected. Results of this altered action of the part are increased secretion of the cerumen and exfoliations of the epidermis, two principal constituents in the accumulations found in the locality we are describing. To the latter subject reference will be made later on.

In looking over his cases of hyperæmia of the auditory canal, the writer finds that in almost every instance reflex irritation from the mouth (diseased teeth, etc.) existed. Many were associated with chronic catarrhal or acute purulent inflammation of the middle ear.

Strong mental action, and the use of alcoholic beverages, which play an important part in increasing cerebral circulation, often induce hyperæmia of the ears. Men are, of course, more subject to these conditions than women. Everyone has observed the flushing of the face and auricles under excitement. The aurist is familiar with the every-day statements of patients that they experience "burning in the ears;" and that the "ears itch," so that it is with difficulty they restrain from violently scratching the meatus with pins or anything convenient to use for the purpose. Hyperæmia, if moderate, may occasion only itching and dryness, with absence of ceruminous or other secretions.

OTITIS EXTERNA CIRCUMSCRIPTA.—Furunculous inflammation, which is described by Schwartze as a perifollicular inflammation in the skin, is especially liable to affect the outer extremity of the external auditory canal, and frequently, owing to the richness of this locality in connective tissue, the inflammation extends deeply and becomes phlegmonous in character. Furuncles just within the meatus may give rise to so little irritation as to be misleading and be taken for a tumor, as the integument in some cases is scarcely discolored. Furuncular inflammation may be the result of irritation from middle-ear discharge, coming on sometime during the course of middle-ear inflammation. It may also be consecutive to periostitis of the canal, and is very often induced by the employment of irritating drops, syringing, the rude handling of the speculum, probes, cotton-wool swabs, ear picks, etc. This inflammatory affection arises, furthermore, often in persons having a tendency to boils, acne, etc., and in cases where more or less reflex irritation from decayed teeth, and catarrhal conditions of the naso-pharynx exist; in women, especially during pregnancy, and when other uterine reflex irritations are present. The presence of accumulations of wax or of foreign bodies in the external auditory canal is conducive to an inflammation of these parts. Furuncles appear to be most abundant in the spring of the year, and during the hot weather, when persons are apt to be run down in health.

The *subjective symptoms* usually present are more or less intense pain, and deafness if the canal be occluded. Tinnitus aurium and vertigo occur also, owing to nervous irritation and disturbance of the tension of the drum-membrane. The parts about the auricle are apt to be tender to the touch, especially in the neighborhood of the tragus, and traction on the auricle itself is generally painful.

Of 197 recorded cases, 93 were males and 104 females. Among the males there were but ten cases under ten years of age, the youngest being respectively seven and nine months old. Only seven of the female patients were under ten years of age, the two youngest respectively seven and eight months. The fact that in 109 of these patients there existed decided reflex irritation from decayed teeth, cutting of wisdom-teeth, etc., is instructive from what has been said before on this subject. Catarrh of the upper air-passages, hypertrophied tonsils, etc., existed in 61 cases, and 38 patients had chronic catarrh of the middle ear. In 2 cases, the furunculous inflammation was consecutive to acute catarrhal otitis media; in 12 cases, to acute purulent otitis mdeia, while in 22 cases it was, to all appearances, caused by irritation from the discharge in coexisting chronic purulent inflammation of the middle ear.

The disease appears to have been caused in 8 cases by sea-bathing, and in a number by trauma of various kinds, such as the scratching of the canal with pins, a blow on the ear, etc. Among the women were 22 where decided reflex irritation from uterine disturbances existed, due to pregnancy, childbirth, etc. In the large majority of these cases, pain, more or less severe, was present, and tinnitus aurium. Vertigo existed in 7 cases, and autophonous symptoms in 12. The disease was recurrent in 6 patients.

In examining patients with circumscribed inflammation of the canal, care should be exercised in introducing the speculum, as the procedure invariably causes much pain. Sometimes the swelling of the walls of the canal is so great that complete occlusion of the deeper parts is present. The meatus is often filled with *débris*, and, when seen, the drum-head and inner end of the canal have a macerated appearance.

In many cases it will be found extremely difficult to differentiate between circumscribed and the diffuse forms of inflammation of the auditory canal, as the symptoms are very similar, and the former has often a tendency to run into the latter. The swelling in the canal is, however, more localized in furuncular inflammation, as is also the tenderness; conditions which can be tested by touching with a probe. Differential diagnosis between circumscribed and diffuse inflammation of the external auditory canal and purulent inflammation of the middle ear is not always easy, for in the diffuse form of inflammation there is frequently active hyperæmia of the middle ear, and the discharge from furuncles may simulate an otitis media purulenta, though it is usually scant and very thick. Where multiple furuncles exist the canal is liable to be completely occluded. The favorite seat of furuncles is on the anterior inferior wall, just within the meatus, the swelling giving the lumen a triangular appearance.

Treatment.—Incisions into the canal should not be made at random, for often the precise spot of inflammation, comprising a distended follicle, can be discovered on careful search, and an incision into this point will usually be followed by speedy relief. Incisions of furuncles are, however, in some cases, liable to close up in a few hours, the pressure of the canal walls favoring this where the furuncles fill the canal. The openings should be made pretty large in order to give free exit to the thick tenacious matter. In some nervous subjects the operation is illy borne, and is at times unadvisable; in children the administration of a limited quantity of ether or chloroform is advisable.

Many still adhere to the treatment with leeches in these cases. Some patients are, however, made much worse by this procedure, and from the author's own experience better success generally attends other treatment. It is in these cases that sulphur and its compounds seem to act with especial advantage. That sulphur has long possessed great repute as a curative agent, both in the profession and among the laity, is a fact well known. The appearance of furuncles should not, the author believes, be regarded altogether as a local trouble, but generally as a manifestation of systemic disturbance. Sulphur seems to act as a corrective in the function of digestion, and especially so in run-down persons, and as such undoubtedly assists very materially in improving the general health of these patients. In the aggressive stage calcium sulphide, given in doses of one-tenth to one-twentieth of a grain, every two hours, or soon after food has been taken, has been generally found to be beneficial. Pain may be relieved with the tincture of aconite in small and frequently repeated doses; and warm applications and fomentations may also be applied in some cases, but their excessive use should be avoided. An ointment composed of equal parts of ung. belladonnæ and vaseline is a valuable remedy in painful affections of the canal. It may be smeared over the parts two or three times a day, or a pellet of absorbent cotton-wool may be used as a vehicle and left in the canal when its presence is borne.

Otitis Externa Diffusa.—Diffuse inflammation in the skin of the meatus, although liable to result in abscesses, etc., at the outer third of the canal, is most frequently found in the deeper portions, where, owing to the absence of connective tissue, its behavior is different, and there is likely to be periostitis as well as an extension of the inflammation to the drum-head.

The disease appears in the acute and chronic form.

Acute diffuse inflammation of the meatus does not often occur without involving the membrana tympani; neither does acute inflammation of the tympanum often occur without more or less affecting the inner end of the external auditory canal. It may be caused by chronic eczema of the auricle, or follow the removal of polypi, and, as not infrequently happens, it may be produced by rude handling of instruments, etc. In some instances it seems to be due to exposure to cold draughts of air, and it is very frequently the result of getting cold water in the ear while bathing in the sea, cold salt water being particularly irritating. Among 191 cases of diffuse otitis externa, there were 105 of the acute form of the disease. In 40 of the latter number the cause of the affection could be traced to sea-bathing, and in 5 to the effect of Russian or Turkish baths. Many of these acute cases were due to traumatism of various kinds, such as attempts at removing foreign bodies, cerumen-plugs, etc., from the canal. The disease is frequently due to reflex nervous influences arising from oral irritation, catarrh of the naso-pharynx, etc., and more remote disorders of the system, as described with furunculosis. Of 191 cases, 124 were males, 67 females. The greater frequency of the affection among males is undoubtedly owing, in some degree at least, to their greater exposure to vicissitudes of climate and weather, out-door life, occupations, etc. Twenty-three of the cases were associated with acute purulent otitis media, 17 with chronic purulent otitis media, and 8 with acute catarrh of the middle ear. In the large majority of these patients there was more or less irritation from carious teeth, and the greater number of them were subject to head colds, etc.

Subjective symptoms.—There is generally a sensation of burning, at first, in the ear, and in the milder cases more or less itching. Pain, of course, is present in greater or less degree, as well as tinnitus aurium, deafness, and, in many cases, autophonous and vertiginous phenomena.

Objective symptoms.—When examined, the integument of the canal will generally be found red and inflamed, or much swollen and very tender to the touch. The drum-head, when seen, often has a macerated appearance, or is deeply injected. The objective symptoms frequently resemble very closely those of circumscribed otitis externa. In some cases the inflammation may involve the connective tissue and extend out over the mastoid and parts about the ear. Abscesses are not infrequently the outcome of this, and periostitis is not an uncommon occurrence. In the older cases, where the disease assumes a chronic character, itching, and some loss in the hearing power, will generally be found. The integument becomes thickened and desquamating, the canal being often found partially filled with scales of epidermis.

Treatment.—Incision of the external canal will, in some few cases, be found necessary to relieve tension or purulent collections; and calcium sulphide and aconite are generally indicated.

General care, including hygienic measures and rest, must be urged in the more severe cases.

Otitis Externa Desquamativa s. Exfoliativa.—Desquamative inflammation of the external auditory canal occurs as an acute and also as a chronic process. It is, however, mostly found in the acute form. It is generally in run-down, intemperate persons and unhealthy children that we see the disease. Numerous reflex causes in remote parts of the body, such as have been already described in connection with the circumscribed and diffuse forms of inflammation of the external auditory canal, frequently give rise to the trouble.

There is but little if any discharge from the parts of anything excepting the pasty desquamative matter, or an entire exfoliation of necrotic epidermis. In some cases the whole of the dermic lining of the canal, including that of the membrana tympani, will be detached, resembling when removed the form of a glove-finger.

The affection is usually painless throughout, and this fact will aid materially in the establishment of a differential diagnosis between this disease and chronic diffuse inflammation of the parts. Pruritus and tinnitus aurium, caused by the presence of the accumulated epidermis-scales, are prominent symptoms of this trouble.

Treatment.—Relief may be attained by removing the scales, etc., by moderate syringing, and by insufflating powdered boracic or salicylic acid. When the desquamation diminishes, the use of the syringe should be discontinued in the treatment. The canal, of course, should be thoroughly, but very gently, dried out, after syringing, with cotton-wool before the powder is applied.

CERUMINAL ACCUMULATIONS.—These are of frequent occurrence, and when impacted, or efforts at their removal are unavailing, may give rise to much distress. Accumulations of wax are generally inspissated in consequence of the evaporation of their fluid constituents; but sometimes the mass remains soft for a long period of time, impaction in such cases seeming to occur from the continued deposition of cerumen upon that portion of the collection presenting inwardly.

Cerumen is sometimes secreted very rapidly, often flowing freely out of the canal in a semi-fluid state, when it is liable to be mistaken for purulent matter. The writer has had a number of children brought to him where the presence of such a secretion has been the cause of much anxiety to parents.

In health the moderate secretions of the external auditory canal disappear usually by evaporation and desquamation, the exfoliated matter falling out as quickly as formed.

The smaller collections of wax are found adherent to the epidermis, especially where the small hairs of the part are abundant. These collections frequently fall out, little by little, of themselves, or are removed by picking the ear. In some instances, however, the escape of even the natural secretions is prevented by collapse of the cartilaginous walls of the canal; and in some of these cases the imprisoned matter receives daily contributions from without, owing to the efforts of the patient at cleansing the concha during ablutions, the act working particles of dust, soap, etc., past the valve-like closure of the lumen.

The location of accumulations depends somewhat on the number and position of the ceruminous glands, the number of hairs, the size and curvature of the canal, and the movements of the jaws in mastication. The latter would seem, in some cases, to press the wax first against the posterior wall, and afterward, as the quantity increases, impel it backward toward the upper edge of the drum-head; the latter movement, however, would be influenced by the size and curvature of the canal. The writer's observations would seem to show that the location of cerumen may depend on the source of the exciting cause. Thus an enlarged tonsil may cause the wax to accumulate on the posterior walls of the meatus, as observed in one case in particular, where the condition of the teeth was excellent.

Collections of wax, whether soft or hard, frequently exert pressure of greater or less extent on the drum-membrane, especially at its upper segment, which part projects more than any other portion. This may keep up a constant state of hyperæmia of the membrane, leading finally to trophic changes, or even to inflammation.

Etiology.—It appears from the following table, showing ages and sex of 800 cases of ceruminal accumulations, that the trouble is found in individuals of all ages, and in males much more frequently than in females:

Table showing Sex and Age in 800 Cases of Cerumen.

Age.	Males.	Females.
4 months	2	
Between 1 and 2 years	1	1
“ 2 “ 3 “	5	2
“ 3 “ 4 “	2	1
“ 4 “ 5 “	5	6
“ 5 “ 15 “	42	51
“ 15 “ 25 “	84	42
“ 25 “ 45 “	229	86
Over 45 years	175	66
	545	255
Total		800.

We find, in reviewing this table, that the male subjects more than double those of the opposite sex, and that this affection is quite common in childhood. Indeed, a large number of persons, at some period or other of their lives, have experienced greater or less inconvenience from this cause.

Accumulations are mostly bilateral, and therefore in every instance both ears should be examined. It happens, however, as will be seen below, that one ear alone may be the seat of such a collection. Among the author's cases the accumulations were found in 397 cases in both ears; 146 cases in the right ear; 180 cases in the left ear. In the 77 remaining cases the affected ear was not recorded. It has long been known to otologists that accumulations in the external auditory canal are frequently associated with other abnormal conditions of the ear. The author is convinced, however, that more thorough observations will prove, in the majority of cases, that such collections are almost in variably due to diseased action elsewhere.

Causes.—One of the most important of the numerous causative influences in exciting the accumulations of cerumen is hyperæmia of the canal. Dentition, diseased teeth, ulcerated and inflamed conditions of the gums and mouth generally, also catarrhal conditions of the pharynx, etc., are all conducive to an excessive secretion of wax, owing to the hyperæmia excited by means of the sympathetic relationship of these parts to the ear. Thus we find that among these 800 cases of ceruminal accumulations, 601 of the patients were suffering from marked catarrh of the upper air-tract, enlarged tonsils, and, furthermore, from dental irritation caused by decayed and dead teeth.

Inflammations of the middle ear seldom fail to induce hyperæmia or even inflammation of that portion of the external meatus immediately connected with it by continuity, and the inflammatory affections of the meatus itself have even a greater tendency than the foregoing to produce accumulations which obstruct the canal to a greater or less degree. In one hundred and sixty-five ears from which Toynbee removed accumulations, only sixty were free from other aural disease. In the 800 cases of the writer were found:

238 cases associated with chronic catarrhal otitis media.
9 “ “ “ acute “ “
52 “ “ “ chronic purulent “
26 “ “ “ acute “ “

The free growth of hair in the meatus, found most frequently in those beyond middle life, and mostly in men, furnishes a nidus for accumulations, as it prevents the escape of flakes of cast-off epidermis and cerumen.

Operatives in dusty employments are subject to accumulations in which dust is found to be an important part. Foreign bodies furnish the nucleus for accumulations in many instances. Their presence is an excitant to the secretory function of the integument of the meatus, and they also prevent the escape of the flakes of dried cerumen as they form. The imprisoned object may consist of a pledget of wool or other substance, introduced to convey a medicament, or to protect the ear from the atmosphere, and carelessly allowed to remain until its presence is forgotten.

Among the cases mentioned were eight where the centre of the accumulation was formed by a foreign body.

It is not an infrequent amusement of childhood to put into the meatus cherry-pits, grains of corn, peas, beads, and the like, which may remain for years quietly embedded in the accumulations which their presence attracts. Vermin may become lodged in the meatus and, being unable to escape, remain to be surrounded by accumulations of cerumen. The bodies of various insects have thus been often found.

The exanthemata, as is well known, are often followed by aural disease; the hyperæmia and inflammation from this source are of course the same as from the causes previously mentioned. Large accumulations arising from this cause in young children have come under the observation of the writer. Thus, accumulations were found in 6 cases following scarlet fever, in 4 after measles, in 3 after diphtheria, and in 2 after typhoid fever.

Inspissated pus and other products of chronic purulent inflammation of the middle ear may contribute to these formations, but when the discharge is abundant it keeps the canal free. Such are the more frequent causes of accumulations in the external auditory canal. When the drum-head is absent the tympanic cavity is also likely to be occupied by the collection.

Character of the accumulations.—The appearance of accumulations will vary according to their character and the stage of the process. After inflammations of the middle ear the inner extremity of the meatus will always be found to have been involved, as the integument in that locality is far more delicate than in any other portion of the canal. We have to deal here with non-suppurative inflammations more especially, and in them we shall find the epidermis loosened and more or less humid where it joins the drum-head. Frequently there will be found an admixture of cerumen in these exfoliations.

Soft cerumen in small quantities is formed now and then upon the walls of the meatus of most people, and if undisturbed it may undergo gradual desiccation and fall out of the meatus unobserved. Where it has been secreted in slight excess, and where the meatus was large enough to receive the finger or some object used to wipe it out, the author has observed the cerumen spread over the walls by the wiping process until it adhered as a hard coating, which could not be removed without bringing away portions of the underlying epidermis. This soft cerumen, however, frequently collects in the meatus in such quantity as to completely fill it from the drum-head or near it to within ten or fifteen millimetres of the outlet. Its consistence will allow the passage through it of a probe or curette. Inspissated cerumen is the term usually applied to this mass. Hard, desiccated masses are formed by the complete evaporation of the aqueous constituent of the collection. They are usually of a dark-brown color, and often appear polished when seen from without. But whatever the nature of the accumulation, it will be found to contain more or less epidermis; sometimes, indeed, layer after layer of exfoliations will be found in a mass which, after removal, has been allowed to macerate in water.

Of course, from what has been said in describing the origin of accumulations, we may expect occasionally to find them containing hairs, pus, foreign bodies, etc. It is after adult life that most of the prominent collections are met with, the hard, desiccated variety being observed mostly in the aged, where the drying goes slowly on until the plug has an almost metallic density.

Symptoms of the presence of accumulations.—Itching forms one of the first and most distressing symptoms, giving rise to great general discomfort. Tinnitus is furthermore a very general symptom, causing much annoyance to the patient, as does also "ear cough" as it is called. When a collection of soft cerumen is present, the patient often complains of a "stuffy" feeling in the ears and of "muffled" hearing. Movements of wax or of other collections in the meatus sometimes awaken the patient at night. Among the writer's cases are 10 patients who suffered much from otalgia, 29 from facial neuralgia, and 264 with distressing autophonia, tinnitus aurium, and vertigo. Great deafness is not usually present, although the accumulations may almost completely close the canal. It was a marked symptom in but 15 of the cases. The writer has observed cases of this kind where there seemed to be better hearing for certain sounds than usual. One case is worthy of mention here: A brakeman employed upon a railway freight-train had both ears seemingly completely closed by hard accumulations. Examination by voice and watch resulted in demonstrating better hearing than usual. He maintained that he could hear the engine's signals, when he was at the rear of a long train of cars, better than any other person in the same position. The removal of the accumulations was not followed by any improvement in hearing.

The collections touch the drum-head in these cases occasionally; we have the statement of Toynbee that the collection, when removed, sometimes has a cast of the membrane upon it. It is certain, however, that when impaction takes place, the normal vibrations of the membrane are interfered with, and that tinnitus and deafness occur.

Impaction of accumulations.—Ceruminal collections of all sizes and conditions may remain for years without observable deafness or other symptoms of their presence. Sooner or later, however, they are liable to become suddenly displaced. This accident usually results from water entering the meatus while the patient is bathing—notably in the Russian bath—or from the introduction of a finger or the roll of the napkin in the subsequent endeavor to cleanse and dry the canal. Or the accumulation may be loosened by sweating, going into a moist atmosphere, by a blow upon the ear, or any violent jarring of the body. An unpleasant sensation in the ear has induced patients to seek relief by pouring some medicament into the meatus, such as olive-oil, spirits of camphor, chloroform, laudanum, gin, and other liquors, and when an accumulation has been present these efforts at relief have caused impaction to take place. Impaction is seldom observed in children, and they do not often complain of tinnitus. Accumulations are therefore not apt to be observed unless the patient is examined for some inflammatory condition attended with earache or deafness. The latter symptom — deafness — is usually disregarded both by parents and teachers until it becomes very marked. It should be an invariable rule to examine the ears of children who have recently had scarlet fever, measles, diphtheria, whooping-cough, or severe colds, since accumulations may occur in the canal, and give rise to much irritation without the real cause being suspected.

In the 100 cases of impacted cerumen recorded, among the causes were: Sea- or surf-bathing in 27 cases, Russian baths in two cases, washing head or ears in four, maltreatment in one, a violent fall in three cases, a blow of the hand on the auricle in two, concussion of thunder in one, the compression of air in a railroad tunnel in one, and in one the highly condensed air in a submarine caisson. In a large number of instances no special cause could be discovered, but many of them were doubtless due to loosening of the plug from sweating, or its detachment from the walls of the canal in consequence of shrinkage; when slight movements of the head or lying upon the opposite ear were attended by displacement.

The plug, when loosened, sooner or later impinges upon the drum-head, the pressure being followed by noises in the ear, often very distressing; sometimes by pain and vertigo. Sometimes the patient is almost distracted by these symptoms, especially when they are associated with autophonia and deafness. Motions of the head, or traction upon the auricle, are sufficient to temporarily release the plug in most instances from time to time; the intervals of immunity lasting from a few hours to days or weeks, according to circumstances. If the pressure is caused by a dry, and consequently hard plug, the drum-head may be much injured by its presence, and hyperæmia or inflammation follow. The sudden displacement and consequent impaction is frequently accompanied by a loud report in the ear, resembling the discharge of a pistol or other explosive sound.

Sometimes, as has been stated, accumulations form gradally *upon* the drum-head; the sudden separation of these would be likely to give rise to objective sounds such as occur from sudden impaction. The presence of a hard, loose plug of wax interfering with the movements of the temporo-maxillary articulation sometimes gives rise to inflammation of the external auditory canal, when the movements of the lower jaw are much limited from the pain experienced in the glenoid fossa. This state of things sometimes offers the first intimation we have of the existence of these accumulations.

Inflammation of the middle ear arising during the presence of plugs may also bring them to notice.

Treatment.—The removal of cerumen usually is not difficult; it should never be undertaken, however, especially by the inexpert, without due preparation, since a failure usually leaves the patient worse than before; for inefficient syringing may serve to only further increase the impaction. Difficulties are liable to arise in some cases owing to the tortuous nature of the canal; in others to the character of the plug, which may be of so tenacious a consistence, and so tightly wedged in the canal, that syringing alone will not bring it away.

Ceruminal collections, when impacted, should be removed without delay. In the greater number of cases the syringe is the best instrument for this purpose. Much disappointment may be avoided by using a suitable syringe for this work. The best one the writer has yet found was made for him by Mr. Ford; the barrel is of glass, the mounting of hard rubber. Where syringing fails dressing forceps and the foreign-body curette may be cautiously employed to loosen the mass, when it in most cases will be easily removed by syringing.

The operator in no instance should proceed until the ear has been carefully examined under a good light; the best illumination being afforded by the electric head lantern, though a forehead mirror usually is sufficient. In syringing, the operator will find it best to seize the auricle with the left hand and pull it upward, backward, and outward, exposing more freely in this manner the opening of the meatus. The syringe, filled with water as warm as can be conveniently borne by the patient, is held in the right hand. The water and *débris* escaping from the ear during the syringing are caught in a cup or basin held beneath the ear by the patient himself, or by an assistant. If the accumulation is very hard, and completely fills the meatus, the stream of water should be directed with decided force against one edge of the plug, preferably the upper side. Usually a few syringefuls are sufficient to dislodge the mass and somewhat soften it—sometimes bringing it away. If it remains in the canal it can be seized with aural dressing-forceps and removed. Should a continuance of the syringing be determined necessary, frequent inspection should be made with a speculum as the operation proceeds.

The soft or scaly collections require more gentle syringing.

After any syringing there will usually be seen lying upon the meatus-walls small particles of loosened epidermis. They must be cautiously picked out with forceps under illumination, using care not to forcibly detach any of them; though with the best of care there will at times be left denudations.

Sometimes these denudations are extensive, leaving bleeding patches upon the walls of the meatus. We may have in such cases subsequent diffuse or furuncular inflammation.

The membrane, after the operation of syringing, has a macerated and injected appearance, which, however, rapidly disappears.

After we are through syringing, the meatus is to be dried by gently passing in a small portion of absorbent cotton-wool wound upon the end of a vulcanite carrier or held in the grasp of the dressing-forceps. A pledget of wool should be left in the meatus if the patient exposes himself to the open air after the operation.

Coughing and dizziness are phenomena of common occurrence while syringing proceeds, but they quickly pass away, and are not alarming symptoms.

A return of accumulations is of frequent occurrence, depending, of course, upon the cause.

A considerable accumulation of soft cerumen often takes place in a few weeks, and in twelve or eighteen months, unless causative action ceases, a considerable plug may confidently be anticipated in many individuals.

If the remote causes of the collections are sought, and treatment be directed to them, we may hope in many instances to prevent their return.

Keratosis obturans.—A tough, pasty mass, first described by Wreden;[1] is found sometimes, but rarely, in the external auditory canal, and is exceedingly difficult of removal. It apparently consists of modified sebaceous matter, having the tenacity of fibrous tissue. It usually remains adherent to the inner portion of the canal and to more or less of the drum-head's surface. The writer has met with but few cases in a long experience. Burnett[2] states that but few cases have come under his observation. From the closely adherent condition of the collection under discussion, the writer has been inclined to believe that it was composed of matter which is a product of inflammatory action. It is of rather light color, and does not seem to become inspissated like the endogenous collections, which easily dissolve in water, and on unfolding themselves develop layers of exfoliated epithelium and sebaceous matter.

The removal of this substance is extremely difficult; it must be detached little by little, using the syringe occasionally for the removal of detritus. The biting forceps and foreign-body curette are of service, as well as the ordinary dressing-forceps. The patient can scarcely endure efforts at removal for more than half an hour, and it is probably the best plan to resort to several sittings. Even with the utmost care, some denudation of the canal-walls or drum-head is likely to occur. No one unaccustomed to the employment of aural instruments would be warranted in operating upon these cases.

SEBORRHŒA.—This disease, characterized by an increased exudation or hypersecretion of sebum, which then dries on the surface of the skin, forming small scales and flakes, is sometimes found occurring in the auditory canal. In most cases both ears will be affected. According to most authors, females are more frequently troubled with this affection than males. Among 51 cases recorded by the writer and occurring in his practice, however, 27 were males and 24 females.

The disease is generally recurrent and occurs mostly among neuropathic, run-down, and intemperate individuals, and also among those subjected to continual worry and mental strain.

Symptoms.—Itching, noises in the ear, and more or less loss of the hearing power, are the usual subjective symptoms observed. The canal is found more or less filled with a mass of whitish, or whitish-brown scales, on the removal of which the skin of the meatus will be seen to be red and more or less tender to the touch. Eczema, which seborrhœa of the canal may resemble in some few instances, is very seldom found confined to the meatus alone, but spreads, in the larger number of cases from the auricle to the canal.

Treatment.—The masses of dried sebum should be removed by syringing and the exposed surface well but gently dried; boracic acid in powder may be insufflated if secretion continues. When the patient is run-down and otherwise in poor health, attention to the general condition should of course be given, and rest, etc., recommended.

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[1] Archives of Ophthalmology and Otology. 1874.

[2] Treatise on the Ear, etc., pp. 278–280. Philadelphia. 1884.

Aspergillus.—The presence of a fungus in the external auditory canal during the existence of other pathological conditions is sometimes so marked a feature as to attract especial attention. Several varieties of this vegetable parasite are known to occur; they give the particular color to the mould—thus *Aspergillus glaucus* presents a somewhat grayish aspect, while *Aspergillus nigricans* is dark.

The deep part of the external auditory canal in the neighborhood of the drum-head, where the parts are more humid, is that most frequently attacked by this fungus, and in a very considerable number of cases the membrana tympani is itself attacked. Aspergillus has been observed by some writers to grow in the cavity of the middle ear. Mould is also often found on the walls of the meatus, usually springing from a light deposit of cerumen which is spread over the canal.

Aspergillus will be generally observed appearing in the course of chronic purulent diseases of the middle ear, or where there is an increased secretion of the canal. In the author's own experience, mould is most commonly met with in seborrhœa and desquamative dermatitis of the canal, owing to the humidity usually present in these affections; sometimes a dermic sac which has been thrown off from the canal and drum-head and removed entire has been thus found to be lined with a delicate layer of aspergillus. It is also found when moderate otorrhœa exists and the canal is coated with a layer of inspissated pus. The writer has not observed in any of his cases that the presence of this vegetable growth complicated to any great extent the diseases which it accompanied, but some writers allege that much irritation may be caused by its presence. Among these authorities should be included Dr. Charles H. Burnett, whose contributions to this subject will be found of much interest.[1] The reader would also do well to consult his work for a more complete and exhaustive essay on this subject.[2]

As regards the *subjective symptoms* accompanying the presence of aspergillus in the ear, it may be stated that these are usually noises in the ear, pain more or less severe, and occasionally vertigo. Itching, a sensation of burning, and even in some cases more or less interference with hearing are other symptoms frequently observed.

Treatment.—Instillations of alcohol, carbolic acid, and various other antiseptic fluids are used for the purpose of destroying the fungus, and also, it should be added, insufflations of boracic acid and other powders. Cleanliness, by means of syringing, and dryness, is the only treatment, however, the writer has found it necessary to employ, besides attention to other morbid conditions upon which the existence of these fungi seemingly depends.

Hernia of the Testicle.—M. Kirmission spoke recently on hernia of the testicle at the Paris Société de Chirurgie. A man after a severe contusion of the scrotum presented a hernia of both organs. The right remained covered with its vaginal tunic, but the left was found to be impossible to retain in position by ordinary means. A pin was finally passed through the gland, and the result was very satisfactory. M. Tillaux said that he did not see why the operator did not enlarge the wound and thus allow the testicle to return without having to employ a pin. M. Anger thought that there must have been a rather considerable loss of substance. In a similar case he was obliged to ablate the organ. M. Kirmission considered that nothing in such cases could justify castration, for he had known two cases in which, it not being found possible to reduce the organs, they were left exposed; at the end of two days the surfaces granulated, and soon the testicles were completely covered. — *The Medical Press.*

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[1] American Journal of Otology, pp 10 and 93. Vol. I. 1879.

[2] Op. cit., p. 263.

SOME CLINICAL FEATURES OF DIPHTHERIA AND THE TREATMENT BY PEROXIDE OF HYDROGEN.

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The sentiment, so long divided, with regard to the constitutional or local inception of diphtheria, seems to be now almost universal in the direction of the latter theory. Consequently, in the light of this opinion, it is clear that the rational treatment must rest more on the recognition of some local agent which will surely destroy the specific germ before a full development of the constitutional infection is reached, rather than on any system of general medication which might be presumed to act more or less as an antidote in combating the septic influences occurring in the course of the disease.

The favor with which intubation is received appears to point in a measure to a realization of the fact that all present remedies, local or constitutional, serve but a very insecure reliance toward controlling the invasion and extension of the so-called membraneous formation. Whatever benefit may be derived from the use of pigments in which iron, silver, zinc, iodine, alum, or certain of the mineral acids are the main principles, probably lies in their simple astringent or tonic action on the tissues, in closing the follicles and arresting the tendency to absorption rather than in any manner affecting the morbid elements themselves, unless, indeed, some of these agents are employed in sufficiently concentrated form to lead to the destruction of sound tissue as well, and thereby open fresh points for contagion.

On account of their poisonous or irritant nature the active germicides have a utility limited particularly to surface or open-wound applications, and their free use in reaching diphtheritic formations in the mouth or throat, particularly in children, is unfortunately not within the range of systematic treatment. In peroxide of hydrogen, however, it is confidently believed will be found, if not a specific, at least the most efficient topical agent in destroying the contagious element and limiting the spread of its formation, and at the same time a remedy which may be employed in the most thorough manner without dread of producing any vicious constitutional effect. Although the peroxide is by no means of recent date, its medicinal value has been chiefly confined to the cleansing of foul ulcers and suppurating wounds, and there is hardly more than a casual mention of its utility in the treatment of diphtheria previous to a paper of Dr. Mount Bleyer on this subject.[1] Quite independently of these observations, somewhat over eighteen months since, at the Metropolitan Throat Hospital, several cases of well-marked buccal diphtheria were treated with the peroxide, with the effect of confirming in the most satisfactory manner the results obtained by Dr. Bleyer. The report of these cases was consequently omitted, pending the experiences it was supposed others would be quick to furnish on a more extended scale of the new remedy so warmly advocated. Among the somewhat small number of trial cases which have appeared at various times in the medical press, there are none in which a distinctly negative opinion is expressed, and where only a partially satisfactory result is attained there has appeared to be sufficient cause to permit a reasonable explanation for the fact.

In common with all forms of treatment promising particular or specific results, there are apt to be two substantial reasons which would naturally lead to disappointment. The first lies in the fact that improper cases are selected for experiment. In this category are included those where the disease has already passed the boundary of simple pathological conditions, either on account of a special severity of the attack in its incipiency, or, what is identical, a vitiated constitution, where secondary symptoms occur at a much earlier stage and tending to a necessarily fatal termination. It has been frequently stated in other connections that the practice of medicine is to be regarded as an art, not a science in the true sense of the term ; that an exact result may not be predicated in any physical derangement, no matter how far the intrinsic effect of drug or treatment may have been determined. The study of the microscopic germ organism as the cause of disease leaves unanswered the vital principle in its clinical aspects as to relations of intensity and effect. Hence in diphtheria, where, pre-eminently, secondary conditions are to be expected, a delay in appreciating the early manifestations of the attack will place the resisting power at a minimum, and any particular value in a given line of treatment is to be measured by just such a ratio in anticipating its results.

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[1] The Medical Record, August 13, 1887.

The question is frequently raised as to the identity of follicular tonsillitis and specific diphtheria. While, in the experience of the writer, no case of follicular tonsillitis, however pronounced, has been seen to pass into the local or constitutional phases of diphtheria, and, moreover, similar attacks occurring in the same individual at successive periods, without complications, clearly point to a like conclusion, it is equally true that diphtheria is commonly, if not generally, marked by an early follicular manifestation that may not be readily distinguished from a simple inflammatory process involving merely the tonsillar crypts. However paradoxical these views may seem at first sight, the illustration of their bearing is found in the sharp boundary-line which determines the favorable career of follicular tonsillitis, on the part of those whose experience lies particularly within the range of throat diseases, as compared with the uncertain diagnosis of diphtheria so common in the reports of cases in the hands of the general practitioner. It is with no intention of hypercriticism that this statement is made, which the experience of many can attest, but merely to emphasize the fact that too little discrimination is exercised in the recognition of two diseases altogether dissimilar in their nature and in their demands for appropriate treatment. In this connection it may not be amiss to quote, from a recent paper entitled "The Therapeutics of Diphtheria," [1] the following statements: "Diphtheria is a contagious disease. Severe forms may beget mild or severe cases. There is probably no spontaneous origin of diphtheria any more than there is a spontaneous origin of cholera or scarlatina. What has been called follicular amygdalitis (or tonsillitis) is diphtheria in many, perhaps most, instances. It is seldom dangerous to the patient, because the tonsils have but little lymph communication with the rest of the body. But the diphtheritic variety of follicular amygdalitis also is contagious."

Within the foregoing statements, quoted in their context, are two propositions which are certainly diametrically opposed, unless, indeed, the intention of the author was to reconcile them by a middle ground, which, to say the least, contains the most ambiguous meaning, by the use of the term "diphtheritic variety of follicular amygdalitis." Furthermore, any reasonable explanation is disturbed by a paragraph following (p. 8): "Indeed, many cases of throat disease occurring during the prevalence of an epidemic of diphtheria are but those of pharyngitis, which, under favorable circumstances, may develop into diphtheria." Are we to understand that diphtheria—a specific spontaneous disease—is identical with follicular amygdalitis with its simple prognosis ; in other words, an intrinsically abortive diphtheria, and may we not question that pathology which would have us believe that under favorable circumstances a pharyngitis or tonsillitis may "develop" into diphtheria ? Unquestionably inflammatory conditions, acute and chronic, or lesions of continuity of these parts will predispose to the reception of the contagious conditions of diphtheria, but it should be distinctly understood that the disease, whether mild or severe, must, in its *origin*, start as a true diphtheritic formation.

A further explanation for the uncertain results attending the use of the peroxide lies in the direction of the preparation itself, as also in the manner of its topical application. The usual descriptions allow the diluted strength of from three to seven volumes of distilled water. Inasmuch as the efficacy depends upon the ozonized oxygen in solution it has seemed desirable to rely on the full strength of the officinal preparation of fifteen volumes, especially when used in the fauces, where any slight irritation from its acidity is not apparent. In all the cases treated, a fresh, standard Marchand preparation of fifteen volumes was that on which the experience of the writer has been based. An equally important element is in making the application in such a manner as to produce the most determined effect on the diseased tissues, with as little local disturbance as possible. Swabbing the tonsils and pharynx is the rough and ready method commonly resorted to, with the second motive of detaching, if possible, the membraneous formation. Such treatment is not only unnecessarily harsh toward the patient, but also in intrinsic efficacy falls far short in securing the best therapeutic value of the remedy. It is properly recognized that the removal of the membrane, unless it occurs spontaneously, is not favorable to the local conditions ; moreover, the glairy mucus coating the surfaces does not permit the application to come fairly in contact with the disease, or so superficially as to require the most constant repetition. The latter criticism holds the same bearing, only modified in a degree, to the hand-ball vapor and spray-producing instruments that have been recommended.

A steady coarse spray, with an air-pressure of twenty pounds or more, will, in a few moments' time, produce a more positive action than prolonged efforts to reach the fauces by means of cotton applicators. The force of the spray should be sufficient to cleanse at once the surface accumulations, as it destroys the necrosial elements with which it comes in contact. In this manner the removal of the *débris* and the action on the deeper structures go hand in hand.

It will be noticed that immediately on contact with the peroxide a white, cloudy coagulum is formed on and about the diphtheritic patches, readily floated off and exposing a more sharply defined and a flatter, smooth, and whiter base. Properly speaking, there is no liquefaction of the exudation, but the decomposition of the inflammatory products is so complete that the cells are broken up and freed from the entangling fibrous net-work beneath. In a particular instance in the case of apparently a continuous diphtheritic slough, involving the tonsils and extending in an unbroken line across the margin of the soft palate, a solitary application exhibited this effect to such a degree that the natural color of the mucous membrane appeared in spots as if the exudation might have bridged across sound tissue without as yet securing attachment to the subepithelial layers.

How frequently the treatment is to be followed up depends to a considerable extent on the density as well as the area of the surface involved. It may be said, however, that two applications a day, in the great majority of cases, should be sufficient, if thoroughly performed, to arrest all danger of extension and accomplish the gradual resolution of the local formation.

If the experience of the writer is confirmed, it is apparent how much time, trouble, and unnecessary handling is obviated when contrasted with the methods outlining hourly or half-hourly swabbing, or, as one has more frankly expressed it, "scrubbing," with nauseating applications and culminating in the exhaustion of the patient, if not the most indifferent success. No reasonable objection can be raised either on the score of the expense or the difficulty of transporting the apparatus necessary, as small portable air-receivers can be readily obtained in the instrument shops, on the model of those devised by Codman & Shurtleff, of Boston, and which for the purpose are equally efficient as the larger stationary office fixtures.

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[1] A. Jacobi, reprint.

The more recent experience of Dr. Gifford,[1] establishing the active germicidal properties of peroxide of hydrogen, rapidly diminishing in proportion to its dilution in what might be called a geometrical ratio, appears to emphasize in a marked degree the clinical observations on which the main features relating to its employment have been based.

PAPOID AND VERATRUM VIRIDE IN DIPHTHERIA.

By J. D. BRUCE, M.D.,
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THE quest after a "remedy for diphtheria" finds no readier sympathy from me than I should give to a search after a remedy for fevers—for identically the same reasons; and which are apparent without further statement. Nor am I disposed to try any one remedy which is claimed to possess such potency; yet I am ever ready to give trial to any remedy which addresses itself to my mind as possessing qualities that would clearly meet any one or more indications, in the treatment of that truly terrible disease. As soon as I was informed that papoid had the unusual property of a solvent, acting alike in the presence of an alkali or an acid, I determined to give it a trial in diphtheria. But it has only been within the last few weeks that I have had the opportunity of putting it to the test in clearly typical cases.

On August 10th I was summoned to see a child, aged thirteen months. He was a stout, well-grown child, with this history: Had been in excellent health until within one week, when he was noticed to have a high fever, and was hoarse, which led to an examination of his mouth and throat. White patches were found in both. It was thought to be thrush, and a wash was improvised. He gradually grew worse until last night, when croup set in. When I saw him he was tossing from side to side, struggling for breath, and clawing at his mouth and neck—coughing almost incessantly. Pulse, 135; temperature, 105+° F.; respiration quick, short, and abdominal. Head very hot; feet and hands cool. There were several patches of diphtheritic membrane on the edges of the tongue. The pharynx was covered solidly as far as could be seen; the physical signs indicated an invasion of the larynx; the nares were completely obstructed. Bowels constipated, urine scant, highly colored, and of 1.024 specific gravity. At no subsequent visit did I have an opportunity of examining his urine. The cervical glands were enlarged and tender.

I gently washed his mouth and throat, as far as possible, with a five per cent. solution of papoid, which was to be repeated every hour, if awake; if asleep, not to be disturbed oftener than once in three hours. I ordered a powder of calomel, gr. v., to be followed in six hours by a teaspoonful of castor-oil. He was also to have veratrum viride, gtt. ij., every four hours until the pulse fell to 80; the dose then to be one drop, if that were sufficient to keep the pulse down to that point. I ordered an ointment, thus composed, applied on a flannel covering the chest:

℞.	Pulv. opii	gr. v.
	Pulv. camph	℈ ss.
	Cerum	ʒ iij.

M. To be renewed night and morning.

When the physic shall have acted he is to take quin. sulph., gr. iij.; tr. ferri chlor., gtt. iij., every four hours. Just before leaving him I placed five grains papoid in an insufflator and blew it into the pharynx. On the following day the child seemed much brighter; had been sitting up playing with his toys. The calomel had acted twice during the night, the last operation being decidedly bilious. The tongue and throat were in much better condition, and where the membrane had been thin it had entirely disappeared; the thicker portions had begun to disintegrate and peel off. Pulse, 80; breathing less frequent and easier; the cough, though not so distressing, was still croupous. The nurse informed me that soon after I blew the powder in his throat the day before he threw up great quantities of membrane, when he immediately became quiet and slept sweetly for several hours. He had persistently refused all nourishment until this morning, when he took the mother's breast readily. No change was made in the treatment; the solution of papoid was continued; it was found necessary to make it fresh, as it very soon spoils in hot weather; the throat was not to be swabbed; simply wet with the solution. After the third dose, one drop of the veratrum had been found sufficient to control the pulse.

August 12th.—Following the advice of an officious neighbor, sulphur had been burned in the room last night, and the little patient had contracted a fresh cold, and was much worse this morning. Pulse, 130; breathing labored; croup worse, if possible; restless, and clawing at his mouth and neck; his feet and his legs, to his knees, cold; features pinched; the membrane had fully re-established itself. The nurse had increased the veratrum to gtt. ij., without any sensible effect on the pulse-rate. I ordered it increased to four drops, if so much were necessary; the papoid to be used by insufflation. If there was any trouble in expelling the loosened membrane, he was to be given hyd. sulph. flav., gr. v., to produce emesis. In addition to the quinine and iron, he was to have alcohol, f. ʒ j., every three or four hours. At bed-time he was to have ol. ricini, ʒ j.; ol. terebinth., gtt. v.

August 13th.—Much improved; sitting up playing; has taken beef-tea, a soft-boiled egg, and nurses readily. Pulse, 78; breathes easily, except after a fit of coughing, when he becomes distressed and fretful; has had a choking spell during the night, when he was given the turpeth mineral; he vomited freely, quantities of membrane being ejected, some pieces being figured. On examining the throat only occasional patches were seen, but when the membrane had peeled off the mucous membrane seemed very much inflamed and disposed to bleed. I was assured that no force had been used in its removal. After each insufflation of the papoid he had gagged severely and threw up great quantities of membrane. I discontinued the papoid, and substituted what had become almost a standard wash with me:

℞.	Pinus canadensis	gtt. xx.
	Bromo-chloral	f. ʒ j.
	Pot. chlor	ʒ j.
	Aqua dest	f. ℥ ij.

M. Continue quinine, iron, and alcohol. Veratrum, gtt. ij., t.i.d., if necessary.

Did not see him again until August 16th. He was then convalescing nicely, though when he coughed there was still the metallic ring. The quinine and iron to be kept up for a week or ten days. Ordered flannel clothing. Discharged the case.

I did not isolate the other children of the family—never do—and no other case occurred in the family. The neighbors' children came and went at will, and there has been no other case in that immediate neighborhood. I will state that this is the first case where I have used veratrum viride as the basis of treatment. It would be difficult for me to decide with which I was more pleased in this case, the papoid or veratrum viride. The other seven cases treated with papoid were mild. They were seen on the first appearance of the disease. The papoid very certainly dissolves the membrane quickly, if not *too* quickly sometimes, as I think was the case in the above instance. Of course, my experience with the drug is not sufficient to establish its reputation; hence this report, in order that it may be added to the cases of other experimenters.

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[1] THE MEDICAL RECORD, September 1 1888

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published by

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, October 13, 1888.

THE MODERN THEORY OF THE PATHOLOGY AND TREATMENT OF URÆMIA.

Uræmia is a morbid state caused by the accumulation in the body of poisonous products that should be eliminated by the kidneys. So far, all pathologists are agreed. The question has been, and still is, what are these non-eliminated substances? The idea that urea, or its decomposition-products the ammonia salts, cause uræmia, has long been abandoned. The real nature of the poisons, it is agreed, varies in different cases. Recent investigations have given us some truer notions of what they are. The discoveries of Pouchet, Gautier. Feltz and Ritter, and of Bouchard, have been of most value in this line, and Dr. William Carter, in his recent Bradshaw lecture on uræmia, has given an interesting *résumé* of their work.

Pouchet and Gautier have found that poisonous alkaloids are formed by the normal metabolism of the body, and are eliminated rapidly by the kidneys.

Feltz and Ritter have shown that the potassic salts were the most poisonous constituents of the urine. Several observers have proved that urea, though not seriously toxic, can exert some injurious effect on the system.

Bouchard finally has analyzed the different sources of toxicity of the urine, showing their relative harmfulness and also the different ways in which these noxious constituents vary.

The sources of toxicity, says Bouchard, are fourfold—namely, (1) aliments, and more especially their potassium compounds; (2) the absorbed soluble products of intestinal putrefactions; (3) secretions such as the bile, saliva, etc.; (4) tissue disintegrations. Between their several sites of origin within the body, or of their introduction into it from without, and the kidneys, their common site of exit, these traverse the blood, and, if not removed from it with rapidity, poison the tissues. Those that are taken up from any portion of the alimentary canal undergo the modifying influence of the liver, an influence now proved in many and different ways to be of the utmost use in protecting against auto-infection.

By careful injections into the veins of different animals, Bouchard established such facts as the following—namely, that the urine secreted during the night differs from that of the day not only in the degree but in the nature of its toxicity, the former being mainly convulsive in its action, the latter soporific or coma-producing; that that of one part of the day differs from that of another; that the night urine, though specifically heavier, is less poisonous than that of the day; that hard work in the open air markedly diminishes the toxicity, while a mere passing indisposition, indicated by no more serious symptoms than a transient feeling of weariness, markedly increases it; that, within the limits of ordinary health, it varies with the degree of cerebral activity, the presence or absence of constipation, and innumerable other circumstances until lately thought to be of little importance; that the several constituents are not only different from, but to some extent antagonistic to each other; and so on. Furthermore, by comparative experiments on animals, with urines in their natural condition and decolorized by animal charcoal respectively, by injecting at different times aqueous solutions of those portions of the dry residue of evaporated urine that were severally soluble and insoluble in alcohol, and by employing first one and then another definite constituent, such as urea or the potassium compounds, and observing their physiological effects, Bouchard determined the presence of seven distinct toxic substances combined together in the most variable proportions under different circumstances, of which two were convulsivant (one of the two being either the coloring matter or contained in it), one (probably urea) diuretic, one narcotic, one sialagogue, one pupil-contracting, and one temperature-reducing. These could not all be isolated, and their chemical composition determined; yet the conclusions seemed inevitable from the methods of experimentation adopted.

Many of the foregoing facts we have already presented to our readers, but they will certainly bear reiteration. Bouchard gives an approximate estimate of the importance of the different toxic constituents of the urine. Thus he assigns one-ninth to the urea, two-fifths to those substances (including the coloring matter) that are fixed by animal charcoal, a very small but unmeasured fraction to ammonia or its compounds, and the remainder to the mineral constituents, at the head of which stand potassium salts. In other words, the main causes of uræmia are the pigment metabolites, the products of intestinal fermentation, and the potassic salts.

The practical deductions from these new views of the nature of uræmia are in the main confirmatory of the value of ordinary methods of treatment in uræmia. Purgation, diaphoresis, blood-letting, diuretics, are still rationally indicated.

But, besides this, new principles are suggested—the urine is less toxic when intestinal putrefaction is diminished. Hence intestinal antisepsis, by means of naphthaline, iodol, animal charcoal, and milk-diet, is indicated.

The potassic salts being poisonous, the iodide of sodium rather than of potassium may be tried. Muscular exercise and plenty of oxygen lessen urinary toxicity, hence Jaccoud's treatment of Bright's disease by inhalations of oxygen in doses of ten litres three times daily.

Compressed air may, it is thought, be found of value.

The use of vaso-dilators, like nitro-glycerine, has been frequently shown to be of value in helping to eliminate toxic products and in relieving the vascular spasm which their presence in the blood produces.

To sum up, the modern principles of treating uræmia, as set forth by Bouchard, are: "1. In cutting off one or other of the urinary poisons at their source, now that we know to some extent what these poisons consist of, and whence they are derived. Under this head we recognize the great importance (*a*) of limiting potassium salts both in food and in medicine; (*b*) of employing the simplest and most easily assimilated diet, such as milk; (*c*) of bowel disinfection; (*d*) of maintaining at its best the functional activity of the liver; (*e*) of care in the nature of nutrient enemata, when these are required. 2. In directly or indirectly withdrawing or diluting the poison by (*a*) venesection, (*b*) purging, (*c*) sweating, and (*d*) transfusion. 3. In burning up the poison by (*a*) active exercise, and (*b*) the administration of oxygen or oxidizers. 4. In antagonizing the poison, or at least overcoming special symptoms."

THE STATE MEDICAL ASSOCIATION.

THE meeting of the New York State Medical Association this week was an interesting occasion. The attendance was good, and the programme of work was laid out with skill. The Association meetings furnish an excellent opportunity for the country practitioner to visit the city, and combine instruction with a few days of agreeable recreation. We see in its meetings the curious spectacle of the country physician reading papers in the metropolis, while at the gatherings of the State Society the city physician exhibits his attainments in the provinces. On the whole, the contributions of the general practitioner have quite as much of practical interest, while they are refreshingly devoid of any suggestion of self-seeking or specialistical advertisement.

The State Association has quite lost all excuse for existence, so far as ethical matters go. But it is filling a useful purpose in bringing some of the bone and sinew of the profession into the city once a year.

A NEW CAUSE FOR LEAD-POISONING.

A NEW cause for lead-poisoning, which has recently been discovered by Dr. H. C. H. Herold, of Newark, N. J., appears to demand the immediate attention of the profession on account of its wide-spread influence—Dr. Herold having had no less than fifty cases within his own practice during the last six months.

The symptoms observed in these cases were, blue line on gums, constipation, colicky pains, more or less nausea and vomiting, and occasionally paralysis affecting certain muscles. These symptoms clearly pointed to lead-poisoning, but as none of the patients were engaged in any business likely to occasion such a trouble, the cause appeared inexplicable.

Other medical practitioners in Newark reporting similar cases, and the same mystery respecting their origin, Dr. Herold determined to solve the question, and first directed his attention to the nature of the drinks the patients had been in the habit of taking previous to the attacks of lead-poisoning. By a carefuly inquiry into the history of each case, he found that they were all great soda-water drinkers, using that contained in the usual five-cent patent-stopper bottles. Dr. Herold then began an exhaustive chemical examination of this form of aërated waters, which occupied two months of his time, although ably assisted by his brother, Dr. Henry T. Herold. The result clearly demonstrated that all these cases of lead-poisoning were due to drinking this acidulated soda-water, for an examination of all samples proved the existence of lead in sufficient quantities to cause the poisoning in question.

To prove that the presence of lead in this soda-water was not due to accidental causes, such as cleaning bottles with lead-shot, etc., Dr. Herold purchased several dozen new bottles, and had them filled with water which had been charged with pure carbonic-acid gas. With one dozen, aqueduct water was used, and one dozen with distilled water. The stoppers were allowed to remain in contact with the soda-water for only two days, and then chemically examined. The result proved that the aqueduct water then contained .39 grain of metallic lead per dozen bottles, and the distilled water contained .46 grain of metallic lead in the same quantity.

Dr. Herold next directed his attention to the stoppers, and found two kinds on the market; one, with the maker's name stamped thereon, proved to contain, by actual analysis, 42.4 per cent. lead, while an unstamped variety contained 83.6 per cent., or more than four-fifths of lead. Probably the latter form, being the cheapest, is that in common use.

Under these circumstances the chemical result is obvious; for when the soda-water is brought in contact with the stopper, the excess of carbonic acid acting upon it forms an insoluble carbonate of lead. This fact can be demonstrated by anyone who cares to make the experiment.

Now the action of the carbonic acid continues, and redissolves the carbonate of lead, and thus what was at first a harmless carbonate becomes bi-carbonate of lead. This is an accumulative poison, and, if taken into the system even in the quantity contained in one or a few bottles daily, of soda-water impregnated with it, would soon produce marked symptoms of lead-poisoning.

It is possible that the publication of these interesting facts may explain many obscure and mysterious cases of colic which have hitherto been unexplainable, and Dr. Herold's investigation should lead to the abolition of all lead-fittings to soda-water bottle fittings, and to pipes in stationary soda-water apparatus; for undoubtedly the presence of this metal in such positions is a grave source of danger to public health.

THE PHONOGRAPH AS AN INSTRUMENT OF PRECISION.

IT seems not unlikely that the recently perfected invention of Mr. Edison will be of practical value in medical work. It has already been used to record abnormal heart and lung sounds, and reproduce them with almost startling accuracy. If its use can be supplemented by that of the megaphone, whereby recorded sounds can be reproduced with increased intensity, a new system of clinical teaching may be inaugurated. Instead of the professor in the amphitheatre telling the class what he himself hears, all present may be able to hear for themselves. The great trouble with describing physical signs, so as to make them intelligent to another, comes not from a lack of classification, but of minor descriptive terms. If anything, our system of classification is too complicated as it is. But we cannot express with accuracy those slight differences of character which, as physical diagnosticians, we easily recognize with the ear.

Dr. William Porter, of St. Louis, has already made some practical observations in this field. He finds that not only are different voice sounds preserved distinctly, but also that, by attaching an ordinary stethoscope to the phonograph, some of the cardiac sounds could be easily recognized after they had been recorded by the new invention. The murmur of a case of mitral insufficiency was especially well reproduced. He found that normal cardiac sounds were too soft for a perfect record and reproduction. He believes, however, that even this can be done as the machine is gradually perfected and made more delicate.

The wax cylinders on which the imprint is made are not expensive. They will hold about two thousand words, and cost five cents each.

When the phonograph was first presented to the public the paragraphists all had their turn on the humorous possibilities of the machine. Confined to a medical sphere, it must be conceded that they are unique, even startling. We may be able to buy cylinders of cardiac murmurs, aneurismal bruits, fœtal heart sounds, etc., at "list price, twenty per cent. off," just as we now buy charts, manikins, and models. This new class of merchandise will certainly prove a great boon to country medical colleges where clinical material is scarce. If a physician appointed to read a paper before any of the societies should be unable to be present, he can send down his cylinders to be placed in the society's phonograph, and thus his contribution be presented to the members. For, of course, the new machines will eventually be as common as microscopes are now.

THE SENSATIONS OF THE DYING.

The subjective side of disease is one which physicians hear much of, but generally with some impatience. Those feelings experienced by the patient which help in forming a diagnosis, or in modifying treatment, cannot of course be ignored. But the wide range of emotion which the consciousness of a fell disease may excite is something which only the most patient and sympathetic physician can find time to study.

For this reason we would advise everyone to read that remarkable work of Tolstöi's, "The Death of Ivan Iliitch." It is a description, most intense and realistic, of the thoughts and emotions of a man dying of a progressively fatal and painful disease. This disease is the somewhat fantastic, and in the connection impossible, one of "dislocated spleen." The diagnosis, however, is of small moment. The feelings of Iliitch as he gradually realizes that he is in the grasp of a mortal malady; the "pain in the side," the "bitter taste in the mouth," which continually recur to choke out hope and remind him of his inevitable fate; the terrors that at times come over him, his revolt and bitterness over the fact that he must die, his constantly renewed hope of life as constantly destroyed, his curious relations with his worldly wife and daughter, and the final death-scene, are all drawn with a marvellous power. Few can read such a work without feeling new sensations and keener sympathies with those afflicted with a mortal disease.

To be sure, physicians who have dealt for years with sickness and death in all its phases will not agree that Tolstöi's story has general and frequent applications. Death-beds are rarely painful, and even those who have a fatal disorder seem to acquire with it an indifference to or disbelief in their future which prevents any keen suffering. Yet, in some degree, in some persons the subjective side of disease, as portrayed by the Russian writer, does exist, and it is a service to science as well as to literature to have it so vividly and tragically described as has been done.

Tolstöi's views of science and of physicians are, as is known, by no means sympathetic or appreciative, and his description of Iliitch's consultation with an eminent physician bears with it some instructive truth. "It was just as he had expected, he had to wait, and then he saw the doctor, who displayed the stiff professional manners which he knew so well in himself as a magistrate. There were the little thumps, the questions which called forth stereotyped replies scarcely heard, the examination with the stethoscope and the air of importance conveying the idea that the patient had nothing to do with the matter. 'We are going to make it all clear,' the doctor replied; 'we know everything beforehand, and how to set to work; always in the same fashion, no matter what may be your temperament.' Ivan Iliitch could have fancied himself in court. The airs he assumed toward the prisoners in the dock were similar to those which the doctor assumed toward his patients.

"What the doctor said was this: 'This and that in you denote that and this; but should our suppositions not be confirmed, then, after such and such investigations, we must conclude this and that, and if we conclude this and that, then,' etc.

"The only interest Ivan Iliitch felt was in one point—was his condition serious or not? But the doctor paid no heed to such an ill-timed inquiry. From a professional point of view it was an idle question, and unworthy of discussion. As for an exact diagnosis, the complaint, so the doctor said, was a displaced spleen, or chronic catarrh, or an affection of the pylorus. But as to whether Ivan Iliitch's life were in danger, not a word."

Such scenes apply better to the profession in Europe than to that in republican America. The satire is a keen one upon the tendency (on the whole a good one) to examine the body as if it were a machine or a chemical mixture.

PHTHISIS AND THE USE OF ALCOHOL.

THE question whether the use of alcohol has a tendency to prevent the development of phthisis is still a mooted one.

The older writers, such as Magnus, Huss, Johnson, and Leudet, thought that it not only did prevent tuberculosis, but even assisted in arresting the progress of the disease when present. Later observers have taken a somewhat different view. Recently Dr. Alison, in an article in the *Archives Générales de Médecine*, September, 1888, presents the results of his studies of this question among persons living in rural districts, where the history of each case could be followed up for a long time, and in great detail. Among fifty-eight cases of phthisis thus examined he found eighteen, or about one-third, who had been for years excessive indulgers in alcohol. Thirteen of these possessed no hereditary taint whatever, nor were any evidences of contagion discovered. They had all given signs of alcoholism before the phthisis developed. They drank from one to three litres of beer or wine a day, or from one to three litres of brandy a week.

Dr. Alison thinks that the alcohol, in being eliminated by the lungs, causes a congestion and irritation of the bronchial membranes, thus affording a good nidus for the development of the bacillus tuberculosis. He further shows by other statistics that alcoholic cirrhosis of the liver is a comparatively rare disease in the country, even among hard drinkers. This observation will not be disputed.

Neither need there be any doubt that the prolonged excessive use of alcohol, by lowering vitality, may induce phthisis The important question, after all, is whether the moderate use of alcohol favors tuberculosis, or the contrary. We believe it will generally be admitted that, on the whole, such use of alcohol is beneficial to persons having the disease. That its moderate use among persons of phthisical tendency is beneficial or prophylactic is another question, which can hardly be as yet answered. Probably the influence of race, climate, and individual predisposition must here be taken into account.

HOW SHALL THE DOCTOR DISINFECT HIS INSTRUMENTS?

Dr. Hugo Davidson has been making some experiments in the Hygienic Institute at Berlin, in order to find a simple and practicable way of disinfecting instruments. Recent observations show more and more plainly that wounds become infected not so much through the air as through micro-organisms upon the patient's skin and upon the doctor's hands and instruments. The best methods of cleaning the skin and hands are pretty well known, and have been described in these columns. For testing the question of the sterility of instruments, Davidson used the anthrax bacilli, as being the most resistant to disinfectants. He found that the best and simplest process was to boil the instruments for five minutes. A water-bath for this purpose can, he says, be easily obtained and used. It must be covered and all the water must boil, *i.e.*, it must be heated to 212° F. throughout.

His method is to wash the instruments after use in cold water, place them in a water-bath, boil them, wipe them with a sterilized cloth, and place them away for use. By taking these precautions, he can operate safely without disinfecting fluids. He denies that the hot water in any way injures the edge of the instruments.

The method, it seems, is not entirely free from objections, since it would exclude all instruments made of hard rubber.

THE UNION OF MEDICAL SCHOOLS WITH UNIVERSITIES.

The September number of the *New Englander* contains the address delivered in June last, by Professor William H. Welch, now of Baltimore, but formerly of New York, before the Yale Medical School. He spoke especially of the advantages to be secured from a union of such schools with universities, but his address, as we come to peruse it carefully, contains no less valuable suggestions concerning American medical education in general, the history of its past, the promises of its present, and the hope of its future.

He alludes to the old schools at Alexandria and other ancient cities as historical evidence in favor of the main proposition, and comes to the interesting inquiry "What does the present state of medical education and science teach as to the best system of medical education?"

The advanced position of Germany to-day in medical teaching is owing, he argues, to the fact that medicine is there taught "only as a department of a university. Independent medical schools do not exist there. Something more than a feeling of piety has preserved the historic association of the medical with the other faculties."

It is true that somewhat different academic conditions exist on this side of the Atlantic. We have had our ideals, but our newness, geographically and politically, and our poverty have prevented our attainment of them; but we shall be wise to heed the example of older countries in educational matters and methods. This integral relation of the medical with the other faculties has come only from the conviction of its necessity in order to secure the best results.

What now, he asks, are the specific advantages of the proposed union? "In the first place, this system may be expected to maintain the proper balance between purely technical training in the medical art and cultivation of the medical sciences upon which this training should be based; or, to express the same idea more intelligibly, although in somewhat crude and much-abused terms, between the practical and the scientific side of medicine." Anatomy is to be coupled with embryology and comparative zoölogy. Physiology is based upon special application of physics and chemistry, and upon these, together with pathology, is the true system of medical education to be based.

We live in such a practical time that we are apt to forget its relation to that which is intellectual and spiritual. This latter idea has always been kept alive by the university system, and it forms a most important part of character. Hence in universities the practical part of medicine will be ennobled and developed by the intellectual atmosphere of the place.

Again, we are told, university endowment offers greater encouragement of research and the development of original work. The great discoveries of scientific medicine during the last decade have occurred under university auspices.

Finally, economy of organization results from this ideal union. This union must be in fact, and not merely in name. Right here comes the imperfection in this particular with our own local schools. Two of them are allied nominally with universities, but this alliance runs little further than the appearance of some of the same names on two different trustee-lists. The universities might be in Alaska for all the good that their endowments do the medical students. That public attention is being drawn to the matter of medical education is attested by the material prosperity of our schools. The magnificent donations of the last few years mean, however, more than this. They mean an awakening of the public conscience to the fact that the profession, in its furtherance of preventive medicine, is the guardian of their firesides no less than civil authority. But, as waves of further prosperity roll in, may we not plead for a further extension of the union between medical school and university, so that the combined influence of the two may graduate physicians who shall be alike skilful physicians and soulful men.

News of the Week.

No Yellow Fever in Atlanta, Ga.—Dr. James B. Baird, M.D., Secretary of the Board of Health of the City of Atlanta, writes: "In The Medical Record of the 22d ult. it is stated that yellow fever has appeared at Atlanta, Ga. In fact, there has not been a case of yellow fever in this city for many years, and no case has ever developed here except, rarely, among refugees who have been exposed to the disease before leaving infected places during former epidemics."

A Correction.—The *Boston Medical and Surgical Journal*, from which an extract was quoted by The Medical Record bearing on the composition of several artificial foods, publishes a correction based upon the analyses of Professors Elwyn Waller and A. A. Breneman regarding Reed & Carnick's soluble food, to the effect that 38.26 per cent. of the albuminoids which it contains are in soluble form, that no "hard unchanged particles of casein" were found, that the casein is partially rendered soluble by the action of the digestive ferment, that the proportion of albuminoids is limited only by the quantity which can be kept unchanged in solution, that sixteen per cent. of alcohol is necessary to prevent decomposition of the albuminoids, and that no greater than three per cent. of these can be held in solution in this liquid. We publish the correction from the same source as the original quotation as an act of justice to all concerned, regretting that we, in common with our Boston contemporary, were in any manner misled by what appeared to be a well-authenticated official report.

Death of Dr. Henry Rolando, of Baltimore, Md.—Dr. Henry Rolando, aged twenty-seven, died, October 4, 1888, at his home, No. 1309 Park Avenue, Baltimore, after an illness of some weeks. He was well known in this city, and gave promise of becoming prominent in the medical profession. Graduating in 1881 at the Johns Hopkins University, he studied medicine at the University of Maryland in 1883. During 1883–85 he was resident physician at the Presbyterian Hospital, New York, and for the past two years had been practising his profession in this city. He was single, and was the nephew of Dr. Riggan Buckler.

The Virginia State Medical Society meets at Norfolk on October 23d.

Homicidal Paranoia in Texas.—In 1885 there was a series of murders and assassinations of women which extended at intervals throughout the year. Eight women in all were killed, including two white married women. The others were colored women and girls. These murders have never been explained. The assassin left no trace whatever to identify him. There was a fearful similarity among all these murders—nearly all were killed about midnight, and usually within a few days of full-moon nights. All of the victims were struck with some sharp instrument about the head, and on the same side of the head. All were slain in profound silence, even persons in an adjoining room hearing nothing. The bodies were all found in the same position. All were dragged out into the back yard.

The State Board of Lunacy and Charity of Massachusetts seems to be in continual trouble. In the vortex of this is the figure of a Mr. F. B. Sanborn, the Secretary. Five years ago the Governor of Massachusetts tried to remove him, but failed. Now the Board itself has undertaken the same task.

The Medical Profession of Memphis is suffering from the taunts of the press because certain members in authority thought that a case of drunkenness ending in a bilious attack was suspiciously like yellow fever. A general panic followed and lasted twenty-four hours, then the whole country knew that Mr. Binford, of Memphis, had been intoxicated. Our esteemed contemporary, the *Memphis Medical Monthly*, is taking the matter too deeply to heart, and publishes a number of apologetic, defensive, and argumentative editorials to show that the local profession was not to blame. Two columns of "taunts" from the press are also printed, doubtless for their educational effect upon the city's medical talent. Here are some specimens.

Citizen: Hello, Doc., have you seen Mike?

Doctor: What Mike?

Citizen: Microbe; he is looking for you.

A few barkeepers who are judges of "suspicious cases" are wanted on the Citizens' Committee and the Board of Health.—*Ledger.*

Col. R. Dudley Frayser stated to a *Ledger* reporter this morning that a good barkeeper and a first-class judge of liquors should be added to the Board of Health to complete the outfit.—*Ibid.*

Col. Bob Leech is not much scared. He allowed a reporter of the *Ledger* to look at the opening of a letter to his daughter, in which he said: "We have had one grand 'surprise'—a drunk in Memphis. We have had nothing of the kind in the last decade, and our physicians were at sea, but some good coffee and 'steamboat talk' brought him around all right."—*Ibid.*

Mayor Hewitt and our Insane Asylums.—Mr. Hewitt gives a graphic account of the condition of affairs in our city lunatic asylums, showing the results when an independent mayor attacks abuses due to political management. He says: "When I entered office I went through the Charity Department Institutions, and I found a terrible state of affairs respecting cooking in the insane asylum. The means of cooking was inadequate, and the cooks employed were worthless. An outrage was doing to the poor insane. I spoke strongly about the matter to Dr. Macdonald, but he proved that ever since 1875 he had been asking for the means to provide his patients with proper food, and that his appeals had been disregarded. I knew that the taxpayers of New York were not mean, that they did not want to save money in that way. Money was appropriated for a cook house and for the reformation of the cook's staff. This picture shows the result—a fine building and a party of lunatics who have been taught to cook well and are benefited by having something to do. And the cost of cooking is less than when methods were followed that aroused a sense of disgust in everybody who saw them."

Surgical Evisceration.—It is stated that a surgeon of this city recently successfully removed the spleen and one of the kidneys of a patient.

A New Hospital.—The corner-stone of the new St. Joseph's Hospital at Yonkers was laid by Archbishop Corrigan on Sunday, September 23d. The site of the hospital is on a high cliff overlooking the Hudson, and the buildings will be substantial and thoroughly equipped. The estimated cost is $140,000.

The Professorship of Clinical Medicine at Johns Hopkins University.—Dr. William Osler, Professor of Clinical Medicine in the University of Pennsylvania, has been appointed physician to the Johns Hopkins Hospital, and Professor of Medicine in the Johns Hopkins University. Dr. Osler took his degree in the McGill University, Montreal. He subsequently studied in London, Berlin, and Vienna, and in 1885 was appointed Gulstonian Lecturer in the Royal College of Physicians, London, and in 1886 Cartwright Lecturer in the College of Physicians and Surgeons, New York.

Half a Million for Yellow Fever Camps.—A bill has been favorably reported from the Committee to the House of Representatives, providing for the appropriation of $500,000, to be expended in establishing camps for yellow fever refugees.

The Yellow Fever Epidemic at Jacksonville has shown slight symptoms of abating in the past week. The mortality, however, is now very low, and the virulence of the disease is lessened. The total number of cases, up to October 10th, was 3,319; the deaths, 299.

Re-establishing the National Board of Health.—The question of re-establishing the National Board of Health, or a body having similar powers, is being agitated in the Southern papers. The Memphis *Appeal*, in a recent issue, says, in double-leaded type: "The request forwarded to Senator Harris and Representative Phelan yesterday by President Hadden, representing the taxing district; President Martin, of the Merchants' Exchange, and President Suggs, of the Cotton Exchange, and other gentlemen, for the re-establishment of the National Board of Health, was a timely movement that we feel sure will have the immediate attention of our representatives. The contentions and confusions that have grown out of the clashings and local boards, and the demands of the people everywhere for non-intercourse, make it plainer than ever before that a National Board of Health, or a National Bureau of Health, is a necessity to the maintenance of the public health, the prevention of the spread of disease and panic, and the saving of life and property."

Professional Certificate Signers. — One often wonders where all the doctors come from who sign certificates of proprietary and secret remedies. An item in the papers shows the residence and methods of one of this class. Dr. Willard H. Morse, an alleged chemical expert of Westfield, N. J., sold his so-called analyses for ten dollars upward. He was recently arrested by Anthony Comstock's society for fraudulent use of the mails. He confessed everything, and pleaded ignorance of the law in extenuation. He scanned the medical and pharmacal journals, and when a new advertisement appeared he sent the manufacturer a very critical analysis to insure payment for a laudatory one.

Society Reports.

NEW YORK STATE MEDICAL ASSOCIATION.

Fifth Annual Meeting, held at the Hotel Brunswick, New York, October 9, 10, *and* 11, 1888.

October 9th—First Day—Morning Session.

Dr. John Cronyn, President, called the meeting to order at 10.15 a.m.

After standing committees had made their reports, The President read his address, taking for his subject

THE MEDICAL PROFESSION AND THE PUBLIC.

Quoting a lay writer, he said what the public needed to place it in more harmonious relations with the profession was not to be more thoroughly instructed in medical books, but to be taught to distinguish between the true and the false, between the charlatan and the honest, conscientious physician. This task would take more than one generation, and could be accomplished through the influence of the profession, but it must be confessed physicians too often encouraged the ignorance which they ought to enlighten.

The physician was born, not made. Genius, ambition, and love of profession could not make one a physician if the quality of the genius were not medical. The physician required swiftness of action, power of immediate perception, ready analysis, and induction; he should have reverence for the possibilities of his profession. Without these natural qualifications medical education would not make of one a successful practitioner, nor place the profession, as a whole, in its best light before the public.

Dr. Oliver P. Hubbard read the history of

A CASE OF ANÆSTHESIA BY THE INHALATION OF NITROUS OXIDE,

supposed to be the first on record.

The case occurred, November 13, 1821, at Rome, N. Y., in a young man who was found in a room, completely anæsthetic from nitrous oxide which he had turned on from an apparatus in the use of a lecturer. The patient was removed to another room, and recovered.

Dr. George E. Fell read a paper entitled

FORCED RESPIRATION: HISTORY, APPARATUS, AND REPORT OF SIX CASES—EFFECTS OF, ON NARCOTIZED SUBJECTS; ADAPTABILITY OF, IN CASES OF DROWNING OR SHOCK.

He used the term forced respiration in contradistinction to that of artificial respiration. His first case was that of a man who in July, 1887, had, after drinking, taken twenty grains of morphine. The stomach was emptied, belladonna and atropia were administered, the patient was moved about, but opium-narcotism grew more profound, and forced respiration was resorted to. At this time there was venous congestion of the face, and there was not the slightest effort at respiration on the part of the muscles. After the trachea had been opened, and forced respiration by the bellows had been instituted, the patient soon began to make movements which caused disturbance of the tracheotomy tube and hemorrhage, and thereby endangered life. After forced respiration had been continued two hours and a half the patient was allowed to breath for himself. Delirium tremens afterward complicated the case, but the patient recovered. The second case which he cited did not occur in his own practice, but in Germany.

In the third case Sylvester's method of artificial respiration had been continued some hours before Dr. Fell arrived to employ forced respiration. The patient was unable to breath for himself for over fourteen hours, and it was necessary to continue forced respiration nineteen or twenty hours, and at intervals for some hours longer. Recovery finally took place.

In the fourth case the man had attempted suicide by cutting his trachea, his arm, and by taking a large quantity of laudanum. Several physicians saw him at the hotel before Dr. Fell was sent for, all of whom pronounced his case hopeless, and the coroner ordered a coffin. Forced respiration was established through the tracheal wound and the patient was soon partially resuscitated, but his vitality was so low that this means also would have failed to save life had they not performed transfusion with a prepared liquid. The loss of blood from self-inflicted wounds had been great. Some abscesses developed at points of hypodermic medication, which prolonged the patient's convalescence.

In the three cases recited there could be no question of a fatal result had not forced respiration been resorted to.

Case V. occurred in a Buffalo hospital and was treated by the house-surgeon. It also was from opium-poisoning. Life was prolonged fourteen hours by forced respiration, when the patient succumbed.

Case VI. was that of a child, aged eighteen days, which had by mistake been given one grain of sulphate of morphine. Six hours later forced inspiration was begun, and hopes were even entertained of yet saving life, but four hours later the heart failed. The author thought that had forced inspiration been begun two hours sooner the patient might have been saved. Another case in which he tried forced respiration was that of a still-born child. It was not brought to life, although the method was applicable.

Artificial respiration was, in the class of cases under consideration, carried on at the expense of the patient's energy, as well as that of the physician. Not so with forced inspiration. He thought the latter could be employed with advantage in drowning, and also in shock, although he had not had an opportunity to try it. The action of the apparatus was demonstrated, and it was seen to be equally applicable in adults and infants. Three motions of the bellows represented one inspiration, and three one expiration. Its action was continuous, the air, during three movements, being forced into the lung, and during the next three escaping externally through a valve, during which time the air within the lung also escaped. The air could be warmed or medicated with ease.

AFTERNOON SESSION.

DR. **ALFRED L. CARROLL** read a paper introducing the

DISCUSSION ON NOSOGRAPHY.

That there was need of a proper classification of diseases must be evident to every teacher and practitioner of medicine. Under the present method, or rather, lack of method, lesions and symptoms, causes and consequences were so interchangeably confused as to retard scientific education. Until our knowledge of pathology should be completed, any classification must necessarily be provisional; but as our knowledge extended regarding a given disease, its name should be changed and a new one be used based on a definite classification. In speaking of classification based on anatomy, the latter term comprised action, growth, microscopical structure, and chemical constitution of the various component parts of the body in both normal and abnormal conditions. In this sense it would be impossible to think of any alteration or derangement which could not find a suitable place, or any clinical phenomenon which could not be satisfactorily registered if it were satisfactorily investigated. For the intercommunication of ideas between different nations it was necessary that names be derived from universal and intelligent roots. Hence Greek and Latin must supplant vernacular terms.

The proper place for the microbes had not been determined with certainty, but he thought the impression was gaining ground that the part which they played in the production of disease had been overestimated. As to the place to be assigned to ptomaïnes and leucomaïnes, there was alleged evidence, at least, that a few of the latter were mutually antagonistic. Of the nature and mode of operation of various extractives we could yet but surmise.

DR. **E. G. JANEWAY** discussed the question,

WHAT ARE THE ADVANTAGES OF A NOSOGRAPHICAL SYSTEM BASED UPON ANATOMY?

His remarks were submitted in writing, for he had on study come to the conclusion that at present it was not practical to found a system of nosography on anatomy alone. Take, for instance, typhoid and typhus fever; could there be given a name on an anatomical basis? He thought not. If the disease were dependent upon a parasite, as trichiniasis, an attempt to name it on an anatomical basis would at once cause a confusion of anatomy and etiology. Difficulty would especially become manifest in trying to classify nervous affections on an anatomical basis. The term epilepsy meant little except to the one who knew the disease clinically; anatomically it could not be classified. There would be less difficulty in making an anatomical classification and nomenclature of local than of general diseases. What general principles should govern classification and nomenclature, irrespective of their particularization in medicine?

M. L. BRITTON, Ph.D., discussed this subject from the point of view of the botanist, giving the basis of classification and nomenclature in botany.

DR. **E. D. FERGUSON** read a paper entitled

DOES A NOSOGRAPHY BASED UPON ANATOMY AFFORD SATISFACTORY MEANS FOR THE REGISTRATION OF CLINICAL PHENOMENA?

He said the uncertainty of facts had made him charitable of the looseness which prevailed in nomenclature and classification. The meaning of any term whatever would vary more or less according to the mental peculiarity and education of the person using it. The attempt to make a classification or nomenclature need not be postponed until perfection was possible. No word, nor even phrase, could fully describe the disease; it could only imperfectly do so. Some words, when first used, were intended to be descriptive of the thing they represented, but they often continued to be used long after this description had been proven quite false. Proper names of persons were at one time intended largely to be descriptive, but this meaning entirely ceased in after-generations, and it might be a question whether the naming of diseases by numbers would not be less confusing than to employ descriptive terms. While he might criticise Dr. Gouley's classification he was unable to offer a better.

CHARLES RICE, Ph.D., sent a brief communication on ptomaïnes as regular constituents of urine in cystinuria.

DR. **MICHELL**, of Charleston, thought a classification based on anatomy was best and practical, and that the objections offered by Dr. Janeway with reference to typhoid fever, etc., were not insuperable.

DR. **E. M. MOORE** mentioned dropsy, and some other terms formerly employed as designating a presumable disease, while now they were known to represent only a symptom of a disease. Notwithstanding the difficulties in the way, it would be desirable, where possible, to have an anatomical classification, for we then had a solid basis.

DR. **J. W. S. GOULEY** said, with regard to the restrictions which had been placed upon an anatomical classification, that they were not well founded, for the word anatomy was used in its broad sense, and included physiology, bio-chemistry, embryology, etc. We should make all these branches subservient to our nomenclature. It was perfectly possible to make a classification in harmony with whatever part was taken by the ptomaïnes and leucomaïnes.

ELWYN WALLER, Ph.D., discussed the question,

WHAT PLACE IN NOSOGRAPHY SHOULD BE ASSIGNED TO BACTERIA, PTOMAÏNES, LEUCOMAÏNES, AND EXTRACTIVES, RESPECTIVELY; (*a*) FROM A BIO-CHEMICAL, (*b*) FROM A CLINICAL POINT OF VIEW?

DR. **NELSON B. DE SIZER** followed with a paper on the same subject, which he treated in a more or less exhaustive manner. Ptomaïnes, the work-product of microbes, were due mostly to animal decay, less to vegetable decay, and varied in properties almost infinitely, some being virulently poisonous, others only feebly so. Certain ones developed only when decay took place under certain conditions, the germs causing the decomposition requiring a varying life-medium. The products of the same germs might cease to be poisonous when those germs were transferred to a purer water. Certain epidemics of disease were evidently due to ptomaïnes which had their origin in decomposing food. Dr. De Sizer referred to one case, however, in which the poison causing fatal sickness in one family had its origin in canned apricots.

The fact that the bacilli formed a chemical poison and the proof of this theory of the origin of certain diseases, amounted to almost demonstration, although the chemistry was yet imperfect. As to the action of the leucomaïnes, their poisonous influence was readily manifest when the human body failed to throw off its excreta. He quoted approvingly the view that chlorosis might be caused by the absorption of fecal matter.

Dr. Charles W. Brown cited an experiment with the blood of a horse which died of traumatic tetanus. Some injected into a litter of kittens caused all to die with symptoms of tetanus, while the irritation at the point of injection was scarcely perceptible. The cause of death was, perhaps, by ptomaïnes or leucomaïnes introduced with the blood of the horse.

Dr. W. D. Garlock then read a paper entitled,

THE ORIGIN AND MEDICAL TREATMENT OF URIC-ACID CALCULI OF THE KIDNEY.

He said of treatment that it should relate (1) to alimentation; (2) metabolism, including diathesis and excretion; (3) habit of life, climate, occupation, etc.; (4) local disorders leading to production or prevention of excretion of uric acid. These factors had to be kept constantly in mind in the treatment of the uric-acid diathesis and in efforts to remove stone from the kidney by solvent remedies. Moderation in diet was probably of more importance than exclusion of any particular kind of food. He thought a mixed diet was to be preferred. Milk-diet, if it could be maintained a long time, would probably be best of any exclusive diet, and should form an important part of any mixed diet.

The diet in lithiasis should embody in proper amount various albuminous, starchy, and saccharine elements selected from articles most easily digested; the albuminoids should be animal rather than vegetable.

There seemed to be an increasing appreciation of the value of sodium compounds. Anything which had the power to lessen the colloid matter in the pelvis and calices of the kidney would prove prophylactic in high degree. Of all local conditions, catarrh of the pelvis of the kidney, or pyelitis, aided perhaps most in stone-formation, and this was greatly intensified, especially for phosphatic stone, if ammoniacal degeneration supervened.

Evening Session.

Dr. Frederick W. Putnam read a paper entitled

HICCOUGH, WITH NOTES ON TREATMENT.

Hiccough might occur without known cause, or in the course of various diseases. The milder cases occurring in childhood were usually readily relieved by domestic remedies. In other cases the hiccough lasted hours or even years. In one instance the affection continued twenty years, and led the patient's husband to seek a divorce. The paper dealt chiefly with treatment, briefly reviewing the various means of producing relief by diverting the patient's attention, producing a sudden influence upon the nervous system, electricity applied to the diaphragm, the phrenic nerve, etc., or the use of pressure or dry-cups over the phrenic nerve; the value of drugs, such as ipecac., valerian, anæsthetics, etc. If chloroform were used, its influence, he thought, would be greater on the hiccough if it were produced suddenly.

Dr. J. Lewis Smith then read a paper on

DIPHTHERITIC PARALYSIS AND THE TREATMENT OF DIPHTHERIA,

first reviewing the history of diphtheritic paralysis, which, he said, was not described by writers as far back as the sixteenth century. Definite knowledge on the subject began to form about 1855, but the nature of the paralysis, the manner of its occurrence, and its pathology were still undetermined.

The statistics of different writers differed regarding the frequency of the affection, which is to be accounted for by the fact that some epidemics were more severe than others.

The paralysis did not usually begin until the period of pseudo-convalescence, but cases have been recorded in which the paralysis developed as early as the third day. Mild walking cases of diphtheria occurred not infrequently in New York, and the diphtheritic affection might be overlooked until after paralysis developed.

The paralysis was motor and sensory, a fact which should be borne in mind in studying the nature and cause of the affection. The muscles affected atrophied, as in other forms of paralysis. The symptoms varied, of course, with location.

Loss of tendon reflexes, usually preceded other signs of paralysis, and was present in one-third to one-half of all cases.

As to the muscles affected, the velum palati and pharyngeal muscles were most commonly involved, although various muscles of the body might be implicated. The paralysis was never general, but frequently multiple. When the muscles of the heart and lungs became paralyzed death ensued. Post-mortem examinations in these cases had revealed nothing abnormal in the heart's muscle or nerves.

The treatment of diphtheritic paralysis was hygienic and medicinal. He thought galvanism had proved of benefit, as had also strychnine. Perhaps the latter acted as a tonic.

Dr. George E. McDonald read by title

A CASE OF SUPPOSED PARTIAL TWIST OF THE INTESTINES

Dr. E. J. Chapin Minard read a paper entitled

DOES THE MENSTRUAL FLOW ORIGINATE IN THE TUBES?

She had been invited, in August last, to see a case of inverted uterus. When she saw her the patient was menstruating, it being the first time since the birth of a child five months previously. She was nervous and prostrated, the flow was unusually free. The uterus was proved to be inverted, the tubes dragged down in the sac formed by the peritoneal surface of the inverted uterus. The surface of the tumor thus formed was of a dark-red color, studded with points of a darker hue, resembling the tongue of a bad case of scarlet fever, without the creamy coating. From this surface no discharge to speak of could be wiped away, but from the tubes a dark, healthy menstrual flow, non-fibrinous, passed out drop by drop, and when the tubes were pressed upon would form a stream for an instant.

If the menstrual flow did take place from the tubes many things would be explained in gynecology and midwifery which were now dark.

Dr. J. P. Garrish presented a paper, which was read by title, on

THE USE AND ABUSE OF THE FORCEPS IN OBSTETRICS.

Dr. C. A. Leale reported on some specimens of

RASPBERRRY SEEDS MISTAKEN FOR GALLSTONES,

presented at the last annual meeting by Dr. R. H. Sabine, consisting of small, hard, corrugated bodies passed to the amount of half a teaspoonful by a woman, believed to be gallstones, but which proved to be raspberry seeds.

Wednesday, October 10th—Second Day, Morning Session.

ADDRESS ON SURGERY.

Dr. William H. Carmalt, of Connecticut, read the address, choosing for his subject,

REMOVAL OF THE CANCEROUS TONGUE.

The infiltrations of the growth, difficulty of swallowing, the annoyance of dribbling of saliva, fetid breath, more or less frequent attacks of impending suffocation, the consciousness that there was no permanent relief, tended to make the patient's condition wretched, and should induce the surgeon to do all in his power to give temporary relief. The radical operation of extirpation was now the only accepted one in cancer of the tongue. Statistics of the Connecticut State Board of Health gave statistics of 1.227 cases of death from cancer, in 231 of which the site of the disease was unknown. In 12 of the remaining 996 it was located in the tongue. In 3 the sex was not given; in 1 the disease occurred in a female; in 8 in men. Probably the proportion of cancer of the tongue to all cancers was one per cent. The general rule in cancer existed in these cases, that it usually originated at a point of long-continued irritation. The irritation might be due to broken teeth, incrusted teeth, hot pipe-stem, etc. The reader was indebted to Mr. Barker's article for much valuable information on various operations, etc. A simple enumeration of these showed the many and important difficulties which surgeons had encountered in operating. Death after the operation came from one of two causes: from hemorrhage—primary or secondary—or from septic pneumonia. If the patient recovered from the operation death would, of course, finally result from recurrence of the disease in surrounding tissue.

Hemorrhage during the operation was almost entirely under the control of the operator. Skilled assistance was necessary during the operation. Dr. Cormalt would not undertake the operation with cocaine alone, or an anæsthetic, although it had been done. If the artery were tied, it should preferably be done in the digastric triangle. He favored preliminary tracheotomy, to administration of anæsthetic, to prevent blood entering the lungs, etc., and feeding the patient through a stomach-tube. He opposed removal of the diseased mass by ligation, écraseur, and galvano-cautery. With the use of the cautery the slough was long in coming away, and exposed the patient to septic infection from decomposition. After referring to Whitehead's operation by the knife, he described that of Kocher, of Zurich, which Dr. Cormalt adopted in one instance successfully; but the patient exposed himself six weeks later, and contracted pneumonia, from which he died. He did not favor leaving half the tongue, as it was of little use, and one could not say positively that it contained no cancerous infiltration.

Dr. Charles W. Brown then read a paper on

RAILWAY INJURIES.

He gave statistics of two hundred and sixty-five cases which had come under his care. They showed that the appearance of the parts often enabled the experienced railway surgeon to judge of the manner in which the injury had been inflicted; when the hand or fingers were caught between the draw-heads the parts were nearly, if not completely, cut through, and when between the bumpers they were crushed to a pulp, etc. When the wheels passed over a limb it was frequently mashed and torn to pieces, but he had seen many cases in which from one to a dozen wheels of loaded cars had passed over the leg, which had on it a heavy sock, boot leg, and thick trousers, and after removing these the skin was found unbroken, and to a casual observer would not show even a mark of injury; but when the knife was thrust through the limb it collapsed like a broken bubble, all the soft parts, except skin, and the bone reduced to a fluid pulp. Fractures of long bones were very likely to be compound.

Of the 265 cases there were 53 of crushed fingers. or of 80 fingers; 18, crushed forearm, etc.; 19 cases of contused wounds; 61 fractures; 14 scalp wounds; and various other wounds. Amputations were performed on 41 patients, and included the removal of 58 fingers. All the patients on whom amputation was performed, except 4, lived. They were all immediate amputations except two, and the author spoke strongly in favor of the immediate operation. In many cases, by waiting for reaction to take place, the shock already produced by the crushing wound would have added to it mental shock, and in many cases would end in death. If, in place of waiting for reaction, an effort were made by the use of whiskey hypodermatically, artificial heat, and "hot sling" internally, to assist nature in bringing about reaction, which would in nearly every case manifest itself by rapid improvement in circulation, primary amputation under ether would leave a clean stump, and mental anxiety would disappear. The inexperienced surgeon was likely to leave a part that should be removed in his anxiety to save enough skin for flap. He preferred porous dressings not covered by oiled silk.

Dr. Thomas Manley, speaking from experience with injuries inflicted by horse-cars, etc., expressed an opinion against primary amputation. He would not use dressings intended to prevent access of air to the wound, as oiled silk. Children were unfavorable subjects for amputation.

Dr. E. M. Moore cited a case of complete crushing of the arm; the skin, however, not being broken and the vessels remaining intact, amputation was not performed and the arm became useful. Primary amputation was always preferable to secondary. When the limb was badly mangled, do not try to save it; give whiskey, ether, and the knife, replace the mangled limb by a clean amputation-wound, and thus avoid much mental distress and shock in the patient. Bichloride acted not only as an antiseptic, but also as a local anæsthetic.

Dr. J. W. S. Gouley then opened the

DISCUSSION ON TUMORS.

He spoke of the great utility of periodical examinations of the question of tumor-formation in the human body. The term tumor should be used in its sense of a swelling in any part of the body, to the exclusion of inflammatory swellings, etc. Tumors are accordingly divided into four classes, viz.: 1. Neoplasmata; 2. Adenomata; 3. Blastomata; 4. Cystomata. Neoplasma or new formation is applicable to certain benign and to malignant tumors but not to adenomata, granulation-growths, or cysts. The views of Hasse, Cohnheim, and Lancereaux are set forth regarding the genesis of new growths.

Clinical observation, supplemented by microscopical examination, has established the fact that neoplasmata of high organization are benign while those of low organization are malignant, and that the lower the organization the greater the malignancy.

The basis adopted for the nomenclature and classification of tumors is the broad anatomical foundation comprising embryology, physiology, histology, etc.

Degeneration of benign into malignant tumors is admitted and accounted for partly by metaplasis, partly by the independent proliferation of embryonic cells, but it is denied that the whole of a tumor is metamorphosed. for its primary benign elements are traceable in the general mass of disease.

The questions of recurrence and curability of malignant tumors are examined from a pathic as well as from a clinical point of view. Eleven cases are cited in illustration of periods of immunity ranging from seven to forty years from the time of the extirpation of malignant tumors, the average being a fraction over nineteen years. In three of these cases there was no recurrence. In seven cases the disease recurred once in each case as follows: in 8, 8, 16, 20, 25, 30, and 40 years. In one case the disease recurred three times. The first recurrence was twenty years after the operation, the second two years after the second operation, when there followed a period of immunity of twelve years; a small growth then appeared which rendered the fourth operation necessary. The patient was living and well three years after the fourth and thirty-seven years after the original operation.

Three cases are still under observation. In one of these cases there was no recurrence seven years and three months after the operation. In one case the disease recurred in twenty years. when a second operation was performed. There was no further recurrence in three years and eight months. In one case the disease recurred in eight years, when a second operation was performed. Six years and three months afterward there was no sign of further recurrence.

The question, *Are malignant neoplasmata ever cured?* may, then, be answered, first, from a strictly scientific, and, secondly, from a clinical point of view. In the first case the answer will be negative, while in the second case it may be affirmative with qualifications. From a scientific point of view, it cannot be said that malignant neoplasmata are cured– since it is known that their tendency to recur is strong, and that the period of their recurrence is indefinite—if the term cured be used in the sense of restoration of health without limitation so far as the particular disease is concerned. But if, from a clinical point of view, the term cure be used in the sense of temporary restoration of health, so far as the particular disease is concerned, it may then be said that malignant neoplasmata are practically cured, especially when the period of immunity is extended to eight, ten, fifteen, twenty, thirty, or forty years after excision. A reasonable doubt as to accuracy of diagnosis naturally arises when a neoplasma, said to be malignant, is declared cured many years after its ablation, unless its relation come from an experienced clinician and include the statement of a searching microscopical examination of the excised growth by a competent patho-histologist, or unless it be known to have recurred in after-years. In regard to the treatment of malignant tumors, the conclusions of the speaker are as follows:

1. A suspicious neoplasmata, susceptible of excision, cannot be too soon removed. The earlier the operation the greater the chances of prolonged immunity.
2. In the excision of malignant neoplasmata, as much of the neighboring healthy tissues should be sacrificed as is compatible with sound judgment.
3. Immediately after the excision of malignant neoplasmata, careful search should be made for diseased neighboring lymphatic ganglia, all of which should be removed.
4. Excision of multiple malignant neoplasmata is contraindicated, particularly when they invade many lymphatic ganglia, or when they are disseminated in hundreds upon the surface of the body. If, however, there be among them a very large growth seriously interfering with a vital function, the excision of this growth is warranted on account of the temporary benefit that may thus be conferred upon the sufferer.
5. When a malignant growth is in a state of ulceration and this necrotic process and consequent putrescent discharges become a source of exhaustion to the patient, the growth, if accessible, should be forthwith removed. By this means suffering is mitigated and the life of the patient is rendered more tolerable, and may even be prolonged many months.
6. When hemorrhage from a malignant growth threatens life, the diseased mass, if within reach, should be extirpated without delay, to prevent sudden death from a great loss of blood, though the general infection be such as to give the surgeon little hope that the patient will live more than a few weeks.
7. When an ulcerated malignant growth involves a large cutaneous surface, a cutting operation being contraindicated, applications of sundry kinds, such as cataplasms, soothing lotions, deodorizers, etc., should be made, and opiates should be administered in sufficient quantity to mitigate pain and insure sleep.
8. Whenever its locality and other circumstances are favorable, the whole wound resulting from the incision of a malignant neoplasma should be cauterized as freely as the nature of the case will permit.
9. The medicinal treatment of malignant growths has been too generally discarded of late years. This treatment fell into disrepute because of the inconsiderate and extravagant claims made for many so-called specifics, and because it was used as a distinct means of "cure," and not as an adjuvant of surgical treatment. Very much mischief has been the outcome of attempts made to cure malignant tumors exclusively by means of internal medication, which is so delusive as to lead both physician and patient to temporize until it is too late for operative interference. No kind of medicinal agent so administered has ever cured malignant tumors. Nothing short of their extirpation, principally with the aid of the knife, has ever been of any avail, and this mode of treatment often requires to be supplemented by the cautery, and to be employed in an early stage of the disease. Then only are the longest periods of immunity likely to follow, and only as a help to this end is constitutional treatment of any use.

AFTERNOON SESSION.

DISCUSSION ON TUMORS (*continued*).

DR. ALFRED L. CARROLL discussed the question,

WHAT IS THE RATE OF MORTALITY FROM MALIGNANT NEOPLASMATA AS COMPARED WITH OTHER DISEASES?

Statistics should be accepted with care. The best he had bearing on the above question were those of the Health Board of the State of New York, giving the entire mortality in the State for three years as 264,161, and of these cancer was given as the cause in 6,162, being a little more than two and one-third per cent. It was possible some deaths attributed to cancer were due to sarcoma. Probably many deaths due to internal cancer were attributed to other causes. More deaths from cancer occurred in sparsely than thickly settled districts; more in the country than in cities. Possibly this could be accounted for by the fact that in cities surgical interference was earlier and more commonly resorted to.

DR. HERMANN M. BIGGS discussed,

WHAT ARE NEOPLASMATA, AND WHAT ARE THE CHARACTERS WHICH DIFFERENTIATE THEM FROM BLASTOMATA, AND THESE FROM INFLAMMATORY PROCESSES.

Neoplasmata were tumors which tended to persist or increase, independent of the nutrition or organism from which they arose. They often grew quickly when the organism from which they were derived rapidly emaciated. Their growth was not determined or limited by a definite purpose, and the condition of their growth and nutrition was largely independent of those obtaining in the parent organ. In this sense, neoplasmata were parasitic.

The second part of this question was answered by defining blastomata, which were infectious, inflammatory new formations which showed no tendency to persist or increase beyond a certain size. They did not usually pass beyond the stage of granulation-tissue; they soon began to degenerate. Their formation was a conservative process tending to limit the extension and multiplication of the organism which caused their growth. They differed from neoplasmata in that their formation was determined by the action of specific forms of micro-organisms. Blastomata were distinguished from inflammatory processes by their occurrence in the form of minute nodules or tumors, all containing specific forms of micro-organism, by their failure to pass on to fibro-blast stage of development, by their early tendency to degeneration, by their local infectivity, by their tendency to dissemination and reproduction in distant parts. Yet blastomata were essentially inflammatory; they were in reality only inflammatory infective new growth.

Dr. Biggs thought the only rational basis for classifying neoplasmata was that of histogenesis; and the naming of the tumor, if on an ananatomical basis, gave a pretty accurate conception of its relative degree of malignity.

Among objections to the grouping of neoplasmata in accordance with benignity and malignity was that such a grouping suggested the idea of a sharp line dividing malignant from benign neoplasmata, which was far from being true. There was a gradual ascent from benign to malign neoplasmata. A benign tumor might surely cause death, not because of its nature, but because of location. Furthermore, malignity had come too commonly to signify cancer. Such a classification was very unscientific.

Dr. Charles B. Nancrede, of Philadelphia, also discussed the question,

WHAT ARE THE OBJECTIONS TO THE GROUPING OF NEOPLASMATA IN ACCORDANCE WITH BENIGNITY AND MALIGNITY?

and then that of

WHAT CONSTITUTES MALIGNITY, HISTOLOGICALLY AND CLINICALLY?

One form of histological element did invade the histological elements of a different type until we came to malignant tumors, and malignity, briefly expressed, was invasion of one form of histological elements by histological elements of different types, the invading elements being unable to develop into a stable tissue.

He further discussed Question 6, "What is the mechanism of the necrotic process which so often occurs in certain neoplasms?"

It was due to insufficient blood-supply to the histological elements. Cicatricial tissue might be the direct cause of the anæmia in the histological elements.

Dr. Nancrede further discussed Question 13,

ARE MALIGNANT NEOPLASMATA EVER CURED?

and expressed his views in the affirmative, and gave as illustrations cases of removal of cancer from the lip. When, as in cases referred to by Dr. Gouley, the disease remained absent many years after removal, and then again occurred, he thought here it could not properly be regarded a recurrence any more than a second attack of scarlet fever could be spoken of as a recurrence. The evidence was that the disease was local in the beginning, and if so, there was no reason why it might not be cured by removal.

Dr. Nathan Jacobson discussed, at length, Questions 5, 6, and 12. He thought cancer could be cured by early and thorough excision. A second attack after some years did not mean recurrence.

Dr. W. H. Carmalt, of Connecticut, thought the development of malignant growths simply due to failure of cellular tissue, whether connective tissue or epithelial, to arrive at maturity, and in this immature state developed afterward in an indefinite way. Malignant tumors should be divided into those of connective tissue and epithelial type, a much better classification than into sarcoma and carcinoma. Sarcoma usually invaded distant organs through blood-vessels, carcinoma through the lymphatics. He had known removal of malignant tumors not to be followed by recurrence for years. He favored radical removal.

Dr. Joseph D. Bryant discussed in a paper Questions 7, 8, and 13.

The reason for occurrence of malignant tumors in parts distant from the primary seat was as much a mystery as was that of normal vital force. Facts pointed at present as follows: (1) That sarcoma and carcinoma were dependent entirely on local causes for their existence in many cases; (2) that they were a local manifestation of an inherent peculiarity of certain tissues; (3) that they started in local irritation. The local manifestations were first to be seen and first appealed to the fears of the patient. How did malignant growths invade neighboring parts? There seemed to be no doubt now that it was by cell-nuclei, or cell-passage from the primary point through lymphatics or capillaries and vessels. Clinically and theoretically the rapidity of the growth corresponded to its vascularity, richness of neighboring lymphatics, softness of surrounding tissues. Malignant disease, as such, was not inherited, but he thought a vulnerability of tissue favoring its development might exist in the offspring. Could malignant neoplasmata be cured? The question could be safely answered in the affirmative. The site of the growth and early removal had much to do with cure. The knife was the instrument with which to operate.

Dr. Charles W. Brown gave his personal experience with removal of cancer in prolonging life.

Dr. E. M. Moore continued the discussion on tumors, giving personal experience with malignant neoplasmata. Some years ago, when the microscope came into use, it was thought the questions of the pathology and diagnosis of cancer would be definitely determined. But to-day as much reliance could be placed upon clinical experience independent of the microscope. He had hoped to hear during this discussion that some German had discovered a microbe to which the disease could be positively attributed. But here again he had been disappointed. Dr. Moore had removed a number of cancerous breasts, the patients living years afterward without a recurrence, and death resulting from some other disease. The older the patient, the less likely was there to be a return. While he had regarded cases operated upon many years before, in which there had been no recurrence, as cured, yet he recalled the case of a man who came to have a cancer of the lip removed, and stated that at the same place a cancer had been removed seventeen years before, there being recurrence only after sixteen years.

Dr. Cronyn, President, said, regarding heredity, that he had seen the disease in four generations of one family, affecting in one generation two brothers, in another three brothers; in one case the cancer appeared in the side neck, and in the same place in the patient's son.

Dr. Nancrede mentioned some cases in Philadelphia in which there had been frequent removals, the patients' lives undoubtedly being prolonged and made more comfortable. He could not easily understand how one could transmit to offspring a disease which did not appear in the parent before sixty. Sir James Paget had explained that by heredity it was not meant the disease was transmitted absolutely, but potentially. He was unable to understand that explanation, but he could understand an inherited tendency to premature senility in some particular tissues of the body, and disease attacking such tissue was more likely to be malignant than if it attacked relatively younger tissue.

Dr. Wood recalled a remark of the late Dr. Alonzo Clark, that if a mother had cancer and had daughters, one or more of them would be likely to develop cancer. Dr. Wood recalled one instance in which two daughters developed cancer, the mother having had cancer of the uterus. He thought there might be a predisposition to the disease, just as there might be to phthisis.

Dr. C. L. Squire gave the history of a woman on whom eight operations for cancer, commencing in the breast, had been done within five years, the entire period covered by the disease being fourteen years. Three years had elapsed since the last operation, and still no return.

Dr. Gouley still held to the view that in the cases narrated, in which freedom from cancer continued many years after operation, that the second attack was properly designated a recurrence. The essential of cancer was polymorphism of the cells. Cancer was of pan-blastic, sarcoma of meso-blastic, origin. The name should be determined by the elements of which the tumor was chiefly composed. The microbic and leucomaine theories were still under study. He thought there was no doubt of spread of sarcoma chiefly through the blood-vessels, and of cancer through the lymphatics. Regarding hereditary predisposition, Broca had published the records of a number of cases of the disease existing in three or four generations. He then gave a scheme of classification and nomenclature of neoplasmata. He claimed it was shorter and simpler than others; it was not introducing new names; they were very descriptive.

Dr. Moore had listened to Dr. Gouley's statement that both sarcoma and cancer, or epithelioma, were composed of the same cell-elements; the difficulty in distinguishing the one from the other, where the number of cells were pretty equally divided, still remained. The classification sounded well, but he feared physicians would not stand the long names.

Thursday, October 11th—Third Day, Morning Session.

ELECTION OF OFFICERS.

William T. Lusk, M.D., of New York, was elected President for the ensuing year.

Vice-presidents by Districts: First, Dr. S. H. French; Second, Dr. R. C. McEwen; Third, Dr. Elias Lester; Fourth, Dr. Thomas R. Strong.

Members of Council by Districts: First, Dr. Douglas Ayres; Second, Dr. J. B. Harvie; Third, Dr. T. H. Chittenden; Fourth, Dr. R. T. Menzie; Fifth, Dr. A. L. Carroll; and Dr. William B. Eager.

ADDRESS IN MEDICINE.

Dr. John Shrady chose for his subject

MEDICAL NEW YORK IN 1800.

He sketched the social and political aspects of the times. He gave items of many local changes and condensed biographies of many medical celebrities, among them, David Hosack, Samuel L. Mitchill, and Wright Post. He maintained that the condition of the profession at that time, considering the general surroundings, was as good as that of the present day; that there was the same panting after knowledge, the same struggles, the same self-sacrifice, the same ingenuity of resource, and the same devoted humanity. They constituted no mean connecting links between the past and the present, and deserved well of posterity, for it is to be considered that their surgery was without anæsthesia, and their medicine without the instruments of precision.

Dr. Isaac E. Taylor read a paper on

INVERSION OF THE UTERUS AFTER SOMATIC DEATH.

It was true that there were only rare cases in which the child was expelled and the uterus inverted after the death of the mother, but the subject deserved attention because of its importance. To the mechanism of the inversion he would call attention. Three important reasons, or theories, had been advanced in explanation of posthumous delivery of the child and inversion of the uterus: 1, Spasm of the uterus or rigor mortis; 2, decomposition of the tissues and fluids in the abdomen, and the evolution of gases; 3, contraction of the uterus, consequent on the irritability of the muscular structure of the uterus which ensued after death. Physiology had shown that muscles did not lose their irritability immediately or very soon after death of the general system, but it did not explain why the muscles of the uterus, powerless at death, should afterward with remarkable energy force the expulsion of the child, much less turn the uterus wrong side out. The uterus after birth of the child and expulsion of the placenta had been found as firmly contracted in these cases as after labor in the living mother. The uterus was one of the last organs to undergo decomposition. The contraction of the womb after death was not due to the influence of the nerves, as these were dead. After offering objections to other theories, which would mostly suggest themselves to every mind, Dr. Taylor said he would suggest the belief that the investigation of the mechanism of posthumous delivery of the child, and inversion of the uterus after death, would confirm his opinion of the mechanism of normal labor expressed in 1863, and show that the same explanation applied here, namely, that inversion was effected by one continuous persistent contraction of the uterus, and the inversion was from below upward, instead of from above downward.

Dr. C. A. Leale said the subject was one of great importance from a medico-legal point of view; the physician was called, and found the mother dead and a child born, perhaps dead, perhaps alive. According to the law in some States, if the mother was dead when the living child was born, and then afterward died, the heir would be the husband of the mother; but if the child was born dead or died before the mother, the property went to the mother's heirs.

ADDRESS ON OBSTETRICS.

Dr George T. Harrison, in his address, reviewed recent progress in obstetrics. An epoch-making procedure was introduced with freezing the body before making dissection. It had been established that in the parturient, as in the unimpregnated state, there was a lower segment of the uterine body, distinguished from the neck. In parturition there was an upper active and a lower passive part, although the functional did not correspond to the anatomical division between the body and cervix. The body contracted actively during delivery, the lower portion remained passive. The "ring of contraction" corresponded to the lower boundary of firm attachment of the peritoneum. Hoffmeyer had confirmed statements made by Dr. Taylor in 1865 that the cervix remained in its integrity to the end of pregnancy.

There had been some reaction from Crede's method of expulsion of the placenta, but he could not concur entirely with the views of Schroeder. Crede's method should be reserved for cases in which the placenta did not become detached, or those in which it remained fixed in the cavity, its expulsion being prevented, perhaps, by a narrow line of contraction in the neck.

Much valuable literature had recently appeared on the yet unsettled questions of eclampsia. There had been progress in study of the physiology of the fœtus, particularly by Prior. It had been shown that substances could pass from the circulation of the mother to that of the fœtus. Progress, in recent years, had, as was well known, been made in antiseptics, particularly since the discovery or acceptance of the fact of transmissibility of infectious disease.

What more important procedure could be mentioned than the improved method of Sänger for Cæsarean section?

Dr. Thomas H. Manley then read a paper on

TRAUMATIC GANGRENE,

in which he first cited his experience with five cases, containing the following salient points respectively: In the first, the swift and appalling virulence, and almost immediate lethal action, of the bite of a rattlesnake, the bite being in the arm of a man, and death following in about nine hours; the second, though collateral circulation was established after the brachial artery was torn across, mortification quickly supervened on injury to the arm, and was as promptly arrested by cutting off the affected tissues; the third illustrated how serious a condition might arise from a trifling injury, which was the crushing of the big toe, afterward threatening gangrene, when it was removed; the fourth, that the surgeon should use every effort to save every inch of tissue which still showed a spark of life; the fifth, the case of a child, aged seven, run over by a horse-car, crushing a leg, the failure to save life, because of operating too early after the injury, and development of gangrene, instead of waiting for the vital forces to rally.

Regarding preventive treatment, the modern enthusiast, he said, might believe that if antiseptics were rigorously applied inflammation would be impossible. If we unconditionally subscribed to that doctrine it would be idle to discuss other measures.

If inflammation would develop in spite of efforts to control it, we could often lessen its violence by free bloodletting in the vicinity of the swollen parts.

When was interference with the knife justifiable? Shall we operate in spreading gangrene? He answered in the affirmative; he would not wait for the line of demarcation, but one should be positive of mortification before amputating. He would rather include in the incision some of the tainted part than go too far up, especially if it necessitated the involvement of a joint.

(To be continued.)

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 4, 1888.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

REPORT OF R. C. M. PAGE, M.D., DELEGATE FROM THE NEW YORK ACADEMY OF MEDICINE TO THE CONGRESS RECENTLY HELD IN PARIS FOR THE STUDY OF TUBERCULOSIS IN MAN AND ANIMALS.

DR. PAGE stated that he had made the following brief summary of conclusions from the transactions of the Congress for the Study of Tuberculosis, recently held in Paris, more as memoranda for his own reference than as a report for the Academy of Medicine, as he had not expected to be called on for one. It had been submitted to Drs. Villemin and Landouzy, however, and received their verbal approval, whatever mistakes found in it being his own:

1. True tubercle generally (not always) contains the bacillus first supposed to exist by Bouchard, of Paris, in 1880, but afterward discovered by Koch, of Berlin, in 1882. All other substances—products of inflammation in connection with other conditions than tubercle (caseous, for example), and occurring in non-tuberculous subjects—do *not* contain Koch's tubercle bacillus. That is the true difference between them. When true tubercle does not contain the bacillus, it is because the latter has been liberated and escaped, owing to breaking down of tissue by pathological process, or else the tubercle yet contains only germs of undeveloped bacilli. True tuberculous virus, therefore, though it may not contain Koch's bacillus, is, nevertheless, capable of reproducing itself by inoculation under certain conditions, by reason of bacillary germs. Any other substance than tubercle that contains Koch's bacillus, or its germs (caseous products, for example, which have become infected by the bacillus or its germs, as may occur in tuberculous subjects), can also produce true tuberculosis by inoculation. Other substances, however, apart from tuberculous subjects and *not* containing Koch's bacillus or its germs, *cannot* directly produce true tuberculosis. Koch's bacillus thrives best at a temperature of 98° to 100° F., and is susceptible of proliferation between 86° and 104° F., although it may live beyond these extremes. It attacks the lungs by preference, although no tissue is exempt from it, and it may remain virulent in running water at a temperature of 60° F. for six weeks, and in stagnant water for eighteen weeks; in dried sputa for a month.

2. Koch's bacillus is the *cause*, not the result, of tuberculosis (inherited or acquired), however this fact may be yet doubted or disputed by some. In case of inheritance, the disease may be directly transmitted to the ovule by spermatozoa infected with bacillary germs.

3. Tuberculosis is a contagious disease under certain conditions, especially those that tend to produce lowered vitality, and is transmissible between man and animals by the digestive tract, as proved by the experiments of Chauveau, in 1868, through uncooked tuberculous drink and meat, especially cow's milk and beef. Also, by the respiratory tract, through infected air, as proved by Villemin, in 1869, and Tappeiner, in 1876–77. Hence the necessity for sanitary measures as a means of prophylaxis, especially with reference to thoroughly cooking meat and boiling milk, even though previously inspected. True tuberculous virus is also transmissible by inoculation, by subcutaneous injection, or through the integument stripped of its epidermis, as proved by Villemin, in 1869; and, also, perhaps in the following ways: By other mucous membranes than those already mentioned, as the conjunctival and genito-urinary; by dermatoses which destroy the epidermis; through the sudoriparous and sebaceous glands; and, finally, through wounded and absorbing surfaces.

4. In the early diagnosis of doubtful or suspected cases of pulmonary tuberculosis in man, if physical signs are insufficient, Koch's bacillus should be sought for in the sputa by an expert; but it is not always possible to find it at first, because the bacillus may not have yet been liberated, or only its germs may exist. To verify it, two or three lower animals (rabbits. for instance), may be kept under the necessary devitalizing conditions, inoculated with the suspected sputa, and killed at varying intervals after a month or more. If it is the disease in question, some tubercles containing Koch's bacillus will usually be found in the different organs.

5. No practical means for destroying Koch's bacillus in patients has yet been discovered, although antiseptic inhalations and injections have been employed by some, and even localized surgical treatment, as the drainage of cavities, in certain advanced cases.

6. That the management of tuberculosis in man at the present time should therefore be directed toward two objects chiefly: (1) Prophylaxis by proper attention to climate, food, exercise, and the like; and (2) treatment by means of medicines only as symptoms arise that require it.

THE REPORT OF A DELEGATE TO THE BRITISH MEDICAL ASSOCIATION

was read, referring briefly to some of the work done at the meeting.

DR. E. G. JANEWAY then read a paper, entitled

REMARKS ON THE DIAGNOSIS OF DISEASES OF THE LIVER AND THE FEVER ACCOMPANYING BILIARY OBSTRUCTION.

His object was to present certain facts, and groupings of facts, showing some of the difficulties attending diagnosis of diseases of the liver which had come under his observation, and said he had not attempted to make a complete paper on the subject. He first spoke of the difficulty of recognizing diseases of the liver as compared with affections of the heart, lungs, and kidneys, the physical signs in the case of the heart and lungs being more definite, while in the case of the kidneys the urinary examinations gave a clue. The physical examination alone would never prove sufficient in the majority of diseases of the liver; we had to conjoin with it a study of the etiology and symptomatology, and in many cases had to take into consideration the condition of the spleen. He then took up certain circumstances which would be likely to lead to a misinterpretation of the size of the liver. This was well illustrated by the uncertainty in diagnosticating perforation of the bowel based on loss of liver flatness, which some mistakenly regarded as an absolute sign of intestinal perforation. He had known the sign to fail both where there was a portion of intestine between the liver and diaphragm, and where the liver was turned up by a tumid condition of the abdomen, and where the liver was adherent to the diaphragm from perihepatitis. Thus in one case there would be loss of liver flatness, while in the other it would be present. We also met with difficulty in studying diseases of the liver itself. Many conditions of the heart, lungs, abdominal viscera, particularly enlarged conditions of the kidney, were likely to deceive the diagnostician by making the liver sometimes appear too small and sometimes too large. The author alluded to cases which he had seen, where tumors behind the liver had pushed it forward, making it appear larger than normal, as aneurism, and to some cases of enlarged right kidney simulating enlarged liver. In one the kidney was enlarged in a manner that the liver came down over it, and in the other the kidney had grown upward, pushing the liver obliquely, so that the left lobe was over the kidney. Again, a tumor of the intestine or omentum sometimes became adherent to the liver, simulating hepatic enlargement. Fecal impaction had rarely been a source of trouble to him in making diagnosis, although it was frequently mentioned in the books.

Difficulties also attended the diagnosis of diseases of the liver based on the size of the organ. The same kind of liver might be either large or of medium size. Nodulation of the liver was an important aid in diagnosis, but even that sign was not always reliable, for sometimes the organ was large and smooth, owing to the distribution of the disease which usually caused nodulation—cancer and cirrhosis. One division of cases was into smooth, large livers, and nodular large livers, but if one placed entire reliance on the physical signs he would here also be likely to err.

Turning his attention to small livers, it was often difficult to say whether the organ was somewhat diminished in size, and even when there was much diminution it was still necessary to consider the different conditions which might be the cause.

In jaundice we had not a great, but a certain, amount of help in diagnosis. When the diseased process surrounded the bile-ducts it was more likely to give rise to jaundice; a small process might cause it, while one of very considerable size might not, it being a question of the site of the process. He spoke particularly of the infrequency of jaundice in solitary abscess of the liver, compared with cases of multiple abscess. He cited a case of acute yellow atrophy, with no obstruction of the duct, in which there was complete absence of bile from the stool, showing that obstruction of the duct was not necessary to cause complete absence of bile from the fæces.

He then passed to the question of fever and jaundice. Sometimes in cancer of the liver there was fever; it was not absolutely necessary that there be an inflammatory process in order to have fever. Again, it should be borne in mind that fever might be due to an intercurrent process, and not to the condition of the liver. He spoke of the little fever sometimes present in abscess, and of the combination of fever and jaundice in difficult diagnosis, and referred to Charcot's intermittent hepatic fever, which occurred in connection with obstruction of the bile-ducts and simulated malarial fever. Weil's disease was apt to deceive the physician, the nature of this affection not being as yet thoroughly established.

The author had performed exploratory puncture many times, and had had no injury result. Abscess might be present, however, and fail to be detected by puncture. It was best to introduce the aspirator in one or two places in doubtful cases, choosing the axillary space or the posterior part of the chest, and reaching the deeper part of the right lobe. He also spoke of the value of perihepatic friction and fremitus as aids in establishing the condition which produced inflammation on the surface of the liver; that it was of particular service in hepatic abscess, as showing the point at which puncture should be made. The quantity of urea passed was an unreliable diagnostic element so far as it related to the liver.

Dr. Beverley Robinson said, with regard to deep abscess of the liver, that its diagnosis was likely to remain obscure unless several deep punctures on successive occasions were made. He had not known puncture to result injuriously.

The President inquired whether abscess of the liver was frequently present without fever.

Dr. A. L. Loomis would say, from personal experience, that fever was always present in multiple abscess; but in single abscess, abscess without known cause, fever was often absent. He had entered too late to hear enough of the paper to enable him to discuss it.

The President said, with regard to the liver seeming to be enlarged when it was not, that there were a number of reasons for this. For instance, the question of whether the liver and spleen were enlarged in rachitic children had often been discussed, some holding to the affirmative and some to the negative. Great mistakes could be made in judging of real enlargement, for in the fœtus the liver was very large and it remained so a number of years, whereas this great size might be mistaken as abnormal. Then in rachitic children the arteries were large, compared with the heart, and large arteries meant low blood-pressure, and this meant temporary or permanent large liver from mechanical stasis. Then the deformity of the chest in rachitic subjects was likely to throw the liver downward and make it appear larger than normal. Inflation of the intestinal tract might change the position of the liver, causing it to appear smaller than it really was, while pressure from behind might make it appear larger than its actual size. Then rarely dislocation of the liver misled to a diagnosis of enlargement. He asked Dr. Janeway what influence hemorrhage had on the size of the cirrhotic liver, and the influence it was likely to have on diagnosis.

Dr. Janeway replied that he thought hemorrhage might occur at different periods of cirrhosis, both when the liver was large, when of moderate size, and when small. In hospital practice patients often entered and died with some other affection, and at autopsy cirrhosis of a liver of about normal size be found, although disease of this organ had not been recognized during life for want of a previous history. In private practice, on the other hand, a diagnosis lacked confirmation frequently because an autopsy could not be obtained. Thus the answer to the President's question was, that there were not a few cases of hemorrhage from the liver of moderate size or a little enlarged, the hemorrhage perhaps being repeated, and the patient dying before the liver shrunk. The hemorrhage would have more effect perhaps on the spleen than on the liver.

The President recalled a case of repeated hæmatemesis in large amount, extending over six or seven months, but in spite of this the patient had a small liver and a very large spleen.

Dr. Van Santvoord recalled a case of hemorrhages at long intervals, very much enlarged spleen, and no appreciable change in the liver—the diagnosis of cirrhosis of the liver proved correct.

Dr. Loomis, after being informed more particularly of the nature of the discussion, said one was likely to make great mistakes if he depended on physical examination alone in diagnosticating diseases of the liver. One had to rely much upon the subjective symptoms. Exploration for abscess not infrequently failed, although abscess was present. He had seen in the early stage of cirrhosis of the liver, when the organ was considerably enlarged, diminution in the size of the organ follow in a short time hæmatemesis. The hemorrhage seemed to have relieved the hyperæmia present in the early stage of the disease. In reply to the President's question, how numerous were cases of abscess of the left lobe compared with abscess of the right, Dr. Loomis said he had rarely seen single abscess in the left lobe.

Dr. Janeway, answering the same question, would say between a third and a fourth of single abscesses occurred in the left lobe.

The President's experience in this respect corresponded with Dr. Loomis'.

Dangers of Saccharin.—M. Worms read a paper at the Académie de Médecine, in which he stated that he administered saccharin, in varied forms, to four persons suffering from diabetes. One, after a course of two months, still suffered no inconvenience therefrom; but the other three, at the end of a fortnight, complained of loss of appetite, indigestion, and weight in the stomach, which symptoms continued for eight days after leaving off the saccharin. The doses were resumed in the case of one of the patients, and a return of the symptoms complained of took place at the end of ten days. This proved that it was dangerous to put saccharin into the food of anyone suffering from diabetes; and, moreover, that as it was an indigestible substance, the general employment of it might result in serious consequences to the public health. This fact is at present worth knowing, as it is proposed to substitute saccharin for cane-sugar in many ways, such as in sweetening acid wines, and in the manufacture of syrups, it being half the price, and its power of sweetening so much greater than that of sugar. —*British Medical Journal*.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Eleventh Annual Meeting, held at St. Louis, Mo., September 25, 26, *and* 27, 1888.

(Special report for The Medical Record.)

The meeting was held in that beautiful building, the Pickwick Theatre, situated in the residence portion of the city. It was opened by prayer, after which Mayor Francis, of St. Louis, made an

ADDRESS OF WELCOME.

The mayor, who is seeking advancement in the political scale, was out looking for his political fences in a distant part of the State and showed his appreciation of doctors by riding all night to be present and bid them welcome, "with genuine Western hospitality, to St. Louis, the commercial metropolis of the Mississippi Valley, the garden spot of the earth over which the star of empire paused in its westward course." The mayor's speech was heartily applauded and he doubtless made some votes to reward him for his long ride, for his speech was not without political reference.

The Chairman of the Committee of Arrangements, Dr. I. N. Love, then introduced in a neat speech the venerable and beloved Dr. L. C. Boislinere, who welcomed the Association on behalf of the medical profession of St. Louis. He dwelt on the magnitude of the Mississippi Valley, which was as large as Europe and contained one-half of the inhabitants of the country. He referred to the brightest stars of this firmament, Cincinnati, Chicago, New Orleans, and St. Louis. Horace Greeley said, "Young man, go West," and they have come West, where we make presidents and governors of them. Gross, Emmett, Sims, Parvin, and Bartholow were Western men. We make great men in the medical profession here, and in the future we mean to keep them. It will not be long till our hospitals, colleges, and universities will be as great and attractive as those in the East.

THE PRESIDENT'S ADDRESS

was delivered by Dr. Dudley S. Reynolds, of Louisville, Ky. This gentleman, after being happily introduced by Dr. Love, made a few remarks. He said we were here for the discussion of grave questions which make up the branches of the profession of medicine. He quoted from the mayor's address, in which he referred to the influence of the medical profession on legislation, and said that this influence was not anything near what it should be (applause). There is now stalking abroad, in the Southern portion of our country, a pestilence which we think might have been avoided had we been hearkened to in the halls of legislation. He thought the subject of presidents' addresses was a well-worn one and knew of no subject on which he could interest them, and after thanking the Association for the honor conferred on him resumed his seat.

Dr. J. M. Matthews, of Louisville, replied to the words of welcome on behalf of the visiting members.

The reading of the minutes was dispensed with, after which the committees and officers made their report.

Dr. C. G. Comegys, of Cincinnati, read the first paper, on

YELLOW FEVER.

He considered first what the profession could do to assuage this terrible disease and prevent its spread to other cities. The phases observed in those stricken with the disease were related, and the clinical history given. We know that yellow fever depends on a specific poison but what that poison is we have not discovered as yet. He thought the fatal results in this disease were due to a very intense degree of the "Brightoid condition." He recommended a hot bath to insure free diaphoresis, and repeated to relieve the kidneys. Where a hot bath could not be given he did not object to the use of a spirit lamp or steam with the patient covered by blankets. Boiled ears of corn make an excellent substitute in country practice. Cool lemonade, potash salts, nitro-glycerine are excellent remedies, the latter when there is cardiac dropsy. Alcoholic stimulants he considered very baneful unless the kidneys were freely open, as they are quite impervious to alcohol unless open. Alcohol under these circumstances acts as an irritant. He then reviewed the subject of protection by vaccination and expressed the hope and the belief that the future was more hopeful in this direction.

Dr. William Bailey, of Louisville, said that if he took any exceptions at all to the most excellent address, it would be that at certain times we have no more certain agent for elimination than alcohol. He believed that the Southern portion of this country was more afflicted by quarantine than by yellow fever.

A SHOT-GUN QUARANTINE IS HORRIBLE.

Does it do any good? Certainly not, unless it is complete, and completeness is about impossible. The Government should quarantine against its introduction into the country, but sections of our land should not quarantine against other sections. In 1878 great numbers of refugees, 10,000, came to Louisville. They filled the hotels, crowded the boarding-houses and private residences with themselves and their luggage. We did not believe that it would spread, then. We had a yellow fever hospital, and in it were about thirty resident physicians and nurses, day and night busily engaged with the sick. The disease was carefully studied, post mortems and microscopic examinations were made with great frequency. Fifty others were in daily attendance, including every minister in the city and every charitably disposed woman, and from the one hundred and fifty cases none took the disease. So much for personal contact. Previous to this we had thought the disease not indigenous to our climate. Within two squares of the spot where the luggage was emptied out and the cars cleaned, we had thirty or forty cases, none having had personal contact with any sick, but with the luggage and clothing. We again invite yellow-fever refugees as we did then, but we ask them to leave their luggage at home. Louisville would rather clothe them than have them bring their dangerous clothing with them. In inviting them we believe we will save more lives than we will lose. There may be some reason for such cities as Memphis for surrounding themselves with a cordon, for she has suffered terribly, but can we not take the risk for suffering humanity?

Dr. McPheeters, of St. Louis, wished to speak of State and city quarantine. He indorsed Dr. Bailey thoroughly. Previous to the war he was for a time surgeon to the United States Marine Hospital here. Many patients having the yellow fever came here and were placed in the fever wards with other patients. Not much attention was given to them, they created no panic, and, so far as he was able to learn, no case originated from these. He believed that the whole country suffers more on account of quarantine than the yellow fever. The brutality of shutting our doors against the refugees is worse than the yellow fever. Louisville's action is creditable to her.

Dr. Homans, of St. Louis, Mo., Secretary of the Missouri State Board of Health, moved that a committee of five be appointed to consider this subject of yellow fever, and report at a later session of this meeting. This motion was adopted.

Dr. Comegys, in closing the discussion, said that he certainly agreed with the gentlemen who had taken part in the discussion on the question of the non-contagiousness of the persons or patients suffering with the disease. A man without clothes might go anywhere and not spread the disease. He insisted further on the necessity of hot baths.

INFANT FEEDING

was the subject opened for discussion by Dr. J. A. Larrabee, of Louisville. He discussed the virtues, real and imaginary, of the various foods for babies. Condensed milk he thought a convenient and good substitute for mother's milk. We accept the theory of fermentation, and we know there is no such thing possible without the microbe, which gets into the milk after it leaves the cow. This thing of summer complaint has to go to the wall. All the harm done by teething and the second summer is now out of the question. The reason of more sickness occurring during the second summer is, that during the first summer the food is taken directly into the child's mouth from the mother's breast hermetically sealed. In the second summer the child gets a greater variety of food and microbes. Then, too, artificially fed children are generally overfed children. It is difficult for the mother, for the nurse, or even for the doctor to tell the difference between the cry of colic, the cry of an overdistended stomach, and the cry of hunger. The child often wants not food, it wants water. In the cities it generally gets both together. The bottle makes too convenient a stopper for the crying child, be it from hunger, colic, or over distention. A very good thing to add is a little salt, now and then.

Dr. Dudley S. Reynolds, the President, stated that Mr. Ernest Hart, the editor of the *British Medical Journal*, and his wife had been instrumental in founding a charitable society in London for the purpose of teaching dairymen and nurses how to keep and prepare milk.

Dr. Cook, of Vandalia, Ill., thought sterilization of cow's milk to be one of the most important things, also the selection of a healthy cow.

Dr. Mayfield, of St. Louis, sterilizes his milk. He filters his water through charcoal and sand, and pumps it into a tank without it having access to the air and heats to two hundred and twelve degrees. He then mixes the milk with this water half and half, and sweetens with a little sugar. He thinks we should insist on the mother nursing her child and not allow her to avoid this duty.

Dr. Nicholas Guhmann, of St. Louis, thought that the simpler you treat children the better for them. They should not be given much medicine.

Dr. Middlekamp, of St. Louis, thought that in addition it would be well for us to secure a wet nurse. He had employed the method of J. Lewis Smith, extract of pancreatine and soda in milk, described in "Pepper's System of Medicine," vol. ii.

Dr. William Bailey, of Louisville, thought it might do the child harm by removing from it the necessity of digestion. If the child can digest we should not digest its food for it.

Dr. Larrabee said that he was directly and totally opposed to the medication of infants. He could not see the need of antiseptics where there was no sepsis. He certainly agreed with what had been said in reference to digestion. The ferments are microbes. The pancreatine has a very putrescent odor. Feeding barley-water previous to nursing has cured completely many cases of screaming gastralgia in infants.

The granddaughter of Ephraim McDowell, Mrs. Mary Ridenbaugh, being present in the room the attention of the Association was called to that fact and she was greeted on the part of the Association.

DISEASES OF THE MIDDLE EAR

was the subject of an essay by **Dr. C. H. Beard**, of Chicago. The literature of otology is very limited, proving the status to be low. The surgery of suppuration of the middle ear, he thinks, will soon take a leap forward. He hoped to inaugurate an era of greater energy and investigation in the field of otology. Otology stands to-day with bowed head before the membrana tympani. It was his humble opinion that there are no cases of chronic suppurative inflammation of the middle ear that will not yield to persistent cleansing with aseptic warm water, and as thoroughly drying the same. He exhibited instruments for cleansing the middle ear through the Eustachian tubes. The naso-pharyx, he thought, was a part which was much neglected.

Dr. William Dickinson, of St. Louis, thought diseases of the ear were not trivial in their character, and merited careful attention. He recited cases of proof.

Dr. Thompson, of Indianapolis, thought that the time to look after this matter was in infancy, when catarrhs commence and increase with every cold that is taken.

The President expressed his belief that chronic suppuration of the middle ear was sufficient ground to refuse an applicant for life assurance, and cited a case proving this fact.

Dr. Beard replied to the remarks of the other gentlemen.

RETINITIS ALBUMINURICA

was the subject of a paper by **Dr. William Dickinson**, of St. Louis. He reported a number of cases, and thought the symptom one of extreme gravity. We should never regard any disease of the eye as unimportant.

Dr. William Bailey, of Louisville, asked that Bright's disease be widened a little, and not be confined to the kidney. Retinitis albuminurica he thought only a part of the general disease. "I believe that in these cases in pregnancy we can act by elimination and save the mother, her vision, and her child."

Dr. Dickinson replied.

EXOPHTHALMIC GOITRE

was the subject of a paper by **Dr. R. Bower**, of Chicago. In this paper he lauded greatly strophanthus as a remedy, but would not admit that he relied on it entirely, depending, to a certain extent, on hygienic treatment, which he thought very necessary.

Dr. Dickinson reported a few cases.

Dr. T. R. Prey, of St. Louis, favored the use of strophanthus.

Dr. Bower, in closing, requested of his hearers that they try strophanthus in this trouble, and also in sick headache and epilepsy, and let him know their results.

DIPHTHERIA

was the subject of an essay by **Dr. C. R. Earley**, of Ridgeway, Pa. His paper was a report of his experience for six years with this disease. He thought from the mass of literature extant this was a much studied disease. Carpets, paper, and cellars, he thought, had done much to bring it on. It was not common when these things were unknown. He thinks the disease constitutional, and that the treatment should be likewise constitutional.

A CASE OF STRANGULATED HERNIA,

in which an operation did not relieve the symptoms, and which was followed by laparotomy and case resulted fatally, was reported by **Dr. Arch Dixon**, of Henderson, Ky. No autopsy was permitted, but it was probably incarcerated at first, then became strangulated. Operation has occurred as late as eight or ten days after strangulation, with restoration of the gut.

CONSANGUINITY IN MARRIAGE

was the subject of some verbal remarks by **Dr. E. S. McKee**, of Cincinnati, who was called upon by the President, who stated that Dr. McKee had made a special study of this subject. Dr. McKee said that there was, permeating all classes, nations, and ages, a belief that consanguineous marriages were detrimental to the welfare of the offspring. He had occasion several years ago to study up this subject thoroughly, and his investigations had led him to the belief that there was nothing in it. His opinion was that the children of healthy cousins would be healthy, and those of unhealthy cousins would be unhealthy. This would occur entirely independent of the fact of consanguinity. We are often perplexed by counting relationship by two methods, the civil and the canonical. The former counts the number of generations up from one individual to the common ancestor, then down to the other. The latter counts in but one line, this the longer from the common ancestor. This law is imperfect, making persons in the same relationship to a certain person when this is not so. Prohibiting marriage in the third degree by the canon law prohibits many more than by the civil law. The Levitical code is very generally followed by the various States in this nation, but New Hampshire, Ohio, and Indiana forbid the marriage of first cousins. Most States forbid a man to marry his aunt or niece, but this is allowed in New York.

THIS QUESTION OF COUSIN-MARRIAGES

has been studied very thoroughly by Mr. George H. Darwin, of London. He found in London the cousin marriages 1.5 per cent.; English urban districts, 2 per cent.; rural districts, 2.25 per cent.; landed gentry, 3.5 per cent.; aristocracy, 4.5 per cent. The average in England is 3 per cent. while in Scotland it is 5.25 per cent. A thorough search through the institutions of the insane, deaf and dumb, and idiots, revealed to Mr. Darwin that between 3 and 4 per cent. of the inmates were the descendants of consanguineous marriages. In fact, all reliable statistics go to show that about the same proportion of deaf-mutes, idiots, and insane persons, are descendants of consanguineous marriages to the whole number of these unfortunates as the number of consanguineous marriages is to the whole number of marriages. Consanguineous marriages appear to be aristocratic. Physical and mental weakness, frequently found in the higher classes, has been laid at the door of consanguinity in marriage. Is it not much more probably due to debauchery, extravagance, and corruption?

STERILITY,

among the many other defects, has been laid at the door of consanguinity. We find, on carefully analyzing large numbers of cases, that the fertility is slightly greater in marriages of consanguinity than in the non-consanguineous. This probably occurs from the fact that cousin marriages are much more liable to occur where there are large families of cousins together. In these cases the fertility is hereditary.

The marriages of Brown and Brown, Smith and Smith, Jones and Jones, is probably the marriage of distant relatives though they themselves are unaware of the fact. Then, too, all men are the sons of their mothers, but not all men are sons of their fathers, so to speak. Might not this illicit intercourse result in the marriage of relatives supposed to be non-relatives, thus vitiating statistics? The evil results following consanguinity are probably *post hoc*, not *propter hoc*. They may be due to one of a thousand influences. Atavism may explain many of the cases where evil results seem to follow consanguineous marriages. Evil results prove that something was wrong, but that it was consanguinity is not proven. Given a malformation or disease firmly established we have a tendency to breed true. The Quakers are educated to abhor color. Those who admire it separate themselves from the sect, and thus intensify the tendency in the remainder. The defect is also strong among the Jews, where it has probably accidentally gained a foothold and has been intensified by intermarriage.

Anatomically, physiologically, and sexually,

MAN IS AN ANIMAL.

He is subject to the same laws of propagation. In-and-in breeding is done by cunning breeders to improve the stock and put money into their pockets. The Jersey cattle have been bred for the past one hundred and fifty years on a small island six by eleven miles. We would not raise them for beef and oxen, yet they command a high price for their milk and butter. This was probably the recommendation of the first cattle on the island, and this quality has improved from time to time through in-and-in breeding. The ludicrous is approached when we enumerate the half a hundred abnormalities, among others whooping cough, which are ascribed to consanguineous marriages. We find certain factors leading to consanguineous marriages, viz.: Portions of country geographically isolated by mountains, or seas, rendering communication with the outside world difficult; religious or political sects of an exclusive nature, and aristocratic ideas of position and wealth. As examples, note the percentage in Scotland, Martha's Vineyard, the Commune of Batz, and among the Jews and Quakers. The facts deduced, by a careful study of the subject, do not warrant us in supposing that there is a specific degenerative effect caused *ipso facto* by consanguinity. Would it be better for the offspring were consanguineous marriages under medical supervision? Certainly no better than for all marriages to be under like supervision. We are warranted in concluding that consanguineous marriages, no other objection being present, should not be opposed on physiological grounds.

SOME OBSCURE AFFECTIONS OF THE RECTUM

was the subject of a paper by **Dr. J. M. Matthews**, of Louisville. He thought the term hysterical rectum not a good one. He has under his care a girl whom he has treated for three years for a chronic diarrhœa. She has six or eight evacuations daily. Every evacuation brings on a stool, and she is in constant misery. He reported the case of a well-known Kentucky physician who, every time, had a most annoying case of spasm of the sphincter, which was cured by dilatation. An Indiana doctor, at the American Medical Association at Cincinnati, consulted him for a similar trouble. These cases are relieved by local treatment; hence the trouble, he thought, was local, not secondary or hysterical, as is said to be the case by Goodell. The speaker was of the opinion that the symptoms are neuralgic. The treatment of these cases naturally depends on a correct diagnosis. He thought these obscure affections of the rectum merited our careful consideration, for many lives are wrecked by neglect and falling into the hands of charlatans. Attend to the local cause, and the nervous symptoms, so-called hysteria, will take care of themselves.

Dr. G. J. Cook, of Indianapolis, was surprised that Dr. Goodell would write such a paper. It sounded like some of the old papers on gynecology. Hysteria covers up an amount of sins which is appalling. Stricture of the rectum may be brought on by disease of the ovaries, uterus, bladder. He does not believe in the term hysterical rectum. He has seen a large number of cases of disease of the rectum and has never seen one in which a local cause could not be determined.

Dr. Pitner, of Illinois, enjoyed Dr. Goodell's paper very much, but could not agree that hysteria was the sole whole cause of the trouble. He recommended the use of hot-water injections.

The paper was further discussed by Drs. Earley and Boerck.

Dr. Matthews, in closing, said that the general condition was secondary to the local trouble in the rectum, and this organ should be thoroughly investigated.

CONDITIONS WHICH PRECEDE SERIOUS LESIONS OF THE KIDNEYS

was the subject of a paper by **Dr. C. S. Bond**, of Richmond, Ind.

Chronic lesions of the kidneys, according to the best authorities annually carry off great numbers of patients.

Doctors recognize these lesions when they have reached the condition of passing albumen and casts, but not before. This is too late, as the latest authorities state that but few cases recover which are affected in this way. Flint, Bartholow, Delafield, Loomis, etc., do not examine the urine for urea and make a record of these cases for a long interval of time. The profession at large do it much less than these standard authorities. The former agree that urea is deleterious when held in the blood and also that urea is found in the blood in increased quanti ties in these cases, yet as shown by their works they do not advise these examinations.

I have been making careful examinations, for four years past, with especial reference to the quantity of urea secreted among a class of patients answering in all other respects to those of chronic Bright's disease, except that they do not pass albumen and casts. I would regard the

RETENTION OF UREA

as of much more importance than a knowledge of albumen and casts, since by the quantity of urea I could estimate the degree of disturbance in these organs or in the system at large.

Here followed the synopsis of several cases, showing examples of three classes, artificially arranged, according to the quantity of urea excreted, and whether albumen and casts were passed. From the third group of these classes the conclusion was deduced that a patient who passes constantly but ten or twelve grains of urea in twenty-four hours is in a dangerous condition, not only of some serious lesion of the kidneys, but of having retinitis, pleurisy, endocarditis, pericarditis, or inflammation of serous membranes, as well as being distressed by his present symptoms of dyspnœa, insomnia, and neuralgic pains in various parts of the body. By giving saline cathartics and nitro-glycerine this urea can be discharged, and patient will improve proportionately if kidneys have not been affected beyond a certain point.

In conclusion, doctors are in duty bound to make these examinations if these diseases are to be prevented, which is the highest duty of the practitioner. If he does not make these examinations he must not be surprised if his patients suffer from supposed general debility, dyspepsia, uterine conditions, and finally albumen and casts be passed, and death sooner or latter follows.

Dr. J. A. Larrabee, of Louisville, thought that no more important subject could be considered than the one just discussed by Dr. Bond. The man who begins to unbutton his vest, have some stomach trouble, and must go to the oculist is in the outer circle of death from Bright's disease. In three hundred post mortems from all causes, accidents as well, made in the European hospitals, one hundred and seventy showed that they would have died of Bright's disease sooner or later.

Dr. Griffiths, of Kansas City, Mo., said that we had need of an easy method of examining and determining the amount of urea in the urine.

Drs. Gregory and **Brooks**, of St. Louis, further discussed the subject.

Dr. Bond replied that there are very simple methods of finding the amount of urea in the urine. It is only necessary to know the amount of nitrogen. There is a very simple instrument made by Parke, Davis & Co., of Detroit, which tells the amount of urea very promptly. The doctor then asked all those who had made the examination for urea, honor bright, to hold up their hands. About forty per cent. of those present held up. On motion Dr. Bond was appointed a committee with power to call to his assistance other members to investigate this subject further and report at the next meeting.

THE ELECTION OF OFFICERS

resulted as follows: President, Dr. George J. Cook, of Indianapolis; Vice-Presidents, Dr. J. D. Griffith, of Kansas City, and J. A. Larrabee, of Louisville, Ky.; Secretary, Dr. R. L. Thompson, of St. Louis; Treasurer, Dr. W. C. Chapman, of Toledo.

Committee on Credentials: Drs. C. S. Bond, of Richmond, Ind., Chairman; A. W. McAllister, of Columbia, Mo.; L. S. McMurtry, of Danville, Ky.; C. G. Comegys, of Cincinnati; D. S. Booth, of Sparta, Ill.

Judiciary Committee: Drs. J. L. Gray, Chicago; W. W. Bailey, of Louisville; C. R. Earley, of Ridgeway, Pa.

Chairman Committee of Arrangements: Dr. A. M. Owen, of Evansville, Ind. Evansville was chosen as the next place of meeting. Dr. Owen promises an interesting meeting, and he knows how to do it, for he gave an exhibition of his abilities in that line three years ago, when the Society met in that "little side-tracked city in the pocket of Indiana."

THE SOCIAL FEATURES OF THE MEETING

were marked. One evening the members were taken to Kensington Gardens by the resident physicians, where they viewed the destruction of Pompeii. The volcanic eruption and the fireworks, with several special figures for the doctors, were excellent. One evening was given up to private receptions, and three were given, one at the residence of Mr. and Mrs. R. C. Kerens at 36 Vandeverter Place; Mr. and Mrs. J. C. Drummond, 3631 Delmar Avenue, and Dr. and Mrs. N. B. Carson, 3152 Pine Street. The doctors were given a carriage-ride out to the fair grounds, and an excellent spread at the Sportsman's Lodge, where a number of toasts were responded to. They were given a special evening at the exposition and were invited to see a game of base-ball. (No one is known to have gone.)

Mrs. Mary Ridenbaugh, of Louisville,

GRANDDAUGHTER OF EPHRAIM M'DOWELL,

of Kentucky, the pioneer ovariotomist, graced the meeting with her presence.

CONTUSIONS AND LACERATIONS OF THE KIDNEYS—NEPHRECTOMY

was the subject of a paper by **Dr. H. H. Mudd**, of St. Louis. He considered contusions and lacerations of the kidney sufficient to cause hæmaturia to be of frequent occurrence, and reported cases. He thought the kidneys should be brought more into the field of surgery, the great care being not to injure the renal ganglion of nerves.

Dr. Dickinson, of St. Louis, said that nephrotomy, in his opinion, should precede the graver operation of nephrectomy.

Dr. Fairbrother, of St. Louis, thought that the trouble with these lesions was that they had very bad exit and this caused the slowness of repair.

Dr. Haley, of Kansas City, Mo., was very much interested in this subject, because it is of constant occurrence. It has generally been considered that the kidney is beyond the domain of the surgeon's help. The kidney is no more dangerous to remove than many other organs. The object is to avoid the removal of the renal ganglion. The best method for removal he thought to be by laparotomy. He had removed the kidney three times and two patients died.

Dr. A. M. Owen, of Evansville, did not favor laparotomy.

Dr. Mudd, in replying, said that post mortems had shown for a number of years that one kidney was sufficient. If one is destroyed we have a hypertrophy of the other. That nephrotomy was proper before nephrectomy he thought would go without saying. We may have extravasation of urine and it may remain in the kidney for some time without inflammation resulting.

ABSORPTION OF WATER BY THE COLON

was the subject of a paper by **Dr. G. J. Cook**, of Indianapolis, which was dealt with in a very interesting manner.

Dr. A. M. Owen, of Evansville, Ind., had made experiments by injecting water into the rectum and had it to come away by the bladder.

Dr. C. S. Bond, of Richmond, asked if the urine had been examined for urea. He thought the water drunk at the springs would do about as much good if drunk at home, if drunk in the same quantities.

Dr. J. M. Matthews, of Louisville, thought the subject a very original one. Impactions which he has found were in the sigmoid flexure, not in the rectum. The injection should be made at this point.

CHRONIC PHARYNGITIS

was the subject of a paper by **Dr. Townsend Porter**, of St. Louis. He gave some interesting vivisection experiments on two cats to show how the application of cold to the abdomen would cause a pallor of the mucous membrane of the trachea, which in his experiments was exposed to the view of the assembly. The experiments were first performed by Dr. Rossbach, of Würzburg, Germany.

PENETRATING ULCER OF THE INTESTINE

was the subject of a paper by Dr. J. M. Emmert, of Atlantic City, Ia.

LAPAROTOMY WITH CASES

was the subject of **Dr. H. C. Dalton**, of Missouri. The justifiability of laparotomy has long since been acknowedged. Appendicitis, perityphlitis, peritonitis, gunshot wounds of the abdomen are conditions which demand this operation frequently. He had used Senn's hydrogen-gas injection with success. In one case of gunshot wounds of the abdomen he had fifteen perforations of the abdomen. He reported sixteen cases, and was sure that he would have had a better result had he operated earlier.

BENIGN LARYNGEAL GROWTHS

was the subject of a paper by Dr. William Porter, of St. Louis.

CONSANGUINEOUS MARRIAGES

was the title of a paper by **Dr. A. W. Spain**, of Terre Haute, Ind. He claimed that the physical condition of the persons married was solely responsible for the peculiarities of the offspring, and the fact that they were blood-related had nothing to do with the case.

CAN A DISEASED FALLOPIAN TUBE BE TREATED THROUGH THE UTERUS?

was treated affirmatively by **Dr. T. B. Harvey**, of Indianapolis. He referred to Cincinnati, Kansas City, and Dublin writers who had been inclined to hold him and his treatment in this line up to ridicule and related his early experience with the mode. He read a paper on this subject before the Tri-State Medical Society in Indianapolis in 1883. The physiology and pathology of the oviducts he hoped would be more thoroughly studied when attention was directed to this subject. He quoted from Barnes, Thomas, Winckle, Bandl, and Fritz on this subject, the quotations being favorable.

THE RECENT EPIDEMIC OF SMALL-POX AT MOBERLY, MO.,

was the subject of a paper by **Dr. Joseph Grindon**, of St. Louis. This was an interesting paper on an interesting epidemic which spread from the opening of an old chest of second-hand clothing brought from Bohemia by an emigrant. He said it was the opinion of the secretary of the State Board of Health that we would have small-pox in Missouri this winter. He had the cases all nicely tabulated into generations on a chart, which also showed two interesting points, the effect of isolation and the very low death-rate—only 6.25 per cent. Some interesting points on the effect of vaccination were also brought out.

A TYPICAL CASE OF MASTOID DISEASE

was the subject chosen by **Dr. S. S. Beard**, of Chicago, and handled in a thorough and entertaining manner.

A YELLOW-FEVER MANIFESTO

was the result of a discussion on the subject of yellow fever, introduced by a paper read by **Dr. C. G. Comegys**, of Cincinnati. The whole matter was referred to a committee consisting of Drs. George Homan, of St. Louis, J. A. Larrabee, of Louisville, J. D. Griffith, of Kansas City, George N. Kreider, of Springfield, Ill., G. A. Collamore, of Toledo, O., David S. Booth, of Sparta, Ill., A. U. Williams, of Hot Springs, Ark., and A. P. Waterfield, of Tennessee. These gentlemen were instructed to draft resolutions embodying the sense of the Association on this subject. The resolutions were adopted by unanimous vote without discussion.

Resolved, That it is the sense of this meeting that yellow fever is not contagious in the ordinary sense of the term; that it cannot be communicated from the sick to the well, except in an atmosphere containing germs.

"That the mildness of the present yellow-fever invasion and the lateness of the season warrant us in strongly deprecating the fear now existing in many Southern communites, the present rate of mortality not being greater than that which ordinarily obtains in typhoid fever.

"That the self-imposed quarantine regulations now in force in the States north of the infected districts are not only absurd but inhuman, and unworthy of the age in which we live.

"That the quarantine regulations, to be effective, should apply to the baggage, clothing, and effects, rather than to the person of the individual.

"That when such effects come from infected districts, they should be destroyed by fire, and the owner reimbursed from public funds.

"That cities and towns to the north, and upon lines of travel, may safely provide hospitals for the reception and care of the sick."

The resolutions were signed by the members of the committee.

A PLEA FOR SIMPLER THERAPEUTICS

was the subject treated by **Dr. Thackery**, of Chicago.

Dr. J. A. Larrabee, of Louisville, thought we were in greater danger now from poly-pharmacy than anything else. The old prescription of calomel and jalap is now very rarely prescribed, and there is nothing more beneficial than this, especially in this Southwestern country. Emetics are seldom prescribed now, yet the therapeutic effect of these things remains the same.

PRACTICAL POINTS IN DENTISTRY

for the general practitioner was the subject discussed by **William Conrad, M.D., D.D.S.**, of St. Louis. He considered dentistry to be one of the legitimate specialties of medicine. He thought there was need for greater familiarity on the part of the general practitioner in regard to dentistry. He recommended that the teeth be brushed on every surface every day, and that picks be used after each meal. The powder used should be precipitated chalk. He thought that men who advertised gas should be discountenanced, as it leads to the sacrifice of good teeth in a great majority of cases. Physicians should recommend dentists who follow the code. Fraternizing of physicians and dentists is necessary, and will result in benefit to all.

The discussion which followed dealt mostly with the implantation of teeth. **The President** recited the implantation of teeth done by John Hunter.

Dr. Conrad, in replying, defined the terms transplantation, implantation, and replantation.

THE SURGICAL TREATMENT OF FRACTURE OF THE PATELLA

was the subject of a paper by **Dr. F. J. Lutz**, of St. Louis. He illustrated his report clinically, and was sorry to state that one of his best cases, a female, had suffered one of those reverses of fortune, and got confined in the workhouse. Owing to the absence of the proper official, looking after his political fences, that executive clemency which would allow him to present her there could not be obtained. He reviewed the causes of partial anchylosis. The operation was made after Fluor, of New York. A transverse incision is made, cutting down on to the tissues of fractured bone. He presented two propositions: 1. The osseous union of the fractured patella is desirable and necessary for the re-establishment of the functions of not only the knee but also of the entire limb; 2. Arthrectomy accomplishes this end with the smallest loss of time, with the greatest certainty, and, if performed under proper wound treatment, is not *per se* a dangerous surgical procedure.

CLINICAL NOTES ON RHEUMATIC NEURALGIA

was the subject of a paper which was extensively discussed by the members. It was read by Dr. R. F. Brooks, of Carthage, Mo.

Dr. Chapman, of Toledo, O., said he was a man of perfect health, but had frequent recurrences of lumbago which he could not cure.

Dr. Simson, of St. Louis, recommended massage.

Dr. Owen, of Evansville, Ind., recommended cupping.

Dr. Smith, of Vincennes, Ind., treated this complaint with carbonate of iron, the hot iron, and sweat-baths.

Dr. Pitman, of Jacksonville, Mo., said he thought we should not say that we could not do anything in this climate. In spare and lean patients he thought it due to a fault of nutrition.

Dr. Joseph Grindon, of St. Louis, Mo., said he had used ichthyol externally with success.

Dr. J. A. Larrabee, of Louisville, thought the trouble due to a want of oxidization of the products of nutrition.

The discussion was continued by Dr. Lowe and Dr. Bond, of Indiana, and closed by Dr. Brooks.

PSYCHICAL TREATMENT OF THE INSANE

was the subject of a paper by Miss Bryant, of Chicago. She once heard a patient say that every superintendent of an insane asylum should be confined in the barred room six months before allowed to continue his position. He would then know better how to treat his patients. This room the patient described as hell. She discussed the insane atmosphere which was present in asylums. The personality of attendants she thought very great in importance. She advocated the cottage plan of asylums, dispensing entirely with the enforced confinements, and recommending humane treatment throughout.

Dr. Chapman, of Toledo, O., said that he had considerable experience with the treatment of the insane. He liked the cottage plan very much. The cottage asylum at Toledo was a home, not a prison. The patients were put in cottages of not more than thirty each, and treated as human beings.

Dr. Shaw thought the freedom given insane patients had gone far enough. It was now time to call a halt, or we would have a very severe reaction.

The paper was discussed by several other gentlemen.

THE YELLOW-FEVER QUESTION AND QUARANTINE

was discussed at great length by Dr. J. R. Rauch, Secretary of the State Board of Health of Illinois. He condemned quarantine as existing at the present time in the most severe terms. He stated that the yellow fever cannot spread in a continued temperature of seventy degrees or under, and the present panic was uncalled for. There was no danger at all above the North Tennessee border. He condemned the inefficiency of local quarantine. The address of Dr. Rauch met with sincere approval, and the Association elected him chairman of a committee to investigate the question.

Several other papers were read in abstract or by title, and the Association adjourned, to meet in Evansville, September, 1889.

Antiseptic Value of Chloroform.—Dr. Salkowski writes to a Vienna medical journal concerning the use of chloroform for the preservation of samples of urine by the analyst. A six-per-mille solution was found by him to effectively prevent the growth of micro-organisms, and he recommends it to be employed for keeping pathological liquids, and for the storage of anatomical preparations. Moreover, he suggests the employment of such a solution internally as a disinfectant and as a mouth-wash, and observes that it could be advantageously added to solutions for hypodermic use.—*Medical Press*, June 6, 1888.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department. United States Army, from September 30 *to October* 6, 1888.

Williams, John W., Major and Surgeon, on duty with battalion of 2d Artillery, now at Fort Wadsworth, New York Harbor. Granted leave of absence for one month, with permission to apply to the proper authority for an extension of one month. Par. 1, S. O. 209, Headquarters Division of the Atlantic, Governor's Island, New York City, October 4, 1888.

Cronkhite, Henry M., Major and Surgeon. On being relieved by Captain Corbusier, will report for duty to the Commanding Officer, Little Rock Barracks, Ark., reporting by letter to the Commanding General, Division of the Atlantic. Par. 10, S. O. 227, A. G. O., Washington, September 29, 1888.

Adair, George W., Captain and Assistant Surgeon. Is relieved from duty at Fort Brady, Mich., and will report for duty to the Commanding Officer, Fort Robinson, Neb., reporting by letter to the Commanding General, Department of the Platte. Par. 10, S. O. 227, A. G. O., Washington, September 29, 1888.

Corbusier, William H., Captain and Assistant Surgeon. On being relieved by Captain Taylor, will report in person to the Commanding Officer, Fort Hays, Kan., for duty at that post, relieving Major Henry M. Cronkhite, Surgeon, and reporting by letter to the Commanding General, Department of Arizona. Par. 10, S. O. 227, A. G. O., Washington, September 29, 1888.

By Direction of the Acting Secretary of War, the following named officers of the Medical Department will report in person, on the dates set opposite their respective names, to the President of the Army Medical Examining Board, Army Building, New York City, for examination for promotion: Captain James C. Merrill, Assistant Surgeon, October 16, 1888; Captain George McCreery, Assistant Surgeon, October 16, 1888; Captain Richard W. Johnson, Assistant Surgeon, October 9, 1888. Upon completion of their examination the officers named will rejoin their proper stations. Par. 5, S. O. 231, A. G. O., October 4, 1888.

Taylor, Arthur W., Captain and Assistant Surgeon. Is relieved from duty at Fort Robinson, Neb., and will report in person, without delay, to the Commanding Officer, Fort Grant, Ariz. Ter., for duty at that post, relieving Captain William H. Corbusier, Assistant Surgeon, and reporting by letter to the Commanding General, Department of Arizona. Par. 10, S. O. 227, A. G. O., Washington, September 29, 1888.

Rafferty, Ogden, Lieutenant and Assistant Surgeon. Will stand relieved from duty in connection with the Division rifle competition, the 7th inst., and under Par. 6, S. O., No. 2, c. s., Headquarters Division of the Missouri, will return to his proper station, Fort Clark, Tex. Par. 5, S. O. 95, Headquarters Department of Texas.

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 6, 1888.

Hudson, Adrian, Medical Inspector. Ordered to Naval Hospital, Mare Island, Cal.

Gihon, A. L., Medical Director. Detached from the Naval Hospital, Mare Island, Cal., and proceed home.

Remedy for Warts.—Kaposi recommends one part of bichloride of mercury dissolved in thirty parts of collodion. A little of the solution is painted on and around the base of the wart once every day.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 16 NEW YORK, OCTOBER 20, 1888 Whole No. 937

Original Articles.

PNEUMONIA—ITS INCREASING DEATH-RATE. ONE OF THE ESSENTIALS IN ITS TREATMENT.

BY GOUVERNEUR M. SMITH, M.D.,

NEW YORK CITY.

WHATEVER doubts may be entertained regarding the specific cause of acute lobar pneumonia, there is no doubt in respect to the seasons of the year in which the disease is most prevalent in this latitude. The subjoined table, kindly furnished me by Dr. John T. Nagle, Register of Vital Statistics in this city, clearly demonstrates the ebbings and floodings of a diseased tide, as it has disastrously flowed for the past decade through the calendar months of each year of that period.

Deaths from Pneumonia in New York City, by Months, etc.

Years and months.	1887.	1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878
January ...	480	387	375	348	357	376	366	261	341	280
February ..	370	354	486	339	361	370	371	248	251	247
March.....	394	506	587	349	526	453	391	266	330	306
April	466	374	512	304	472	393	393	375	274	249
May	390	256	337	268	345	464	282	340	214	222
June	164	184	229	186	213	234	176	163	126	143
July	137	176	150	167	133	169	151	127	103	84
August ...	119	160	139	150	122	103	134	108	92	103
September .	205	125	149	156	127	135	157	134	114	106
October...	260	258	160	209	182	191	200	205	171	141
November..	347	376	217	298	240	225	254	246	268	181
December..	375	501	308	385	331	359	386	349	270	226
Total....	3,707	3,657	3,649	3,159	3,409	3,472	3,261	2,822	2,554	2,288

A glance at the table shows that the autumn, and specially winter and early spring, are in deadly alliance with the disorder. History is doubtless to repeat itself; and it requires no preternatural gift to prophecy that in many homes Christmas cheer, and New-Year and Easter greetings, now anticipated with pleasure, are to be interrupted by the ghastly intrusion of pneumonia.

Meteorologists classify the month of March in the vernal season, and, scientifically, it appears as a harbinger of flowers. Popular classification does not yield it any meed of praise as such a harbinger, but ranks the month as a ruthless, cyclonic Juggernaut. An inspection of the above table illustrates its mortal greed. There seems to be an untimely hitch between the meteorologists and the ordinary run of climatological observers.

With such important facts before them, it behooves physicians at all times, but specially each autumn, to examine their equipments, and find if they can improve their methods of smiting a disorder which annually proves such an inimical foe to mankind. The disease not only prevails extensively during the seasons designated, but also prevails most disastrously, its rate of mortality reaching a very high figure. The physician of to-day, when in attendance upon a case of pneumonia, is perplexed with anxiety in regard to the result; and consternation and dismay unnerve both the patient and the family. Such intense solicitude and affright are modern concomitants of the malady. A few decades ago the disease, while considered as a serious one, was not regarded with such appallment. Medical science has in many directions been making advancements in pathology and therapeutics, but so far as pneumonia is concerned, science has shrivelled, and the rate of mortality from the disorder has been increasing. This is an unpleasant fact to acknowledge, but it is, alas! too true.

Dr. Henry Hartshorne, in his paper read before the College of Physicians of Philadelphia, February 1, 1888, has so ably laid before the profession his views on the "Past and Present Mortality and Treatment of Pneumonia," that it is only necessary to briefly allude to the statistics he has gathered in relation to the subject.

In the Pennsylvania Hospital he has found that the death-rate from the malady has augmented from 6¼ per cent. in the years 1845–46–47, to 18½ per cent. in the years 1865-66-67, and to more than 31 per cent. in 1884–85–86. He quotes from an editorial in the *Medical News* of December 11, 1886, that "the rate of mortality" of pneumonia "in the large general hospitals in this country is rarely below, more often above 25 per cent., which represents about the average death-rate from this disease in the Northern and Southern armies during the Civil War." It is added that "in this country extensive statistics of pneumonia in private practice are not available; but in the recent returns of the Collective Investigation Committee of the British Medical Association, the mortality was 18 per cent." Dr. Hartshorne continues: "This last ratio, it will be perceived, is considerably more than double the carefully computed mortality of pneumonia before 1858, namely, 8.33 per cent. We have thus, I think, a *demonstration* of the large increase in the proportion of deaths from that disease, in recent times, over what it was thirty, forty, and fifty years ago."[1]

New York experience corroborates the statistics of Philadelphia. Mr. Joseph H. Vandervoort, Assistant Librarian of the New York Hospital, has kindly furnished me with a table showing the number of cases, the number of deaths, and death-rate from pneumonia, occurring in the institution for a period extending from the year 18[illegible]0 to 1887. As divided into decades, it appears from the table that the lowest mortality occurred between the years 1820 and 1830. The mortality has been rising, and during the last decade it reached its acme, considerably over double the earlier percentage.

Any one at all familiar with metropolitan hospital affairs, distinctly understands that hospital statistics cannot always be quoted as exemplifying the results of treatment unless the cases are classified. Many cases of sickness and injury are brought to a hospital in a moribund condition; treatment can scarcely be initiated, and so far as the institution is concerned, they are really coroners' cases. Formerly, ships on arriving in port discharged their damaged and diseased crews into the wards of the New York Hospital; but, alas! too often in a plight kindred to that of perishable freight after a prolonged voyage. The modern hospital ambulance system, which is such a blessing to humanity, is doubtless often employed to foist into an infirmary, dying cases. Many without friends, in lodgings, or among heartless friends or relatives, are shuffled to an institution to die, while in their last moments. Even if too late to be placed under regular treatment, such unfortunates, fortunately, find a final crumb of comfort—medical skill palliates suffering, trained nurses minister with gentleness, adieu to life is peaceful, euthanasia affording quiet birth into eternity.

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[1] The Medical News, Philadelphia, April 7, 1888.

Hospital statistics, therefore, in order to afford valuable scientific data, must be silted, and classified in groups of cases. Without any such general and accurate figures to guide, as relating either to hospital or private practice in this country, but from such sources of inference as are at hand, and from observation, it is now an accepted fact that the death-rate from pneumonia is much greater at present than it has been hitherto. Science and pneumonia have ever been at loggerheads, and the latter is vanquishing its pretentious foe.

Before coming to speak of the special point in treatment to which I wish to refer in this paper, a few initial thoughts may be appropriately interjected. It seems very conundrumical that so little use and mention are now made of means of relief which were formerly employed in the management of pneumonia, when it was a less deadly disorder. Fashion seems to have ostracized certain remedies and resources which apparently, at least, were benign in their action. The remedies were of modest chemical nature, as compared with their modern *élite* successors, but were, nevertheless, to the pharmaceutical manor born. Shoddy has undoubtedly in some instances superseded worth.

The use of the thermometer in disease has proved of great value in science, but since the abnormal rise of temperature has been specially noted, there has risen in therapeutics a potent fire brigade, known as the Antipyretics. This brigade has a formidable enginery, and has largely supplanted the older febrifuges. The latter had some engines, which had to be used with great caution, but a number of them could be employed to refresh patients without the slightest risk of inducing mischief.

Metropolitan fire departments are splendidly equipped to master conflagrations. Alert insurance patrols are always on hand, however, not to quench flames, but to protect property from being destroyed by the zealously-delivered deluge of the firemen. In medicine we have no equally alert protective insurance patrol—a puissant antipyretic, while quenching abnormal heat, may also extinguish the vital spark.

In the present fashionable catalogue of remedies are found oxydimethylchinizine, and phenylacetamide or acetanilide. These potentates figure aristocratically when associating with chemical companions, each syllable being a conferred degree of respectability, but when herding with drugs they appear each under a democratic alias, the former being known as antipyrine and the latter as antifebrine.

How do these and other modern and *élite* syllables behave in the human economy as they whirl through the blood in accord with the cardiac rhythm? The ghost of Holbein suggests a "Dance of Death!" The ghost is as satirical as his old prototype, but while the suggestion may be a vile innuendo, it nevertheless points to the necessity of extreme caution in exhibiting powerful remedies until after the most judicious observation such drugs are found to be thoroughly reliable in safety and efficiency. Medicine has always been handicapped by its laggard branch of therapeutics. Chemistry has presented to science choice remedies, and is to bestow others vastly more valuable, but it must be remembered that among the originalities of the chemists an article may appear as a "Jekyll" on the shelf of the laboratory and as a "Hyde" on the counter of the apothecary.

Recognizing the uncertainties attendant upon the use of drugs in the treatment of disease, it behooves the physician to place his patients, so far as it is possible, under the best hygienic conditions favoring recovery. Expectantly treating diseases under such circumstances is often most salutary. Lightning in summer strikes with a deadly celerity, and the chills and blizzards of winter smite the young, the feeble, and the old with almost equally rapid and ghastly strokes. Quite a number are so violently overcome as to succumb without an opportunity being offered for efficient medical interference; but quite a large proportion of cases of pneumonia are met with, in which it is reasonable to anticipate an acute illness of about ten days.

People in health with two lusty lungs must breathe about eighteen times a minute to maintain the blood in a pure condition. Suppose, for a moment, that it was possible in a healthy person to plug a part of one lung, or an entire lung, or a portion of both lungs, in such a manner that the air could not enter such occluded parts. Suppose such condition was continued for a period of from seven to ten days, what would be the plight of such an individual at the end of this period, if the closed part of the lung was of any considerable size? Nature would probably try to adapt means to meet the situation; but nevertheless the sound person would become a patient, from a mechanical cause, and would show signs of suffocation, hebetude, and heart-failure.

In pneumonia we find a somewhat analogous state. One lung, a part of one lung, or of both lungs are involved in disease; engorgement, and hepatization, rendering such portions of the pulmonary tissue, for the time being substantially useless for respiratory purposes, and neighboring portions are inclined to be cross and irritable. Complicating the situation, we find fever, more or less intense, and the abnormal heat frets the economy. Kidneys peevishly perform their work, springs, feeding the smaller and larger glands run dry, and scorched nervous centres rebel. Co-operative disquietude is manifest in every vital atom, and, unless assuaged, a communistic strike, chaos—ashes to ashes!

Amid the bedlam, varying in degree with the extent of the initial lesion and collateral sympathy, one strong hope can animate the physician. In the natural course of events the pulmonary obstruction will disappear in a few days, and the lung or lungs gradually resume normal work. Can the patient be bridged to reach the climax? Can the uninvolved portions of the lungs respire sufficiently to maintain a tolerable condition of the blood until the critical period is passed? This is the great exigency—this is an absolute necessity.

It is clear that the blood requires aëration; can it be revived in any manner so efficiently as through the lungs, nature's method of arterialization? Can pill conceal oxygen, and smuggle through the gastric pouch life to the venous circulation? Can essence of ozone be given to substitute the process of respiration? Can any zephyred antipyretic essentially promote hæmatosis? Resources there are to palliate pain, relieve thirst, abate fever, and stimulate flagging energies; and all important as these means are, they are almost insignificant as compared with affording pure air in superabundant quantity. While fresh air is essential in the management of all diseases, it is omnipotently indispensable in pneumonia, where the patient is using but a part of the breathing apparatus in the place of two lungs. It is more than ordinary ventilation that is required in such cases; what is needed is a persistent, systematic attention to a constant change of air in the apartment of the sick, by night, by day, each hour, each minute, and each second, and the twin companion of each one who enters the sick room should be a volume of genial, pure air.

Attention in the line above indicated should be excessive. Is such excessive care ordinarily bestowed upon the invalid? Trained nurses and affectionate relatives, while in a general way attending to ventilation, are contriving dishes, and with gentle hands administering comfort. But while with sympathetic smiles they may hope to cheer, and with kind words may encourage, their lungs are robbing the air of the apartment of its oxygen, and are vitiating the atmosphere. Friends, unwittingly, assume the rôle of foes. Sacred history records that when man was first formed the Creator "breathed into his nostrils the breath of life"—kindred and attendants clustered around a loved one, with the beneficent intent of preserving life, are breathing into his nostrils *the breath of death.* This need not necessarily be so. Freely admit the invisible friend, fresh air; it may as grandly revive the body, as the invisible Spirit often brightens the soul under the same circumstances.

I have purposely omitted giving details in relation to the therapeutical management of pneumonia, wishing to confine my remarks to one point in its care which is imperative. I will not even venture to suggest methods of perflation, as rooms, and suites of apartments, according to their size, situation, etc., may have to be managed differently to secure the requisite result. The open fire prevents aërial stagnation. The sick-chamber should be kept at an invariable and genial temperature, agreeable to both the patient and attendants. In admitting pure air, perceptible cool currents are to be specially avoided. Eastern philosophy deftly says "drafts of air are arrows of death."

It is a very, very difficult task to secure the all-essential aërial purity, but without it the patient is liable to suffocation and to heart failure. Here an opportunity is afforded for ingenuity on the part of the physician and family; and when plans are devised for attaining such result, they should be specially intrusted to vigilant attendants, whose sole duty, if necessary, it should be to unremittingly carry them out.

I am tempted, and will venture, to make a digression, and give a hospital reminiscence of student life, which will illustrate a past and popular mode of managing the disorder, a method probably pretty generally in vogue at that time. In those days, it was customary to give clinical bed-side instruction in the wards of the New York Hospital, groups of students following the attending physician. Circles of two or three were selected to auscultate each patient, thus the invalid was not fatigued and each disciple, in rotation, trained his ear to morbid sounds. The preceptor stated the stage of the disease, what was to be heard, foretold what was to be heard hereafter, and laid out the plan of treatment. The pupil did not learn that the disorder was extraordinarily fatal, and did not expect, on returning a few days later, to hear that the patient had succumbed, and to find the bed tenanted by another.

What means were then employed in treating the malady? Venesection, for the most part, had become obsolete. Wet and dry cupping and leeches were employed, as indicated by the condition of the patient. Poultices and oil-silk jackets were applied, and blisters were sometimes resorted to. In sthenic cases, minute doses of tartar emetic were exhibited, and in others spiritus Mindereri was given as a cooling draught, to which was added occasionally minute quantities of powdered ipecac. to relax the skin and loosen pulmonary secretion. Dover's powder allayed pain.

In no inconsiderable number of cases, mercury seemed as a sheet-anchor. Calomel in small doses, and guarded with opium, was administered at frequent intervals. The patient rapidly came under its influence. The dry mouth and tongue became moist, salivation was avoided beyond a genial moistening of the mucous membrane of the buccal cavity, which seemed also to extend to the vesicular structure of the lungs. On applying the ear to the chest, over the consolidated lung, one could hear it melt. Softened and loosened pulmonary secretion was freely expectorated, air again penetrated the lungs, and the ejection of sputa was favored by the use of Stokes' expectorant, with its stimulating carbonate of ammonia. While such remedies were being employed, fresh air, good food, and cordials, as required, were acting "*cito, tuto, et jucunde.*"

This reminiscence is given as a remembrance of bygone days, now sped a score and more of years. It is not presented with a view, either of urging an adoption of a plan of treatment, or of contrasting such plan with methods which have since prevailed, or of debating the question of varying types of disease, etc., for the limits of this article forbid any discussion of such important subjects. It is simply recorded as an historical fact; there was no doubt regarding the diagnosis, and the death-rate then was a little more than half of what it is at present.

In finally resuming the thread of my theme, it may be said that if physicians, while modifying their views regarding the methods of treating pneumonia, as it appears under varied phases and conditions, have failed to find infallible remedies for its relief, it is important that in one essential hygienic point of treatment, they can at least agree. An agreement, founded on truth, can remain an eternal covenant.

Further reiteration seems unnecessary; but a few words in closing. It is clear, from what has been said, that in the treatment of pneumonia a superabundance of pure air is specifically indicated. The patient's breathing apparatus is only partially performing its functions, as the diseased parts of the lungs are substantially useless. The working portion must perform the work of two lungs, for a week or ten days, in order to maintain the blood in a proper condition to sustain life. The patient requires purer air and vastly more air than one in sound health. In estimating the amount of genial, and possibly moistened, air which should gently and freely pass through the sick-chamber, allowance should be made, both for the requirements of the patient and for the requirements of attendants. The latter should be as few as possible, in order to lessen the chances of aërial contamination.

Our atmosphere at times is harsh, but it always contains a life-giving element. When exposed to its inclemencies, care must protect from its bitterness, while extracting its sweetening oxygen. When admitted to homes, it can be artificially tempered as a boon to the shorn and to the unshorn. While remedies often behave benignly in the human economy, nevertheless, pure air, as a remedial agent in the management of pneumonia and of other disorders, both acute and chronic, has ever been a more important ally of therapeutics than any panacea offered by alchemy or any hobbledehoy presented by modern chemistry.

Physicians will constantly meet with cases where, owing to the surroundings of the patients, it is impracticable to carry out the best methods of treatment. If a physician, however, through inadvertence on his part, allows a patient to die from want of fresh air, he deserves a stigma as ignominious, if not as heinous, as that which four centuries ago attached itself to Richard, Duke of Gloucester, for the crime of smothering princes in the Tower of London. History hisses through the ages!

THE ETIOLOGY OF RHEUMATISM CONSIDERED FROM A BACTERIAL POINT OF VIEW.—Dr. Mantle (*British Medical Journal*) points out that there are certain conditions of the body alike favorable to the development of rheumatism, scarlatina, and erythema nodosum. This, he says, argues that all these diseases are brought about by a similar poison. Holding these views, he set about making investigations in rheumatism. A dram of serum was withdrawn, under the strictest antiseptic precautions, from the knee-joint of a patient suffering with acute rheumatism. With this serum several sterilized tubes of gelatinized meat-infusion were at once inoculated, and in each tube a copious growth took place. He had found two kinds of bacteria—a micrococcus and a small bacillus. Cover-glass preparations of blood and serum showed micrococci as single cocci or pairs, and in acute cases zoöglea masses; in addition, small, short, thick bacilli were also seen, either single, in pairs, or in colonies. These bacteria were easily stained with methyl-violet, with fuchsine, or by Gram's method. In two cases of purpura rheumatica he found no bacilli. In one case of gonorrheal rheumatism bacilli were found only in the blood. In chronic rheumatism and rheumatoid arthritis the bacteria were found. Might not the chemical products of these bacteria be lactic acid and thus form the chief ptomaine of the diseases? The author found that cultivations of the bacteria of rheumatism, amygdalitis, erythema nodosum, and scarlatina, produced lactic-acid fermentation in sterilized milk.

CHRONIC JOINT DISEASES AND CONSTITUTIONAL TREATMENT.[1]

By V. P. GIBNEY, M.D.,

SURGEON-IN-CHIEF, HOSPITAL RUPTURED AND CRIPPLED, AND PROFESSOR OF ORTHOPÆDIC SURGERY, NEW YORK POLYCLINIC, ETC.

I HAVE selected the above title in order to bring before this Society of Practitioners a subject upon which there is a diversity of opinion and, at the same time, a certain amount of confusion.

The exact meaning of constitutional treatment is not clearly defined. When the surgeon who has much to do with joint disease is asked what his special management is, the practitioner usually follows this question by the following: "And do you employ any constitutional treatment?"

In former times, when scrofula played such an important part in the etiology of joint diseases, constitutional treatment was regarded as necessary to the full and complete management of a case.

By chronic joint disease, I would have you understand such affections as Pott's disease, hip disease, and white swelling. In view of the frequency of these ailments during early childhood and youth, I propose, this evening, to limit the discussion somewhat to the above affections as they occur in youth. I make no apology for defining white swelling as a tuberculous ostitis of the epiphysis of the knee-joint; hip disease as a tuberculosis inflammation of the bones entering into the formation of the hip-joint; of Pott's disease as a similar form of inflammation confined to bodies of the vertebræ.

Orthopædic and general surgeons of the present day seldom waste time in discussing the nature of struma or scrofula. There are some, however, who have for several years ignored these terms and held to the traumatic nature of joint lesions, and naturally find the initial processes in the soft parts. This theory, however, is not a popular one with the great majority of those who teach this subject.

Pathologists, with few, if any, exceptions, hold to the tuberculous nature of the diseases under consideration, and as a result of their studies we are enabled to locate the lesion in the immediate neighborhood of the epiphyseal line.

A prominent English writer has long since called attention to the similarity between chronic inflammatory lesions in the cancellous structure of the bone and like lesions in the parenchyma of the lung.

The two structures are not unlike, and the simile is well taken. A caseous focus in the end of the bone behaves very much like a caseous focus in the lung. By means of physical signs we are able to detect small areas of consolidation, or even small cavities with surrounding induration. Physical diagnosis does not help, however, in the diagnosis of bone lesions, but, on the operating-table and in the dead-house, exactly the same condition of things is often found in the cancellous structure of bone. The clinical histories of the two diseases are very nearly identical. Both have exacerbations, both may have long periods of remission. The interpretation of these exacerbations is pathologically as follows: A small inflammatory focus extends by continuity, in the case of bone, to the cartilaginous covering, and we have an increase of what are known as constitutional symptoms, and aggravation of the muscular spasm about the joint; in the case of lung-tissue, a rise of temperature, some distress in the respiratory symptoms, and an increase of the constitutional manifestations. If the inflammation extend beyond homologous tissue, we have what is known as inflammation by contiguity, and, in case of bone, the cartilage and synovial membranes are invaded, giving rise to true joint symptoms, and there may or may not be effusion into the joint.

In the case of the lungs we have the pleura invaded, and there may or may not be effusion. As the inflammation subsides the symptoms in the two cases abate, and convalescence may seem to be established.

The careful practitioner, however, understands this state of affairs, and does not permit himself to be misled by the wishes of the patient.

He knows that the tissues which have been recently inflamed are rendered more vulnerable, and he expects to find more impairment of the joint function and more impairment of the lungs after succeeding exacerbations. So long as we have, in these exacerbations, simply an extension of the inflammation by continuity and contiguity, we have nothing more than a simple serous synovitis in the one case and a pleuritis with adhesions in the other.

When this central focus has increased in size to the formation of an abscess-cavity, the synovial membrane and the pleura finally become walls of this sac, through which rupture takes place, producing in the one case a suppurative synovitis, and in the other a suppurative pleurisy.

It will be seen, from the foregoing, that chronic joint disease is secondary to chronic bone disease. In adult life, however, the rule is to have these relations reversed. Here we have chronic synovitis, chronic fungous arthritis, gelatiniform arthritis, etc.

I am prepared to admit that the practitioner finds in childhood cases of primary synovitis; at the same time, however, I must take the liberty of questioning his diagnosis if he employs the term chronic to designate the affection. Cases of acute traumatic synovitis are not uncommonly met with, just as cases of acute primary pleuritis are met with, in childhood. I am aware that a primary pleuritis is regarded by many as dangerous to the lung, and that, if resolution does not take place within a short time, a predisposition to pulmonary disease results. We have no such protection to the lung as we have to the cancellous structure of bone.

It must be remembered that there is a dense layer of compact bone-tissue immediately beneath the cartilage. I do not believe, therefore, that a simple traumatic synovitis predisposes to bone disease.

Let us return for a moment to those cases of so-called chronic primary synovitis and subject them to analysis. Occasionally I find a case that seems, at first glance, to be one of typical primary chronic synovitis. There is distention of the synovial capsule, and the mother avers that this swelling has only recently appeared, and that prior to this the child was perfectly well and free from lameness. Before the interview is completed, however, she admits that some six or twelve months ago there was some stiffness of the knee and impairment of gait which lasted a few weeks. No special importance was attached to it and he seemed to recover; but, on still closer investigation, it is discovered that the recovery has been perfect, so that to-day I am forced to admit that I have seen no cases either in private or hospital practice where the chronic joint disease started as a primary synovitis. Let it be distinctly understood that I am speaking of the disease as it occurs in childhood.

This much for the definition of the first part of my title.

What shall we understand by the term constitutional treatment? It is assumed that the constitution of the patient is impaired more or less, and that, whatever local treatment we employ for the joint disease, a special treatment must be adopted for the repair of the constitution.

When an interne of the Hospital for Ruptured and Crippled, I was taught to look upon drugs as a *sine qua non* to the successful management of all joint diseases.

All patients with joint disease were kept for months on the following prescription:

℞. Hydrarg. bichl.......................gr. ij.
Tinct. cinch. comp ....℥ vj.
M. Sig.—ʒ j., b.d.

In addition to this, they also had one drachm of pure cod-liver oil twice a day. During the summer months the cod-liver oil was omitted, and some preparation of malt substituted therefor.

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[1] Read before the Practitioners' Society, October 5, 1888.

After a patient had been taking the bichloride and tincture many months, a change was made to the sirup of iodide of iron (gtt. x.), twice a day. With an occasional dose of calomel, the above was regarded as constitutional treatment.

In general practice, cod-liver oil and sirup of iodide of iron are looked upon as proper constitutional treatment.

Many physicians, I know, regard the phosphates in some form as necessary to the successful management of the case. Professor Jacobi believes that phosphorus is almost a specific in bone disease.

I claim to have administered faithfully the above drugs, and I must confess that I fail to see how it is possible to estimate their true value. Nearly all are given on what we choose to style general principles. The public seem to have an impression that medicine in some form must be administered, and, if the specialist fail to prescribe anything more than some form of apparatus, the family physician, in one way or another, intimates that the specialist is apt to be one-sided. It is my custom to prescribe tonics when I think a tonic is indicated: to counteract, by the few specifics we have, any of the vices to which the constitution may be subject—*e.g.*, if a specific element be present, I employ mercury and the iodide of potassium, either singly or in combination; if the system suffer from malarial poisoning, I use quinine; if a rheumatic element is found, I adopt such remedies as I think will counteract this influence. In all cases where any stomach or intestinal trouble is present I employ measures to improve the digestion.

I am sure the gentlemen present will concur with me when I assert that our aim should be to keep the general health at or above par. Believing, as I do, in the tuberculous nature of the majority of these lesions, I have come to look upon a change of air or climate as exceedingly important.

The time will come when we shall feel that it is as important to send our bone cases to the mountains, or to other health-resorts, as it is our pulmonary patients. The apparatus we employ, therefore, should be so simple that the patient can be taught the principles governing the same, and how to manage the dressing. I do not wish to be understood as advocating any lack of intelligent care on the part of the surgeon who employs the apparatus. The facilities for travel at present are so great that the patient can return at proper times for the adjustment of a new splint or the repair of an old one. A change of climate can thus be easily obtained and the general good of the patient enhanced.

Thus far, it will be seen, I have confined my remarks to the mechanical and the medical aspects of the subject. I cannot close these fragmentary remarks without alluding to the surgical features of chronic joint-disease.

If a bone-abscess exist, I know of no better constitutional treatment than the antiseptic evacuation of such abscess. We are all familiar with the prompt relief afforded the patient by the removal of diseased bone.

Dr. Yale, of this city, a few years ago, in a paper on excision of the hip-joint, stated that an excision was sometimes the best antipyretic one could employ. If, therefore, our patient is suffering from hectic, it seems unscientific to employ drugs for this condition when we can remove the cause by the knife. If suppuration is prolonged, we find a low specific gravity of the urine, which continues for some weeks. The best constitutional treatment we can give the patient is to remove the diseased bone, or even the offending member.

Lest my hearers may think that I am advocating operative surgery for all joint diseases, I would say that in protective splints I have found most gratifying results in by far the greater number of cases with which I came in contact. Take, for instance, a case of chronic ostitis of the hip (hip disease) where the patient is suffering from loss of sleep—that annoying symptom of reflex spasm. If we can immobilize the hip, or employ simple traction which practically immobilizes, I am sure we find this treatment better for the constitution than alteratives, opiates, or counter-irritants. If, furthermore, we can employ a portable apparatus which accomplishes the same results, we not only contribute to his comfort at night and his pleasure by day, but we place him under the most favorable circumstances for recovery. It is the duty, therefore, of the surgeon to employ such measures, and at the same time bear in mind that there are bone lesions that no form of splint will cure. While he should have a proper amount of respect for constitutional treatment, he should remember that the judicious employment of the knife will often accomplish more than all the drugs in the Pharmacopœia. As in pulmonary diseases we are accustomed to look upon a robust condition of health as the best evidence that our patient is improving, so in chronic joint disease we should look upon the physical condition as a fair index of the progress of the case.

Drugs, diet, and climate are recognized as potent factors in the building up of health, and if to these can be added the relief of irritation in or about a joint and the removal of such influences as contribute to sepsis, then our armamentarium is complete.

SHOULD INEBRIATES BE PUNISHED BY DEATH FOR CRIME?[1]

By T. D. CROTHERS, M.D.,
HARTFORD, CONN.

It is a common error to suppose that law and its practice, and the facts and theories of science generally accepted to-day, are final and fixed truths. The fact is not often recognized that theories, creeds, and laws, and their application to the events of life, are only human conceptions of truth. Hence the demand for change and readjustment of the relations of life to conform to the new truths and new facts constantly appearing. Whenever human conduct, thought, and law fail to adapt themselves to these new conceptions of life, great injury and loss follow.

The treatment of insanity, medically and legally, has totally changed from that of the past century. A better knowledge of such cases has demanded an adjustment of theory and practice to conform to the new views. The armies of the lawless and defective are no longer concealed by the fogs of superstition. Their origin and march are growing more and more distinct with every advance of the age. The hosts of the insane have been outlined and traced; the idiot has appeared as a growth from distinct causes; the epileptic has emerged from the theory of being possessed with an evil spirit; criminals are found who are not deceitful and desperately wicked, but the direct products of conditions of life and living; the inebriate, who for ages has been the subject of ridicule and punishment, comes into view as defective and diseased. Thus, from the front lines of advance come new facts, new views, requiring new laws, new adjustments of the theory and practice of yesterday to meet the clearer, wider knowledge of to-day. The farmer must put aside the old implements of his fathers; the merchant must use the telegraph and telephone because correspondence is too slow; the practice of the courts, the theory and treatment of diseases, the teaching from the pulpit, are all changing. The spirit of the age questions and demands reasons for the theories and practices of to-day. It inquires if our methods and theories are destructive or obstructive in the race march from the lower to the higher. My purpose is to show that the death penalty, as a means of punishment for inebriates, is opposed by all the teachings of science and experience, and should be superseded by other means based on a more accurate knowledge.

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[1] Read before the New York Medico-Legal Society, September 12, 1888.

An outline view of the present legal methods of dealing with inebriates who commit petty crime will make clear both the destruction and obstruction which follow from the failure to comprehend and utilize the facts which science and experience teach.

Of the estimated half million inebriates in this country, ten per cent. are yearly convicted of crime of all degrees. Of this number, two per cent. commit capital crime, and one per cent. of this number, or about one hundred persons, are executed every year. These statistics are only approximate estimates, but they illustrate in a general way the extent of inebriety, and how far the courts are called to restrain and check it. A study of the local statistics shows that in every town and city of this country a large part of the business of courts of justice is the legal punishment of inebriates. The inmates of jails and prisons who are inebriates are variously estimated at from fifty to eighty per cent. of the whole number. Year after year the courts administer the same treatment of fine and imprisonment for both inebriety and crime, and yet the number of inebriates is increasing. When this fact is studied, it appears that a species of fatality seems to follow the first legal punishment of inebriates, seen in a repetition of the same offence and the same punishment, with an ever-increasing frequency. In the courts these are called "repeaters," and the number of sentences of the same man for the same crime in some cases extends into the hundreds. In one thousand cases confined on Blackwell's Island, nine hundred and thirty-five had been sentenced for the same offence from one to twenty-eight times before. This fatality seems to start with the first sentence and punishment; and the victim is precipitated lower and lower, becoming more degenerated and incapacitated, until finally death follows in prison, the insane asylum, or almshouse.

The natural history of such cases is continuous punishment for inebriety, assault, theft, burglary, and petty crime, and finally murder. Each period of punishment is followed by the same or more aggravated crime. The intent and purpose of the law is defeated, and this means of treatment both directly and indirectly increases crime and prepares the inebriate for worse and more hopeless states. The courts and prison officials are powerless, public opinion sustains the law and demands its execution irrespective of all consequences. The poor victims punished to-day reappear to-morrow, under arrest for the same or a worse crime. The severity of the punishment makes no difference. The inebriate who, under the influence of alcohol, commits assault to-day, will do so to-morrow, and next year, and so on, as long as his inebriety continues. No legal punishment of fines and imprisonment can stop him. These facts are sustained by the experience of all courts and prison officials. They are also equally true in the death punishment of inebriates for crime.

When the crime is the direct or indirect result of inebriety, it is only the natural outcome or logical result of conditions of brain disorder and surroundings. The assumption that inebriety is always a voluntary condition, within the control of the person, is a most fatal error. On this error is based the death penalty. Its practical failure is apparent in the increase of capital crime by inebriates. The inebriate who has been arrested for petty crime while intoxicated many times before, finally commits murder in the same condition, and is executed. His friends and companions do the same thing and suffer the same penalty. Thus one brutal murder committed in a state of intoxication is followed by another equally brutal, and the execution of the murderer makes no diminution in the number of similar crimes that follow. In every daily paper appear records of the same murders by inebriates under the same circumstances. A wave of public vengeance may dispose of the criminal by lynch law, or only be satisfied when he is hung, but the same murders are committed again by the same class of men. This is only the repetition of the same blunder of fining and imprisoning inebriates for inebriety and petty crime. In both cases the victims are destroyed, and similar offences are increased rather than diminished. In one case imprisonment and fines make the inebriate more incurable and less capable of change of life and living; in the other, the execution of the inebriate leaves a brutalizing, combative influence and a form of contagious glamor that defective brains are powerless to resist. These are the facts which experience and observation fully confirm, and which the latest teachings of science explain and point out.

To-day it is known that the action of alcohol on the brain and nervous system is anæsthetic and paralyzant. The use of alcohol to excess, at intervals or continuously, always numbs and paralyzes the higher operations of the brain; the over-stimulated heart reacts, and depression and feebleness follow. All the senses are disturbed and become more or less incapable of transmitting the impressions which are received. The brain is incapable of accurately comprehending the nature of acts and the relation of surroundings when under the influence of alcohol. The palsy which follows from this drug masks all brain action. Delusions of vigor and strength appear; events and their consequences and motives and conduct are all exaggerated, misconceived, and misinterpreted, and the brain is unable to correct them. The pronounced delusions, illusions, delirium, mania, imbecility, and stupor, seen in states of intoxication, are only the advanced stages of brain conditions which begin with the first glass of spirits. The early changed conduct and speech of men who use spirits are the first symptoms of the paralyzing action of alcohol. More spirits are followed by more paralysis, and finally all judgment and experience, and all distinctions of right and wrong, of duty and obligation, are confused and unreal. The supposed brilliancy which follows from the use of spirits is unreal and transient—it is the glamor of the mind which has lost its balance and is unable to correct itself. No other drugs are known whose paralyzing effects on the higher brain centres are so positive and insidious. The inebriate and moderate drinker have always impaired brain force and nerve power. The automatic nature of their life- and brain-work may cover up this fact; but change the surroundings and demands on the brain, and its incapacity appears. Every toxic state from alcohol more or less permanently impresses and debilitates brain integrity.

The fear of the law and consequences of acts make little impression in such cases. The brain is anæsthetized and crippled, and cannot realize events and their nature and consequences. The crime committed by an inebriate cannot be the act of a healthy brain. The more pronounced his inebriety and the longer its duration, the more positive the disease and incompetency to reason and control his acts. The effort to fix a point in all disputed cases where sanity and responsibility join insanity and irresponsibility, is an impossibility which every advance of science demonstrates. It is equally impossible to use alcohol to excess for years and have a sound. normal brain. It is impossible in such a case to fully realize the nature and consequence of acts and obligations. It is a legal fiction to suppose that a crime committed while under the influence of alcohol was the voluntary act of a sane man. It is a legal fiction to suppose that a sane man would plan a crime and then become intoxicated for the purpose of executing it. It is a legal fiction to suppose that premeditation in crime committed by inebriates is evidence of sanity and consciousness of his acts. These are some of the facts of science which bring additional evidence of the error of capital punishment in such cases.

A study of the crime committed by inebriates amply confirms the fact of brain incapacity and disease. Thus, in cases of capital crime by inebriates, delusions, illusions, morbid impulses, and epileptic explosions, are common symptoms. In many cases capital crime is the result of peculiar circumstances and sudden strains on the enfeebled brain, or the possession of a morbid impulse, a delusion, or illusion, that suddenly dominates the mind; also epileptic explosions, that are real attacks of maniacal fury and unreasoning. Alcoholic somnambulism or trance is present in many cases. The mind in these cases is oblivious to all outside influences or considerations, and is subject to every passing impulse that may come from either external or internal causes. At the time no general indications of unconsciousness may be present, yet a certain automatic line of conduct and history of crime give clear hints of brain enfeeblement. All crime by inebriates will be found associated with concealed or open delusions, morbid and epileptic impulses, and sense deceptions. In all these cases the brain is unsound and cannot act rationally and clearly. There are present in these cases either insanity of inebriety or the inebriety of insanity. The inebriety of the prisoner has merged into insanity, or some concealed insanity or brain degeneration has developed into inebriety or dipsomania. The death penalty to such cases has no horrors. It is rather welcomed. The struggle for life is the attractive publicity that makes a hero of the man, and the mystery of the end of life intensifies the interest to the last moment.

A summary of the facts we have outlined would sustain the following statements:

1. The legal treatment of insanity has changed in obedience to a more accurate knowledge of the brain and its diseases.

2. The legal treatment of inebriety is unchanged to-day. Although it occupies two-thirds of the time of courts all teachings of science and a larger knowledge of the inebriate and his malady are ignored.

3. The ruinous error of punishment by fine and imprisonment of inebriety, and petty crime associated with it, which notoriously increases and perpetuates the inebriate and criminal, is a fact demonstrable in every community.

4. Thus public opinion, through mediæval theories and laws, is training and preparing a class of inebriates who first commit petty, then capital crime, with a certainty which can almost be predicted.

5. The death penalty for such crime utterly fails for the same reason. The execution of any member of this class simply opens the door for an army already prepared and trained to take their places.

6. From a scientific study of these cases, it is clearly apparent that they are diseased and incapacitated to act sanely. Alcohol has palsied the brain and made them madmen. The very fact of continuous use of alcohol is evidence of mental impairment and unreasoning act and thought.

7. To hold such men accountable for their acts, and by punishment expect to deter them from further crime, and by such punishment check others from similar crime, is an error which both scientific teaching and experience point out.

8. The object of the State, through the law, is to protect society and the individual; but if the execution of the law-breaker fails to accomplish this end, the laws are wrong.

9. The unfounded fear that the plea of insanity in crime, and the failure to punish, is an encouragement for further crime, is flatly contradicted by statistics.

10. Among the mentally defective, the insane, and inebriates, the death penalty is followed by an increase rather than a diminution of crime.

11. The inebriate should never be hung for crime committed while under the influence of alcohol.

12. This method of punishment is never deterrent, but furnishes an attraction for other inebriates who commit similar crime in the same way, following some law of mental contagion.

13. The inebriate murderer should be confined the rest of his life in a military work-house hospital. He should be under the care of others, as incapacitated to enjoy liberty and incompetent to direct his thoughts or acts.

14. A change of public sentiment and law is demanded, and a readjustment of theory and practice called for. The criminal inebriate occupies a very large space among the armies of the defective who threaten society to-day, and his care and treatment must be based on accurate knowledge, not theory.

15. Inebriate murderers should never be placed on public trial, where the details of the trial are made prominent, or the farcical questions of sanity are publicly tested. They should be made the subject of private inquiry, and placed quietly in a work-house hospital, buried away from all knowledge or observation of the world.

16. The contagion of the crime and punishment would be avoided, and his services might repair some of the losses to society and the world.

TESTS FOR DIABETES MELLITUS.[1]

By PALMER C. COLE, A.M., M.D.,

NEW YORK.

Professor C. F. Chandler, of Columbia College, in 1874 brought from Berlin a modification of Fehling's test for the detection of grape-sugar in solutions, and determining the quantitative amount.

Dr. S. B. Ward, now of Albany, and myself, after long and carefully conducted experiments became convinced of its great superiority over any test with which we were then acquainted for the detection of grape-sugar in urine. In 1875 Professor Chandler read a paper on this test for sugar in urine before the New York County Medical Society, which, for some inexplicable reason, has remained ignored by the profession. Why a quantitative test so simple, so absolute, should be ignored by professors in Medical Colleges, and so far as I know, by all our text-books on urinary analysis, is difficult to account for.

Of all the tests for sugar Trommer's is the best known and most generally used by our profession. It is recommended in all the text-books, taught by all professors in our medical colleges and even by the professors in our polyclinics.

This test, so relied upon by the general practitioner (justified by the teaching of medical works and the lectures of those who should be a guide to the student), is untrustworthy.

It is untrustworthy for these reasons: Under certain circumstances, when urine contains grape-sugar, Trommer's test will fail to give the precipitation of suboxide or hydrated suboxide. Under such circumstances it is judicious, according to Seegen, "to filter the urine through animal charcoal one or more times until it is completely decolorized, to wash the charcoal with a little distilled water, and to subject this water to Trommer's test, which then, provided the urine originally contained .05 per cent. of sugar, causes a precipitate of suboxide of copper."—Ziemssen's Cyclopædia, American edition, vol. xvi, pages 974 and 975.

Under certain circumstances Trommer's test will give indications of sugar where none exists in the urine. This might possibly be obviated by filtering through animal charcoal, though I have never tried the experiment. Under any circumstances the proceeding is tedious and may lead to fallacious results, as I think it possible that the very process to which we subject the urine may cause a trace of sugar to appear where none previously existed. How many practitioners who use Trommer's test ever observe the above precautions? How many even know of the necessity for their use?

As long ago as 1854 Golding Bird, "On Urinary Deposits," American edition, page 295, says, "Several objections have been made to this test on the ground that mere uric acid is sufficient to reduce the copper, and thus introduce a serious source of fallacy." I would add that, when in excess, creatinin, ammonia, and sometimes the coloring matter of the urine will prevent the finding of sugar when it is present.

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[1] Read before the Northwestern Medical and Surgical Society of New York, June 20, 1888.

For myself, I have been misled in previous years by finding by Trommer's test indications of sugar when probably none existed. My patients, after longer or shorter lapses of time, recovered. Knowing the ordinarily slow but sure progress of the disease, I was mystified, but concluded that diabetes mellitus was in some cases easily curable.

The modified Fehling's test showed me that the disease from which my patients recovered was probably not diabetes mellitus.

We have simple and infallible tests for the detection of grape-sugar in urine.

A test which, like Trommer's, may lead to fallacious conclusions should be expurgated from our text-books, and professors should cease to teach it to their pupils.

Fehling's test, if freshly prepared, may be relied upon. The one drawback to its use is its instability—on exposure to the air it deteriorates.

Professor J. C. Dalton obviated this defect by putting up the freshly prepared solution in half-ounce bottles, hermetically sealed, and opening a fresh bottle every time he made a test. Even with this precaution the test will sometimes decompose.

A modification of Fehling's test made up extemporaneously, perfectly trustworthy and reliable, uninfluenced by any of the normal or abnormal constituents of the urine, requiring no preliminary treatment of the urine (always an element of error), and by which a qualitative test can be made in five minutes, and a quantitative test in less than thirty minutes, is obviously superior. I am told that this test takes too much time to be applied by the busy professional man.

What professional man who takes an interest in his patients but can afford half an hour once or twice a week for the satisfaction of knowing absolutely their condition? The "differential density method" of Roberts, the fermentation test, the picric-acid test, as performed by Dr. Johnston, of London; the polariscopic test, and many others, all have sources of fallacy. The fermentative test is liable to these errors: In certain conditions of the urine it will fail to act when we know sugar is present. Again, the best prepared yeast, Fleischman's, will sometimes give us fermentation in water in which we know there is no sugar. The "differential density method" is liable to these errors and others. The precipitation of urates, earthy phosphates, and other changes not well understood lessen the specific gravity of the urine. As to the picric-acid test, our life insurance companies will not accept it. The polariscopic test, while no more accurate than the "differential density method" of Roberts, requires an expensive instrument which few doctors possess.

The limit of this article prevents the consideration of other tests, as I consider my test superior to any other.

During the last twenty-five years I have devoted much time to the specialty of urinary diseases. I have never found any test for grape-sugar so absolutely free from error as the one I have recommended.

Dr. Ward and myself, in the course of our experiments, spent one afternoon in Professor Chandler's laboratory. We had met with a specimen of urine which, by Trommer's test, gave indications of sugar, but with my test did not give sugar, but a deep yellowish-green reaction. We asked Professor Chandler what caused it? He said, "He did not know, but it was not diabetes."

After many months of clinical investigation I arrived at a conclusion from which I have never seen cause to vary. This peculiar reaction indicated a pseudo-glycosuric condition of the system, perhaps analogous to diabetes mellitus, with this vital difference—it was curable.

Shortly after arriving at this conclusion I had occasion to verify it. A prominent physician of this city, knowing I had long been engaged in examination of urine, brought me a specimen of his own. He had been pronounced diabetic by some of the best authorities in New York, was nervous and anxious, thinking and saying he had but a short time to live. He was preparing to give up his practice and move to the country, which he shortly afterward did.

When he called to get my report, I was pleased to tell him that I could not find a trace of sugar in his urine; that he did not have diabetes mellitus, but was suffering from glycosuria, which was curable, and that he would get well. He did not believe me. I said to him, "Perhaps your urine may be temporarily free from sugar, give me another specimen in two or three days." He did so; same result. I asked for and obtained a third specimen a week or ten days afterward, and again obtaining negative results I positively stated to him that he did not have diabetes mellitus and that he would recover.

He did not believe in my diagnosis or prognosis, and thinks to this day that he has recovered from a disease he never had.

I mention this prominent case as an illustration of the value of my test for diagnostic purposes.

Before proceeding further I would state that foods advertised as "Diabetic" are all, comparatively speaking, valueless, and so far as they advertise that they are absolutely free from starch, fraudulent.

With my test for the simple detection of sugar a large test-tube will suffice, but for a quantitative analysis the following simple and inexpensive apparatus is required: A retort stand, a few feet of rubber tubing, a Bunsen's burner, two or three Florence flasks of ten to twelve ounces capacity, one 100 c. ctm. flask, one 10 c. ctm. pipette, and a 25 c. ctm. burette graduated to tenths of a c. ctm.

The chemicals consist of, 1. A standard solution of sulphate of copper, C. P., 17.319 grams dissolved in 500 c. ctm. of distilled water. 10 c. ctm. of this solution will be reduced by .05 grm. of grape-sugar. 2. Caustic potash, C. P., one part dissolved in ten parts of distilled water. 3. Crystallized tartaric acid, C. P., pulverized. These reagents should be kept in grounds-toppered bottles.

All apparatus and C. P. chemicals can be obtained from Eimer & Amend, Eighteenth Street and Third Avenue.

The solutions are permanent. I prefer to make my own, and would advise others to do the same. With scales and metric weights and measures it is simple and easy.

To make the test solution: Take 10 c. ctm. of the copper solution, place it in a Florence flask and dilute with 40 c. ctm of distilled water (Croton water filtered, or rain water filtered after boiling is pure enough for all practical purposes), add and dissolve without weighing, a small quantity (.66 grm. is sufficient) of tartaric acid, C. P. (the only precaution to be observed is to use a sufficient quantity, which a few experiments will teach). Now add the potash solution until a deep and permanent blue is obtained. Place it on the retort stand to boil, for this test is only used while boiling. A spirit or kerosene lamp may be used instead of gas. The flask should be placed on a thin tin plate instead of wire-gauze to obviate smoking. It takes a few minutes longer to make the test but is safer.

This test is self-testing. If on boiling we get the slightest change of color, except, perhaps the intensification of the blue, we may rest assured that we have made some error in preparing our solution—our chemicals are impure, or our flasks are imperfectly cleansed. The solution, being worthless, must be thrown away and a fresh one prepared, which remains unchanged, before we proceed to test the urine.

After making a test, if sugar is found, the flask should be washed with eight or ten drops of nitric acid in a little water and then rinsed, to cleanse it from the precipitate of copper. While the test-solution is heating prepare the urine for analysis. Place 10 c. ctm. of the urine in the 100 c. ctm. flask, fill with water and mix. We have now urine diluted to ten per cent.

These dilutions are requisite for accuracy in quantitative analysis. Fill the 25 c. ctm. burette with the dilute urine. When the test-solution boils, add from the burette, drop by drop, until the blue is entirely discharged.

You have now a precipitate of the red suboxide of copper leaving the supernatant liquid clear. The reaction is *unmistakable ;* no matter what other reactions urine may give with this test, if the characteristic reaction of the precipitation of the red suboxide is not obtained, we may rest assured *that there is no grape-sugar in the urine.*

To determine the per cent. of sugar we have this simple formula: c. ctm. of urine used : grams. of sugar found : : 100 : per cent. of sugar.

For example, say we have used from the burette 7.4 c. ctm., then, as the urine used was diluted to ten per cent., we place the decimal point one figure to the left, and find that in reality only .74 c. ctm. of urine was used. Now fill out the formula .74 : .05 : : 100 : 6.756 per cent. of sugar. The urine used in this experiment had a specific gravity of 1.036. Knowing the amount of urine passed in twenty-four hours, a very simple calculation will show the amount of sugar eliminated from the system by the kidneys in a given time. The test is simple, cleanly, and reliable. Its delicacy is so great that the earliest stages of diabetes can be detected with the utmost certainty.

Any careful observer can detect one part of grape-sugar in five thousand parts of urine, and an expert may detect one part of grape-sugar in twenty thousand parts of urine.

For the last thirteen years I have used no other test for grape-sugar (though I have experimented with many) and it has never failed. The claim I make as the result of clinical observations with this test is the ability to diagnose between a pseudo-glycosuric condition of the system which is curable, and diabetes mellitus, which we all regard with grave apprehension, and in its advanced stages must consider, though amenable to treatment, as incurable. I say in the advanced stages, for I have had two patients who came to me in the early stages of the disease and were apparently cured. One, after being under treatment for eighteen months, remained well for ten years. The other was under observation for about three years after all traces of sugar had disappeared. I have seen neither since. These are the only two cases of recovery I have to report in thirteen years. Many cases have been reported as typical cases of diabetes mellitus cured, which, from their published histories I should call glycosuria.

I should class the conditions we have been considering, under three heads :

First, Pseudo-glycosuria. We are now unable by any known test to detect sugar, but have well-defined indications that serious changes are going on in the assimilative organs. Second, Glycosuria. We have now greater changes in the assimilative organs, but their perverted action has not yet become habitual. Sugar appears and disappears from time to time, owing to causes partly dietetic. Third, True Diabetes Mellitus. Now the perverted action of the assimilative organs has become habitual, and sugar in varying amount is constantly found in the urine.

These three conditions can be clearly diagnosed.

The first two, pseudo-glycosuria and glycosuria, as a rule, yield to dietetic and hygienic treatment. I place but little confidence in drugs in the treatment of this disease. The third, true diabetes mellitus, if recognized in the early stage, when the amount of sugar is small, though persistent, may yield to treatment ; but if it does not come under observation until the advanced stage has been reached, must, as I have before said, be regarded, though amenable to treatment, as incurable.

254 West Forty-second Street.

A Dress for Physicians.—Some individual has suggested that physicians adopt a peculiar style of dress in order to distinguish them from the vulgar herd. We doubt whether a peaked cap with bells would render the originator of this scheme any more conspicuous among his fellow-men.

ANTIPYRIN AS AN ANALGESIAC.

By P. R. Egan, M.D.,
Assistant Surgeon, United States Army.

Now that antipyrin is taking its place in medicine as an efficient analgesiac, it might be of interest to your readers to record some short notes of nervous cases treated before and since its introduction.

Case I.—Miss M—— (1882). Neuralgia left supra-orbital. Headache said to follow an injury over left eye where a piece of glass remained in the wound for some time. Always brought on by excitement and worry. Photophobia during attacks. Vomiting gives no relief. Caffein and ungt. veratria no relief. Bromides, iron, and arsenic, no relief. Morphia produces very distressing after-effects.

Case II.—Mrs. G—— (1882). First had headache from living in a low malarious region. It is distinctly periodic—" comes always on a Friday." Has been treated by various doctors with all sorts of remedies. Quinine faithfully tried and found wanting. Strychnine, iron, and arsenic, no relief. Objects to morphia.

Case III.—Mrs. S—— (1883). Hemicrania ; marked hereditary migraine, anæmic in character. Follows indigestion. Relief from vomiting. Treated for indigestion, but never found any medicine to produce improvement or give relief.

Case IV.—Mr. M—— (1883). Inveterate cigarette smoker. Suffers from pseudo-angina. Has attacks of sick headache, but never vomits. During attacks has difficulty in reading, and can only see half the things looked at. Cannot remember names when he hears them, and continually uses wrong words. No relief from medicines. Bromides, caffein, iron, and arsenic.

Case V.—Mrs. I—— (1884). Right supra-orbital neuralgia. Comes on periodically from exposure to cold. Relieved by hypodermic of morphia, and by H. C. Wood's mixture, but declines to continue their use. No other medicine found availing.

The following classes of cases were treated by antipyrin :

Class I.—Case of sciatica, right thigh, relieved. Only half (grs. x.) the medicine intended (grs. xx.) was taken.

Class II.—Three cases of diffuse neuralgia of fifth nerve, with swollen face from exposure to cold, were cured inside one hour by doses of fifteen grains.

Class III.—Four cases of migraine were relieved by fifteen-grain doses. "Acted like magic," "Never had anything so good," were the statements of grateful patients.

Class IV.—Three cases of dysmenorrhœa with severe pain prior to the flow, relieved by two doses of fifteen grains each.

Class V.—Case of pseudo-angina pectoris, relieved by fifteen grains in one-half hour.

Class VI.—Case of intercostal neuralgia cured. No return in eight months.

Class VII.—Case of earache, with marked improvement of hearing during attack, but no discoverable inflammation. Occurred once before. Relieved by two doses of fifteen grains each. No return in over six months.

Class VIII.—Case of chronic muscular rheumatism, relieved by one dose of fifteen grains.

Class IX.—Case of gastralgia. No dyspepsia and no relation to taking of food. Cured by two doses of fifteen grains each. No return in ten months.

Class X.—Case of dull headache over brow, relieved by grs. x., but returned next day. Was not suited to this treatment but to mineral water, pepsine, and acids.

Remarks.—Unfortunately antipyrin, like other analgesiacs when frequently used, tends to lose its effects unless increased in quantity. In one case under my care its effect decreased markedly, and in another reported to me it wholly disappeared. No evil consequences followed its administration, save in the case of a child, four years old, where two doses of four grains each, given an hour apart, produced vomiting lasting eight hours.

In all the cases reported prior to 1885 antipyrin would have saved my patients much mental worry, and often the keenest physical suffering.

Professor H. C. Wood's mixture I became acquainted with in 1884, and find it equally effective, but its composition is often objected to, as it was in Case V.

Hammond's large doses and Little's (Dublin) mixture I have had no experience with.

Clinical Department.

PENGHAWAR DJAMBI, NOT A NEW HÆMOSTATIC.

By K. A. NORDERLING, M.D.,
ROCKFORD, ILL.

In The Medical Record of July 21, 1888, penghawar djambi is mentioned as a new hæmostatic, which, however, is not the fact. The botanical name of the plant from which the drug is derived, is cibotium cumingii, and it is indigenous on Sumatra in the province Djambi, hence the name. It is a tree-like fern, and the parts employed are the fine hairs that surround the base of the leaves and stem.

The drug has been used by the natives since times immemorial as a hæmostatic.

Fifty years ago Kool, of Amsterdam, wrote about its hæmostatic property; by him it was confounded with the agnus scythicus, known in the sixteenth and seventeenth centuries also under the name of trutel tartareus, which was then thought to be a link between the animal and vegetable kingdoms, a vegetable lamb. This agnus scythicus was, however, derived from another country and another fern.

Penghawar is mentioned in Miguel's "Analectica Botanica Indica," No. 34. It was introduced in the Pharmacopœia Neerlandica, 1851, as a hæmostaticum. Dr. Vinke, of St. Petersburg, experimented with the drug in 1854, and his experiments are given below: Two beakers, each holding about four cubic inches, were filled with recently-drawn blood from a plethoric person. The beakers were placed in water, which was kept at a temperature of 100 F. during the experiment. Five grains of penghawar was put in one of the beakers, and after the expiration of three minutes the blood was transformed into so firm a coagulum that it did not fall out when the vessel was turned upside down.

In the other beaker the blood, even after twenty minutes, remained mostly liquid. Ten minutes thereafter, under a room temperature of 65° F., the coagulum with the penghawar was so firm that it with difficulty could be torn asunder with the fingers, and the volume to the surrounding serum was as two to one. The coagulum in the beaker without the penghawar was viscid and easily torn, and was floating in a quantity of liquor sanguinis which was three times greater in volume than the coagulum. Similar experiments with blood from persons afflicted with different diseases gave the same result.

The blood always coagulated with penghawar within four minutes, but the spontaneous coagulation did not occur until after the course of twenty minutes or even longer. The larger the quantity of penghawar that was used the less serum was separated, and the sooner was a firm coagulum formed. In one instance seven grains of penghawar in two cubic inches of blood produced a firm coagulum in two minutes, from which no serum was separated. A like quantity of the same blood but without the drug commenced first to coagulate around the sides of the vessel after twenty-five minutes, and could then easily be poured out into another vessel. Similar experiments were tried with penghawar after having been macerated in sulphuric ether, caustic potash, or dilute hydrochloric acid, and then boiled in water and perfectly dried in the sun before experimenting; the results were the same.

On the presumption that the hæmostatic power of penghawar was derived from its physiological quality, comparative experiments were made with agaricus chirurgorum, lycopendron bovista, and spongia marina. The agaric and the bovista were reduced to threads, and the sponge cut up in small pieces. In every experiment the blood was taken from the same person, and immediately after venesection divided up in four vessels that had a capacity of four cubic inches. These were placed in water of 100° F. In the first glass was put five grains of agaric, in the second, five grains of bovista, in the third, five grains of spongia, and in the fourth, the same amount of penghawar.

At a room temperature of 75° F. the following results were obtained. A firm coagulum was formed of:

	Penghawar Minutes.	Agaric. Minutes	Spongia. Minutes.	Bovista. Minutes.
In 1st experiment in	3	11	8	7.5
2d " "	2.5	12	10	8
3d " "	2	10.5	9	6.5
4th " "	1.45	10	7	6
An average of	2	10.52	8.30	7

The result not only shows the superiority of penghawar but also explains its *modus operandi*.

Agaric and sponge consist of twisted threads which are not hollow. The blood, therefore, only penetrates the meshes of their tissue (not the interior of the threads) and congeals there a little sooner than when left alone in the air. At the end of six minutes fluid blood could be squeezed out from the agaric and the sponge. The hairs of the penghawar that have been used to form a coagulum will swell out five times their thickness, and assume an almost cylindrical shape without changing color or transparency.

The coagulating property of penghawar djambi depends, therefore, upon its quality of depriving the blood of its serum, which is absorbed into the fine capilli of the drug.

The drug was used considerably thirty years ago, but has fallen into oblivion (which is the fate of so many good or bad drugs). As it has been very hard to obtain it has not been used as much as it deserves.

OPERATION FOR ANCHYLOSIS OF THE KNEE-JOINT, RESULTING IN GANGRENE—AMPUTATION AT THE THIGH—RECOVERY.

By A. L. STAVELY, M.D.,
READING, PA.

About sixteen months ago Mrs. Sarah H—— noticed for the first time a sharp pain in her left knee, which became so intense that she could hardly walk. The knee was much swollen, and the leg became so much flexed that the big toe would not touch the floor by fully four inches. On September 18, 1887, she went to the Jefferson Hospital, where her leg was placed on and bound fast to a long posterior splint. Then gradual extension by means of weights was resorted to, and after ten weeks her leg became considerably straightened. That condition remained only for a week or so, at the end of which time the leg became flexed again and the pain increased.

The patient can give no adequate cause for the anchylosis, though her sister maintains that she had "milk leg" at one time. On August 6th she was persuaded to submit to an operation, and came to the Reading Hospital for that purpose. About 4 P.M. the same day she was anæsthetized, the adhesions were broken up and the leg was bound down to a long posterior splint. She was then removed to the ward and a hypodermic of morphia, one-quarter grain, was given. The pain from the operation was very great and it was several hours before she became quiet. On the morning of August 7th there was a visible cyanosis of the nails of the left foot and some impairment of sensation also. Although the bandages were not tightly enough applied to interfere with the circulation, they were removed and the leg left unencumbered. Stimulation by alcohol, friction, and heat was resorted to. On the 9th there was decided impairment of sensation, and on the sole of the foot near the toes there was a small white spot where the epidermis had become loosened from the corium beneath, and around it was a bluish areola. On the 10th and 11th the foot became uniformly purple, blebs formed beneath the epidermis, and the leg up to the knee became intensely swollen, hot, and extensively infiltrated with serum, and at the same time was very painful. On the evening of August 17th her temperature was $104\frac{2}{5}$° F.; on the morning of the 19th it was $102\frac{3}{5}$° F. On the same morning there was a consultation, and it was decided to remove the gangrenous part, the amputation to be at a short distance above the knee. The operation was performed about noon and consisted of the modified circular of Dr. D. Hayes Agnew. There was a dark-looking mass of muscle posteriorly which looked suspicious, and as it appeared to extend upward a considerable distance no attempt was made to remove it. The operation was performed antiseptically and there was perfect coaptation of the parts. Five or six strands of catgut were put in for drainage, and the wound was dressed antiseptically with iodoform. At 7 P.M. the same evening the temperature had fallen to $99\frac{1}{5}$° F. and at no time after the operation did it go above 101° F. The dressings were removed on the sixth day; and there was union by first intention along the whole length of the wound, and the catgut had become absorbed. On the following day the stitches were removed and the patient was allowed to wheel herself around in a wheel-chair. The patient was discharged well, thirteen days after the operation.

WHISKEY NOT AN ANTIDOTE TO RATTLESNAKE POISON.

Dr. A. T. Hudson, of Stockton, Cal., writes: "Having often seen the statement made in the public press, and sometimes in medical journals, that whiskey and ammonia were the acknowledged antidotes to rattlesnake bite, I feel it a duty to administer a corrective to the above fallacious teaching. About thirty years ago Professor Weir Mitchell, of Philadelphia, spent over two years in carefully experimenting with the virus of snake poisons. Taking a few drops of the pure virus from the sack of the snake, he mixed it consecutively with alcohol, ammonia, iodine, bromine, mercury and other reputed antidotes, then injected the solution of each into birds, rabbits, dogs, goats, and other animals—when he found that the poison was not altered in its power, but would produce its specific toxic effect just the same as when it was undiluted. He found also that the virus was fatal only to a certain extent, that is, if it took half a drop to kill an animal of thirty pounds weight it would require one to two drops to kill one of sixty to eighty pounds. Its action is immediate, and it kills only when the animal is too small and weak in resistive vitality. It is rare that an adult person dies from the bite of a rattlesnake. The virus of the cobra is more intense and fatal. Several years ago a prominent minister in Philadelphia died from the bite of a young cobra. As a given quantity of the rattlesnake virus is necessary to overcome a certain amount of physical force, it is seldom that such quantity is ever deposited by the snake bite upon an adult person. If a large snake should bite a goat of fifty pounds weight, and soon after bite two children of about the same weight, the goat might die but the children would not, for the reason that the goat would receive the largest amount of the virus, when there would be but little left to poison the children. In such a case whiskey being used on the children, their recovery would be attributed to the whiskey, so the friends and neighbors would think they have positive proof of a sure antidote in whiskey. Here is the fallacy which science alone can demonstrate. If, when whiskey is mixed with the poison directly, it is no antidote, how can it become so when taken into the system remotely, the whiskey in the stomach and the poison in the goat? Physiologically whiskey is antidotal so far as it will sustain the flagging powers during the time the poison is being eliminated by the excretory organs. In the light of the above scientific demonstrations, how a doctor can gravely or frantically proceed to treat a rattlesnake bite 'by injecting around the wound permanganate of potass, or any supposed antidotes, or order a chicken split open and applied to the wound, or the anus of the chicken applied over the wound, using a number of different fowls for the purpose,' is a problem hard to understand in this age of reason."

CASE OF SUPERNUMERARY NIPPLE ASSOCIATED WITH MATERNAL IMPRESSION.

Dr. Arthur H. Coe, of Ann Arbor, Mich., reports the following: "Mrs. O——, aged thirty-two, two children, the elder aged twelve years, has always enjoyed good health. The left breast presented two nipples, the smaller, or supernumerary one, being about two inches below the normal nipple. It was correctly proportioned and surrounded by a faint areola. The patient stated that during lactation the secretion flowed freely from the lower nipple, requiring the application of a bandage. The possibility of the supposed nipple being a fistulous opening with everted edges resulting from an old abscess, was considered, but a careful examination and a statement by the patient, to the effect that the two nipples had been present as long as she could remember, seem to be conclusive evidence against that possibility. An interesting point in the case centres in the possibility of the malformation being due to a so-called 'maternal impression.' Upon inquiry the patient stated that her mother, when about two months advanced in pregnancy, was much startled on one occasion by a young kitten, which jumped upon her breast (the left) and seized the skin just below the nipple. She was much prostrated by the occurrence, which made a deep impression on her mind. The subsequent birth of the child with the peculiar malformation, would seem to indicate some dependence thereon."

COCAINE USED IN OPERATING FOR SINGLE HARELIP.

Dr. Frank P. Hudnut, of Brooklyn, reports the following: "Boy aged nine years, of healthy parents, had a well-marked case of harelip on the right side, with cleft palate. He was unable to hold water in his mouth after the glass had been removed from the lips. After fastening two clamps on the lip to cut off as much of the circulation as possible, I injected, in four places along the lines for incision, fifteen minims of a four per cent. solution of cocaine. After waiting about three minutes I proceeded with the operation. The child never cried or appeared to suffer until I was introducing the last two stitches. The operation was a complete success in every way. The stitches were removed on the third day. I report this case, as it is the first one (to my knowledge) where cocaine has been used in this operation."

DEXTROCARDIA.

Dr. James F. Michel, of Jamesville, writes: "In The Medical Record of September 8, 1888, I read an account of a case of dextrocardia. Some two years ago I met one of these rare cases, which may be of interest. The patient had been informed that his heart was not where it ought to be, and wished me to examine him. I had him strip to the waist and examined him closely and thoroughly. The following is a copy of notes taken at the time: A. L——, negro, aged twenty-two years; unmarried; occupation, barber; height five feet seven and one-half inches; weight, one hundred and fifty-five pounds; erect, well-built, muscular; has always been healthy, and his heart never troubled him at all. The heart is exactly reversed as to side of body—apex just below fifth rib, and three and one-eighth inches to the right of the mesial line. Base directed upward, backward, and to left. Area of heart dulness (right side, of course) about normal, merging below into line dulness; no dulness on the left side. The heart sounds are normal. Pulse normal, full and strong. Respiration regular. So far as I could determine on careful examination, all the other viscera were in their normal position. I made an appointment with the young man to re-examine him in presence of some professional friends, but he failed to keep the engagement, and I have never seen him since, so I can only send you my own unsupported statement and diagnosis."

Progress of Medical Science.

Alaninate of Mercury; A New Antisyphilitic.—Schmiedeberg's suggestion that combinations of mercuric oxide with certain amidic acids of the fatty series (acetamidine glycocollamine, asparagine) should act well in the treatment of syphilis, and the fact that these preparations have the advantage of being very soluble and easily absorbed, induced Dr. R. De Luca, assistant in the clinic of Professor Ferrari in the University of Catania, to make some experiments with mercuric alanine in the treatment of syphilis, and these he has now published. Preliminary experiments on animals (rabbits, Guinea-pigs, and dogs) showed that the drug was not very poisonous.

The alaninate of mercury used was prepared in the following manner: One part of alanine was dissolved in twenty parts of distilled water, which was then gradually raised to the boiling point; while the liquid was boiling it was poured over a small quantity of mercuric oxide (HgO) until it was all dissolved. Then the liquid was filtered and evaporated, and the residue crystallized, and a whitish substance, mercuric alanine, was obtained, which under the microscope showed the characteristic needle-shaped crystals grouped in crosses and tufts. When thus prepared alaninate of mercury is soluble in three volumes of cold distilled water; this aqueous solution is perfectly colorless, clear, is changed neither by exposure to the air nor to light, and will keep indefinitely. In dilute solution it will not coagulate albumen; in concentrated solution its coagulating action is limited to its causing a cloudiness of that part of the liquid with which it comes immediately in contact. In other respects it has the general properties of other salts of mercury.

On his patients De Luca used the drug in three different solutions of 4, 8, and 10 milligrammes to 1 c.cm. of distilled water (gr. 1-16, 1-8, and 1-6, to 16 m.), both for internal use and for injections, subcutaneous or intermuscular. The drug was used by injection in twenty cases; nineteen cured and one improved. The daily quantity used on each patient (all adults) was from five to ten milligrammes. The average number of days of treatment for each patient was 37.05; average number of injections to each patient, 27.7; average age of patients, 23.2 years. In the case that improved but was not cured, the patient stopped treatment. All the cases were those of secondary syphilitic lesions. Each patient received an average quantity of 228 milligrammes (gr. 3.5). Only three times did suppuration occur at the site of injection. As regards the duration of treatment, then, it is seen that mercuric alanine has some advantage over the bichloride; as to the quantity to be used it has a decided advantage, the quantities being as 22.8 to 42. With regard to the efficacy of the alaninate, in twelve cases (out of the twenty) that could be seen to ascertain if any recurrence had taken place, there was only one case of recurrence, in a case of syphilitic papule of the larynx. From this it seems that the alaninate gives more permanent results than other mercurial preparations. Further, in not a single case in which the drug was used by injection was there any stomatitis or other unpleasant effect produced. From a tabulated statement of twenty cases treated by the internal use of the drug, it is seen that for the cure of ten adults with secondary syphilitic lesions, there was an average of 45.4 days and 641 milligrammes to each patient. Of ten children treated one died on the third day. For the cure of the remaining nine, of an average age of 7.4 months, with hereditary or acquired syphilis, each required an average of 54.6 days, and 159 milligrammes of the drug. Of the nine cured six were seen in from eight to nine months after treatment was stopped, and there was no recurrence in any one of them. There was not a case of stomatitis, and only one case of intolerance of the drug, which was completely controlled by the administration of cocaine. Regarding the internal use of the alaninate, then, it is not to be preferred to the tannate or the phenate of mercury in the opinion of De Luca, but the easy tolerance of the drug, and the excellent manner in which it acts on syphilis in infants, make it an important addition to the list of anti-syphilitics. The child that died was only two months old, and was in a desperate condition when it came under treatment. De Luca claims that the decidedly calmative effect of the drug gives especially happy results in children. The author thinks that the drug is worthy of confidence, and that time may prove that it will give good results in the late manifestations of syphilis.—*Medical Journal and Examiner.*

Phosphate of Copper in Tuberculosis.—Dr. Luton, of Rheims, says that he is convinced that tuberculosis may be cured by phosphate of copper in a nascent state. He recommends the following formulæ:

1. Pills of the aceto-phosphate of copper.

℞. Neutral cupric acetate........... grs. iij.
Crystallized sodic phosphate....... ʒ ss.
Div. in pilulas No. xx. Ten such pills constitute a daily dosage to commence with.

2. Potion of aceto-phosphate of copper.

℞. Neutral cupric acetate........... gr. jss.
Crystallized sodium phosphate.... grs. xv.
Mucilaginous potion............. ℥ viij.
M. The dose is a tablespoonful repeated p. r. n.

3. Hypodermic solution of phosphate of copper.

℞. Cupric phosphate (freshly precipitated). gr. $\frac{1}{6}$
Glycerin, pure,
Distilled water .... āā ♏ xl.
Mix at the moment of using.

Luton thinks that the initial dose should not be more than one and one-half grain daily of the copper salt, and he adds that the specific medication should be supplemented by a special tonic to confirm the cure and prevent relapses. He suggests the following tonic wine, which he calls phosphated wine of walnut:

℞. Extract of walnut................. ℥ j.
Phosphate of sodium............... ℥ ss.
Malaga wine....................... O ij.
M. Sig.—A tablespoonful after meals.

Effects of Acute and Chronic Cocaine Poisoning.—Dr. Zanchevski, of St. Petersburg, has published some observations on the pathological changes found in the bodies of animals poisoned by cocaine. The experiments were made in two series. In the first series the animals (dogs) were given hypodermically a single lethal dose of cocaine—viz., 3 centigrammes per kilogramme of the weight. In the second series of dogs chronic poisoning was induced by the subcutaneous injection of a much smaller quantity—about the fifth part of the lethal dose was given every day for six days. A day was then missed, and during the next six days an increased dose given. Every seventh day was missed, and the dose gradually increased. Thus, dog No. 6, weighing 5650 grammes, was experimented on for seventy-three days. During each of the first six days 3 ctgr. were given; during the next six 4 ctgr. For ten days 5 ctgr. were given, for thirteen days 6 ctgr., for eleven days 7 ctgr., and for the last eleven days 8 ctgr. The total quantity given was 3.35 grammes. One day in the week was always missed. At the beginning the immediate effect of the cocaine was seen in increased frequency of the cardiac beats and of the respiration, which, however, did not last more than a quarter of an hour. Afterward great weakness of the legs came on, the animal remaining in a sitting posture and swaying its head to and fro. The pupils were dilated and sensation intact. In three hours the normal condition returned. When larger doses were given the disturbance was greater, the animal commencing to try to run about and the subsequent weakness lasting for a longer period. The general results obtained by observation of the animals during life and by post mortem examination of the bodies showed that in acute poisoning the mode of death was asphyxia. In chronic cases without asphyxia there was a marked hyperæmic condition of the central nervous system, which presented a contrast to the state of the rest of the organs, which were anæmic. Albuminoid degeneration was especially marked in the ganglionic cells of the spinal cord and the nerve cells of the heart ganglia; it was present also, but in a less marked degree, in the muscular fibres of the heart, in the ganglionic cells of the medulla oblongata, and in the hepatic cells. In these last there was found an accumulation of glycogen. In chronic poisoning the degenerative processes were found to have advanced further in the cells of the spinal cord and medulla, minute cavities, atrophy, and hyaline degeneration being noted. In the heart there was fatty degeneration of the muscular tissue; in its nerve ganglia there were fatty degeneration, minute cavities, and simple atrophy; and in the liver atrophy of the hepatic cells was present. The vascular system was most affected in the spinal cord, there being cellular proliferation and hyaline degeneration of the coats. In the heart and liver an atrophic condition of the tissues was found, also a swelling of the endothelium of the capillaries of the cardiac ganglia.—*The Lancet.*

Spontaneous Expulsion of a Vesical Tumor after Perineal Incision.—Bruhl relates a case in which he opened the bladder by the usual perineal incision, introduced his finger into the bladder after dilating the prostate, and found a hard incrusted mass lying behind the neck of the bladder. The mass at once slipped out of his grasp, and he could not again find it. The following day, after some considerable amount of pain, the patient expelled a tumor covered with calculous material, about two inches in length and two in breadth. The wound was completely healed in fourteen days.—*Centralblatt für Chirurgie.*

The Sightseer's Headache.—Of the lighter penalties which pleasure entails, none probably is more widely known and felt or more persistently endured than the sightseer's headache. It is nature's tax levied on the comfort of that great body of busy idlers to which we all at some time or other belong. (*The Lancet.*) It is endemic among the frequenters of museums, picture galleries, and exhibitions, varying somewhat perhaps in different cases in its precise causation, but associated always in a manner significant of its origin with the habits of the observant loiterer. The circumstances in which it arises afford the most reliable clue to its true character. Among these, temperature, atmosphere, and strain both of body and mind, though commonly combined, play their several parts in varying degrees of activity. The influence of a warm and close atmosphere as a cause of headache is too well known to require more than a passing notice. The torpid congestion of tissue which it tends to induce, and from which the brain is not exempted, is familiar to most of us as a morbid process too often illustrated in our painful experience. It contributes its proportion, doubtless, toward that total of malaise which affects the visitor to a crowded picture-gallery or assembly room, and culminates in the localized ache which renders the slightest mental effort a weariness. The very general prevalence of this variety of headache, however, and its independence in many instances of any vitiation of atmosphere, teach us to look for its explanation in other causes. The effort of mind implied in long-continued observation, even though this does not involve the strain of study, has probably an appreciable, though a secondary, influence. Fatigue certainly has an important share in its production; but it is with most persons rather fatigue of muscle than of brain. The maintenance of the upright posture during several hours of languid locomotion, the varied and frequent movements of the head commonly in an upward direction, and the similar and equal restlessness of eyes whose focus of vision shifts at every turn as a new object presents itself, form a combined series of forces more powerful in this respect than the sunlight and frequent changes of mental interest and attention by which they are accompanied. The muscular strain implied in these movements is necessarily very considerable. It affects more or less every member of the body, but the distant localization of the resulting ache has probably much to do with the unusual activity of the cervical extensor and rotator muscles and of the muscles which move the eyeball. Whatever the minor influences at work, therefore, there can be little doubt that mere fatigue is primarily accountable for this most general form of headache, and that rest and nourishment are most reliable antidotes. The utility of stimulants for this purpose is necessarily temporary and deceptive. One improvement on existing arrangements ought to be of real assistance to the suffering sightseer if more generally introduced by responsible authorities. The comparative scarcity of seats in many places of amusement has often been noticed. It would be much to the public advantage if this want were supplied. For the attendants at exhibition stalls a chair for occasional use is an absolute necessity.

Disease of Adrenals without Bronzing.—At a late meeting of the London Pathological Society Dr. Collier showed the right suprarenal capsule of a woman, aged thirty-six, who had been ill for nine months with exhaustion and vomiting. She was anæmic, but well nourished, and not bronzed in any part; the pulse was extremely weak. While in the Radcliffe Infirmary, the most characteristic feature was the extremely languid condition in which she lay in bed. The patient died suddenly. Both suprarenal capsules were enlarged; the right capsule was entirely caseous, the left was reduced to a small sac containing cheesy material. The history showed that the suprarenal capsules had been diseased for at least nine or ten months, which rendered the absence of pigmentation the more remarkable.

The Incompatibility of Antiseptics.—Dr. Boxall calls attention to a very important point in connection with the employment of mixed antiseptics. He has ascertained that mixtures of corrosive sublimate and iodine, iodine with carbolic acid, and carbolic acid and olive oil, produce chemical changes which materially affect the properties of the original constituents. He found, moreover, that soap and glycerine are, as a rule, bad vehicles for antiseptics. Perchloride of mercury, iodine, salicylic acid, and permanganate of potassium are changed or precipitated by admixture with soap. It is evident, therefore, that some little discrimination is necessary before we employ other than simple solutions of the principal antiseptics.—*Medical Press.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, October 20, 1888.

THE ANGLO-GERMAN CONTROVERSY.

It is deeply to be regretted that the medical profession is again subjected to the evils of a bitter controversy between eminent representatives of the science. Beset as the divine art of medicine is on every hand by empiricism, and struggling as it is into the light of a higher intelligence, it is lamentable for its votaries to witness the blows against its dignity from those who have risen to just eminence in its ranks, and who should, by virtue of their distinction, be the conservators of all its best interests. Silence, even under great provocation, is always welcomed and appreciated by the profession at large, when by breaking that silence harm is done the whole body of medical men by lowering the high standard of professional dignity; and it is a very serious question how far a physician may go in defence of himself at the expense of the profession and its membership. Still, heated professional controversies are not so infrequent as to be remarkable when one does occur. In theology, law, medicine, and politics, where discussions are not "cribbed, cabined, and confined" by the rules of an exact science, and where opinion frequently takes the place of observed phenomena from which deductions are made and conclusions drawn, it is not uncommon to see acerbity in debate and temper shown by disputants. But for intensity of feeling and bitterness of language, no professional dispute of recent years can compare with that now raging between the British and German physicians who were in attendance upon the late Emperor Frederick. When we think of the exalted rank of the patient and the eminence to which the warring surgeons have attained—their wide reputation for learning and professional skill—it becomes almost incredible that such regrettable and embittered differences should exist as are disclosed in the indictment and answer of Sir Morell Mackenzie.

The highest political considerations, national pride, and personal ambitions, without question, have entered largely into the dispute and contributed to its passionateness and intensity, and have fanned into a flame what may have been at first an honest difference of opinion of every-day occurrence between professional men. But whatever may have been the rivalries, jealousies, and ambitions which led to the quarrel, the existence of the controversy itself cannot be ignored.

The accusation and the answer of the accused are before the public for decision and a verdict. And as it looks now like a Reply and a Rejoinder will soon follow before the pleadings are made up, we will confine ourselves to a brief examination of Sir Morell's brochure,[1] issued in London this week, advance sheets of which are before us.

In May, 1887, Mackenzie was summoned to Berlin to see the Kronprinz. Upon arrival he was requested by the patient to examine his throat. He suggested instead a conference with the other doctors in attendance. They were Professors Gerhardt, von Bergmann, and Tobold; Dr. von Lauer, Emperor William's physician; Dr. Wegner, Crown Prince Frederick's physician, and Dr. Schrader, a German army physician. The consultation resulted in the statement that there was a small growth on the left vocal chord, about the size of a split pea, which Dr. Gerhardt had attempted to destroy by galvano-cautery. An examination by Mackenzie followed, confirming the presence of the growth on the chord. Except for loss of voice the throat gave no trouble to the patient, no pain, no dyspnœa, no hinderance to deglutition, and to every outward appearance the Prince was "a model of stalwart health, far stronger than the average even of strong men."

After the examination the question of diagnosis came up. The three German professors pronounced the disease cancerous, and recommended external partial laryngeal excision. Mackenzie took the ground that "there was nothing characteristic in the appearance of the growth, and that it was quite impossible to give a definite opinion of its nature without a more searching examination." He proposed cutting off a small piece of the tumor with the forceps, and submitting it to Professor Virchow for microscopic examination, and to allow Virchow's report to govern the question of excision. This was agreed to, and the minor operation fell to Mackenzie (as he claims) because of the incapacity of the other gentlemen to perform this particular *manœuvre.*

It was at this first consultation that the seeds of dissension and hostility were shown, and which steadily grew till the death of the patient temporarily put an end to the quarrel, but which was reopened in public with increased bitterness as soon as the doors of the tomb closed upon the illustrious dead.

It is not the province of this review to express any but a modified opinion as to the merits of the various questions involved in the dispute. Before any definite decision can be formed, the Reply of the Germans and the Rejoinder of Mackenzie will be essential to any fair and complete estimate of the evidence and facts in the controversy. However, there are many things in the statement under review which we may touch upon without prejudice to either side.

In this instance, that Mackenzie is fully justified in making an elaborate defence we believe no one acquainted with the facts will dispute. He has been assailed, from the day following his first arrival in Berlin, with all the weapons of political and professional warfare; his assailants have not only used the German medical journals, but have had full use of the secular and Imperial press as well. He was practically alone in a hostile camp, with the prejudices and passions of the people inflamed against him on account of nationality, encouraged no doubt by the powerful influences of the Court. His position was one of the greatest difficulty, not only because of the grave responsibility of the case itself, but what may be called the "external, political, professional, and international complications." This hostility culminated at last in accusations, from the Berlin Imperial Press, equivalent to a charge of malpraxis, and we must agree with Mackenzie, that one must be more—or less—than man to bear such allegations in silence and without response.

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[1] The Fatal Illness of Frederick the Noble. By Sir Morell Mackenzie. London: Sampson Low & Co.

The answer made, however, goes farther, and passes into such an acrimonious criticism of Sir Morell's German colleagues as to amaze the reader, and create hesitancy in accepting many of the allegations without first hearing the other side. The book presents such a narrative of intrigue, hypocrisy, theatrical pretence, jealousy, envy, suffering, and professional incompetency, as to be discreditable to humanity; and if but a portion is substantiated, it will show the immeasurable advance of English and American practice, not only in medical and surgical skill, but also in those humanities and amenities of life which have done so much to elevate and ennoble the profession in the popular mind.

Here we have presented to us the spectacle of an eminent German surgeon burning the vocal cord with the galvano cautery, daily, for twelve consecutive days. We see professional gentlemen who first tell the world the private details of professional consultations, and shock the patient and his family with undetermined suspicions of a horrible disease, and afterward lecturing in public, while the patient yet survives, upon a newer theory of the disease—a theory which, while it could not add anything to the terrors that cancer conveys to the mind of a patient, yet did add the shame and humiliation of an allegation that the trouble was due to venereal contagion. We find an accusation that a consulting surgeon deliberately mutilates his victim to bear out a false theory of diagnosis; spies surround the surgeon in charge and follow him from place to place, and incompetent pretenders are permitted to torture the patient in order to support their own claims to importance and learning; truculence takes the place of independence of thought and integrity of opinion, and a most extraordinary and unaccountable butchery, by an over-stimulated or excited surgeon, closes the mournful scene. Taken all in all, it is difficult for the imagination to picture a more revolting play of the baser passions than we find depicted in and between the lines of Mackenzie's narrative. It is a recitation in any point of view to be regretted and deplored, and we hope, for the good name of the German faculty, who have contributed so greatly to modern medical learning and research, that the gravity of the charges brought by Sir Morell may be modified by further facts and explanations.

It may be said, however, to the credit of medicine, that the cause and origin of much that was discreditable in the conduct of the case was extra-medical, and due to the court intrigues at Berlin.

This much in a general way; and now, upon the main point at issue a few words:

The fundamental difference between Sir Morell and the German physicians appeared at the first consultation. The Germans believed the disease to be malignant, and the result proved they were right; for, however much we might condemn the practice of galvano-cautery as used by Professor Gerhardt, yet we cannot agree with Mackenzie that this led to the subsequent development of the disease. But, in the light of American conservative surgery, we do endorse Mackenzie's procedure in first seeking Virchow's report as to the microscopical appearance of the growth before accepting the theory of cancer, especially when that acceptance was the first step to an operation of the gravest and most doubtful import. Virchow's report justified Mackenzie's position, and after the reception of the report, which was negative in its conclusions as to cancerous conditions, even they who advocated laryngeal excision could not consistently demand it in the face of Virchow's great pathological authority.

To illustrate: Suppose excision had been performed at this time, and that the patient had succumbed, either under the knife or a few days or weeks afterward, as is commonly the case. Suppose, then, the report of Virchow upon the excised portion had been the same as he did give, showing no cancerous condition present. What would then have been the professional and lay verdict against the physicians responsible for the seemingly needless and hazardous performance? Inexcusable and unpardonable.

This difference at the beginning was the fundamental one, and from it sprang all the subsequent disputes and controversies. What the result might have been if excision had been resorted to can only be conjectured. If the operation were to be performed at all, there is no question that it was better early than too late, and in this the German view seems right; but in the light of all the facts, the subsequent history of the case, and the tables of similar cases, American opinion, we think, will incline to the belief that excision would not have prolonged life much more than the course pursued extended it, and that, in addition to this belief, the general treatment which was followed avoided the grave dangers and accidents of the major operation. While American surgery has been on many occasions both brilliant and original, yet we feel that its general tone is one of conservativeness and great caution, because, no doubt, of the great practical character of our people; and on the basis of conservative surgery American opinion, we think, will be with Mackenzie upon this most important feature of the case. As to the controversies which were incessant in conducting the case on this general line of treatment we do not care to speak until both sides are fully before the public, and possibly not then, as they are subservient to the central difference, and are more of personal than professional interest. Yet, notwithstanding all that has been said and done and written about this celebrated case, much of which was calculated to lower the popular esteem of the efficiency of medical treatment, we cannot rise from a perusal of this book without a profound sense of the resources and skill of modern medicine and surgery, of which the Crown Prince had the benefit, and by and through which his life was prolonged to the ascent of the imperial throne and the assumption of his inherited rights and dignities. We cannot close this brief review without a word in eulogy of the great soul that bore up so manfully under conditions that would shake the firmest resolution and the stoutest heart. Throughout the terrible ordeal the illustrious patient bore himself with a heroism that will adorn the page of history, and always command the respect and love of his fellow-men in every walk in life.

ACUTE LOBAR PNEUMONIA.

In another column Dr. Gouverneur M. Smith calls attention to the seasons of the year in which pneumonia is most rife among us; to its increasing death-rate; dwells specially on one important point in its management; and gives a hospital reminiscence illustrating a former popular method of its treatment.

Pneumonia is a dreaded disease, more dreaded than formerly on account of its augmented mortality. The cause of such increased mortality is, in a measure, veiled in mystery. It is essential for the medical profession to carefully garner all known truths regarding the disease, and to utilize them, while, at the same time, endeavoring to unfold its unsolved problems.

Of late years large doses of quinine and the use of antipyretics have been extensively employed in the treatment of the disease, but their services have not been satisfactory. Since the clinical thermometer has come into general use, special heed has been given to the temperature of the patient; before that time, perhaps more attention was paid to the pulse, skin, secretions, etc., and appropriate remedies exhibited to mitigate conditions, without reliance on a mere Fahrenheit scale. However this may be, it is of great importance for physicians to study the enervating influences which are checking medical supremacy over the disorder, and to continue the investigation until the usurped power of a disease has substantially yielded to the higher authority of therapeutics.

DEGLUTINATION OF THE CARDIAC MUSCLE-CELLS.

In many cases of sudden death said to be occasioned by heart disease, the diagnosis is assumed rather than proved, the post-mortem changes offering no anatomical basis for such an opinion. There may be some degree of softness of the muscles, but it is not pronounced, and a diagnosis of cardiac degeneration or paralysis is made for want of a better one.

Dr. Klein, of Warsaw (*Gazeta Lekarska*, No. 18, 1888), has recently made a study of these cases, and has found a possible explanation, for some of them at least, in a change in the grouping of the cells of the cardiac muscle. As has been shown by Weismann, the muscle-cells in the mammalian heart are quadrangular in shape and more or less branched, and are intimately united at their ends, as well as by their branches, but are not actually fused together. Although they seem to form long fibres with many nuclei, it is possible, by means of certain reagents to isolate the single cells, thus showing that the union is not complete. In two cases examined by Dr. Klein, it was found that there had been a partial separation of those cells, so that the muscular fibres were split into single cells, each containing a distinct nucleus. The deglutination had taken place along the horizontal lines of Eberth, which correspond to the lines of junction of the single cells, the amount of separation varying considerably.

The evident result of this loosening of the union between the individual cells is feeble muscular action, the rapidity of the contractions being markedly lessened. The author, from a study of the two cases observed by him, and of three others reported by Dr. Przewoski, in which the same changes were noted, comes to the following conclusions:

1. The deglutination of the cardiac cells may take place independently, or as a consequence of other changes in the musculature of the heart.
2. When this alteration involves a large portion of the heart-muscle, it may cause sudden death independent of other lesions.
3. It is met with as a secondary change in the course of acute febrile and zymotic diseases, as a consequence of mechanical interference with the circulation, and in cases of chronic myocarditis.
4. When the deglutination is very marked, involving many cells, though not over a very extensive area, the lesion may lead to rupture of the heart.

MULES' OPERATION FOR EVISCERATION OF THE EYEBALL.

Enucleation of the eyeball, performed according to the usual method, is very disfiguring in its results; the glass eye which is subsequently inserted having only a very limited movement, and being almost useless as far as concealing the deformity is concerned. Mr. Mules some time ago introduced a new operation which, he claims, obviates this disadvantage, so that it is almost impossible to detect the loss of the natural eye. By this method the sclerotic, with its attached muscles, is left in the orbit, so that the movements of the glass eye are nearly perfect.

The successive stages of the operation are thus described by Dr. Sydney Stephenson, in *The Hospital Gazette* of August 18, 1888:

1. An incision is to be made with a narrow-bladed knife, all round the periphery of the cornea, at its junction with the sclerotic, and the entire cornea removed. The inner and outer extremities of the wound are to be shaped so that when the wound is sutured the incision will lie evenly.
2. With a scoop, or other convenient instrument, the contents of the globe are to be removed. The greatest care must be taken to leave no trace of choroid or other internal structure behind. The internal surface of the sclerotic coat should be left white and glistening.
3. Bleeding must be checked by well irrigating the cavity with either cold or very hot 1 to 4,000 bichloride solution, and by pressure with small aseptic sponges.
4. When all bleeding has ceased, a glass sphere, of which several sizes are made, must be introduced into the scleral cavity. Mr. Mules has invented an ingenious instrument for this purpose, but if a sphere be used considerably smaller than the cavity—and this should always be done—difficulty is seldom met with.
5. The sclerotic, with its superincumbent conjunctiva, is united over the glass sphere by three or more silk sutures introduced vertically. Silver sutures should not be used for this purpose, as they are difficult and painful to remove.
6. To prevent excessive reaction, Mr. Mules burrows

deeply with the point of a pair of scissors into the orbit at the outer side of the globe, and introduces a gold wire into the hole thus made.

7. All the parts are thoroughly syringed with a 1 to 4,000 bichloride solution, and iodoform is sprinkled over the wound. A dressing of salicylic ointment, spread on lint covered with cotton-wool, and a bandage, are then applied.

If all proceed satisfactorily, it is unnecessary to dress the eye for three days, and when dressing is needed the bichloride solution and iodoform should be used freely. The sutures may be removed when the wound has healed. Some pain and swelling of the conjunctiva, lids, and face may follow the operation, but in the course of a week, or ten days, a perfect and very movable stump remains. An artificial eye may be fitted in from three to four weeks after the operation.

It has been urged as an objection to the operation that the glass ball might get broken in the orbit. Such an accident, which might undoubtedly occur, would be very serious, although, fortunately, no such accident has yet happened. Another and more serious objection is, that a foreign body is introduced into the eye, and there is no certainty that it will always remain innocuous. It is true the operation is a favorite one with several excellent English ophthalmic surgeons, yet it is one that cannot be recommended until a long experience has proved its safety. The loss of the second eye, and consequent total blindness, which might possibly result from sympathetic disturbance, could not be compensated for by the improved appearance of the glass substitute for the eviscerated organ.

News of the Week.

The Medical Examining Board of Virginia.—Dr. J. Herbert Claiborne, Jr., of this city, writes: "To the Editor of The Medical Record. Sir: In your issue of October 6th you refer to the Medical Examining Board of Virginia. In your comments you say: 'It is well known that an effort has been made by the Faculty and Students of the Medical College of Virginia to change the law so as to exempt Virginia graduates from its provisions. This is a confession of weakness unworthy, as it seems to us, of the colleges of that State. If the local institutions cannot educate students sufficiently to pass the Board examinations they had better go out of the business.' Your correspondent freely agrees with you in the sentiments expressed in the above quotation from your editorial, but he would distinctly call your attention to the fact that *only* the 'Medical College of Virginia,' as represented by its Faculty and students, has made any effort to change the reading of the law so as to exempt Virginia graduates from its provisions. The Medical Faculty of the University of Virginia have never made any such effort, and an intimate acquaintance with the sentiments of this body convinces your correspondent that they never will. It is safe to say that the sentiments of the Faculty of the University of Virginia are echoed in this respect by those who have the honor to claim this institution as their *alma mater*. As your comments stand, one who is not acquainted with the history of this movement in Virginia would be quite certain to assume that some other medical college had participated in this effort to have Virginia graduates exempt from the provisions of the law. It is but right to call your attention, and that of your readers, to this matter."

Thanks.—The New York Medical Record, with its usual enterprise, devoted its entire edition of September 22, 1888, excepting one page, to a report of the proceedings of the Congress of American Physicians and Surgeons, and of the special societies that met in conjunction with it, in Washington, September 18th, 19th, and 20th. This is a valuable index to the proceedings, and will undoubtedly be in large demand outside of its regular subscription list.—*Buffalo Medical and Surgical Journal.*

"Sulfonal" and not "Sulfanol."—Dr. B. Sachs writes: "The name of the new hypnotic was unfortunately distorted in my recent article. The o and a had been interchanged. Sulfonal, and not sulfanol, is the correct spelling."

Death of Dr. E. Williams, of Cincinnati.—We regret to have to announce the death of the well-known Cincinnati oculist, Dr. E. Williams.

Sir Morell Mackenzie's Book Seized.—The Berlin authorities have taken the surest way to prove that Mackenzie's book contains evidence against official classes difficult to refute, by seizing it. It is stated that forty thousand copies have been taken by the police.

M. Paul Gibier, of Paris, who was sent to investigate the yellow fever last year in Cuba and South America, passed through this city last week on his way to Florida.

The Violence of the Yellow Fever continues to decline; the number of new cases daily ranges between twenty and thirty, with three or four deaths. The whole number of cases up to October 15th was 3,569, with 316 deaths.

The Congress for Criminal Anthropology holds its second annual session in Paris, August 1st to 8th, under the presidency of Professor Brouardel.

The Italian Pediatric Association is the name of a new national medical society recently organized at Rome.

Another Addition to Bellevue Hospital is a handsome chapel and library, which is now in course of erection, and which is the gift of Mrs. R. H. L. Townsend, the lady who last year presented to the institution a cottage devoted exclusively to operative procedures on female patients.

Sued for Malpractice for giving Chloroform in Eclampsia.—Dr. J. J. Leppa, of this city, has been sued for malpractice. The plaintiff, an Italian woman, says that her brother, the patient, a boy of fifteen, went to work at his trade in a silk-twine and braid factory in the morning, and came home at noon complaining of a pain, and was shortly after seized with convulsions. She called Dr. Leppa, who gave him chloroform and ether. The boy had six successive convulsions. The anæsthetic brought him out of each, but at the end of the sixth he died. It is a well-known fact that chloroform is one of the best and most approved drugs in eclampsia; and this case seems to be a particularly unjust one.

A Dinner was given to Dr. David Ferrier and Mr. Victor Horsley at the University Club, on the 11th inst., by several neurologists and surgeons of this city.

Dr. A. H. Smith gave a reception to Dr. Sansom, of London, on the 5th inst. It was largely attended by the representative medical men of this city.

Our Scholarly and Interrogatory Contemporary the American *Lancet* comes out this month with the query, "The Union of Medical School and University—What is the Advantages?" One advantage would be a wider knowledge and deeper knowledge of syntax, a gradual disappearance of the correlation of plural nouns with singular verbs, and adscititiously, perhaps, the infusion of acumen into the minds of proof-readers and printers' devils.

Charity and the Paupers of New York.—According to the Charity Organization Reports of this city, there were, in 1886-87, 92,582 persons applicants for, or dependent on, charity. A critic of this report works over the figures and finds that we have only about 27,918 dependent families in the city, representing perhaps 100,000 people of all ages. If this is the limit of the dependent class, why is it that about 250,000 depend upon charity for their medical services at dispensaries, and over 40,000 depend upon charity for medical services in hospitals. There can be no doubt that there are between 90,000 and 100,000 families in this city who apply for, or more or less depend upon, charity.

Professor Zuckerkandl, of Gratz, has been appointed Professor of Anatomy at Vienna, to succeed the late Professor Hyrtl. Professor Ebner, of Gratz, has been appointed to the Chair of Histology.

A Woman Without a Vagina or Perineum.—Dr. Bonnain, in *L'Union Médicale* (Canada), was summoned to an obstetrical case, and found the labor over and the child alive and well. On examining the patient he found an extraordinary state of affairs. "Picture to yourself, in short, that with this unfortunate woman, not as the result of an obstetrical mishap, but as a fault of conformation, there was neither anus, nor perineum, nor fourchette, nor vulvar ring, nor sphincter of the vagina, nothing in short of that which constitutes that barrier, sometimes so difficult to pass, which is called the inferior strait. The whole was replaced by a frightful chasm, whose dimensions, particularly from above downward, were really immeasurable. The natural result of this was that the large baby, which during my examination was quietly sleeping near us, had had no difficulty in getting out of his prison."

Another Disease of Women.—Dr. Lindner, of Neuwied, has just written a book on floating kidney, and he asserts most emphatically that it is a frequent trouble in women. One out of every five or six has floating kidney. Dr. Lindner, in examining the patient, always stands to her right side. He places the right hand against the anterior abdominal parietes, and presses the left against the back of the lumbar region, so as to press the kidney forward. The patient is then placed on her side, with her knees drawn up. By sharply shaking her body the kidney, if movable, will fall forward. In some cases Dr. Lindner did not detect the abnormality till after repeated examinations. He finds that floating kidney affects the peculiar nervous organization of women more or less unfavorably; but he is opposed to operative measures, excepting when the patient's life is endangered, which must at least occur very seldom. He has collected records of thirty-six nephrectomies and twenty-nine nephrorrhaphies. Dr. Lindner is a great believer in the treatment of floating kidney by careful bandaging.

An Intercolonial Medical Congress is to be held at Melbourne, in 1889.

Doctors of Medicine in Germany and in America.—During the academical year 1886-87, the twenty Universities of Germany conferred the degree of Doctor of Medicine on 847 candidates, as against 689 in the previous corresponding period. During a similar period the 117 medical colleges of the United States graduated 4,000 students. This is a great country.

The Coccus of Acute Bright's Disease, which has been expected for a long time, was born to science in Vienna recently. Dr. Julius Mannaberg, working in Nothnagel's clinic, has found a new streptococcus in the fresh urine of acute Bright's disease, and not found in two hundred examinations of urine in forty-five other patients not "Brightiques." Dr. Mannaberg has cultivated, inoculated, etc., his coccus and concludes: In the majority of cases of acute Bright's disease the streptococcus is found in large quantities in the fresh urine, which was not the case in the urine of healthy persons, or those affected with another malady. The pure cultures of this microbe essentially differed from all other micro-organisms hitherto described. The injection of this streptococcus into the blood-vessels of rabbits and dogs produced an inflammatory lesion of the kidneys, whereas the other organs were only exceptionally affected. With these results he believes he has proved, with a certain degree of probability, that certain forms, and perhaps all the forms, of the idiopathic acute Bright's disease had a bacteriological foundation.

Experimental Entomology.—It is stated that a laboratory of "experimental entomology" has lately been established in the Cornell University, with the object of investigating the action of insecticides on noxious insects. While seeking for a means of exterminating the Colorado beetle and kindred scourges, travellers on the Continent and dwellers in London lodging-houses may, perhaps, be permitted to hope that the workers in this useful field of research will extend their philanthropic efforts to the suppression of meaner forms of insect life, which add a good deal to the sum of human discomfort.—*British Medical Journal.*

Medical Practice in Arizona.—First doctor—"Got back already from Arizona?" Second doctor—"Yes; I don't like it out there." "What's the matter?" "If you have a case of small-pox and don't report it to the Board of Health, you are fined and imprisoned. If you do, the relatives fill you full of buckshot. It ain't a healthy country for a young doctor."—*Medical Standard.* In this city the methods are more refined; instead of using shot-guns the relatives bring a suit for damages.

Society Reports.

NEW YORK STATE MEDICAL ASSOCIATION.

Fifth Annual Meeting, held at the Hotel Brunswick, New York, October 9, 10, and 11, 1888.

(Continued from p. 460.)

Thursday, October 11th—Third Day, Afternoon Session.

DISCUSSION ON PUERPERAL SEPTICÆMIA.

Dr. Carlton C. Frederick opened the discussion. Were micro-organisms invariably found in the bodies of women sick with puerperal septicæmia? In the affirmative of this question stood the names of Myerhofer, Fetty, Caze, Waldeyer, Rindfleisch, etc. The micro-organisms were always similar or identical in form. Doleris maintained they could be discovered in the blood by persistent search.

Despite various arguments which had been presented in substantiation of the specific nature of puerperal septicæmia, the tendency of modern research had been to prove that the puerperal poison was of a septic nature, and the points of entrance to the body were generally through the wounds of the genital canal. But, clinically, it seemed probable the germs of the disease might enter the blood through other channels, as the respiratory or digestive tracts; otherwise certain epidemics could not be explained.

There was abundant proof that the contagium of some of the zymotic diseases might produce in the puerperal woman a form of febrile disease undistinguishable from puerperal septicæmia and presenting some of the characteristics of the specific disease from which the infection was derived. This opinion had been accepted and opposed by men of equal eminence.

Puerperal septicæmia occurred more frequently in primiparæ than multiparæ, and its frequency bore some proportion to the number of channels laid open favoring absorption.

The number of puerperal cases had diminished in lying-in hospitals more than in private practice, demonstrating the advantages of antiseptic precautions.

If the conditions of puerperal infection were always the same, puerperal septicæmia would always pursue the same course. But such conditions varied greatly, as did also the course of the disease The prognosis varied with the character and intensity of the affection as well as with the individuality of the patient. The further entrance of germs should be prevented by cleansing the wounds, immediate union of lesions after labor, not too frequent examinations during labor, all precautions of cleanliness, irrigation of vagina, and when a dead fœtus had been delivered and in certain manipulations within the uterus, irrigate that organ with bichloride solution, 1 to 4,000. Further particulars in treatment related to diphtheritic patches, fever, etc.

Dr. Everard D. Ferguson, replying to the second question, whether there was a specific febrile disease peculiar to the puerperal woman, said that puerperal fever was a surgical septicæmia; that an essential fever, as scarlet fever, small-pox, etc., was the same disease whether occurring in a pregnant or non-pregnant woman. There remained certain cases, however, which were due to a common zymotic cause, and others due to toxic agents generated in or belonging to the body of the patient. Pregnancy did not afford immunity from any one of the infectious diseases. Mere severity of zymotic diseases in the puerperal patient did not necessarily imply infection through the genital tract. In general the zymotic diseases ran an aggravated course when they developed in women in childbirth, but the essential nature of the diseases was not changed.

Dr. Herman M. Biggs discussed Question 1, "What facts can be cited in support of the doctrine that the puerperal febrile diseases owe their origin to the action of the micro-organisms?" and said these diseases were so manifestly infectious in nature, and had been so long recognized as such, that argument seemed superfluous.

Their bacterial origin had become an acknowledged fact. The manner of infection was of great interest. The microbes necessary to the development of puerperal infection existed, according to Doleris, in all normal vaginæ, and in all cases wounds for their entrance into the blood existed after labor. But the microbes met with many difficulties in healthy patients in their attempt to infect the system; and prevention might be effective by washing out the vagina; cleanliness during and after delivery. The difference in the virulence and nature of the organisms bringing about infection, difference in resistance of the individual and in conditions surrounding the patient and of parts through which absorption took place, would explain differences in course and severity of the disease in different cases.

It could be said that in puerperal febrile diseases we had a class of affections closely allied to surgical septic diseases, with similar anatomical and pathological characteristics, and presenting the same organisms. Puerperal fever occurred only in conditions permitting infection.

Dr. S. B. Wylie McLeod, in continuing the discussion, said puerperal fever was a septic disease, depending on a variety of causes, but in most cases it was identical with surgical septicæmia. He believed there was an etiological relation between zymotic and some forms of puerperal fever, and the relation seemed similar to that between typhoid and malarial fever in so-called typho-malarial fever.

Dr. F. W. Ross classified the causes of puerperal fever as follows: The condition of the woman, her susceptibility to septic influences, conditions surrounding her, foreign influences conveyed by the attendant. Considering the fallibility of man, he would answer the question, Were there any antiseptic measures which under all conditions could be relied upon as prophylactic to puerperal septicæmia? in the negative.

Dr. John Shrady maintained that the rôle of the microbe in the animal economy was not as yet understood in all its bearings, that many of the conclusions were without logical links. He thought that statisticians in a measure diminished the mortality by contracting the classes; that the placental separation during labor left a wound which presented a sufficient absorbing surface, without considering the minor tears and abrasions made by the accoucheur. He advocated the avoidance of all possible solutions of continuity, but would make other causes as well bear the opprobrium of disaster. He certainly believed that cleanliness was next to godliness, and that the system should be put upon the defensive, and would advise the employment of antiseptic measures so that there might be no impugnment of deeds even though faith be absent. He asked, however, if the temple which had been built was founded on a rock?

Dr. Frank Grauer, speaking of pathology, said if critics asked what was puerperal fever, he would ask, in tnrn, what was surgical fever? Then there were varieties of surgical fever as there were of puerperal fever. If it were said surgical fever was septicæmia, was that not begging the question, for we must still ask, what was septicæmia. If septicæmia caused surgical fever, might it not produce a fever of the same character in the lying-in woman? Septicæmia required two factors, the poison and the blood which received the poison. He claimed the poison had not been proven not to vary in different cases, and the blood was never the same in any two individuals; consequently the symptoms varied both in surgical and puerperal fever. Dr. Grauer went on to give the pathology of puerperal septicæmia.

Dr. W. T. Lusk discussed the treatment. The history of the Maternity Hospital offered excellent evidence of the value of aseptic conditions in reducing the percentage of cases of puerperal diseases. Formerly in that hospital the mortality from septic diseases was from two to three per cent., but since the introduction of prophylaxis, including Garrigue's pad, septic disease was unknown. The same prophylactic measures, should they become commonly employed, would likewise lessen the number of septic cases in private practice. It required only a few simple measures, of no great bother to the physician or patient: Surgical cleanliness, soap and water, nail-brush, corrosive sublimate, 1 to 1,000 for the hands, carbolic acid, 1 to 1,500 for instruments, corrosive sublimate solution employed to cleanse the vulva, thighs, and lower abdomen of the patient, and perhaps an injection of sublimate solution into the vagina as a safeguard against infection. Unnecessary examinations should be avoided. In the third stage, secure complete removal of membranes. The technique in closing wounds made during delivery was not difficult. The Garrigue pad should be worn after delivery. Patients thus handled did not have septic fever. Some recommended the use of the intra-uterine douche whenever the temperature went above 100° F., but such practice was based on ignorance and was not justifiable. The indication for the uterine douche was not the temperature. When the organ was large and flabby, contained coagulæ, gave a fetid discharge due to retention of portions of membranes, and fever attended prolonged operations in the uterine cavity, or a dead fœtus was born, the douche should be employed, consisting of carbolic-acid solution. Two quarts was sufficient. It should not be repeated every four hours, as had been suggested. Three injections were seldom called for. Wounds of the genital tract should be touched by a caustic. He was a firm believer in the vaginal douche, which, with care, could be given with safety when symptoms developed.

The discussion of treatment was continued by Dr. R. L. Banta, and a paper on the subject by Dr. A. S. Carroll was read by title.

Adjourned.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN SURGERY.

Stated Meeting, October 8, 1888.

Robert Abbe, M.D., in the Chair.

CANCER OF THE BREAST IN A MAN.

Dr. Charles A. Powers presented the patient because of the rarity of cancer of the breast in the male. The man was about seventy years of age. The family history was negative. About eighteen months ago he fell heavily on the sidewalk, striking the right arm and right side of the chest, which was ecchymosed. Twelve months later a hard lump appeared in the right breast. Dr. Powers saw the patient in July, 1888, at which time the tumor was half the size of a man's fist, involved the upper and outer region of the right breast, was circumscribed, and of stony hardness. The skin was retracted about the nipple, the axillary glands were markedly enlarged. July 20th he removed the breast and axillary contents. Convalescence was rapid. Dr. Ferguson pronounced the tumor typical cancer. An interesting point in the case was the development of cancer directly from traumatism. He had found that during the past ten years one hundred and seventy cases of cancer of the breast had been admitted at the St. Luke and New York Hospitals, and of these but one was in the male. Dr. Gross had found about two per cent. of the cases of cancer of the breast to be in males.

Dr. John Ridlon read a paper entitled

THE EARLY DIAGNOSIS AND RATIONAL TREATMENT OF LATERAL CURVATURE OF THE SPINE,

WITH DEMONSTRATION OF EXERCISES AND PRESCRIPTIONS ADAPTED TO THE VARYING CONDITIONS,

by Claes Enebuske, Ph.D., M.G.

Dr. Ridlon said that upon the early diagnosis and rational treatment of the conditions presenting, would depend the successful termination of a case of lateral curvature. When the distortion had advanced so far that the diagnosis had been made by the dress-maker, it might fairly be said to have passed the time for an early diagnosis, and generally for a complete eradication of the deformity. It was not easy to say how early the disease could be diagnosticated. He thought it would depend upon the cause of the curvature, since upon this would depend the first symptoms. A curvature depending upon one of the fevers, scarlatina, etc., would present early symptoms, differing greatly from those of a curvature following pleurisy, although when well advanced the distortion in either case was similar. A curvature depending upon shortening of one lower extremity would in its early symptoms differ from one due to polio-myelitis anterior. In short, a case might begin with curvature and rotation; or without curvature; or without rotation; or without either curvature or rotation, and still present diagnostic symptoms. An early diagnosis could be characterized as such when there was yet no deformity of the spine, or only such deformity as could by posture be temporarily eradicated. A deformity which at the first examination could not be made to wholly disappear, would generally resist treatment so far as removal of the primary curve was concerned.

By rational treatment they meant an attempt to meet indications as presented by causation and symptoms in each individual case, with the end constantly in view to restore the figure, as far as possible, and to so strengthen the muscles that this contour might easily be maintained. Routine treatment of any kind was to be deprecated. Rotation of the vertebral bodies, causing the convexity and concavity, was the characteristic symptom of lateral curvature, and in a large number of cases appeared very early; but even before this rotation could be detected there were in some cases characteristic symptoms: as the patient walked, unconscious of being observed, the head was carried somewhat to one side, the shoulder of that side was somewhat advanced, and the corresponding foot was rotated out. Where the lateral deviation appeared before rotation, as in curvature depending upon one short lower extremity, he had not found the neck and shoulder symptoms and the outward rotation of the foot. It might be asked whether a true scoliosis could be caused by a short leg or a contracted pleural cavity, and he would answer, in the present state of uncertainty as to the etiology of true scoliosis, that lateral deviation of the spine, with rotation of the vertebræ, and all the characteristic forms in the late stage, might follow a short leg or contracted pleural cavity.

For the sake of clearness in arranging the symptoms, they divided the cases into two classes: 1, Those that presented rotation before curvature; 2, those that presented curvature before rotation. The symptoms in these two classes were given, with numerous photographic illustrations. The deforming symptoms might go on progressively to almost any degree, or they might cease to progress at any time either with or without treatment. The distortion in some cases took place very slowly, covering upward of ten years, while in others the same degree of deformity was reached in a few months. In the second class, of those in which the curvature preceded rotation, they had not found outward rotation of the foot and the peculiar advanced shoulder during locomotion that was so often present in the first class; the lateral deviation of the head appeared subsequent to the lateral deviation of the line of the spinous processes. It was very doubtful if true mammary atrophy occurred in cases of the second class, but they had observed a smaller, though not a flabby gland on the side of the convexity. Some considerable number also presented a condition of flat-foot. The spinal rigidity came slowly as compared with the other class of cases, and so far was more amenable to treatment. In cases in which there was a short lower extremity, there was an advantage in having the length equalized by a high shoe. But this was not absolutely necessary for a good result.

The treatment should consist in the reduction of the deformity, and the development of the muscular strength to maintain the acquired position. This was gained by posture, manipulation, massage, and gymnastics, with assistance and resistance. In many cases electricity was of use; the proper arrangement of the clothing was of no small importance; but of more importance than any other one thing, was constant maintenance by voluntary effort, both during the exercises and between them, of the best possible position. As to the use of braces, supports, jackets, and corsets it was difficult to lay down any uniform law. In some cases they were unnecessary, in some even harmful, while in some they were a great comfort to the patient; but it should not be forgotten that their use was prejudicial to muscular development and delayed the ultimate favorable result.

Claes Enebuske, Ph.D., M. G., then demonstrated a number of exercises which patients with lateral curvature of the spine were required to practise, differing according to the indications in the several cases. The exercises should never be carried to the point of fatigue, and should be adapted to the patient's ability; many of them were performed with assistance or resistance from the surgeon, but voluntary effort was required in all cases, even were paralysis present. No exercise should be performed with arrested breath. The following were some of the exercises demonstrated in a case which had been under treatment for some time: 1, Forward-bend-lean, standing, arm-stretching upward and aside; 2, left-stretch, right-wing, stride forward-bend, sitting, raising of the trunk with pressure and resistance; 3, standing, circumduction of the arms; 4, left-stretch, right-wing, hip-lean, stand, bending to the right, with pressure; 5, forward-bend-lean, standing, arm-raising, aside, upwards, etc.

Dr. L. A. Sayre being called upon to open the discussion, said he was very glad at last to find the doctrines which he had taught for thirty years beginning to make an impression. About three years ago his son demonstrated exercises similar to what he had just witnessed, and he had for years taught that in lateral curvature proper gymnastic exercises were essential in the treatment, and that all machinery, whether consisting of the plaster-of-Paris jacket, iron brace, or whatever else, was of no use, but injurious, excepting as an aid in maintaining improved position. If gymnastics were adopted early enough there would be no need of machinery of any sort. He said proper gymnastic exercise, but it was almost impossible to describe what that was. The exercises demonstrated during the evening were only a few which might be employed, and it was almost impossible to classify or write them in a book. The exercises had to be adapted to each case separately; find out what muscles required development, and then apply electricity, manipulation, beating of the muscles, voluntary movements, etc., as might be indicated. He did not believe that when the bones had changed their form that they could be made straight by any treatment. But there was one essential in the treatment of lateral curvature, namely, self-suspension, for in that position the deformity was less evident than in any other. It was possible, however, to carry the muscular development to extremes, as ocurred in the case of a doctor who increased the measurement of his chest fourteen inches in two years. Where machinery was required he had found nothing as valuable in retaining what had been gained by exercise as self-suspension and the application of the plaster-of-Paris corset. He had never seen any machinery which did not produce more irritation than the plaster jacket applied properly during self-suspension; but if one could get the patients for treatment early enough more could be done by physical training without any mechanical support.

Dr. Gibney inquired of Dr. Sayre how he determined, when a patient first came to him, whether he should or should not wear a jacket.

Dr. Sayre replied that he could not tell when the patient first came whether it would be necessary to put on a jacket. He never put it on until he saw that the patient could not get along and improve without it.

Dr. Judson agreed with Dr. Sayre in emphasizing the importance which should be attached to the remarkable reduction of deformity, amounting in mild cases to absolute restoration of symmetry, which attends placing the patient in suspension by the scapulæ and humeri. He could not escape the conviction that the longer a patient's body is kept in a symmetrical position during the growing period, the better the chance for removing deformity or preventing its increase. We thus take advantage, as in many other forms of orthopedic treatment, of the child's growth If the deformity and disability are unmolested in the growing period, they increase with the growth of the child. If they are removed or lessened during the growing period, the natural increment is so much added on the side of ability and symmetry.

In regard to the value of active exercises such as had been exhibited, if the affection is but the local expression in the vertebral column of a general weakness, as may be inferred from the lassitude and the harmful effects of fatigue exhibited by some of his patients, he thought that a limit would soon be reached in the effectiveness of muscular exercises. His plan of treatment was based on the avoidance of fatigue, and the assumption for as many hours in the twenty-four as is practicable of those positions in which the deformity is lessened. He favored suspension by the hands and the axillæ and the supine position with lordosis maintained by an air-pillow. The latter position may be maintained in some patients during the hours of sleep.

Dr. Gibney being asked his opinion of Bernard Roth's method of treatment by exercise, said he was practically a convert to it. He had been pleased to hear Dr. Sayre's remarks, for it had been stated by those who were advocates of Roth's method that Dr. Sayre, in the use of his plaster-of-Paris jacket, undid exactly what he had attempted to do by exercise, and they had claimed that he put the jacket on nearly all of his cases as soon as they came for treatment. Dr. Gibney was glad to learn that Dr. Sayre did not apply the corset in all cases, but first tried gymnastic exercises, and failing to make any improvement under this, then gave the support of the jacket. The greatest obstacle in treatment by systematic gymnastic exercises was met in cases of elderly persons whose modesty forbade them taking the exercise in classes usually composed of young people; and in factory girls who, in spending their time in this manner, were taking it from the hours of sleep. He now refused to take patients for this treatment unless they would submit to daily exercises for a month under directions of a teacher. Bernard Roth did not claim to correct the rotation of the spine; even in the best cases he had failed to notice any marked improvement in rotation; but by great enthusiasm he got his patients to walk and sit correctly, or in the most favorable position, until it was done instinctively, thereby strengthening the weak muscles and greatly improving the patient's appearance.

Dr. Reginald Sayre dwelt upon the importance of the patient fixing his attention upon desired movements, even though he was unable to perform them, as in some cases of paralysis, and it had to be done entirely by the physician or instructor. A patient should not be excused from exercises because he complained of lassitude.

Dr. Lewis Hall Sayre thought supporting jackets should never be applied as long as steady improvement followed exercises. But many cases which had gone on to marked rotation, while improving under gymnastics to a certain point, yet after a time came to a stand-still, and the jacket worn at intervals between the exercises would prove of benefit and not interfere with the development of the muscles. Of course the jacket itself restrained muscular movement somewhat, but by maintaining the improved position which had been gained by muscular exercise, it took off the strain from the muscles, prevented them from becoming overtired, and thus aided their development. He did not believe the rotation was ever much improved.

Dr. Ketch stated that two years ago he had read a paper giving the statistics of two hundred and twenty-nine cases of rotary lateral curvature of the spine, and much to his surprise had found that over fifty per cent. of the cases were in children under seven years. Those spoken of this evening had been mostly in adults. He thought that if the treatment in these cases had been begun early, in childhood, the results might have been better. After rotation had progressed to a certain point we could do no more than by exercise to improve muscular tone, and through that maintain a better position. If children were regularly examined much might be done to prevent and relieve lateral curvature.

Dr. Anderson, of Brooklyn, had the assistance of a corps of teachers, and among them they taught gymnastic exercises to about fifteen thousand pupils each week, and it was interesting to see the beneficial change come over the physique of the little ones. They recorded the height, weight, etc., and particularly the outline of the body from head to foot. After pupils had attended school two years they almost invariably found the right shoulder a trifle lower than the left in right-handed persons. They had, therefore, instituted exercises and positions for the correction of that tendency. They could take a perfectly formed boy, and by training make him deformed within six months. But if a child took only twenty minutes' obligatory gymnastic exercises a day, and was permitted the remainder of his school hours to assume injurious positions, one might expect deformity. But exercises three or four times a day in the school-room would tend to keep the spine straight.

Dr. A. M. Phelps thought one mistake had been made, the whole argument having been directed toward muscle. He believed that in a large majority of cases of lateral curvature of the spine the difficulty was not primarily in the muscle, but in the bone. Even in the child at the desk the change was in the bone, for it sat in a position to favor absorption of one side of the body of the vertebra. Deformity high up in the dorsal region was often of rachitic origin, and do what one would to develop the muscles, the deformity would remain and often continue to grow worse. If the trouble was primarily in the bone, and not in the muscle, it was clear that treatment should be directed not to the muscles but to the bone. Dr. Ridlon had spoken about short leg producing the deformity. He believed that was certainly a mistake, for he had very seldom found one leg short in cases of lateral curvature of the spine. The shortness of one leg was only apparent, as was the case when a weight was swung from the anterior superior spinous process of the ilium to the floor, the patient twisting the pelvis slightly without moving the feet the weight would touch the floor, but on standing erect, facing directly forward, it would swing free from the floor. The plaster corset or brace did not produce atrophy of muscles if gymnastic exercises were continued. Dr. Phelps took exception to calling the exercises those of Roth, for Roth had simply borrowed them from the Swedes and Germans. Moreover, Roth had not cured one case by such exercises, and the apparent improvement in position was due to the patient's becoming fatter. The plaster jacket was best, excepting, however, one which he had obtained from the Russians. This consisted of veneer of spruce glued in layers of linen and made to accurately fit the body. It was thin, strong, and very light.

Dr. Taylor said he had also been accused of employing mechanical means unduly, but he wished to disclaim it, since many of his cases received no mechanical treatment at all, requiring only exercise and hygiene. They employed artificial respiration, which he thought padded out the thorax from within, where the deformity was most accessible. Then, among other Swedish movement-cure methods, they employed lateral suspension, making the fulcrum the greatest point of the convexity. Where the back was flexible he thought the rotation could be somewhat reduced. The patients should give up much mental work, and children should lie down some minutes in the afternoon.

Dr. A. Jacobi, having listened to the discussion, thought it well to remember the fact that to the vertebral column there was attached a child or adolescent. It had appeared to him that too little attention had been given to the individual; nearly all had been given to the vertebral column. Some years ago scoliosis was scarcely known in this country; now it is common. It had been admitted that lateral curvature was rarely cured after adolescence. We should, then, give attention to children, especially those which showed any tendency to rickets. The trouble was first with the bones. The specialist should remember that there were general causes for local diseases. Particular attention should be given to dietetic treatment and healthy school surroundings. He mentioned one drug in particular which had proven of value in rachitic subjects, namely, phosphorus, but not phosphates.

Dr. Ridlon closed the discussion, and said. concerning short legs, that he had seen this deformity very seldom in lateral curvature of the spine.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, October 5, 1888.

Francis P. Kinnicutt, M.D., President, in the Chair.

Dr. Beverley Robinson presented a patient suffering from an

INTRA-CRANIAL LESION,

whose history, as obtained from his wife, was as follows: James D——, aged twenty-eight, formerly worked in a hardware store. His habits were fairly good, and he had never had epilepsy, syphilis, or any other serious disease. A year ago last August he was struck by a base-ball over the outer portion of the right eyebrow. The blow caused a small flesh wound and some discoloration around the eye, but the man did not lose consciousness. He had a headache for a few days which was severe enough to keep him at home. At the end of this time the headache disappeared and he apparently recovered his health perfectly. Six months later his wife noticed that his speech was becoming affected, and it was soon so thick and "tangled" that she could not understand him. He used incorrect words, and when told the right ones could not always repeat them correctly, although he would make some sounds resembling them. He did not know himself that he made use of the wrong words, nor did he seem always to understand what was said to him. He could write nearly, if not quite, as well as before. At the same time that the difficulty in speaking appeared the patient became very irritable, taking offence on the slightest provocation, striking his wife and children, and menacing them in various ways. He was also very somnolent. He had a very noticeable tremor, and there was some paresis of the left arm and leg; he was, however, able to walk about, although he fell to the ground on several occasions. On one or two days, at this time, there was such extreme weakness of the left lower extremity that the patient was unable to stand erect, and the left leg was also rigidly extended (tonic spasm?). About one month after the beginning of these symptoms the patient was suddenly attacked with a tonic epileptoid convulsion, limited to the left side of the body. This convulsion was repeated once the following night, but has never since reappeared. There was no aura, no biting of the tongue, and no loss of consciousness. For a period of about a month the mouth and chin used to twitch frequently, and at times, off and on, ever since the accident the wife had noticed that the right pupil was larger than the left. The sight was good, there was no strabismus, and examination of the fundus showed it to be normal. About seven months ago the patient suffered greatly from headache, specially marked in the right occipital, frontal, and temporal regions. There was also frequent vomiting at that time. The headaches lasted for about three months. There was some deafness for about two months, and it was noticed also that the patient sweated considerably.

Examination.—The right pupil is dilated and responds sluggishly to light. There is no strabismus. The patient can stand well on both feet, though not on either alone. He drags his left leg slightly in walking. The left arm and hand tremble somewhat, and are weaker than the right. The tongue, when protruded, points a little to the left with marked tremor. There are no other signs of facial paralysis, no anæsthesia nor analgesia, and no abnormal sensations in any part of the body. The speech is indistinct, though the patient articulates single letters fairly well. There is no derangement of the bowels or bladder. The patient writes his name very distinctly.

During the past few days he has been taking potassium iodide, and has improved greatly.

The question of special interest in connection with the case, Dr. Robinson said, was whether the cerebral symptoms presented had anything to do with the injury received six months before they appeared.

Dr. C. L. Dana said that it was difficult to express any positive opinion as to the nature of the lesion present, but, taking into consideration the fact of an injury and the subsequent symptoms, the case looked like one of local encephalitis.

Dr. A. H. Smith questioned whether the blow had anything to do with the trouble. He did not think that a blow over the frontal sinuses, not fracturing the bone, was likely to cause sufficient traumatism to give rise to such marked symptoms.

Dr. Sansom said that the fact of an injury on the right side and of motor symptoms on the left side was sufficient, in his opinion, to lend at least probability to the belief in some causal relation between the two, although the question was a difficult one to decide. Whatever the cause, there was undoubtedly some lesion present in the right hemisphere. Yet it was interesting that there should be aphasia, as Dr. Robinson, in reply to a question, had stated that the man was right-handed. It seemed as though there must have been some radiating lesion which had passed off. He was inclined to think that there was some degeneration going on in the brain, a sort of sclerosis, perhaps.

Dr. William M. Polk thought that, with such a history and such symptoms, one would be justified in trephining; yet it was precisely in cases such as this that the consulting together of the physician and the surgeon was of indisputable advantage. The physician was needed to advise the surgeon as to whether, in a certain case, an operation were justifiable.

Dr. Robinson said that he had been unable yet to study the case as carefully as its interest and importance warranted, but, as far as he had formed an opinion, he was inclined to regard the condition as one of pachymeningitis. He did not think there was an abscess present.

Dr. Sansom, referring to the question of operation, said the mistake often made was in hesitating too long. It was better at least to attempt to do something in these cases than to let the patients die unrelieved.

Dr. Kinnicutt thought that Dr. Dana's suggestion was worthy of consideration. Suppuration can take place in the cerebral tissues while all symptoms may be latent for a long time. He related a case of cerebral abscess in which for a considerable period there were no definite symptoms, after which the patient grew worse, and then apparently better again. He finally died, and at the autopsy an abscess was found in the brain.

Dr. Peabody reported a case in which middle-ear disease had existed for forty years, symptoms of brain trouble having occasionally been manifested during that time. At the autopsy a cerebral abscess was found.

Dr. William M. Polk then presented a number of

GALL-STONES, REMOVED BY OPERATION

from a patient, a lady, who had suffered for a long time with obscure gastric symptoms.

Dr. V. P. Gibney then read the paper of the evening (see page 472), entitled

JOINT DISEASE AND CONSTITUTIONAL TREATMENT.

Dr. Robinson agreed with the author of the paper in his doubts concerning the efficacy of medicinal treatment of this class of diseases.

Dr. Dana asked whether the author did not belive in the utility of certain drugs, such as mercury and iodine? The latter was regarded by many in the light of a specific in tubercular diseases.

Dr. Gibney replied that he did not think these drugs did much good, notwithstanding the reputation which they enjoyed.

Dr. Peabody said that he had been much interested in the parallel between chronic joint disease and pulmonary tuberculosis. Such an idea had often occurred to him, but he had never formulated it to himself in exactly that way.

The Society then adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

MR. BRYANT'S RECENT LECTURES AT THE COLLEGE OF SURGEONS—THE CASE OF DR. GLOSTER—THE WHITECHAPEL MURDERS—PHARMACY AND PHARMACISTS—AMALGAMATION OF THE SANITARY INSTITUTE WITH THE PARKES MUSEUM—DR. POORE ON HYGIENE

London, September 29, 1888.

In his recent lectures at the College of Surgeons on "Cranial and Intracranial Injuries," Mr. Bryant emphasized anew the importance of estimating all injuries of the head with reference to the risk of the cranial contents being involved—either primarily or secondarily. As a practical deduction from this view, Mr. Bryant pointed out that if in every grave, or, indeed, apparently uncomplicated example of head injury associated with more or less complete paralysis of at least one of the brain functions, such as was indicated by unconsciousness, the surgeon recognized to the full the force of the fact that the brain, as a material organ, was bruised or otherwise injured, a line of treatment was likely to be at once suggested which could best favor the restoration of the injured part toward health. Physiological and mechanical rest would stand foremost, with the administration of nourishment simple enough to maintain the normal powers and help repair, and not stimulating enough to excite action. Everything in the form of alcoholic stimulants or solid meats should be forbidden. This line of treatment should be continued for weeks—possibly for months—the severity of the injury and the primary symptoms forming the surgeon's best guide to a decision. This method of treatment would also be adopted under the wholesome dread of exciting, by sins either of omission or of commission, the one common complication which the surgeon should have ever before him, viz., an inflammatory action in the injured organ. Experience spoke in no feeble terms that this action was readily started and with difficulty quelled, and that it was by such inflammatory changes in the injured brain that most head cases, simple or severe, were brought to a fatal termination. Mr. Bryant observed that these views were taught at Guy's Hospital thirty years ago by the late Mr. Hilton, a former teacher and colleague of his. Mr. Bryant went on to say that should symptoms of intracranial irritation or inflammation show themselves, they should be dealt with actively, as, from the nature of the brain and its membranous coverings, the process, when once started, soon spread. In the early stage, the application of cold to the head by means of a Leiter's metallic tube was the most efficient local measure, and free purgation, with very low diet, the most effective general treatment. If the inflammatory action were great, a free bleeding from the jugular vein or from the arm was strongly to be advocated, and this operation might, in many cases, be repeated with much advantage. The lecturer said he was convinced that he had saved lives by this treatment. In chronic cases the value of mercury taken internally could not be doubted.

Considerable satisfaction is expressed in medical circles at the acquittal of Dr. Gloster, a medical practitioner of Kensington, who has just been brought to trial on a charge of having caused the death of a patient by procuring criminal abortion. The patient was poor, and no fee, it was admitted, had been offered to Dr. Gloster. There was, therefore, no pecuniary inducement for his having acted as alleged. Almost the only evidence against him was an alleged "dying declaration" on the part of the patient. The judge, however, decided that this could not be received as evidence, as there was no reason to suppose that the patient, in making the statement, knew that she was on her death-bed. The post-mortem examination disclosed that the patient was not pregnant, but that the uterus had been injured by an instrument of some kind, which, however, although introduced within the os uteri, had never entered the uterine cavity at all, but had passed upward through the posterior wall of the uterus emerging close to the summit of the fundus. A piece of dressmaker's wadding was found lying in the peritoneal cavity. It is difficult to imagine that such a wound could have been caused by any operation performed by a medical man, with ordinary care and skill. Dr. Gloster, however, had had special experience in obstetric and gynecological work, as he would have been enabled to prove had the trial proceeded. Among other witnesses prepared to testify in this respect on his behalf was Dr. Lombe Atthill, of Dublin, who had come to London expressly to give evidence. The deceased (a married woman separated from her husband) believed herself to be pregnant, and had solicited Dr. Gloster to procure abortion. He had declined, and had, it was proved, desired her not to come to his house again. It is supposed that the injuries found after death were self-inflicted, and that the so-called "dying declaration" (made by the patient at a time when she was not aware of her critical condition) was made out of personal pique against Dr. Gloster for refusing to comply with her wishes.

All England has been horror-struck with the series of murders recently committed at the East End under peculiarly revolting circumstances, and apparently with impunity, for no culprit has yet been discovered. The victims in each case have been women known as prostitutes, and in the last two cases the bodies have been mutilated by the murderer in a most barbarous manner. In the last one of all, the abdomen had been opened and the intestines removed and placed by the shoulder of the deceased. The uterus and its appendages, with the upper part of the vagina and the posterior two-thirds of the bladder, had also been removed from the pelvis, and, as no trace of these parts could be found, it is presumed that they were taken away by the murderer. The incisions were cleanly cut, avoiding the rectum, and the vagina was divided low enough to avoid injuring the cervix uteri. The natural deduction is that the murderer must be a person with some anatomical knowledge, but further than this no clew to his identity has yet been found, nor any motive for the crime discovered. It has, indeed, been suggested that the murderer is a lunatic, and that this and the previous murders are the work of the same person; but as yet this is pure conjecture.

Many will be ready to echo with approval the views put forward lately by Mr. F. B. Benger in his presidential address to the British Pharmaceutical Association. The address was chiefly devoted to the relation of pharmacy to pharmacists, and the question of education and training. A more extensive preliminary examination was urged. Considering the close relations of pharmacy to medicine, the question of elevating the status of pharmacists in any way is one fertile in interest to medical men. It must, however, be confessed that while, on the one hand, the bulk of general practitioners in this country continue to dispense their own prescriptions, and, on the other hand, counter-prescribing by chemists is the rule rather than the exception, there must be some antagonism between the two classes. There are, it is true, medical men in general practice who do not dispense, and there are also some high-class chemists who steadily set their faces against counter-prescribing, but they are in the minority. A more complete separation of the two professions, as in many other countries, would tend to the elevation of both. As it is, the public are often inclined to look upon the ordinary practitioner as being but little, if anything, above a tradesman, and they are so accustomed to regard non-dispensing as one of the characteristics of a consulting physician that they sometimes regard a non-dispensing general practitioner as almost the equal of a *bonâ fide* physician in consulting practice.

The amalgamation of the Sanitary Institute with the Parkes Museum has been successfully carried out, and the union of the two institutions bids fair to add to the prosperity of both. On Tuesday last an audience of nearly a hundred assembled to hear Dr. Vivian Poore deliver the first of a series of twelve lectures, designed especially for the benefit of sanitary inspectors. The lecturer urged that the greatest of all sanitary evils was overcrowding, and that the professional sanitarian would scarcely be needed if it were not for the fatal tendency of populations to concentrate in towns. The science of sanitation, he said, was practically the science which enabled persons to live in crowds with the least amount of damage to themselves. We must not lose sight of the fact that big schemes of water-supply and sewerage tended indirectly to cause a concentration of population in itself most undesirable. It was doubtful if this overcrowding of buildings could be prevented; but, unless it could, one must have serious doubts as to the permanency in the improvement in health in our large towns. Death-rates were often very misleading, especially in regard to so mobile a population as that of London.

OUR PARIS LETTER.

LESSENING THE DANGERS IN OVARIOTOMY—ETIOLOGY OF TETANUS—AN INTERESTING CASE OF RUMINATION—PASTEUR INSTITUTE.

(From our Special Correspondent.)

PARIS, September 28, 1888.

AT a recent meeting of the Academy of Medicine, Dr. Polaillon exhibited an enormous tumor of the ovary of the right side, which he had removed from a woman aged thirty four. The tumor weighed six kilogrammes and a half. He took the opportunity of pointing out the danger of washing out the peritoneum during ovariotomies and analogous operations practised on the abdomen. He observed, in the case under notice, and in others before, a suspension of the respiration, and a syncope almost fatal occurred during the act of washing, owing to the water employed extending to the upper regions of the abdomen, and particularly to its contact with the inferior surface of the diaphragm. To attenuate this danger, Dr. Polaillon recommends: 1. That the patient to be operated on should be placed in an inclined position, the chest being raised above the level of the hips, so that the washing be limited to the hip and to the lower part of the abdomen to prevent the water reaching the diaphragm.

2. The temperature of the water employed should never be higher than that of the body. 3. The anæsthetic administration of chloroform should be particularly attended to.

After having passed in review the divers theories entertained on the etiology of tetanus—to wit, the nervous theory, the humoral theory—Dr. Richelot, Jr., declares himself a convinced partisan of the theory which admits the infectious and contagious nature of this malady. In support of this theory, Dr. Richelot communicated to the Academy two interesting cases which recently came under his own observation. In the first case the patient was a young woman, aged twenty-one, who was operated on at the hospital on June 15th for a salpingo-ovaritis, and about a week after she was affected with tetanus, which carried her off in forty-eight hours. A few days later another young woman, aged twenty, was admitted into the hospital who was also affected with a salpingo-ovaritis of a grave character. She was operated on, July 5th, and on the 11th she was suddenly seized with sharp pains in the left abdominal region. At the same time, she suffered from a sore throat and was seized with trismus and tonic convulsions. The patient died on the 13th. Nothing abnormal was found in either case at the autopsy. That the second case was infected by the first there seemed to be not a shadow of a doubt for Dr. Richelot, but how the first patient got affected with tetanus he was rather embarrassed to say; the more so as, according to the more recent theories, the origin of tetanus is attributed to the horse. In the cases under notice he could trace no relation between them and that animal.

In connection with this subject, it may be interesting to reproduce here the following note on the infectious nature of traumatic tetanus, recently published in the "Archives Roumaines." Traumatic tetanus of the horse and of the mule is at least sometimes, if not always, an infectious affection, transmissible to animals, and very probably to man. During the evolution of the affection a virus is developed and multiplied, which virus, injected into the cranial dura mater of another animal, produces the same infectious affection. This virus is found in the bull, and in the spinal marrow of the animal primarily affected with the disease. Analogous to the rabic virus, its virulence may be augmented by the sub-duramatric inoculation in series. Like the rabic virus, it is susceptible of attenuation by desiccation in the air, at a moderate heat, and, like the rabic virus also, its effects are more intense when it is inoculated under the cranian dura mater than when it is inoculated in the skin or in the muscles of the back. The author, Dr. S. O. Shakespeare, reserves his conclusions relative to the prophylaxy of inoculations with attenuated virus (*Le Courrier Medical*, September 1, 1888).

The following case of rumination is related in the *Petit Journal de la Santé*: A patient, in consulting Dr. Dehio lately for a bronchitis, related that he was subject to a sort of eructation which brought up to his mouth aliments he had taken a little time before and which he remasticated to enable him to swallow them again. The patient's parents were healthy, and had never had anything of the kind. This anomaly first began at the age of twelve, after an attack of intense and persistent whooping-cough, each fit of coughing being followed by vomiting. Till the age of sixteen each meal was accompanied, without exception, with the rejection of aliments corresponding in quantity to that of an alimentary bolus, and that without effort, without pain or nausea, and altogether involuntarily. Moreover, it was with pleasure that the patient masticated for the second time the aliments regurgitated. The operation took place at different times, the rejection commencing a quarter of an hour after meals and continuing for nearly an hour afterward. The aliments were not modified, milk was the only thing that was brought up in a coagulated state, there were no gaseous eructations; in fine, digestion was quite satisfactory, and the process still goes on as usual.

The construction of the Pasteur Institute is far advanced, and the opening is announced for an early date. It is situated in the Rue Dutot, within a few yards of the Boulevard Vaugirard. It has an imposing appearance, the principal wing of the building being reserved as a residence for M. Pasteur, who, it is said, will be lodged in a most sumptuous manner, thanks to the generosity of the subscribers to the work. The other parts of the main building contain a comfortable apartment for M. Roux, M. Pasteur's principal assistant. There are also a library, laboratories, halls for conferences and inoculations, and, finally, an amphitheatre, rather small in proportion to the other parts of the building. At the back are to be seen folds, dog-kennels, hutches for rabbits, aviaries—all these being rather scanty. To the left is the laboratory where the virus is to be manufactured. The waiting-rooms are rather too near the halls for inoculation, as the operation might produce an unpleasant impression on those who present themselves for treatment. It is said that some of the rooms will be reserved for pensionnaires, and, as observed by a French critic, it is to be hoped that this institute, contrary to the intentions of the subscribers and founders of the work, will not become the hostelry of rabies, after having been a palace.

THE VAGINAL TAMPON.

To the Editor of The Medical Record.

Sir: Speaking of the vaginal tampon, as discussed in your late issues, a fact has been omitted to which much importance should be attached. The presence of unhealthy secretion is a potent factor of vaginal and uterine irritation, and the tampon that obstructs its egress may support the uterus, but create an evil in another direction by provoking congestion and ulceration, or aggravating existing soreness with an acrid pent-up fluid. Hence the tampon that facilitates escape for the discharge is the least objectionable. As to the shape, no standard can be observed; it must vary and adapt itself to the necessities as indicated to the surgeon's judgment. If sufficient elasticity and pliability in the material be obtained, the necessity of methodical exactness in regard to the form of tampon is precluded. It will adjust itself to the parts to be filled simply by care in packing. The tampon made wholly of absorbent cotton is doubtless the softest and most pliable or perhaps soothing that can be applied, and yet one of the worst in use for the very reason that it does not in any degree retain these properties. It takes up moisture, it is true, but while the thin, watery fluid oozes through, the viscid humor—if there is any—remains behind. But a few hours suffice for it to become thoroughly saturated in a comparatively healthy vagina, then it not only loses all elasticity, lessens in size, drops out of place, and renders no service, but creates much mischief by acting as an irritant. Wool and absorbent cotton make a much better tampon, inasmuch as elasticity is secured; but if uniform pressure, consistent bulk, and free vent for offending secretion are desired, we fail in the object in proportion to the amount of absorbent cotton used, for the same reason that the cotton alone is useless.

I agree with Dr. H. I. Ostram, that all tampons present features of imperfection, but the nearest approach to one responding to the requirements, and obviating the objections here presented, is to be found in the refined or dressed oakum. I have been in the habit of using the coarse material which I deemed preferable to other substances for most purposes. But since employing the dressed oakum, I have acquired results superior to those obtained by the use of other agents. It corrects fetor, and gives tonicity to the parts, thus improving the quality of, and lessening unhealthy discharges. Æsthetically it is cleaner and neater, offending less by its odor than other material when removed. It can be medicated as other substances when desirable, and formed into any shaped tampon required. It is elastic, pliable, porous, absorbent, affording better means of exit for discharge, and parting with thick humors more readily. And irritable sores are more tolerant of its contact because of its healing properties.

M. F. McTaggart, M.D.

St. Helena, Cal., September 25, 1888.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 7 to October 13, 1888.

Meacham, Frank, Major and Surgeon, died at Fort Douglass, Utah, October 9, 1888, at twenty minutes past one P.M.

Maus, Louis M., Captain and Assistant Surgeon, by direction of the Acting Secretary of War, is relieved from duty at Fort Schuyler, N. Y., and will report in person to the commanding officer, Fort Porter, N. Y., for duty at the post. Par. 10, S. O. 236, A. G. O., Washington, October 10, 1888.

Spencer, William G., Captain and Assistant Surgeon, by direction of the Acting Secretary of War, granted leave of absence for two months. Par. 11, S. O. 236, A. G. O., Washington, October 10, 1888.

Davis, William B., Captain and Assistant Surgeon, by direction of the Acting Secretary of War, granted leave of absence for six months. Par. 12, S. O. 232, A. G. O., October 5, 1888.

Banister, John M., Captain and Assistant Surgeon, by direction of the Acting Secretary of War, the leave of absence granted to him in S. O. No. 210, September 10, 1888, from this office, is extended one month. Par. 2, S. O. 232, A. G. O., October 5, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 13, 1888.

Bates, N. L., Medical Inspector. Detached from the Pensacola, and placed on waiting orders.

Farwell, W. G., Surgeon. Ordered to U. S. Receiving Ship Franklin.

Scott, H. B., Passed Assistant Surgeon. Detached from the New York Navy Yard, and ordered to the Naval Hospital at Mare Island, Cal.

Magruder, A. F., Surgeon. Ordered to duty at headquarters of the Marine Corps.

Chloroform-water as a Solvent for Drugs.—Dr. Unna (*Therapeutische Monatshefte*, July, 1888) has employed the antiputrefactive power of chloroform-water for the preservation of solutions of drugs for subcutaneous employment. When a solution of chloroform-water is injected under the skin a slight burning sensation is produced; but general action attributable to chloroform is but rarely produced. In many cases, however, no objective sensation follows the injection of chloroform-water in the gluteal muscles. Unna commends the substitution of chloroform-water for distilled water in the preparation of Fowler's solution, and all ergotine preparations, even when intended for internal use. He likewise recommends the addition of a few drops of chloroform to morphine solutions, and, in fact, he finds it preferable to dissolve all alkaloids, whether intended for internal or external use, in solutions of chloroform-water.—*Therapeutic Gazette.*

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 13, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	46	12
Scarlet fever	81	16
Cerebro-spinal meningitis	1	1
Measles	83	8
Diphtheria	73	20
Small-pox	0	0
Yellow fever	0	0
Cholera	0	0

The Sixty-first Meeting of German Naturalists and Physicians.—This meeting was held in Cologne from the 17th to the 23d ult. Among the subjects and papers for the Section of Medicine were: "The Phenomena of Irritation in Spinal Diseases," by Prof. Naunyn; "Ankylostomum Duodenale and Anguillula Intestinalis, with Demonstrations," by Prof. Leichtenstern; "Pathology of Speech," by Dr. Ewich; and others. In the Section for Surgery some of the more important subjects set down are perhaps of greater interest and include: "The Results of the Treatment of Peritonitis and Peritoneal Sepsis," by Dr. Witzel, of Bonn; "The Importance and Value of Capillary Aspiration of the Bladder," by Dr. Rosenberger, of Würzburg; "Six Cases of Surgery of the Brain and their Treatment, with Demonstrations," by Dr. Flothmann, of Bad Ems; "The Treatment of Acute Purulent Osteomyelitis at the Epiphysial Line," by Dr. Thelen, of Elberfeld; "On Utilization of the Doctrine of Cerebral Localization Surgically Considered," by Dr. Heusner, of Barmen; "On Infection with a Sound Skin," by Dr. Schimmelbusch, of Cologne; "Extirpation of the Bladder, or Total Excision of the Vesical Mucous Membrane," by Dr. Brohl, of Cologne.

Fuller reports will be given later.

Hospital of the University of Pennsylvania.—Amputation of the Thigh by Professor Von Esmarch, of Keil, and Demonstration of the Physical Examination of the Heart by Dr. Sansom, of London, at the Hospital of the University of Pennsylvania, September 22, 1888. Professor Esmarch and Dr. Priestly were introduced by Professor Ashhurst, in whose place Professor Esmarch operated for sarcoma of the knee. The operator applied his bandage up to the middle of the leg, spoke of the danger of driving cells upward if carried too far, and then bound the limb very tightly in the upper third of the thigh, using a two inch bandage, provided with an adjustable clamp. Von Esmarch had washed his hands antiseptically with great care, was dressed in a long, white operating dress, and washed the limb thoroughly before the bandage was applied. He used a long French knife; amputating at the lower third by a single circular incision, he severed the periosteum and sawed the bone. Dr. H. R. Wharton assisted and tied the arteries, and at Professor Esmarch's suggestion sutured the sheath of the sartorius muscle. Professor Esmarch then examined the tumor, which he pronounced a giant-celled sarcoma, and, as the disease had involved only the upper portion of the tibia, gave a favorable prognosis. The interior was full of cysts and blood-clots. The operator remarked that "in most cases of amputation I sew together the wound and apply the dressing before removing the constrictor," but said that in this case the veins were so much distended by the tumor that it was best to remove the bandage first. He also spoke of bleeding by paralysis of the vessels from compression. Professor Esmarch uses catgut ligatures and sutures, and usually no drainage-tubes,

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 17 NEW YORK, OCTOBER 27, 1888 Whole No. 938

Original Articles.

APRAXIA AND APHASIA; THEIR VARIETIES, AND THE METHODS OF EXAMINATION FOR THEIR DETECTION.[1]

BY M. ALLEN STARR, M.D., PH.D.,

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THE recent marvellous success of operations upon the brain, and the admission by surgeons that their chief guide in such operations is the presence of localizing symptoms, makes it incumbent upon all physicians to be on the watch for such symptoms. But many of the localizing symptoms require to be searched for, and are not directly complained of by the patient; *e.g.*, hemianopsia, and the hemiopic pupillary reflex recently described by Seguin. Hence it is not necessary to apologize for calling attention to the proper manner of examining a patient who presents one of the most interesting of all local symptoms, namely, aphasia. And I venture to do this before this audience, because of the recent discovery of certain defects of thought and memory associated with aphasia, and now named apraxia, which may not be familiar to those who have not given especial attention to the literature of nervous diseases. The study of patients who belong to the intelligent classes, who are able to appreciate, and become interested in and thus aid in special lines of examination, is open especially to the members of this Academy; and it is from such patients rather than from those found in hospital wards that information regarding these symptoms is largely to be obtained. It is, however, an exception to find in American literature reports of such cases, and I am convinced that this is due to the lack of appreciation of the importance of their careful study and examination, and publication. My object in this paper is not so much to present a review of our present knowledge regarding aphasia and apraxia as to indicate very briefly the methods of examination to detect *all* the symptoms present in patients suffering from these affections.

The division of disturbances of speech into the two great classes of sensory and motor aphasia—the first due to defect in the receptive and the second due to impairment of the emissive functions of the brain—has been followed by a further subdivision into several varieties. These are word-deafness, word-blindness, agraphia and motor aphasia, and paraphasia.

The accepted notion to-day is that every word in ordinary use has a complex mental substratum, which may be termed the word-image, made up of a number of memory-pictures. The memory of the sound of a word as spoken; the memory of the appearance of the word as printed; the memory of the muscular movements needed to write the word or to pronounce it, are known to be distinct from one another and yet to be associated together. Loss of one of these memory-pictures, or disturbance in their association, impairs the integrity of the word-image, and produces such defects in its use as are indicated by the names given to the respective varieties of aphasia. But, before considering these defects, let us look at the physical basis of the thought which lies back of the word. For the word is only a convenient means of expressing a thought, and thinking precedes language, as every intelligent observer of animal life knows, however Max Müller may regard the question. Objects and actions are the chief subjects of thinking, and their mental substratum is not difficult to discover. Take an example. This steel-pen has a certain shape and size and consistence which I see and feel. The shape and hardness perceived by eye and finger are associated and are remembered, and the mental substratum or idea of this pen consists of these two memory-pictures joined together. Other pens have forms of their own, and of them, too, I have a series of memory-pictures. But the idea of the object is only made complete when its use is known. And so to the memory-pictures of the pens is added another of the act of writing; itself a complex image, for that act has been watched and practised before being acquired, and its recollection involves the recalling of those memories of activity of which I have been a spectator or a participant. The mental image of the action is associated with the various mental images of different kinds of pens, so that it forms a common basis for the formation of a general idea of a pen as an object used for writing. And this idea, complex as it is, made up of numerous memory-pictures, is acquired by the mind through observation long before language is used. The baby may try to write before it can say "pen," or before it can describe the act of writing. The words, then, are added to the mental image to make it communicable to others, but are not essential to the idea.

A rose has, as its mental basis, a larger number of memory-pictures than a pen, for it has odor, color, taste, variety of outline and beauty; in fact every object, if thus analyzed, will be found to vary from every other in respect of the memory-pictures which form its mental substratum. What is true of these single words will be found to be true of every other, if the trouble is taken to analyze our subjective knowledge of them—an analysis full of interest, but aside from the present question. It is a fundamental position involved in the accepted theory of cerebral localization that memories are the residua of perceptions and are therefore localizable in the regions of the brain concerned in perception. It follows that these memories forming the idea of an object or an action, being distinct from one another, may be lost by disease of the brain having a limited extent, and that the character of the memories lost will depend on the location of the disease. Now cases have been recorded in which persons acted as if they no longer possessed such object-memories, for they failed to recognize things formerly familiar. A fork, a cane, a pen may be taken up and looked at by such a person and yet held or used in a manner which clearly shows that it awakens no idea of its use. And this symptom, for which at first the term blindness of mind was used, is found to extend to other senses than that of sight. Thus the tick of the watch, the sound of a bell, a melody of music, may fail to arouse the idea which it formerly awakened, and the patient then has deafness of mind; or an odor or taste no longer calls up the notion of the thing smelt or tasted; and thus it is found that each or all of the sensory organs, when called into play, may fail to arouse an intelligent perception of the object exciting them. For this general symptom of inability to recognize the use or import of an object the term *apraxia* is now employed. And since apraxia is a symptom which is very frequently associated with aphasia and which, in fact, may lie at the basis of aphasia, it should always be looked for in a patient. To test for apraxia it is only necessary to present various objects to a person in various ways and notice whether he gives evidence of recognition. Have him watched by his friends, and they will be able to tell whether he still chooses his articles of food at the table intelligently; whether he still knows how to put on his clothes, to use various toilet articles, to sew or knit or embroider if the patient is a lady, to admire pictures, or flowers, or perfumes, as before the illness began. The patient may or may not be able to name these objects; that, at present, is not the question. But is it evident that the object awakens an idea in the mind?

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[1] Read before the Academy of Medicine, October 18, 1888.

The variety of apraxia known as blindness of mind is the one most commonly found, and it may not be uninteresting to recount one case of it, especially as that case affords the first example of its successful treatment by operation.

It is a case recorded by Macewen,[1] of Glasgow, and is as follows:

A man who had received an injury a year previously to his applying for treatment suffered from deep melancholy and strong homicidal tendencies which were relieved by paroxysms of pain in the head. There were no motor phenomena, but it was discovered that immediately after the accident, and for two weeks subsequently, he had suffered from psychical blindness. Physically he could see, but what he saw conveyed no impression to his mind. An object presented itself before him, which he could not make out; but when this object emitted sounds of the human voice he at once recognized it to be a man. In attempting to read, he saw what he considered must be letters and words, but they were unknown symbols to him; they conveyed no impression of their meaning; the memory of their signs was gone; it was a sealed book to him. These phenomena gave the key to the hidden lesion in the brain. On operation the angular gyrus was exposed and it was found that a portion of the internal table of the skull had been detached from the outer and had exercised pressure on the posterior portion of the supramarginal convolution, while a corner of it had penetrated and lay embedded in the anterior portion of the angular gyrus. Removal of the bone resulted in complete recovery from the pain and mental symptoms.

The variety of apraxia known as deafness of mind has recently been studied by Oppenheim,[2] of Berlin. He noticed that while some aphasics retain their musical faculties, others may lose the power to follow melodies, to appreciate music, or to hum or sing the tunes which they formerly knew. Thus, he relates that a patient of Finkelnburg, a flutist, noticed an impairment and finally a loss of power to follow notes, to play or to write notes, at the same time that he lost his speech. Ballet relates the case of a musician who suddenly lost his power to read music, and Kast one of a musician who suddenly became note-deaf; and Oppenheim gives histories of eleven such patients seen by him. That this is not a part of aphasia in any sense is proved by the fact that in many patients no such loss of musical power accompanies aphasia. In the well-known cases of aphasia recorded in this city by Ball and Seguin and by Amidon, it is expressly stated that the musical faculties were unimpaired. Granet tells of a patient who could say only one word, "pardi," and yet who could follow music, and not only sing the tune of the Marseillaise, but, while singing, pronounced several words, "patrie," "enfant," etc., which he could not say voluntarily; and Proust relates the case of a musician who could neither speak nor write, yet who could write a musical melody which he heard sung.

In view of these observations, it is worth while to test intelligent patients as to their musical faculties—their power to recognize tunes, hymns, melodies, their power to sing or hum a tune and to read or write music or play on various instruments.

Investigations of the power of a person to recognize and name an object by touch or taste or smell would be interesting, but have not often been undertaken. The loss of the muscular sense and consequent inability to perform delicate motions of the hands has rendered deaf and dumb persons who use their peculiar language of motion incapable of conveying their ideas; and if cases of this kind were more closely investigated some light might be thrown on the exact location of muscular sense. But all of us, by the feeling of many objects, can recognize them at once with our eyes closed, and thus arouse the memory-pictures of an object through this channel of sensation. Recently a case has been recorded by Farjes, in France,[1] of a gentleman afflicted with aphasia, who, though unable to name an object when he saw it, could do so when he felt it, thus proving that when one association is broken another may persist and be put to use. And in this connection mention may be made of cases, now several in number, of persons who, though unable to read letters which they saw, were at once able to name these letters correctly when they traced the shape of the letter with the finger, the muscular sense thus acting for sight and arousing the idea, and enabling the person to read, though he had true "blindness of mind."[2]

All of these facts are of great interest, not only as throwing light on mental processes of association, but as indicating that those processes are carried on in definite areas of the brain and in tracts which connect those areas, and can be arrested by disease in these parts; for in some of these forms of apraxia the situation of the lesion has been found. It is as yet too soon to make definite statements regarding such lesions. It seems likely that they lie in that *terra incognita*, the white matter beneath the cortex. And if the problem of the differentiation of cortical from subcortical lesions is ever to be worked out, it will only be after a number of cases, thoroughly examined as to all these processes, have been recorded, and autopsies to supplement the clinical record held. Let us see to it that when we get the autopsy it is not rendered useless by a failure in the examination.

One fact, however, of great interest, not formerly mentioned, to my knowledge, has been brought out by a study of the cases of apraxia which I have been able to collect and which are here tabulated—and that is, that that lesion has always been found in the left hemisphere in right-handed and in the right hemisphere in left-handed persons; in other words, in the same hemisphere lesion of which has produced aphasia. It is true that apraxia, like aphasia, has been noticed in cases of paretic dementia in which the disease is diffuse and is situated on both sides. This fact would not, however, imply that a unilateral lesion alone was insufficient to produce the symptom, and the nine cases with autopsy, here brought together for the first time, seem to establish the statement made.

Apraxia has as many varieties as there are organs of sensation. The variety which existed in the nine cases tabulated was that of psychical blindness, and accompanied the form of aphasia known as word-blindness. In all the cases the lesion involved the cortex of the supramarginal and angular gyri, or the tracts posterior to these parts in the white matter beneath them. It is probable, from the association of psychical deafness with word-deafness, that it is due to lesions in the upper temporal convolution, but autopsies are wanting. It is noticeable, however, that this symptom of apraxia is always associated with some form of aphasia. Hence all cases of aphasia should be examined for apraxia. It is well known that lesions in the right hemisphere in right-handed, as the left hemisphere in left-handed, persons do not produce aphasia. In the accounts of cases of such lesions, I have not been able to find any account of the discovery of any form of apraxia. It seems, therefore, that at present we must

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[1] British Medical Journal, August 11, 1888.

[2] Charité Annalen, xiii., 1888.

[1] L'Encéphale, 1888, No. 5.

[2] See Bernard: De l'Aphasie.

TABLE I.—*Cases of Apraxia with Word-blindness.*

No.	Author.	Reference.	Power to recognize objects seen.	Power to read.	Power to write.	Power to understand speech.	Power to speak.	Lesion.	Location in left hemisphere.
1	Bateman.	On Aphasia, 1870.	Impaired.	....	Lost.	Good.	Fair; misplaced words.	Cyst and softening.	P_2, A.
2	Ball.	Arch. of Med., 1881.	Impaired.	Impaired.	Impaired.	Impaired.	Fair; misplaced words.	Softening.	P_2, P_1.
3	Claus.	Irrenfreund, 1883, p. 82.	Impaired.	....	Lost.	Impaired.	Good.	Softening.	Within T-O lobe.
4	Amidon.	N. Y. Medical Journal, 1885, p. 113.	Impaired.	Lost.	Lost.	Lost.	Good.	Softening.	P_2, A, T_1, T_2, O_2.
5	Seppilli.	Functions Localization, p. 182.	Impaired.	....	....	Lost.	Talked jargon.	Softening.	Entire T-O lobe.
6	Monakow.	Arch. f. Psych., 1885, xvi., 166.	Impaired.	Lost.	... .	Lost.	Good.	Softening.	Within T-O lobe.
7	Bernheim.	Hecht. Thèse de Nancy, 1887.	Impaired.	Lost.	Lost.	Good.	Good.	Softening.	Within O lobe, also O_1, O_2, and A. (Right hemisphere, pat. left-handed.)
8	Laquer.	Neurol. Centralbl., 1888, p. 340.	Impaired.	Lost.	Never learned.	Good.	Talked jargon.	Softening.	T_1, P_2, O_2.
9	Macewen.	Brit. Medical Jour., August 11, 1888.	Impaired.	Lost.	....	Good.	Good.	Pressure.	P_2, A.

TABLE II.—*Cases of Pure Word-blindness without Apraxia.*

No.	Author.	Reference.	Power to recognize objects.	Power to read.	Power to write.	Power to understand speech.	Power to speak.	Lesion.	Location in left hemisphere.
1	Broadbent.	Med.-Chir. Trans., 1872.	Good.	Lost.	Good.	Good.	Good.	Softening.	Under T_1 and A.
2	Jastrowitz.	Centralbl. f. Augen., 1877, p. 284.	Good.	Lost.	....	Good.	Good.	Softening.	O lobe.
3	Henschen.	Neurol. Centralbl., 1886, p. 424 (2).	Good.	Lost.	....	Impaired.	....	Softening.	A.
4	Hun.	Amer. Jour. Med. Sci., January, 1887.	Good.	Lost.	Lost.	Good.	Slightly impaired	Softening.	P. C., P_1, P_2, A.
5	Wilbrand.	Seelenblindheit, 1887, p. 180.	Good.	Lost.	Never learned.	Good.	Good.	Softening.	Within T-O lobe.
6	Sigaud.	Progrès Médical, 1887, p. 177.	Good.	Good.	Lost from lack of power to recall appearance of words.	Good.	Good.	Softening.	P_2, A.

NOTE.—P. C. = posterior central; P_1, superior parietal; P_2 inferior parietal, including supramarginal gyrus; A, angular gyrus; O, occipital gyri; T, temporal gyri.

locate our memory-pictures of objects on one side of the brain; and on the same side which presides over speech. This appears to be very strange, since the bilateral connection of each sensory organ with both hemispheres is proven. There appears to be no reason why the appearance of things, their sounds, tastes, odors, etc., should not be received and remembered in both hemispheres instead of in one. But, as a fact, they are not. And the fact remains as mysterious as the corresponding fact regarding speech-memories.

Turning now from this investigation as to the condition of the memory-pictures of objects in the brain which together form the idea of a thing, let us look at the second set of memory-pictures which make up the word-image. As already stated, the word makes the idea available for thought and for its communication. The word "pen" or "rose" brings to a focus a number of various sensory images. But the word itself, in its ordinary use among intelligent persons, involves several of the senses. Words are heard, read, spoken, and written; and each of these processes goes on in its own brain-area, in which area, therefore, distinct residua of the process or memory-pictures of the word lie. Hence each word is composed, as far as its own image goes, of four separate memories, each of which may be lost separately.

1. If the memory of the sound of the word is lost, the word cannot be called to mind and cannot be recognized when heard. Show the patient a watch and he is unable to name it; tell him it is a stone, a match, a watch, and notice whether he dissents from the former and gives signs of satisfaction at the last. If he does, he has only auditory amnesia but not word-deafness. If not, he is word-deaf, and is unable to understand what is said to him. The lesion lies in the posterior half of the first and second temporal convolution in the left hemisphere in right-handed; in the right, in left-handed persons. This is one variety of aphasia whose lesion is well known, though it rarely occurs alone.

2. If the memory of the appearance of the word is lost, the visual image of it cannot be called to mind or recognized, and then the patient will be unable to write spontaneously, for he cannot remember how the letter looks which he wishes to write; and he will be unable to read because the shapes of the letters and words seen arouse no recollection. As a matter of fact, words are forgotten more easily than letters, and if a patient is to relearn to read he must begin with letters and go on to words. Figures are sometimes recalled when words are forgotten, and many a patient can do mathematical calculations on paper who cannot read or write ordinary words. Such patients may also play cards or other games if they are not psychically blind. It is not infrequently the case that persons who are thus word-blind can read aloud, can write at dictation, or copy, and yet show no evidence of understanding what has just been read or written. A distinction must be made between those who can and cannot do these things, though its pathological basis is still obscure. The condition of visual amnesia with word-blindness is due to a lesion involving the supramarginal convolution and angular gyrus, and is often associated with psychical blindness, but may occur independently of it. It was present in all the cases of psychical blindness enumerated in the table, and in the cases tabulated in Table II. Word-deafness and word-blindness frequently occur together, and then the lesion is found involving both the temporal and the angular convolutions. About forty cases are now on record, with autopsies, which prove this assertion. Two of the cases here cited illustrate this combination.

3. If the memory of the effort needed to pronounce a word is lost, a true paralysis of articulation occurs, though the muscles may not be weakened. This is the ordinary form of motor aphasia, due to a lesion of Broca's centre. It is to be noted that such a loss of speech involves a loss of the power of repeating words after another, as well as of voluntary speech, and is not accompanied by any inability to understand spoken or written language. In the uneducated, as in children, the acts of talking and writing are closely joined, as may be seen by watching the lips, which move in the act of writing. But among those accustomed to write much these acts are independent, and it is probable that many educated aphasics may be able to answer questions in writing when their efforts at speech fail. Reading aloud will also be lost in motor aphasia, for here, too, the inability to articulate hampers the patient.

4. The independence of the effort-memory necessary for writing and connected with movements of the hand from the effort-memories of speech has been alluded to. When these are lost alone the condition is known as agraphia. In such a state the pen cannot be used. Copying, writing at dictation, and voluntary writing are all lost. It has been noted already that when a word cannot be called to mind it of course cannot be written. But words can often then be written at dictation, if the person is one who writes much. Hence sensory agraphia and motor agraphia must be distinguished; the former being a part of word-blindness, the latter not at all as-

sociated with inability to read. The lesion of motor agraphia is unsettled, though a few facts point to the posterior part of the second frontal convolution as the probable seat of this function. It is not unlikely, however, that the more exact localization of fine movements of the thumb and fingers in the posterior central convolution by Horsley may be followed by the discovery of the writing centre in this vicinity. As it is still unsettled, it becomes incumbent to test every patient as to his powers of writing voluntarily and at dictation, and of copying.

These forms of aphasia are due to a loss of distinct memory-pictures. These several memory-pictures which are united in the word-image may thus be reasonably regarded as separate from one another in their location in the brain. But since they *are* joined together to form the word-image, it follows that the association-fibres joining the various areas are as necessary to the use of even a single word as the various areas with their memories. It is really by association only that an object or a word becomes a subject of thought or use. To a man who understands English only, the word "cloche," as seen or heard, conveys no idea. Form an association with that word by telling him that it is the French for "bell," and he at once possesses an idea. Or, to put it in another way, cut off from the auditory word-memory "bell" all its connections with sight, sound, feeling, and effort memories—isolate it completely—and when the word bell is heard it no longer means anything. Such complete severance of association-fibres is the probable explanation of some cases of psychical blindness and deafness, including word-blindness and deafness. And when the condition is complete it will, of course, be impossible to distinguish between a loss of the memory-picture and an isolation of the memory-picture. The condition may, however, be incomplete. A man suddenly unable to read at sight is able to recognize letters by tracing them with his forefinger. What does this mean? It is evident that he has a visual memory of the letter, for he can, under certain circumstances, arouse that memory and recognize the word. But he cannot arouse it directly by sight. He has to do so indirectly through muscular sense. Is it not evident that the association of the visual memory-picture with the general visual area is cut off, but its connection with the muscular sense area is preserved; and so, by way of the latter, it can be reached? The association with the word-hearing and word-writing memories in these cases is commonly preserved, for the man could write at dictation or write spontaneously, yet was unable to read what he had just written. All the associations with that visual memory then were intact but one, and that one the one commonly used in reading, namely, from the common sight centre in the occipital lobe to the angular gyrus. Thus analyzing the condition subjectively we reach the conclusion that in such a case some defect in definite associations was present. In four such cases now on record a deep-seated lesion within the occipital lobe underneath the cortex has been found after death,[1] lying in such a position as inevitably to affect seriously the association-fibres passing to the angular gyrus.

Again, it has been noted that the power to recall the name of objects was often lost when the patient was able to recognize that name when heard. It is in a serious and permanent degree the same trouble which we are all liable to when we fail to recall the name of a man whom we know. In such a condition of auditory amnesia the memory or mental echo of the word is not lost, because when the word is heard it is recognized. The memory-picture remains, but is inaccessible by the ordinary way. The sight of the object does not call it up. But, in such a case, if the object be handled or smelt or tasted—or heard, if that is possible—the name may come to mind. Thus the voice of the man may cause us to recall his name when his face has not done so. In other words, if one association-tract is impervious others may be open, and before it can be stated that the memory-picture is lost all the ways to it must be tried. I am not aware that any autopsies can be found to support the theory that auditory amnesia is due to lesion in the association-tracts leading to the temporal convolutions, in distinction from word-deafness due to lesion in those convolutions. But, judging from the facts known regarding word-blindness as distinct from visual amnesia, there is a probability in favor of this theory. Here, again, we are met with the difficulty that previous examinations of cases have been incomplete even when autopsies have been secured.

5. There is one form of aphasia in which the lesion is known to affect a great association-tract; viz., paraphasia, or the aphasia of conduction of Wernicke. In this condition the word-hearing and word-uttering process is perfect, but their connection is broken. The patients can understand what is said to them and can pronounce many words well. But they misplace words, use one word for another; *e.g.*, call, as one of my patients did, the card four of spades the "five of telephone." Such patients may even talk jargon. In such a case it is impossible for the person to repeat a word after another, yet he may be able to speak the word, like the patient who, after trying in vain to say no at the request of the physician, finally gave it up and, shaking his head sadly, said, "No, no." The lesion in these cases usually involves the island of Reil and severs the fibres beneath it which join the temporal and frontal lobes with one another.[1] This power of repetition should, therefore, be tested invariably. A somewhat similar condition of defective writing and copying, in which words are mispelled or are unintelligible, has been recognized clinically, but its lesion is not yet known.

It is therefore evident that the processes of association should be most carefully tested. Such acts as reading aloud, writing at dictation, or copying, may be mentioned as involving the function of a few of the association-tracts, and these should be investigated, as well as those already named.

In many cases of aphasia the symptoms are not such as to point to one of these pure forms of aphasia; a combination of the characteristics of these forms will be found. The patient then has a mixed form of aphasia in which both sensory and motor elements are combined. But in such cases a thorough examination will demonstrate that one or the other pure form is present in excess, and this will indicate in which direction the lesion lies. The fact that all the various speech-areas are supplied with blood by the middle cerebral artery, and the frequency with which an embolus lodges in this artery instead of plugging a small branch of it, explains the frequency of mixed aphasia and the rarity of pure forms—which are due to small areas of softening.

To examine an aphasic thoroughly it is neccessary to test:

1. The power to recall the spoken or written name of objects seen, heard, handled, tasted, or smelt.
2. The power to understand speech, and musical tunes.
3. The power to understand printed or written words.
4. The power to speak voluntarily. Does he talk clearly? does he mispronounce words? does he misplace words? does he talk jargon?
5. The power to repeat a word after another.
6. The power to read aloud. Does he understand what he reads?
7. The power to write voluntarily. Can he read what he has written?
8. The power to write at dictation.
9. The power to copy.
10. The power to recognize the use of objects seen, heard, felt, tasted, or smelt.

The following cases illustrate some of the varieties of aphasia here described, and present interesting features:

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[1] Wilbrand: Seelenblindheit, p. 180; Claus: Irrenfreund, 1883, p. 82; Dejerine: Progrès Médical. July 31, 1883; Broadbent: Med.-Chir. Trans., 1872, p. 162.

[1] Cases of Wernicke, l. c; Dejerine: Rev. de Méd., 1885, p. 174; Starr: Amer. Jour. of the Med. Sci., 1884, Case 99.

Case I. *Word-deafness and word-blindness.*—S. B——, aged sixty-five, right-handed, was suddenly seized with aphasia during the night of April 20, 1888. His wife on waking found him on the floor, acting strangely, saying, "What is the matter with me," and in distress, but conscious and not paralyzed. For the next three days his wife thought that he was out of his head, for he paid no attention to what she said, and could only say one word—"hook." Then the use of words began to return, and he talked better and better. He complained of numbness in the right side, and said that he could not understand her. He seemed himself, but she was unable to get him to answer questions, as he could not comprehend what she said to him. His general health has been about as usual, but he has kept quiet, as going about among people bewilders him. He is always worse in the morning on rising.

Examination on May 14th failed to reveal any sensory or motor disturbance, excepting a slight deviation of the tongue to the right. Reflexes equal on both sides; pupils equal and react normally. The existence of hemianopsia could not be determined, as he could not be made to understand what was sought, and experiments were ambiguous in results, as he was very watchful of all tests. Hearing good; central vision good. Loud aortic direct murmur, with hypertrophy and dilatation of the heart, which was rapid and irregular. The aphasia was tested carefully. As far as the power of articulation and of the spontaneous use of words was concerned he had no loss. He talked freely and rapidly when he could be made to talk at all, and often made remarks of his own accord; *e.g.*, while I was testing his sensation to cotton, he said, "I feel you touch me, if that is what you want to know." As far as the power of writing spontaneously or handling the pen was concerned there was no loss, for he wrote his name clearly, and he also wrote words and figures fairly well. He therefore did not present the symptoms of motor aphasia nor of agraphia.

His power of understanding spoken or written language was, however, almost entirely abolished. He had a bewildered look, and turned to his wife constantly for aid when spoken to, though he did not seem to understand her any better than me. To all such commands as, "Shut your eyes," "Show your tongue," "Stand up," "Sit down," "Put on your glasses," he remained wholly indifferent, listening attentively, but not obeying until the idea was conveyed by gestures, when he at once understood and acted accordingly. To ordinary questions he gives no appropriate answer; sometimes, however, when he sees that a reply is awaited, he says, "I don't understand you;" "I would answer you if I knew what you wished to know." The only method of arousing any comprehension is to repeat a single word over and over, when he sometimes understands. Thus when the word "name" is repeated he at last seems to get the idea, and says, "Oh, my name; yes, my name is S. B——." To several subsequent questions he gives the same reply, and seems puzzled that I should ask, as he supposes, the same question again. The word "age," repeated, elicits the answer, "Sixty-five, sixty-seven," and he appears uncertain as to the exact number. When asked his address he does not reply, but when it is repeated gives his name again, then his age, and only when the words "Long Island" are repeated several times does he get the idea. Then he gives his full address at once correctly. There is, therefore, almost total word-deafness. His auditory memory of the names of objects is also impaired, for when various objects were shown him he failed to name many of them, though after several attempts he occasionally succeeded. He appeared much perplexed at his failure to name objects and so much distressed that tests were not pursued. The power to recall names, as well as the power to recognize words, was therefore much impaired. Since it was impossible to obtain replies to spoken questions, written questions were put to him. And this elicited a remarkable symptom. He read to himself or aloud all that was written, easily and rapidly, but failed utterly to understand what he read. To very few of the written questions did he show any evidence of intention to reply. In one or two, a single prominent word read several times aloud awakened an idea; thus, "When did this begin," was answered by, "I don't know whether I can tell you; it was the twentieth of April, I think." "Where do you live?" he read three times aloud, and then answered by giving his name. Other questions were equally lost to his understanding. It was evident that word-blindness as well as word-deafness was present, and in about an equal degree. This condition of word-blindness appeared to prevent his writing freely. The only thing he could be got to write was his name; and this he wrote again and again when attempts were made to make him write at dictation or copy. In fact, he could do neither of the last two even when the idea was conveyed to him by gestures. He succeeded a week later in copying a few figures, but was unable to add them up, though formerly a good accountant. The word-blindness was therefore associated with visual amnesia.

The condition was therefore one of pure sensory aphasia, word-deafness and word-blindness being combined; but no disturbance of utterance, no misplacing of words, no hesitancy in reading aloud being present.

The diagnosis of embolism of the terminal branches of the left Sylvian artery, producing anæmia and loss of function in the first temporal and angular convolutions and the intervening cortex, seemed justifiable in view of the existence of a cardiac obstruction at the aortic valve, and in view of the post-mortem findings in similar cases in the brain.

During the following months he improved slowly but steadily, the irregular cardiac action being corrected by the use of digitalis. He soon recovered the power to name objects and to write after a copy, but was still unable, in July, to write at dictation or to add and divide. His wife thought that he understood many things he heard, but she admitted that he did not comprehend what he read, for he had given up reading his Bible on this account. It was evident that he understood much that was said to him. Thus it became possible to test his visual field, which was found to be intact on all sides though slightly contracted in the right eye. Ophthalmoscopical appearances were normal from the first.

In October he was very much better. He now understood what was said to him, if it was said slowly, but it was difficult for him to follow conversation, as the change from one topic to another confused him. He would go on talking on a previous subject even when questions on a new one were asked, and his wife says that she has to indicate to him that the subject is changed by clapping her hands. He is able to name objects quickly and correctly and speech is as fluent as ever. He reads without hesitation aloud and says that he understands. His wife says that he now reads the papers and tells her the news. So she is sure that he does understand what he reads if he reads very slowly. Rapid reading, like rapid speaking, he is still unable to follow, and for this reason he cannot yet go to church.

His writing is still imperfect. He figures and calculates perfectly, but makes mistakes in writing at dictation and in copying. During an attempt to write he stopped and said, "I can't think how that letter looks." It was a capital H which he wanted; and a little later in the test, when a word beginning with it was given him to copy, he failed to make it properly, writing Nurrison for Harrison. And it is this lack of memory of the appearance of words which prevents his writing with any freedom. There is therefore still a moderate degree of sensory aphasia, the word-blindness being now more prominent than the word-deafness.

Case II. *Word-deafness and word-blindness; temporary apraxia.*—T. D. C——, aged forty-two, right-handed, suddenly became unconscious on March 11, 1888, and on coming to himself a few minutes later felt bewildered, did not recognize his surroundings or his wife or father, and could not talk intelligibly or understand what was said to him. He therefore presented symptoms of aphasia with psychical blindness. His alarm led him to desire to see his physician, Dr. Walker, to whom he at once wrote the following note, which he apparently read over after it was written and sent off with the idea that it was a request for an immediate call. The note is written in his natural handwriting and reads: "Please person me personally per me Dr. personally me personally me. My love. T. D. C." Dr. Walker saw him on the following day and found a condition of almost total aphasia. He tried to talk, but could not be understood, the words used being disconnected. He said, "Crazy, I am crazy!" and he was unable to reply to questions, as he could not understand anything said to him. He was slightly paralyzed on the right side of the face, not elsewhere, and he had pain over the left eye and in the forehead and head on the left side. For a week this condition remained and then he began to improve rapidly, recognized his family and friends, regained the use of words, and on March 24th wrote a letter of some length quite correctly to Dr. Walker. I saw him March 25th. He then talked freely and rapidly, so that no one would have noticed any difficulty of speech, articulation being distinct and words used correctly. He was able to write spontaneously freely, but has difficulty in writing at dictation and in copying. The words dictated had to be repeated if more than three words were given, and in copying he scanned closely each letter and word. But writing thus slowly he made no mistake. There was, therefore, no motor aphasia or agraphia.

There was, however, marked impairment in his power of understanding what he heard or read. My questions were only understood when spoken very slowly and repeated, and any sudden change of subject caused evident bewilderment. His wife had found it very difficult to make him understand, and as she spoke to him in French it was evident that this, as well as his English memory of words, was impaired. He had been to the theatre and occupied a front seat the day before I saw him, but had been unable to understand the words of the play, so that, as he said, "The actors might as well have spoken in Greek." Unfamiliar words were not as readily understood as common ones, and the bewilderment increased as he was examined; so that at the end of half an hour he did not understand as quickly as at first. He was able to repeat single words after me, but if more than two or three were given him at a time he failed, and in a long phrase only occasional words were remembered. His recollection of familiar sentences, *e.g.*, "Peter piper," was, however, good. The same trouble was noticed in writing at dictation as in repetition. He recalled the name of various objects shown to him readily. He therefore had partial word-deafness.

When asked to read he did so to himself and aloud accurately. But he only understood short sentences, and if long ones were read through they conveyed no idea to him. He was spending most of the time in reading, but confessed that he only got an indefinite idea of what he read. The single words, if dwelt upon long enough, are understood, but when combined into sentences are not fully comprehended. He remembers having read the note to Dr. Walker, and supposed it was written correctly. When given paragraphs of a newspaper to read he was never able to tell subsequently the contents of the paragraph when he had read it rapidly. In writing from a copy he could only recollect the appearance of a word or two of the copy and had to consult it frequently. There was therefore partial word-blindness.

Hearing and sight were perfect, the visual field being equally extensive in both eyes and normal. No trace of the psychical blindness remains. He has a systolic murmur, heard at the apex and conveyed to the back. He did not recover from his sensory aphasia, but went abroad, and died in Paris of acute encephalitis about the middle of April.

In both of these cases the power to speak, the power to write spontaneously, the power to read aloud were preserved; the power to understand spoken or printed language was lost, and the power to repeat sentences, to write at dictation, or to copy was impaired. In both, the power to recall the names of objects seen was much better than the power of recognizing those names when heard. In both, the things which were read aloud correctly were nevertheless not comprehended. In both, the condition present was pure sensory aphasia without any affection of articulation, or of the use of the pen; and in both a very marked degree of recovery had followed the attack. In both, the word-deafness and word-blindness were about equally marked. In neither was motion, sensation, sight, or hearing markedly impaired.

CASE III. *Paraphasia progressing to total aphasia.*—H. A. T——, aged fifty-four, right-handed, after a severe mental strain gradually developed a difficulty of speech during a period of three weeks preceding the time when I saw him in consultation with Dr. O'Dwyer on January 9, 1885. He first misplaced words, using one word when he meant to use another, both in speech and in writing, and this increased until his speech became almost unintelligible. At the same time mental failure was thought to be present, as he seemed less able to understand what was said to him than formerly, and had forgotten many words and names. On examination it was found that he understood fairly well all words and short sentences, but failed to follow long sentences or complex orders. When told to walk, to stand still, etc., he did so; but when told to pick up a pack of cards and put them on another table he did not catch the idea till it was repeated slowly. His power to recall the names of objects was very much impaired, but he dissented from wrong names and recognized the right names when told. He often recognized the fact that he had not said the word which he meant to say, but he did not succeed in this always; so that he often became indignant with his wife because she failed to understand him. He could not recall the names of presidential candidates, of the day of the week, or month; and even when told he forgot them at once. There was, therefore, considerable auditory amnesia and word-deafness. There was also some word-blindness. He read single words, but sentences seemed to convey no idea. When he attempted to read aloud he uttered jargon. When he attempted to write, either voluntarily or at dictation, or after a copy, he only succeeded in making a series of badly-formed letters, few words being properly spelled and the result being illegible. Though an expert accountant he failed to add or subtract correctly, putting down and saying out loud the wrong figures every time. That his mental powers were not impaired was evident from the fact that he would not allow me to take the paper on which these attempts at writing had been made until I tore off and gave to him the part containing his name. There was evidently a considerable degree of word-blindness.

His power of articulation was good, words being well pronounced and his speech rapid and fluent. Like the power of handling the pen, the power of forming words was unimpaired. There was no motor aphasia and no motor agraphia.

But the chief defect consisted in a substitution of some word for the one which he wished to use. Thus when asked to name the card of a pack with which he had been playing he called the four of spades "five of telephone;" "trying to do" he pronounced "trayling to dool." His alphabet was said as follows: "a, m, w, x, w, m, x, y, w," the constant recurrence to "m" and "w" being noticed; he also substituted m for four in counting from one to ten. The The days of the week were not said correctly, Friday coming next to Tuesday, but this he noticed and corrected after saying them all over from the first. He made mistakes in repeating words after me, as well as in talking and in reading aloud. This difficulty of speech becomes worse when he is excited, and then not a single sentence of a long harangue can be comprehended. This is especially unfortunate, as he is anxious to give directions regarding financial affairs and about his will, and though he knows what he wishes it is impossible for others to learn his desires, either by his speech or in writing.

Vision and hearing good; slight paresis of right side of face and tongue, none elsewhere; no anæsthesia; optic disks normal; no cardiac disease. Syphilis is suspected but no history was obtainable, and specific treatment, on which he was placed, failed to modify the course of the disease, which progressed to total aphasia and right hemiplegia, and he died comatose on February 9, 1885. No autopsy was obtained.

In this case a partial degree of word-deafness and word-blindness was accompanied by a very marked condition of paraphasia with paragraphia.

CASE IV. *Paraphasia and paragraphia.*—W. E. V——, aged forty-five, right-handed, became unconscious suddenly in March, 1884, and on recovering consciousness was unable to talk, had much tingling and numbness in his entire right side, but no paralysis. For a month he could only say, "How many," but then the use of words returned, and improvement has been steady until February, 1885, when I saw him. He is an intelligent physician and interested in his own case. He understands perfectly whatever he hears or reads, and has no evidence of psychical blindness or deafness, though for a few weeks after the attack he could not play cards or enjoy music as he had formerly done. His pronunciation and his power of using the pen are perfect, and his only complaint is that both in speaking and in writing he uses wrong words. In talking he chooses his words carefully and speaks slowly, but makes occasional mistakes; *e.g.*, "when" for "well," "lant" for "lance," "misplate" for "misspell." He says his alphabet, and counts perfectly. He says that, when unable to say the word he is thinking of, if he calls up to his mind the appearance of the word as written he can usually pronounce it correctly; and it is found that he makes fewer mistakes in reading aloud than he does in talking. In writing he often mispells words, *e.g.*, "unforable" for "unfavorable," "sencotts" for "senate," but he copies freely, remembering several words easily, and he writes well at dictation. He says that he has sometimes written the name of one drug in a prescription for another, and that he is also apt to write the quantities wrong, so that he never fails to read his prescriptions several times. He finds much difficulty in keeping accounts, addition and subtraction being very much impaired, and the results being very apt to be wrong. The condition is therefore one of paraphasia with paragraphia. He has cardiac disease, which makes it probable that the lesion is embolic in origin. Vision and hearing unimpaired. Six months subsequently a slight improvement had taken place, but he never recovered entirely, and died of cerebral embolism three years later.

Such an uncomplicated condition of paraphasia is rare, and it is especially interesting to notice that conduction of impulses from the word-hearing centre to the word-uttering centre was more interfered with than from the word-seeing centre to the word-uttering centre. He therefore got over the obstacle by calling to mind the appearance of the word, and then could say it when the recollection of its sound was insufficient to initiate the movement. The lesion therefore affected the association-tract between the temporal and frontal lobes more seriously than the one between the angular gyrus and the frontal lobe.

RENAL CANCER WITHOUT URINARY SYMPTOMS.—Dr. Julius Wesselowski reports (*Medical Register*) a case of cancer of the kidney occurring in a child aged five years—female. At the autopsy the left kidney was found the seat of trouble, it weighing two pounds and eight ounces. There was found neither albumin, blood, nor pus in the urine during life. The pain was severe, and there was icterus due to pressure on the ductus communis choledechus.

THE ASEPTIC USE OF MALGAIGNE'S HOOKS IN TRANSVERSE FRACTURE OF THE PATELLA.

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A. B——, aged thirty, was admitted to the German Hospital in April, 1888. The evening previous, in alighting from a train which had slowed up, but was still in motion, he had made a violent effort to preserve his balance, had felt something give way at the front of the right knee, and had suddenly become unable to use the limb. When examined, twelve hours later, the circumference of the right knee was twenty-one inches as compared with fifteen and a half inches on the left side. There were considerable tension and marked fluctuation. The fragments of the fractured patella were indistinctly felt, separated from each other by an interval of about three inches. He was in considerable pain, and was quite unable to extend the limb. After thorough and scrupulous purification of the skin about the joint I proceeded as follows: A hollow needle was introduced, first to the inner and then to the outer side of the swollen joint, and several ounces of bloody fluid were withdrawn by aspiration. This enabled the fragments to be readily palpated and brought into good position. The apertures made by the aspirating needle being then closed with iodoform and collodion, two pairs of Malgaigne's hooks, which had been previously boiled and soaked in a one to twenty solution of carbolic acid, were placed *in situ*, the upper hooks of each pair being fastened firmly in the edge of the upper fragment close to the insertion of the quadriceps tendon, this being drawn downward. The other hooks were placed in position by being thrust through the soft parts into the inferior edge of the lower fragment. On approximating them, by means of the screw, the fragments of patella were brought apparently into almost perfect position, the line of fracture being barely discoverable, by reason of a slight elevation of the lower edge of the upper fragment. This procedure was effected under antiseptic irrigation, and the limb was then dressed by encircling the joint with moist sublimate gauze, which included and covered in the hooks; outside of this a layer of sublimate cotton was placed, and the limb was carefully bandaged with an antiseptic roller. It was then placed upon a posterior splint, and the foot elevated for about eighteen inches. The patient had absolutely no symptoms whatever. There was no elevation of temperature, and on the two occasions when the joint was looked at the fragments were found to be in the same excellent position, the injured knee had the same appearance as the opposite knee, and the hooks did not even produce the ulceration of the skin or soft parts which I had anticipated. At the end of five weeks the hooks were withdrawn by easing the points out, first from the lower and then from the upper fragment. This was readily done without disturbance of the broken bone, and an examination then made by my colleagues and myself established the fact that the fragments were in close contact, and that it was barely possible to discover the line of fracture. The limb was again placed upon the posterior splint, the little apertures left after the removal of the hooks were dressed antiseptically, and the patient left undisturbed for some days. The splint was then removed, and a figure of eight bandage placed around the joint. The patient moved and tossed around in bed, but, so far as I could learn, did not get out or make any attempt to use the limb for support or progression. I was about to order slight passive motion, when another examination revealed the fact that a slight separation of the fragments had occurred to the extent, possibly, of three-eighths of an inch. The posterior splint and figure of eight bandage were at once reapplied, and the question submitted to the patient of the propriety of cutting down and wiring the patella. He declined the operation, and left the hospital some weeks later with a fairly useful limb, the fragments having undergone no further separation.

The proper treatment of fracture of the patella is at the present day still a subject of disagreement among surgeons of experience and ability. The questions to be considered in arriving at a definite conclusion as to the merits of the radical method of cutting down and wiring the fragments are as follows:

1. Are the results obtained by the ordinary methods of treatment satisfactory?
2. If not, what are the causes of failure?
3. Is there no method less radical than that of opening the joint and wiring the fragments which will be equally effective?
4. If the latter be answered in the negative, what are the dangers of the operation of wiring?

Taking these questions up in the order mentioned, there can be little difficulty in answering the first one in the negative. Every surgeon is familiar with the disability accompanying ligamentous union in cases of transverse fracture of the patella, and it is safe to say that bony union is one of the rarest occurrences after such an injury. The patient, with a fibrous band of an inch or more in length interposed between the upper and lower segments of his patella, will have a gait which is peculiar and unmistakable. He cannot bring forward the foot without flexing the knee, he cannot go downstairs without placing both feet on the same step at the same time, on account of his inability to maintain the leg of the injured side with any certainty in the line of the thigh. If he is in the supine position he cannot lift the limb while holding the leg in full extension. In addition, there is a feeling of uncertainty in standing and walking, frequent and recurrent hydrops articuli, atrophy of the quadriceps femoris, often more or less joint-pain, in many cases the necessity for a brace or knee-cap, and other minor inconveniences. Refracture is not uncommon, and in the very best cases convalescence is tedious and protracted. These conditions are not exaggerated. While Malgaigne states that he has never seen the function of the limb completely restored even when the separation was limited to one-third of an inch, Dennis asserts that after a careful analysis of a large number of cases treated by the older methods he has found that a separation of the fragments amounting to half an inch is considered a most favorable result.

It is evident, without further argument, that as compared with this condition a close bony union of the fragments is greatly to be desired. Mr. Henry Morris has, to be sure, called attention to the fact that in cases where the fibrous band is very short and firm there is practically no weakening of the joint, and that in such cases, when refracture occurs, it is the bone and not the ligamentous band that breaks. Even admitting these statements as correct, I am convinced, after an independent investigation of the subject, that such results as Mr. Morris describes are extremely rare, and cannot be confidently expected in more than five per cent. of ordinary cases.

2. The alleged causes of failure to procure better results by ordinary methods may be divided into three classes.

a. Mr. Lister believed that non-union was usually due to two factors: The separation of the fragments by the contraction of the quadriceps muscle, and the presence of accumulated fluid within the joint. *b.* Von Bergmann thinks that the atrophy of the quadriceps, due to the pressure of the dressings employed and to disuse, is progressive, and believes that this condition is responsible for a large proportion of the cases in which it is impossible to extend the limb. *c.* Macewen believes that the chief cause of non-osseous union is the interposition of fibrous and aponeurotic structures between the fractured surfaces, and that, before such union can be obtained, it is requisite in the first instance to elevate all the tissues which lie over the fractured surfaces and which prevent them from coming into intimate contact. In explanation of this view he details cases in which he has found portions of the soft parts lying between the fragments, either forced there by the vulnerating body in cases of direct injury, or driven in by atmospheric pressure when the fracture is the result of muscular violence. In such cases the fibrous and aponeurotic structures, being more elastic than bone, the latter breaks first and then retracts, while the soft parts stretch, give way, and are then forced in between the fragments by the pressure of the outside air. Macewen's observations have been corroborated by Hardy, Laylard, and others. Fowler, of New York, reported a case in which he found irregular, shreddy fibres of the soft tissues at the upper edge of the rent intimately adherent to the projecting spiculæ of the roughened fractured surface of the upper fragment. Sir Joseph Lister has recently told me that, in his own cases of fractured patella, he had frequently found it necessary to elevate such portions of the soft tissues from between the fragments, and he expressed a general acquiescence in the view which attributes to them the chief importance in the production of ununited fracture.

It is safe to say that the above-named causes include all the chief factors which tend to produce non-union; but much depends upon the relative importance which is assigned to them. It is self-evident that continued separation of the fragments must prevent union by bone. It is almost equally probable that a large unabsorbed or organized effusion of bloody synovia will have the same effect. Atrophy of the quadriceps will, of course, and necessarily, interfere with the further use of the limb and would serve to increase the disability apparently due to the want of bony union. As to the influence of fragments of soft parts interposed between the bones, it would seem, on *a priori* grounds, to be the least potent factor of the three, as absorption and disappearance of soft and living tissues under such circumstances might reasonably be expected.

One of the strongest advocates of wiring adopts the plan of turning the ends of the wire in between the bones instead of hammering them into their outside surface. This would seem to offer an obstacle to bony union at least equal to that caused by the presence of shreds of fibrous tissue; but it did not seem to affect his results, which were excellent. It is evident that if Macewen's explanation be the correct one, and the interposition of the prepatellar fibrous structures be the chief cause of non-union, the only rational method of procuring bony union is by cutting down and elevating these fragments of the soft parts. The other indications can, however, be met by much simpler and safer methods of treatment The exudation in the joint can be removed by aspiration. The fragments can be brought together and held in position by bandages, or by Malgaigne's hooks, as in the case above described. Indeed, immediate aspiration of the joint and the aseptic application of Malgaigne's hooks covered by sterilized or aseptic dressings, together with the use of a posterior splint and a light, moderately firm bandage, would seem to meet every indication except the one which has been mentioned. The use of the hooks enables us to dispense with the excessive pressure by bandages or otherwise required to keep the fragments in apposition. It certainly approximates them more nearly and accurately than does any other method I have ever seen, with the exception of wiring. It combines all the advantages of the old methods by splints and plaster with a greater degree of accuracy in bringing and holding the fragments together. There should be scarcely more risk of septic infection than in an ordinary subcutaneous tenotomy, provided ordinary care as to aseptic precautions be taken at the time the hooks are introduced. If Macewen is mistaken in assigning to the influence of the presence of the prepatellar structures the majority of cases of non-union, the aseptic use of Malgaigne's hooks would, in my judgment, be the most rational method of treating transverse fracture of the patella. It must be confessed, however, that the case above described rather seems to corroborate Macewen's theory. I think it quite possible, however, that I removed the hooks two or three weeks too soon; and that their longer retention might have resulted in a permanent bond of bony union.

In estimating the comparative value of the different methods, it is needless to say that the danger to life should exert a predominant influence. This danger is undoubtedly greater by the method of wiring than by any other plan of treatment. And it is this fact which causes careful surgeons to hesitate to-day in recommending its employment. Of the 186 cases included in the table of Dennis, there were 34 cases of suppuration, 4 amputations, 24 cases in which the result was said to be poor, 14 of them were said to be complete anchylosis, and there were 11 cases which terminated fatally. Of the remainder, 35 were marked as ending with a fair result, 17 of them having incomplete or partial anchylosis. Mr. Lister himself has told us that before he made the incision in the first case of wiring which he ever performed, he remarked to those sitting around him in the amphitheatre that he considered no man justified in performing such an operation unless he could say with a clear conscience that he considered himself morally certain of avoiding the entrance of any septic mischief into the wound.

The opposition at this time (November, 1883) was very strong, and such surgeons as Mr. Bryant, Mr. Adams, Mr. Sidney Jones, Mr. Henry Morris, Mr. Edmund Owen, and Mr. Grant placed themselves on record as opposed to the operation, believing that the bulk of simple fractures do well enough without it, Mr. Christopher Heath going so far as to remark that he thought Mr. Lister's paper would cost many knees and many lives. As recently as August, 1887, we find that Messrs. Barker, Thompson, Stoker, and Robson were equally opposed to the indiscriminate performance of the operation. The strength of the feeling against the operation, only a few years ago, is well shown by the following conclusions reached editorially by the London *Lancet*, after a full consideration of the subject. They were:

1. That the operation is not suitable as a primary measure; 2. That in view of all its dangers and of the good results obtained by other and perfectly safe methods of treatment, it is not commendable for general employment; 3. It is not justifiable unless with most absolute asepsis.

The French Academy of Surgery pronounced against it with almost equal force, and the most recent writers on fractures and dislocations have freely agreed with Pick, who says that he would not permit the operation to be done upon himself, and therefore cannot recommend it to his patients.

Mr. Howard Marsh (Art., "Fracture of the Patella," Heath's "Dictionary of Practical Surgery") says that the prevailing opinion in regard to this operation is that in cases of recent fracture it is uncalled for, while in many cases of old fracture it is impossible to carry it out in a satisfactory manner. He adds that he cannot recommend Malgaigne's hooks, as their use has been followed by diffuse inflammation around the patella, and even by suppuration of the knee joint, ending in some cases fatally, in others in anchylosis, and because, although they draw the fragments more closely together than any other method except wiring, they do not by any means insure bony union. Packard (Article on "Injuries of the Bones," "International Cyclopædia of Surgery," vol. iv.) only countenances resection and suturing when everything else has failed, and it is clear that want of union between the fragments is the sole cause of the disability. Ceci (*Deutsch. Zeitsch. für Chirurg.*, February, 1888) describes a method consisting of a subcutaneous buried suture which surrounds the patella, and passes through the tendons above and below it close to its margin. He reports 5 cases in detail, all of which were successful. He believes that this plan of treatment has the following advantages: The general applicability of the suture, no matter how great the comminution of the patella; the mechanical union of the fragments, independent of new bone-formation, and affording sufficient and permanent resistance to the disjunctive forces; the subcutaneous character of the entire operation, permitting of rapid and thorough repair of the superficial and deep soft parts, completed in his cases in from four to eight days; the removal of the splints as early as the end of the first week, after which the joint requires neither immobilization nor compression. The practical advantages of the method he thinks may also be seen when it is studied in its relation to the causes of non-union. If, for example, union does not take place on account of blood or synovial exudation, puncture of the joint or aspiration is not required, as the exudation will escape through the openings made to admit the suture, and this emptying the joint can be facilitated by the employment of gentle massage. Atrophy of the quadriceps is to a great extent avoided, by the very early period at which passive motion or even active movement can be permitted. If union is prevented by the interposition of fibrous bands, the subcutaneous wire suture is sufficiently strong to hold the fragments together.

In several of his cases, months afterward, the wires could be felt plainly through the skin and gave rise to no trouble or inconvenience of any sort. The operation appears to bear a close resemblance to that of Volkmann, who employed a silk suture passing out through the quadriceps tendon and through the tendo-patellæ, and to that of Kocher, who passed a silk thread above and below the fragments by means of a transverse or longitudinal incision. König has done a similar operation, employing catgut. I have have had no opportunity of testing this operation practically, but it would seem to be open to the same criticism as the use of Malgaigne's hooks; that is, if bony union is the object aimed at by the surgeon in the treatment of this fracture and if such union is prevented by the presence of fibrous tissue between the fractured surfaces, the encircling wire, while it insures approximation, as do the hooks, will yet fail to bring about osseous repair. It is hard to believe that, in the absence of such union, the wire will permanently hold in place the fragments of a broken patella. It would appear that the methods by buried sutures were at least open to the same objections as the use of the hooks, namely, the risk of consecutive inflammation and suppuration. Cases of this kind have already been reported by Agnew, Hamilton, Volkmann, and others, but in the majority with which I am familiar the hooks were used with little or no antiseptic precaution.

It appears to me that, in connection with this subject, the most important practical point now before the profession for final and conclusive settlement by means of large numbers of carefully observed and recorded cases is that which relates to Macewen's theory of the cause of non-union. This applies to all recent fractures, and in each case which is operated upon by incision and wiring, in all cases of compound fracture of the patella, and in all instances in which patellar fracture is associated with other and fatal injuries and in which an autopsy is attainable, the condition as to the presence or absence of prepatellar fibrous tissue between the fragments should be carefully observed and noted. In old fractures of the patella with marked disability, especially when that disability results from wide separation of the fragments, there is a general concurrence of opinion to the effect that wiring is justifiable. Mr. Lister, however, at the time of his original address upon this subject said that he considered the old ununited cases as in every respect worse subjects for operation than the recent ones. There is certainly one difficulty—that experienced in approximating the fragments—which does not exist in cases of recent fracture. Mr. Turner has reported a case in which the difficulty of bringing the fragments together caused the abandonment of the operation. Mr. W. E. Ward has recorded one in which the wires repeatedly broke during an attempt to bring together the fragments in a fracture five months old.

In these cases Malgaigne's hooks were used and left in for thirty days, the wound and the hooks together being enveloped in a salicylic and iodoform dressing. J. E. Michael and Muskett have each reported cases in which it was impossible to bring about accurate apposition of the fragments. Tenotomy and myotomy of the quadriceps have been resorted to to overcome this difficulty. Macewen has recommended a series of **V**-shaped incisions made into the substance of the muscle, as a means of lengthening it without much diminution of its strength. Cameron, of Glasgow, first frees the under-surface of the muscle from the bone by means of a blunt instrument introduced beneath the upper fragment of the patella, and then incises the muscle itself obliquely at two places, the cuts beginning at the inner and outer edges a short distance above the patella and running parallel with each other nearly to the opposite edge. They go through the entire thickness of the muscle and permit of great elongation without complete severance of its continuity. Lister now uses this method in old cases attended with shortening.

In 22 recent cases of wiring, Turner reported no deaths and one case of anchylosis, while in 28 old fractures which were wired there were 2 deaths and 7 cases of anchylosis. I believe that, with our present knowledge of the subject, the following conclusions are justifiable :

1. The results obtained in transverse fracture of the patella by means of splints, plaster dressings, or bandages are extremely unsatisfactory, owing chiefly to the absence of bony union, to the length of the fibrous band interposed between the fragments, and to the accompanying atrophy of the quadriceps muscle.

2. If further observation shows that the chief difficulty in getting good union lies in the separation of the fragments and the presence of blood and synovia, the treatment to be preferred will probably be some form of the prepatellar wire suture or the aseptic use of Malgaigne's hooks after aspiration of the joint.

3. If, however, as seems highly probable, the chief cause of non-union is found to be the presence between the fragments of portions of the aponeurotic tissue in front of the joint, it will be good surgery in all cases of recent fracture to cut down with the strictest and fullest antiseptic precautions and wire the fragments.

4. In old fractures, on account of the increased risk and the difficulty of the operation, the disability of the patient should be quite decided before wiring is recommended by the surgeon.

SALICYLATE OF MERCURY IN VENEREAL DISEASES.—After a number of experiments with this drug, Dr. Szadek comes to the following conclusions : 1. Salicylate of mercury is as efficacious a remedy for syphilis as any other mercurial employed until now ; it is most suitable for application in secondary affections ; given internally, it causes the milder symptoms of syphilis to disappear. When introduced into the organism by deep injections, it quickly removes all symptoms of syphilis. 2. Given by the mouth, or by means of deep injections, it does not produce any injurious effects, and in this regard it differs from other mercurial preparations, and may be employed as the most suitable mercurial in syphilis. 3. Employed externally, it is very useful in various local syphilitic affections, producing resorption of gummata and healing up primary and secondary ulcers. 4. In acute and subacute gonorrhœa it produces no abortive action on the course of the disease ; in some cases, however, it acts well, causing a diminution in the discharge.—*Przeglad Lakarski*, June 9, 1888.

GLYCERINE OF STARCH AS A SURGICAL DRESSING is highly recommended by Dr. Charles E. S. Flemming. He dissolves in the glycerine some antiseptic like the bichloride.

A NEW METHOD OF STUDYING THE PECULIARITIES OF COLOR IN SKIN DISEASES.

By FREDERICK J. LEVISEUR, M.D.,
NEW YORK.

THERE is no doubt that color, as a symptom, plays a very important rôle in the diagnosis of skin diseases. Yet we have no sufficient facilities at our disposal to study this symptom more closely. A glance at the descriptions of skin eruptions in text books and medical journals will invariably impress one with the fact that a more general understanding of the peculiarities of color in diseases of the skin is very much called for. Bluish or yellowish red, deep or pale red, red shading to yellow, copper, or tan-colored, red with a violaceous hue, even irritated or (*horribile dictu!*) angry-looking, are some of the terms with which we are often confronted. These certainly are devoid of meaning, and to hurl them at the inexperienced student recalls to mind the futile attempt of describing the colors of the rainbow to a man born blind. During my stay at the Hôpital St. Louis, Paris, I made a careful study of the large collection of wax models representing skin diseases. Monsieur Baretta, the renowned maker of these models, keeps the details of the manufacturing process strictly secret, and very little could be learned from him about it. On investigating the subject, I came across an article by Dr. Brooke, of Manchester, in which the writer, in a very clear manner, gives an able description of "The Plastic Representation of Skin Diseases" (Dr. Unna's *Monatshefte fuer praktische Dermatologie*, 1885). This article, and the material placed at my disposal through the kindness of Dr. L. D. Bulkley, of the New York Hospital, enabled me to pursue my work. It is my object to demonstrate, in the course of this article, that to produce good models no "mighty magic" will be called into play on the part of the operator, but only a little dexterity, which anyone can easily acquire. It is hoped that other colleagues may be induced to begin work in plastic representations, for it offers a novel, yet the most reliable, method of fixing in mind and studying the transitory manifestations of skin diseases.

The following is a *résumé* of the manner of producing wax models of parts of the body and extremities. To model parts of the face or limbs in their entirety is a more complicated process, which requires some experience and is easier to be demonstrated than described.

The first step is to take a plaster-of-Paris cast of the seat of the disease. A good-sized porcelain bowl is partially filled with cold water, into which plaster-of-Paris powder is sifted without stirring. The plaster of Paris used by dentists is the best, especially if it has been kept carefully dry and is not flabby. As soon as the water ceases to readily absorb the plaster of Paris, dip the hand into the mixture directly underneath the surface of the liquid and gently keep stirring the latter, always carefully avoiding the production of air-bubbles. The pap will then soon begin to thicken. Now pick it up with a scoop, and gradually pour it upon the part to be modelled, the latter having previously been prepared in the following manner : First, it is carefully cleansed, dried, and lightly painted over with oil by aid of a fine camel's-hair brush, and then surrounded with a projecting wall of moulding, clay, or wax, in order to prevent the plaster-of-Paris mixture from spreading, and cause it to cover the object in a layer thick enough to guarantee a solid and durable cast. Besides, all the cavities and recesses due to the roundness of the human body are filled with the same material. We avoid thereby a good deal of trouble afterward, when it comes to taking the cast off the patient's body. We return now to the plaster-of-Paris mixture which was ready for use, and pour a large quantity of it upon the cast which has been prepared in the manner just described. Ten to fifteen minutes will elapse before the pap becomes sufficiently hard to be taken off. In removing the cast from the patient we proceed very carefully, lest we break or crack it. It is advisable to gently loosen the edges of the cast with a blunt knife and then gradually lift it from the skin. The cast taken off the patient has, on its concave side, an exact impression of the part we intend to model. The elevations found on the patient's skin (however minute they may be) form depressions in the plaster-of-Paris cast, and *vice versa.* It is obvious that, by using this cast as a mould or matrix and making a second cast from it, we will get a correct fac-simile of the part of the patient's body with all the details of formation of normal and diseased skin.

The general shape of the plaster-of-Paris, or first cast, as taken from the body, resembles a trough or gutter, and in order to make it serve the purpose of a mould, it is necessary to build a sort of wall of plaster of Paris at those sides which, when left open, would let run out the prepared material about to be described. We intend to use this mould like a pudding-form or pan, and have to take care to remove all the prominent edges and projecting points in order that our second cast, *i.e.*, the wax model, will slip out of the mould with the same ease as a pudding does. After this has been accomplished, the mould is immersed in water, which it readily absorbs, owing to the porosity of the hardened plaster of Paris. When it is thoroughly wet it is taken out of the water, emptied, and freed from drops which are likely to collect in the recesses by blotting-paper. It is then ready for use, and we may proceed to prepare the wax mixture and cast the model. Three hundred parts of white wax, together with ten parts of paraffine, are melted over a sand-bath in a porcelain pot with a wooden handle and a broad nozzle. A good mixture of two hundred parts of finely powdered talcum and one hundred parts of amylum is then strewed into it, with continual stirring. A yellowish-white, thick but fusible, mass is the result. By adding a few drops of an alcoholic solution of carmine we give this wax mixture a light-pink color, and then rapidly pour it into the wet plaster-of-Paris mould, filling the latter to the brim. We now let it alone for about ten minutes, after which we pour three-fourths of the contents of the mould back into the pot. By shaking the mould the remaining wax mixture is found to spread itself in every direction. As it cools it becomes hard and forms a hollow cast of the plaster-of-Paris mould. We finally turn over the mould and let the wax cast, *i.e.*, the model, slip out of it by its own weight.

The mounting of the model is accomplished after the following fashion. Pieces of white mousseline, soaked in liquid glue, are placed all around the borders of the model, and this, in turn (model and surrounding mousseline), is fastened on a thin black-board, kept from warping by two small stretchers. The life-like appearance, the exact color of normal skin of the model, will invariably surprise the operator. He has now to add the pathological changes in color and some other details, and the model is finished.

We have found that we have to deal: 1. With covering colors; 2. With penetrating colors; 3. With effects of colors.

For covering colors we use oil-colors, mixed with oil of turpentine; for penetrating colors, water-colors rubbed up with lanolin (Liebreich). To produce effects of color which are due to a colored stratum of the skin shining through a semi-transparent layer, likewise variously colored, is more difficult, and demands the combining of both penetrating and covering colors. I do not intend to dwell now at full length upon the manner how to color the wax models, but shall do so later, when taking the liberty to give to the profession some notes which I have collected regarding the peculiarities of color in skin diseases.

687 LEXINGTON AVENUE.

WHAT'S IN A NAME?—The Kansas City *Medical Index* requests all contributors to its columns, who may have occasion to refer to antipyrin or antifebrin, to use the words methozine and acetanilide for these drugs respectively, since the former are names of patented articles.

Clinical Department.

A RANULA CAUSED IN A VERY UNUSUAL MANNER.

By WILLIAM FREEMAN FRENCH, M.D.,
NOROTON, CONN.

F. E——, a school-boy, aged eleven, called at my office on September 22, 1888, to have cut out what his teacher called a gum-boil. On questioning him, he said that, one week previous to the visit, while eating a very hard apple, a piece pressed the floor of the buccal cavity on the right side, causing pain, and within a few minutes there appeared a lump which precluded any further mastication. This lump broke twice during the week, discharged its contents, and then promptly filled again. On inspection I found a tense, semi-transparent, cystic tumor, irregular in shape, about the size of a large walnut, below and to the right of the frænum linguæ, close to the point of exit of Wharton's duct, and the surface had small blood-vessels branching in all directions. The tongue was crowded to one side, and could not be protruded beyond the teeth. Erichson relates a similar case in which a ranula was caused by the slipping of a pair of tooth-forceps, wounding the floor of the mouth near the Whartonian duct, and the collection of fluid accumulated in the cyst was actually submaxillary gland-secretion. Treatment was the passage of a seton through the cyst-wall to evacuate the contents (which was a viscid fluid), and also to cause inflammatory adhesion and obliteration of the sac. Within ten days the parts returned to their normal condition.

PRECAUTIONS AGAINST INFECTION.

By F. B. STEPHENSON, M.D.,
UNITED STATES NAVY.

THE mortality among physicians attending the sufferers from yellow fever in Florida causes me to think that the following suggestions may be of use:

1. Avoid all unnecessary exposure.
2. Stand rather than sit beside the patient's bed, and remain as much as possible near the bottom rather than the head of the bed.
3. Keep a little off for a few seconds when the bed-clothes are turned down.
4. If near-sighted, draw the breath and hold it hard before looking at the tongue, or narrowly at any other part of the patient.
5. Never stethoscopize unless it be absolutely necessary; when necessary, expose the patient's chest for a few seconds before beginning, hold the breath on a full inspiration while making the examination, and be quick about it.
6. After finishing with one patient, go into the middle of the ward for a few seconds to draw your breath a bit before beginning with another.
7. Never enter a fever ward in the morning without breakfasting, or, if at a too early hour for that, without taking coffee.
8. Have a ward coat, to be cast off and ventilated after getting into quarters.
9. Enforce regular ventilation.

The chief merits of these rules are that they are obvious in their object, easily acquired so as to become a habit, and such as may be practised without exciting any attention from by-standers.

These precepts, though formulated for hospital service by a scientific practitioner of a past generation, appear adaptable to the daily life of medical men in private practice.

A CASE OF OBSTRUCTION OF THE BOWEL; ONE THOUSAND WATERMELON SEEDS REMOVED FROM THE ANUS.

Dr. W. Z. Holliday, of Harlem, Ga., writes: "A few days ago I was called to see J. M ——, negro. Inquiring as to the nature of his trouble, he stated that he was 'clogged with watermelon seeds.' He ate heartily of melons on Wednesday night, and since that night has had pains and straining in his bowels, with continuous desire to go to stool, but was unable to evacuate his bowels. Digital examination per anum confirms his diagnosis, and he is found very much 'clogged.' I can introduce my finger only through the sphincter; then the resistance of a solid mass of seeds prevents its further admittance. After getting a little opening by pulling away the seeds just inside the sphincter ani, I gave him a copious enema of tobacco-infusion. This soon had the desired effect, and he was *thoroughly relaxed.* After this I could easily remove the mass, which was very tightly impacted. The rectum, and perhaps part of the colon, was filled with this foreign material. It was with much difficulty that I reached in far enough to get it all; however, the contractions of the bowel would force the mass down as it was removed from below. Having gotten away all I could reach, and being quite sure most of it was out, I proceeded to count the seeds, and found there were just eight hundred and twenty. His wife now assures me that she had gotten away at least two hundred before I was summoned. So it is a fair estimate to say that the obstruction was originally a mass of a thousand watermelon seeds. He says his bowels are now easy, and that he feels very well. I ordered for him three ounces of castor-oil, to be taken at once, and leave him. Returning next day he says his bowels acted three or four times from the oil, and he is now all right."

A CASE OF RECOVERY FROM TRAUMATIC TETANUS.

Dr. F. B. Streeter, of Glenn's Falls, N. Y., writes: "After having seen several deaths from traumatic tetanus I have the pleasure to report one recovery. On December 13, 1887, I was called to see H——, a farmer's son, aged twenty, who had driven a nail through the thin sole of an old rubber boot into his foot while in the act of jumping. The accident had occurred ten days prior to my visit. The foot was still swollen and tender and the tetanus was well marked, the patient being unable to protrude his tongue or to take any food except fluids. Poultices were applied to the foot, and potassium bromide, gr. xx., was given every two hours. The symptoms steadily increased in severity for three days, and the case seemed hopeless until, at the expiration of that time, an abscess pointed on the back of the foot between the first and second metatarsal bones. This abscess, on evacuation, was found to contain foul-smelling pus and a piece of rubber, which had evidently been carried into the wound by the nail-point, its circumference being about the same. The wound was dressed antiseptically and the patient almost immediately began to recover, and after several months slowly regained his former strength. Without presuming to advance any theory as to the nature of tetanus, or its etiology, I am satisfied that the potassium bromide exerted very little influence for recovery in this case; and in my opinion the thorough opening, cleansing, and disinfection of wounds of this character will afford far more satisfactory results than any course of internal medication whatever."

Treatment of Venereal Warts.—Equal parts of burnt-alum and tannin sprinkled in powder upon venereal warts will desiccate them, and they can be rubbed off in a few days.—*Canada Medical Record.*

Progress of Medical Science.

Supra pubic Cystotomy.—Observations, made during experiments on intestinal suture, in 1881, showing the ready repair of accidental wounds of the bladder, led Professor Rydygier, of Krakow, to the idea, whether the tendency to adhesion of the peritoneum could be applied for cystotomy. To prove this he made a series of experiments on dogs, and encouraged by the results, he operated on a boy thirteen years of age. Rydygier's method of operating is briefly as follows: The patient is prepared as for laparotomy, a catheter is passed into the bladder, and the latter is washed out with a warm solution of boric or salicylic acid, and then partly filled with the same solution. A section is made on the linea alba, as usual. After letting out the solution by means of a catheter, the bladder is drawn out by a silk noose, and iodoform gauze is solidly packed in between the bladder and the edge of the wound. An incision one and a half inch long is made in the bladder, and the finger is inserted and along it the forceps. The bladder is again washed out by the catheter with the above solution, which may overflow the wound of the bladder without entering the cavity of the abdomen. Rydygier recommends applying the furrier's suture according to Czerny's method. This suture has this advantage, that the more the bladder distends the more the suture tightens. It is necessary to keep the catheter in the bladder for eight to twelve days. Rydygier's method can particularly be applied to the entire removal of tumors of the bladder, and it may also be of use in wounds of this viscus. The author concludes his paper by a short recital of his case, in which this method gave excellent results.—*Przeglad Lekarski*, Nos. 6 and 7, 1888.

Multiple Primary Tumors.—The appearance of several malignant tumors of the same anatomical qualities, independent of each other, is not common, and still less frequent, perhaps, is the appearance of many primitive tumors of different character. Two such cases, however, Dr. E. Przewoski, of Warsaw, gives in the *Gazeta Lekarska*, Nos. 19 and 20, 1888. On one patient, when still alive, only one movable tumor, of the size of a fist, was noticed on the neck. This patient came to the hospital complaining of feverishness, pain in the abdomen, and obstinate intestinal obstruction, and died one month after. The post-mortem examination showed cancer of the stomach, and its dissemination on the peritoneum, besides that fibroma lipomatodes in the connective subcutaneous tissue upon the left collar bone, angiomata cavernosa in the liver, knotty fibromata in the kidneys, and psammomata springing from the dura mater. There were, therefore, five different kinds of tumors in different organs. On another person the autopsy showed struma cysticum, angiomata cavernosa in the liver, fibromata in utero, cystic tumor of left ovarium, cancer of rectum, and diffused nævus verrucosus pigmentosus—all together six different tumors. Considering what could be the cause of such extraordinary development of the tumors in the two cases, Dr. Przewoski speaks fully on Conheim's and Rindfleish's theory (the latter admits as the cause of them diminution or want of nervous influence), and does not give his explanation, but leaves the solution of the question to the readers.

Treatment of Pulmonary Phthisis by Parenchymatous Injections of Creasote.—Dr. Teofil Stachiewicz has injected creasote after Rosenbusch's method in the clinic of Dr. Brehmer, in Goebersdorf, and has convinced himself that this method, although it is useful, does not give such results as Rosenbusch asserts. According to the experience of the author, the cough after every injection augments, and the quantity of sputum increases considerably. The author has never seen any influence of injections on the temperature. The action of creasote, according to him, is the same as of any other extraneous body, *i.e.*, the inflammatory action. But as the fluid gets into the affected place, so *in punctu minoris resistentiæ* the inflammation is very destructive, and the quantity of sputum greatly increases. The following are the author's conclusions: 1. If the lungs are affected only on one side and cavities have formed, injecting creasote may produce a rapid destruction of tissue. 2. If the patient is inclined to hemorrhage, the injections are contra-indicated, because every hemorrhage endangers life, and therefore it would be risk to produce it artificially 3. In tubercular infiltrations in which there is obstinate fever with a great number of bacilli, there is danger of the development of miliary tuberculosis. In such cases the injections produce destruction of tissue, and may cause the demarcation of the morbid process. Even in large infiltrations a partial destruction may be occasioned, by which the further invasion of the lungs may be prevented. The author had occasion several times to observe that, with such large infiltrations, even with little destruction after hemorrhage, the morbid process after some time was changed to such a degree that cavities appeared and an improvement quickly followed. For the injections a strong needle, from five to seven centimetres long and one to one and a half millimetre in diameter must be employed, lest a sudden cough break it. After the injection, the patient must lie quiet and an ice-pack is to be applied over the point of injection.—*Przeglad Lekarski*, Nos. 20, 21, 1888.

CANCER OF THE LARYNX.—At a meeting of the French Society of Otology and Laryngology, Dr. Charazac reported an interesting case of cancer of the larynx. The patient, sixty years of age, was in apparently excellent general health, with easy respiration, no cough, no expectoration, a strong-smelling breath, but not fetid. There had been aphonia for the past eighteen months. On examination with the laryngoscope, congestion of the epiglottis and of the left side of the larynx was found, the ordinary symptoms, in fact, of chronic laryngitis. To the right, at the level of the vocal cord, could be seen a grayish ulceration tolerably deep, occupying the centre of a tumefaction which had invaded the ventricular band and which closed the half of the glottis. The author diagnosed the case as cancer of the larynx. The progress of the disease, in spite of the energetic antisyphilitic treatment, confirmed this diagnosis, and on February 19, 1888, tracheotomy became indispensable to prevent asphyxia. Extirpation of the larynx was proposed, but was not accepted by the patient. The author compared the results obtained by palliative tracheotomy with those of extirpation of the larynx in cancer. At first sight, tracheotomy would appear preferable, as it enables the patient to live six or eight months longer, whereas in extirpation of the larynx two thirds of the patients succumb either to the operation or to a rapid recurrence of the affection. But these unfavorable statistics, Dr. Charazac maintained, were due to the fact that surgeons have not always paid sufficient attention to the indications furnished by the state of the patient and the nature of the disease. All cases of cancer of the larynx should not be operated upon. Extirpation ought to be performed only in the case of cancer limited strictly to the interior of the vocal organ, while the general condition of the patient is yet good, and when, as yet, the glands are not affected. Partial extirpation gives better results than those furnished by complete laryngectomy. Whence the necessity of an early diagnosis.—*Revue Mensuelle de Laryngologie*, No. 6, 1888.

NITRO-GLYCERINE IN TINNITUS AURIUM.—Dr. Lautenbach, assistant surgeon to the Pennsylvania Eye and Ear Infirmary, Philadelphia, after a fair trial of nitro-glycerine, has reached the conclusion that it is of value in certain cases of tinnitus aurium—especially in those where cardiac lesion exists, functional or organic, and where there is little or no loss of hearing. In many of these cases more or less structural changes from catarrhal inflammation of the middle ear were present; among them change in the shape and translucency of the drum-head, with accompanying change in appearance or position of the triangular light spot. Follicular pharyngitis was present in some of the cases. The tinnitus was generally constant, or nearly so. It was not, as a rule, more marked when the patient was in a recumbent position; occasionally there was some remission in that position. The thermometric and barometric conditions of the atmosphere influenced the tinnitus; damp weather, with low barometer, usually increased it. Dull, heavy headache, more or less persistent, most frequently parietal, though sometimes frontal, was of frequent occurrence. He used the nitro glycerine in pill form, in doses of one-hundredth of a grain. At first but one pill a day was given, generally in the morning. The dose was then increased, enough being given to diminish the tinnitus or to cause headache. As many as six of these pills were given in a day, though usually two were found to produce a beneficial effect. Improvement sometimes was manifest within a day or two. In cases of long standing, the remedy might have to be continued for one to three months before a satisfactory result was obtained. Cases in which there was recurrence of the tinnitus seemed to yield more readily on resuming the treatment than when the remedy was first administered.—*Philadelphia Medical Times.*

HEMI-CHOREA COMING ON AFTER PARTURITION.—This case was observed at Osler's clinic in Philadelphia. Mrs. X., the mother of three children, had an attack of inflammatory rheumatism, four months after the birth of her last child. From this she recovered, but four months afterward chorea appeared, commencing in the right thumb the twitching extended up the entire arm, and subsequently appeared in the right leg, in which the motion was more marked than in the upper extremity. The choreic movements were confined to the right side. When she applied to the dispensary the above condition was noted; examination of the heart revealed a systolic basic murmur. No valvular lesion was detected. The movements were much worse in damp or stormy weather, so that at times she was not able to walk across her room. She was treated by Fowler's solution, five drops three times daily, and increased until doses of ten or twelve drops were taken, or half a dram daily. An interesting point in the case consisted in the fact that the patient had never had chorea in childhood, and none of her family had been similarly affected.—*Philadelphia Medical Times.*

CYST IN THE HEART.—At a recent meeting of the London Pathological Society (*The Lancet*), Dr. W. B. Hadden brought forward a specimen of cyst in the heart. The patient was a woman of sixty-six, who died of cirrhosis of the liver. There were no symptoms pointing definitely to the condition of the heart, and nothing in the history to explain the origin of the cyst. It was an inch and a half in diameter, globular, thin-walled, and situated in the inter-auricular septum. The contents were pink and grumous, and, microscopically, were found to consist of finely granular fatty material. The walls were of loose, fibrous tissue, and there was no evidence that it was hydatid, dermoid, or serous; its nature and origin were obscure.

METHYLAL INJECTIONS IN DELIRIUM TREMENS.—Kraft-Ebing advocates the use of methylal subcutaneously in delirium tremens. Although large doses are required by the mouth to procure sleep—often as much as sixty grains—administered subcutaneously one and a half grain is sufficient, although two and often six hours are required to bring about the desired result. Earlier investigators, such as Mairet and others, spoke of it as a reliable and not disagreeable hypnotic, but they often resorted to doses of one and a half to two drachms. If Kraft-Ebing's results (restfulness and sleep) after minute doses given subcutaneously prove the rule, it will add materially to the value of the drug.—*The Medical Press.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, October 27, 1888.

CALOMEL AS A DIURETIC.

THE observation of Jendrássek that calomel has a powerful diuretic influence has excited wide attention, and led to extensive use of the drug in various dropsical conditions. The fact that calomel has for years been frequently used as a diuretic. in combination with digitalis and squills. or with digitalis alone, is not ignored by the more recent writers. J. Sachs is quoted by Leyden as having long ago used calomel and camphor as a diuretic, and Brafield and Jahn have combined it with iodine in ascites. Among those who have lately reported favorably upon the diuretic action of calomel alone are Mr. Speller Locke ; Dr. Leech. of Lancaster. England ; Dr. Mendelsohn. Drs. Weinstein and Terry, Drs. Talfourd Jones. Leyden, Meyjes, and Schwass.

Dr. Jones contributes an article upon the subject in the *British Medical Journal* of September 22d. He reports a case of cirrhosis of the liver in which calomel seemed to have a practically curative effect. The drug was given in doses of three grains three times a day until he had had five doses. Diuresis set in on the second day, and continued for about five days. Twelve days later a second course of the drug was given, and continued for five days. Diuresis again set in about the second day. At the end of twenty-five days from the beginning of treatment the girth had decreased from forty to thirty-three inches, and dropsy had gone.

Dr. Jones quotes the suggestion of Mr. Locke as to the mode of action of the drug. He observes that it has long been known that the action of squill and digitalis as diuretics is greatly assisted by the addition to them of a little mercury. The part thus played by the mercury has hitherto been never satisfactorily explained, though the recent work of Dr. Noel Paton on the connection between bile-secretion and the formation of urea seems to afford a clew. According to Dr. Paton, the increase of the bile-secretion and of urea is due to the hæmolytic action of the mercury on the blood-cells ; and since. as is well known, an increased quantity of urea in the blood acts as a powerful diuretic, the good effects derived from the use of mercury in combination with squill and digitalis may be explained by its action on the blood-corpuscles.

Mr. Locke, commenting on Jendrássek's paper, thinks the diuretic action of the calomel must be attributed either to the drug containing a trace of persalt or to its being converted to a slight extent into a persalt in the alimentary canal, since Rutherford has shown that calomel causes no increased secretion of bile.

Simultaneously with the appearance of Dr. Jones' article on the value of calomel in cirrhosis, we find one on the same subject by Dr. Schwass (*Berlin. klin. Wochenschrift*, No. 38, 1888), assistant in Senator's clinic. Dr. Schwass states that the warm praise which he gives to the drug in question is based upon two years' experience at the Augusta Hospital. He, however, while commending the use of calomel alone, prefers to give it in combination with digitalis. In this way he was able to give more calomel and keep up its use longer. For example, in one case he gave a grain and a half of calomel, and a grain of digitalis (leaves?) every three hours for a week. It is evident that we here are only getting a revival of the old digitalis, calomel, and squill combination, except that the amount of mercury is increased.

THE COUNTY SOCIETY AND THE WATER-SUPPLY.

IT is quite unfortunate, for the good name of the County Society, that the resolutions offered by Dr. Washburn to rescind its previous indorsement of a private scheme for supplying the city with water were not allowed to pass without question.

The Society cannot afford to put itself upon record as countenancing any private scheme, even under the specious plea of its being for the public welfare. By so doing it loses its influence for good when impartial judgment is expected and opens itself to the suspicion of being led by anyone who may have mere personal ends to serve. It would be well for the members to look carefully into the matter at the next meeting.

A LAY VIEW OF THE MACKENZIE CONTROVERSY.

WHAT the "outside world" thinks of the ever-recurring squabbles and disgraceful disputes of physicians is so well known as to be proverbial. In the case of the late German Emperor, many, if not most, opinions have been formed and expressed on national and political grounds rather than on the clearly understood merits of the case. The Teutonic press, even in our own country, has naturally sided with the German physicians, whereas the Anglo-American journals have taken up the cudgels in behalf of the British specialist.

A noteworthy exception to this rule occurs in a recent issue of the *Illinois Staats Zeitung*, the leading German daily of the West. The German editor of this influential journal openly sides with Mackenzie, for reasons which will appeal to all who have a heart as well as a head.

"For the layman," the journal says, "this controversy appears in a very simple form. Granted that the German physicians understood the nature of the malady better than the English doctor, could they guarantee to their patient a complete recovery, or give him a longer lease of life than Mackenzie did? That alone was the question which confronted the *wife* of the patient, denounced and insulted by German hirelings as the 'Englishwoman,' despite the fact of her being the daughter of a German prince."

It was for the *woman*, who loved her sick husband, to decide, for the woman, who wished to see his life prolonged, to choose between a plan of treatment that gave her grateful hope and another plan which, in a strictly scientific way, perhaps, but at the same time with brutally cruel frankness, thrust a decisive "either—or" upon her. What wonder then, that, like every true German woman—like any loving wife would have done, she chose the former alternative, *i.e.*, Mackenzie. She could not view things from the stand-point of the surgeon, who may congratulate himself on the successful accomplishment of a brilliant operation, while he has but a passing shrug of the shoulders for the unfortunate circumstance of the patient's early death. The supreme wish of the wife was to see her husband's life spared, to nurse him faithfully with unflagging courage to the bitter end, to be to him as he shortly before his death called her, his tireless "maid of all work." The wife had no concern for the glory of German science, for the great fame of distinguished savants. As long as an English "charlatan, humbug, imbecile, swindler," etc., as he has been dubbed by royal-imperial permission, extended to her the one hope of preserving for at least a few months longer the life of the father of her children, so long would she accept his less heroic treatment for the uncertain chance of a formidable surgical interference. So much for the layman's reasonings.

Though we, as physicians, are apt to pay little heed to the judgment of the lay world, so far as medical problems are concerned, it is never harmful to see ourselves as others see us. We will do well to occasionally try to put ourselves in others' shoes. We all have our lessons to learn. The German can doubtless teach us much in the way of abstract science; and it is quite possible that we can teach him a little something in the direction of the *suaviter in modo*. One thing is certain—it is never out of place to have a humane appreciation of the fact that, besides being objects of pathological inquiry, the sick are also subjects with feelings that have no relation to physical laws and the material world.

THE AMERICAN ACADEMY OF MEDICINE.

THE American Academy of Medicine holds its next annual meeting in this city about the middle of November. The energy and ability of the President, Dr. Frederic H. Gerrish, have been actively exerted in securing a good attendance and interesting papers. The American Academy occupies a peculiar and distinctive position among our national organizations. Its objects are educational and literary, including the "subjects of the education of the physician, both preliminary and technical; of the relations of the profession to the public, to its sister professions, and to the State; of the profession in this country to that of other countries; of the status of members of our profession in the service of the United States or of the several States; of medical literature, including history and biography, and cognate themes having reference to the elevation of the literary, scientific, and social standing of the profession."

The field of work offered by the Society is a praiseworthy one, and cannot be too diligently cultivated.

Membership in it involves no annual dues, and is accessible to all physicians of at least three years' experience in practice who, previously to graduation in medicine, had received the degree of bachelor or master of arts.

The Society is steadily growing, but membership in it is an honor which should be still more widely desired.

The Academy has held very few of its meetings in this city, and we trust that its present one will prove most successful.

We shall announce the programme of work later.

THE TREATMENT OF PHTHISIS BY BAKING.

DR. LOUIS HALTER, after showing that workers in lime-ovens (kalköfenarbeitern), who are subjected to high degrees of dry heat do not suffer from phthisis, deduces a method of phthisis therapy based upon these facts (*Berl. klin. Wochenschr.*, No. 38, 1888). The causes of immunity in the class referred to he believes to be:

1. The great dryness of the air in and about the ovens.
2. The rarefaction of the air in consequence of the heat. and its freedom from tubercle bacilli from the same cause.

The workmen are subjected once or twice daily, for ten to thirty minutes, to intense heating of the body—105 to 160° F.—with consequent increase in pulse and respiration rates, diaphoresis, and rapid tissue-changes. They drink immense quantities of water and considerable quantities of alcohol.

Dr. Halter says that the temperature of air in the lungs normally is about 37° to 38° C., which is that most favorable to the development of the tubercle bacillus. If, now, the inspired air be raised in temperature to 45° or 50° C., the air in the lungs will be heated beyond the point favorable to bacillary growth. He proposes to subject phthisical patients to such hot inhalations several times daily, and he pictures an apparatus devised for this purpose.

The idea of breathing sterilized air is well enough. No doubt it is upon this fact of a germ-free atmosphere that most health-resorts for consumptives depend for their reputation. A sterilized air, however, is not quite enough, otherwise sea-voyages would be as beneficial as mountain-resorts. The dryness of the air is an admittedly valuable factor in the climato-therapy of phthisis. The additional idea involved in Halter's apparatus for baking the bacillus in its alveolar nest by inhaling a fiery atmosphere, and, perhaps, in addition, of producing a temporary artificial fever, for the sake of increasing tissue-change, seems highly theoretical.

At the same time, and independently of Dr. Halter, an American physician, Dr. Weigert, residing in Berlin, has been making experiments in the same direction as that of Dr. Halter.

Dr. Weigert, finding that tubercle bacilli outside the body die at a temperature of 41° C., and are adversely affected by one of 38°, has had constructed an apparatus for the inhalation of heated air, and commenced to make trials on phthisical patients in the early stage recommended to him by other medical men, he himself not being in practice. At first a temperature of from 40° to 60° C. was employed, the air for inhalation being quite dry. This temperature was gradually raised as high as 80° C. The patients bore this hot, dry air exceedingly well, and continued to inhale it for three or four hours a day during a month, the only unpleasant effects produced being hyperæmia and dryness of the mucous membrane. The general effects are represented as having been remarkable, patients who had been falling away picking up strength and becoming quite robust, the physical examination showing at the same time that the dulness and râles had perceptibly decreased. The bacilli in the sputum, which had been very numerous, rapidly diminished in number, and finally disappeared altogether. These observations were confirmed by several other medical men.

Despite these alleged successes, one can hardly believe that a temporary heating of the air-passages daily can really affect the pathological processes in the lungs, or the development of the bacilli implanted deep in its structures.

PARIS DOCTORS AND DOCTORS SIGNS.

THE Paris correspondent of the *New York Medical Journal* says: "One of the rather curious facts in regard to medical customs in France is the difficulty a stranger has of finding a physician's house, notwithstanding the fact that Paris has as large a proportion of physicians as any other city—not excepting some American ones. The greater number display no sign, and when you know that in Paris one house is as like another as two peas, it is easy to imagine the trouble of finding the right house when on the search for a doctor. Not only is there no 'shingle' on the front door, but there is not one even on the door leading to the office—not even a card to show the stranger who lives in the *appartement*.

"Among the cheaper class of physicians will be found a small sign saying, '*Docteur en Médecine, de* 1 *à* 3 *heures*,' but no name is given; and as to the better class, not the slightest indication is given that they live in a house. It is a curious Parisian custom."

A slight tendency toward the Parisian idea in signs would be an excellent thing to infuse into the profession in this country, or at least some portions of it.

The size and prominence, the gilded or polychromatic aggressiveness of doctors' signs, depend measurably upon local custom. But, as a general rule, the bigger the sign the poorer the doctor, the more conspicuous the sign the more incompetent its owner.

Death loves a shining mark.

THE CLASSIFICATION OF FEES.

THE Russian authorities have undertaken a paternal direction of the amount of the fees which medical men shall receive. They have gone much further than establishing a one-price schedule such as many societies in this country have adopted. They have tried to "size up" officially the different classes of patients, and prescribe the amount of money that shall be extracted from each. Their classification is as follows: The first and highest-priced class are capitalists, owners of real estate, merchants of the first rank, manufacturers, civil officers of the first to the sixth class. The second category includes civil officers having an income of over one thousand rubles, merchants of second class, agents, drummers, teachers. The third class includes everyone else. The fees depend not only upon the financial rank of the patient but also upon his place of residence. Thus in the country, and smaller towns up to those of ten thousand inhabitants, the fee to persons of the first class is one ruble (about seventy-five cents); to those of the second class, seventy-five copecks (about fifty cents); in the third category, fifty copecks.

In cities of between ten thousand and one hundred thousand inhabitants the fees are one hundred and fifty copecks ($1.20), one ruble, and sixty copecks, respectively. In cities of more than one hundred thousand inhabitants the fees are two rubles ($1.50), one hundred and fifty copecks, and seventy-five copecks, respectively. For night-visits, *i.e.*, after 8 P.M., fifty per cent. is added.

The classification above given is not one legally enforced, if we understand the description correctly, but is that which is officially recognized, the normal one to serve as a basis for taxing. The principles employed in arranging the schedule are correct, or, at least, are in accordance with those which, as a matter of fact, gradually become adopted by the medical profession. The rich have to pay more in order that the poor may be treated for nothing, or for a nominal fee. The maximal price depends upon the condition of the patient, the expenses incurred in living, which are always greater in large cities.

Rigid regulations of fees, however, always fail in free countries, more often because the doctor drops below the normal in his charges than because he rises above it. In large cities there are especially great variations in prices, both in the maximum and minimum fees.

News of the Week.

THE ANNUAL REPORT OF THE SURGEON-GENERAL OF THE UNITED STATES ARMY has just been issued. From this we learn that our army medical service is expected to cost about $230,000 next year. In a chapter on the health of the army, Surgeon-General Moore says the mean strength of the army for the year, including officers and both white and colored enlisted men, is stated at 23,841, of which 21,601 were white and 2,240 were colored. The total admissions to sick report were 29,727; white, 26,600; colored, 3,127. Ratio of all admissions per 1,000 of mean strength, 1,231.42 white and 1,395.98 colored. Admissions for disease, 21,438 white; 2,450 colored; total 23,888. Admissions for injuries, 5,162 white; 677 colored; total, 5,839. Average number constantly non-effective during the year, 907.08 white; 103.20 colored; total, 1,010.28. Number of days lost on account of sickness, 368,754. The death-rate was somewhat lower than that for 1886, when it was 8.82, and considerably lower than the rate for the previous decade, which was 11.4. The death-rate continues to be higher than that of any of the foreign armies except the British and Italian. The principal causes of deaths were pneumonia and shot wounds. The Surgeon-General says that the large number of disabled officers of the medical department seriously embarrassed its efficiency, and recommends the retirement of those officers who have been incapacitated for active service by retiring boards, and their places filled by young and active men. He also recommends an increase in the force of twenty assistant surgeons.

"SLOYD," OR WHITTLING, AS A MEANS OF EDUCATION.—The old Yankee pursuit of whittling has got round to

Sweden, where it has been scientifically studied and applied to purposes of education and amusement under the name of "Sloyd." The *British Medical Journal*, commenting on this subject, says that the main differences between wood sloyd and ordinary carpentering, with which it is very apt to be confused, are these: 1. The objects made are usually smaller than those made in the trade. 2. As to tools used; the knife, for instance, is the most important of all in sloyd. 3. All parts of the work are done by the pupil. 4. The objects of sloyd are to develop the faculties, not to make carpenters. A careful choice is made of the models; the objects selected are such as may be used at home; both soft and hard woods are used. It is often a difficulty in medical practice to suggest amusement and occupation for patients who must keep in-doors for a prolonged period, and who yet preserve an active temperament. "Sloyd" is a form of work which calls forth every variety of movement, and exercises both sides of the body, for it is so arranged that the children can work with the left hand and arm as well as with the right in sawing, planing, etc. In the schools of Norway classes in sloyd are held both for boys and girls. An association has been formed for the introduction of sloyd into England, and for the purpose of training teachers in the art. New England ought to be able to furnish some professors of the art of whittling.

THE PHARMACY LAW IN THIS STATE REQUIRES all preparations of opium and morphine except paregoric to be labelled, such label being on scarlet paper with white letters; while a law passed June 21, 1887, provides that whenever a prescription contains opium or morphine in which each dose of opium exceeds one-fourth of a grain, or morphine one-twentieth of a grain, the prescription shall not be repeated except on the verbal or written order of a physician.

RECEPTION TO DR. W. O. PRIESTLEY OF LONDON.—Dr T. Gaillard Thomas gave a reception on the 22d inst., at his residence, to Dr. William Overend Priestley, of London. It was largely attended by representative medical men of the city.

STATE VITAL STATISTICS AND THE STATE BOARD OF HEALTH.—The *Sanitary Era* accuses our State Board of Health of inaccuracy in making up its vital statistics. The average death-rate for specified localities is, we are told, obtained by dividing the total sum of the local death-rates by the number of the localities. "To illustrate, the little town of Crown Point, with 4,287 inhabitants and a death-rate of 2.80, counts one against one with the city of New York and its 27.73 in a million and a half, and makes an average of 15.27 between them. On the other hand, Saratoga with 54.00 averages with New York up to 40.43; when in fact the combination rises only to 27.77."

THE HOAGLAND LABORATORY of Brooklyn is completed and open for work. Dr. George M. Stirnberg is Director, and Dr. George T. Kemp, of Johns Hopkins University, Associate Director.

DR. JOHN W. S. ARNOLD, formerly Professor of Physiology in the University Medical College of this city, died October 20th at Sewanee, Tenn. He was born in Charleston, S. C., May 16, 1846. He was educated at Columbia College, from which he graduated in 1868 with the degree of A.B., subsequently, in 1871, receiving the degree of A.M. In 1871 he also graduated from the Bellevue Hospital Medical College, and began the practice of his profession in this city. Dr. Arnold made a specialty of physiology and microscopy, and wrote extensively on medical subjects. He filled the chair of Normal and Pathological Histology and of Physiology and Histology in the Medical College of the University of the City of New York, and was at the same time Curator in Bellevue Hospital.

PASSED ASSISTANT SURGEON CUNNINGHAM W. DEANE died on board the coast survey steamer MacArthur at San Francisco October 22d. He was a native of Richmond, Va.

RECENT SURGICAL ACHIEVEMENTS: GASTRO-ENTEROSTOMY AND CHOLECYSTENTEROSTOMY.—Dr. F. Fritzsche, of Glarus, has just published a detailed account of two successful cases of Woelfler's gastro-enterostomy for stenosis of the pylorus. In one, that of a man, aged fifty-seven, the stricture was malignant, while in the other, a woman, aged thirty-seven, the case was one of simple cicatricial contraction. Both patients made an excellent recovery. The man, who had weighed only forty-four kilogrammes before the operation, was found to weigh fifty-four kilogrammes and to have a healthy appearance about three months later, in which state he still remains up to the present (about seven months after the operation). He has no symptoms whatever, except a sensation that the food ingested stays in his stomach only for a short while, so that he is compelled to eat frequently in order to appease his hunger. Similarly, the woman's weight rose from thirty-eight kilogrammes before the operation to forty-eight in two months after it. When seen seventy-seven days after the gastro-enterostomy she stated that she "was quite well, and could eat safely even such things as sauerkraut with lard." At a recent meeting of the Medicinische Gesellschaft, in Basel, Professor Socin read a paper on a successful case of Kappeler's cholecystenterostomy, performed by him in a highly emaciated, weak woman, aged fifty-one, with complete obliteration of the bile-duct, and consequent dilatation of the gall-bladder. Having opened the abdomen by a free incision along the outer edge of the rectus on the right side, he cut into the bladder to remove four hundred cubic centimètres of bile (not containing any concretions); he then made an incision three centimètres long in the jejunum, and stitched the intestinal wound to that in the gall-bladder. Three days later the bowels were opened for the first time, the stools being normal in appearance. Jaundice rapidly disappeared. In forty-one days the woman's weight rose from ninety to ninety-nine pounds. This is the second recorded case of cholecystenterostomy.—*Cor. British Medical Journal.*

A CHEAP BOY.—A Dutch missionary in Africa bought a negro boy two years old, who was deaf and dumb, for six pounds of salt. On account of his infirmity, but for the interposition of this missionary, the child would have been put to death. He is now a pupil in the institution for deaf mutes at Maestricht.

Society Reports.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Annual Meeting, October 22, 1888.

L. Bolton Bangs, M.D., in the Chair.

REPORTS OF OFFICERS AND STANDING COMMITTEES.

Alexander S Hunter reported a balance in the treasury of $77.20. Dr. Bruce, Secretary of the Committee on Ethics, reported progress. Dr. John Warren read the Report of the Board of Censors, particularly regarding the prosecution of illegal practitioners.

THE MEDICAL DIRECTORY.

Article V., of Chapter VIII., of the By-laws was amended to read as follows: It shall be the duty of the *comitia minora* to provide for the annual publication of the Medical Directory of the City of New York.

It was thought that, as last year, the advertisements would pay for the issuing of the directory.

While the polls were open for the election of officers, Dr. Paul F. Mundé read a paper,

THE VALUE OF THE OPERATION OF SHORTENING THE ROUND LIGAMENTS OF THE UTERUS,

based on the results of twenty-three cases.

Having been the first to do the operation in this country (December 12, 1884), and the question of its technique and value being still under discussion, the author thought he was justified in presenting his further experience in a paper this evening.

Since the publication of his first two articles his views regarding the difficulty of finding the round ligament had changed. He now believed that his failure to find the ligament in certain early cases was due to not recognizing certain anatomical landmarks. In his paper he directed attention to three questions: 1. Could the round ligaments always be easily found, drawn out, and thereby the uterus be elevated and everted? 2. In which form of displacement of the uterus was the operation indicated, and likely to be followed by lasting relief? 3. Was elevation and suspension of the uterus by shortening the round ligaments alone followed by permanent results, or did it require a further operation on the vaginal floor? On these points great diversity of opinion existed. Some, principally the Germans, objected to shortening the round ligaments on theoretical grounds, others because they had had difficulty in finding the ligaments, or because they failed to supplement the operation with a plastic operation on the pelvic floor.

Dr. Mundé attributed his failure to find the ligaments in his first cases to following too closely the directions of the inventor of the operation; he failed to find exactly the external ring and to pick up the terminal filaments of the ligaments. Experience had taught him to feel for the spine of the pubis, to mark it, and being careful not to draw the skin aside, make a quick oblique incision, from one and a half to two inches in length, directly down to the spine so as to almost nick the periosteum. Through the incision thus made there popped up a bunch of fat, which during the further steps of the operation should not be lost sight of, since in it were contained the terminal filaments of the ligament. As soon as the outlines of the ring were found, the whole pouting mass should be lifted with the forceps, gentle traction made, when it would be found to extend by connection with the terminal filaments of the ligament to the pillars of the ring where the cord was attached. In three quarters of his cases there was healing of the wound after the operation by first intention; sometimes there was some suppuration, particularly in fat patients. In fat subjects the incision would need to be a little longer, but the ligament could be found with equal ease, although formerly he thought differently.

Two of the chief objections to the operation, which could not be discovered beforehand, were, first, that the ligament might be too small to support the uterus, as when it was no larger than a knitting-needle; second, when there were adhesions in the canal, causing it to break before it could be drawn out.

Regarding the indications of the operation, where the uterus was displaced backward, was non-adherent, there was relaxation of the vagina and pelvic floor, shortening the round ligaments would do more than any other measure toward retaining the uterus in place; but Dr. Mundé emphasized the fact that adhesions of the uterus absolutely forbade the operation. If there was complete prolapsus of the uterus and vagina it was expecting too much of the ligaments to support the uterus with the vagina dragging upon it; a plastic operation on the pelvic floor was necessary.

Replying to the third question, Dr. Mundé said that nineteen of his twenty-three cases were successful; in two the ligaments were not found; in two both were torn off. Of the nineteen cases, which had been kept under observation from three months to three years and a half, in all the uterus was retained in the position it occupied when the operation was concluded. But in only seven of the twenty-three cases was Alexander's operation alone performed. In view of the results recited, he expressed himself decidedly in favor of the operation in properly selected cases, for it usually accomplished what was desired, with very slight risk and little pain or inconvenience to the patient.

Dr. H. T. Hanks thought the Alexander operation had its legitimate sphere, but he believed it had been done in this country where not called for, and by persons who should have devoted much more time to searching for the round ligaments on the cadaver before attempting the operation on a living subject. He had seen Alexander search fifteen minutes for the two ligaments.

Dr. H. J. Boldt would still further limit the operation in the class of cases pointed out by Dr. Mundé to those in which at the point of flexion in the uterus there was such atrophy and loss of vitality that it could by no means be restored. In many other cases, where the operation was now done, he would employ Brunt's system of gymnastics to the uterus and pelvic organs.

Dr. Andrew F. Currier thought the chief difficulty of the operation related to finding the ligaments, which could be facilitated by making a slight incision up the transversalis fascia after reaching the ring, which would permit the fat to pout out much more readily. He thought the operation on the ligaments and the supplementary plastic operations should be performed at different times.

The paper was further discussed by Drs. Abbott and Lesser.

The tellers announced the result of the election as follows: For president, Dr. Alexander S. Hunter; vice-president, Dr. L. Bolton Bangs; for secretary, Dr. Charles H. Avery; for assistant secretary, Dr. William E. Bullard; for treasurer, Dr. John S. Warren; for censors, Drs. J. Leonard Corning, Maurice N. Miller, Daniel Lewis, Andrew F. Currier, and Laurence Johnson.

Dr. Washburn offered the following resolutions concerning the water supply of the city passed at the last meeting of the Society, which were laid on the table.

Whereas, A resolution was passed at the last stated meeting of this Society endorsing a private scheme in the following words, viz.: (See Medical Record, September 29, 1888, page 402.)

Whereas, In the judgment of this Society it was an error which is calculated to break the force and destroy the influence for good, of this, as a scientific body; therefore be it—

Resolved, That the foregoing resolution be, and the same is, hereby rescinded. And be it further

Resolved, That while this Society does not endorse any particular scheme, it desires to emphasize the fact that the present deficient water-supply is a menace to public health and should be supplemented, at the *earliest possible* date, by accessions from *any* source that will the most *perfectly* and *promptly* supply the city's pressing necessity; and urges upon those having authority, to institute such means as will procure for this city *the most ample supply of pure* water at the earliest possible moment.

On motion of Dr. A. S. Hunter the annual dues for the ensuing year were declared to be three dollars.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 18, 1888.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

DR. M. ALLEN STARR read a paper (see p. 419) on

APRAXIA AND APHASIA: THEIR VARIETIES, AND THE METHOD OF DETECTING THEM.

DR. W. R. BIRDSALL thought the subject treated of by Dr. Starr formed a sort of oasis in the desert of neurological investigation, and that our present knowledge of it had been very clearly stated. Reference has been made to preservation or loss of the musical faculty in aphasia, and he was reminded of the first case in which he had independently made a diagnosis of aphasia. The subject was rather illiterate, and was accustomed to play the violin at balls. He was almost totally aphasic and agraphic, being able only to say yes and no, and to write and speak his name. There was neither word-deafness nor word-blindness. There was no interference with the musical faculty, for he could read notes and play the violin as well as before his attack. The case showed that the nerve-tracts concerned in musical ideas were independent of those of speech.

He thought Dr. Starr's diagram must have involved a great amount of labor, and such an analysis of pathological cases was of much greater value in cerebral localization than laboratory investigations.

DR. E. D. FISHER had seen one of Dr. Starr's cases, and had recognized the difficulty of determining the presence or absence of hemianopsia, and during the examination it had occurred to him that it would be difficult to determine, in many instances of so-called sensory aphasia, whether the lesion was localized in some particular part of the gray substance of the brain, for to him it was difficult to say where the general intelligence lay in the cerebral substance. It was, he thought, impossible to say that it lay in the frontal lobe, or whether it was not in the whole cortex. Therefore, in so-called sensory aphasia there might be something besides a localized lesion which apparently was pointed to. There might be general loss of intelligence represented by some cortex degeneration, not a localized degeneration. There were cases of so-called localized motor aphasia in which the patients seemed to have lost understanding in a general way, and seemed to lack knowledge of affairs; yet at death a lesion was found involving Broca's convolution and no lesion involving the sensory area. It seemed likely that, in many cases, instead of a localized lesion there was some interference with the whole sensorium.

Again, admitting that there were special sensory and motor centres, it would be rather difficult to say that such centres were affected; only the association fibres might be involved, while the cells in the cortex, the psychical centres, were not involved. It was a very interesting study to distinguish between lesions of the white substance and of the gray matter. In motor lesions the diagnosis was less difficult.

THE PRESIDENT agreed with Dr. Fisher regarding the existence of difficulties in diagnosis which he had pointed out. They had been recognized by a number of prominent neurologists. For instance, symptoms had been found to exist which, according to some, should point to a definite localized lesion, yet the autopsy revealed an extensive lesion. On the other hand, in some cases in which at the autopsy only a local lesion was found, yet there had been a large number of different results. Quite a localized embolus might give rise to fever, to active congestion, convulsions might set in, and a number of cerebral symptoms which did not belong to a local lesion. But Dr. Starr seemed to have shown that a number of cases were on record, verified by autopsies, in which definite symptoms had followed definite local lesions.

DR. PUTNAM-JACOBI thought Dr. Starr's diagram was imperfect, that it explained only the loss of verbal signs, of simple words, of nouns, and did not explain the loss of language where a number of ideas were involved. She asked the author in how far lesions had been found in aphasia in parts of the brain other than those associated with the visual, auditory, or tactile centres, and not including cases of diffuse lesions of the brain in which there would, of course, be more or less interference with language as with all the mental powers.

DR. A. H. SMITH remarked that years ago he was studying a case of aphasia for some time, and it occurred to him that the condition might be expressed as one of "psychical inco-ordination," an inability to associate properly the mental processes and the motor impulses necessary to give expression to them.

DR. STARR, in closing the discussion, said he thought the diagram of cases would aid in replying to Dr. Putnam-Jacobi's question, viz.: Whether lesions in other parts of the brain than those referred to by him would produce the symptoms and affect the mind, or cause disturbance in what had been called the intellectual centre? The various diagrams presented by different authors had upon them an intellectual centre, such a one as Dr. Putnam-Jacobi had referred to, and with which all the various memory-centres were connected by converging lines. The question suggested itself to him, when looking over those diagrams, was there such an intellectual centre? He did not believe there was. He believed there was no such thing as an intellectual centre in which we had an idea of such a thing as a bell. If so, then we ought to find lesions of the brain causing loss of such idea while recognition of the object remained—two things which were incompatible. The concept "bell," he thought, was explained by the existence of the three independent centres figured in the diagram, and the concept was complete only when the three centres were intact. The supposition of an independent intellectual centre for the concept bell would be equivalent to supposing a wheel was something aside from the hub, spokes, and tire composing it. There was no necessity for a further intellectual centre in the brain for an idea of the word "bell." When we found that no lesion of the brain would destroy the idea of a bell entirely unless that lesion affected all the centres in the diagram, we came to the conclusion that there was no necessity for such a centre. The term suggested by Dr. Smith, psychical inco-ordination, was a very applicable one, as that was the condition present when the sensory centres were destroyed. He thought the discussion had enforced the value of pathological observations as distinguished from physiological. Animals might certainly have certain symptoms after the destruction of certain brain areas, but the symptoms which were detected were very likely to be those for which the physiologist was searching, and if he failed to search for a symptom which might be present, that symptom the animal could not explain or make known. Therefore, he thought that the results of experiments on the brain of animals were far less satisfactory than the observations of pathologists of local lesions in man.

The Academy indorsed a resolution requesting the council to exercise its power in purchasing a new site and erecting a building. After a start should have been made it would be easier to raise the necessary additional funds.

Reviews and Notices of Books.

Intestinal Diseases of Infancy and Childhood. By A. Jacobi, M.D. No. 5 of Physician's Leisure Library. Detroit: George S. Davis. 1887.

This timely publication, while containing nothing new, will nevertheless be read with pleasure and profit, especially by the younger members of the profession. The various topics belonging to the subject of intestinal diseases of the young are treated in a rather fragmentary but yet suggestive manner. Practical hints in the management of these disorders abound in this unpretentious manual, and altogether it can be safely commended to the attention of the profession.

The Practice of Medicine and Surgery Applied to the Diseases and Accidents Incident to Women. By W. H. Byford, A.M., M.D., Professor of Gynecology in Rush Medical College, etc., and Henry T. Byford, M.D. Fourth Edition. Philadelphia: P. Blakiston, Son & Co. 1888.

Byford's treatise on the diseases peculiar to women is already well known to the profession in this country. The author is often too positive in his assertions, especially where methods peculiar to himself are concerned. The student and beginner may be misled by teachings that do not always represent what is accepted by the great body of gynecologists. For the more advanced student, however, whose own experience will enable him to either accept or reject doctrines and methods, this work will prove entertaining, suggestive, and instructive. Some of the drawings are old acquaintances, though scarcely old friends. The majority, it seems, were specially prepared for this volume, and are in the main commendable. It is quite evident, however, that some of the exploring fingers found depicted within the genital organs must have at least one more phalanx than those commonly owned by Dr. Byford's Eastern confrères; indeed, one particular finger, at page 94, probably has two of these supernumerary phalanges. We envy the possessor of such gynecologically perfect digits, which doubtless makes the *tactus eruditissimus* his inalienable birthright.

Diseases of Women: A Handbook for Physicians and Students. By Dr. F. Winckel, Professor of Gynecology and Director of the Royal University Clinic for Women in Munich. Authorized Translation by J. H. Williamson, M.D., Resident Physician Allegheny General Hospital. Under the supervision and with an introduction by Theophilus Parvin, M.D., Professor of Obstetrics and Diseases of Women and Children in Jefferson Medical College, Philadelphia. Philadelphia: P. Blakiston, Son & Co. 1887.

Winckel's handbook is a work that will be profitably consulted by all classes of gynecological practitioners. It contains better and more elaborate pathological descriptions than any work of its kind in the English language that we are acquainted with. The German school of scientific gynecology is worthily represented by this treatise, and the English reader will feel grateful for having the often difficult original rendered into smooth and readable English. As a text-book for students, as well as a work of reference for the practitioner, we can conscientiously recommend Winckel's "Diseases of Women."

Medical Lectures and Essays. By George Johnson, M.D., F.R.C., F.R.S Pp. 900. London: J. & A. Churchill. 1887.

In this large volume the patient and painstaking research of thirty years is set before the reader. The medical lectures and essays published at various times during this period have been gathered together. The author writes upon the physiology of the circulation, upon cholera, and some nervous diseases as well as many other topics.

Essentials of Chemistry and Toxicology. By R. A. Witthaus, M.D., Professor of Chemistry of the University of the City of New York, etc. New York: William Wood & Company. 1888.

This pocket manual for the use of medical students has reached its second edition. In a series of over a thousand questions and answers it brings out the important facts concerning medical chemistry. Toxicology is considered not only in its purely chemical aspects, but the main symptoms are given for individual cases. It is difficult to see how it could be improved upon.

What to Do First in Emergencies. By Charles W. Dulles, M.D., Surgeon to University Hospital, etc., Philadelphia. 12mo, pp. 123. Philadelphia: P. Blakiston, Son & Co. 1888.

This is written in popular language, and is intended to furnish information for emergencies until a physician may arrive. It is therefore a "First Aid" hand-book, and, we think, is in many respects superior to the official publication of the society alluded to. For its toxicological portion it cannot, of course, be compared with Murrell's recently published book, as it covers a different field entirely. The use of type of different sizes and a complete index render reference to any topic perfectly easy even for a novice. The writer is to be congratulated on his success in putting so much scientific information in such simple language.

Diseases of the Heart and Circulation in Infancy and Adolescence. By John M. Keating, M.D., and William A. Edwards, M.D. 8vo, pp. 215. Philadelphia: P. Blakiston, Son & Co. 1888.

The ten chapters which compose this treatise were published in instalments in the *Archives of Pediatrics* last year, though they have been much changed and added to since their first appearance. The authors have done valuable service in condensing into one book a vast amount of material which was scattered throughout medical journals, society reports, lectures, etc. The opening remarks on Methods of Study should be carefully read by everyone commencing medical practice, and, in fact, no library of reference can be considered complete without the book. Two excellent photographs illustrate the chapter on mitral lesions. There is always a tendency to exalt physical signs over symptoms in writing on heart and lung diseases. This is a modern leaning toward one side which is to be greatly deplored, because it gives only half the truth. Drs. Keating and Edwards have not omitted the physiological factor in diagnosis by giving too much prominence to the physical factor. We mark this complete volume as a praiseworthy contribution to the literature of pediatrics.

A Reference Handbook of the Medical Sciences: Embracing the Entire Range of Scientific and Practical Medicine and Allied Sciences. By Various Writers. Illustrated by Chromo-lithographs and Fine Wood Engravings. Edited by Albert H. Buck, M.D., New York City. Vol. VI. New York: William Wood & Company. 1888.

The sixth volume of this work contains articles from "Prairie Itch" to "Teplitz-Schönau," and fully sustains the reputation which it has already earned for scientific thoroughness and practical utility. Among the larger subjects treated of are Professional Neuroses, Prostate, Ptomaïnes, Puerperal Condition, Quarantine, Poisonous Reptiles, Resection, Sanitary Inspection, Scarlet Fever, Schizomycetes, Secretion, Sewage, Small-Pox, Spectacles, Spinal Cord Diseases, Stomach Diseases, Suicide, Syphilis, and Teeth. Those mentioned are only a few of the longer articles, but there are literally hundreds of other subjects of equal importance in their way, but which require less exhaustive treatment. Among these may be mentioned the various articles on organic and inorganic medicinal agents, health-resorts, regional anatomy, pathology, new-growths, skin diseases, etc. We can only repeat what we have said so often, in noticing the earlier volumes of this "Handbook," that it is a work which not only the active practitioner, but the scientific student as well, can ill afford to be without, for it contains a mass of information which no man, be he ever so learned, will not find of use at some time. The title is well chosen, for the work embraces indeed the entire range of scientific and practical medicine and allied science.

The Medical Register of New York, New Jersey, and Connecticut. For the year commencing June 1, 1888. Published under the supervision of the New York Medico-Historical Society. William T. White, M.D., Editor. Vol. xxvi. New York: G. P. Putnam's Sons. 1888.

The physicians of New York are now well supplied with directories. The "Register" is about the same as in former years, with the exception of a new table of stillbirths and deaths in New York for the past eighty-four years, and one of births and marriages since 1847, together with the population and ratio of mortality for the same period. The list of physicians in the State, outside of New York and Brooklyn, is arranged alphabetically as well as by counties. The book contains the names of 6,976 physicians.

The Medical Directory of the City of New York. Published under the auspices of the Medical Society of the County of New York. New York: Stettiner, Lambert & Co. 1888.

The "Directory" is for the convenience chiefly of members of the County Society, but contains the names and residences of all the registered physicians in the city. In a limited field it answers the purposes of a medical directory as well as does the older publication. We notice, however, several errors and omissions in it, which might perhaps have been avoided by more careful editing.

Food Adulteration and its Detection, with Photo-micrographic Plates, and a Biographical Appendix. By Jesse P. Battershall, Ph.D., F.C.S., Chemist United States Laboratory, New York City. Pp. 328. New York: E. & F. N. Spon. 1887.

Dr. Battershall's work goes into a new field, and presents systematically the results of the labors of chemists in the line of food adulteration up to the present time. It contains a bibliography and also an appendix, with a full account of the laws relating to food adulteration in this country.

The subjects presented include spices, oil, pickles, vinegar, water, liquors, wine, beer, honey, sugar, bakers' chemicals, flour, butter, milk, cocoa, coffee, tea, cheese, confectionery, miscellaneous.

The book is a much needed one, and ought to be of great service to the public. It is extremely well printed and the plates are all good.

Traité d'Électricité médicale. Recherches physiologiques et cliniques par les Docteurs E. Onimus et Ch. Legros Deuxième édition, revue et considérablement augmentée par E. Onimus. Avec 275 Figures dans le Texte. Pp. 1088. Paris: Félix Alcan, Éditeur. 1888.

There is no text-book on medical electricity which embraces the results of so much individual physiological research as the one before us, and few which present the results of a wider practical experience. Everyone interested in medical electricity, therefore, will find something of value in Professor Onimus' work. It is not, however, a systematic and complete text-book, and many of the author's physiological views are not fully accepted by the generality of scientific authorities of to-day. It is a book to be read critically.

Synopsis of the Physiological Action of Medicines, Prepared for the Use of Students, etc. By Louis Starr, M.D., James B. Walker, M.D., assisted by W. M. Powell, M.D. Third edition, enlarged. Philadelphia: P. Blakiston, Son & Co.

When this little work is enlarged again, we trust it will be made to include a larger number of drugs, and thus more thoroughly represent the Pharmacopœia.

The Language of Medicine: A Manual giving the Origin, Etymology, Pronunciation, and Meaning of the Technical Terms found in Medical Literature. By F. R. Campbell, A.M., M.D., Professor of Materia Medica and Therapeutics, Medical Department of Niagara University. Pp. 318. New York: D. Appleton & Co. 1888.

Dr. Campbell's work is that of a careful scholar, as such a work ought to be, and it supplies to the profession a most useful book. In particular, it should be in the hands of medical students and physicians whose knowledge of Latin is deficient.

Under Part II. the author gives a short Latin grammar, sufficient to teach anyone enough Latin for prescription writing and for understanding medical terms.

Part III. contains a short Greek grammar, adapted to the same purpose. There is a chapter on nomenclature, and a chapter on words commonly mispronounced. This latter ought to be read by everyone, with an eye to self-correction. The book is a thoroughly good one, and we commend it heartily to our readers.

Bibliothèque diabolique (Collection Bourneville). Procès criminel de la dernière Sorcière brûlée à Genève, le 6 Avril 1652. Publié d'après des documents inédits et originaux, conservés aux Archives de Genève. (No. 3,465.) Par le Dr. Ladame. Pp. 57. Paris: Aux Bureaux du Progrès Médical, 1888.

The title of this work tells its nature. It appeals to those interested in curious psychological and historical studies.

Chemical Analysis of Healthy and Diseased Urine. Qualitation and Quantitation. By T. C. Van Nüys, Professor of Chemistry, Indiana University. With thirty-nine wood engravings. Pp. 187. Philadelphia: P. Blakiston & Sons. 1888.

This little work is a most creditable one to its author and to American chemistry. It contains a much fuller account of the methods and results of the more complicated analyses of urine than is usually found. We have had so many small urinary hand-books for students, lacking in originality and completeness, that the present work is somewhat of an oasis in the arid desert of the average manual. Not that Professor Van Nüys has gone over the whole ground, but the part covered is covered thoroughly.

Leçons sur les Maladies du Système nerveux, faites à la Salpêtrière par G. M. Charcot. Tome troisième, deuxième fascicule. Paris, 1887.

Charcot's method of work is to present the results of his special investigations in the form of clinical lectures. These are at certain intervals collected and published. The present volume deals with functional neuroses especially. The lectures upon hysteria and its allied phenomena we do not regard as of much value to the American reader. The chapters on aphasia, myopathy, concussion of the spine, and chorea are, however, extremely valuable, and the volume on the whole is worthy of its author.

Manual for Hospital Nurses. By Edward J. Domville, M.D. With recipes for sick-room cookery. Pp. 100. Philadelphia: P. Blakiston, Son & Co.

This is a compact and useful little work, excellently arranged and printed.

TREATISE ON HUMAN PHYSIOLOGY FOR THE USE OF STUDENTS AND PRACTITIONERS OF MEDICINE. By HENRY C. CHAPMAN, M.D. Pp. 945. Philadelphia: Lea Brothers & Co.

WE receive one or two new physiological text-books every year, and there are already more in the field than can very well be utilized. Still, physiology is a progressive science, new facts are added each year, and new methods of presenting the subject are brought out. So we welcome the new-comers, hoping that each one will prove the ideal work.

Professor Chapman's work is a large one. It is very full of details in parts, and is particularly rich in descriptions of instruments and methods of physiological work. This, while making the book very useful for reference, lessens its value as a student's work. It is not, to be candid, a good student's text-book. It lacks the proper balance, giving as it does an excessive amount of detail in parts, and being deficient in other parts, as in that devoted to the nervous system. It shows, however, that the author is an industrious and accomplished physiologist, and many chapters will possess a permanent value as representing the results of his observations and experiments.

JAHRESBERICHTE UEBER DIE FORTSCHRITTE DER ANATOMIE UND PHYSIOLOGIE. Herausgegeben von DR. L. HERMANN und DR. G. SCHWALBE. XV. Bd., Literatur. 1886. II. Abtheilung, Physiologie. Leipzig: Verlag von F. C. Vogel, 1888.

ZUR PATHOLOGIE UND HYDROTHERAPIE DES FIEBERS. Von PROF. DR. WILHELM WINTERNITZ, unter Mitwirkung der Herren Dr. L. Sweinburg, Dr. A. Winternitz, Dr. J. Pollak, und Drnd. O. Pospischil. Pp. 78. Leipzig und Wien: Franz-Deuticke. 1888.

WE shall refer to this interesting monograph later.

ELEMENTS OF PHYSIOLOGICAL PSYCHOLOGY: A TREATISE OF THE ACTIVITIES AND NATURE OF THE MIND. From the Physical and Experimental Point of View. By GEORGE T. LADD, Professor of Philosophy at Yale. 8vo. Pp. 696. New York: Charles Scribner's Sons. 1887.

PROFESSOR LADD has undertaken to embody in a systematic treatise the results of the numerous investigations in physiological psychology which have been made in recent years. His task was a most difficult one, especially for a person who is not a trained physiologist or anatomist. It took him into a new field, since only Wundt's work had been written at the time the present one was finished. The works of Sergi and Herzen, which appeared in the same year, are inferior in method and completeness. The first part of the work is taken up with a description of the anatomy and physiology of the nervous system. The account given is remarkably free from errors, and though necessarily not complete or exhaustive, it yet gives the student an excellent idea of the present state of knowledge of this subject. The second part deals with the co-relations of the nervous mechanism and the mind; the third part with the nature of mind. Professor Ladd, though dealing with a branch of knowledge the students of which are mainly materialists or agnostics, is himself nothing of the kind. The mind he thinks has unity, reality, and spirituality. Mental phenomena are not, he thinks, atomic motions in the brain-cells, but are simply correlated to these. Professor Ladd is a dualist, we take it, and he defends his position by careful reasoning; yet we doubt if he convinces many. It is as difficult a task to prove that the mind is "immaterial" as to prove that it is "material." The common-sense of those who have familiarized themselves with nerve-physiology tends to convince them that mind is a form of force struck off by, or correlated to, the motion in the brain-cells, rather than an independent reality. Yet, when one tries to show how the Extended can produce the Unextended, he is very much at a loss. So we fancy that arguments over the nature of mind will continue indefinitely to be very indefinite in results. Professor Ladd's work, however, is, as a whole, to be greatly commended. It fills a want in literature, and its perusal can but be of great educational value to the physician.

PTOMAÏNES AND LEUCOMAÏNES; or, The Putrefactive and Physiological Alkaloids. By VICTOR C. VAUGHAN PH.D., M.D., Professor of Hygiene and Physiological Chemistry in the University of Michigan, and Director of the Hygiene Laboratory; and FREDERICK S. NOVY, M.S., Instructor in Hygiene and Physiological Chemistry in the University of Michigan. Philadelphia: Lea Brothers & Co. 1888.

IT is seldom that one finds, in these days, a book that is so full of information on a new subject as is this. Much has been written, it is true, concerning the animal alkaloids, of late years, but the articles are scattered about in various scientific periodicals, and are practically inaccessible to the busy man. The authors have therefore done a good work in collecting these materials and grouping them together in logical order where they can be of service to the ordinary reader. There are chapters treating of the foods containing poisonous ptomaines, of the relation of ptomaïnes to disease, and of the various methods employed in the extraction of ptomaines. The chemical, physiological, and pathological relations of the ptomaines and leucomaines are then considered at some length. This is, we believe, the only book in existence that deals methodically with this most important subject, and we can recommend it without hesitation to all who wish to inform themselves concerning this interesting study, which has such close relations with the etiology of many of the most common diseases.

THERAPEUTICS FOUNDED UPON ORGANOPATHY AND ANTIPRAXY. By WILLIAM SHARP, M.D., F.R.S., Licentiate of the Society of Apothecaries; Member of the Royal College of Surgeons; Fellow of the Royal Medical and Chirurgical Society; formerly Senior Surgeon of the Bradford Infirmary; now Vice-President of the Rugby Hospital. London: George Bell & Sons. 1886.

THE author of these essays seeks to establish the science of therapeutics upon laws rather than theories. Two of these laws, which he claims to have discovered and which he maintains are founded upon facts, are organopathy and antipraxy. By organopathy is meant the local action of all drugs. This has been treated of in former essays and is not considered at length in the present volume, which is devoted to the effort of proving the law of antipraxy. This term is employed to denote the contrary action of large and small doses of the same drug. The author is certainly convinced in his own mind of the truth of these two laws, and his book is written with the very laudable purpose of endeavoring to bring others to his own way of thinking.

THEINE IN THE TREATMENT OF NEURALGIA: Being a Physiological Contribution to the Therapeutics of Pain. By THOMAS J. MAYS, M.D., Professor of Diseases of the Chest in the Philadelphia Polyclinic; Member of the Philadelphia College of Physicians, of the Philadelphia County Medical Society, etc. Philadelphia: P. Blakiston, Son & Co. 1888.

THIS is a report of a series of experiments made by the author to determine the therapeutic action of theine. He shows that while the actions of theine and caffeine agree in many respects, yet in many important particulars they are very unlike. Theine affects more particularly sensation, causing, when injected in doses of from one-fifth to one grain, a decided anæsthesia in the parts below the seat of injection. The author relates a number of cases which seem to demonstrate that the drug exercises a decidedly beneficial effect in the relief of various forms of neuralgia and other painful affections. The little book will repay perusal.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

OPENING OF THE MEDICAL SCHOOLS FOR THE WINTER SESSION—THE INTRODUCTORY LECTURES—FRESH ATROCITIES AT THE EAST-END—A MURDERER WITH ANATOMICAL KNOWLEDGE—TWO NEW MEDICAL JOURNALS—OPENING OF THE MEDICAL SOCIETIES—A NEW OPERATION FOR VESICO-UTERINE FISTULA—PILOCARPINE IN OBSTETRIC PRACTICE—SIR MORELL MACKENZIE AND THE GERMAN DOCTORS—A NEW HOSPITAL FOR MANCHESTER—THE ARMY MEDICAL SCHOOL AT NETLEY.

LONDON, October 5, 1888.

DURING the past few days the medical schools have recommenced work, the winter session being, as usual, heralded by a chorus of "introductory lectures." Although at some schools the custom of having an introductory lecture is one " more honored in the breach than in the observance," it has so far survived the assaults made upon it that this year an introductory lecture has been delivered at seven out of the eleven schools. The subjects chosen by the lecturers have been various. At King's College the address was given by Mr. Erichsen, President of University College, and was largely devoted to the question of the desirability of establishing a new university in London—" for London and London alone." He maintained that the position of King's College and of University College justified them in asking for university rank, with power to grant degrees. He then addressed the students on the subject of their profession, and the qualifications for success in it. It was, he said, of great moment to learn to forget in medicine. Looking back on his own life, he found that, independently of minor advances, surgery had, during the last forty years, advanced in three distinct lines, which compelled every man engaged in surgical practice or teaching to become a student again, to throw aside a good deal of the knowledge he had previously acquired, and buckle to in order to acquire insight into the new order of things. The first of these was in connection with the pathology of tumors. Forty years ago the microscope was scarcely used in pathological anatomy, and the microscopical examination of tumors was utterly unknown. The next event was the introduction of anæsthetics into operative surgery. Perhaps the greatest revolution in modern surgery was that brought about by the introduction of that method of treatment, which was due to the untiring energy and the translucent genius of one of the professors of that college, a man who, he was proud to say, was a pupil and house-surgeon of his own—Joseph Lister.

At University College the address was given by Professor Ramsay, and was largely devoted to a consideration of the manner of thought of the middle ages in regard to science and medicine, as evidenced by the writings of the period. The lecturer then traced the connection between medicine and his own subject (chemistry), and referred to the value of the latter as a preliminary training for medical men. He then compared English with German students, to the advantage of the latter, who, he said, read to acquire knowledge, while our students read to pass their examinations. He attributed this partly to the fact that German teachers examined their own students.

At St. Thomas' Hospital Dr. Cullingworth discoursed on the preventability of puerperal fever. He said the mortality of childbirth was much higher than it was supposed to be, no fewer than 3,877 deaths having been returned as due to this cause in England and Wales in 1886, and the most reliable statistics went to show that the greater part of these deaths were due to puerperal fever. He believed that almost the whole of this mortality might in future be avoided, and puerperal fever be practically stamped out. He urged a more general use of antiseptics, which had already achieved wonderful results in obstetrics.

At the Westminster Hospital Mr. Stonham gave an elaborate address on the subject of medical education. He urged the desirability of rendering the preliminary examination in general education more severe, of lengthening the curriculum a year (from four to five), and he also pointed out the importance of senior students making themselves acquainted with those classes of disease which are not always met with in general hospitals, viz., infectious diseases, and the various specialties.

At St. George's Hospital Dr. Ewart discussed the medical man of the future, his training and his prospects. In what manner, he said, was the medical mind to deal with the enormous increase of knowable facts? and, on the other hand, how were medical practitioners to survive if their numbers maintained their present rate of increase?

At the Middlesex Hospital Mr. W. Foster urged the importance of giving chemistry a prominent place in medical studies; and at St. Mary's Hospital Dr. Waller's lecture was very largely devoted to describing the work which had been carried on in the physiological laboratory with regard to the electrical action of the human heart.

On Sunday last a further thrill of horror went through London, at the news that early on that morning two more women had been murdered at the East-end. One of them was much mutilated, being not only disembowelled in a similar manner to one of the previous victims, but also cut about the face in such a manner as to render recognition difficult, though the body has since been identified. A post-mortem examination disclosed that, in this case also, the uterus and portions of the adjoining parts had been removed and taken away by the murderer. It is said that the left kidney was also abstracted from the body. It is supposed that both these two last murders are the work of one hand, and that the murderer is identical with the perpetrator of the former crimes accompanied by similar mutilations. No clue, however, has as yet been discovered. In giving evidence at the inquest yesterday, Dr. Gordon Brown, Surgeon to the City of London Police, expressed the opinion that the murderer must have been a person possessing a good deal of knowledge of the position of the abdominal organs and the way of removing them.

It might have been thought that medical journalism in this country had reached its limits. Yet another aspirant for favor has, however, just appeared, styled *The Illustrated Medical News*. If the promise given by the first few numbers can be maintained in subsequent issues, there would appear to be room for the new venture. Whether it can be made a success commercially appears, though, very doubtful. Not only has each number been profusely illustrated with engravings, lithographs, etc., but a colored plate is issued weekly, and the price of the journal is only sixpence. Another medical periodical is also announced as to appear shortly, under the title of *The Journal of Dermatology*.

LONDON, October 12, 1888.

The commencement of the winter season is, as usual, signalized by the renewal of activity on the part of the medical societies. The Clinical Society meets for the first time this evening, and in the course of next week both the Pathological and Ophthalmological Societies will inaugurate their winter sessions. The first to take the field, however, has been the Obstetrical Society, which held its first meeting last week. Dr. Champneys then read a paper, in which he described a new operation for the cure of vesico-uterine fistula, which he had successfully performed in one case. The cervix was drawn down and the anterior vaginal wall dissected away from the cervix to beyond the limits of the fistula. A hole was thus left in the bladder and another in the cervix. These were closed with silver sutures and the vaginal wall repaired. Fifteen silver sutures were used. Dr. Percy

Boulton objected to the new operation, that the pelvic cellular tissue was opened up and freely bathed with urine, that the amount of necessary repair was more than trebled, since three large openings had to be closed, and that all the sutures put into the bladder and uterus were shut up and left behind, seven in the bladder and four in the uterus. Dr. Herman thought the operation was a great improvement, and suggested that the objection raised by Dr. Boulton, as to leaving the sutures, could be met by using catgut, which would certainly be absorbed. Mr. Doran referred to Bozeman's recent bold innovations in the treatment of urinary fistulæ. Dr. Champneys, in reply, said that he would in future use silk or perhaps chromic gut. He had used silver because he was anxious not to fail in a new operation on account of the sutures. With antiseptic irrigation there was no reason to dread opening up the cellular tissue, or the passage of a few drops of urine.

Dr. John Phillips then read a paper on the value of pilocarpine in pregnancy, labor, and the puerperal state. The subject was fully discussed under various headings. As an agent for the induction of premature labor, Dr. Phillips concluded that it was not reliable. It was of use during the dilating and expulsive stages of labor to increase and intensify the pains, being more certain than ergot and with none of the ill effects of the latter. Cases of simple uterine inertia were the most suitable for its administration. Pilocarpine was useless post partum and to stay hemorrhage. The results of thirty-nine published cases of puerperal eclampsia were given in a table, showing recovery of thirty-one mothers and eight maternal deaths. Good effects were produced by the drug in twenty-eight cases, but in nine such dangerous symptoms manifested themselves that the author said he felt bound to warn others against its use, especially when coma was pronounced. He recommended bleeding in conjunction with pilocarpine where it would not act alone. Dr. Herman did not agree with Dr. Phillips' estimate of the value of pilocarpine in the dilating and expulsive stages of labor, and thought it inferior to ergot. He concurred with the author in his warning against pilocarpine when eclampsia with coma had set in, on the ground of the dangerous liability to filling of the bronchial tubes with secretion. In eclamptic patients who recovered from convulsions and coma, the great danger was from pulmonary complications resulting from the great congestion of the lungs during the fits, and Dr. Herman thought that the liability to these lung troubles would be increased by pilocarpine. Dr. Dyce Brown was struck with the uncertainty of the action of pilocarpine as an ecbolic. Dr. Phillips said, in reply, that he had undertaken his researches with impartiality. He laid especial stress on the danger of using pilocarpine in puerperal eclampsia, a matter which had not received sufficient attention. Sänger's idea, that its use might supersede the forceps, was chimerical, and should not be entertained for a moment. He was sorry that all his evidence pointed to the fact that pilocarpine was not desirable as an ecbolic.

The medical case of the late Emperor Frederick continues to occupy public attention to an unwonted degree. No translation of the German physicians' account of the emperor's illness has as yet appeared in this country, Sir Morell Mackenzie having threatened to institute libel proceedings against any publisher who should venture to produce the work. A summary of their account of the case appears, however, in this week's *British Medical Journal*, and although it is followed by an abstract of Sir Morell Mackenzie's reply, as given in his work on the subject now in the press, it must be admitted that some of the accusations made are sufficiently damaging. The German physicians do not hesitate to charge him with deceit, with gross unprofessional conduct, and, on at least one occasion, with actual want of skill in the performance of intra-laryngeal operations, he having (according to them) then actually seized and crushed the healthy right vocal cord instead of attacking the morbid growth on the left. Sir Morell Mackenzie retaliates with accusations of want of skill on the part of the Germans, and contemptuously dismisses the evidence of some of them as that of discredited rivals. The subject of the quarrel has crept into the lay press, in which, however, only extracts from Sir Morell Mackenzie's forthcoming defence are given, the German version of the case being ignored. In a leading article in this morning's issue, *The Standard*, while not attempting to decide or discuss the professional questions involved, deplores the controversy and regrets that so many recriminations have been indulged in on both sides.

It is an open secret that for some years past there has been considerable friction between the authorities of Owens College, Manchester, and those of the Manchester Royal Infirmary. Some of the most distinguished students of the college have been refused appointments at the infirmary, and during the past summer great umbrage has been given to the staff of the infirmary by electing an Edinburgh surgeon to the professorship of surgery in Owens College, thus completely passing over the surgeons on the staff of the infirmary. It has been suggested that the college would be able to conduct its medical teaching more efficiently if it had a hospital of its own, and it has frequently been stated that Manchester is deficient in hospital accommodation. It is, therefore, a matter for congratulation that the trustees of the late Sir Joseph Whitworth have offered to expend a sum equal to about four hundred and fifty thousand dollars to erect and partially endow a hospital of one hundred and twenty beds in immediate proximity to the college. As the Royal Infirmary is at some distance from the college, the new hospital would be of incalculable value for clinical study to the students of Owens College, and it cannot be doubted that the munificent offer will be thankfully accepted. If erected, the management of the new hospital is to be placed in the hands of the trustees of the college.

Rumors are again afloat that the Army Medical School at Netley is to be abolished. Some months ago it was mooted that the special courses of instruction for the Indian medical service given at Netley were to be discontinued, and it was intimated that the Government were considering the advisability of giving special instruction to young medical officers on arrival in India. There are obvious objections to such a course, and it is sincerely to be hoped that the school at Netley may be preserved in its integrity both for army and Indian medical officers.

OUR PARIS LETTER.

PUERPERAL SEPTICÆMIA—URINE AFTER INTERMITTENT FEVER—ABDOMINAL NEPHRECTOMY.

PARIS, October 12, 1888.

In support of his candidature for the Membership of the Academy of Medicine, Dr. E. Verrier, a well-known obstetrician, made the following communication on the treatment of puerperal septicæmia, founding his observations on a case that had lately come under his notice. It was that of a woman in confinement, and in whom, after the birth of the child, the placenta was retained and adherent to the right horn of the uterus. After numerous manual attempts, the medical attendant succeeded in extracting only about two-thirds of the placenta, including the membranes and the umbilical cord. Owing to the extreme fatigue of the patient, instead of the operation of "curetage," or cleansing of the womb, Dr. Verrier, who was called in, recommended intra-uterine injections with a solution of corrosive sublimate of one to two thousand parts. At the commencement all went on well, but on the fifth day the first symptoms of puerperal septicæmia manifested themselves, the general state of the patient became aggravated, and there was a notable rising of the temperature. On the ninth day, the septicæmia having become more accentuated, the injections of the sublimate were replaced by injections of a two per cent. solution of carbolic acid. At the same time alcoholic drinks were administered to the patient. From this moment the state of the patient improved, and on the twentieth day after her delivery, with the exception of a phlebitis in the right leg, she might have been considered as cured. Dr. Verrier concludes from this case that in the gravest forms of putrid infection, after forced abandonment of a portion of the placenta, strong antiseptic injections, frequently repeated, suffice to rid the patient of the placental débris which could not be extracted, and to render aseptic those which remained adherent. It is, therefore, not necessary, in the very great majority of cases, to subject the womb of the patient to the further traumatism to which it would be exposed by the operation of curetage or scovelling.

Some time ago Professor Verneuil made some researches on the condition of the urinary excretion after intermittent fever. He found that a great number of patients suffering from that affection became diabetic. Dr. Mossé, of Montpellier, undertook to verify this point of urology in all the paludal patients of the hospital of Montpellier. At first his results were entirely negative; later on, since 1881, when his first researches were published, to last year, he established, of about one hundred cases of paludism, only 2 cases of glycosuria, and even in these two cases it occurred to individuals predisposed to this accident; one was a wet nurse, and the other an "arthritic" subject. Dr. Mossé, however, found that if glycosuria was rare consecutively to an access of impaludism, polyuria, on the contrary, was rather common a few days after febrile paroxysms. These observations were communicated through Professor Bouchard to the Academy of Medicine last week. At its meeting of the present week, Professor Verneuil, in responding to Dr. Mossé's observations, stated that he did not wish to attack the negative results which Dr. Mossé had made known. But he did not believe that these results can be generalized. That which is true for the South of France or for Algiers may not be true for hot climates. Several employés of the Company of Panama were sent to M. Verneuil, as the doctors there had recognized in them the existence of diabetes after paroxysms of intermittent fever. He had also learned from a medical officer at Bombay that glycosuria was frequent in impaludal patients in that Presidency, and in other tropical countries. Professor Verneuil is of opinion that paludal glycosuria is met with more particularly in regions where hepatism is endemic, and perhaps it is not met with elsewhere. In any case, to judge the question impartially, new researches carried out in divers points of the globe should be awaited.

Dr. Terrillon reported the case of a woman, aged thirty years, on whom he had performed abdominal nephrectomy, for a displaced suppurating and tuberculous kidney. The patient had for seven years experienced severe pains in the region of the right kidney, but principally in front of and below the liver. At the same time she noticed the existence, in the flank of the same side, of a tumor which was looked upon as a displaced kidney. An incision was made, extending from the borders of the ribs to the crest of the ilium. In the attempt to remove the kidney it was found difficult to do so with its capsule, and the surgeon had to remove it by piecemeal. It was, however, found necessary to leave a small stump at the bottom of the cortical portion of the kidney. The edges of the capsule of the kidney were fixed to the abdominal opening, and the capsule itself was filled with iodoformed gauze. The fragments of the kidney that were removed were found to be the seat of tuberculous lesions in every stage of evolution. The operation was crowned with success. A fistula which had remained soon disappeared, and the patient may now be considered completely cured.

Dr. Chibret, of Clermont-Ferrand, has performed experiments with three antiseptic agents on the pyogenic "micrococcus aureus," and the following were the results obtained: The oxycyanide of mercury at $\frac{1}{1300}$ acts like the sublimate at $\frac{1}{1400}$; that the cyanide does not act so well as the oxycyanide; that the solutions at $\frac{1}{100}$ of the oxycyanide, of the cyanide, and of the sublimate killed the aureus in five minutes; that the same solutions at $\frac{1}{1000}$ kill it in less than an hour; that the same solutions at $\frac{1}{3000}$ commence to kill it only at the end of four hours, and that cultures of the aureus may survive even after ten hours. Employed in surgery, on suppurating surfaces, or to render mucous membranes aseptic, and particularly the conjunctiva, the solution of the oxycyanide of mercury at $\frac{1}{1500}$ procures an asepsy superior to that which is obtained by the sublimate, owing as much to the tolerance of the tissues as to the feeble absorption.

INFLAMMATION OF THE SEMINAL VESICLES.

To the Editor of The Medical Record.

Sir: Permit me to correct several errors in your abstract (September 15th) of the paper read by me at the meeting of the British Medical Association. I do not find "pain in defecation, and constitutional disturbance" are leading symptoms. Supra-pubic pain of moderate intensity, increasing as the bladder distends and being relieved by urination, is usually prevalent. I am reported to have said that suppuration of, or about, a vesicle should be incised into from the rectum; now that is just the very thing I protested against. All suppurations between the bladder and the bowel should be opened from the perineum.

My paper will appear in full, in due course, in the pages of the *British Medical Journal*.

May I say in conclusion that, if surgeons will direct their attention to this class of maladies a little more carefully, the majority of the late gonorrhœal obscurities which puzzle them will become intelligible.

I am faithfully yours,
Jordan Lloyd, M.D., F.R.C.S.

Birmingham, England,
September 26, 1888.

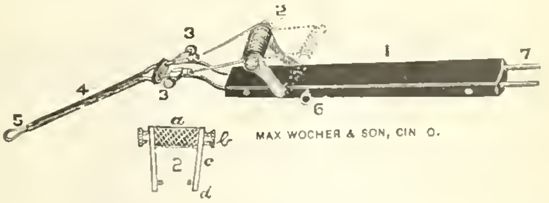
New Instruments.

A NEW GALVANO-CAUTERY HANDLE.

By MAX THORNER, M.D.,

CINCINNATI, O.

I present to the notice of the profession some modifications in a Galvano-cautery Handle, the essential points for which I claim novelty being its simplicity and availability. The handle consists of the usual hard rubber handhold (1). The interrupting button (6) is placed on the side, similar to others now in use. In the use of snares the draw-tubes (4) are inserted into grooved slots, fixed by two set-screws (3). The wire, at its free ends, is attached to two buttons on the side of a simple swing-lever (2), the latter consisting of an isolating bar of hard rubber (fig. 2, a), from which two steel spring-bars (c) pass downward, and are attached to the body of the handle by two small prongs (d) fitting into notches.



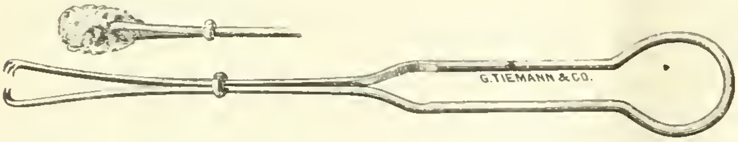
The index-finger of the operator is placed on the hard rubber bar, the latter being roughened to prevent slipping, while the thumb presses on the interrupting-button, giving full control of the circuit. The wire is drawn home by simple flexion of the index-finger, swinging the lever back. This backward movement of the lever gives the operator absolute control of the snare, allowing of rapid or slow traction, as desired.

To change snares, or to use simple electrodes, it only requires the loosening of the wires from their attachment and unscrewing the set-screws, when the snare can be readily lifted out. The lever swung back makes an excellent finger-rest for the index-finger when using the knife or similar electrodes. If desired, the whole lever, with the snare attached to it, may be lifted out of the notches.

AN IMPROVED SPONGE-HOLDER.

By F. C. HUSSON, M.D.,
NEW YORK.

I WOULD like to call the attention of the profession to an easily cleaned and perfectly aseptic sponge-holder, which was made for me in Paris, and which can now be obtained from Messrs. George Tiemann & Co., in this city.



The instrument is nine inches long, and made out of a single piece of steel wire, nickel-plated. The blades are brought together by an incomplete ring of steel, which can be readily slipped off, thus permitting the instrument to be thoroughly cleaned.

The woodcut represents the instrument so clearly that further explanation is unnecessary.

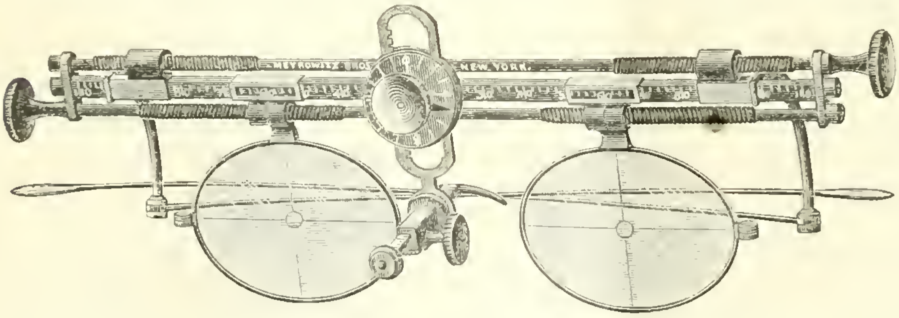
The advantages that I claim for this instrument are: 1. That it is easily cleaned, hence thoroughly aseptic. 2. That it is light, strong, and durable. 3. That it is cheap.

111 EAST TWENTY-THIRD STREET.

ADJUSTABLE FRAMES FOR TAKING FACIAL MEASUREMENTS.

By C. H. FISHER, M.D.,
SCRANTON, PA.

THIS apparatus is practically a pair of mechanical spectacles, so constructed that the four principal measurements required in the ordering of spectacles are easily obtained. The eyes hold a pair of plane lenses on which the centres are marked by cross lines. These are adjusted to the pupils, and the distance between them read in millimetres on the sliding bar above; the distance between temples is measured by means of a pair of adjustable bows, and registered on the same bar. The measurement of the nose is accomplished by two independent mechanical movements, up and down, and in and out, both by means of rack and pinion, as shown in the engraving, both measurements being registered by scales which are easily read.



In fitting glasses it is scarcely less necessary that the frames should be perfect, than that the lenses should correct the refractive error. Much difficulty has heretofore been experienced, by those ordering glasses from a distance, to give the proper measurements with the instruments ordinarily at hand.

By means of these trial frames the tyro can succeed in getting a perfect fit as well as the most experienced oculist. The entire instrument is light and of superior workmanship, and will be found invaluable by those ordering from a distance.

I am indebted for some valuable assistance in the mechanical construction of the instrument to Messrs. Myrowitz Brothers.

A FLEXIBLE SCALPEL.

By A. W. P. LEUF, M.D.,
OF THE UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA.

FULLY seven years ago, while demonstrating in the dissecting-room of the Long Island College Hospital, Brooklyn, and winter before last, while performing the same duties at Dr. George McClellan's Pennsylvania School of Anatomy and Surgery, and during the entire seven years gone by, I have had in use a scalpel which for neatness of work, ease of sharpening, and satisfaction in handling, is decidedly superior to any other knife that I have ever seen. The scalpel is made of the best steel, and so thin that it is very flexible. The advantage of flexibility is the facility with which it adapts itself to curves; for instance, in dissecting away the skin it can be laid almost flat upon the integument and drawn along with a steady sweeping motion, cutting the connective tissue so close to the skin as to render the work of the neatest kind. It can be laid against muscles, bones, nerves, blood-vessels, and some of the viscera, and made to adapt itself to curves and bends. At first its flexibility may seem a little awkward, though it soon is controlled, and then the dissector realizes that he has in his hand an instrument that enables him to be more neat and rapid in execution than with any other knife he can handle.

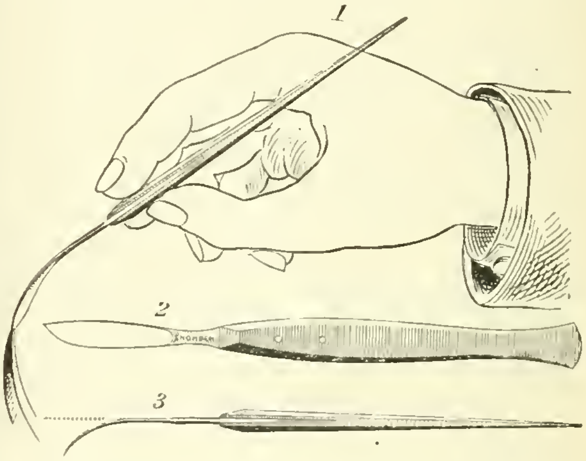


Figure 1 shows the knife in making an upward and outward stroke; just enough force and pressure is being made to bend it as shown in the cut. If the direction of the cut is in line with the plane of the blade, and kept so, as much force as necessary can be employed for all ordinary dissecting. In some heavy work it cannot, of course, supplant the ordinary scalpel, but it is a necessity in every good case of dissecting instruments. Figure 2 shows that the blade has the same shape as any other scalpel; while Figure 3 shows the blade edgewise and bent away from the straight line, but to which it immediately returns when the pressure is removed.

I feel confident that the flexible scalpel is a useful instrument, and that it will be so judged by all who give it a trial. Green hands can do much better work with it than they can with the ordinary stiff instrument.

Its thinness makes a sharp edge an easy possibility. Every ten or fifteen minutes it can be lightly drawn a few times across the edge of a stone or board, or across the shoe, and made as sharp as ever.

Mr. W. Snowden, the well-known instrument maker of Philadelphia, is the manufacturer of these scalpels.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 14 *to October* 20, 1888.

Page, Charles, Colonel and Assistant Surgeon-General, Medical Director of the Department. Will proceed to and inspect the Medical Department at Forts Ellis, Tex.; Supply, Reno, Sill, and Gibson, I. Ter.; Fort Leavenworth, Kan., and the Leavenworth Military Prison, in the order named, and upon completion of this duty return to these Headquarters. Par. 1, S. O. 127, Headquarters Department of the Missouri, Fort Leavenworth, Kan., October 15, 1888.

Comegys, Edward T., Captain and Assistant Surgeon. Relieved from duty at Madison Barracks, New York, and will report in person to commanding officer, Fort Bayard, N. M., for duty at that post, relieving First Lieutenant William D. Dietz, assistant surgeon.

Munday, Benjamin, Captain and Assistant Surgeon. Relieved from duty at Jefferson Barracks, Mo., and will report in person to the commanding officer, Fort Sisseton, Dak., for duty at that post, relieving First Lieutenant John L. Phillips, assistant surgeon, and reporting by letter to the commanding general, Department of Dakota. Par. 11, S. O. 242, A. G. O., Washington, D. C., October 17, 1888.

Dietz, William D., First Lieutenant and Assistant Surgeon. On being relieved by Captain Comegys, will report in person to commanding officer, Alcatraz Island, Cal., for duty at that post, reporting by letter to the commanding general, Department of California. Par. 18, S. O. 240, A. G. O., Washington, October 15, 1888.

By direction of the Secretary of War the following-named officers of the Medical Department will report in person, on October 23, 1888, to the President of the Army Medical Examining Board, Army Building, New York City, for examination for promotion: Captain **John de B. W. Gardiner**, assistant surgeon; Captain **William C. Gorgas**, assistant surgeon; Captain **C. N. Berkeley Macauley**, assistant surgeon; First Lieutenant **W. L. Kneedler**, assistant surgeon; First Lieutenant **Edgar A. Mearns**, assistant surgeon. Upon the completion of their examination the officers named will rejoin their proper stations. Par. 1, S. O. 239, A. G. O., Washington, D. C., October 13, 1888.

Phillips, John L., First Lieutenant and Assistant Surgeon. On being relieved by Captain Munday, will report in person to the commanding officer, Fort Lyon, Col., for duty at that post, reporting by letter to the commanding general, Department of the Missouri. Par. 11, S. O. 242, A. G. O., Washington, D. C., October 17, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 20, 1888.

Magruder, A. F., Surgeon. Ordered to the Marine Barracks, Washington, D. C.

Stone, E. P., Assistant Surgeon. Detached from the Richmond and ordered to the Minnesota.

Keeney, J. F., Assistant Surgeon. Detached from the Minnesota and ordered to the Richmond.

McCormick, A. M. D., Assistant Surgeon. Detached from the Bureau of Medicine and Surgery and ordered to the Vermont.

Moore, A. M., Surgeon. Detached from Naval Station, New London, Conn., and ordered to the Kearsarge.

Austin, A. A., Passed Assistant Surgeon. Ordered to Naval Station, New London, Conn.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 20, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	47	13
Scarlet fever	84	15
Cerebro-spinal meningitis	1	1
Measles	72	8
Diphtheria	64	19
Small-pox	1	0
Yellow fever	0	0
Cholera	0	0

The History of Yellow Fever.—Mr. Kirk Munroe has given, in the *New York Times*, a very condensed summary of the history of yellow-fever epidemics. Although the home of yellow fever is in the West Indies, it has become naturalized in the United States, where it has existed in a more or less active form for nearly two centuries. It has never appeared in Asia, Australia, the islands of the Pacific, nor, so far as is known, in Africa, and it has only been felt sporadically on the Pacific coast of North and South America. In Europe it has invaded Spain, Portugal, Italy, France, and England. In South America it has prevailed in British Guiana, Columbia, Peru, Bolivia, Brazil, and the Argentine Republic. In North America it has ravaged Honduras, Mexico, and the West Indies, and has even appeared so far north as Quebec. Of the United States the following have suffered from its visitations: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Kentucky, Tennessee, Missouri, Arkansas, Ohio, Indiana, Illinois, and also the Indian Territory. The first authentic record of its appearance is in Central America in 1596, and its most terrible visitation was that to the island of St. Lucia in 1666, when it swept away every soul of a population of 5,000. It first appeared in New York in 1668, in Boston in 1691, and again in 1693. Philadelphia was first visited in 1695, and again in 1699, when the city was but seventeen years old, it swept away 220 of its scanty population. In this year also it first appeared in Charleston, S. C. In 1702 it raged with great fury in New York until the 30th of September, the mortality reaching 570, and in that year it first visited the Gulf coast, appearing at Biloxi, Miss. In 1705 it visited Mobile, and also made its first appearance in Europe, at Cadiz, Spain. Between this date and 1800 it appeared in Charleston, S. C., 17 times, in New York 16 times, in Philadelphia 12 times, in Baltimore 5 times, in Boston 3 times, and in New Orleans 4 times. Prior to the year 1800 it also visited such remote places as the island of Nantucket, where, in 1763, 259 persons died from it; Catskill, N. Y.; Hartford, Conn., Portsmouth, N. H., Albany and Greenfield, N. Y., Salem, Mass.. and Woodbury, N. J. In this country the most terrible visitation in the last century was in 1798, when the mortality from yellow fever in Philadelphia was 3,500, in New York 2,080, in Baltimore 200, in Wilmington, Del., 225, in Portsmouth, N.

H., 100. in New London, Conn., 81, and in Chester, Penn., 50. In this year also, on the island of San Domingo, out of 25,000 troops the incredible number of 21,190 fell before the dread destroyer. In 1799 the death list in Philadelphia from yellow fever reached 1,000, and in New York 76 During the year 1800 the most terrible ravages of the fever were confined to Spain, where, in Cadiz, the cases numbered 48,520, and the deaths 7,387; in Xeres, with a population of 33,000. the cases numbered 30,000 and the deaths 13,000; in Seville, with a population of 80,568, the recorded cases reached the enormous number of 76,488 and the deaths 14,685. Many other smaller Spanish cities suffered in like proportion, and in Havana the mortality was 9,977. In this year also New Bedford, Providence, Hartford, Boston, New York, Philadelphia, and other Northern cities suffered more or less, and in Norfolk, Va., the fever claimed 250 victims out of nearly a thousand cases. In 1801 Spain and the West Indies again suffered. and the fever spread into Italy, where, at Leghorn, 150 died daily for several months. It also visited several places in the United States, among them Block Island and Queensborough, in Orange County, N. Y., where 140 persons died during the month of October. In 1802 the mortality from yellow fever in the West Indies was something frightful. In San Domingo there were 27,000 cases and 20,000 deaths, and other islands suffered in like proportion. In 1803 the fever began in New York on July 18th, and ended in October, with a death list of 6,700 souls. In 1804 Cartagena, Spain. lost from yellow fever 14,940 of her population of 32,220, and Malaga from a population of 36,000 lost 11,464. The official reports of deaths from yellow fever in Spain for this year place the mortality at 124,000, and the population of the country is said to have been reduced by more than a million. In 1805 Quebec was visited by the fever for the first and last time. The attack was of short duration, being nipped by frost early in September, but it was so severe that out of one company of English troops, 55 in number, all perished except 6. In this year also the fever again raged in Philadelphia, destroying 3.400 persons. From this date until 1819 there was no epidemic of yellow fever in the United States, though every year witnessed a number of sporadic cases. In 1819 it broke out in Alabama and Louisiana, and in New Orleans the mortality was 2,190. Spain suffered terribly during this year and in the two following. In 1822 New York witnessed its last epidemic of the fever, where out of 414 cases 230 died. Since this date there have been no epidemics of the fever on the Atlantic coast north of Norfolk, Va., though a number of imported cases scattered about the shores of New York Harbor threatened to cause one in 1856. The terrible epidemic of 1853 that swept over portions of Florida, Alabama, Mississippi. Louisiana, Texas. and Arkansas, numbered its victims by thousands. In New Orleans alone during the month of August the mortality was 6,235, while before the epidemic ended the death list had swelled to a total of 8,400. In 1854 the dread fever claimed 2,423 more victims in New Orleans, and in 1855 2,670. In the latter year the pestilence also raged in Norfolk, Va., where it claimed 1,807 victims, and in Portsmouth, Va., where the mortality was 1,000. In 1857 Jacksonville, Fla., was visited for the first time. In 1858 the mortality in New Orleans was 3,889. A phenomenal year was 1861, when not a single case was reported from any quarter of the United States. This was probably owing to the all-absorbing interest of the war. After 1853 the next great epidemic year was 1867, when the principal sufferers were Louisiana and Texas. During this season the mortality in New Orleans reached 3,093; in Galveston, Tex., 1,150, and Memphis, Tenn., 231. In 1870 there were 49 deaths from yellow fever on Governor's Island, in New York Harbor, and 18 in Philadelphia. but in neither case did the fever spread beyond its original limits. Florida, and Charleston, S. C., suffered in 1871, and in 1873 another great epidemic of yellow fever swept along the Gulf coast and up the Mississippi Valley, touching parts of Florida, Georgia, Alabama, Mississippi, Louisiana, Texas, Arkansas, Tennessee, Kentucky, Illinois, and Ohio. The greatest mortality was at Memphis, where it reached 2,000. In 1876 the yellow fever became epidemic in Savannah, Ga., and in 1878 occurred the most terrible epidemic of the disease yet known to this country. It swept along the Gulf coast and up the valley of the Mississippi to Cairo, Ill., seizing its victims in every city, town, and almost every village and plantation in its course. So malignant was it that it readily attacked domestic animals, and even the wild deer of the forest are said to have died from it. In Memphis, with a population reduced to less than 20,000, there were 17,600 cases and 5,150 deaths, a ratio of mortality to cases of 1 in 3.3. Since that awful time to the present, a period of ten years, there have been no great epidemics of the pestilence in this country.

An Interview with the Late Dr. Fothergill.—It was at one of these meetings that the lecturer introduced me to Dr. J. Milner Fothergill. whom I had been prepared to meet by the somewhat graphic description I had heard, and which portrayed him as being a "bag of wind as big as a bed-tick." Certainly not very elegantly put. An American would probably have said that he "played with a long bow." Dr. Fothergill is the "biggest" doctor I met while abroad. I think he will weigh upward of two hundred and fifty pounds. He is unwieldy in appearance and lacks all the graces of Apollo. No sooner was he told that I was from the States than he professed the greatest admiration for the Yankee. He spoke highly of Bartholow and DaCosta—said Flint was a fine diagnostician but a poor therapeutist. That he (Flint) could not treat him (Fothergill) for the State of New York. Dr. Brunton's Letsomian Lectures were on Digestion, Indigestion and its Treatment—a subject, as you all know, upon which Fothergill has written a book. I remarked to him that I had been greatly interested in his work on "Indigestion and Biliousness." "Ah!" said he, "if you have read my book carefully, you are prepared, all the more, to fully appreciate Brunton, for the more knowledge you bring to the subject the more you will enjoy him." "Do you know," said he, "that Brunton and myself are the hardest workers in London?" I said I supposed so. "Oh, but he is by far the cleverer fellow of the two. you know." I am afraid I said that I didn't know. "But he is not as practical as I am, he *cannot turn a sentence* as I can, you know. But I did not attain this excellence of style without large reading and hard work—haven't I sweat though?" And from the way he was then puffing I could easily imagine he had—but I only observed that the thorough mastery of his subject was not more impressive than the lucidity and elegance of his style. "It is a great help to an author," said he, "it enables him to give finishing touches to his work, as an artist to his picture."—Dr. H. B. Lowry, in *Omaha Clinic*.

Treatment by Suppressing Menstruation.— Dr. Loewenthal, in the *Rev. Obstet. et Gynecol.*, reports the results of treating twenty-three patients suffering from chlorosis or hysteria by suppressing the menses. The method employed consisted in injections of hot water of the temperature of at least 49° C., with complete rest in bed. In some very rare cases iced water was employed preferably to hot water. In eighteen cases the remedy was employed for pure chlorosis. The five others comprised two cases of grave hysteria, and three of convalescence from exhausting maladies. In these latter the convalescence was shortened. One of the hysterical patients received a marked advantage, and all the chlorotics were cured with surprising rapidity, and without ulterior medication, after from three to five menstrual suppressions. No grave consequences were noted.—*Journal of the American Medical Association.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 18 NEW YORK, NOVEMBER 3, 1888 Whole No. 939

Original Articles.

INTERPLEURAL PATHOLOGICAL PRODUCTS: THEIR CAUSE, SIGNIFICANCE, AND SPECIFIC RELATIONSHIP TO PULMONARY PHTHISIS.

By J. R. LEAMING, M.D.,

NEW YORK.

THE normal healthful pleuræ are free in movement. Their surfaces glide over each other in respiration without sound-producing friction. They cover the lungs and their lobes, the inner costal walls of the chest, the outer surface of the pericardial sac, and the mediastinum. They are not only smooth of themselves, but they are lubricated by a natural secretion never in excess and never absent.

Unfortunately, the normal healthful condition of the pleuræ is not what is most frequently found in post-mortem examinations, for seldom are the pleuræ entirely free from pathological results. The early pathologists, finding these conditions of such frequency and without history of illness as cause, looked upon them as normal. It is not yet twenty years since Doctor Flint, standing in the very front of medical renown, whose memory we revere and of whose fame we are proud, in leading the discussion of a paper on pleuritis which I had the honor of reading before the New York Academy of Medicine, said, in effect, and not unkindly, that the profession would not agree with me in my estimation of the causes, pathology, physical signs, or treatment of interpleural adhesions; that they were not discoverable by auscultation, had no effect upon the health of the individual, and could not be reached by medication. There is no doubt that Professor Flint truthfully represented the verdict that would have been given by the profession throughout the world, could it have been taken, at that time. But since then, many advanced pathologists have adopted other views. Sir Andrew Clark, especially in his Lumleian lectures of three years ago last spring, gave a very thorough and clear account of interpleural pathological products, without acknowledgment of any American assistance. My early connection with this subject, if I am not, indeed, the earliest one to draw attention to it, is, I suppose, the reason that I have been invited to bring it before you at this time.

Laennec and Louis refer to saddle-leather creaking sounds as being due to old cartilaginous adhesions within the pleuræ. But all other râles and rhonchi were believed to be interpulmonary or interbronchial. But the application of the laws of sound points out unerringly their location and mechanism, and furnishes the elements of a correct diagnosis

Pathological products within the pleuræ are foreign elements, whether they are growths, like cancer, or benign tumors, tubercle, or other neoplasms; or whether they are exudates, the result of inflammations, or of depressed vitality—of which I shall have much to say in this article.

Of tumors or neoplasms, benign or malignant, I shall not discourse, not intending to be exhaustive of the subject of interpleural pathology, but shall confine myself to the two forms of exudates—sthenic and asthenic, which may influence or cause phthisis pulmonalis.

The interpleural exudates which interest us in this discussion are of two kinds: First, those which are the result of active inflammation, such as pleuritis or pleuropneumonia; second, those which result from depressed organic life. The first is the one generally had reference to when the subject is under consideration.

At the discussion which followed the very able papers before the New York Academy of Medicine, led by Dr. Westbrook, on the subject of interpleural exudations as cause of consumption, the sthenic was the only form considered. It depresses the organic life by its mechanical pressure, pressing upon the organs, shutting off the circulation by closing capillaries for nutrition and for aeration of the blood in the lungs. There is more or less natural tendency to remove this foreign factor by the absorbents, and the effort is successful or not according to the degree of vigor of organic life in the body.

There is no question that they depress the vital force mechanically; but they have no other phthisical tendency. Such seemed to be the apprehension of this subject by the New York Academy of Medicine. But there is another cause producing exudation within the pleuræ which is not preceded by inflammation or the rise of temperature. Indeed, many times the temperature is subnormal before and at the time of its exudation, and soon commences to contract, and the temperature to rise, or to vacillate from below to above the normal. This cause is within the life of the individual, is a part of it, and is immaterial; while the first causes are exterior to the life and are material. There is a trinity of life in man: The organic; the intellectual; the moral or responsible.

Life, like heat and electricity, is known only by its manifestations. Let us study the beginning of these manifestations of organic life, as Harvey did with the eggs of the hen during incubation. After the first day, upon opening the shell, it was found that the relative positions were changed—of the yolk, the white, and the germinal spot or eye, and that the white began to be a little turbid. This was the first manifestation, and proved that the hen had been with the cock, for the eggs of the hen which had not been with the cock did not show these changes. In them were no manifestations of life, and there was no life, for an unfertilized egg is dead. In the fertilized egg before incubation the life is inchoate, and by incubation it is warmed into manifestations. At the end of the second day the changes are still more marked, and at about the beginning of the third day a little point of red appears in the germinal spot, pulsating. This is the beginning of the circulation of the blood before there is a heart, proving that the rhythm and pulsations are primal manifestations of organic life, which then commences to build—first the right auricle and ventricle, and afterward the left heart. Finally, the arteries still shooting out, the whole body is formed in completeness. This organic life—the builder, is immaterial. It uses the prepared organism of the egg as the mason does the brick and mortar, the stones and cement provided for him. It shapes the building in form and for use.

The immaterial essence which results from sexual congress, and which builds the material body, preserves its identity as an individual from the moment of conception until its final death, or until its manifestations cease in the material world. But as organic life always manifests itself in form, as well as in motion, we see the spermatozoa of the male with its distinctive form and locomotion by which it reaches the ovum of the female and is destroyed and a new creature begun.

In the fable of Dionysius or creation, representing in Greek mythology desire or love—"Semele, Jupiter's paramour, made him take an inviolable oath to grant her one wish, whatever it might be, and then prayed that he would come to her in the same shape in which he was used to come to Juno. The consequence was that she was scorched to death in his embrace."

The form of the individual continues during life, modified by age, accident, or disease—also the form of the organs, the members, and the constituent parts, the blood-disks, the cells of all the tissues, and the secretions. Everything that has life has inherited its form, its limit of age, and transmits the same to its children—not only the essential inherent qualities of the individual but, many times, acquired peculiarities. So that disease forms and tendencies may also be inherited—not the material, but the immaterial.

The building material in each individual is introduced into the blood from the digestive organs, and is vivified and used to build or repair the form, which, as it grows old and dies, is thrown out of the system, and fresh, new material takes its place. The life and form continue, and are continually modified by time until the limit of the age of the individual is reached, when formation ceases and form decays. The most absolute proof of the immateriality of life is its death ; because the dead body is proof of its former life. The excellence of Lord Byron's beautiful simile in "The Giaour," in the description of "Greece, but living Greece no more," depends upon the appearance of form simulating life :

> Before decay's effacing fingers
> Have swept the lines where beauty lingers.

Bone is the evidence of the once living animal. *Hamlet*, with Yorick's skull in his hand, reasons upon the former life of its occupant until his "gorge rises," and he puts it down in disgust, but goes on in his illustration by citing the dust of Alexander and that of Cæsar in decay, and suggests the vile uses to which they might come. Wood is the evidence of the life of the tree, and of its growth from the seed ; the identity of the life remaining ever, for the wood was always cedar, mahogany, or oak, as was the seed from which it sprang. The life remained, although it often changed particles—the particles which it took up from the ground and assimilated always making cedar, mahogany, or oak, never losing identity, for a thousand years or more, a continual evidence of the immateriality of life in the tree as in the animal. And the wood remains the death-evidence of the life of the tree for thousands of years afterward.

The diamond, the ruby, or the sapphire are evidence of the immaterial Creator. "The earth was without form and void." Divine creative energy flashed through these elements and crystallized them into gems of particular form, brilliancy, and hardness, or of rocks enduring, or of ores of precious metals, where they ever remain evidence of the eternal immaterial existence of the Creator. The crystal, the tree, the animal, represent the primal creation.

Man is mortal—the race immortal. There is an endless succession of individuals, each filling his allotted time and then giving way for his successor. Each constituent molecule is mortal, like the individual man. It has its limited time of existence, and then passes away and gives place to a new one—and the succession goes on during the existence of the individual. It has its predecessor and successor, and with them its acquired tendencies to disease. These are laws impressed upon all organic life—heredity and endless succession. The organic life, besides pervading every constituent part of the body, has its particular home in the great sympathetic nerve. A connected series of ganglia near vital regions massed together in plexuses are reservoirs ; each ganglia, however, is, in a measure, independent, yet all are joined in sympathy with each other, and with the unity of the individual. Filaments accompany each artery, vein, and capillary. The organs of special sense, the heart, lungs, kidneys, liver, stomach ; of digestion, of secretion, of generation ; even the brain, which itself was created for the home of the intellectual life, is in every part of it supplied with organic life. The brain could not emit a single thought or emotion without the active assistance of organic life. We learn of the intellectual life through its manifestations. The feeblest brain-effort of the newt to the highest development of man are recognized only by their manifestations. Both seek their food, defend themselves from danger and attack, and propagate their kind. Their intelligence differs with corresponding differences of brain-development. The chief manifestations of the lower animals are locomotion with definite purpose. In man the manifestations are of greater extent and greater power, with the capacity for improvement by education. But what distinguishes man from all other animals is a manifestation of another kind of life—a moral life, or conscience The manifestations of this new life may be very feeble, but they are distinct, and admit of education, like the intelligence. It is quite certain that each may be educated separately or in unison ; but, if separately, resulting in a moral monstrosity. The trinity of life in man may be thus stated : First, the organic (the builder)—the life of the body ; second, the intelligence—the life of the soul ; third, the conscience—the life of the spirit ; body, soul, and spirit all immaterial—each known by its manifestations only. The evidence of the immateriality of the life of the body is in its manifestations otherwise as builder. We could know nothing of them but by building the form of the material body in all its parts, and as a whole ; its mysterious conception—intra-uterine existence, and birth, and independent life through the periods of infancy, childhood, youth, manhood, old age, and natural death. Intellectual life commences after birth, noticing outside objects, learning its relationship to the outside world, feeling pain, showing pleasure, fear, or joy. The manifestations increase with the growth of the body and the successive stages of periods of age, until decline and death. The soul, too, grows old. Its habitation, the brain, is part of the body ; and as the body grows feeble by age, the intellect must give feebler manifestations, according to the waning power of the body, and the brain its instrument.

The manifestations of the spirit commence only when the soul upon which it depends has arrived at some degree of capacity for intelligence. All human laws recognize this fundamental truth, for the child is not held responsible for its acts until it has arrived at the age of discretion. Responsibility is measured by intelligence. Intelligence is limited by the development of the body. This delicate interdependence may become deranged at any time during the life of the individual. It is frequently temporary, as in fevers, or in intoxication from medical agents, or commonly by alcohol ; or may be more or less permanent, as in pathological conditions of the brain, or reflex, in sympathy with organic disease in some other part of the system of organic life. This higher development of the animal in body and soul, with the added form of spirit or moral life, belongs alone to man. "Conscience makes cowards of us all," is an appreciation by the poet of the spirit's power, for good or evil, over the physical organism. It dominates with controlling force in nutrition, in pathological conditions of atoms as observed in the intimate structure and in the blood. This power is in contradistinction with the outside agents which affect the life of the body—such as poison of different varieties brought in contact with the organic life, externally or within ; or miasma, which is simply another form of poison ; or microbe, especially the bacillus tuberculosis. The *modus operandi* of these agents is difficult of explanation, but the practical fact remains that tartarized antimony will cause emesis, or that croton oil will produce catharsis, and that other agents the same or similar effects or different ones, and that we make use of our experimental knowledge of them in the treatment of diseases. Again, it is just as difficult to explain how the *materies morbi* which may come to us in the air which we breathe or in the food we eat—miasmatic or microbic—should always produce in the organism the same diseases. There is nothing *a priori* in the constitution of the *materies medicatrix* or of the *materies morbi* which will explain their peculiar and characteristic effects upon the living organism. We are forced to the conclusion that the peculiarity of the invariable effects of these exterior agents is not in the agents themselves but in the organic life—for if the life has gone out of the body these agents have no similar effect. Calomel or other preparations of mercury applied to the dead body produce no characteristic effects, as they invariably do when applied to the living organism. And so with all other medical agents or poisons, or disease-germs. They are exterior causes which have power to influence the interior life of the body for health or for disease. But the spirit is a potent factor in preserving health or in causing disease, and its action is not more mysterious upon the organic life than is that of the *materies morbi* or the *materies medicatrix*.

This interior cause which dominates the life of the body through the life of the soul, although depending upon them for its life, controls their healthful manifestations when benign, or of disease and death when malign. It may cause death of the body by first causing death of the atoms, instantly or successively. When malignly influencing the atoms, causing their immediate or successive death, it gives rise to diseases of the body similar to those produced by the *materies medicatrix* or *materies morbi*. With the tissues and circulation filled with these dead and diseased atoms, the organic life attempts their expulsion by crowding them through the walls of capillaries into the natural cavities of the body, notably the pleuræ and the cellular tissues. They are not all dead atoms, but diseased, and when thrown out of the systemic circulation they still have vitality left for organization, imperfect as it is. The immediate action of this pseudo and imperfect organization is to contract, and in this manner to cripple the functions and manifestations of the organic life in local areas of the physical body. The pleural cavities are the great dumping-ground of the organic life. Here pathological products are more frequently found, and when of much extent their contraction mechanically closes the capillaries of the lungs upon their surfaces, preventing largely the aeration of the blood, and, all of the malign causes continuing to operate, it becomes progressive fibroid phthisis. The temperature, perhaps, always is subnormal in the earliest stages of exudation. But when contraction commences after adhesions, the local irritation causes the temperature to rise at irregular times, and vacillates from below to above normal. It is frequently a sign of organic feebleness and a losing struggle in the battle of life.

Physical and pathological conditions similar to these followed the severe storm last March in New England and New York, known as the blizzard. It will be remembered that the temperature was low—about zero—and that the winds were very high and the atmosphere loaded with fine particles of ice. The result was, many times, disastrous to those obliged to travel on foot for any length of distance. The exertion was constant and violent; breathing very much interfered with, on account of the fine snow or frost filling the air. This, with the vital depression consequent upon the intense cold, immediately lowered the organic life of the atoms in the circulation, and death or partial death of these constituent parts of the body took place. Soon after the storm—two or three weeks, in some cases—violent efforts of the organic life to expel these dying and dead constituents became demonstrative. Slight or limited attacks of pleuro-pneumonia of a low type, with hemorrhages, became frequent. These were generally amenable to treatment, but the interpleural pathological products increased *pari passu* afterward with vital depression, and many of the sufferers died shortly—that is, within three or four months—with the genuine conditions of fibroid phthisis as from depressed organic life. The method of death was the same as in that of fibroid phthisis from immaterial interior causes; the spirit acting upon the intelligence causing the disease and death of the atoms of the body in the tissues and in the circulation. Great and prolonged sorrow, deep disappointment, worry, and anxiety—the loss of friends and property, of position, reputation—always cause death of molecules, which being crowded out of the circulation, interpleural pathological products occur which may finally result in progressive fibroid phthisis. When this happens to a wife or husband who has unduly and inordinately mourned the other's loss, it has been ascribed, without sufficient reason, to contagion. The known cause of immaterial vital depression through the conscience is enough to account for the morbid phenomena without referring to the principle of contagion, of which we know so little.

I have not known of a case of fibroid phthisis in which a distinct history of vital depression could not be elicited by getting the history of the mental conditions of the patient during the preceding year. Sometimes it comes from great sorrows and anxious worry of a few months. Again, it is the result of years of continual unsuccessful struggle in the battle of life—the inability to cope with its great difficulties. Morbid products accumulate in living organisms. The organic life thrusts them out of its dominion, into the pleural cavity, for instance, where a feeble reorganization takes place, which contracts upon the lungs, shutting off a portion of its circulation and crippling its life-power. Here we may notice the great difference between these pathological products and those which result from the sthenic inflammation. These are characteristic in their morbific results, and in this are distinctive of phthisis pulmonalis. It is progressive—the products are constantly being thrown out into the pleural cavity, until the end. One has an inherent tendency to get well, the other to die, and this needs all the assistance of the physician, or of climate, or of food, to arrest its progress.

Management of fibroid phthisis from interior immaterial causation of molecular death must be rational in order to be successful. The organic life expels the diseased and dead particles, crowding them out of the circulation. The pleural cavities are an ample and the most convenient receptacle. The crowded capillaries of the true respiratory system are separated from them only by the thin membrane of the pleuræ. As might be expected, the pleural cavities give the earliest evidence of morbid impressions upon the individual life of the particles or blood-disks. When the disease is not overwhelming they are thrown out, ejected from the circulation, until the organic life has recovered from the attack, when the mass of débris is taken up by absorbents and carried out of the system. But if the morbific cause continues to operate, more of the waste is expelled from the blood, and the pathological products become too much for the absorbents to remove; they are soon organized and commence an independent existence. The diseased atoms in this parasitic mass become not only mechanically obstructing and depressing, but vitally also, by their morbid effect upon the life of the body. Under these great and overwhelming difficulties the mucous membranes of the bronchia become exuents through which these dead and dying atoms are expelled in the form of mucus, and the broken-down, dying, red corpuscles being added to the diseased white ones, a hemorrhage results. If we look at this state of things wisely and calmly, what are we to do? attempt to resist nature by arresting the hemorrhage with ergot, or leave this agent to the gynecologist? For it has no power to arrest a bronchial hemorrhage but rather to increase it; and if it were possible it were undesirable, for then would be retained in the circulation the morbific products which the organic life is endeavoring to expel.

The most rational, as well as the most successful, remedy is spirits of turpentine applied by frequent washings of the chest externally. This has the tendency to prevent or relieve pulmonary stasis: First, to remove the interpleural morbific exudates before organization has commenced; and, second, to revivify the sick corpuscles, both white and red.

The emergency having passed, we have to deal with organized products which, by continual contraction, are lessening the area for blood-aeration, and progressive emaciation results—consumption.

Spirits of turpentine is still a valuable agent, stimulating the absorbents and dissipating local congestion, and promoting the health of the blood-corpuscles in active circulation. But, above all things else, it is important to maintain and increase the area of blood-aeration. This is best done by simply breathing rightly, taking in as full respiration as is comfortable, and then holding the breath in for a short moment until the newly inspired air has mixed with the residual air, and has expanded under the rarefaction of the blood-heat. This must be continuous. It must be the all-time breathing; spasmodic or stated periods of correct breathing, of forced inspiration, will not succeed so well, for if the expansion is intermittent the pseudo-membrane will recontract at every intermission, and the fable of Sisyphus will be illustrated. For this reason, all mechanical methods of expanding the chest, although undoubtedly useful when not violent, are less beneficial than correct breathing which is continual. Change of locality, pine-woods, and mountain-climbing may all be beneficial.

Interpleural pathology has but a casual or accidental connection with tubercle. Tubercular inflammation, extending to the pleuræ, may cause plastic exudation within the pleuræ, and occasionally tubercle may come independently to the pleural membrane in general tuberculosis. And in this connection only will we refer to the bacillus tuberculosis, which has come to represent the disease. One thing is certain, that wherever a tubercular cavity in the lungs is found, there, in the cavity and in the tissues surrounding it, we expect to find in great abundance the bacillus. Wherever tubercular concretions or aggregations are found, there will the bacilli be also. But sometimes as well, but in far less proportion, where there are dead or dying atoms from mental anxiety or sorrow, scattered through the body, and, of course, in greatest abundance in the lungs, there, too, will be found bacilli. In regard to the question of contagion, or specific causation, of tubercle I shall not enter. But in regard to its connection with the dead and dying elements within the tissues of the body or in the circulation of the blood I have come to no conclusion except that the connection is casual, just as mould comes to decaying animal tissues by natural selection. And mould and the bacillus tuberculosis are suggestive of each other.

Movable Heart.—Dr. Rumpf reports five cases in which the heart, as was shown by the seat of the impulse and the area of dulness, changed its position in the thorax to an unusual degree in accordance with the position of the patient. In the most extreme case, the impulse in the erect posture was 61 to 62 ctm. from the left sternal border; in the right lateral position it was just to the left of the sternum; in the left lateral in mid-axilla; the distance between these two extremes was 13 to 14 ctm. The symptoms were inability to lie on either side without pain, oppression, and increased rapidity of the heart's action, with weakness, vertigo, and partial disablement as regards work. Four of the five patients had either just undergone treatment for corpulence or lost much flesh, a fact which strikes the author as very significant. He propounds the theory that the undue motility is dependent on the loss of fatty tissue from about the organ.—*Boston Medical and Surgical Journal*, September 6, 1888.

SOME OBSCURE AFFECTIONS OF THE RECTUM.[1]

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What I shall have to say in this paper is in answer to a learned dissertation by Professor William Goodell, read before the American Medical Association (Obstetrical and Gynecological Section) at the meeting in Cincinnati, May 8, 1888. The title used by Dr. Goodell was "The Nervous Rectum," but the term most used in the article was hysteria or hysterical rectum. In other words, the position taken was that certain muscles become hysterical.

In explanation, he says: "The mind is sane, the organic body is sound, the individual, as a whole, is above reproach, and yet these muscles will behave as if they were bereft of reason." Further on, he says: "The muscles most liable to become *hysterical* are perhaps the circular ones, viz., the sphincters of the outlets and inlets, and while the insanity, so to speak, is more localized, the sufferings are perhaps greater."

The term employed here, "hysterical" rectum, is, in my opinion, misleading, and, while the importance of these affections cannot be overestimated, I am inclined to think that a caption such as heads this article, "Some Obscure Affections of the Rectum," is better for the elucidation of the subject than that employed by Professor Goodell—for the reason that it invites investigation. I dare say there is no physician here but has had some patient complain to him of some vague symptoms of rectal disease, when such diagnosis was not borne out by an examination. But you will permit me to say that it is too often the custom to dismiss these patients without an examination.

Webber defines hysteria to be "a diseased state of the *nervous* system, evidenced by an almost innumerable variety of symptoms." It is commonly classed as a *functional nervous disease* and has no recognized *pathological anatomy*. Dr. Goodell says: "In this form of hysteria there are usually present, in my experience, some one of the protean symptoms of general nerve-prostration, such as spine-aches and backaches, sore ovaries, uneasiness, wakefulness, and nervousness. But the chief suffering, or the most exacting symptom, is referred to some portion of the rectal tract, leading the physician to suppose he is dealing with some case of traumatic lesion. The act of defecation then gives great suffering, followed by a painful throbbing, which may last for hours. Patients thus affected so dread the suffering that they school themselves into habits of costiveness and often become victims to opium-eating." This is a perfect description of this class of patients; many of them would prefer death to living such a life, and we would not be stating the case too strongly to say that this condition will often end in actual insanity.

But is Dr. Goodell correct when he says that one of these "may lead the physician to suppose that he is dealing with some traumatic lesion?" To state it more definitely, *is not* the physician really dealing *with* a traumatic lesion? and can a cure be effected upon any other hypothesis? Certain it is that, if a lesion exists, the disease will not be cured until such lesion is eradicated; and, *per contra*, if no lesion exists, then the methods used for its eradication are *nil*. Let me cite a few cases: The following was given in a paper to the Kentucky State Society when I was discussing this subject. I have under observation a girl who has been treated for three years for chronic diarrhœa. The least excitement would cause her bowels to move. She had, on an average, six or eight evacuations a day. If a stranger came into the room, she had to go to stool; she could not go into society for this reason. For three years she had taken no nourishment save stale bread, milk, and weak tea. She had the protean symptoms of general nerve-prostration, viz., backache, wakefulness, nervousness, etc., together with a burning sensation at defecation, and an aching for hours afterward.

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[1] Read before the Mississippi Valley Medical Association, St. Louis, September 26, 1888.

I gave this girl a careful examination, and found a sensitive spot in her rectum. Under chloroform, I divulsed the sphincter muscle and touched the spot with nitric acid. She made a rapid recovery. In a few days all looseness of the bowels had disappeared and she ate freely three times a day.

CASE II.—Dr. J. G. Carpenter, of Standford, thus relates a case in his own person. "I was the victim once of this spasmodic contraction of the sphincter ani muscle. Often, when riding on horseback, and feeling perfectly well, I would be seized with a sudden pain in the rectum, the sensation passing all over me as if I had been struck by lightning, causing me to drop the lines in agony of seemingly impending death. A few weeks would elapse before another attack; on very sudden change of the weather I was affected. Dilatation of the sphincter cured me."

CASE III.—William B——, aged forty-three, came to me with the following symptoms: At the approach of defecation he feels a severe pain up in the rectum, said by him to indicate the passage of the fecal mass over a sore place. During the act, a lancinating pain is experienced, and after the evacuation a dull, throbbing, aching sensation, which lasts for hours. A nervous exhaustion supervenes, which completely unfits the patient for any mental or physical labor. This condition has lasted about two years. The symptoms seemed so clearly to call for divulsion of the sphincter that, without a minute examination, it was done under chloroform, and the promise given that he would be relieved. Several weeks after he reported to my office, saying that he had not experienced any relief, and expressed the desire to die. I then carefully examined him and could find no lesion whatever. Recognizing the powerful effect of the reflexes in these cases, I advised that he go to a genito-urinary surgeon and be examined for stricture. This he did, and was told that he had both a meatic and deep urethral stricture. These were divided by the surgeon, and the man relieved of his rectal symptoms.

CASE IV.—Dr. H——, of Indiana, asked me at one of the medical societies to examine him, and gave me the following history: Several years ago, while prosecuting his professional duties, he was attacked by a terrific pain in the rectum. It was as if a sharp knife had been thrust through him. It would come on as paroxysms, with a few minutes only of intermission. He hastened to procure chloroform, and inhaled it at each approach of the paroxysm, until it gradually subsided and disappeared. He now carried a bottle of chloroform and regarded it as his best friend. Indeed, he said, "Nothing could induce me to part with it." He would likely go for weeks without an attack. Placing him in bed, I examined his rectum carefully with the index-finger; had no instrument with me. I gave it as my opinion that a lesion existed, perhaps only the exposure of a sensitive nerve, and that a free divulsion of the muscle would effect a cure. He afterward consulted Dr. Cook, of Indianapolis, who gave him a careful examination with the speculum, etc., and agreed to the diagnosis I had made. An operation was not done, but we met him months afterward and he reported that he had never had another attack, but still carried his chloroform.

CASE V.—A professional gentleman, sitting in his office with his feet elevated, felt a quick, sharp pain dart through the rectum near the verge of the anus. The pains came quick and sharp; he jumped to his feet and cried for help. A friend coming in caught him as he was in the act of fainting. The attack lasted about twenty minutes, and was quieted by opium. I directed that he be taken home and suppositories of opium and belladonna be administered for their full effect. The patient had three other attacks in as many days, after which nearly all intimations of rectal disease subsided after treatment, which consisted of a few washings of the rectum with hot water and the use of the suppositories. And so I might go on to cite cases of this kind, but will make these suffice to illustrate my subject.

CASES I., II., IV., and V. were evidently traumatic lesions, causing the exposure of a nerve, and Case III. was due to a traumatic stricture of the urethra, and the pain in the rectum was entirely reflex. Four of the cases were relieved by divulsion of the sphincter, and the fifth case did not succumb to the same treatment, for the reason that the disease was outside the rectum. Hence the statement. if these diseases are relieved by local measures, it proves the affection to be local, not hysterical, in the sense used by Dr. Goodell; primary and not secondary in their nature.

Secondly, if they be hysterical or secondary, local treatment would not relieve; but a constitutional course would be necessary. Says Dr. Goodell: "Sometimes the site of the rectal pain lies higher up than the sphincter muscle, and is irrespective of the act of defecation. It then is liable to show periodicity in its character, coming on at regular hours of the day; probably from the periodicity with which the accumulation of fæces in the lower bowel takes place." In these cases, at least, all idea of hysteria attacking the muscle must be dissipated; for the reason that the disease is above the muscle. This brings us to consider more minutely the pathological conditions found in obscure diseases of the rectum.

Believing hysteria to be a disease of the nervous system, as defined by Webber, having no recognized pathological condition, we have argued that it is impossible for a muscle to be attacked by such disease; that when evidences such as have been described are manifest, they are the result of disease at the seat of trouble or by reflex from continuity of structure, and that such evidences are usually the result of trauma. Without such recognition, the plan of treatment would be misleading, and no good results obtained.

Disease is often found above the sphincter muscle, which presents symptoms strongly resembling the so-called "hysterical" rectum. From what do these symptoms originate? Are they from some localized disorder of hysteria? or are they from a pathological condition? I maintain that disease exists at this local point and, as a result, we have pathological change; or, per consequence of disease in a contiguous part, we have disease made manifest by the reflexes. If either one of these propositions be true, then the idea of such diseases being hysterical in their nature cannot be sustained. Now I do not believe that such condition is an hysterical one; a better term would be neuralgic—though this would be far from correct. There are so many pathological conditions which exist in the rectum, either of which could present all the symptoms of the so-called hysterical rectum, that the necessity for an examination cannot be too strongly urged. For instance, the rectum, because of its peculiar office, of its deficiency of valves in the venous supply of blood, of its dependent position, etc., is quite liable to a congested condition and to an inflammatory state. Because of these two conditions, ulceration is often found in this portion of the gut. Foreign bodies frequently lodge in the pouch of the rectum, and by mechanical means produce trauma. The passage of hard fecal matter frequently results in a tear of the mucous membrane, and the making of a small anal fissure. Even the use of hard substances as a detergent will do the same. The enema-tube is known to be a cause of a wound at the verge of the anus. Small openings of internal fistulæ are a source of great irritation. As other pathological conditions which may be responsible for all the symptoms of an hysterical rectum could be cited: 1. Hemorrhoids; 2. Proctitis; 3. Injuries to or diseases of the uterus; 4. Stricture of the urethra; 5. Cystitis: 6. Enlarged prostate, etc.; indeed, any pathological state existing in or around the rectum. Until said state is returned to normal, none of the so-called hysterical symptoms will disappear. Constitutional treatment would be of no avail.

Besides the common diseases of the rectum, a few of which have been given here as causes of these vague symptoms, there are others of an obscure nature which are hard to detect. It is to these that I wish to call attention particularly. I can do no better than refer to Professor Goodell's paper: "There is yet another form of disease which, I think, may be classified under the general head of nervous rectum, although its pathology is by no means yet determined. I refer to pellicular colitis, or pseudo-membranous enteritis, as it is usually termed, in which mucous casts of the lower bowel are discharged, with much tenesmus and abdominal pain, either by themselves or in the regular evacuations." Such cases as these are frequently met with in my practice, and I cannot agree that the disease is a "sheer neurosis." I have seen the affection in patients not given at all to hypochondriasis, and relief has been obtained by remedies outside of those that affect the nervous system. I believe that in all these cases a disease exists, the result of pathological change: as the name colitis or enteritis implies, of inflammatory action. I have never yet succeeded in curing such a case, outside of direct or local medication.

Etiology.—The rational treatment of all diseases necessarily depends upon a correct diagnosis. How difficult this sometimes is all practitioners of medicine are cognizant. Disease, in the abstract, implies a morbid change: a pathological as a natural condition. I have headed this article "Obscure Affections of the Rectum," a term which in itself implies a doubt. Therefore it has been the object of the paper to demonstrate, by clinical facts, a basis of argument to sustain the position taken; viz., that these affections have their local origin in the rectum, and that all nervous manifestations are simply secondary to the same. If this premise be admitted, then the line of treatment is plain. Relieve the cause (local), and the manifestation (general) will disappear. If this premise is wrong and these troubles are "neurotic," *i.e.*, caused by a "disordered condition" of the nervous system, then the term, as used by Dr. Goodell, "nervous or hysterical rectum," is a correct one, and the line of treatment would be to correct the general condition and the local would disappear. I do admit that the effect of a "sheer neurosis" is sometimes remarkable and difficult to explain; but I am satisfied, after observations extending over a score of years, that these peculiar cases are not due to such conditions. For convenience of elucidation, I will give the following as the causes of these obscure affections of the rectum, which have such symptoms as have been narrated in this paper: 1. Hysteria (?) neurosis; 2. The reflexes; 3. A lesion, or pathological change, at seat of trouble.

Of all vague terms used by physicians, this one, hysteria, is the vaguest. Having reference, as the derivative of the word implies, to the womb, the profession has been in the habit of characterizing many affections of the female which they could not understand as hysterical. But so many symptoms analogous to them are presented in the male that we frequently see articles descriptive of them, and the same term used. I do not deny but that the nervous system is responsible for many strange freaks; but I do assert that much that is attributed to it has origin in a local way, where a pathological condition exists. In such a case all the treatment that could be given for the nervous system would avail nothing until the local disorder was relieved. On the other hand, it must be admitted that if the local condition was the cause, it should receive the first attention. Hence I am inclined to the opinion that in this condition of so-called "nervous rectum" a careful and minute examination of the parts should be given. This, I am sure, is very seldom done. If it be done, I assert that it would be the rarest of happenings to find a "nervous rectum" *per se*. Therefore I will be excused from considering hysteria as a cause of rectal trouble.

2. *The reflexes.*—No one doubts the part played by the nerves in reflex action, as a cause of disease and often of a mistaken diagnosis. It has been but a few years since Dr. L. A. Sayre startled the profession by his theory of adhered prepuce causing the spasms of infancy; vomiting as the result of a gravid uterus, epilepsy from strabismus, or a spasm from dentition are every-day examples of the force of the reflexes.

At the meeting of the International Medical Congress at Washington I had the honor of reading a paper entitled, "The Anatomy of the Rectum in Relation to the Reflexes." I cited cases to demonstrate that many diseases (?) of the bladder, uterus, ovaries, prostate, urethra, the cord, etc., were but manifestations of disease in the rectum through the reflexes; and, *vice versa*, it could be shown that many of the so-called rectal troubles could be traced to the same system of nerves. Therefore I conclude that many of the *obscure* affections of the rectum have their origin in contiguous parts. In many instances I have known a stricture of the urethra, an enlarged prostate, an irritable bladder, a congested ovary, an inflammation in the sigmoid flexure, to cause a most uncomfortable feeling, and sometimes intense pain, in the rectum. Therefore it is absolutely necessary in all of these obscure troubles to investigate all these parts. It is a well-recognized fact that all such troubles give rise to great nervous disturbances, but it would be folly to treat them without first curing the pathological condition.

3. *Lesions or pathological conditions in the rectum.*—This is, in my opinion, by all odds the most frequent cause of these obscure rectal troubles. Indeed, I am so fully persuaded of it that I will not prescribe for any patient who presents such symptoms as have been described without first subjecting the rectum and sigmoid flexure to a rigid examination. Since adopting this plan I can say it is the rarest exception that I fail to find the cause. Examination—what I mean by an examination—is not a casual survey of the parts, nor a half-way manipulation with instruments, but a careful inspection of the whole rectum, so described. I first direct the patient to take an aperient, after which the rectum is to be thoroughly washed out with a large enema of hot water. The patient is then put upon a hard table, and, with proper sunlight or, as some prefer, artificial light, a careful inspection made first of the anus. Sometimes a spicula of bone or other foreign substance may be detected in the verge, which, if removed, may stop all the trouble. An inspection is then made of the rectum proper To do this properly it is best to give an anæsthetic. A set of long gutta-percha speculums should be convenient and the size necessary selected. A Wales bougie should be fitted to or on the speculum, and, being well anointed, it should be gradually pushed in. When the edge of the speculum has passed well through the sphincter, the bougie should be withdrawn. Then by the aid of a good light the mucous membrane of the gut can be seen for six or seven inches. A careful search should now be begun for the trouble. Generally the eye is able to detect it, but I am in the habit of passing a long probe up the gut, and, by feeling around as the instrument descends, it will frequently touch the sensitive spot, and the patient notifies you of the fact. Other pathological conditions, such as congestions, inflammations, ulcerations, etc., can be detected by ocular inspection.

Treatment.—Under the head of treatment I am to take it for granted that a pathological condition is found in the rectum; I shall only refer to those that would likely cause symptoms simulating the nervous rectum (?). They are: 1. Fissures; 2. Ulcers; 3. Congestions; 4. Proctitis; 5. Internal fistulæ.

I shall not consider the treatment of the graver forms of rectal diseases such as result from syphilis or malignancy, although in their incipiency they are often attended with symptoms very like the more simple affections herein named.

Fissures of the anus may escape notice even after diligent scrutiny. Therefore I have urged a very careful search for any abrasion. If any lesion or pathological change is found which is embraced by the sphincter, the remedy *par excellence* is *divulsion of the muscle.* It may be argued that this would only temporarily relieve—that the pain would reappear after the fibres of the sphincter had regained themselves. In my experience this is not true. The rest given the muscle is quite sufficient to allow the healing of the fissure, etc. The manner of divulsion is an item. I neither break nor tear, nor use that violent force recommended by some. In lieu of all this I practise a rapid divulsion by means of a Cook's speculum, simply opening it to its fullest extent.

In Classification 2 I use the expression *ulcers*, in preference to ulcerations, the latter indicating a more extensive condition than is found in these simple cases. I refer more especially to the small ulcers that are often found along the course of the gut, and which require a very simple procedure for their cure. A probe with cotton on the end dipped in *pure* carbolic acid, applied through a speculum to the ulcer or ulcers, is generally sufficient to establish a healthy action and insure a cure.

3. *Congestions.*—The rectum is very liable to a congested state, because of its portal circulation; when congested, of course, many of the symptoms of reflex, etc., are present. A careful looking after the liver is essential; so it is my custom to first unload it with a cholagogue cathartic, after which a free administration of some aperient mineral water is recommended. The rectum should be washed daily by injections of very *hot* water. This course is generally sufficient. If any of the astringents are needed they may be added to the wash, but I much prefer the use of boracic acid—a teaspoonful to the pint of hot water.

4. *Proctitis.*—That the rectum can be inflamed seems to have escaped the minds of many. Because of its peculiar office, its abundant blood-supply, its want of valves in a portion of its venous supply, the erect position of the body, etc., it is very liable to become inflamed. When such condition exists, usually the only symptoms manifest are those of reflex. It is no wonder a patient is doctored for all manner of diseases which he has not. Pains in the back, legs, belly, ovaries, general lassitude, mania, nerve-prostration, headaches, bladder involvement, loss of appetite, melancholia, etc., are prominent symptoms of this trouble. It is no wonder that this trouble is frequently called *hysteria.* When these vague symptoms exist, I beg that the rectum be inspected. I know of no class of troubles that so affect the mind, even to a contemplation of suicide. If upon examining the rectum I find it inflamed, the following course is pursued: Free aperients, hot-water injections, a non-stimulating diet, perfect rest of the body, and the use of one of the following prescriptions as injection, to be used once daily:

℞. Sub-nit. bismuth .... ʒ j.
Iodoform .... gr. x.
Sweet-almond oil .... ℥ j.
M. S.—Inject.

℞. Fluid hydrastis .... ʒ j.
Aquæ .... ℥ j.
M. S.—Inject.

℞. Listerine,
Aquæ .... āā ℥ j.
M. S.—Inject.

In obstinate cases it is best to put the patient upon a fluid diet. The best article that I have ever used is bovinine, known as Buske's fluid food. In conclusion, permit me to say that I regard these obscure troubles of the rectum as worthy of your careful consideration. Many lives have been wrecked from the fact that patients so afflicted are neglected by the physician, and they fall into the hands of charlatans and quacks. Too much stress has been given in these cases to the nervous symptoms that present, and not to the local cause of the trouble. I cannot agree with Dr. Goodell when he says: "The treatment of a nervous rectum depends largely upon the general condition of the patient. If she have nerve-prostration, as she usually will, failure will attend every effort to cure the rectal disorder, unless the former is successfully treated. The very best general treatment for this condition of the nervous system is that devised by Weir Mitchell, which I have described in detail in the last edition of my 'Lessons in Gynæcology.' It consists of prolonged rest in bed, of seclusion from friends, of nutrition, of massage, and of electricity." I believe such a course, pursued with such cases, would be highly detrimental, and I cannot be too emphatic in saying, attend to the local cause and the nervous symptoms will take care of themselves.

TOXICOLOGICAL EFFECTS OF BORACIC ACID.[1]

By GEO. T. WELCH, M.D.,
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BORACIC ACID has become generally known and esteemed in recent years for its antiseptic and germicidal powers, and its application has been extended in various directions to the treatment of diseases, especially those of a suppurative or catarrhal nature, and the drug not limited as to its quantity, under the impression of its harmlessness. I have myself used it in otitis, cystitis, and other chronic inflammations, with decided benefit, and from internal and external use in various affections, I gradually became accustomed to the opinion that it might be used in even large quantities without detriment, if not always with success. But even water and the atmosphere have their limits when viewed therapeutically in their effects on the human system, and I have found that boracic acid, under certain conditions, is not without its poisonous effect, and have reason to doubt the accuracy of the recent assertion of Gaucher, that "the fatal dose of this drug is two and a half ounces continued for at least ten days."

I have, since August of 1887, treated five cases of chronic leucorrhœa by packing the upper third of the vagina with boracic acid, once or twice a week, tamponing the lower canal, and permitting the mass to remain until liquefaction occurred, on the second or third day, when the tampon was withdrawn, and a moderately hot douche was used to cleanse the membrane. The curative effect was marked—far more so than when any other means were used. The treatment is not original, though I am not aware of the name of the first operator; nor is it essential, as the same processes in these minor matters doubtless occur to many minds about the same time; but I do not believe that anyone resorting to this means has recorded the same startling experience, in the end, that I have had.

My first case, Mrs. J. A. R——, was put upon this treatment in September of last year, after I had exhausted other means, and her patience as well as my own. She had become the despair of local physicians, and had been under treatment by a noted gynæcologist in New York, for some weeks, before she came under my care. Her leucorrhœa was, perhaps, the most excessive I had ever known of, being of a profuse, acrid character, demanding the application of several napkins daily, and causing an intolerable pruritus of the vulva. A chronic cervical endometritis from which she had suffered, had been right skilfully treated by my predecessor without relieving the leucorrhœa, but he had relieved himself by sending her back to the country.

The upper part of the vagina was highly vascular, deeper in color, and copiously exuding its secretion, to the extent of making it very difficult to dry it sufficiently for the application of the boracic acid. But having had the patient already under treatment for five weeks, with douches, astringents, suppositories, tonics, paintings of the membrane with solutions of carbolic acid and of nitrate of silver, tamponing, with various harsh drugs in solution saturating the cotton, etc., I was resolved to give the boracic acid an extended trial. I found it necessary to astringe the mucous membrane with nitrate of iron before it could be dried sufficiently to begin the experiment. The treatment was given on September 4th, 11th, 18th, and 25th, and on October 9th, 16th, and 23d, and November 13th. Finely pulverized boracic acid was used, and it was well packed and held in position by a tampon of dry absorbent cotton. The patient withdrew this on the third day and used a hot douche afterward; on the seventh day the process was repeated. From the very first application the troublesome disease began to abate, and November 13th the last operation was given—the relief being complete before this time for about fifteen days, when a slight moisture alarmed the patient, and caused her to send for me again.

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[1] Read before the Monmouth County Medical Society, at Freehold, N. J., October 8, 1888.

I heard nothing further from the case until the 23d, when I received a telegram from her husband asking me to call. The family lived in a village about seven miles from Keyport. I was astonished at finding my patient bolstered in an easy chair, her hands, face, and feet having a charred appearance, as if dipped into some solution of caustic alkali; but her tongue was supple and voluble, and she was fierce in her denunciation of the treatment she had last received, alleging that all her trouble arose from that. As nearly as I could gather, it appeared that on the second day after the treatment there was some feeling of formication in the hands and feet, and later on in the face; the patient became low-spirited, and complained of great depression of the nervous system. There was an acrid escape of liquid from the vagina toward the second night, and the tampon was withdrawn and the douche used. As the days wore on the burning of the skin increased, but particularly that of the face, hands, and feet; the skin swelled, became charred, and all motion was painful. The leucorrhœa returned, was copious, and the eczema of the vulva was intolerable. Loath to believe that the boracic acid had anything to do with her condition, I cross-examined the patient closely and got an account of all the details of her life for the two days most in question, but could not learn of anything suspicious in food, drink, or toilet.

She had not sent for me before because of the hopelessness that had possessed her mind, but had at last yielded to the importunity of her husband. The skin of the worst affected parts subsequently exfoliated and the leucorrhœa ceased abruptly without further treatment. I examined the vagina about December 1st, and found it in a normal condition. I remained in a perplexed state of mind in regard to the matter until August 15th, of this year, when similar phenomena presented themselves in another case similarly treated.

This lady, Mrs. F——, was progressing very favorably indeed, when on August 15th she received treatment with the boracic acid the seventh time. Called to her hastily on the morning of the 17th, I found her in a state of collapse, the pulse barely perceptible, the eyes sunken, the face dusky, and the voice weak and whispering. She was in a low state of mind, had been weeping, and was full of foreboding. She complained of great pain in the vagina and of the corrosive discharge from that part. The hot douche had been used without benefit. I attempted to make a digital examination, but was forced to desist because of the pain it occasioned. I syringed the vagina with a large quantity of warm water, and upon examining found that the mucous membrane was corroded, and that a large ball of the acid, too hard to be broken up with the finger, was lying in the fornix. This I removed, as I did two smaller pieces, and by continuing the douche the vagina was finally cleansed. Oiled cotton was then introduced, and the excoriations treated. The temperature was $97\frac{6}{10}^{\circ}$ F., and the pulse 60, the heart beating feebly, the patient sighing and weeping by turns. Stimulants were used freely with decided benefit—brandy, ammonia, valerian—but it was not until the seventh day afterward that all the symptoms subsided; the patient being at times cold, and hysterical, and especially prone to melancholy. The urine was scanty during this week, and of course voided with pain. At the end of this time my attention was called to an exfoliation of the skin, which came away in branny scales.

I attempted on two occasions to examine the condition of the vagina with a Sims speculum, but had to desist on account of the pain caused, and the menses appearing, it was not until September 1st that I could satisfy myself on this point. The mucous membrane had been newly renewed, was dusky in appearance, and the os uteri was in a vivid state of inflammation.

At the time this accident occurred I was treating my fifth case of leucorrhœa, in the person of Mrs. J——, with the boracic acid; three cases had been cured, without any return, after several months, of the disease, and the present case had been progressing so well that it was with great regret that I felt obliged to discontinue the use of this drug. Other means failing to alleviate the chronic catarrh, I came to the conclusion that I would use smaller amounts of the acid, and that without packing it firmly as heretofore I would order the tampon withdrawn the following morning and the douche used. Accordingly, I procured a new supply of the acid from another chemist, and made trial with it on September 6th. Shakespeare says that

> "Truth can never be confirmed enough,
> Though doubts should ever sleep."

But I must confess that I am no longer curious in substantiating the toxicological effect of boracic acid, for twelve hours after the operation I was hastily summoned to my patient, whom I found with skin singularly cool, pulse feeble, respiration sighing, eyes sunken and dull, voice whispering, and mind unclouded but despondent. I gave stimulants freely, and douched the vagina thoroughly after removing the tampon. There was no corrosion of the membrane here, and the patient at the end of a few hours recovered her normal condition.

I should remark here upon the great coolness of the vagina when first examined, in both these cases. Where I have used ice in post-partum hemorrhages I have not noticed greater coldness in the parts than I have experienced here.

The amounts used varied from one to two ounces of the boracic acid, at each operation. In the first case the average must have been two ounces. When liquefaction began to occur, the escape of the fluid was prevented by the tampon of absorbent cotton, until this was saturated to the point of leakage, which was usually in about forty-eight hours. The great number of papillæ found in the mucous membrane of the vagina gives a large absorbent surface, which must be very actively engaged, under the circumstances above detailed, and argues a reason why the acid should more profoundly impress the system when lodged here for days, without external escape. Used as a boroglyceride upon a tampon, the affinity of the glycerine for water would draw upon the resources of the glands, and speedily produce a liquid discharge which would eliminate the acid. But I suspect that large quantities given by the stomach could not escape without some mischief, especially if there was any diseased surface along the course of the intestines.

The symptoms of poisoning by boracic acid resemble those of the caustic and carbonated alkalies. As found in nature boracic acid exists in volcanic regions, and is notably obtained from the lagoons in Tuscany, by building basins over the jets of vapor and boiling water which issue with violence from fissures in the earth; the basins being flooded with water from the mountain springs, the boracic acid is absorbed as it ascends in the stream, and being drawn off into basins at lower levels, is transferred to shallow tanks for purification. (Bowring.) The annual production is about three million pounds, and of this crude boracic acid one hundred and seventy-eight thousand seven hundred and ninety-eight pounds were imported to the United States in 1878. Whether it thus passes, to any extent, to the pharmaceutist, I am not able to say, though it is the general impression that the drug, as used in medicine, is first made into borax, and is again obtained from this in hot solution by adding hydrochloric acid, when it crystallizes in white translucent scales. It is soluble in thirty parts of cold water and in three of hot, and is soluble in alcohol, where it burns with a green flame, constituting a test of the presence of boron. Its solution exhibits an acid reaction with litmus paper, yet it turns turmeric paper brown, as do the alkalies. If heated for some time at eighty degrees, it loses the elements of a molecule of water, and is converted into metaboric acid; and heated for eight days to about one hundred degrees, four molecules unite, with loss of five molecules of water. (Witthaus.)

Boron is a most singular element, closely allied to carbon, and when isolated from boracic acid it resembles the diamond in lustre, hardness, and refractive power, and if larger crystals can be prepared it will take rank as one of the most valuable gems. In combination, as borax, it is fatal to the lower animal life; as boron fluoride, it carbonizes organic matter, as does sulphuric acid, and as boracic acid, I think I have shown it is not without its dangers when used in large quantities in the human system.

DEAF-MUTISM: ITS PATHOLOGY, CAUSES, AND TREATMENT.

By B. ENGELSMAN, M.D.,

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Deaf-mutism implies muteness caused by deafness only. Muteness due to an organic defect of the vocal organs is not included in this class. Such cases are rare, and only one has come under my observation. It is an established fact that the mental faculties will act, if only stimulated by one of the intellectual senses. The senses convey the impressions made on them by our environment to the brain, and the latter converts them into ideas. Full possession of the senses promotes the development of the mental faculties; any defect of the former must necessarily leave a lack in the development of the mind. All observers concede that the loss of one or more of the intellectual senses will cause greater vividness of the others, owing to their extra exertion and education. The senses which take the place of hearing in deaf-mutes are sight, touch, and general sensation. By means of these senses they can be educated to converse in spoken language, and to enjoy dancing to music. I attended, last winter, a masquerade ball of deaf-mutes, where I had the pleasure to notice their joy in keeping time to the rhythm of the orchestra. Surrounding society exerts the same influence on a deaf-mute child as on a hearing one. A child brought up in a refined family will acquire refined habits, and *vice versa*. There is, of course, a difference in the intelligence of deaf-mutes, as in those possessed of hearing, for intelligence depends on the quality and quantity of the brain texture.

In examining the subject of deaf-mutism, we may divide deafness into two classes, viz.: congenital and acquired. Statistics differ with regard to the predominance of one class over the other, but we will be safe in assuming that over fifty per cent. are acquired. In regard to the ages at which deafness is most likely to occur, the *American Annals for the Deaf and Dumb*, of July, 1873, show that in 1,256 cases of acquired deafness there occurred under one year of age, 296 cases; between 1 and 2 years, 276 cases; between 2 and 3 years, 191 cases; between 3 and 4 years, 102 cases; between 4 and 5 years, 88 cases; and 5 years and upward, 207 cases. The census of the United States of 1880 shows that there are 18.567 male and 15,311 female deaf-mutes. The predominance of the males may be due to the fact that more males than females survive the diseases occurring in childhood. It is often difficult to determine whether a child is a congenital mute or has acquired deafness in early childhood. The following rule in the school-room will lead to a correct diagnosis: Congenital mutes acquire the mechanism of articulation with more difficulty than those who have acquired deafness, at whatever age this latter may have happened; the speech of both is monotonous, but that of the former is harsher, and attended, at the beginning, with contortions of the face. The external appearance of the deaf-mutes does not present anything noteworthy, except that many drag and shuffle the feet in walking, which is due to two reasons: 1, To the deafness, which renders them unable to recognize the disagreeable effect; and, 2, to the want of education. A continuation of this habit into adult life generally denotes a feeble mind. Their sense of feeling is very acute; in the school-room it is only necessary to clap the hands or stamp slightly with the foot to attract their attention when their backs are turned.

Pathology.—Congenital deaf-mutism may, in most cases, be ascribed to certain irregularities of the auditory apparatus. They may be external or internal. The external ear may be partly or entirely absent; the meatus externus may be narrowed or completely closed. In regard to the internal abnormalities, the autopsies of deaf-mutes furnish the most varying results. In many cases in which deafness resulted from nervous or other diseases no organic defect was found, while in others, again, various deformities were discovered. A few of the numerous post-mortems made by Hyrtl gave the following results (*Schmidt's Jahrb.*, 1838):

Case I. presented an example of ectopia cordis, four inches long and two inches wide, covered with periosteum, and with abnormal distributions of several arteries. The external ear, with the exception of the small muscles of the pinna, normal; the membrana tympani thickened and dried parchment-like; the malleus and incus atrophied; on the former was missing the processus brevis, and on the latter the os orbiculare; the laxator tympani was wanting also, and the tensor tympani was so indistinct that it might have been taken for a condensed cellular tissue; the cavity of the tympanum was nearly dry. To this extent both ears presented the same appearances, but the labyrinths presented dissimilarities. On the right side the fenestra ovale was adherent to the foot of the stapes, both crura were wanting, and instead of them there extended from the centre to the base of the stapes a single small pedicle, bent outward and downward, and at its point was missing the eminentia pyramidalis, with the stapedius muscle. The neurolemma of the auditory nerve was thickened, the nervous tissue reddish and smeary, the ends of the nerves vestibuli and cochleæ liquiefied into a brownish disorganized jelly. On the left side the fenestra ovale was closed by the stapes, which was very much atrophied, and its arms thinner than a hair; the eminentia pyramidalis, the rostrum cochleæ, and the external canalis semicircularis were wanting, although the pyramid in the outer pavilion, and the upper canalis semicircularis were completely developed. The nerves were similar to those on the right side.

Case II.—A girl, five years old, died of chronic hydrocephalus. On examination found the right temporal bone unusually developed, the squamous portion three times as thick as the other cranial bones; the mastoid process and cells of unusual firmness. The two tables of the temporal bone were nearly separated to the circumference, forming a cavity communicating with the cavity of the tympanum, and inclosing the head of the malleus and the body of the incus. The carotid canal was very narrow, hardly admitting a thin probe. The membrana tympani was split, as if a piece had been cut out. The fenestra ovale was almost obliterated. Of the semicircular canals only two were present.

CASE III.—At the autopsy of an adult deaf-mute he found the membrana tympani of the size proper to a seven-months' embryo, but very much thickened. The head of the malleus had an epiphysis with a broad base and pointed extremity directed forward to the Glaserian fissure. The base of the stapes was not larger than the os orbiculare and lay movable in the narrowed fenestra ovale; it was only connected with one of the processes, the other process of the stapes being free in the cavity of the tympanum. The cochlea had only two turns of the spiral, the remainder being agglutinated together; into this projected half of the atrophied malleolus. The lamina spiralis was entirely wanting, the semicircular canals were smaller and narrower. The bones around the labyrinth were harder and denser. The left ear had no stapes, and the fenestra ovale was closed by the growth of a bone which appeared to be the base of the missing stapes.

From the above post-mortems the conclusion may be drawn that the organic defects are not always symmetrical in both ears, and that the stapes is most frequently the seat of deviations from the normal. Congenital deformities may be due to intrinsic defects in the ovum, to arrested or obstructed development from various extrinsic causes, and in some instances they arise from the disease to which the fœtus is liable.

Predisposing or hereditary causes.—There is no donbt that the scrofulous diathesis is one of the predisposing causes of deafness. This condition produces its effect by exciting inflammation in the exterior and middle ear, and, when once started is liable to become chronic, and often causes perforation of the membrana tympani and discharge of the ossicle. With reference to heredity, the following cases came under my observation:

K——, of this city, became gradually deaf. Has four sons and a daughter; two of the sons are congenital mutes; one lost his hearing at the age of four years, and the girl is a cripple.

Mrs. R——, of this city, became partially deaf; she is also a cousin of her husband; one of her girls is a deaf-mute.

B——, of this city, lost his hearing at the age of four years, after scarlet fever; one of his sons lost his hearing at the age of five years from the same disease.

S——, of this city; partially deaf and afflicted with curvature of the spine; his grandchild is a congenital mute.

Marriages between near relations is another cause for congenital deaf-mutism. The *modus operandi* of this agency may be readily understood. Close intermarriages may transmit and intensify any defect which may be peculiar to the stock, while marriages of non-relatives leads to antagonism, and consequently diminution of any defect which may be peculiar to either of the parents.

The following statistics of the Allgemeine Oester. Isr. Jaubst Institute of Vienna confirms, at least partially, the above statement:

School years.	Number of pupils admitted.	Born of related parents.
1860–1861	9	2
1861–1862	10	2
1862–1863	16	4
1863–1864	15	3
1864–1865	11	4
1865–1866	10	2
1866–1867	12	2
1867–1868	13	3
1868–1869	23	5
1869–1870	14	3

This table shows that twenty-three per cent. of the whole number of pupils admitted were born of related parents. The relationships were as follows: The fathers of fifteen of these pupils were cousins of their wives; the mothers of fourteen pupils were nieces of their husbands, and the grandfathers of two pupils were cousins. Finally, I come to the consideration of accidental deaf-mutism.

The manner in which the inflammation extends to that part will be easily understood by calling to mind that the lining of the tympanum is a continuation of that of the fauces, and the affection of the throat soon finds its way through the Eustachian duct and involves the investing mucous membrane of the tympani. Other causes are inflammation of the external and internal canal—usually occurring in scrofulous children, of which I have treated before—acute otitis, otorrhœa, or the accumulation of wax in the meatus, etc.

Treatment.—If we read the literature of the subject we shall soon discover that manifold remedies have been employed for the cure of deaf-mutism. As in so many other medical and surgical diseases, empirical remedies came into fashion and were used indiscriminately in all cases, the etiology of the affection being entirely left out of view. If, perchance, one case was benefited in the slightest degree by a certain measure, the virtue of this remedy was exaggerated by the inventor, and henceforth it was used by most physicians connected with asylums for deaf-mutes. The French literature especially is rich in this phase of the subject. One instance only will suffice to illustrate the *modus operandi* of the fact just stated. At one time perforation of the membrana tympani came into vogue. Itard performed the operation on a deaf-mute. After the operation he employed injections of tepid water, which in the first few days caused the patient severe pains, and on the fifth day the injection escaped through the Eustachian tube into the mouth. This was followed by cephalalgia, dizziness, and vertigo, which were the symptoms of the sensibility of the organs of hearing, and by and by, Itard says, "the patient began to hear and to speak. But, unfortunately, the patient died soon after the operation, from tuberculosis." Itard performed the operation on thirteen other deaf-mutes, but without favorable results.

Dr. DeLau, jr., says, in his book, "Mal de l'Oreille," that he performed the same operation on two female patients, one sixteen and the other twenty-one years of age, and soon after the operation the patients began to hear and to speak a few words. He refers to three other cases in which the patients were benefited by the operation. The publication of these cases attracted the attention of physicians in different countries, especially in Belgium and Holland, so that the method was tried at the asylums on not less than eighty pupils, and, of course, without favorable results. At other times galvanism, magnetism, and other remedies were in vogue.

Deafness, as I have remarked, depends on different causes, and in cases in which a correct diagnosis can be made we may sometimes be able to remove the cause, as, for instance, in a case reported by Dr. Schleifer, of Neuhof (Ober. Oest.). The patient, a girl of nine years of age, who suffered a great deal from scrofula since infancy, began, at the age of seven years, to gradually lose her hearing, and at the age of nine years, when she came under observation, was completely deaf. The abdomen of the patient was enlarged, and, combined with other symptoms, Dr. Schleifer presumed the patient was suffering from worms, and accordingly ordered anthelmintic remedies. By a continuation of this treatment for six weeks eighty-seven pin-worms and over two hundred ascarides, combined with jelly-like mucus, were discharged, and at the end of six weeks the patient regained her hearing and speech. But in cases in which therapeutic remedies are of no avail, what measures shall be employed for the relief of these unfortunates? There are no other means at our command than to educate them. In infancy no difference can be appreciated in the mental characteristics of deaf-mutes and those having their full senses. The emotions of the deaf-mute are expressed in an exactly similar manner; when pleased, it smiles and moves its limbs lustily, and when displeased it weeps and turns away from mother and nurse. As the child begins to appreciate surrounding objects, it expresses its desires in the same manner as other children before they have acquired the power of speech; but as time passes it becomes apparent to the parents that their child cannot hear, and a change is noticeable. The necessity of communication produced spoken language. In deaf-mutes the same inexorable necessity produces a language by natural signs. The difference which must exist between these two products is obvious—the former can express abstract ideas and the latter only concrete; from this stage of development two systems of education are in vogue, the German and the French. The German method follows nature, inasmuch as it gives the child a living word in articulate sounds for each natural sign it has invented; as a consequence these signs are gradually dropped as the child becomes familiar with the word, and soon the child advances from the single words to simple sentences, and slowly passes from concrete to abstract ideas. The French method, on the contrary, develops, from the natural signs which the child has invented, an artificial sign language, which has no analogy in construction with spoken language, and compels the pupils to translate this highly artificial language into our language.

Without further comment I shall merely reproduce the judgment of the inventor of this system, the Abbé de l'Épée, contained in two letters addressed to his follower, the Abbé Seccard, "De Gerando," vol. i. p. 479. He says: "Do not expect that your pupils will ever be able to express their thoughts in writing, their language is not our language. Be satisfied if they correctly translate ours into theirs, as we ourselves may translate foreign tongues without being able to think or express ourselves therein, and that your pupils, like mine, can write dictated signs."

In the second letter he blames Seccard for attempting to make authors of his pupils, inasmuch as his system could only produce copyists; teach your pupils declensions, conjugations; teach them to construct parts of sentences after the model given by you; do not flatter yourself, however, that your pupils will ever express themselves in French; they will do this as it is possible for me to express myself in Italian, although I can translate the language tolerably well

The German method has the additional advantage that it causes greater physiological development of the respiratory organs by the practice of articulation. To produce a letter, certain movements of the organs of speech are required, these the deaf-mute acquires by imitation, and as a consequence learns to recognize them when produced by others, and in this way reads from the lips-mouth of others what is spoken. Some perfect themselves in lip-reading to a very astonishing degree. As a proof that those taught by articulation think in language, I may state that I have heard them frequently talk in their sleep. Any deaf-mute educated by the method of articulation can only think in this language, for he knows no other. He will use his mutism in his writing and will be a better scholar than when educated by signs. Articulation brings him nearer his hearing fellows, while the sign language widens the already existing inequality between him and his hearing fellows, and makes them a community by themselves.

CIRCUMCISED BY A MATERNAL IMPRESSION.—Dr. John G. Harvey, of Blue Mound, Ill., relates the following: "On August 11, 1884, I performed the operation of circumcision on a boy, three years of age, for the relief of a nervous trouble. On March 31, 1885, just seven months and twenty days later, his mother gave birth to a boy who was as perfectly circumcised as the child upon whom I had operated; even the scars from the sutures were reproduced in the exact number and location of those on the organ of the boy upon whom I had operated."

Progress of Medical Science.

RUPTURES OF THE BLADDER AND THEIR TREATMENT.—In connection with a successful case of suture of a laceration of the bladder, Dr. Blum gives some instructive statistics. The cases are naturally divided into intra-peritoneal and extra-peritoneal. Quoting the statistics of Bartels, out of 75 cases of the second class 46 were fatal, while of 94 cases of the first class 93 ended in death. When the rupture is joined with fracture of the pubic bone the prognosis is still worse—130 deaths in 139 cases. The seat of the lesion is variable, being in the intra-peritoneal cases almost always posterior, and in extra-peritoneal cases generally anterior. In general there is but a single laceration, and this seldom exceeds five centimetres in length, though rarely a double rupture has been seen. The principal symptoms are violent pain in the hypogastrium at the moment of the accident and great desire to urinate, without any result. Catheterism generally results in a few drops of bloody urine only, though in a few cases after several trials escape is afforded to a considerable quantity of urine, either clear or slightly tinged with blood. In these cases the catheter passes through the laceration and into the peritoneal cavity, or into the extra-peritoneal collection of urine. In extra-peritoneal rupture spontaneous recovery is possible, especially if there is an external wound, and if the patient is not carried off by urinary infiltration and inflammatory complications. In intra-peritoneal ruptures left to their own course death is the unvarying result, usually ensuing within twenty-four hours, and always within the first week. The diagnosis as to the seat of the laceration is often difficult, more especially if there is no external wound. If to the signs already mentioned there are joined pain all over the abdomen and marked tympanites, the chances are greatly in favor of intra-peritoneal rupture. If, on the other hand, there is no tympanites, but if there are marks of urinary infiltration of the abdominal wall, or if a fluctuating tumor above the prostate is made out by rectal touch, the rupture is probably extra-peritoneal. In the latter case perineal section and permanent catheterism are absolutely indicated, and have given good results. In intra-peritoneal rupture all the danger comes from communication between the bladder and the peritoneum, and the treatment is very different. Laparotomy is indicated, and should be done with as little delay as possible, to reveal the size and situation of the rupture, and it should be closed completely by the method of Lembert (the sero-muscular suture not involving the mucous membrane). The toilet of the peritoneum should be made with care. In twelve cases treated in this way there have been five successes, and Blum's makes one more. He was called in a case of this nature forty hours after the accident, and when the signs of commencing peritonitis were unequivocal. Nevertheless, the recovery of his patient supports the bold line of treatment which should be adopted, in which alone there is any hope of success.—*The New York Medical Journal*, October 6, 1888.

DISINFECTION OF SURGICAL INSTRUMENTS AND DRESSINGS.—Dr. Renard states that the disinfection of instruments by a five per cent. solution of carbolic acid is unreliable, the germs withstanding a soaking of from thirty to forty-five minutes. Bichloride is reliable, but has a chemical action on the instruments. Flaming, if thorough, is efficient. Boiling at 212° F. is efficacious, if long continued. Steam at 230° F. destroys all germs, if the substance be submitted to it for thirty minutes. Renard has a copper cylinder boiler that he fills about an eighth full of water; baskets containing instruments, and provided with feet that raise them from the surface of the water, are put in the cylinder, a lid containing a manometer and a safety-valve is screwed in place, and by means of an alcohol lamp the water is boiled; the air in the cylinder passes off by a stop-cock in the lid, which is then closed, and the pressure is increased until it represents a temperature of 230° F. Absolute disinfection is obtained in half an hour. Sponges are not subjected to this temperature, and instruments are never subjected to a temperature of more than 245° F. He draws the following conclusions: 1. Disinfection by steam compressed at 230° F., as applied in the apparatus above described, is certain and practical. 2. Instruments or dressings submitted to this treatment for fifteen or twenty minutes are absolutely disinfected. 3. The apparatus is very simple, not dangerous, and can be trusted to a nurse. 4. Neither dressings nor instruments are in any way altered by a prolonged treatment, if the temperature does not exceed 230° F.—*Boston Medical and Surgical Journal*, September 20, 1888

THE TOXICITY OF ALBUMINOUS URINE. In pursuing researches similar to those of Bouchard upon the toxicity of urine, MM. J. Teissier and G. Roque have communicated a paper to the Paris Academy of Sciences upon the character of albuminous urine in this respect. They point out that the determination of the toxicity of the urine is of great value in the prognosis of a case of albuminuria, but that the degree of this toxicity may vary at intervals, so that more than one estimation is needed. It does not matter whether there be much or little albumen in the urine if renal elimination be imperfect. They characterize albuminuria as a symptom of secondary importance in renal disease. The injection of albuminous urine into animals produces different effects from the injection of normal urine, and the most highly toxic specimens are those which contain most nitrogen; while in some the toxic effect is proportionate to the amount of albumen. The value of these laboratory researches is minimized by the fact that at present we do not know of any clinical indications of the degree of toxicity of the urine.—*The Lancet.*

TREATMENT OF UNUNITED FRACTURE OF THE NECK OF THE FEMUR.—Professor Loreta has successfully treated an ununited intracapsular fracture of the neck of the femur, by scraping the fractured surfaces and inserting a bundle of metallic sutures between them. On January 23d a robust man, aged thirty-six, was admitted into the Bologna clinic with the history of a fall on the left hip nineteen months previously, since which he had been quite unable to stand and had suffered from constant severe pain, shooting from the left hip joint into the gluteal region, the point of greatest intensity being over the course of the sciatic nerve. The limb was much wasted, but it was normal in position and scarcely at all shortened. Flexion and extension of the thigh on the pelvis were almost impossible, but the patient could occasionally execute very slight movements of rotation and abduction. In rotation he was sometimes conscious of faint crepitus in the trochanteric region. On February 15th Professor Loreta operated, with full antiseptic precautions. He made a long incision behind the great trochanter, so as to expose the capsule of the joint, when he noticed a depression between the intracapsular and extracapsular portions of the neck of the femur. On moving the limb it was found that there was a fracture without displacement in that situation. The capsule was then opened, the fibrous tissue between the fragments divided, and the fractured ends carefully freshened by scraping with a raspatory. As it would have been very difficult to wire the fragments, a bundle of from eight to twelve metallic sutures was introduced between them, and brought out at the lower angle of the external wound. The wound was carefully cleansed, a drainage-tube inserted, the edges brought together with deep and superficial interrupted sutures, and the whole covered with a sublimate dressing. A long outside splint was then applied. Five days after the operation the bundle of metallic sutures was removed, and the wound healed by first intention. In less than a month the pain had permanently ceased, and fifty-five days after the operation the patient left the hospital, being able not only to stand, but to walk with no further support than an attendant's hand.—*The British Medical Journal.*

WOUND OF INTERNAL MAMMARY ARTERY: HÆMATO-MEDIASTINUM.—A remarkable case of this kind recently came under the observation of Dr. Madelung) *The British Medical Journal*). On September 2d a man, aged thirty-nine, was stabbed with a knife in the head, thorax, and abdomen. But little hemorrhage was noticed; he walked one hundred paces, reaching his dwelling, where it was found that intestine had prolapsed through the abdominal wound. Twenty hours after the injury he was taken in a wagon to the Rostock Infirmary, after a journey of over an hour. The intestine was reduced, having been left alone till admission, and the abdominal wound sewn up. The thoracic wound was on the right side, parallel to the third rib, beginning close to the border of the sternum. It was four-fifths of an inch long, and no blood escaped from it at the time; it was drained and sutured. There were no signs of cardiac or pulmonary mischief. On the evening of September 13th, after doing well for many days, pain and dyspnœa troubled the patient, and hemorrhage occurred from the thoracic wound, which recurred on the evenings of the 14th and 15th, so that the patient became anæmic. On September 16th Dr. Madelung opened the wound. The right third costal cartilage was cut through close to the sternum. Arterial hemorrhage was observed above and below the cartilage, about an inch of which was resected. A cavity in the anterior mediastinum, "the size of a goose's egg," was exposed; it was full of clot. An inch of the fourth costal cartilage was resected; in so doing the operator opened the pericardium. Apparently that serous sac had been opened by the stab, and had speedily closed, the operation breaking down the adhesions which closed it. Much hemorrhage accompanied the opening of the hæmato-mediastinum, the blood gushing from the lowest part of the wound. Dr. Madelung therefore tied the internal mammary artery in the fifth intercostal space, in its continuity, when the hemorrhage ceased. The cavity was packed with iodoform gauze, and a tampon of the same material was placed over the wound in the pericardium. The patient recovered.

THE TREATMENT OF PULMONARY ABSCESS.—Drs. Spillman and Haushalter discuss the subject of abscess of the lung following acute pneumonia—a somewhat rare event. They reproduce abstracts of nine recorded cases where pneumotomy was had recourse to—in seven with success (*The Lancet*). All these cases were operated upon long after the pneumonia had subsided, in two after the lapse of two and five years respectively. Surgical intervention should, in their opinion, not be delayed so long, owing to the risks involved both locally and generally in leaving an abscess in this situation unrelieved. The diagnosis is therefore all-important, and is based upon the supervention of hectic after pneumonic defervescence, of purulent or gangrenous expectoration containing shreds of lung-tissue, fatty crystals, etc., and the physical signs of excavation. Recognizing the frequent insufficiency of these latter signs, they urge the use of exploratory puncture, which was adopted in most of the cases referred to. Pleuritic adhesions may have resulted from the previous pneumonia, but in some cases they are lacking, and may have to be artificially produced, either by resection of a rib and suture of the pleural layers, as suggested by Rüneberg, or by exciting pleurisy by means of the cautery as Cerenville did. Rüneberg, however, does not think the absence of such adhesion contra-indicates the operation. The authors record a case of their own where signs of abscess at the right base appeared on the fifteenth day of pneumonia, and where the diagnosis was confirmed by exploration. Glycerine and iodoform were injected into the abscess, but the patient died on the following day from collapse. The paper concludes as follows: "1. Before having recourse to operative intervention, one must be quite certain of the existence and site of the abscess by every method of diagnosis, and especially by exploratory puncture. 2. When an abscess is diagnosed in the course of pneumonia, intervention should, as a rule, not be entertained; but if the pneumonia is cured and the abscess persist, then intervention may bring about rapid recovery, or at least prevent serious accidents resulting from the opening of the abscess into neighboring organs or externally. 3. Before opening the abscess, it is useful to provoke pleural adhesions, if these do not exist. 4. To reach the abscess, the best procedure seems to be resection of rib and piercing the lung by the thermocautery. 5. The complete escape of septic fluids must be effected by drainage; antiseptic injections are to be avoided, and dry dressings to be preferred."

The Advantage of Borax and Boric Acid.—The Paris correspondent of the *Journal of the American Medical Association*, September 15, 1888, writes that Dr. Bedoin has pointed out the advantages of borax and boric acid. He states: 1. Borate of soda or borax, and particularly boric acid, possess incontestable antiseptic properties, the activity of which is not so small as is generally affirmed. Both are recommended for the preservation of alimentary substances, such as milk, butter, cheese, eggs, butcher's meat. But owing to its almost absolute insipidity, boric acid should, for this purpose, be preferred to borax, the savor of which is disagreeable; both are absolutely innocuous. 2. Interiorly the therapeutic employment of boric acid as an antiseptic has already given very encouraging results, which are of a nature to authorize its administration in the affections where, till now, carbolic acid was almost exclusively employed, for example, typhoid fever. 3. Exteriorly, the antiseptic properties of borax, and particularly of boric acid, justify the generalization of their employment in surgery, notably in the practice of dressings after the manner of Lister, also in certain affections of the urinary organs, of the eyes, ears, and of the skin.

Physiological Effects of Russian Baths.—Dr. Makovetski, of Professor Manassein's clinic in St. Petersburg, has published as a graduation thesis an elaborate investigation made by him on the effect of the so-called Russian bath on nitrogenous metabolism, and on the assimilation of fat and the nitrogenous principles of food. His researches were carried out on four student friends in a condition of perfect health. The baths were given daily for five days; perspiration in a hot chamber was induced, with the usual amount of shampooing, no steam being used. Accurate analyses of the urine, etc., were made for five days before the baths, for the five days during which they lasted, and for two days subsequently. It was found that the assimilation of the nitrogenous parts of the food was diminished, the nitrogenous metabolism being increased. The loss by the lungs and skin was markedly increased, but the urine was diminished, the uric acid, too, was diminished during the days when the baths were given. The baths have the effect of strengthening the muscular and nervous systems, and of increasing secretion where there is much muscular work, especially where the food is deficient in nitrogen, when there is a large amount of nervous and mental activity, and also when there is deficient action of the secretory organs in consequence of preceding hypersecretion, or morbid conditions such as chronic catarrh of the bronchi, stomach, intestines or genito-urinary tract, chronic hepatic, renal, or splenic affections. In these cases, together with the baths, fats and hydrocarbons are required in the food. As contra-indications, theory would lead us to include all conditions where the nitrogenous metabolism is diminished, and also those where artificially induced diminution of it appears to act prejudicially.—*The Lancet.*

Hot-Water Baths in Chronic Synovitis of the Knee.—The Italian correspondent of the *British Medical Journal* (September 15, 1888) says that Dr. G. Allexich, of Crema, has used hot baths with good results in six cases of chronic synovitis of the knee, in some of which the affection was of many months' standing, and had resisted all ordinary treatment. Dr. Allexich makes his patients keep the knee immersed in hot water for half an hour at a time. The joint is placed in the water in a flexed condition, and the patient stands upright, resting the weight of his body on the sound limb and supporting himself with his hands on the backs of two chairs. When taken out of the bath the knee is carefully dried and wrapped in cotton wool, the joint finally being carefully bandaged. For some days the patient should only go about on crutches. Dr. Allexich thinks that the virtue of various hot springs renowned for the cure of joint affections (such as Acqui, Abano, Viterbo, Ischia, etc.) consists not in their chemical composition, but in their temperature, and that equally good effects can be got at home by the simple means just described.

Australian Treatment of Typhoid Fever.—In compliance with the request of the Sydney Board of Health, Dr. W. Peirce, medical superintendent of the Coast Hospital, has reported upon the treatment of cases of typhoid fever, of which the rate of mortality during the first five months of the present year has been unusually low. Dr. Peirce, in his memorandum, states that, in cases received within the first ten days of the disease, calomel (three to five grains) is administered; and after that acetanilide, in five-grain doses, whenever the temperature exceeds a certain point (101° to 103° F.), up to six or eight times in the twenty-four hours. The effect of this is to cause a fall of temperature in about forty minutes, attaining its minimum in from two to four hours, with concomitant fall in the pulse and respiration rates, with decrease of arterial tension and profuse sweating. The tendency to delirium is diminished, and there is "a remarkable feeling of ease and repose, which appears partly to depend on the production of a certain amount of peripheral anæsthesia." When the effect of the drug passes off, the temperature often rises with great rapidity. He considers this treatment to have many advantages over cold bathing. He has given the drug continuously for several weeks, and has not found it contra-indicated, even when there were cardiac complications. It renders the course of the fever milder, but it may not lessen the duration of the disease. In all cases where it is freely given there is liability to occasional cyanosis of extremities and face, with irregular pulse. Alcohol was given very sparingly, and generally only in cases of failing heart. The author also maintains that the prolonged use of alcohol is very injurious.—*The Lancet*, September 15, 1888.

Lead Poisoning from Glazed Earthenware.—It is far from generally known that the use of glazed earthenware pans for preparing home-made bread, etc., is attended by the risk of lead poisoning due to the glaze becoming dissolved, and giving rise to more or less serious symptoms. In view of some recent cases of intoxication due to this cause at Alcester, it has been suggested that the fermenting process should be carried out in wooden vessels. Lead poisoning is a contingency against which the medical man requires to be on his guard. It occurs in the most unexpected places, and under circumstances which are very apt to escape his attention. The sources from which it has been known to be derived are varied in the extreme, and have often baffled the efforts to afford relief, until someone more far-seeing than the others has set to work to investigate the causes which underlie the perplexing ailments to which the ingestion of lead in any form is apt to give rise. There is scarcely an article of food, and still less of drink, which is not liable to contain the toxic agent, and nothing but constant vigilance can protect the practitioner from the results of an erroneous diagnosis.—*The Medical Press.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place

New York, November 3, 1888.

THE ELECTRICAL PROPERTIES OF THE HUMAN HEART.

THE idea that "electricity is life," and *vice versa*, is one which decidedly tinctures the minds of a large class of imperfectly educated people. There is, however, not the slightest reason to believe that vital force or nervous "discharges" have any closer identity with electricity than with heat, or magnetism, or light. The energy in a nerve impulse or muscular contraction is one of a distinct type, and only correlated with electricity, just as electricity is correlated with other manifestations of force.

There are, however, peculiar manifestations of electricity associated with the phenomena of the living organism. An electrical disturbance depressing in character accompanies the passage of a nerve-impulse, the secretion of a digestive juice, or the contraction of a muscle.

As a burning candle gives off at the same time heat and light, so the body, in manifesting vital phenomena, develops also electrical phenomena. These latter are very slight in amount, and can only be studied by instruments of great delicacy and precision; yet, with the aid of rude instruments, very curious and important observations have been made.

There are none more curious than those recently described by Dr. Augustus D. Waller, in an introductory lecture delivered before the St. Mary's Hospital medical school, on "The Electro-motive Properties of the Human Heart." Dr. Waller has observed what other physiologists had done, that with every beat of the heart in cold-blooded animals a wave of electrical disturbance passes from base to apex. He has lately tried to find whether the same phenomenon occurs in warm-blooded animals, and asserts that it does. Only, in the case of warm-blooded animals he thinks that the contraction begins at the apex and travels toward the base. If this be so, it will revolutionize some of our theory of cardiac pathology.

Dr. Waller has next tried to find whether the cardiac electrical phenomena occur in man. To do this it is only necessary to dip the two hands into two basins of water which are connected by an insulated wire with a delicate electrical indicator. With each heart beat a wave of positive electricity—to use conventional terms—starts from the apex and diffuses over the left and lower half of the body, while a wave of negative electricity diffuses to the right arm, head, and neck. More strictly, there is established with each heart-beat a difference in electrical potential over these areas, the degree of which is measured by the indicator. Dr. Waller succeeds in obtaining an electrical cardiogram of a certain definite character. A study of the variations in the electrical disturbance of the heart in various morbid conditions may furnish instructive data for the clinician and therapeutist.

FOOT-BALL PATHOLOGY.

WE are at the height of the foot-ball season, and the weekly record of casualties in various college towns and athletic associations is considerable. Such casualties are usually those of strains, bruises, wounds, with occasional severer injuries. It would hardly be thought that foot-ball could, like tennis and base-ball, produce a special form of trouble; yet, according to Dr. George Werry, in *The Lancet*, such is the case. The physician in question says that the most common foot-ball accident which he is called upon to treat is one known technically as "the poop." Whether such term has become adopted in this country or not, we cannot say; but certainly the accident occurs here.

The description of the injury given by Dr. Werry is this:

During the game a player receives a blow on the front and outside of the thigh; there is at once a feeling of utter helplessness, but he may recover so far as to be able to continue the play after a short rest, and feel little of it next day, except that he cannot run. The patient comes to consult the physician the day after the injury, with little pain. He limps in walking. On examination there may be effusion into the knee-joint, a soft and somewhat tender area over the quadriceps extensor femoris, and the patient cannot lift the limb when it is kept extended. Ecchymosis is not common. The amount of knee-joint effusion depends on the position of the injury with regard to the bursa behind the quadriceps tendon, and whether the man has tried to continue his sport, or walked much after the accident. The blow may be in the middle of the thigh, and cause an effusion into the joint; the patient may have forgotten the "poop," and come to complain of the swollen knee. The recovery of the damaged muscle is generally complete. It seems probable, therefore, that in the "poop" the muscle is more bruised than broken.

SPLANCHNOPTOSIS.

SOME time ago we published a description of an alleged new disease or morbid condition called enteroptosis, or falling of the bowels. M. Glenard, who is the originator of this term, and who first called attention to the condition, thought that it was not infrequent, and that it caused many of the nervous and dyspeptic phenomena of chronic invalids. This condition, referred to by Glenard, has been described by Beard as gastric neurasthenia, by Arndt as a nervous hypertrophy, by Leube as a primary or acquired gastric ectasia, by Bouchard as a primary enfeeblement of the gastro-enteric muscular system with relaxation of gastro-intestinal walls, enfeebled digestion, and absorption of leucomaines, ptomaines, etc.

M. Glenard's view that enteroptosis or ptosis of parts of the bowel or of the kidneys, or stomach, may cause many of the nervous phenomena of gastric neurasthenia has received attention from M. Féréol, who thinks the condition does exist, and that the fact is an important clinical one.

Dr. M. J. Cuilleret, of Lyons, has recently contributed some further evidence regarding this condition (*Gazette des Hôpitaux*, 1888, No. 109). M. Cuilleret reports the history of a case of enteroptosis with nephroptosis, diagnosticated as such by Glenard during life. Autopsy proved the accuracy of the diagnosis. Dislocation of the kidney is one of the frequently observed forms of "ptosis." Glenard has published statistics of one hundred and forty-eight cases observed at Vichy. This dislocation may cause no symptoms if slight, or it may cause nervous or gastro-intestinal symptoms. Prolapse of the ascending colon, with consequent stenosis of the transverse colon, is another frequent condition; and it is asserted that there may be gastroptosis without dilatation of the stomach.

Among about forty female and twelve male dyspeptic and nervous patients, Cuilleret found seven cases of enteroptosis, or, as he chooses to call it, "Glenard's Disease." The conclusions which he draws from his studies are:

1. Enteroptosis, either pure or accompanied with ptosis of other abdominal viscera, is a morbid entity sharply defined and very frequent.
2. This disease is characterized anatomically by a prolapse of the bend or knee of the ascending colon, and of the first part of the transverse portion. This is the fundamental organic lesion, constant and irremediable, of enteroptosis.
3. The affection described as movable kidney ought to be considered as in reality an affection of the digestive tube, for there can be no prolapse of the kidney without a prolapse of part of the colon or small intestines.
4. The subjective symptoms of especial significance in enteroptosis are: General weakness, insomnia, constipation, intolerance of certain foods. Tension and sensitiveness of the cæcum are the only objective signs at first Careful and deep palpation must however be made.

A history of traumatism, falls, repeated childbirths, and other things tending to weaken the abdominal walls must be sought for.

The treatment consists in bandages, laxatives, alkalies, a diet of meat and eggs, alkaline waters, and hydrotherapy.

THE TREATMENT OF URETHRAL STRICTURE BY ELECTROLYSIS A FAILURE.

Dr. E. L. Keyes, after a faithful trial of electrolysis in stricture, pronounces the method a failure. In a paper on this subject, published in the *New York Medical Journal* of October 6, 1888, he says that a wide-spread belief exists in the community, lay as well as medical, that material progress has been made of late years in the use of electricity as applied to the cure of urethral stricture. This belief includes the three presumptions:

1. That anyone, by following rules, may use the method successfully.
2. That electricity does no harm to the urethra.
3. That stricture cured by electricity is dissipated by absorption, and the urethra remains permanently open.

There is no foundation for these beliefs. Dr. Keyes had occasion to observe eight typical cases, in which the method, as advocated by Dr. Newman, was given a fair trial. In one of these cases, Dr. Newman himself applied the electricity. All the cases proved to be failures. Dr. Keyes concludes his article as follows:

"I may state that electrolysis with a very mild current—I prefer to put it at less than two milliampères and a half—does no harm; in fact, does nothing that I can appreciate, and does not interfere with the benefit to be derived from ordinary dilatation. I believe that a strong current is full of danger, both immediately from irritating effect and ultimately from cicatricial effect; and that employment of the negative pole does not prevent this.

My study of the subject and the experience it has brought me, digested with all the impartiality I possess, lead me to state that the allegation that electricity, however employed, is able to remove organic urethral stricture radically, lacks the requirement of demonstration. The confidence of its advocates that it will radically cure organic fibrous stricture is, in my opinion, due either to the combined credulity of the patient and imagination of the surgeon, or to some special but fortuitous act of Providence, upon the co-operation of which, in the case of his own patients, the general practitioner cannot with any confidence rely."

THE DIAGNOSTIC SIGNIFICANCE OF A RED GINGIVAL MARGIN IN PULMONARY TUBERCULOSIS.

The diagnosis of pulmonary phthisis in its early stages is often beset with so many difficulties that an acquaintance with even the most trivial signs is a matter of considerable importance. One of these minor symptoms, to which a certain value was at one time attributed, but which has since fallen into oblivion, is the appearance of the margins of the gums.

Some forty years ago Frédéricq directed attention to the presence, in various diseases, of a streak along the gingival margin which was of a different color from the surrounding mucous membrane. He described this streak as of a red color in acute phthisis, but of a more bluish tint in chronic cases. The streak was visible in the early stages, and the redder it was the more acute was the process, a diminution in the degree of redness being a favorable sign. A few years later Thompson described this same streak, which he said was seen less constantly in women than in men. The wider was the line the worse was the prognosis, according to this observer, and its absence in men justified a favorable opinion concerning the outcome of the disease. Later observers disputed the diagnostic and prognostic significance of this sign, and, like so many other little things in medicine, it was soon forgotten.

Recently Dr. G. Sticher had his attention called to the frequent occurrence of this line, and has examined upward of a thousand patients, suffering from various affections, with a view to determine its semeiological value. The results of this investigation, which he has published in the *Münchner Medicinische Wochenschrift*, No. 37, 1888, have led him to attach considerable importance to the sign. He found it almost constantly present in men suffering from pulmonary phthisis, and but very seldom in other affections. He does not wish to lay much stress upon it nor to regard it as pathognomic, but says that it is a symptom of some value, the more so because it is so easily determined by simple inspection. He found it present in pulmonary phthisis almost without exception, and, in men especially, it was one of the earliest signs of the disease, though in women, for some reason, it occurred much less constantly. It was never seen in men who were free from tubercular trouble, but in women it occurred sometimes during pregnancy and persisted occasionally for a certain period after delivery.

The author's conclusions were, that the presence of a red gingival line in men pointed strongly to the existence of pulmonary tuberculosis, but in women its value was much less. Similarly, its absence in women was of no diagnostic importance, but if it was not found in men there was a strong presumption that the affection from which they suffered was not incipient tuberculosis.

It is possible that this red line may be present in many or most cases of pulmonary phthisis, but its existence has been noted in other affections as well, and the diagnostic value which it is possible to attribute to it can hardly be very great.

THE AVERAGE COMPOSITION OF THE URINE.

THE composition of the urine varies slightly, as is well known, with the season, the diet, exercise, age, and sex. There is reason to believe, also, that racial differences exist. At any rate, it happens that most of the compositions given in standard works are of German origin, and may not apply strictly to other races. Vogel, Kerner, Drechsel, Mosler, among the Germans, have given tables of urinary composition; Beclard, Bouchard, Gautier, and others, among the French. Parkes has also made analyses of the urine of English adults. The figures of averages range, for total daily solids, from sixty to seventy-two grammes, showing a very considerable variation.

MM. Yvon and Berlioz have recently (*Rev. de Médecine*, September, 1888) reported the results of 661 analyses of urine, 347 being analyses of the urine of men; 314, of that of women. The specimens were all obtained from healthy adults, and, being made on so large a scale, with the greater conveniences and more complete chemical knowledge of to-day, seem to be worthy of special record.

The figures which the authors referred to give are these:

	Men.	Women.
Daily amount	1313.0	1125.0
Specific gravity	1022.4	1021.5
Urea	26.52	20.61
The range being	24 to 32	20 to 28
Uric acid	0.596	0.566
Phosphoric acid	3.191	2.590

The analyses did not cover the sulphates, chlorides, etc. They show a much smaller average for urea than is given by Kerner (38.1), Vogel (35.0), or Parkes (33.0).

It is noted that the different elements are all in greater proportion in the urine of man than in that of woman, with the exception of uric acid. The percentage of this in woman is 0.055; in man, 0.050. They establish a quantitative relation of 1 to 40 between uric acid and urea, a relation which is fairly constant. There is a decided difference, necessarily, between the ratio for man and that for woman.

For man it is	1 to 44.5
For woman it is	1 to 36.5
Giving the average	1 to 40.5

The relation of urea to phosphoric acid is also a constant one, the daily amount of urea being to the daily amount of phosphoric acid as 8 to 1.

News of the Week.

HOSPITAL SATURDAY AND SUNDAY ASSOCIATION.—This Association has begun to organize its preparations for the coming winter's collections. At a meeting held October 15th, the following interesting facts regarding last year's work were presented:

	1886.	1887.
Churches	$32,784 66	$28,626 79
Trades	12,740 82	14,276 85
Exchanges	2,709 05	3,104 06
Benevolent orders	726 50	640 50
Woman's fund	487 00	1,018 45
Personal and general	2,847 72	2,113 65
Professions	57 00	157 00
Box collections	699 23	511 85
Total	$53,051 98	$50,449 15

Following is how this was divided according to denominations:

From religious sources.

Denominations.	Designated.	Undesignated.	Total.
Episcopal	$2,273 29	$15,866 19	$18,139 48
Presbyterian	432 71	2,905 12	3,337 83
Methodist	1,182 37	689 18	1,851 55
Synagogues	....	1,679 14	1,679 14
Reformed Dutch	71 43	892 93	964 36
Congregational	5 56	695 00	700 56
Lutheran	353 94	274 33	628 27
Baptist	163 00	254 26	417 26
Unitarian	....	206 10	206 10
Ethical Culture	....	172 50	172 50
Universalist	....	145 24	145 24
Swedenborgian	1 00	121 18	122 18
Roman Catholic	100 46	....	100 46
Friends	5 00	81 11	86 11
Evangelical	....	26 75	26 75
Missions	....	24 00	24 00
Moravian	....	22 50	22 50
Reformed (Catholic)	....	2 50	2 50
Total	$4,588 76	$24,038 03	$28,626 79

From secular sources.

	Designated.	Undesignated.	Total.
Contributions	$407 15	$21,415 21	$21,822 36

Summary of above.

	Designated.	Undesignated.	Total.
From religious sources	$4,588 76	$24,038 03	$28,626 79
From secular sources	407 15	21,415 21	21,822 26
Total	$4,995 91	$45,453 24	$50,449 15

The Association gives a review of the events connected with the withdrawal of the Presbyterian Hospital, which shows, as has been shown before, the selfish and scheming policy of its managers.

THE UTERUS AS A CANDLESTICK.—In reference to the mutilation of the bodies of the women murdered recently in London, Dr. Block, a member of the Austrian Reichsrath (*Hospital Gazette*), directs attention to the fact that in various German criminal codes of the seventeenth and eighteenth centuries, as also in statutes of a more recent date, punishments are prescribed for the mutilation of female corpses, with the object of making from the uterus and other organs "thieves' candles" or "soporific candles." According to an old superstition, still rife in various parts of Germany, the light from such candles will throw those upon whom it falls into the deepest slumber, and they may, consequently, become a valuable instrument to the thieving profession. At the trial of the notorious German robber, Theodor Unger, surnamed "The Handsome Charley," who was executed at Magdeburg in 1810, it transpired that a regular manufactory had been established by gangs of thieves for the production of such candles. That this superstition has survived among German thieves to the present day was proved in a case tried at Biala, in Galicia, as recently as 1875.

THE FEVER AT JACKSONVILLE.—On October 29th there were reported 36 new cases and 4 deaths. The total number of cases up to date had been 4,095; deaths, 352.

CHLOROFORM AND ETHER.—A correspondent from Omaha asks if we see any reasons for changing the opinions often expressed regarding the use of ether as against chloroform. The facts, we would say, still remain strongly in favor of ether, and the tendency is toward its still wider use in Great Britain. There is some evidence of a reaction in favor of chloroform in this country.

THE TRAINING OF THE HANDS FOR THE ACQUIREMENT OF SURGICAL DEXTERITY.—Deftness and delicacy of touch are things which chiefly come by nature. Sufficient dexterity for most of the general surgical manipulations, however, can be acquired by training, and everyone can improve his natural gifts by practice. Mr. Ernest D. Bower, a London oculist, claims that playing on musical instruments, particularly the piano, gives strength and delicacy to the touch.

ANTISEPTIC TREATMENT "AS SHE IS DESCRIBED."—Dr. Von Mosetig-Moorhof, speaking at the Vienna Medical Congress, showed himself to be possessed of great originality in one thing—his bold and unique treatment of the English language. He quoted the following as Lister's statement of his "fundamental satze:" (1) "Let the wound to be alone;" (2) "Let the wound to be protected;" (3) "Let to the wound her free discharge." This interesting specimen of "English as she is spoke" by Sir Joseph Lister, will doubtless surprise many people; not least, we should imagine, Sir Joseph Lister himself.—*The Hospital.*

M. SUCCI began another thirty days' fast, at Barcelona, on September 22d.

IMPERIAL SYMPATHY.—Emperor William, as soon as he got back to Berlin, invited Von Bergmann and Gerhardt to dine with him, thus showing where his sympathies lie. While at Vienna he had a long interview with Professor Schrötter.

A MISALLIANCE WITH A PHYSICIAN.—American physicians will read with some interest and curiosity the following account of a matrimonial "misalliance" as given in the *Mail and Express:* "A misalliance often mentioned is that of the sister of the Duke of Westminster, Lady Alice, with Dr. Frank, a popular English physician at Cannes. Save in the mere matter of rank—and that, to quote Burns, is but the guinea's stamp—Lady Alice has made no misalliance. Surrounded by all the luxurious ease which wealth bestows, living in a climate which fills our dreams of heaven itself, and joined to a cultivated man of philanthropy and science, whose patients fairly adore him, the Duke's sister may well congratulate herself on having been brave enough to marry out of her order. So inexorable, however, are the decrees of English court caste that, were the children of Lady Alice the children of even the most worthless man of rank, instead of a noble-minded physician, their social status would be higher."

STATUS OF AMERICAN MEDICAL SCHOOLS IN EUROPE.—Dr. John H. Rauch writes as follows regarding the above subject in the *Medical and Surgical Reporter:* "Practically, the diplomas of no medical colleges are recognized in Europe. If the question was divided it could be answered much easier; as, for instance, the recognition of diplomas for the purpose of practice, or as a qualification prior to receiving degrees from institutions. Degrees of Harvard, University of Pennsylvania, and Bellevue receive recognition to a certain extent in some countries, but not in all. By a recent Act of Parliament the Medical Registration Law of Great Britain has been changed, allowing the registration of diplomas from other countries. I am not advised as yet whether the law has gone into effect, or what diplomas are recognized."

THE ETHICS OF JOURNALISM.—The premature publication by our contemporary, the *British Medical Journal,* of an analysis of Sir Morell Mackenzie's work, several days before its publication, and in spite of the most strenuous efforts on the part of publishers to prevent access thereto, has naturally given rise to much and severe comment. It is not unlikely that so gross a breach of the unwritten code of morality will lead to counsel's opinion being taken to ascertain whether the making of extracts to the extent of probably an eighth of the whole book, without comment, does not amount to a breach of the copyright law.—*Medical Press and Circular.*

REPORT OF A CASE IN WHICH, FROM CONGENITAL DEFORMITY, A MAN AGED FIFTY-FOUR HAS PASSED HIS FÆCES AND URINE BY THE URETHRA ALL HIS LIFE.—A case of the above character is reported in the *British Medical Journal* by Mr. Frederick Page. The patient, a small-built man of a peculiar, dark complexion, not unlike that of a person suffering from Addison's disease, was admitted into the Royal Infirmary, Newcastle-upon-Tyne, May 21, 1888, and gave the following history: Immediately after birth it was discovered that fæces and urine were passed from the meatus urinarius, and that the anus was imperforate. An attempt was made by a surgeon to establish an anus in the natural situation, but the operation was not successful; fæces and urine still passed by the urethra, though fluid has from time to time escaped from the anus. At the age of ten years the urethra became blocked by hardened fæces. Relief was obtained from an incision into the urethra immediately in front of the scrotum, and through the fistula thus formed the patient has continued, with great difficulty and discomfort, to pass his fæces and urine. He says he is in the habit of taking aperient medicine daily, and has to squeeze his fæces through the fistula with his fingers, the proceeding generally occupying from an hour to an hour and a half. From time to time the fistula has become blocked, and then the patient has passed his fæces and urine from the meatus. Sometimes, too, the urethra became blocked, and then the patient has passed his fæces through the fistula, and his urine by the fistula and from the anus, until he has succeeded in displacing the obstruction. His urine is generally clear and natural in appearance, but sometimes there is a brown deposit from it, and it has a fecal smell. He has been married twenty-four years, and is the father of one child.

Lanolin and Boric Acid in the Skin Diseases of Children.—The combination of lanolin and boric acid as an ointment is said to have a most gratifying effect in certain skin diseases in children, especially eczema of the head and face, intertrigo, and seborrhœa. In the case of eczema, for example, with raw patches on the cheeks and yellowish crusts on the head, the surface is first cleansed in the usual way, and then dusted over with finely powdered boric acid. On the following day this washing and dusting over is repeated; already the inflammation will seem lessened. The process is then repeated twice daily, the washing being always done gently, until the skin is in a condition to bear an ointment containing thirty per cent. of lanolin and eight per cent. of boric acid. In the squamous form of eczema with considerable induration, olive-oil is well rubbed in and then removed with Castile soap, and an ointment containing one-half, or one per cent., of salicylic acid with thirty per cent. of lanolin is energetically applied according to the degree of induration. This washing and application are repeated twice daily. The strikingly beneficial action of this course of treatment, which is less painful than the use of strong alkalies or oil of cade, is ascribed to the penetrating properties of lanolin, which thus facilitates the entrance of salicylic acid into the deeper layer of the epidermis. Dr. Russell Sturgis, who advocates the above treatment, also finds lanolin a reliable means of alleviating the irritation due to chronic urticaria.—*British Medical Journal.*

A New Method of Mixed Narcosis.—In a recent number of the *Wiener Klinische Wochenschrift*, Professor Obalinski proposes the following method of mixed narcosis, which he has repeatedly tried and found very useful. Pure chloroform is given, to begin with, in the usual way (that is, by means of Esmarch's mask), for from four to twelve minutes, the quantity of chloroform used being equal to from four to twelve grammes. A quantity of from three to five centigrammes of a three to five per cent. solution of cocaine is then injected into the place to be operated upon. There is no reason to be afraid of injecting even a larger quantity of cocaine, as chloroform, which is one of the best antidotes of cocaine, is administered at the same time; and also, because a part of the cocaine is removed by operation. After the injection of cocaine Professor Obalinski does not use any more chloroform, especially when the operation is one of short duration; occasionally he employs it in small quantities and at long intervals of time. The method has hitherto been employed in twenty-four cases, and the following are its advantages: 1. The advantages of both the general and local anæsthetizing methods are combined in it. Certain dangers proper to each of these methods are excluded by the combined procedure. The fact that a smaller quantity of chloroform is used gives greater confidence in its use, and besides, at the same time, a drug is employed which is known to be the best excitant, as it causes contractions of the blood-vessels as well as of the cardiac muscle, whereas chloroform paralyzes these organs. Again, there are individuals who have a certan idiosyncrasy in respect of cocaine; in these, even proportionately small doses of the drug produce disagreeable symptoms of cerebral anæmia, shown by tinnitus aurium, pallor of the face, giddiness, etc.; and an antidote, such as amyl nitrite, chloral hydrate, chloroform, ether, or morphine, when administered at the same time, instantly causes all these disagreeable phenomena to disappear. From all these facts it may be concluded that local cocaine anæsthesia, in connection with semi-narcosis produced by chloroform, is more reliable than pure chloroform narcosis. 2. Vomiting occurs much more rarely in mixed than in chloroform narcosis. 3. The patients awake more easily from the mixed narcosis, and do not feel depressed or weary. The sole disagreeable symptom —and it is one of rare occurrence—is that there is more excitement, especially in nervous persons. This is manifested by crying, uneasiness, or strong tetanic muscular contractions. Similar symptoms are, however, also observed in pure chloroform narcosis.—*British Medical Journal.*

Pyrodin: A New Antipyretic.—Dr. Dreschfeld has recently reported observations on a new antipyretic drug named pyrodin, the active ingredient of which was acetyl phenyl-hydrazin (*British Medical Journal*). This substance was a powder, which was very sparingly soluble in cold water; it had no unpleasant taste, and produced neither nausea nor vomiting. It acted much more quickly and powerfully than antipyrin, antifebrin, or phenacetin. It reduced the fever temperature within a few hours, and kept the temperature down for six or eight hours; this reduction was followed by a rise, and this was succeeded by a second fall, so that rarely more than one dose need be administered within twenty-four hours. The reduction of temperature was associated with sweating, but neither collapse nor rigor had been observed, though in some cases the reduction of temperature amounted to 7° F. The drug had been found especially useful in pneumonia, typhus, and scarlet fever; in typhoid fever the antipyretic properties were equally well marked, but slight toxic effects were occasionally noticed after a few doses had been given. The powerful antipyretic properties were also noticed in non-zymotic inflammatory fevers, such as peritonitis. It acted well also in cases of migraine, even when antipyrin failed. Given in repeated doses of eight to twelve grains, pyrodin was apt to produce toxic effects; these consisted in the appearance of jaundice, due to commencing hæmoglobinæmia, as was proved by a series of experiments on rabbits. The dose of pyrodin for children was three to four grains, for adults eight to twelve grains.

For the Removal of Freckles a lotion composed of equal parts of lactic acid and glycerine is said to be efficacious.

Society Reports.

CANADIAN MEDICAL ASSOCIATION.

Twenty-first Annual Meeting, held in Ottawa, September 12 and 13, 1888.

(Special report to The Medical Record.)

WEDNESDAY, SEPTEMBER 12TH—FIRST DAY.

THE Twenty-first Annual Meeting of the Canadian Medical Association was held in the Parliament Buildings, Ottawa, and was largely attended by medical men from different provinces of the Dominion.

DR. J. E. GRAHAM, of Toronto, the retiring President, delivered the

ADDRESS OF WELCOME.

He said he thought they might congratulate themselves upon the prospect of having a pleasant and profitable meeting, and they could the more confidently do so seeing that they had selected as President, this year, a gentleman in every way capable of fulfilling the duties of that office; one who was a leader of his profession in one of the largest cities of the Dominion, and whose reputation is not alone confined to that city, but to the Dominion at large. He took great pleasure in introducing Dr. George Ross, of Montreal, the President-elect.

CHAIRMEN OF SECTIONS.

After the election and introduction of a large number of new members, the President appointed the chairmen of the different sections as follows: For the Medical Section, Dr. Bray, of Chatham; for the Surgical Section, Dr. Cameron, of Toronto; for the Obstetrical and Gynæcological Section, Dr. Trenholme, of Montreal.

DR. GIRDWOOD, of Montreal, read a paper on

RECIPROCITY OF REGISTRATION.

He stated that on making inquiry in regard to this subject on a recent visit to England, he had been informed that before registration could take place it would be necessary to have an Order in Council passed making a new law of reciprocity of registration, applicable to Canada. Reciprocity takes place between Great Britain and Australia, and he thought that we might very fairly have reciprocity of registration between Great Britain and this colony. He remarked upon the marked want of harmony existing between the medical councils of the different provinces, in not allowing members to practise in every province of the Dominion of Canada. He proposed that a committee be appointed to make inquiries and ascertain the views of the different provincial societies on the matter, so that, if possible, steps might be taken to secure the desired end. After a spirited discussion the resolution was adopted.

DR. GEORGE ROSS, of Montreal, then delivered

THE PRESIDENT'S ADDRESS.

He first commented on the extraordinary progress of the Dominion, and pointed out the activity in all branches of science and learning. There had been, during these years of progress, an almost entire revolution in the science of medicine, and in the methods adopted for teaching the same. Preventive medicine has occupied a place to which its importance justly entitled it, and sanitary laws and regulations were attracting the attention and occupying the minds of statesmen. Never was there a time when more attention was being given to the enforcement of sanitary laws and the diffusion of sound sanitary knowledge. In regard to medical tuition, instead of the old fashion of walking the hospitals, systematic attendance at wards was being insisted upon. He approved of the development in regard to specialists, and held that the whole profession had been a gainer by the work of such men, and the good counterbalanced, to a great extent, the objections urged, that specialties were overdone, or were being cultivated by unworthy members. He advocated the establishment of a Dominion Annual Register at Ottawa, so that a regularly qualified graduate in medicine might, by registering therein, be permitted to practise medicine throughout the whole Dominion, without prejudice to the official bodies in the different provinces. He claimed for this Dominion Medical Association a share in bringing about the improved state of things in the present day. Although they failed to carry out such comprehensive measures as were advocated at first, they had been occupied in considering matters of general hygiene, and the discussions at their meetings had been instrumental in the carrying into effect of legislation which promoted the public health. He deprecated the

LAXITY OF THE OFFICIALS

in a city not very far from Montreal, where typhoid fever was prevalent, and their hesitation in trusting to experienced practitioners, whose efforts would do much to alleviate the ravages of the outbreak. It was a reflection upon our sanitary organizations that such things could be, and that no efforts were made to eradicate the evil as soon as discovered. The matter of alleged cases of malpractice was alluded to, and the severest condemnation was expressed for the unworthy members of the profession who originated and fomented such actions. He regretted the small attendance of their French-Canadian brethren, but hoped their interest in the Association would increase in the future. In making reference to the necessity of every medical man seeking every year some recreation, he praised a trip to the Northwest and British Columbia as likely to greatly invigorate the jaded physician. He had recently visited the latter province, and had found the sulphur springs at Banff, in the Rocky Mountains, entitled to the highest praise. After alluding to the desire on the part of many of the members to hold their next meeting at the Banff Springs, Dr. Ross concluded his admirable address by referring in fitting terms of respect to the demise of several talented members of the Association during the year.

DR. WORKMAN, of Toronto, moved a vote of thanks to Dr. Ross for his able address.

SIR JAMES GRANT, of Ottawa, in supporting the motion, said he was very glad to have the opportunity of listening to the admirable address delivered by the worthy president, Dr. Ross, of Montreal, and it was to him a matter of great pleasure to see present the mover of the resolution, Dr. Workman, now in his eighty-fourth year. It is a fitting recognition to our Association, to have here to-day Dr. Workman, so well known, not only in the Dominion of Canada, but throughout the length and breadth of the world, to move to Dr. Ross a vote of thanks for the masterly address delivered.

DR. SWEETLAND, of Ottawa, on behalf of the local Medical Association, then extended a hearty welcome to the visiting members of the profession, and assured them that they would receive that hospitality at their hands which is customary among medical men wherever they may meet.

DR. F. J. SHEPHERD, of Montreal, delivered an address entitled

RECENT ADVANCES IN SURGERY.

He said that the history of surgery during the past fifty years had been one of continuous progress, and had proved the falsity of Boyer's opinion, expressed after the French war, that "Surgery seems to have attained the highest degree of perfection of which it is capable." The advances made in the last decade might be considered phenomenal, and now scarcely a month passes without the introduction of some new operative procedure, or some daring operation, in cavities and organs which have from time immemorial been regarded as sacred. The causes of this advance have been two in number, the discovery of anæsthesia and the introduction of aseptic surgery, with which the name of Lister will ever be associated. Formerly surgery was regarded as a mechanical art, and practitioners of medicine looked down upon the surgeon as one who practised a trade. How different is the relationship now! Surgery now takes the lead, and the surgeon has wrested from the physician many regions which he thought to be essentially his own. The abdomen, for a long time the hunting ground of the physician, has been almost completely surrendered to the surgeon, and with what brilliant results every one knew. Certain diseases of the liver, kidneys, ovaries, brain, etc., which were formerly purely medical, have become chiefly surgical, and owing to modern methods of operative treatment many lives have been saved which heretofore the physicians let slip through their fingers as being beyond their skill to cure, though they endeavored by a copious and, it is to be hoped, judicious use of the various preparations in the Pharmacopœia, to alleviate the sufferings of their unfortunate patients. The brain, within the last few years, has yielded not a few results to surgery which medicine has striven for in vain. Still, medicine and surgery are not opposed to one another, and should go hand in hand. Without the aid of the physician many cases would escape the beneficent treatment of the surgeon; and one cannot afford to do without the other. As Bergmann had said in his address before the German Scientific Medical Association, in 1887, "There is more or less rivalry between medicine and surgery in the cure of disease, but further progress in surgery can only take place through an increased knowledge of internal medicine. Surgeons must now avail themselves more of the accurate means of investigation which we owe to physicians—auscultation and percussion, thermometry, chemical, microscopical, and electrical investigation. As long as internal medicine remains the guardian of scientific methods and scientific principles, so long will it remain the parent tree of which surgery is only the branch. There is a

DANGER OF SURGERY DEGENERATING INTO A MERE DISPLAY OF MANUAL DEXTERITY,

and one is struck, in reading the surgical literature of the day, by the almost exclusive attention paid to the operative aspects, while those departments of surgery which are not operative receive but scant consideration. Alluding to some of the recent advances in the more important departments of surgery, reference was first made to the progress gained in the treatment of wounds by the careful attention paid to cleanliness, rest, and asepticism. Faith in germicides is now being lost, and although irrigation has supplanted the spray, the solutions have become weaker and weaker, until some surgeons use water only, especially in operations on the abdomen or thorax, where antiseptics have proved to be absolutely injurious, and often dangerous; while in Germany, lately, he had seen in every surgical klinik the magnificent ruins of the spray producer, looking like some old castle which marked the customs and conditions of other days. In cases of

ACUTE INTESTINAL OBSTRUCTION

it is now becoming a recognized custom for the physician to call in a surgeon in consultation, and the result was that many lives had been saved by timely surgical interference. It is now an axiom of surgery not to let any case of acute intestinal obstruction die without at least an exploratory incision. In inflammations of the cæcum and appendix surgical interference had been attended, in numbers of cases, by remarkable success. In tubercular peritonitis most brilliant results have been effected by operation. The same can now be said in regard to cases of suppurative peritonitis. American surgeons are the leaders in operations in perforating gunshot wounds of the abdomen.

THE RADICAL CURE OF HERNIA

had been much discussed of late, and at the Dublin meeting of the British Medical Association several valuable contributions had been made to show the gradual progress being made in that department. Dr. Shepherd related an interesting and successful case, in which he had lately operated by excision of the sac and fixing the stump at the internal ring. In the victorious advance of surgery the liver has not escaped. The left lobe has been successfully resected, and several surgeons have sutured the liver with success for gunshot and other wounds. The surgery of the gall-bladder had been making steady and uninterrupted progress, and its excision has been frequently performed with success. After reference to the advances in surgery of the kidney, bladder, and stomach, the paper concluded with a concise review of the progress made in the surgical treatment of the various diseases and

INJURIES OF THE BRAIN AND SPINAL CORD.

Brilliant results have been obtained in this department, results which, a few years ago, would have been looked upon as utopian. While the operation of trephining the skull was an old one, it was long thought unsafe to venture beyond the dura mater, and highly injudicious to interfere with the brain itself; and it was only with the introduction of antiseptic surgery, and a more accurate knowledge of the localization of brain functions that the brain had been interfered with. But the observations of brilliant investigators have proved that many areas in the brain are connected with separate and distinct functions. It was found that if these areas on the surface of the convolutions were stimulated electrically, distinct movements were excited in different groups of muscles on the opposite side of the body. Since the truth of the theory of Broca's localization has been established on a firm basis, operations have been undertaken where there was no external indication of injury or disease. The lesions have not only been successfully diagnosed, but the brain and its membranes have been incised without resulting in fatal inflammation. It has been clearly shown that inflammatory conditions following operations are due to sepsis. The achievements of Macewen and others in surgery of the spinal cord were commented upon, and the admirable address concluded with a brief summary of several other advances indicating the progress of modern surgery.

MEDICAL SECTION.

DR. T. W. MILLS, of Montreal, presented a paper on

THE INFLUENCE OF THE NERVOUS SYSTEM ON THE NUTRITIVE PROCESSES.

He began his address by referring to a synopsis of a paper read by him last year, on a new basis of improved cardiac pathology, which developed the theory that all the nutritive processes were constantly under the influence of the nervous system. He explained metabolism as the molecular life of protoplasm, and regarded the organic action of the nervous system, or nerve with the tissue element, as regulating these processes. He proved that nerves going to bone, on being divided, caused atrophic changes in the bones; a change called by Charcot acute necrobiosis. He also referred to certain affections of the skin following nerves, which he traced to similar nervous lesions. He spoke of the cause of death in animals after section of the vagi nerves as being due to pneumonia, which was an inflammatory process due to the severance of the nerve connection. In birds, section of nerves in connection with the heart was followed by its fatty degeneration. He discussed the influence of the trigeminus nerve, also the inhibitory fibres and sympathetic fibres, due wholly to such interference with nutrition. He referred to the emotions, and their influence on vital processes as being such, and also dwelt upon the training of athletes, stating that over-exertion called into play, and used up, the residual nerve-force.

The paper was discussed by Drs. Sheard and Graham, of Toronto, Drs. Small and Playter, of Ottawa, and Dr. Campbell, of Montreal.

SURGICAL SECTION.

Dr. **Proudfoot**, of Montreal, read notes of a case of

EXCESSIVE HEMORRHAGE, AFTER CATARACT EXTRACTION, INTO THE ANTERIOR CHAMBER OF THE EYE.

No anæsthetic was used, and no iridectomy made. Pressure was made over the globe by compress and bandage, which were removed next morning owing to great pain, and an atropine solution dropped into it. Hemorrhage continuing, pressure was reapplied with boracic acid solution, and morphia given for the pain, which was very severe. Hemorrhage continuing on the eleventh day, enucleation was performed, and on dividing the globe, the point from which the hemorrhage came was found to be in the retina. No reason could be given for the troublesome hemorrhage, excepting that the patient was very plethoric and a drunkard.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION.

Dr. **Alloway**, of Montreal, read a paper on

THE INDICATIONS FOR, AND COMPARATIVE MERITS OF, EMMET'S AND SCHROEDER'S METHODS OF OPERATING UPON THE CERVIX UTERI.

This paper gave rise to an interesting discussion on the subject.

Dr. **Gardner**, of Montreal, was in favor of Schroeder's operation as compared with Emmet's, in cases of extreme hypertrophy of the cervix, and inflammation of the mucous membrane. He considered it enabled disease to be removed where Emmet's fails, on account of the stitches being unable to approximate the edges together after an operation.

Dr. **Trenholme**, of Montreal, favored Emmet's operation in all cases, except in very extreme ones of hypertrophy and inflammation accompanied by glandular condition of the follicles, where Emmet's operation was not available, but thought that in very few cases would this be found necessary, if the tissue was pared away well toward the cervical canal, leaving a narrow border by which tissue could be obtained. Pressure upon the hypertrophied parts afterward would lead to the formation of the natural cervix. In no case were we warranted in amputating the cervix if it could be avoided.

The discussion was largely in favor of Schroeder's operation being resorted to only in extreme cases.

THE ANNUAL BANQUET

of the Association was held in the evening at the Russell House, and was largely attended.

Thursday, September 13th—Second Day.

After the meeting had been called to order, Dr. Ross, the President, introduced Dr. G. H. Oliver, delegate from the Medical Society of the State of New York, Dr. Wallis Clark, of Utica, N. Y., and Dr. Imrie, of Detroit, Mich. They were received most cordially.

Dr. W. H. Henderson, of Kingston, President of the Ontario Medical Association, was also introduced, and in pleasing terms referred to the feeling existing between the parent association and the provincial body of which he had the honor to be the head.

The report of the Committee on Nominations was then presented and unanimously adopted. It recommended

THE ELECTION OF OFFICERS

as follows:

President—Dr. H. P. Wright, Ottawa; *Secretary*—Dr. James Bell, Montreal; *Treasurer*—Dr. W. H. B. Aikins, Toronto; *Vice Presidents*—For Ontario, Dr. C. Sheand, Toronto; for Quebec, Dr. F. W. Campbell, Montreal; for New Brunswick, Dr. Graham, Bathurst; for Nova Scotia, Dr. E. Farrell, Halifax; for Manitoba, Dr. Lynch, Winnipeg; for British Columbia, Dr. J. M. Lefever, Vancouver; for Northwest Territory, Dr. Jakes, Regina; for Prince Edward Island, Dr. Jenkins, Charlottetown.

The Committee recommended that the next annual meeting be held at Banff Springs, in the Northwest Territory, not later than the second Wednesday in August, 1889. The Canadian Pacific Railway Company sent a communication to the effect that transportation tickets, including sleeping-berth and meals, from any part of Ontario or Quebec to Banff and return, would be issued for $95, and they would board the delegates free of cost for four days at the hotel at Banff Springs. The distance from Montreal to Banff and return is 4,684 miles.

A cordial vote of thanks was accorded to Dr. Charles Sheard, of Toronto, for his long services as treasurer of the Association, an office from which he requested permission to retire.

The meeting then adjourned to meet in sections.

MEDICAL SECTION.

Dr. **J. E. Graham**, of Toronto, read a paper on

A CASE OF EXTREME RAPIDITY OF THE HEART'S ACTION,

which was briefly discussed by Drs. Mullen, of Hamilton, Mills, of Montreal, Sheard, of Toronto, and Milne, of Victoria, British Columbia.

Dr. **R. P. Howard**, of Montreal, read an interesting paper on

OPHTHALMOPLEGIA EXTERNA,

illustrated by diagrams. He spoke of a case of ophthalmoplegia externa and interna, and explained as a cause the close association of the cerebral centres and the extension of the disease from these. He referred to cases recorded where both ophthalmoplegia externa and interna had been caused by hysteria. He noted also the association of this condition with locomotor ataxia and pseudohypertrophic muscular paralysis. He was convinced, however, that ophthalmoplegia externa could exist without such association. He also discussed the relation of syphilis to this ocular disease.

Drs. Stewart, of Montreal, Mullen, of Hamilton, Graham, of Toronto, and others discussed the paper.

Dr. **Playter**, of Ottawa, read a paper on

A FEW FACTS RELATIVE TO COMMUNICABLE DISEASES IN MAN AND ANIMALS,

especially as brought out at the recent Paris Congress and British Medical Association, referring particularly to tuberculosis.

SURGICAL SECTION.

Dr. **Fenwick**, of Montreal, presented a paper on

RETROPHARYNGEAL TUMORS.

In these cases the operation must be regarded as formidable, and the literature on the subject was scant. Dr. Cheever, of Boston, Mass., appeared to have been the first who operated on these tumors. Velpeau operated in 1836 on a large tumor, operating by the mouth, tying the artery first. The patient died on the seventeenth day. Dr. Fenwick was early convinced that operation from the outside is the correct method. These tumors are usually sarcomatous or cancerous, and in a large majority of cases recur. Dr. Fenwick then proceeded by diagrams to illustrate Dr. Cheever's method of cutting from without. A long straight incision is made, beginning on a level with the lower border of the ear, and extending down the neck in the line of the great vessels. If sufficient room is not thus given, he makes a transverse incision from the straight incision across the jaw. The jaw is not divided, the vessels and nerves are drawn aside, and the tumor enucleated in the usual way. Czerny's operation is modified from Cheever's. He opens the trachea and keeps up respiration in this way during the operation. He divides the jaw-bone between the second and third molar, and in getting down to the tumor has to sacrifice the chief nerves and vessels in that region. He then removes the tumor with a hot knife. Dr. Fenwick then described his own operation by a curved incision following tolerably well the line of the angle of the jaw. In two cases the operation was easy, no vessels or nerves of importance were divided, except the facial nerve in one case. The bleeding in both cases related was practically nil.

Dr. **Sheard** thought that distinction ought to be made between cancerous and sarcomatous tumors. He thought cancerous tumors, which were not neglected, required a more serious operation, and that more room should be given, as they could not be removed solely with the finger without dissection.

Dr. **Bell**, of Montreal. read a paper on

EXOSTOSIS BURSATÆ,

in which he gave the notes of a case which he believed to be the only one reported by an English-speaking surgeon.

Dr. **Shepherd**, of Montreal, referred to the great rarity of the disease, and drew attention to the explanation which was offered, of the existence of floating cartilages in the joints.

Dr. **Buller**, of Montreal, then made a few remarks on

PENETRATING WOUNDS OF THE EYEBALL,

and related several interesting cases where the urgency of prompt treatment and cleansing the wound had been advantageous.

Dr. **Shepherd**, of Montreal, followed with a paper on

MANIA FOLLOWING OPERATIONS,

and reported six cases in which he attributed mania to the use of iodoform.

Dr. **Stirling** read a paper on

SOME EYE-SYMPTOMS DUE TO CEREBRAL LESIONS.

This was followed by two papers by Dr. **Lapthorn Smith**, of Montreal. The first on "The Treatment of Varicocele and Orchitis by the Electrical Current of Tension;" the other on "A Case of Resilient Stricture of the Urethra Cured by Electricity."

OBSTETRICAL AND GYNÆCOLOGICAL SECTION.

Dr. **Smith**. of Montreal, presented a paper on

SOME MINUTE BUT IMPORTANT DETAILS IN THE MANAGEMENT OF THE CONTINUOUS CURRENT IN THE TREATMENT OF FIBROID AND OTHER DISEASES OF THE UTERUS.

He insisted upon attention being paid to antiseptic treatment, and upon performing all the operations with care. The results in his own hands had been very satisfactory. He recommended the electrode of Dr. Inglemann in preference to Apostoli's clay electrode. The different forms of electrodes of sounds were shown, and that of Martin he favored most, as being the least expensive, and at the same time serving the purpose. He referred to the necessity of exact dosage, and the after-care of patients where much electricity had been used.

This paper led to an interesting discussion as to the field for which it was intended to be useful.

Dr. **Trenholme**, of Montreal, favored an antiseptic method apart from irrigation, simply advising that the vaginal passage be washed out with soap and water. and a plug of antiseptic cotton left in contact with the cervix, when the sound was removed.

After the meeting of the sections had been concluded, a general session of the Association was held.

PRECAUTIONS TO PREVENT TUBERCULAR DISEASE.

Dr. **Milne**, of Victoria, British Columbia, moved, and Dr. **Sweetland**, of Ottawa, seconded, the following resolution, which was unanimously adopted:

"That in view of the apparently increasing prevalence of tubercular disease in domestic animals, more especially in cows, it is the opinion of this Association that it is desirable that some legislative action should be taken by the Dominion Government to check the progress of this disease, and we urge that the Government take this matter under their consideration at as early a date as possible."

Votes of thanks were passed to the retiring officers of the Association, the medical profession of Ottawa for their generous hospitality, and to the Government for the use of the Committee rooms of the Parliament building.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN PRACTICE OF MEDICINE.

Stated Meeting, October 16, 1888.

R. C. M. **Page**, M.D., **Chairman**.

Dr. **Landon Carter Gray** read a paper on

NEURASTHENIA; ITS DIFFERENTIATION AND ITS TREATMENT.

Dr. Gray first directed attention to the fact that functional nervous diseases are largely disregarded by the general practitioner because of the modern development of the study of them, although the need of a classification of them was widely felt, especially by neurological specialists. For this reason it was that the writings of Dr. George M. Beard had had such a success in Germany. Dr. Gray did not believe that true neurasthenia was as prevalent as the followers of Beard would have us believe. He stated that, in his opinion, there were three forms of neurasthenia: the reflex, the lithæmic and the simple. The reflex form was due to vicious habits and reflexes from non-nervous organs, the lithæmic was due to lithæmia, and the simple form was that in which there was true nervous prostration. The points of differential diagnosis of these various forms were then dwelt upon. But neurasthenia was also to be differentiated from a number of nervous diseases, especially the early stages of the latter, such as the morbid fears (for which Dr. Gray suggested the name of functional insanity), and which really belonged to the insanities and were often associated with them; melancholia, especially the mild forms, in which suicide was often committed; the early stages of mild chronic forms of insanity; neurotic individuals who are subject to migraine, hysteria, angina pectoris or anginoid attacks; the early stages of general paresis of the insane, of locomotor ataxia; and a peculiar disease described a year ago by Dr. Hughes Bennett, and called by him muscular hypertonicity, in which the symptoms are those of weakness and exaggerated reflexes of the lower extremities.

The prognosis of these different forms was variable, depending upon the severity of the reflex cause and the possibility of thorough treatment. The treatment of the reflex form was the removal of the cause, if possible. The lithæmic form was to be treated by moderate laxatives, dilute nitro-muriatic acid, and, if the nervous symptoms were severe, by rest. In any case rest was a most important adjuvant, and should be proportioned to the needs of each case, it being better to have rather too much of it than too little. The diet should be regulated to a moderate degree by the cutting off of starchy and nitrogenous material for a short time, and then by the cutting down of the starchy material permanently by at least fifty per cent. In hot weather it was sometimes advisable to cut off the nitrogenous material for several weeks. In the true cases of neurasthenia the best treatment was that advocated by Dr. Weir Mitchell, of rest, forced food, massage, and faradism. Large doses of iron and malt extract should also be given in this treatment, with which the great difficulty was, however, that patients are apt to be disappointed at the loss of their muscular strength upon first getting out of bed. It should be explained to them that this would gradually return. Great care was necessary, however, with many patients at this period, to prevent them from losing the flesh and red blood that had been gained. Galvanism is an agent of great value in all these forms of neurasthenia, and should be used as early as possible. except when the case is to be put to bed. It should be applied by large sponges, one in the nape of the neck, the other in the dorsal spine, five to fifteen milliampères of electricity being used, and the sitting every day for three to five minutes. Massage was an uncertain remedy, often irritating the patient.

Dr. N. E. Brill thought the author had again demonstrated the fact that whatever work he did. he did it well, and with his accustomed literary ability. He did not hesitate to express the opinion that if Dr. Beard had not attempted to concentrate certain nervous phenomena which he could not explain on physiological or pathological grounds into a symptom-group, that neurasthenia would not have been elevated to the dignity of a disease. The mere fact that the Germans had accepted Dr. Beard's views had tended to perpetuate the term and to give rise to considerable writing at the present time. They had said, and doubtless with truth, that they could find nothing in Germany identical with the affection as described by Dr. Beard. Neurasthenia, as the term implied, was simply an exhaustion of the nerve-centres. This might be due to anything which would derange the physical state. Thus we saw it in diarrhœa, diseases of the stomach, and of other organs. If peripheral or internal diseases continued a long time, the nervous impulse transmitted from the diseased organs was likely to exhaust the nerve-centres to the extent of producing neurasthenic symptoms. or a multitude of nervous symptoms.

Dr. Eugene C. Reeves, of St. Paul, remarked that in the West they made little excuse for errors in diagnosis by Eastern men, whose opportunities for observation were much better than their own. To be a good diagnostician of neurasthenic conditions one had to be a good clinician. He recalled one case in which the diagnosis of neurasthenia had been made, and when he was called he was able to correct the error and point out cerebral apoplexy by the presence of aphasia. In another case, however, in which he had diagnosticated neurasthenia in a woman, his colleague subsequently observed a tumor, apparently of the great vessels in the abdomen, supposed to be cancerous. The patient died, and at the autopsy the apparent tumor was found to be due to a forward bend of the spinal column, which was unduly prominent from emaciation. No cause for death was discovered. He thought the molecular disturbance caused by railroad concussion might give rise to a neurasthenic state, and in time perhaps lead to degenerative changes. In treatment, he had obtained good results from methods directed against malnutrition of the nerve-centres. But in forms of circulatory disturbance, with an undue amount of blood in the head, benefit had followed bromides and ergot, though the administration of these should not be continued too long. In the so-called spinal form of neurasthenia he had obtained the best results from galvanism. Then, contrary to what seemed to have been the experience of neurologists in New York, he had found static electricity of value.

Dr. W. R. Birdsall had found the term neurasthenia a puzzle. He did not know whether it should be used at all. When he applied it to a group of symptoms he felt that he was rather trying to cloak his ignorance in the case. Yet we must admit a neurasthenic element in certain diseases; but in applying the term neurasthenia to a group of symptoms it nearly always failed to fully cover the conditions present. In functional troubles among certain persons there was a predominance of nervous symptoms, a fact frequently depending on a peculiar instability of the nervous system of inherited origin. If the term neurasthenia were used in its limited sense this would be the class of patients to which it should be applied. But there were cases in which the fault in the nervous system might be acquired, and here local causes, as refractive errors in the eye and defective muscular states, might cause neurasthenic symptoms. In some, removal of the local condition would cause the nervous symptoms to disappear. while in others it would not. The classification made by Dr. Gray, of lithæmic and reflex cases of neurasthenia, seemed to be a convenient one, but, not having heard the third class described, those of simple neurasthenia, he could not express an opinion. The lithæmic form probably took in the greater number of cases. In treatment, the question of rest and exercise would have to be solved in each particular case, for sometimes more exercise of one kind was needed and less of that commonly taken; some patients required one form of rest, others another form. Walking on the level was not sufficient; it should rather be mountain climbing in congenial company. Excesses, particularly sexual, were often a cause of neurasthenia.

Dr. W. H. Thompson thought the term neurasthenia was a very satisfactory one to use before patients, for when pronounced slowly and distinctly it made a strong impression upon their minds; but in medical science it was to be abominated. It was on the same level with the term tonic in therapeutics, which might include arsenic, strychnine, electricity, sea-baths, etc., agents which acted in very different ways. Words taken up without conveying a definite meaning were likely to lead to many errors. When he was unable to attribute a given case to a definite disease he asked himself these questions: Is this a case of nervous debility or one of virtual starvation? Is it a case of over-strain, or is it one of self-poisoning? In a good many patients it would be found that while they were taking three meals daily, yet the food was not of an amount or character to prevent virtual starvation with resulting neurasthenic symptoms. A common form of over-strain was that which arose from excessive worry. In the former cases proper food was required, while in the latter sleep should be secured, together with new and pleasant surroundings. In some the symptoms were due to a drain on the system, like excessive venery, to which Dr. Birdsall had referred. Regarding self-poisoning, it was only recently we were turning back to a part of the system which our forefathers had recognized as the starting-point of many ills, namely. the bowels. Here, were it not for the preservative effects of healthy function, constant opportunity would be afforded for decomposition and for poisonous elements to enter the circulation. It was in cases of prolonged auto-intoxication that a complexity of symptoms arose to which Dr. Gray had given the name lithæmic neurasthenia. But how were we to distinguish cases of starvation and over-strain from those of self-poisoning? It was by the character of the pulse and urine. The pulse in the former class was uniformly very weak and compressible, and the urine of low specific gravity and ordinarily neutral or alkaline; while in the other class the pulse was of high tension, the artery distended, while the urine, unless the kidneys had already begun to suffer, was of high specific gravity, at least at times during the day, and was acid or contained a larger amount of urates. In the lithæmic class there was one remedy which had not failed to effect a cure, namely, camping out. Nomadic tribes did not suffer from gouty symptoms or the lithæmic state. More air was required than these patients were accustomed to at their homes and business.

Dr. A. Jacobi thought Dr. Gray had made a historical mistake, for more than one writer on the continent had described conditions now recognized as neurasthenia before Dr. Beard wrote, consequently the disease so called could not be peculiar to America The fact that Americans had been called a peculiarly nervous people had also led at one time to the supposition that infantile paralysis existed only here, and Dr. Beard had even claimed hay fever as an American disease. The name neurasthenia pointed to a complexity of symptoms, the cause of which should be sought. The term neurasthenia should be abandoned.

Dr. A. D. Rockwell believed in the term neurasthenia; he believed in it as much as he believed in that of malaria. He agreed, however, with those who thought its use had been abused very much. To him there was a marked distinction between the neurasthenic condition and nervous exhaustion.

Dr. S. Baruch also believed that there was such a disease as neurasthenia, or rather a complexity of symptoms to which that term could well be applied. He also believed in tonics, and that of the cold plunge as beneficial in many of the neurasthenic cases.

Dr. E. D. Fisher thought the term neurasthenia was the best we yet had for expressing a given group of symptoms. Inasmuch as it represented function rather than pathological changes, as far as was yet known, the treatment would consist largely in measures intended to improve nutrition. One of his favorite prescriptions in this class of cases was nitro-muriatic acid, combined with Fowler's solution, or tincture of nux vomica, and, contrary to the rule just given by Dr. Jacobi, he had administered it with the greatest advantage before meals.

Dr. Gray closed the discussion. He thought there was little difference between his standpoint and that of the speakers. If one had all medical knowledge at command he might be able to exclude certain cases, now classed among the neurasthenias, because due to a definite pathological lesion; yet even with that amount of knowledge some cases would remain, which, so far as could be determined, had no permanent pathological basis, but rather were functional, and would still require a group-name, such as neurasthenia. He mentioned three cases, not in his own practice, in which the diagnosis of neurasthenia was made, and weakness progressed and terminated fatally, yet the autopsy failed to explain death.

Gigantic Intestinal Diverticulum.—Dr. Maas, of Wurzburg, has published a remarkable case of abdominal tumor. The patient was a boy aged fourteen. Shortly after birth the abdomen began to swell; the tumefaction increased as years passed by, with little disturbance to the system, till one year before inspection; then the swelling became much larger, and the lad suffered from dyspnœa and palpitations. The urine was normal; the bowels were often moved; the stools were scanty and thin. The abdominal walls were very tense but not œdematous, the skin pale; some of the subcutaneous veins were uniformly dilated. The circumference at the umbilicus was thirty-five and a half inches; three inches higher, the point of greatest distention, the girth was over thirty-nine inches. The resonance was uniformly tympanitic, with very slight impairment laterally. No solid tumor could be felt. The urine was albuminous on the first day, but not subsequently. Much fæcal matter was voided after injection. A sound passed into the rectum could be felt under the parietes, apparently over the tumor. On that account congenital hydronephrosis on the left side, or cystic degeneration of the kidney, was diagnosed. An exploratory puncture was made in the left loin with a somewhat large trocar. Only fæces escaped. An incision was then made along the linea alba. A large plexus of thick veins covered the surface of the suspected tumor; the operator feared to proceed further, so the abdominal wound was closed. It then appeared as though a cystic kidney, communicating with the intestine, existed. No peritonitis ensued, but the swelling increased, and after suffering badly from dyspnœa, the boy died suddenly. The tumor proved to be a gigantic diverticulum, from the upper part of the rectum; it was filled with fourteen litres of thin fæces, and also contained gas. The aperture of communication, the diameter of which was not mentioned in the *Centralblatt*, was at the posterior inferior aspect of the diverticulum. The rectum was strongly compressed by the tumor. Kölliker and Maas attributed the malformation to a disturbance in the normal involution of the layers of the blastoderm.—*The British Medical Journal.*

Correspondence.

CONCERNING THE SO-CALLED SPECIFIC FORM OF YELLOW FEVER.

To the Editor of The Medical Record.

Sir: I had not intended to pay any attention to Dr. Freire's recent publication, in which he makes a desperate effort to sustain his previous claims in the face of overwhelming evidence showing them to be without foundation; but as you have called attention, in your editorial in The Medical Record, October 6, 1888, page 426, to the manner in which he has attempted to dispose of my evidence, I have thought it best to make a brief statement of facts for the benefit of your readers. As an introduction to what I have to say I quote from your editorial referred to:

"Dr. Sternberg is dismissed in a foot-note, in which Dr. Freire says that the American sojourned but a short time in Brazil, at a time when there was no epidemic; he examined but one sporadic case and made no autopsy."

It is true that my orders took me to Brazil during the non-epidemic season, and that I was not able to secure an autopsy while there, but it is not true that I only examined a single case. I had an opportunity to make cultures from blood drawn from the finger in five typical cases which occurred in the city of Rio de Janeiro soon after my arrival, and in none of them did I find Freire's *cryptococcus xanthogenicus*, either in my cultures or in stained preparations of the blood.

It was a matter of great regret to me that I could not secure any autopsies while in Rio, but I was not sent to that city for the purpose of making clinical or pathological studies of yellow fever. The special object of my mission was to investigate the method and results of Dr. Freire's inoculations, and to ascertain the nature of the material with which they were made.

I had as much time—over two months—as was necessary for the accomplishment of this object, and made a thorough investigation, the results of which are embodied in a detailed report which I submitted to the President of the United States several months since.

I show conclusively in this report that there is no scientific basis for Dr. Freire's claim that he has discovered the specific cause of yellow fever, and no satisfactory evidence that his inoculations have any prophylactic value. When this report is published I do not doubt that the profession will accept the conclusions here stated as established by it.

It is true that when I went to Brazil I had already formed an opinion which was not favorable to Dr. Freire's claims, but this did not prevent me from investigating them in an impartial manner. My opinion was based upon my own extended researches, made in Havana, as a member of the Yellow Fever Commission of 1879, and upon a perusal of Dr. Freire's principal work—"Doctrine microbienne de la Fièvre jaune." No competent bacteriologist who is acquainted with this monumental piece of pseudo-scientific work attaches any importance to Dr. Freire's alleged discovery. The book itself furnishes ample evidence of the imperfection of his methods of research, and of his numerous errors of observation and of inference.

The *cryptococcus xanthogenicus*, as described in this work, differs essentially from any micro-organism known to bacteriologists in its mode of development, in the variety of forms and colors which it is said to present, and in its biological characters. But the micro-organism which Dr. Freire presented to me as his yellow-fever microbe did not correspond with the descriptions which he had given in his published works. It was a simple micrococcus, which forms a milk-white mass upon the surface of agar-agar, and liquefies gelatine rather slowly, without forming pigment of any kind.

This micrococcus was isolated by the plate method from Dr. Freire's impure bouillon cultures, after his arrival in Paris, by Dr. Paul Gibier, as I have been informed by Dr. Gibier himself. The culture given me was from an agar-agar tube which Dr. Freire brought with him from Dr. Gibier's laboratory in Paris.

Dr. Freire asserts that his yellow-fever microbe is present in great number in the blood and tissues of yellow-fever patients. My extended researches justify me in saying most positively that no such micro-organism is to be found in the blood and tissues of yellow-fever patients.

In numerous inoculations in culture media, with blood drawn from the finger of typical cases, in various stages of the disease, made in Havana, in Rio de Janeiro, and in Vera Cruz, I have not encountered it. It was not present in a single instance in my cultures made in Havana, in May and June of the present year, from the blood and tissues of ten typical cases on which I made autopsies at the military hospital in that city. Nor have I been more successtul in finding it, in several cases on which I have made autopsies, since my arrival in Decatur, where the disease is now epidemic.

Again, this micrococcus is readily stained by the aniline colors usually employed by bacteriologists for this purpose, and would be easily demonstrated if present in the tissues; but Dr. Freire did not attempt to make any such demonstration to me during my stay in Rio de Janeiro, and I did not learn that he had any permanent preparations of this kind; none were ever exhibited to me during my frequent visits to his laboratory, nor did he offer me any pathological material from which to make sections myself. But I brought with me from Brazil pathological material from nine cases which had been secured during the epidemic season, and preserved in alcohol by my friend Dr. Aranjo Goes, and soon after my return I received from my friend Dr. D. M. Burgess material from four cases, which at my request he secured for me in Havana during the summer of 1887. Dr. Burgess had previously (1885), at my request, sent me material from two cases.

From this material—chiefly liver and kidney—I had made and stained, *secundum artem*, a large number of thin sections, and had carefully examined them, with a negative result so far as Freire's microbe is concerned, before I reported to the President my conclusion that there is no scientific basis for Dr. Freire's claim that he has discovered the specific cause of yellow fever.

Very respectfully yours,
GEORGE M. STERNBERG,
Major and Surgeon U. S. A.

DECATUR, ALA., October 17, 1888.

IODOFORM IN HÆMOPTYSIS.—Drs. Chauvin and Jorissenne, in treating hæmoptysis, have employed with advantage iodoform at first, with tannin afterward by itself. Pills were given containing iodoform, ¾ gr., and tannin, 1½ gr. Sometimes the hæmoptysis stopped after two of these had been taken. In one severe case of advanced phthisis, as many as five were given *per diem* for three days before the bleeding ceased. In one patient, who had been in the habit of having eight or ten attacks of hæmoptysis in the year, which had been treated by large amounts of ergotine and morphine, three of the iodoform and tannin pills stopped the hæmoptysis four months ago, and there has been no recurrence since. In three cases, recorded in detail, in which the iodoform alone was used, the results were very similar. The authors came to the conclusion that gr. ij. of iodoform *per diem* in three pills was an appropriate dose for moderately severe cases, and that more than eight or nine pills were not required in any case they had to deal with. Their action they consider quicker than that of ergotine, and, therefore, more useful. In all the cases during the past year in which they had given it, there had been no relapse, and, during the treatment, no disturbance of digestion.—*Le Progrès Médical.*

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 21 to October 27, 1888.

FORWOOD, WILLIAM H., Major and Surgeon, Fort Snelling, Minn. Leave of absence, for one month, on surgeon's certificate of disability is granted. S. O. 100, Headquarters Department of Dakota, St. Paul, Minn., October 20, 1888.

WOLVERTON, WILLIAM D., Major and Surgeon. Is relieved from duty at Fort D. A. Russell, Wyo. Terr., and will report in person to the commanding officer at Fort Douglas, Utah Ter., for duty at that post. Par. 16, S. O. 248, Headquarters of the Army, A. G. O., Washington, October 24, 1888.

WILLIAMS, JOHN W., Major and Surgeon. S. O. 209, October 4, 1888, Division of the Atlantic, by direction of the Secretary of War leave of absence is extended one month. Par. 14, S. O. 246, A. G. O., October 22, 1888.

CARTER, EDWARD C., Captain and Assistant Surgeon. By direction of the Secretary of War, granted leave of absence for one month, to take effect on the completion of his present duties. Par. 13, S. O. 246, A. G. O., October 22, 1888.

BARTHOLF, JOHN H., Major and Surgeon. Leave of absence granted for one month, on surgeon's certificate of disability. Fort McIntosh, Tex., Headquarters Department of Texas, San Antonio, Tex., October 10, 1888.

BALL, R. R., First Lieutenant and Assistant Surgeon. Leave of absence granted for one month, with permission to apply for an extension of one month. Par. 3, S. O. 129, Headquarters Department of the Missouri, Fort Leavenworth, Kan., October 18, 1888.

BORDEN, WILLIAM C., First Lieutenant and Assistant Surgeon. By direction of the Secretary of War, relieved from duty at San Antonio, Tex., and to report in person to the commanding officer at Fort Ringgold, Tex., for duty at that post. Par. 11, S. O. 247, A. G. O., Washington, October 23, 1888.

BROWN, PAUL R., Captain and Assistant Surgeon. Relieved from duty at Fort Sidney, Neb., and to report in person to the commanding officer at Fort D. A. Russell, Wyo. Ter., for duty at that post. Par. 16, S. O. 248, Headquarters of the Army, A. G. O., Washington, October 24, 1888.

LORING, LEONARD Y., Captain and Assistant Surgeon. Promoted to be Surgeon, with the rank of Major, October 9, 1888, *vice* Meacham deceased.

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 27, 1888.

SMITH, HOWARD, Passed Assistant Surgeon. Detached from the Wabash and granted six months leave of absence, with permission to leave the United States.

AUZAL, E. W., Assistant Surgeon. Ordered for examination preliminary to promotion to Passed Assistant Surgeon.

WIEBER, F. W. F., Assistant Surgeon. Ordered for examination preliminary to promotion to Passed Assistant Surgeon.

AUZAL, E. W., Assistant Surgeon. After examination detached from Naval Academy, and ordered to Navy Yard, New York.

URIE, J. F., Assistant Surgeon. Detached from the Franklin and ordered to coast-survey steamer Gedney.

OWENS, THOMAS, Assistant Surgeon. Detached from coast-survey steamer Gedney, and ordered to coast-survey steamer Blake.

BERRYHILL, F. A., Assistant Surgeon. Detached from coast-survey steamer Blake, and ordered to Naval Academy.

HARRIS, A. N. T., Assistant Surgeon. Detached from Naval Hospital, Mare Island, Cal., and to wait orders.

HALL, JOHN H., Passed Assistant Surgeon. Detached from the Monongahela, and to wait orders.

CRAWFORD, M. H., Passed Assistant Surgeon. Detached from the Vandalia, and ordered to the Monongahela.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 27, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	43	11
Scarlet fever	122	16
Cerebro-spinal meningitis	1	1
Measles	117	3
Diphtheria	105	23
Small-pox	0	0
Yellow fever	0	0
Cholera	0	0

THE ANÆSTHETIC REVELATION.—Within a few years it has been discovered that sulphuric ether often produces a most singular effect on the mind of the patient or experimenter who has inhaled it, giving rise to what has been called the "Anæsthetic Revelation." Just as the experimenter recovers from the anæsthetic, and before wide-awake consciousness fully returns, he has an intense perception of what seems to him at the time the philosophic secret of existence—the true explanation of the universe. This singular impression, though intense, does not last long, and in spite of the subject's strongest effort to carry the revelation out into wide-awake consciousness, he finds himself unable to do so, but is left full of awe by his strange experience, and wonder at the nearness of the solution which for so many ages has been sought so far afield. The present brief account has been gathered from the literature of the subject, which grows yearly. Mr. Benjamin Paul Blood, of Amsterdam, N. Y., the discoverer of the phenomenon, originally made it known to psychologists in a pamphlet entitled *The Anæsthetic Revelation*, and he has since discussed its philosophical bearings in the *Journal of Speculative Philosophy*, January, 1886. The most scientific account appears in the *Therapeutic Gazette* for August, 1886, where Dr. George E. Shoemaker, of Philadelphia, relates his "Recollections after Ether Inhalations." *Mind* discusses it in vol. iv., p. 345, and vol. vii., p. 206. Dr. Oliver Wendell Holmes mentions the experiment in his "Mechanism of Mind and Morals" (p. 46). A letter from the poet Tennyson concerning his own experience has recently reached the press; and valuable newspaper accounts of the phenomenon may be found in the *Tribune*, September 3, 1886; the *Evening Post*, October 30, 1886, and the *Utica Herald*, September 15, 1886.—*New York Medical Times.*

THE SOCIETY OF GERMAN NATURALISTS AND PHYSICIANS.—The sixty-first meeting of this Society was held in Cologne on September 18 to 23, 1888. The session was opened by an address from the President, Professor Bardenhauer, in which he reviewed the events of the past year, referring to the nation's loss in the death of the two emperors. William II. sent a telegram of greeting and wishes for the success of the meeting, which was received with loyal cheers. Addresses of welcome were also delivered by Herr von Tirchnow, on behalf of the government, Mayor Becker, on behalf of the city of Cologne, Rector Schönfeld, of the Frederick William University in Bonn, and Dr. Graff, for the Association of Physicians in the Rhine provinces. Announcement was then made of the death of Drs. von Langenbeck, Du Barry, and Clausius, and their memory was honored by the members rising from their seats. The report of the Secretary was then submitted, after which the scientific work of the session was begun by the reading of a paper on "Insanity and Crime," by Dr. Binswanger, of Jena. He discussed the physiognomy and shape of the cranium in criminals, and dwelt at length upon the relation of criminal instincts to insanity, and more particularly moral insanity and dementia paralytica. He did not think that an abnormally shaped cranium necessarily pointed to abnormal cerebral development or indicated a morally abnormal man, but thought that a careful study should be made of all the other facts relating to each individual case before any satisfactory conclusion could be formulated. Dr. Lassar, of Berlin, then read a paper entitled, "The Structure of Public Baths." He presented an historical review of the construction of baths by the ancient Greeks and Romans, referred with regret to the scarcity of public baths at the present time, and urged upon his hearers the necessity of having more bathing establishments, admission to which should be placed at such a low figure that all might avail themselves of the advantages there offered. "Prostitution" was the title of a paper by Dr. Wernich, of Cöslin. The paper contained much statistical information concerning the extension of venereal disease among the German people. He said that syphilis increased markedly in Prussia during the past year, while in other parts of Germany no such increase had occurred. The disease was not nearly as prevalent in Germany as in France, where, according to Fournier, it is increasing alarmingly, a large proportion of nurses and midwives being affected by it. Prostitution, he said, cannot be kept entirely under police control, but it should be so controlled as far as was possible. Every physician should constitute himself a police officer, and see to it that his venereal patients did not spread the disease. Professor Waldeyer, of Berlin, read an essay entitled "Women and the Study of Medicine." In the earliest times, he said, women had filled with success many positions ordinarily allotted to men, but no such liberties had been allowed the sex as was given in the French Revolution in 1792, when for the first time women held equal political privileges with men. In 1864 there was one woman studying medicine in Switzerland, and in 1872 the number of female medical students in the Swiss universities was fifty-one. The rank taken by the first students was high, but it had on the average declined as their number increased. Experience, the speaker maintained, has shown that science makes but slight progress in the hands of women, and even obstetrics has attained its present advanced condition only since men entered the field. It has also been shown in laboratory work that women are not so untiring and exact as men, and that they are easily discouraged by slight difficulties. He even made the ungallant assertion that one female student made as much trouble for the laboratory assistant as thirty men. The conclusion of the essay was that woman has her especial field in the family and in society, but that her excursions into the field of science were uncalled for at the present day. Professor Weismann presented a communication on "The Hereditary Transmission of the Results of Injuries." The speaker did not believe that acquired defects could be transmitted to offspring. He reported a number of experiments on white mice, in which a practice was made of cutting off the tails of many successive generations, yet a tailless mouse always gave birth to mice having normal caudal appendages. Different races of men practised various mutilations, from the ear-boring of Europeans to the cramping of the feet of Chinese women; yet these mutilations were not transmitted to the young, but had to be made anew in each generation. A warm invitation was extended to the Society to meet in Stuttgart in 1889, but it was decided to assemble in Heidelberg. The social entertainments were a prominent feature of the meeting, there being a banquet, with covers for about eight hundred, a ball, a soirée at the Zoological Gardens, and numerous private receptions. The number of members present at the meetings of the thirty sections was upward of fifteen hundred.

Hospital Risks in St. Petersburg.—It may be remembered that a medical officer of the St. Petersburg hospitals, Dr. Dreipolkher, was sentenced to banishment to the Arctic regions a few months ago because he had been unable to obtain admission for a poor woman into any of the hospitals, and in consequence of the delay of a few hours she succumbed to the cold. In this case the entire sympathy of the profession was with the unfortunate doctor, who really seems to have done his best and to have been entirely innocent of the charge of negligence brought against him. It was predicted at the time that hospital medical officers would probably find that the public would take advantage of the severity of the court to bully and terrorize over them, so that any man who accepted a position on a hospital staff would have to run some risk, however well he might do his duty, of being prosecuted or in some way maltreated by thoughtless, overexacting, or evil-disposed persons. Something of this kind has recently come to pass. While a hospital medical officer was engaged in examining a patient in the out-patient department a woman forced her way into the consulting-room and loudly demanded instant attention, as she was in great pain. She had a gumboil, it appears. The doctor told her she must really wait a little till her turn should come, when he would attend to her. She then began to cry and make a disturbance and refused to leave the room, so that he was obliged to summon the attendants to show her the door. Nothing more was heard of the case till the evening, when the husband, who as a customs official may be supposed to be a man of some little education, inquired for the doctor who had seen his wife. As soon as he appeared he struck him several blows on the face, asseverating that the doctor's conduct in the morning had made his wife so ill that she had had to have a doctor to see her since. On inquiry being made at the house, the lady was found contentedly sitting at table, the gumboil having broken.

A Poor Showing for Antipyrin.—At a recent meeting of the Académie de Médecine Dr. Ball read a paper by Dr. Oscar Jennings on a case of poisoning by antipyrin. The patient suffered from nodular rheumatism, for which 2.50 grammes of antipyrin were given daily for a week. On the eighth day erythematous spots were observed on the arms, and the patient had an uncomfortable sensation in the eyes. On the following day the face was red and the eyelids swollen. The day after a rash came out all over the body; there was catarrhal conjunctivitis, loss of appetite, and a sensation of internal cold. The pulse was 78. There was singing in the ears. The patient was very weak. A few drops of tincture of belladonna caused these symptoms rapidly to disappear. Dr. Jennings considers that antipyrin should be given with great caution to old people and persons of an impressionable temperament. The symptoms of poisoning can, however, be easily subdued by administering a few drops of tincture of belladonna, or by subcutaneous injections of atropine. M. Germain Sée observed that he had met with many similar cases. The symptoms of poisoning which he had observed were usually due to doses of three or four grammes of antipyrin, given for several consecutive days. Such symptoms were most commonly met with in female patients. Antipyrin should never be given a second time to patients in whom they had been observed. In such cases antifebrin (acetanilide) should be substituted for antipyrin. M. Sée strongly condemned the practice of giving belladonna or injections of atropine to combat the symptoms of poisoning, which will spontaneously disappear in from twenty-four to forty-eight hours if the drug is discontinued, and which cannot be regarded as of a serious nature. M. Dujardin-Beaumetz, who shares this opinion, remarked that, after a prolonged use, antipyrin caused pain in the stomach and dyspeptic symptoms. The adulteration of antipyrin with benzine or other substances was possibly the cause of these symptoms, which had been more frequently observed of late. M. Dujardin-Beaumetz further remarked that subcutaneous injections of antipyrin were painful. Acetanilide caused cyanosis in certain cases. A dose of two grammes a day should never be exceeded. M. Germain Sée had observed the gastric symptoms described by M. Dujardin-Beaumetz, and believed them to be due to the manner in which the antipyrin was prepared. In order to prevent these symptoms, M. Sée employed carbonate of soda or seltzer water. For subcutaneous injections he gave one gramme in four injections. In this way the injections were not painful. M. Ollivier stated that he did not share the belief held by many authors concerning the good effects of antipyrin. He had employed it in the treatment of chorea, and found that, although it modified the affection in certain cases, in others it did no good. Dr. Allen Sturge, of Nice, also sounds a note of warning against the indiscriminate recommendation of antipyrin. A lady liable to migraine was ordered five grains of antipyrin in powder. Five minutes after the first dose the "deadly sickness" previously present seemed to give way, and an "expanding sensation" was felt, rising from the stomach upward. Almost immediately she sneezed violently about twenty times without pause. The face and eyes became deeply suffused; tears began to flow, and quantities of mucus from the nose; the breathing became hard and labored, accompanied by a feeling of suffocation; there was complete inability to lie down. A violent cough shortly came on, and large quantities of mucus were expectorated. At the same time there was very profuse sweating. After these phenomena had lasted for about half an hour, intense itching was felt on the insides of both thighs, and therewith came a thick outcrop of urticaria, which soon extended to the abdomen. There was also a strong coppery taste in the mouth—not continuing but coming on in violent bouts, and an equally strong smell of the same metallic nature, also intermittent. There was loud singing in the ears, which felt intensely congested. The pulse was thick and very full. The symptoms lasted about three-quarters of an hour and then gradually disappeared, some tightness of the chest and running at the nose remaining for four or five hours longer. The sickness accompanying the migraine disappeared completely as soon as the drug had begun to work; the headache also disappeared for a time, but came back slightly about four hours afterward. (*British Medical Journal.*)

Finally, Eloy, in the *Revue Génerale de Clinique et de Thérapeutique* of March 1, 1888, points out that a large number of ailments are frequently produced by it, particularly if given for any length of time. He quotes Guttmann, Falkenheim, Alexander, and others, in support of his statement that nausea, vomiting, and gastro-intestinal disorders may result from its use. Besides these symptoms he records instances where syncope has occurred under its employment, and Bentzeff is quoted as believing that the drug always produces such a tendency. He asserts that, in the opinion of Moncover, Dujardin-Beaumetz, and several others, the secretion of urine is seriously modified, and one of his references is stated to have put it that "antipyrin closes or shuts up the kidneys." Going still further, Eloy calls attention to the case of Dr. Barr, which is recorded in the *Lancet*, in which collapse and death followed the ingestion of from fifteen to thirty grains of antipyrin in two doses. In a case of puerperal fever, antipyrin caused a fall of over two and a half degrees Centigrade, with vomiting and diarrhœa. Rigors now came on, the extremities became lived, and in thirty-two hours the patient died in syncope. At the autopsy the spleen was found contracted, the kidneys were shrunken, and contained infarcts. A large number of instances were also collected, in which antipyrin has apparently, in the minds of the recorders, produced disorders so varied and so different from one another that it is scarcely possible for them all to be produced by the same drug. It appears to us that Eloy is not justified by the facts he cites in reaching the conclusions as to the dangers of the drug which he sets forth. In the case of puerperal fever to which he alludes, nothing occurred which warrants the attributing of the fatal termination to the use of antipyrin, and the post-mortem lesions indeed point to the disease itself as the cause of death, without any aid from the drug. We think it but a fair conclusion that antipyrin is in no sense a dangerous remedy, and that as yet there are no cases in which death can be attributed directly to its use. All untoward symptoms, clearly produced by any drug, should be reported, but at present the tendency seems to exist of reporting any unforeseen turn in a case as the effect of the drug last administered. Undoubtedly the differentiation is at times difficult, as to whether the symptoms are of the illness or the drug, but every disease runs at times such an irregular course that the careful clinician thinks twice before charging a drug with a change which his own foresight or care might have averted, or at least expected.

Potassium Permanganate in Burns and Frost-bites.—Dr. Zyboff has had good results from the use of permanganate of potassium in the treatment of burns and congelations. He keeps the parts constantly wet with a solution of from three-fourths to two grains of permanganate to an ounce of water. If the integument is broken he employs a weaker solution, one-half grain or less to the ounce.

Local Anæsthetics.—At a meeting of the Société de Biologie of Paris, on April 14th, M. Oscar Liebreich read a communication on substances which cause local anæsthesia. Having been led to experiment on a large number of substances, either natural or produced by synthesis, he found that there were a great many more capable of causing local anæsthesia than had been supposed. Some of these substances have an effect on animals but not on man, for many of them act, not by entering the general circulation, but by their direct effect upon the tissues with which they come into contact. With regard to the cornea, it must be remembered that there are two kinds of anæsthesia. M. Liebreich operated by subcutaneous injection of the dorsal region in rabbits and guinea-pigs. For the eye he merely allowed a few drops of the substance in solution to fall on the cornea. Among the substances producing local anæsthesia the principal are hydrochlorate of ammonia and the bromide and sulphate of ammonia; the carbonate and nitrate are without effect. Hydrobromide of sodium acts, whereas the hydrobromide of potassium is without effect. Sulphate of copper is inactive, but iron salts, particularly the sesquioxide, have an anæsthetic action without producing coagulation at the point of introduction. Acetate of lead is anæsthetic, zinc salts are not. Among organic substances, hydroquinone, resorcin, antipyrin, substances belonging to the digitalis group, and serpent venom, in small doses are active. Thallin, alcohol, ether, and glycerine have no action. Essential oils, such as oil of turpentine, hydrate of terebene, eucalyptol, oil of camomile flowers, and a number of others, have a remarkable effect. According to Dr. Liebreich, these substances act by destroying the nerve-ends and by irritating the neighboring parts, causing what has been called "painful anæsthesia." Some substances, such as cocaine, do not cause painful anæsthesia and are followed by contraction of the vessels, whereas, substances that cause painful anæsthesia lead, on the contrary, to vascular dilatation. Substances causing painful anæsthesia have a caustic action, particularly hydroquinone. This anæsthetic and caustic action is also observed in distilled water. In general a very great number of substances produce local anæsthesia, but in their application to man it is necessary to examine first whether they act as caustics, producing painful anæsthesia.—*Brit. Med. Journ.*

Sound Sense Regarding the Therapeutics of Gonorrhœa.—Dr. Mauriac, in a note on the treatment of gonorrhœa, has summarized his conclusions as follows: 1. The abortive treatment is indicated, and has some chance of succeeding in acute gonorrhœa, only during the first hours of its onset. 2. All the attempts to cut short an attack of gonorrhœa during its period of progression, and when it reaches its height, are useless or dangerous; one obtains only delusive cures. 3. The antiseptic practice at once (*d'emblée*), suggested by the microbian theory of gonorrhœa, has till now produced only delusive results. 4. It is indispensable to submit acute gonorrhœa to an antiphlogistic treatment until the almost complete disappearance of the most inflammatory phenomena. It must proceed to the proper stage of maturity before any repressive medication should be had recourse to. 5. This latter gives decisive and durable results only in the involutive phases of the specific catarrh. 6. The agents of repressive medication are copaiba and cubebs internally, the sulphate of zinc in injections. 7. The balsam should be given first; it sometimes, of itself, produces a definitive cure. In the greater number of cases, while continuing its use, astringent injections may be resorted to. 8. The duration of the repressive medication should be short. Should it not soon give the results expected of it, it must be given up and antiphlogistics resorted to. 9. It is by the antiphlogistic medication that the treatment of acute gonorrhœa, imperfectly cured, should be commenced. These cases, which return almost incessantly, are seldom or never subdued in a definitive manner. —Paris correspondent *Journ. of the Am. Med. Assoc.*

The Surgical Treatment of Aortic Aneurism.—At a recent meeting of the Academy of Medicine, Dr. Constantin Paul read a paper on the Treatment of Aneurisms of the Aorta. He does not defend the method that bears the name of Moore, but he believes it to be useful in certain cases to introduce a foreign body into the aneurismal sac. He shows the defects of the electro-puncture, which produces around the needle a deposit of coagulated albumen without adhesion to the parietes of the sac; it is movable, friable, and forms a veritable grain of emboli. The procedure of Constantin Paul consists in the introduction of a certain number of Japanese needles, which are long and extremely fine, so fine that, to make them penetrate the skin, it is necessary to employ a conductor, which keeps them straight. The needles are left in the sac only a few minutes; they produce a slight degree of adhesive inflammation of the aneurismal sac. After a few days the same operation is recommenced, and a new access of inflammation takes place. In a short time the parietes of the sac become thickened, and the needles cannot be introduced into the points where it appeared that the aneurismal sac was about to open. In these special conditions, this form of surgical intervention, always inoffensive when it is practised as indicated by Constantin Paul, renders real service. Dr. Dujardin-Beaumetz thinks that until some absolutely certain method can be found, all surgical procedures in the treatment of aneurisms of the aorta should be abandoned, and particularly that of Moore. More benefit may be expected from the administration of the iodide of potassium, especially when given in beer or black coffee, or even in milk, as it is then better tolerated, the elimination of the iodide rapidly takes place, and the inconveniences of iodism are prevented.—*Lancet.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 19 NEW YORK, NOVEMBER 10, 1888 Whole No. 940

Original Articles.

GENERAL SUMMARY OF CONCLUSIONS FROM A SECOND SERIES OF ONE THOUSAND CONSECUTIVE CASES OF ABDOMINAL SECTION.

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WHEN I had the privilege, some four years ago, of communicating to this Society the results of my first series of a thousand consecutive cases of abdominal section, I said that I did not know whether the general death-rate, 9.3 (the figure ought to have been 9.2, the fractional increase being an error), was high or low, for no such series had up to that time been published, nor have I seen such a series since. I thought the figure must be high, and I expressed my conviction that, if I lived to complete another such series, the death-rate would be very much lower; and it is with no small satisfaction that I can record a diminution from 9.2 in the first series, to 5.3 in the second. I pointed out that as my first series included my early work, which had been so heavily tainted by the mortality of the clamp and other blunders arising from the traditions of the elders, the mere freedom from these alone ought to give me far better results. That this prediction has been completely verified is certain, from the mere fact that my mortality in the treatment of ovarian and parovarian cystoma has fallen from 8.1 to 3.3. But that by no means represents the full gain which I can point out, for in this class of cases I had, in my previous series, a large group of uncompleted operations with a mortality of at least fifty per cent., and these have now practically disappeared. They were cases chiefly of sessile ovarian tumors, and imbedded cysts of the broad ligament, the removal of which I always now complete, and thus at once diminish my mortality, together with that greatest of all opprobria, imperfect work. I am now in a position to say that no cystic tumor of the abdomen exists which cannot be removed, and this is quite as true of solid tumors of a non-malignant character associated with any organs in the abdomen, except the liver and spleen; and I lay far less stress upon my diminished death-rate as evidence of the improvement of my work, than upon the fact that in my second series I have only to plead guilty to six uncompleted operations in a thousand, whereas in my first series the number was thirty—with the same mortality in each, fifty per cent. Even in these six I know now—for post-mortem examinations revealed the fact—that I could have finished the operations in at least two, perhaps three, if I had screwed my courage up to a still harder strain, and I blame myself accordingly. I therefore lay it down as an axiom, that a man who has a large proportion of unfinished operations is a bad surgeon, worse than one with a high mortality. I may here again assert that I never in any way select my cases, or refuse to operate in such as look unfavorable for my statistical results. This diminution of uncompleted operations may, I think, be fairly and entirely put down to increased experience, giving greater readiness of resource, better judgment, and increased manual dexterity, and to some extent the diminution of the death-rate may be credited in the same direction. But I am proud to be able to say that there is certainly another factor which enters largely into this increased success, and that is the fact that the mind of the general profession is now rapidly freeing itself from the shackles of the ancient authorities of abdominal surgery, and is opening itself to the new rules of progress. The most important of these are two: first, that the principles which govern our actions in general surgery must apply in the abdomen; and the second is, that no doubt or difficulty of diagnosis should stand in the way of adopting that means by which the diagnosis is at once made clear, and successful treatment rendered possible by means of abdominal section. In our Birmingham and Midland district these rules have received an almost universal acceptance, and it is only from outside places now that we get cases which are a disgrace to our art. The day has now come for very plain speaking on this subject, for very many reasons, some of which I have repeatedly urged on former occasions, and a few others which are new. Of the former, I may cite one: Do we not invariably urge a woman who comes to us with an abscess of the breast to have it opened without delay? If so, why should we not deal on the same principle with a woman who has an abscess in the pelvis? We might just as well treat the former with a splint as the latter with a pessary, and this kind of nonsense is one I could illustrate afresh every week from my practice.

A rule was introduced by Mr. Spencer Wells, some thirty years ago, and is maintained stoutly yet by his followers, that an ovarian tumor should not be removed as long as the woman can go about. On the contrary, the rule which I have advocated for the last ten years is, that the time for the removal of an ovarian tumor is as soon after the time of its discovery as is possible. What would be thought of us if we told our patients with enchondromata of the thigh, or sarcomata of the jaw, or lipomata of the neck, or aneurism of the femoral, to nurse and treasure their troubles as long as they could go about? What would we say of a physician who, when he discovered an incipient pneumonia, advised his patient to go about as long as he could, and when he could do so no longer, this physician would come in to treat the case? I ask again and again, why the rules of general surgery and medicine should be excluded from abdominal surgery, and I can get no one to whisper an answer; and I show in every series I publish, with increasing emphasis, that early operations mean successful operations, and I am glad to say that nineteen out of twenty of my neighbors agree with me. But what about the others? Let me give two of my most recent experiences on this subject, they both occurred last week.

A gentleman who is very amiable and good, but somewhat careless in his professional work, sent me a woman in the last stage of exhaustion and emaciation, and he sent me a note to the effect that he had been attending her for three months with a lump in her pelvis, that he could not make out what it was, and that therefore he sent her to me. I opened the abdomen, and removed a huge putrid fœtal sac, the result of a ruptured tubal pregnancy—a thing that ought to have been removed when this gentleman first saw her. Of course she had no chance of recovery, and died a few hours after the operation.

Now, this gentleman's conduct cannot be considered a credit to our profession, and I have in all probability sacrificed his friendship forever by frankly telling him so. For twelve weeks he went on physicking this poor wretch, and when he sent her to me she had nothing left to pay for an operation, and was an object of my charity—a subsidiary, but still certainly an element in the case. But worse still, he secured for me a fatal result which I do not deserve; and worst of all—a crime in my eyes for which there is no forgiveness—he secured for surgery a disaster instead of a triumph. I am speaking strongly, gentlemen, but not more so than I feel; for the advancement of our art depends not more on thos ewho practise such a department as this, than on those who are in the position to give us reasonable chances of success, and that success is essential for all of us concerned in dealing with sick people.

A worse case than this, however, is the second, for the gentleman who sinned as I have described, sinned by an act of omission and in ignorance. But the second was a glowing sin of commission, and based upon that assumed certainty of diagnosis which the foolish and inexperienced mostly are guilty of.

My friend and former pupil, Dr. Gowans, of Perth, sent me last week a woman from that city, who brought with her a note dated March 22, 1888, and signed "Skene Keith," to the effect:

"The case is probably sarcomatous. I told the husband that he must not hope for a recovery, and told the patient herself that when the weather got better she should go out and see if she got stronger. She would be better, I think, with a bottle, perhaps a tonic or stomach mixture."

The case seemed to me rather one of large ascitic effusion, due to an ovarian tumor jammed in the pelvis, and probably fixed there by papilloma. As she had been tapped twice, nothing further was to be got in that direction. With a sort of half-hope that I might get the tumor out, I opened the abdomen, and to my disappointment found that the omentum, mesentery, spleen, and liver were all fully infected by advanced growths of papilloma, the centre of origin of which was a small cystic tumor of the right ovary, covered by dendritic masses. The tumor could of course have been removed, and a recovery for a short time would probably have resulted; but no permament good would have been done, and I might have had to record a death which, had it happened, would have been far more fairly credited to Dr. Skene Keith; and therefore I contented myself with an exploratory incision. From the history of the case I think it is perfectly certain that in March there was no papillomatous infection, possibly no papilloma at all. Dr. Keith's diagnosis of sarcoma is merely an illustration of how completely mistaken we all may be—even the youngest. The blunder consists in his not admitting the advisability of adopting the practice of exploring. Dr. Skene Keith has signallized himself by sneering at some people who open the abdomen on all sorts of pretexts, and his father has bewailed the "restless spirit of abdominal surgery which has lately been let loose;" and they both have laid claim to a freedom from errors in diagnosis to which no others have a right. But such a case as this, and it is by no means my first experience, walking in the footsteps of these two conservatives, makes me satisfied in my restlessness. Had this woman's abdomen been opened last March in Edinburgh, as it ought to have been, she would have been another life saved It is far better that we should even open the abdomen a few times unnecessarily, than that we should deliberately limit the powers of our art in this foolish way.

In my former series there were ninety-four simple exploratory incisions. Of these I said that "ninety-four is a large number, but it must be remembered that years ago I advocated exploratory incisions in preference to first tapping, and that I have persistently carried out the practice. They serve the purpose of complete tappings, and as the patients almost uniformly recover, they do no harm at all." The same is true of the present series, and I never tap as a first proceeding, I always explore. In the present series there are only fifty-three of such operations, and this diminution is chiefly, if not entirely, due to the fact that I get the cases earlier than I used to do, so that I arrive at results exactly the opposite of the disaster just narrated in Dr. Skene Keith's case. There are at least thirty cases in this series in which I have removed tumors successfully, and these, had they been delayed as in his case, would have resulted as in that instance; an argument for early operations and for exploratory incisions which is perfectly unanswerable.

Against the fifty-three exploratory incisions there are recorded two deaths, but these two deaths might be eliminated from the table with perfect fairness, for the operation neither delayed death nor accelerated it by one hour.

I have also to repeat what I said before on this subject, that "occasionally the exploration is followed by drainage, and in some of these cases results of the most marvellous kind have followed—the ascitic effusion has not appeared again." and tumors of spleen, liver, and of other kinds, the nature of which was not ascertained, have disappeared, and the patients have been permanently cured.

I am as far off as ever from my explanation of this extraordinary fact, but as it has received abundant confirmation since I first announced it, it is beyond dispute.

The next group of my series is a lot of two hundred and sixty-three cases of operations for chronic inflammatory disease of the uterine appendages, with a mortality of 3.4 per cent., as against a mortality of five per cent. in my first series, a diminution due largely to increased experience. Here, too, the absence of mere exploratory incisions and incomplete operations is very marked, for there is not a single case of incomplete operation to be credited to this group. These operations are far more difficult in every way than removal of tumors of any kind, and the deaths are almost entirely confined to cases of broken down women, the "too late" cases, as Mr. Bryant well designates them. Since my last paper this subject has been thrashed out in numerous discussions, and has even appeared in the law-courts, but the confirmatory verdict of the lay, as well as that of the professional, jury has been in absolute harmony with all I have said on the subject; useless and diseased organs, incurable by ordinary means, must be removed from the pelvis, just as from other approachable parts of the body; even the lungs are no longer sacred to the "restless spirit of modern surgery." The route of my practice is not governed solely by my own wishes and inclinations. It is far more completely influenced by the judgment of my professional brethren; and the fact that, from all parts of the world, these cases have been sent to me in the increased proportion of two hundred and sixty-three in this thousand, to that of two hundred and one in my first series, is a convincing proof that the benefits of this proceeding are being fully recognized. I am not concerned in the present paper with the ultimate results of such cases, but I may mention incidentally that these have been materially augmented, and the period of convalescence shortened, since the discovery by Dr. Arthur Johnstone, of Danville, Ky.—and it is one of my greatest honors to be able to say that he was one of my pupils—that there is a large nerve-trunk entering (or leaving) the cornu of the uterus, in the angle between the round ligament and the tube, which seems to have a powerful agency in the process of menstruation. When this trunk is secured in the ligature close to the uterus, the results of the operation are more speedily effected, and are more complete.

I have just received a very strange pamphlet with a very attractive title, "Electricity *versus* Tait," surely a subject large enough to attract universal attention. Of the manner in which the author speaks of the defendant in this action, I have no reason to complain; in fact, quite the reverse. It is very flattering, and, I hope, altogether true. But when he speaks of the immediate subject, which is really that of chronic inflammatory disease of the uterine appendages, I feel sure that every skilled reader will come but to one conclusion, that the author has never seen the disease which he professes to cure by electricity. I showed the pamphlet to a skilled electrician a few days ago, and his verdict was that its author did not know what electricity was, or anything about it;

yet the following is a quotation from its pages: "In the use of electricity we subdue the local inflammation; promote absorption of hyperplasia and hypertrophy; establish the general health, and produce proper nutrition. In this manner of electrization we have a means brought to bear upon nutrition, local and general, of such pronounced influence that the result is all that could be desired. By it I have been enabled to carry the class of cases instanced above over the apparent limit of repair; observed thickened tubes and adhesions of long standing disappear, which had resisted every means used to overcome them." By such writing as this we are strikingly reminded of Bishop Berkeley and his book on coal-tar water, from which I might reclaim parallel passages. But the famous metaphysician was floored by the concrete example of a sailor's wooden leg. Let our electrolysists try a living limb of flesh. Gonorrhœal inflammations of the uterine appendages are very common, and similar diseases of the large joints are not unknown. They are almost equally intractable. Fortunately, in the case of the joints the recovery can be greatly assisted by rest in splints. But we cannot put the ovaries and Fallopian tubes in splints; we have no means of giving them physiological rest, short of destroying them; therefore they are in a far worse position than the joints I speak of. Asking among my friends who practise general surgery, I find they say with one accord that gonorrhœal inflammation of joints is a most intractable disease, rarely getting well under the most favorable conditions in less than six months, and often extending over years; finally, that a serious proportion of the cases never get well at all, or get well only with stiff, useless joints. Here, then, is Dr. Berkeley's wooden leg. Let us ask our electrolytic friends to take some cases of gonorrhœal elbows and knees, and let us see what they can do. If they cure them, as they say they cure the same disease in the uterine appendages, then we can believe them about the pelvis. But let them remark the contrast; the joints are outside, visible, and easy of observation, whereas the favorite hunting-ground of quackery is an obscure, mysterious mucous canal. One other word about this "Electricity *vs.* Tait," and I am done with the subject. He assumes, like many other critics, that those of us who deal surgically with the abdomen and pelvis are like Mrs. Wemmick, "Here's a church; let's have a wedding!" "Here's a something; let's have an operation!" So far as I am concerned, this is not so. I have always said that the great bulk of cases of inflammatory disease of the uterine appendages get well without operation, though by getting well we do not necessarily mean that they are cured. All I contend for is that the residuum should not be condemned to live on, hopelessly suffering, while there is a *dernier ressort* at our command. When that should be called in is a matter for determination in each particular case, and depends upon conditions which cannot be formulated into laws, varying as they do in importance, even according to the social position of the patient. Electricity may yet prove the means of still further diminishing the number of cases to be submitted to the surgical method, but it does not promise much in the hands of most of those who have taken it up. Ever since the year 1827, which date indicates, so far as I can discover, the first serious application of the electrical current to the treatment of disease, it has been a source of disappointment to the honest, earnest practitioner, with an exceedingly limited area of exception, while it has, on the other hand, yielded an abundant harvest to the pouch of the charlatan.

Naturally enough this brings me to speak of the treatment of myoma, concerning the electrolytic treatment of which much discussion has taken place within the last two years, since Dr. Apostoli made assertions concerning it which startled the surgical world. To form a judgment on such a subject as this there are two methods, both of which must be applied—the first, open, it is true, to much fallacy, and the second still fallacious, but much more trustworthy; but they must both be tried to satisfy a mind that is logical. The first method is that of *à priori* reasoning, and when Dr. Apostoli's assertions were subjected to this process, it was found that there were grave initial objections to his statements. In the first place, there was nothing new about his processes whatever. It is true he had a new nomenclature, but that was all, and in not a single essential detail were his methods new. Years before they had been tried, had failed, and had been found to be dangerous. Then it was remembered that Dr. Apostoli had made precisely similar assertions about the process of involution of the uterus after labor. He had asserted that all the evils of subinvolution might be obviated by the electric current, his proposals had received a fair trial, and had been uniformly condemned. Cognizant of all this, when in Paris, eighteen months ago, I made very extensive inquiries, and I could find no evidence which induced me even to visit Dr. Apostoli's clinic; for merely to see electrodes applied to patients by a man who had had no experience in gynæcology, whohad received most of his training as an army surgeon, could be of no service. I inquired as to what was known to others concerning the ultimate results of patients who had been treated by his methods, and I heard quite enough to make me determine that I should leave this kind of treatment on this side of the channel to others. I had no desire to complicate my work with such difficulties and dangers as I heard of on all sides, and I was perfectly sure that I should, before long, find that there were others ready enough to try them. Speedily we had accounts in the medical journals of visits to Dr. Apostoli. Dr. Burton, of Liverpool, and Dr. Elder, of Nottingham, wrote such papers. I have heard of two fatal cases in Liverpool occurring in the practice of Dr. Grimsdale, and in which the treatment was carried out by Dr. Burton. I wrote to Dr. Grimsdale asking if the statement were correct, but he has not even answered my letter. Dr. Elder has written to me within the last few days with regard to electrolysis: "I am convinced it will not do as much as some of us hoped. In the *majority* of hemorrhagic cases it certainly is an efficient hæmostatic, although the effect is not always permanent. Now and again, in the same class of cases, it signally fails to modify the flow. *Rarely* under its use a tumor disappears, in a larger number of cases it causes marked shrinking, while in some, even with symptomatic improvement, no diminution in size follows. Pain it usually relieves, and in most cases an improvement takes place in the general nutrition. As it evidently will not abolish hysterectomy, I have invented an 'Elder's clamp,' which I hope you will try."

But all that Dr. Elder admits can be secured by easier and safer means, and therefore electrolysis gains no support from his evidence.

My colleague, Dr. Savage, also went to see Dr. Apostoli, and wrote a paper about what he was told he was seeing, but he does not try the methods, at least not in hospital practice; and when, at consultations, I have urged him to do so in what seemed to me suitable cases, he merely shook his head with much gravity, and proceeded to remove the uterine appendages.

In London electrolysis has been much vaunted by a few, but they are notably those who have been unsuccessful in their efforts at abdominal surgery.

I have, therefore, received no more encouragement from the second or empirical method of investigation than I did from *à priori* argument, and I have left electrolysis severely alone. My own negative experience has quite justified this action, for it is as follows: Since May, 1887, there have been fifteen patients who have passed through my hands upon whom the electrolytic treatment has been tried as a substitute for surgical interference. Three of these have died, though I do not know that they have done so as the immediate result of the electrical treatment. Nine others have returned to me for operation, and have all got well. The remaining three are as yet undecided. In addition to these, I have performed hysterectomy on three patients who had just before been subjected to treatment by electrolysis, and I have removed the appendages in four cases which had been similarly treated.[1] I conclude, therefore, that up to the present we are still in want of evidence in favor of Dr. Apostoli's claims in this country, and, if we take a recent record in Germany, we find all that I urged against it on *à priori* grounds completely confirmed. It is published by Dr. Bröse in the *Zeitschrift für geburtsh. und gynäk.*, Bd. xv., Heft I.

CASE I.—The patient was fifty years of age, a multipara, suffering from multiple uterine myomata; uterus twelve centimetres in length; the tumor reached to within two fingers'-width of the umbilicus. She suffered considerable pain and from pressure-symptoms; menstruation regular.

During treatment the pain ceased and the tumor got smaller. After the ninth sitting the tumor reached thirteen centimetres above the symphysis. The patient absented herself for nine months, and came back worse than before. The tumor had grown again, and the uterus measured twelve and one-fourth centimetres.

On using the constant current the symptoms again abated. After eleven sittings the uterus was eleven centimetres long; the patient then left my care.

CASE III.—Patient aged twenty-nine; one child; submucous myoma. The uterus was as large as a four months' pregnancy; there was much dysmenorrhœa and menorrhagia. After one sitting (1½ milliampères), slight pains like labor-pains; second sitting (20 milliampères), strong contractions of the uterus, with labor-pains which lasted for two days continuously till the next sitting. Bloody discharge; pieces of tissue (myoma) were passed; a badly smelling discharge came on; the myoma had necrosed and was being cast out. The constant current was applied twice again; the necrotic mass removed with spoon; the uterus drained. Death, five days later, from septic peritonitis.

CASE IV.—Aged thirty-six; multipara. Uterine myoma; great pain and much dysmenorrhœa. No result after twelve sittings. Hysterectomy was successfully performed.

As a contrast, let me submit a group of 148 cases of removal of the uterine appendages for myoma, with three deaths, giving a mortality percentage of 2.03, as against my 99 cases in the former series, with a mortality of 7. I have already published in detail (*British Medical Journal*, September, 1885) proof of the satisfactory and permanent results obtained from this operation, and have only, in addition, to say that these are maintained. I have, in the two series, to include 247 cases, with 10 deaths. Of the 237 cases I know that 3 have since died of cancer, and that 3 have had hysterectomy performed, owing to the subsequent growth of the tumor, and I know of no other failures.

The next group is that of 88 hysterectomies, with a mortality of 11.3 per cent.; a striking contrast to my previous series of 54 cases, with a mortality of 35.7, a result so distressing that I utterly condemned the operation. But, as Dr. Elder says, we are driven to it, no matter what Dr. Keith says, and if Dr. Keith had not refused to let me see him do the operation, my mortality in this series would have been less than it is now, for he had a method of operating which I did not know, and the knowledge of which at once reduced my mortality enormously. The point was a very simple one. He tied the broad ligaments separately, and stripped them off the uterus. He does not seem to have appreciated the reason of the success of this method, but the explanation is very simple. It prevents occlusion of the rectum by taking off strain. The fact that I have gone so far as to have 31 consecutive recoveries from hysterectomy satisfies me that before long I shall bring its mortality down to something approaching that of ovariotomy.

I have already said, in previous writings, all that need be said concerning such operations as cholecystotomy, nephrectomy, nephrotomy, opening and draining pelvic abscesses, and operations for tubal pregnancy. I have nothing to alter, and nothing to add.

For the relief of intestinal obstruction I still prefer to perform enterotomy rather than make prolonged searches for the seat of obstruction. I have put a group of these cases together, but they have so many divergent features that no efficient conclusion can be derived from mere statistical display. I propose to make this subject the basis of a special paper to the Midland Medical Society during the ensuing session.

Of suppurating peritonitis treated by abdominal section, washing out, and draining I have to speak in terms of unqualified satisfaction. I have lumped together all the cases, save those that were puerperal, in the same group, for it really is impossible to draw hard and fast lines between the acute cases and the chronic. I have operated, in this series, on 26 cases, and have saved 22. I say saved, advisedly, for without the opening of the peritoneal abscess they must all have died. The mortality is 15.3 per cent., and in my first series I had 9 cases, with a mortality of 22.2 per cent. Here again I must plead with my brethren for assistance, and urge that cases of purulent effusion in the peritoneum should be treated by early and efficient drainage, just as purulent effusion in the pleura is dealt with.

Of puerperal peritonitis I have to speak still with bated breath. I have operated four times and had only one recovery. But I nearly had two others, and I believe, if I had obtained twelve hours' start in these two cases, the mortality of my little group would have been twenty-five instead of seventy-five per cent.

In London this operation has been received with much favor and has had very fair success. In a communication on the subject, Mr. Treves expresses a view which seems to imply that in my practice the operation arose in a sort of blundering way, in a case which I did not know what I was about; and subsequent writers are therefore disposed to give Mr. Treves the credit of introducing this practice. Mr. Treves is quite mistaken about my introduction of the operation, which took place in a case sent to me by Dr. Arthur Underhill, in 1879. Dr. Underhill had diagnosed the case completely, and I quite concurred in his view of it; I therefore opened that patient's abdomen, not only knowing quite well what I was about, but with the full intention of relieving my patient, and I was successful. The operation was performed on October 30, 1879.

Puerperal peritonitis—puerperal fever, as it is practically called—is a deadly disease. The recoveries from it are quite fractional. The argument, therefore, for attempting to save such cases by opening or cleansing is surely a strong one, but it must be fairly tried; that is, it must not be left merely to close the scene with. I am strongly disposed to think that in severe cases of puerperal inflammatory mischief the chief trouble is in the womb itself, and I am inclined to think removal of the organ in its inflamed condition may be requisite. In any case, the disease is so hopeless when left alone that any kind of effort seems legitimate.

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[1] The only case in which I have seen pronounced benefit derived from the treatment by electrolysis is one which occurred at the hands of Dr. Apostoli himself. It was a case of subinvolution and chronic metritis, with the invariable retroversion of the uterus, accompanied by chronic catarrh of the endometrium. This lady went over to Paris and had, according to her own account, thirty-one applications of the electric current, several of which were conducted under an anæsthetic. Of course she does not know exactly what was done, but she tells me that the treatment was so severe that nothing would induce her to undergo it again. It occupied five months, and cost a very great deal of money. Now such a case as this could be, and certainly in my practice is, invariably cured by the simple process of dilating and curetting the uterine cavity, and applying Paquelin's cautery freely to the inside. This proceeding is absolutely devoid of risk; nothing in the least approaching anxiety has ever been experienced in an enormous number of cases I have successfully treated. The pain is infinitesimal, and only one sitting is required. The cost is a mere bagatelle. I do not see, therefore, that the electrolytic treatment can be accounted in any way an advance upon the treatment by curette and actual cautery; in fact, it is entirely the contrary.

One small group of cases remains for discussion, as it is full of interest. I mean those in which the pregnant uterus was amputated because it was impossible to remove the child by the natural passages. In my life I have three times performed the old Cæsarean section, and the mother died in every case. In a fourth case, seven years ago, I did exactly what Sänger claims as a new operation, and I removed the appendages to prevent future impregnation, but the patient died. I put all these deaths down to the fatal influence of the "puerperal condition," but it is clear that that explanation is nonsense, for I have now done four operations on the principle laid down by Professor Porro, and all the mothers have recovered, and the children have all lived. The operation I perform is certainly not Porro's operation, for I have altered nearly every detail, but the discovery of the new principle, that of removing the uterus to save the mother from the fatal effects of suppurative metritis and the possibility of having the same trouble over again, is the credit of my friend, Professor Porro. I prefer to give the operation the name of no particular person, because men's names attached to operations are always productive of misunderstandings, quarrels, and confusion. I indicate the principle by calling it "amputation of the pregnant uterus," every word of this term being fact and not theory.

This operation, I venture to predict, will revolutionize the obstetric art, and in two years we shall hear no more of craniotomy and eviscerations, for this new method will save more lives than these proceedings do, and it is far easier of performance. It is the easiest operation in abdominal surgery, and every country practitioner ought to be able and always prepared to do it.

No special instruments are required, nothing but a knife, some artery-forceps, a piece of rubber drainage-tube, two or three knitting-needles, and a little perchloride of iron.

My method of operating is to make an incision through the middle line, large enough to admit my hand, and then I pass a piece of rubber drainage-tube (without any holes in it) as a loop over the fundus uteri and bring it down so as to encircle the cervix, taking care that it does not include a loop of intestine. I then make a single hitch and draw it tight round the cervix, so as to completely stop the circulation. I give the ends of the tube to an assistant, who keeps them well on the strain so as to prevent the loose knot from slipping, the reason for this being that, should there be any bleeding and any necessity for further constriction, I could secure this in a moment without undoing any knot; and the simplicity of this method greatly commends it. I then make a small opening in the uterus, and enlarge it by tearing with my two fore-fingers, seize the child by a foot and remove it. I then remove the placenta, and by that time the uterus has completely contracted and is easily drawn through the wound in the abdominal wall. The constricting tube will now probably require to be tightened, and the second hitch of the knot may be put on at the same time, and the work is practically done. Stuff a few sponges in the wound to keep the cavity clear of blood, and pass the knitting-needles through the flattened tube and through the cervix, and in this simple way a clamp of the most efficient kind is at once made; the uterus is removed about three-fourths of an inch above the rubber tube. The usual stitches are put in, the wound closed round the stump, which, of course, is brought to the lower part of the opening, and then the stump is dressed with perchloride of iron, in the usual way. The operation takes far less time to perform than it takes to describe, and as there is hardly any possibility of complications, it is one of the simplest operations that can be undertaken, and must always be pretty much the same; for this reason no one need ever be in any fear about undertaking it, for in the absence of variation in the difficulties to be encountered, it differs entirely from any other operation in abdominal surgery.

If performed before the patient has been mauled about by ineffectual attempts to deliver, its mortality will be no greater than that of ovariotomy, and the arguments in its favor against all alternative proceedings are, first, that it cannot be more dangerous to the mother than most of these are; that it saves the life of the child; that it prevents the unfortunate mother from again being placed in a similar condition; and it certainly has the great advantage over alternative proceedings having a similar object, that its great simplicity, as contrasted, for instance, with operations proposed by Thomas, Müller, and Sänger, will make it possible for the country doctor less experienced in surgery to perform it without hesitation. These complicated and difficult proceedings may have their advantages, though I confess I do not see them; but they will be left for the hands of experienced specialists. The operation I have described will be the operation of emergency, where only the resources of general practice are at hand.

Analysis of series.	Cases.	Deaths.	Mortality.	Mortality of previous series.
			Per cent.	
Exploratory incisions	53	2	3.7	2.1
Cystoma, parovarian	24	1	3.3	8.1
Cystoma of one ovary	158	6		
Cystoma of both ovaries	78	2		
Enucleation of cysts of broad ligament	12	..		
Removal of appendages for myoma	148	3	2.03	7.0
Removal of appendages for inflammatory disease	263	9	3.42	5.0
Removal of appendages for deformity	2	....	......	...
Hysterectomy	88	10	11.3	35.7
Opening and draining pelvic abscesses	6	....	......	...
Hepatotomy	5	1	20.0	...
Cholecystotomy	28	2	7.1	...
Nephrectomy	12	2	16.6	...
Nephrotomy	24	1	4.16	...
Ruptured tubal pregnancy	28	1	3.57	9.0
Hydatids of peritoneum	4	....	......	...
Tumors of omentum and mesentery	2	....	......	...
Enterotomy	11	2	18.18	12.5
Suppurative peritonitis opened and drained	26	4	15.34	22.2
Puerperal peritonitis	4	3	75.0	...
Radical cure of hernia	9	....	......	...
Amputation of pregnant uterus	3	....	......	...
Tumor of abdominal wall	1	....	......	...
Resection of cæcum for cancer	1	1	100.0	...
Perityphlitis, removal of vermiform appendix	2	....	......	...
Incomplete operations	6	3	50.0	50.0
Cholelithrototy	2	....	......	...
Total	1,000	53	5.3	9.2

ANTIPYRIN FOR THE RELIEF OF LABOR PAINS.—A German practitioner has lately stated that he has succeeded in minimizing, or even preventing entirely, the pains of childbirth, by the administration of enemata of antipyrin. In the case of one woman, with her first child, who had been in great agony for upward of twenty hours, after a single injection per anum of about half a drachm of antipyrin to a few ounces of water, the pain ceased almost immediately as if by magic, although the uterine contractions continued without alteration or diminution, and the accouchement proceeded in an entirely satisfactory manner. He also records cases where one or two antipyrin enemata rendered premature labor absolutely painless. Another authority, Dr. Layel, of Marseilles, has met with the like success, in similar cases, by the employment of this drug. Equally satisfactory results have attended the administration of antipyrin in this manner in England, and consequently it is likely to be extensively employed. Thirty to thirty-five grains (two grams) is the quantity recommended for each enema, and even in very severe cases a second or a third injection, after a short interval, suffice to relieve the patient from all her pain.—Cor. *Journal of the American Medical Association.*

SOME SUGGESTIONS CONCERNING THE PREVENTION OF CHRONIC JOINT DISEASE IN CHILDREN.[1]

By LEROY W. HUBBARD, A.M., M.D.,

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WHOEVER carefully studies the history of medical progress will find that during the past century, and especially the latter part of it, the greatest advances have been made in the departments of surgery and preventive medicine.

Why is it that the results of surgical operations are so much better than they were twenty-five years ago? Certainly we have no more skilful operators to-day than formerly, nor is the present generation more rugged and better able to endure the shock and strain of operations than the preceding ones. No! it is simply because we have found out the ordinary causes of danger, and the means by which they may be rendered harmless.

In the department of medicine, the search for the primal cause of disease has interested a large number of scientific investigators, and so successful have the results of their labors been, that we now know positively, or with great probability, the cause of all the acute infectious diseases; and, as a consequence, the means for the destruction of these causes, or for rendering them innocuous.

No one can say that the present generation possesses more physical vigor than those which have preceded it; nor are the habits and mode of life of the people to-day calculated to prolong existence; yet it has been calculated that the average age of a generation has been raised from thirty to thirty-six years.

In spite of the ignorance of the masses, and of their inability to appreciate the necessity of sanitary laws, the persistent efforts of some of the more enlightened and civilized governments have had their effect, and the terrible epidemics of disease which once swept over a country, decimating the inhabitants, have become things of the past, and their history reads like the tales of goblins and giants which frighten children in the dark.

It has seemed to me, in looking over the history of this triumphal march of progress, that the department in which we are especially interested has not kept in the foremost rank, but has fallen somewhat in the rear in this respect.

No one can question the great progress which has been made in the treatment of chronic joint diseases and deformities after they have appeared, and the results are brilliant triumphs, due to the skilful application of apparatus or manipulation of the knife. Nowhere have these results been more successful than in this country, and the orthopædic surgeons of the United States undoubtedly have no superiors in the treatment of the cases which come under their charge.

We find the literature, in this country, on the subject full of suggestions in regard to treatment; descriptions of new forms of apparatus which are expected to work wonderful cures; statistics of results, often biased by the peculiar hobby of their author or compiler; while the pathology and etiology of these diseases have either been neglected or treated in a superficial manner. As exceptions to this general statement, I must mention the writings of Drs. Shaffer, Gibney, and R. J. Hall, who have added materially to our knowledge of the etiology and pathology of chronic joint lesions as the result of their careful and scientific investigations. Dr. Samuel Ketel, also, in a paper recently read before this society, called attention to the insidious nature of scoliosis, and advised careful observation of young children with a view to the prevention of the trouble.

But these contributions are small when compared to the reams of literature on the subject, and it has occurred to me, therefore, that it might be well at this time to consider the possibility of preventing these chronic joint lesions, which have been and are now so common among children, and whose destructive progress we are so often unable to check, though we may see our patients very early in the history of the disease. While we may do much to mitigate their suffering, still the best results attainable are often impaired function or permanent disability.

In my remarks I shall confine myself to a consideration of only those cases of chronic joint trouble which are commonly known as *fungoid.* I am aware that there are other forms of joint lesions, such as the syphilitic and rheumatic, but they are so uncommon among children that I think they can be left out of consideration.

In order to arrive at a rational method for the prevention of any disease, it is necessary to understand its pathology and etiology.

The pathology of chronic joint lesions, at least in their gross appearances, has been often described and pretty generally agreed upon, but a fierce battle has been waged over the question of etiology.

The opposing factions may be said to have divided themselves into the traumatist and non-traumatist. The one has claimed that in the large proportion of cases of vertebral caries, morbus coxarius, knee-joint disease, etc., a history of traumatism can be obtained which has a direct causal relation to the lesion; also, that the disease frequently occurs in a healthy, robust child whose family history is good, and who has presented previously no evidence of a hereditary or acquired diathesis favorable to the production of a joint lesion.

The other side claim, just as strongly, that a peculiar diathesis or constitutional taint is always necessary. They base their claim upon the undoubted facts that in many, and perhaps the majority, of cases, there is a definite family history of some constitutional disease, frequently tuberculosis; that in a large proportion of cases no injury is assigned as a cause by the parents; and that, when an injury is assigned as a cause, it is frequently trivial, or occurred several weeks previous to the first appearance of the symptoms, the child in the meanwhile being perfectly well.

As is usual in such cases, both sides are partly right and partly wrong; and it will be my endeavor to show, if possible, how both theories may harmonize.

In the first place it is necessary to state two propositions which must be accepted at the outset:

First. Tuberculosis is produced or caused by the direct action of the tubercle bacillus.

Secondly. Chronic joint lesions of the fungoid variety are tubercular.

The first of these propositions needs scarcely comment or proof.

Ever since Koch, in 1881, announced his discovery, after months spent in patient and careful work, and after each elaborate experiment had been verified again and again, the subject has aroused the enthusiasm of all workers in bacteriological investigation. Although his theory was for some time opposed and his facts disputed by the more ignorant and careless experimenters, I think I am safe in saying that to-day there is not a man, whose opinion is worth considering, who does not accept Koch's conclusions.

Rokitansky, justly called the father of modern pathology, as early as 1850 advanced the theory of the tubercular origin of chronic joint disease, but his opinion was not accepted, and for several years nothing was heard of it. Later, Volkman mentioned that it might occur, but thought it rare. Köster, Friedlander, Schüppel, and others followed up the work, but no satisfactory result was obtained, owing to the fact that scarcely any two observers were agreed as to the macroscopical or microscopical appearance of tubercle. But after the discovery of the tubercle bacillus, the investigations of Kœnig, Rosenbach, Dr. R. J. Hall, of this city, and others, have proved beyond doubt that chronic joint lesions are tubercular.

From these premises we can draw but one conclusion viz., that chronic joint disease is due directly to the presence and action of the tubercle bacillus; in fact, that *it*, and it *alone*, is the active and primal cause.

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[1] Read before the Orthopædic Section of the Academy of Medicine, April 20, 1888.

The bacilli gain entrance to the system in one of four ways. In a certain very small proportion of cases they are transmitted directly to the fœtus by one or both parents, who may be suffering at the time of conception from active tuberculosis.

Secondly. The bacilli may be directly inoculated. This is proven by the case of the Hebrew rabbi suffering from laryngeal phthisis, who inoculated twelve children whom he circumcised; also by the case of a servant of one of the professors in the University at Vienna who was ill from phthisis pulmonalis. During the last few weeks of his illness his sputa contained almost pure cultures of the tubercle bacilli. The servant, who was a robust, healthy girl, with no hereditary taint, accidentally cut her finger by the breaking of the receptacle containing sputum. The original wound healed readily, but in a few weeks a local tuberculosis developed upon the tendon of the finger and the glands of the arm, which showed numerous bacilli.

By far the most common modes of infection are by inhalation through the lungs, and by the alimentary canal.

On the other hand, it may be asked, does the presence of a tubercle bacillus in the system necessitate the formation of a tuberculous lesion? By no means, for if it did, few of us would escape, surrounded as we are by continual sources of infection.

The organism must find a soil suited to its growth, or it will not develop. There is a constant struggle between the vitality of the bacillus and the vitality of the living cell.

It is only upon this theory that we can rationally explain the course of any one of the infectious diseases; why one person is susceptible and another not; why one has a severe attack and another a mild one; or why a slight exposure will produce the disease in one individual, while another requires a long-continued and strong exposure.

A case occurring in my own practice is in point. A young lady, who in childhood did not contract measles, was exposed to them frequently, and, in her capacity as teacher in a boarding-school, had often taken care of pupils ill with the disease without contracting it. This year, though in apparently better health than for several years past, she contracted the complaint from slight exposure.

Dr. Daremberg, in his article upon the "Contagiousness of Tuberculosis,"[1] says, "the degree of contagion is controlled by the individual characteristics in those prepared beforehand for infection by hereditary or acquired vices of nutrition."

Moreover, pathologists inform us that they frequently find, in the bodies of persons who have died of other diseases, spots of local tuberculosis which have produced no symptoms and have not been recognized during life.

Daremberg[2] thinks that a local tuberculosis is produced by an attenuated virus, or by a microbe which has undergone some change that renders it less virulent.

Cornil thinks the same, and says that the local tuberculosis has a tendency to remain so, but the microbes may become changed by favoring conditions and produce general infection. These statements are borne out by clinical experience, for we all know how few patients with chronic joint lesions, comparatively, die from general tuberculosis or infection of internal organs; and when it does occur, the infection is generally preceded by an exacerbation of the local trouble.

Dr. Sayre, in his work upon "Diseases of the Joints," refers to the familiar robust, ruddy-faced old man with a short leg from hip disease, as a proof that the disease is not dependent upon a diathesis. The only fact which such a case proves is that the lesion was a local one and did not become general.

Having thus determined upon an active or exciting cause for the lesions in question, let us consider the predisposing causes or the conditions which favor the growth and development of the bacillus. These may be divided into general and local.

Under the first I will place at the head heredity. By this I mean, not a direct transmission of the tubercle bacilli, except, perhaps, in very rare instances, but, as Daremberg expresses it, "the inheritance of vices of nutrition which produced the disease in ancestors.

Gibney, in his article, "The Strumous Element in Joint Disease," states that he found that, of 185 cases of Pott's disease, 76¼ per cent. of the parents had suffered from some hereditary disease, and of 272 cases of hip disease, 60¼ per cent. Of 568 cases of Pott's disease which came to the New York Orthopædic Dispensary, from 1870 to 1878, thirty per cent. gave a direct tubercular history, and of 463 cases of hip disease, twenty-five per cent. These histories were all obtained from the statements of parents, and probably the percentage is under rather than over the actual facts. We cannot, therefore, avoid considering heredity as a strong predisposing cause.

Next, I will mention environment, hygiene, nutrition, etc.

The experiments of Dr. Trudeau, reported in the *American Journal of the Medical Sciences* for July, 1887, are strong evidence on this point.

Experiment I.—Five rabbits were inoculated in the right lung and left side of the neck with five minims of a solution containing a pure culture of the tubercle bacillus. They were then placed in a box in a dark cellar, deprived of light, fresh air, and exercise, and the supply of food was limited.

Experiment II.—Five healthy rabbits were placed in a pit ten feet deep, within a box having sides but no top. The only access to the pit was by a small trap in the roof. through which food was introduced once a day, the quantity being limited to one small potato for each rabbit. The bottom of the pit was so damp that the animals were always wet.

Experiment III.—Five healthy rabbits were inoculated as those in Experiment I., and turned loose upon an island where they had the best possible conditions of light, air, food, etc.

Results. Experiment I.—Four of the rabbits died within three months, and all presented tubercles which gave pure cultures of the bacilli. The fifth was killed at the end of four months and showed well-marked tubercular lesions.

Experiment II.—All the animals were alive at the end of four months, and though emaciated, were lively. When killed, no tubercular deposits were found.

Experiment III.—One of these rabbits died at the end of one month and showed some tubercular lesions. The other four were killed at the end of four months, and found to be perfectly healthy.

Of the animals which were directly inoculated and placed in bad hygienic surroundings, four died and the fifth was infected.

Those which had simply bad hygienic conditions did not develop the disease, and of those inoculated but placed under the best conditions for resisting the bacilli, only one succumbed.

These experiments speak for themselves, and demonstrate that tuberculosis is not developed from bad hygiene alone, and also that the surroundings are an important element in the development of the disease when the bacilli are present.

Anything which produces a lowered vitality of a joint, or epiphysis, may be considered as a local predisposing cause of a chronic lesion. Without doubt, the most common cause under this head is traumatism.

Pathologists generally agree, and chemical experience confirms the opinion, that these lesions usually begin in the bone; either in the epiphysis or at its junction with the diaphysis. Now, we know that this portion of bone, especially in children, is very delicate in structure and extremely vascular. A slight disturbance of the arrangement of the bone-cells might easily produce such changes in the circulation as to seriously affect the nutrition of the part.

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[1] Bulletin de l'Académie, 1884.

[2] Loc. cit.

Max Schüller says, in the *Weekly Gazette*, February 23, 1883: "A point of traumatism is prepared to receive a microbe which, under other circumstances, would circulate through the system without producing infection."

Some experiments upon animals may be given in evidence.

Schüller, of Greifswald, in 1880, injected into the lungs of some dogs tubercular sputa, or an emulsion of cheesy material; other dogs he infected through a wound in the trachea; and still others were confined in a small room, into which was constantly thrown a spray containing tubercular material. Upon all of these dogs he inflicted slight traumatisms of the joints by wrenching them or pounding them with a mallet, lightly but often. In every one a chronic fungoid arthritis was produced, while the same traumatisms inflicted upon other dogs, not infected with tuberculous material, produced only serous effusions which quickly subsided.

Cornil inoculated with dried sputum a rabbit in which the sciatic nerve had previously been cut. Two months after there was a localized fungous arthritis of the knee-joint, and a tubercular lesion of the tibia, both of which contained bacilli.

The traumatism may be a single severe injury to the joint or epiphysis, or, what is probably more common, a slight traumatism often repeated.

It is well known to everyone that children in their sports are continually receiving more or less serious injuries of the joints. Sometimes these injuries cause considerable suffering at the time, but the acuteness of the pain soon wears off. The child then uses the joint, enduring the slight pain without complaint, for fear of punishment or restraint from joining in its accustomed plays.

Many of the sports indulged in by children, of which the familiar skipping-rope is a good example, are calculated, by producing a slight but often repeated traumatism upon the joints, to set up a low grade of inflammation, constituting a favorable soil for the growth of a tubercle bacillus, should it be present. If you have observed a young child descending a flight of stairs, I think you cannot have failed to notice the amount of traumatism inflicted upon the knees and hips. Instead of descending one foot after the other, with the limbs partly flexed, so that the force of concussion is distributed along several curves, one leg is kept continually in advance, and the whole weight of the body is dropped, as it were, from one step to the other, the limb being held stiff and the joints receiving the direct force of concussion.

The argument that very severe traumatisms of joints frequently do not produce chronic lesions of those joints, proves nothing except that the exciting cause was not present, or did not find a suitable soil for its growth. In fact, a chronic lesion is less liable to follow an acute and severe injury than a slight or often repeated one, for the well-marked symptoms produced call for immediate treatment. The joint receives absolute rest for a considerable period, the acute inflammation subsides, and the normal conditions of the joint are restored.

The argument that, as a rule, when a history of traumatism is obtained, we find the injury to have occurred several weeks or months prior to the first appearance of the symptoms, falls to the ground, for that is just what we should expect. The tubercle bacillus is very slow in its growth, and if only a few microbes are present in the beginning, it will be some time before they will produce sufficient change in the bone or joint to present active symptoms.

We have seen, also, how the disease may be brought about through trophic changes in the joint, as illustrated by Cornil's experiment after division of the sciatic nerve. Clinically, it has been observed that chronic joint lesions frequently follow the acute exanthematous diseases. It is believed by many observers, that there is a great increase in the vascularity of the epiphysis of the long bones during these diseases, and an actual growth has been observed in some cases during the few weeks in which the patient is confined to the bed. It is possible that such changes are produced in the articular extremities as to afford a suitable soil for the lodgment and growth of the tubercle bacillus.

Based upon the foregoing facts in regard to the pathology and etiology of chronic joint lesions, I offer the following suggestions for their prevention:

1. A careful inquiry by the surgeon into the hereditary history of each family which he may have charge of; and if a well-marked history of hereditary disease, especially tuberculosis, is found, a warning should be given to the parents of the dangers to which the children are exposed.

2. Instruction in regard to hygiene, diet, etc., with the endeavor to keep the nutrition of the chidren up to the highest point until they have passed the period at which they are most liable to contract a joint lesion, viz., the period of puberty.

3. When tuberculosis is present in a family, either as phthisis pulmonalis, or a joint lesion with an abscess, all sputa or discharges should be destroyed or disinfected; and healthy children should be brought as little as possible in contact with the sick. In this way the risk of direct contagion may be reduced to a minimum.

4. Instruction should be given in regard to the importance of any traumatism of a joint or the parts near it, however slight it may be. After such an injury, absolute rest of the joint should be insisted upon until all evidence of inflammation has subsided and the function of the part is perfectly restored.

5. The prohibition of all sports or exercises which bring repeated traumatism upon one joint. Young children should not be allowed to go up and down stairs frequently.

6. After one of the acute exanthematous fevers, a considerable period should elapse before active exercise, such as running, jumping, or long walks, is allowed.

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CARBO-OXYGEN IN CONSUMPTION AND OTHER FORMS OF WASTING DISEASE.

By HOLMAN S. HUMPHREY, M.D.,

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In the April number of the *Medical Age* I published an article under the above title in which I described my method of using predigested carbonaceous principles for rectal alimentation, followed by injections of pure oxygen gas (for injection the gas should not be diluted). As a carbonaceous food for these injections, I prefer cod-liver oil properly emulsified. Yolk of eggs, beaten with cream, pancreatin, and soda, makes an excellent emulsion for this purpose, as does also the clear oil obtained from breakfast bacon similarly emulsified; whatever carbon principle is used, the object is to get fatty matter furnished to the system without disturbing the upper digestive tract.

I find, in cases of extreme debility of the stomach, liver, and pancreas, in which fatty matters can neither be emulsified nor assimilated, and in which such foods give rise to disgust and loathing, that it becomes necessary to use such foods in some other way. I have in the past tried to furnish such material by fatty inunction, by filling the vagina with such foods and by resorting to the late Dr. Fothergill's method of "body-guarding" emulsified oil through the stomach with soda bicarb.; but in every case I met with disappointment. Too often, in such cases, the skin is dead as parchment, the vagina lifeless, and then, besides, male patients have no vagina—a fact which some recent writers seem to have overlooked—and body-guarding emulsions through the stomach is necessarily a failure where the disgusted nose and palate turn up and retch at each dose. All these efforts fail because they do not reach the purpose aimed at—absorption into the blood and oxidation among the tissues of the body; for carbon in the human system, as elsewhere, is only potential energy until it meets with oxygen, and as these are the great force-producing elements of life, it occurred to me that by furnishing these to the victim of wasting disease we could pick up and push forward the flagging energies of the body until it could assimilate other foods. In order to do this we must utilize the shortest and most accessible route to the blood, and one which shall call for the smallest modicum of vegetative nerve-force in attaining that end. In such cases I found the lower bowel, with its extensive secreting surface, to be the road to success; its lymphatics as ready to absorb digested oil and its portal venules as ready to absorb oxygen-gas as similar vessels in the upper intestine. I reject albuminoid foods as completely as possible until I have overcome the extreme debility of the liver, as all digested peptones must pass through that organ before they are finally metabolized; and this is precisely what I wish to avoid, because in such liver conditions as mentioned, although nitrogen elements may be presented to its cell-structure thoroughly digested, yet it is powerless to split up such materials—converting them into water, urea, and carbonic acid, but instead, compounds of less complex structure are made, as bile acids, uric acid, etc. Thus, in our effort to feed our patient, we poison him instead. The same is true if we fill the alimentary tract in the usual way with peptonoid foods, because such food must pass through the liver, it matters not at which end of the line introduced; and when that organ is helplessly diseased, by such feeding we simply give our patient a stone instead of bread.

Filling the alimentary canal with food is not always feeding the body; indeed, so far as immediate benefit is concerned, food might as well be held in the hand as in the stomach, for it is only after digested principles have passed the epithelial frontier of the intestine that they become food in the true sense of the word. True, in the healthy man the mere presence of food in the stomach gives a sense of well-being, but in the wasted invalid, whose entire system has for months been subjected to the blighting influence of malnutrition, the presence of food too often gives pain instead of pleasure.

In every case of consumption and other forms of wasting disease there is present from the first inception of the malady a marked inability to appropriate a normal quantity of oxygen by respiration; this may be owing to defective structure, confinement in-doors, nervous debility, catarrhal disease of the mucous membrane of the air-passages, in which the ciliated epithelium are impaired in activity and the smaller bronchi loaded with filth. Let the cause be what it may, so soon as a normal quantity of oxygen fails to reach the blood and tissues the digestive and assimilative powers fail, followed by impaired circulation of blood and malnutrition. The earliest defect in digestion is in the direction of fatty matter, for the reason that sufficient oxygen is not present to utilize these foods, as two hundred and ninety-five parts of oxygen are required for every one hundred parts of fat, and failure to get oxygen means want of power to digest fatty food, and a wasting of tissue must follow, with all its attendant evils. This is not alone true of carbonaceous foods, but of all foods, as the quantity of oxygen present determines the capacity to digest any and every kind of food known, and the "stuffing plan" of feeding the sick beyond their capacity to oxidize is a slow but certain method of poisoning them. Alimentary substance is food when the forces stored therein are given to the body by oxidation, and not otherwise.

Dr. Samuel S. Wallian has well said: "The first idea in the treatment of wasting disease is to renew tissue." Desirable, however, as this is, unless fatty matter can be supplied to the extent of running the entire processes of vegetative life so far as heat (force) is concerned, tissue renewal is absolutely out of the question, as this can only take place when there is a surplus of both pabulum and force above the wants of the actual running power of life.

In consumption it is only after fats are absorbed and their supply inadequate for their deposits that muscular waste is possible, and when the powers of the system are so far reduced that carbonaceous foods are no longer assimilated normal histogenesis is impossible, and when repair of tissue is forced by any process using abnormal materials for repair, such tissue cannot live, and a breakdown is sure to come. Hence my first aim is not so much to renew tissue-elements as to preserve what the patient already has, and stop muscular waste by supplying heat-producing materials for oxidation; for, so long as we can do this, muscular waste is not to be dreaded.

The practice of stuffing patients suffering from wasting disease with foods rich in nitrogen seems to be the great desideratum with the majority of doctors; and for what reason I cannot see, unless they are still laboring with the ancient idea that oxidation means muscular waste, and that this waste must be constantly repaired in order to keep up the muscular volume. Hence the ingenuity of the chemist is sorely taxed to get up peptonoids as rich as possible in muscle-forming elements—foods containing as much nitrogen as possible; when the simple fact that the average human body contains but about four pounds of nitrogen, and the other fact that nitrogen oxidizes about as slowly as steel rusts away, and that when muscle is once formed it lasts (when the system is freely supplied with carbon) almost indefinitely, should lead medical men to the consideration of that class of foods which supply force, and lose sight for the time being of nitrogen-foods, which I find far more troublesome to exclude from the diet of the invalid than to get into it.

The food of the monkey in his native wilds is almost exclusively nuts, fruits, and roots, yet he develops a quality of muscle unknown to the structure of man; and, small as is the quantity of nitrogen contained in fruits and nuts, still there is abundance for the repair of muscular waste, and also for all bodily secretions. Hence it seems to me that all this reaching for peptonoids is a blind effort to feed the patient, when, in truth, he actually starves upon such so-called dietary.

We find in the human body about forty-eight pounds of carbon and nearly one hundred pounds of oxygen; not only so, but that these elements are constantly and unsparingly called into use in every thought and act of our lives, while the nitrogeneous elements of the body form the structures within and upon which carbon and oxygen liberate the heat (force) stored within the one and set free by the presence of the other. This being true, it seems that the physician's first duty toward his patient suffering with that class of malady rendering a sufficiency of these elements impossible to obtain without artificial assistance, is to see that such assistance is promptly rendered by supplying in some manner the necessary running power so essential to the well-being of each and every function in life.

Let no one suppose that I do not value albuminoid foods. In the healthy man they are powerfully sustaining, containing, as they do, nearly seventy per cent. of hydrocarbon, and, in order to free that hydrocarbon from the nitrogen present, calling into use the highest quality of vegetative force, thus causing the expenditure of a far greater quantity of nerve-power upon the liver than any other food known; but given a torpid liver, and albuminoid food should be called by another name, as it is no longer food.

If it be true, and the best physiologists of to-day dare not dispute it, that peptones must pass, with the portal blood, not only through the liver but be split up and made into new compounds within that organ, how absurd to load the alimentary canal with such material when the liver is powerless to act upon it, and the fact of predigestion cuts no figure in the matter; for digestion means liquefaction in order that peptone may pass from the intestine into the portal circulation. For peptone is no sooner admitted to the portal blood than it is at once dehydrated and albumen enters the liver as albumen, and every particle not dehydrated enters the general circulation and is removed by the kidneys, and from this source alone has the false diagnosis of "Bright's disease" arisen in thousands of cases. As before stated, large quantities of oxygen are necessary to oxidize peptonoid foods; yet could our patient breathe tons of this life-giving gas, where a torpid liver stands in the road these elements could never meet. Hence, when fatty matter cannot be assimilated, and on account of liver disease proteid foods cannot be assimilated, muscular tissue must be oxidized to furnish heat (force) for bodily function; hence the rapid and extreme emaciation in some cases of consumption wherein a few months closes the scene with only skin and bone remaining. Proteid compounds, given either by mouth or rectum, are incompatible with a seriously diseased liver, therefore I have been driven, by years of vexatious disappointment, to seek other means of getting on satisfactorily with this class of patients. Proteid food is a failure, and hundreds of patients cannot swallow fatty matter in any form, unless it is smuggled past the oversensitive palate in the form of an elegant emulsion; and then the pancreatic and liver failure renders lacteal endosmoses about *nil*, for it is a well-ascertained fact that biliary secretion aids the assimilation of fats in three ways: By increasing peristaltic action; by moistening the mucous membrane of the intestine with an alkaline secretion; and last, but not least, by securing absolute antisepsis of the intestinal contents during the digestive process. So when this important secretion is not present, fats, by being absorbed too slowly or not at all, decompose into a rancid, putrescent mass, and are ejected from the bowel, too often accompanied with colliquative diarrhœa.

There are various elegant preparations which, as emulsions, leave nothing to be desired, but, given by mouth, they are open to the same objections as above stated. I have used these for rectal alimentation, followed by oxygen-injections, with great satisfaction; they are nicer emulsions than I can make, as it is most difficult to find a strictly reliable pancreatin, and when you think you have a good article, perhaps the next specimen of the same make or label will be inert.

Let no one suppose I intend to subject my patient to the carbo-oxygen treatment for long, or to the exclusion of other means of cure. It is simply intended to pick the patient up and enable the flagging energies to take new hold upon the vegetative processes of life, to give power, by these concentrated force-producing elements, to enable the feeble digestive organs to again resume their wonted function. Nor do I find it necessary to resort to the treatment for any great length of time, as it does its work promptly and satisfactorily, restoring appetite and digestive power in every case which I have thus far submitted to it.

How is the treatment given?

Having selected a proper subject for treatment (I do not attempt to raise the dead), I prepare fresh oxygen-gas, which I keep in a zinc or galvanized-iron reservoir over water. I fill a three-gallon rubber-bag, of which a number should be kept on hand; I next connect the bag with my injector (a common rubber bulb-syringe makes a good one), connect this with the wash-bottle, fill the bottle two-thirds full of pure water, attach the long rubber-pipe to the exit tube, to which connect the female tube of a common syringe. Everything must be absolutely clean and air-tight; these are the essentials for using the gas. As to the carbon, I use a long, open-mouthed, glass syringe, modelled after Professor Thomas' artificial leech for dry-cupping the womb, holding three to four ounces. Having my emulsion ready, I place my patient upon his back with the nates resting well forward over the edge of the operating-chair; filling the syringe by suction, I gently pass it beyond the internal sphincter, when I slowly express the contents, one, two, or three ounces, as I desire, into the bowel; then directing the patient to contract the sphincter, I withdraw the instrument, allowing my patient to rest twenty to thirty minutes. I next introduce the gas-pipe, having first contracted the bulb once or twice to expel the air from the tubes. I slowly inject from one to six quarts (vol.), depending on the capacity of the abdomen, the condition of stomach, liver, kidneys, etc.; for if there is much tenderness of any of these organs, the pressure of the gas will cause pain; no definite rule can be given as to quantity. I watch my patient, and when I notice marked fulness of the abdomen, with restlessness of patient, I stop. The treatment may be given twice daily, but I find once a day quite sufficient in most cases.

Time to give the treatment.—The bowel should be emptied and treatment given about three hours after the breakfast-hour. In conjunction with this treatment I use small doses of ferri sulph. exsiccat., say half a grain at ten and four o'clock daily, largely diluted in pure water, say eight ounces; besides, I encourage my patients to drink freely of water and bathe often. As we increase the quantity of iron in the blood, we increase its capacity to utilize oxygen, and it should be remembered that in every case of anæmia, where a chalybeate course brings color to the pallid cheek, that it is oxygen and not iron that reddens the blood.

As soon as possible I encourage my patient to eat light hydro-carbonaceous food, followed, as soon as admissible by some egg-albumen, chicken, fish, etc. Meanwhile I put him upon the inhalation of dilute oxygen-gas, one part oxygen to four of pure air, drawn through water to the reservoir. From the reservoir I have this mixed gas drawn through an inhaling bottle half filled with oil of turpentine; this adds ozone to ordinary oxygen, and renders it surprisingly active. Care should be used in giving this ozonized gas, as, if there is destruction of bronchial epithelium, annoying irritation is set up, with aggravating cough; the inhalations should be given slowly, free respirations of air allowed meanwhile. The first effect of the gas so used is that of a sedative; the pulse becomes slower and fuller, followed in an hour or so by a feeling of greater strength and a desire to get about; there is no excitement produced, but after an hour or so a general sense of well-being becomes manifest. I believe I have herewith given the easiest and safest method for ozonizing oxygen, and so used, with nit. monoxide, it should be a successful remedy for asthma and hay-fever.

And now, to conclude, will the medical profession proper take hold of these facts and use them, or shall they be relegated to the use of the oxygen-parlor frauds that infest the cities all over the land?

And now another word to the medical profession: Carbon and oxygen are the great force-producers in nature; life itself is simply an aggregation of these forces individualized. They bring us into the world, sustain and vivify us while in health; how, then, can we longer intelligently ignore them as therapeutic agents in disease?

RULES FOR FAT PEOPLE AND FOR LEAN.—To increase the weight: Eat to the extent of satisfying a natural appetite, of fat meats, butter, cream, milk, cocoa, chocolate, bread, potatoes, peas, parsnips, carrots, beets, farinaceous foods, as Indian corn, rice, tapioca, sago, corn-starch, pastry, custards, oatmeal, sugar, sweet wines, and ale. Avoid acids. Exercise as little as possible; sleep all you can, and don't worry or fret.

To reduce the weight: Eat to the extent of satisfying a natural appetite, of lean meat, poultry, game, eggs, milk moderately, green vegetables, turnips, succulent fruits, tea or coffee. Drink lime-juice, lemonade, and acid drinks. Avoid fat, butter, cream, sugar, pastry, rice, sago, tapioca, corn-starch, potatoes, carrots, beets, parsnips, and sweet wines. Exercise freely.—Kansas City *Medical Index*.

Progress of Medical Science.

The Utility of Gelsemium.—Gelsemium sempervirens is not as frequently employed, according to Dr. Garland (*Boston Medical and Surgical Journal*, September 13, 1888), as it should be. The eclectics have used it largely for a long time, and many a celebrated eclectic febrifuge has owed its efficiency to this powerful drug. Dr. Garland says that in those crises of cerebral excitement which were formerly combated by assafœtida and valerian, he knows of no drug which can excel gelsemium. Inasmuch as it affects the motor regions of the nervous system before the sensory, it is usually necessary to push its administration until diplopia and heaviness of the lids appear, in order to reach satisfactory results.

In the early stage of acute bronchitis when the cough is disturbing, tubes are dry, and there is pain across the chest, gelsemium will relieve this distress, start up the bronchial secretions, thereby furnishing material for expectoration and diminution of the inflammatory tension.

The dose of gelsemium depends upon the preparation used and the results which one desires to obtain. For the relief of neuralgias one should give three to five drops every half-hour or every hour, according to the intensity of the pain. To produce sweating, one drop every half-hour is sufficient, but the patient should, of course, be well covered up in bed, and protected from the cooling effects of surface evaporation. One drop of the fluid extract every hour will relieve the cough and discomfort of acute bronchitis, and fractional drops can be used as above cited. The tincture of gelsemium is slightly weaker than the fluid extract. The active principle in gelsemium is gelsemin, which can be given in one-quarter to one-half grain doses, but the author prefers the plain drug itself. For convenience the extract and tincture can be prepared in tablet form of one minim each, and then dissolved for fractional doses.

Dr. Garland thinks that the advantages which gelsemium can legitimately claim are: 1. It has an agreeable taste, and is not repulsive to adult or child. 2. It does not irritate the stomach or bowels. 3. It produces no depressing after-effects from ordinary doses. The sleep is natural and the patient awakens refreshed. 4. In ordinary doses it causes no depression of the heart, and it can be used in all forms of organic disease of the heart. 5. It does not create a habit. There is no depression of nerve-centres following its use, and therefore no craving for more of it. 6. Its toxic symptoms are very characteristic and striking, and they appear early, so that plenty of warning is given.

Successful Treatment of Carotid Hemorrhage.—Dr. Treves has reported a case of this kind, as follows (*The Lancet*): A man was brought to the London Hospital bleeding profusely from a deep wound in the neck, about the level of the great cornu of the hyoid bone. While attempting to open a soda-water bottle the bottle burst, and a fragment of glass was driven into the neck. The cut made was less than one inch in length. The glass had been removed. The bleeding had been very profuse, and was arterial. The patient was blanched and almost insensible. The radial pulse could scarcely be felt. The bleeding was for the time checked by pressing a tampon against the wound. It was obviously useless to attempt to find the bleeding point while blood was welling up from so deep a wound. He, therefore, at once exposed the common carotid artery through a lower incision and placed a catgut loop around it. Traction upon this arrested all bleeding. The patient was placed in bed and surrounded with warm bottles. His condition was so grave that he did not feel disposed to search for the bleeding point. Traction upon the loop was maintained for half an hour. On relaxing the catgut no bleeding took place, and it never again recurred. The loop was left *in situ* for four days, when it was removed. The man, who was in vigorous health at the time of the accident, made a rapid and uninterrupted recovery. Dr. Treves supposed the bleeding to have come from the superior thyroid artery.

Rectal Impaction from Nut-shells.—A case of intestinal obstruction, from a cause which would appear to be unique, has come under the observation of Dr. Lockhart Wilson, of Duns, Berwickshire. He was called to see a boy, seven years of age, living among the Lammermoor Hills, who, as his father thought, was suffering from obstruction of the bowels. A week previously he had eaten a large quantity of hazel-nuts, and had swallowed the shells as well as the contents. For several days past he had had intense desire to defecate, but with no result, and seemed to be suffering excruciating pain. On rectal examination, about an inch and a half above the anus was found an impacted mass, as large as two fists, very hard, with the sharp edges of shells presenting here and there. By the use of warm oil the mass was gradually got away in small pieces, not without some abrasion of the rectal walls. It consisted almost entirely of shells agglutinated together by a small amount of hard fæces. For several days after there was paralysis of the sphincter ani, and consequent incontinence of fæces, but otherwise the child made an excellent recovery. The wonder is how such a large quantity of shells, with sharp-pointed and cutting edges, passed through the bowels without causing any inflammatory trouble.—*The Practitioner*, September, 1888.

The Diminution of the Number of Blood-corpuscles in Enteric Fever.—Dr. Leclerc, in attempting to estimate the relative value of various methods of treatment in enteric fever, has undertaken to estimate the numbers of the blood-corpuscles. In all cases he found a diminution during the fever, amounting, according to the method of estimation of Malassez, to a reduction from about 5,500,000 per cubic centimetre to 4,500,000 or even 3,500,000. The results of observations of ten cases, some of which were treated with cold baths only, some with antipyrin or antifebrin, do not show a complete correspondence to the treatment used or to the general severity of the case, but tend to the conclusion that antifebrin produces the greatest diminution, antipyrin a less decrease, and the cold baths the least decrease in cases of about the same severity.

Electricity in the Vomiting of Pregnancy.—Dr. Gunther, or Montreux, mentions five cases of vomiting of pregnancy in which he found electricity of the greatest service. In none of the cases could any pathological condition of the uterus or its appendages be detected. Four of the cases were primiparæ. The remaining case was that of a woman who had had two confinements previously; in her first pregnancy she had suffered from sickness, but not in her second; in the earlier months of the latter, however, she had suffered from severe pruritus of the thighs. Some improvement only was obtainable by regulating the diet, but this was not of any long duration. Narcotics, too, had only a temporary effect. In the absence of pathological indications, we must seek for the explanation of the vomiting in the reflex action between the uterine and gastric nervous supplies, just as the tonsils are enlarged in asthma because of the relation between the cranial and gastric nerves. The female genital organs may be considered as related to other parts of the body from a vaso-motor point of view, and the occurrence of vomiting is probably sometimes to be explained from a consideration of that circumstance. In severe cases a definite degree of sensitiveness is present, and Dr. Gunther believes that there is a functional neuralgia of a reflex nature. He applied the anode of a constant current in the form of a sponge, in a metal case covered with rubber to the cervix. The cathode was a plate about four inches by five inches. This was applied over the spine, between the eighth and twelfth dorsal vertebræ.

It is important to see that the current is not intermittent, and to use only one of a low strength. He commenced with two and a half to three milliampères, and never increased the strength higher than five milliampères. Each sitting lasted from seven to ten minutes. The vomiting ceased in four days, at the most, in all the cases. As some degree of nausea remained, the treatment was continued for some weeks.—*The Lancet*, August 25, 1888.

The Influence of Bacteria upon the Digestion of Children.—Baginsky states that the bacterium of lactic fermentation causes the production of acetic acid and acetone, as well as lactic acid. This formation goes on without oxygen and is not hindered by the bile. The neutral lactates are changed to butyric acid; starch is not changed to sugar, nor is casein or albumin decomposed. The gases formed when acetic acid is produced are carbonic acid, hydrogen, and methane.

He proposes to style this bacterium the acetic bacterium. He further found that this bacterium is destroyed by acetic acid. In examining the stools of children suffering from *cholera infantum* he isolated a bacterium which produced green stools (the germ of Hayem and Lesage) and also a bacterium growing in white colonies. Both of these liquefy gelatine and both are inhibited in their development by the acetic bacterium; this germ has the property of preventing the growth of pathogenic germs in the intestine.

Baginsky considers that only the primary manifestations of *cholera infantum* are caused by bacteria, and that the secondary, severer phases result from the extensive anatomical lesions in the intestine which have occurred. It is evident that the treatment of a given case will depend upon the stage of the disease. He found calomel, boric acid, and resorcin prevent the growth of the acetic bacteria; naphthaline and iodoform are inert. If the case is seen early, when acetic fermentation is excessive, these remedies and the withdrawal of milk are indicated. If pathogenic bacteria have accumulated in the stomach or intestines, irrigation with antiseptic fluids is advised. Each case must be studied separately, and interference with the conservative processes, as shown in the inhibitory action of certain bacteria, should only be undertaken intelligently.—*The American Journal of the Medical Sciences*, October, 1888.

Successful Case of Splenectomy.—Dr. Carlo Liebman, of Trieste, has described a case in which he successfully removed an enlarged and floating spleen (*The British Medical Journal*, September 15, 1888). The patient was a woman, aged twenty-eight, who, in her third pregnancy, noticed a hard, round tumor in her abdomen, toward the left side, below the level of the umbilicus. For some time the swelling remained stationary, but five months before she came under the care of Dr. Liebman it began to grow rapidly and to cause great pain, especially when she moved about. She became quite unfit for work, and on November 24, 1887, was admitted into the Ospedale Civico. On examination, the liver and spleen appeared to be normal in size, the area of dulness corresponding to what was supposed to be the latter, extending in the left axillary line from the eighth to the tenth rib, while its vertical diameter seemed to be about three inches. The abdomen contained a roundish but somewhat oblong tumor about the size of a small adult head, which appeared to rest on the upper margin of the pelvis. The mass, which was situated rather to the left of the middle line, was evidently intraperitoneal. Its surface was smooth, with a kind of notch in the middle. It was movable in every direction, and could be carried up to the margin of the ribs on the right side as well as on the left, but could not be pushed into the hypochondrium beyond that point. There was no adhesion to the abdominal wall in front. A distinct systolic *bruit* could be heard over various parts of the mass. The uterus was normal, but followed the tumor when the latter was pushed toward the right, but not when it was carried over to the left side or in an upward direction. The tumor could be freely handled and moved about without pain. There was no albumin in the urine, of which rather more than a litre was passed in the twenty-four hours, and there was no disturbance of digestion. A diagnosis of ovarian or mesenteric tumor was made, and laparotomy was determined on. On December 13th Dr. Liebman opened the abdominal cavity by a median incision seven inches in length, and divided the peritoneum, which was remarkably thin and transparent, along the whole length of the wound. The ovaries were atrophied, and neither they nor the uterus had any connection with the tumor. On drawing the latter out of the abdomen it proved to be the spleen, enlarged to four times its natural size, while *in situ* its convex surface had been directed upward and forward, and was adherent for a great part of its extent to the omentum. The mesenteric vessels were tied, and all the attachments of the tumor carefully divided between double ligatures, till only the pedicle (formed by the vessels, etc, entering the hilium), which was as thick as the little finger, remained. This was then divided into three bundles, each of which was tied separately, the end of the last ligature being finally passed round the whole for additional safety. The pedicle was further secured by a second ligature two centimetres and a half higher up, and, lastly, it was again tied close to the spleen. It was then divided between the two last-mentioned ligatures, and the spleen removed. Having satisfied himself that there was no blood in the peritoneal cavity, the operator closed the abdominal wound with seven deep sutures taking in the peritoneum, and five superficial ones. A Listerian dressing was applied. The patient rallied from the operation, and, with the exception of a good deal of tympanites, did well till the eighth day, when the sutures were removed, the wound having healed without suppuration. On the night of December 21st menstruation began. A good deal of pain accompanied the discharge, and there was some pyrexia. Soon extensive parametritis set in, which, however, yielded to general treatment. The patient remained weak and anæmic for some time, but finally left the hospital completely cured on March 25th.

Ointment of the Nitrate of Mercury in Boils and Felons.—During the last six years Dr. Robert Kenner has used successfully this preparation as an abortifacient of boils and felons. He claims that through its agency he has been able to abort nearly all cases that came under his care before suppuration had commenced. The application of the ointment is not painful, and in about twelve hours is followed by a peculiar drawing sensation, after which there is a complete cessation of all uneasiness. In treating felons the entire finger should be covered with a coating of the ointment about one-eighth of an inch thick, and then enveloped in a piece of thick sticking-plaster. This dressing is allowed to remain for twenty-four hours, after which time further treatment is unnecessary.—*Therapeutic Gazette.*

Treatment of Aneurisms by Iodides and Antipyrin.—At the Académie de Médecine M. Sée recently read a paper on the treatment of aneurism by iodides and antipyrin. Seventeen cases were brought forward to confirm the efficacy of the treatment, and in all a marked decrease in the size of the tumor was observed, and the oppression, sense of suffocation, laryngeal dyspnœa, accompanied by aphonia, derived from pressure on the recurrent nerve, entirely disappeared. All these happy results M. Sée did not hesitate to attribute to the iodide of potassium. The iodide of sodium, contrary to the opinion of Dr. Huchard, was not as good as the iodide of potassium. As to antipyrin, the learned professor found that it rendered the impulse of the heart more calm, and thus permitted the blood to complete its coagulation in the sac, and further, the painful sensation of tightness so often experienced by patients afflicted with this affection was known to be completely relieved by its use.—*The Medical Press.*

Salicylic Acid in Metrorrhagia.—Dr. Felici has found salicylic acid to arrest the flow in two cases of metrorrhagia in a wonderfully short time, and thinks it should be tried by other medical men in similar cases. His first case was one of carcinoma, where the hemorrhage had been constant and profuse, and had defied all ordinary styptic remedies; a plug of carbolized cotton-wool, soaked in a solution of salicylic acid, was applied to the uterus, and completely arrested the hemorrhage within a few minutes. The second case was one of simple metrorrhagia during the menopause, but of so violent a character that the patient became collapsed. Ordinary remedies were tried, with merely temporary effect. Finally, Dr. Felici introduced into the uterus a dossil of cotton, well soaked in a concentrated solution of salicylic acid, on the end of the uterine sound. This arrested the hemorrhage in a few seconds, and no return occurred.—*The Lancet.*

Idiopathic Dyspepsia.—At a recent meeting of the Académie de Médecine, M. Clozier read a paper on the etiology of primitive dilatation of the stomach and idiopathic dyspepsia. Regarding the former he would recognize four principal causes—the vertical attitude of man, the bad hygiene of the human stomach, morbid secretion of the mucous membrane, and the stretching of the walls of the organ. When the stomach is distended after a copious repast, the ingested food remains naturally a much longer period in its cavity; an abundant secretion of mucus is the result, and dyspepsia with all its annoyances is thus engendered.—*Medical Press.*

The Treatment of Acne.—At a recent meeting of the Berlin Medical Society, Hr. Isaacs gave an address on acne, principally discussing the treatment of the disfigurement, and showing patients. After describing the various methods of treatment, he remarked that while employed in Lassar's klinik, where every form of treatment was tried, he invariably fell back on a ten per cent. napthol ointment, composed of napthol 10, sulph. precipit. 50, saponis virid. and vaselin, each 20 parts. The ointment was applied to the affected parts, and kept there from half an hour to an hour, and then removed with lint or oil. The following day there was slight redness and scaling of the skin. The procedure was repeated until the peeling was completed, which usually took place in from eight to fourteen days. Lately he had adopted the use of a resorcin ointment in obstinate cases: Resorcin, 2.5 to 5.0; zinc oxid. and amyl, 5.0; vaselin, 12.5. M. To be made into a soft paste. The ointment to be put on at night and allowed to remain on till morning. He had seen very good results in the ten or fifteen cases in which the treatment had been employed.—*Medical Press.*

Cardiac Dyspnœa.—Dr. Fränkel has published his views on this subject, a *résumé* of which appears in the October number of the *American Journal of the Medical Sciences.* He says that dyspnœa appears in very different forms in the different heart diseases, depending on the nature of the affection. It is sometimes premonitory, but is then slight and only occasional; and disregarding this, we may distinguish two forms of severe dyspnœa, the *continual* and the *asthmatic.* The first is especially well seen in stenosis of the mitral valve. This lesion is the least apt to attain complete compensation, and even when this occurs it is by hypertrophy of the right ventricle and necessarily with overfilling of the pulmonary system. The distended pulmonary capillaries project into and narrow the cavity of the alveoli, and this contraction of the alveolar space, together with the slowing of the blood current, and the lessening of the proportionate surface exposed to oxygenation, produces the continual dyspnœa. Digitalis in this lesion sometimes acts very badly, since by stimulating the right ventricle and sending more blood to the lungs it only increases the shortness of breath. Other cardiac affections also are accompanied by continual dyspnœa, as, for example, cases of progressive failure of the left ventricle with consequent engorgement of the pulmonary system; as is seen in the last stages of cases of "cardiac overstrain," or in heart diseases resulting from psychic depression. Cardiac asthma, on the other hand, is seen most typically in hypertrophy of the left ventricle, with abnormal resistance in the blood-vessels, resulting from arterio-sclerosis. The asthmatic attack comes quite suddenly and usually at night, waking the patient from sleep, and is generally very severe. The lungs are found full of coarse râles, and respiratory pauses may occur like those of Cheyne-Stokes respiration. The affection often resembles bronchial asthma greatly, but may be distinguished by the high tension of the vessels, the absence of expiratory dyspnœa, and often by the discovery of a dilated left ventricle, though this is not always easily detected, owing to an increase in the volume of the lungs. This enlargement is due to the fact that through the narrowing of the arteries the blood is driven into the venous system, or, rather, into the lungs and the left auricle. Hence there is a permanent engorgement of the pulmonary circulation, even when there is complete compensation. The sudden asthmatic attacks are probably due to a sudden temporary insufficiency of the left ventricle, brought about by psychic emotion, increasing catarrh, or some other cause. The heart is already doing its utmost. and this disturbance of the balance produces increased passive congestion and consequent dyspnœa. Autopsies have shown that the heart muscle is of normal structure, and it would, therefore, seem likely that the failure is due to paralysis of the cardiac nerves or ganglia. Fränkel cannot accept the theory of Basch, that cardiac dyspnœa is due to a rigidity of the lungs from their being overfilled with blood; this producing an insufficiency of the respiratory muscles. Regarding the therapeutics, the author repeats what he has formerly said in praise of morphia and digitalis in combination. The former diminishes the arterial tension, prevents the exhaustion of the respiratory centre by the continued dyspnœa, and cuts short the asthmatic attack, while the latter stimulates the ventricle to greater activity. Calomel may also be employed for its diuretic and purgative action, thus depleting the system; and though somewhat uncertain, it always benefits that patient to whom it has formerly done good. Strophanthus has been of no value in dyspnœa in the author's experience, except in those cases in which it produces free diuresis. As regards uræmic and dyspeptic asthma, the former is simply cardiac, and has nothing directly to do with uræmia. Cases of the latter have been reported by Henoch, and seem to depend on the presence of undigested masses in the stomach, the affection being relieved by vomiting after lasting one or two days.

Fissure of the Cervix Uteri.—"Fissure of the Cervix" is the name given by Dr. T. H. Reilly, of Fair Haven, Vt., to a condition of incomplete laceration which he has observed in several women recently. He has successfully treated this condition, which appears to produce symptoms in every respect resembling those usually found in true lacerations, by cauterizing the existing granulations and employing medicated tampons. Operative interference appears to be unnecessary. It strikes us, however, that fissure of the cervix is a needless refinement of diagnosis. Incomplete laceration is the good old name for the same condition.

Nussbaum's Treatment of Erysipelas.—According to Professor Nussbaum the erysipelatous parts, previously rubbed with a pomade of lanoline and icthyol—equal parts—are enveloped in salicylated cotton. It will be found, the day after this application, that not only has the erysipelas not advanced, but that there has been a notable amelioration in all the morbid symptoms. The swelling, the redness, and the pain have very much diminished. It is hardly ever necessary to continue the application for more than three days.—*Allgemeine Wiener Med. Zeitung.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, November 10, 1888.

THE CAUSE OF THE HEAD-DOWNWARD PRESENTATION.

IT always has been, and always will be, a matter of general and scientific interest to know why ninety-seven per cent. of humanity has been carried for nine months of its life head downward. The simple yet dramatic solution of the question by the ancients was that the child sat upright in the womb until full term, when he cleverly executed a somersault into the L. O. A. position and started on his way through the pelvic strait. This view fully satisfied the followers of the obstetric art for many hundreds of years, and it was indeed not much worse a theory than some of its successors. Dr. James Foulis, in the *Edinburgh Medical Journal* for September and October, 1888, gives us an elaborate discussion of the cause of the head-downward presentation.

Dr. Foulis thinks that gravitation and muscular movements of the fœtal limbs together produce this position, the muscular power in the lower limbs being the main factor.

"These muscular movements," says Dr. Foulis, "are not made with the object of determining a head-downward position of the child, or of putting its body into the most comfortable position in utero, but this head-downward position is the natural and ultimate consequence of the child's head gliding along the inner curved surface of the uterus while its body is being propelled forward by the forcible extension of the lower limbs against a more or less resisting and opposing surface. In this way the assumption of the natural or head-downward position of the child is a vital act. Death of the child in utero at any period may result in any presentation, normal or abnormal, according to *physical* laws."

Dr. Foulis thinks that the first cranial position of the head is also the result of muscular movements in its lower limbs after the child has assumed the head downward position in the way he has described.

The conclusions arrived at are as follows: The head downward position of the child in utero is the necessary and ultimate consequence of the continued extension of the child's lower limbs against the most resisting parts of the uterine sac. The first cranial position of the child's head is the necessary and ultimate consequence of the continued extension of the child's lower limbs against the most resisting part of the uterine sac in its upper part—namely, that which lies in the right hypochondrium—after the child has assumed the head-downward position.

A DEFECT IN MODERN SURGERY.

THE paper by Dr. David W. Cheever, of Boston, on "Shock," of which we gave an abstract in our report of the Congress of American Physicians and Surgeons, brings up a point which deserves much more than casual attention.

Dr. Cheever shows that modern operative methods, though so much superior to the old ones in most respects, yet tend to cause secondary shock. As he puts it:

"Anæsthetics annul pain, but end in nausea.

"Operations under anæsthetics are needlessly prolonged and exhausting.

"Modern dressings are tedious and chilling.

"Pain and bleeding are *less*. Slow cutting, nausea, exposure, low temperature are *more*. Primary shock is diminished; secondary shock is increased."

Patients are now frequently from one and a half to two hours on the operating-table, and three hours more in recovering consciousness. Operations of secondary magnitude are sometimes made so long that the patient dies from shock.

Patients are not given food before an operation to prevent nausea, and they often cannot retain food after an operation for a long time on account of nausea. Here, then, is another defect in modern surgical practice. Lowering of temperature is another thing which occurs after operations. The thermometer frequently falls to 96° or 97° F., and may reach as low as 95° F.

The modern surgical toilet of wounds is depressing, exhausting, devitalizing.

Finally, nausea and vomiting are still present in modern surgery, and are often dangerous indications of depressed vitality.

It is very evident that modern surgery is not yet a perfect art, and Dr. Cheever's paper calls attention to the fact that all is by no means done when perfect asepsis is secured, or wound infection prevented.

The practical directions given for the purposes of lessening the element of shock are these:

1. Wait for reaction.
2. Never neglect to calm those suffering mental shock by a cheerful word and personal presence.
3. Give alcohol, either spirits or wine, a quarter of an hour before the anæsthetic.
4. Make the anæsthesia short; never begin it until everything is ready; suspend it during the less painful dressings. Consciousness returns *tardily*. We keep up the anæsthetic longer than is necessary.
5. As rapid an operation as can prudently be done.
6. As short a dressing as is practicable.
7. As a cardinal point, avoid *chilling* the patient.

To promote reaction after the operation:

1. Persistent and *carefully* applied *dry* heat. (Be *over-careful* about accidental burns.)
2. Liquid nourishment, combined with a stimulant and a little laudanum, by enema.
3. Subcutaneous injection of brandy.
4. Aromatic spirits of ammonia by the mouth. Champagne is sometimes retained when other things are rejected.

5. Black coffee and brandy, the stimulant *par excellence*, when it can be retained on the stomach.

6. Quiet; a horizontal, or more than horizontal, position; sleep; assurance that all is over and doing well.

RESTORATION OF VOICE AFTER DESTRUCTION OF VOCAL CORDS.

Among the cabled reports to the New York *Herald*, having reference to the Mackenzie controversy with the German doctors, we notice the interesting case of Mr. Montagu Williams, who was successfully operated on for complicated growths in the larynx, involving destruction of the vocal cords. The most interesting feature of the case was that Mr. Williams had a partial return of voice, due to a regrowth of the vocal cords, but the patient was never capable of returning to his profession of barrister, or of speaking in a public court.

This case is mentioned as something exceptional and extraordinary, but we may state that we have a case on record in this country in which the symptoms were more aggravated, and not only was the case successful, but the patient lived for many years, and had a complete restoration of voice, the patient, a young man, declaring that, with the exception of its being a little rough, his voice was as good as ever.

This operation was performed by Dr. J. Solis Cohen, of Philadelphia, who reported it fully in The Medical Record, vol. iv., page 244, to which reference is made for details of the case. A brief mention of the case is also made in Dr. Cohen's valuable work on "Diseases of the Throat," published by William Wood & Co. On reference to page 446 of this book, we find three illustrations, showing the laryngeal growths which were removed by thyrotomy, after tracheotomy; the appearance of the parts some months after the operation; and, thirdly, the appearance of the parts some years after the operation, showing the vocal cords in apparent normal condition. Dr. Cohen states that "he removed from the larynx of a young gentleman a large epithelioma, which was upon his left vocal cord and ventricle, as well as two much smaller growths from the right vocal cord, after the previous performance of tracheotomy." He adds: "An important feature in connection with this case consists in the fact that there was a reproduction of tissue in the left vocal cord, the anterior portion of which had been purposely sacrificed in the removal of the growth, and from which an expansion took place to the other cord anteriorly. This shows us that the vocal cords, or a substitute for them, can be reproduced, and seems to confirm the view that they are mere duplicatures of elastic membrane, and not special structures." As we have stated, the patient's voice, although a little rough, was pronounced as good as ever it was.

SULFONAL IN MENTAL DISEASE.

The value of sulfonal as a hypnotic in ordinary cases of sleeplessness from fatigue, worry, etc., seems to be now pretty well established by the experience of many both here and abroad. But it is probable, to judge from some trials made by Dr. G. Algeri, that it will prove to be of equal service in the insomnia of mental disease. This observer reports fifteen cases treated by him with the happiest results in the Asylum for Insane Criminals of Ambrogiana (*La Riforma Medica*, October 8, 1888). The list embraces cases of acute mania, imbecility, melancholia, dementia, epilepsy, hallucinations, and acute alcoholism. In almost every instance a calm, healthy sleep followed the exhibition of from fifteen grains to a drachm of sulfonal. The slumber was accompanied by no disturbances of circulation or respiration, and lasted from two to five hours or longer. In a few cases it was found necessary to repeat the dose before sleep was produced. Even with drachm-doses there were no disagreeable after-effects beyond drowsiness and a feeling of lassitude the following day. The digestive functions were not disordered. But although the drug would appear, from these and other trials, to be innocuous, a word of caution will not be out of place. We are not yet sufficiently familiar with its effects to assert with confidence that it can do no harm, and any substance that is able to calm maniacal excitement and produce sound slumber within an hour is not one that can be given recklessly, at least until we are well acquainted with its mode of action.

THE USELESSNESS OF ANTIPYRINE IN SEA-SICKNESS.

It is the common fate of all new drugs to be speedily tried in sea-sickness. And the newer the drug the better the results usually appear to be, at least for a time. When the novelty has worn off the drug is usually found to have become strangely inoperative. The multicurative antipyrine was at first supposed to form an exception to this rule. But evidence is now at hand which shows that even antipyrine fails to cure sea-sickness, and that we must still undertake our ocean voyages with the prospect of gastro-intestinal retrostalsis before us.

One of the latest antipyrine statements is found in a correspondence published in the *Boston Medical and Surgical Journal* of October 11, 1888. Dr. Stephenson writes that, "It having been reported by O. Bonnet that antipyrine in a dose of thirty grains a day sufficed, nearly always, to prevent sea-sickness, E. Rollet made numerous observations, *in re*, during a voyage from Marseilles to Oran. There were about three hundred passengers on board the vessel. When the ship began to pitch, and the first symptoms of *nausea* were perceived, sixty persons at least took from fifteen to forty-five grains of antipyrine. Of the whole number, four only were enough free from *mal de mer* to sit through dinner. On the return trip the result was essentially the same. It is affirmed that the drug was taken according to the directions given by O. Bonnet.

"This experiment shows how difficult is the exact *seeing* of things which at first appear very simple."

THE INFLUENCE OF TOBACCO-SMOKE UPON INFECTIVE MICRO-ORGANISMS.

Studies upon the chemical, physiological, and toxicological properties of tobacco-smoke always excite a wide interest, and often have some practical usefulness. A new line of research has recently been opened by Dr. Vincenzo Tassarini, who, in the *Centralblatt für Bakteriologie und Parasitenkunde*, No. 15, reports the results of an experimental investigation upon the action of tobacco-smoke upon certain pathogenic micro-organisms. Dr.

Tassarini worked under Professor Giaxa, at the University of Pisa. He devised an apparatus consisting of two funnels placed with their mouths opposed, and sealed with paraffine. To each small end of the funnels tubes were attached, suitably arranged so that a cigar could be placed in one end, while the bacteriological smoker inspired at the other. The smoke was thus drawn into the large space made by the funnels, in which was a plate with various cultures of micro-organisms; control cultures were also used. The microbes were subjected to the smoke for from thirty to thirty-five minutes, during which time from 3½ to 4½ grammes of tobacco were used. The micro-organisms tested were the spirillum choleræ Asiaticæ, spirillum Finkler and Prior, bacillus anthracis, bacillus typhi abdominalis, bacilli pneumoniæ, staphylococcus pyogenus aureus, and bacillus prodigiosus.

The kinds of tobacco used were the large Virginia cigars, the large Cavour cigars, the small Cavour cigars, the best cigarette tobacco.

The results show that tobacco-smoke has the effect of preventing the development of some micro-organisms entirely, and of retarding that of others. The Virginia cigars seemed to have the most powerful effect, while cigarette-smoke had only a retarding influence, and did not entirely check the growth of any form.

The following table of the effect of Virginia tobacco illustrates the results more exactly:

Development delayed of bacillus prodigiosus for	72	hrs.
" " " staphylococcus pyogenus aureus for	73	"
" " " bacillus anthracis for	97	"
No development of bacillus choloræ Asiaticæ after......	128	"
" " " " Finkler and Prior "	128	"
" " " " pneumoniæ "	146	"
" " " " typhi abdominalis "	168	"

By first drawing the tobacco-smoke through water it was found to have lost its germicidal properties.

There has always been a vague belief that smoking lessened, to some extent, the danger of infection when one is exposed. Tassarini's experiments give some support to this opinion, so far as the microbes which infect through the mouth and respiratory passages are concerned.

THE HEALTHFULNESS OF OUR COUNTRY AND THE STATISTICS OF AN EXCEPTIONALLY HEALTHY CITY.

EVER since the publication of the census returns for 1880 we have been preparing ourselves to believe that we live in a country that is phenomenally healthy.

It will be remembered that the actual returns then made to the Government showed a death-rate in the United States of only 15.1 per thousand, though the compiler of the report, making allowances for defective returns, placed the actual mortality at a figure not exceeding 18 per thousand. Comparing this ratio with that of other well-known countries, it is seen that we easily stand at the head of the list, as is shown by the returns for the same year, 1880:

England and Wales	20.5
England (rural districts)	18.1
France	22.8
Austria	29.6
Prussia	25.5
Sweden	18.1
Italy	30.5
Switzerland	21.9

In this connection, and at a time of the year when thousands of invalids are inquiring where they shall spend the winter, it is interesting to gather some information in reference to the advantages which our own country offers, especially in sections where, as yet, little is known of their salubrious qualities. Under date of October 12, 1888, Dr. W. M. Yandell, health officer of the city of El Paso, Texas, publishes a report of the mortality in that place during the first nine months of the present year. In a population estimated at 11,000, the total mortality from all causes was only 85, or a death rate of only 7.63 per thousand. Compare these rates with that of the subjoined cities in 1880:

El Paso	7.63
London	22.14
New York	26.47
Providence	19.83
Liverpool	27.22
Paris	26.48
Madrid	40.18
Dublin	35.94
Rio de Janeiro	33.22

It would appear, then, that the rate of mortality has been less than one-third of that of any of these cities, and less than one-half of the rate of any of the countries enumerated, including the United States.

Of the twenty-two causes of death given, it is natural that diseases of the chest should stand at the head, though Dr. Yandell affirms that no cases of consumption originated there. Indeed consumption appears to be a foreign disease that did not carry off a single Mexican, though they are the natives and comprise the poor of the city.

But extraordinary as this showing is, it appears that if invalids who went to El Paso for their health, and deaths by accident be excepted, the actual mortality should be reduced to 59, or 5.36 per thousand, and these returns are all the more wonderful because in all of the great health-resorts, especially those of the winter season, such as Minnesota and Southern California, the number of deaths from lung-diseased alone among persons who have gone there as invalids raises the death-rate vastly above the natural death-rate of the locality. It is plain that the southwestern portions of our country offer great advantages to invalids, and especially to consumptives, for there winter is dry and bracing, and not severely cold; malarious diseases appear to be unknown. Our medical men should inform themselves more fully of its advantages.

ANTISEPTIC TROCHES, to be dissolved in the mouth as a means of prevention against diphtheria, are recommended by Dr. A. Vaumond (*Norsk Mag. f. v. Tagevidensk*), and have been successfully used by him since 1886. The pastilles contain 20.0 boric acid, 1.0 benzoate of sodium, 0.5 to 1.0 thymol, 20.0 borax, 12.5 citric acid, 1.5 citron oil, 0.5 oil of peppermint, with sufficient glycerine, water, gum and sugar to make a kilogram. Five hundred pastilles are made from one kilogram.

ANOTHER PAIR OF TWINS, united like the Siamese monstrosities, was born recently at Kremsier, in Europe. Unfortunately they did not live and have been deposited in alcohol in an anatomical museum.

News of the Week.

Programme of the Twelfth Annual Meeting of the American Academy of Medicine.—The sessions will be held in the Governors' Rooms of the New York Hospital, 8 West Sixteenth Street, New York, Tuesday and Wednesday, November 13th and 14th. Tuesday, November 13th, at 10 A.M.: Opening of Session; Reading of Minutes of Last Annual Meeting; Report of Council; Election of Fellows; Appointment of Committee on Nominations; New Business; Report of Standing Committee on the Requirements for Preliminary Education in the various Medical Colleges of the United States and Canada, by Leartus Connor, A.M., M.D., Detroit, Mich. Reading of Papers: "The Causes and Prevention of the Opium Habit and other Allied Affections," by James C. Wilson, A.M., M.D., Philadelphia, Pa.; "The Influence of the Work of the Illinois Medical Practice Act upon Medical Education," by H. A. Johnson, A.M., M.D., Chicago, Ill.; "The Importance of Practical Obstetrics in the Course of Instruction given by Medical Schools," by Theophilus Parvin, A.M., M.D., Philadelphia, Pa. At 3 P.M.: New Business; Address by the President, Frederick Henry Gerrish, A.M., M.D., Portland, Me.; Reading of Papers: "A Few Words Concerning the Academy," by R. Lowry Sibbet, A.M., M.D., Carlisle, Pa.; "Toleration and Intolerance in Medicine; Codes of Ethics; What Code should the Academy Adopt?" by Henry I. Bowditch, A.M., M.D., Boston, Mass.; "The Relations between the Consultant or Specialist and the General Practitioner," by L. Duncan Bulkley, A.M., M.D., New York. "The Evils of a Medical Dialect Separated Widely from Classical English," by Edmund Andrews, A.M., M.D., Chicago, Ill. At nine P.M.: Annual Collation of the Academy, at Martinelli's, Fifth Avenue. Tickets for the Collation (fixed, by resolution of the Academy, at two dollars each) may be obtained by remitting the amount to Dr. L. Duncan Bulkley, 4 East Thirty-Seventh Street, New York. Wednesday, November 14th, at 10 A.M.: New Business; Treasurer's Report; Report of Committee on Nominations. Reading of Papers: "The Multiplication of Useless Drugs," By C. C. Bombaugh, A.M., M.D., Baltimore, Md.; "The Necessity for Post-Graduate Instruction in the Present State of American Medical Education," by Charles C. Lee, M.D., New York, N. Y.; "Which is the Liberal School?" by Charles McIntire, Jr., A.M., M.D., Philadelphia, Pa.; "The Treatment of Uterine Diseases by other than Surgical Means," by W. F. Waugh, A.M., M.D., Philadelphia, Pa.; "The Famous Historic Masters of the Healing Art were Men of Classical Education," by George J. Fisher, A.M., M.D., Sing Sing, N. Y. New Business; induction of President-elect; Appointments for ensuing year (additional members of Council; Standing Committee on Requirements for Preliminary Education); Unfinished Business; Adjournment.

Officers and Council: President—Frederick Henry Gerrish, A.M., M.D., Portland, Me. *Vice-Presidents*—William B. Atkinson, A.M., M.D., Philadelphia, Pa.; J. H. Baxter, A.M., M.D., United States Army; Thomas J. Turner, A.M., M.D., United States Navy; J. Berrien Lindsley, A.M., M.D., Nashville, Tenn. *Secretary and Treasurer*—Richard J. Dunglison, A.M., M.D., Philadelphia, Pa. *Assistant Secretary*—Charles McIntire, Jr., A.M., M.D., Easton, Pa. *Council*—Traill Green, A.M., M.D., Easton, Pa.; Lewis H. Steiner, A.M., M.D., Baltimore, Md.; Henry O. Marcy, A.M., M.D., Boston, Mass.; Benjamin Lee, A.M., M.D., Philadelphia, Pa.; Albert L. Gihon, A.M., M.D., United States Navy; R. S. Sutton, A.M., M.D., Pittsburg, Pa; Lewis P. Bush, A.M., M.D., Wilmington, Del.; and the President, Vice-Presidents, Secretary, Treasurer, and Assistant Secretary, for the current year, *ex officio.*

The Manhattan Medical and Surgical Society.—At the last meeting of this Society the following officers were elected for the ensuing year: *President*, Edmund C. Wendt, M.D.; *Vice-President*, Thomas L. Stedman, M.D.; *Secretary* and *Treasurer*, Dillon Brown, M.D.

The Washington Obstetrical and Gynæcological Society.—At the annual business meeting of the Washington Obstetrical and Gynæcological Society, held October 19, 1888, the following officers were elected for the ensuing term: *President*, Joseph Taber Johnson, M.D.; *Vice-President*, D. Webster Prentiss, M.D., and W. W. Johnston, M.D.; *Treasurer*, George Byrd Harrison, M.D.; *Recording Secretary*, Samuel S. Adams, M.D.; *Corresponding Secretary*, G. Wythe Cook, M.D.

New York Post-Graduate Medical School and Hospital.—Dr. Joseph O'Dwyer, the originator of Intubation of the Larynx, has been appointed Professor of Diseases of Children in the New York Post-Graduate Medical School and Hospital.

American Public Health Association.—The sixteenth annual meeting of this association will be held at Milwaukee, Wis., Tuesday, November 20th, at 10 A.M., and continue four days. The following topics have been selected for consideration: "The Pollution of Water-supplies," "The Disposal of Refuse Matter of Cities," "Animal Diseases Dangerous to Man," and "Maritime Quarantine, and Regulations for the Control of Contagious and Infectious Diseases, and their Mutual Relations." The following partial list of papers is announced: The President's Address; "The History and Administration of Quarantine in Texas, 1878 to 1888," by R. Rutherford, M.D., State Health Officer of Texas; "The Canadian System of Maritime Sanitation," by F. Montizambert, M.D., Quarantine Officer at Grosse Isle, St. Lawrence River; "Yellow Fever: Panics, and Useless Quarantines—its Limitation by Temperature," by John H. Rauch, M.D., Secretary of the State Board of Health of Illinois; "The Organization of the National Health Service," by Henry P. Walcott, M.D., President State Board of Health of Massachusetts; "State Boards of Health," by Ezra M. Hunt, M.D., Secretary State Board of Health of New Jersey; "The Difficulties and Success of the Public Health Service in Large Cities," by Oscar C. DeWolf, M.D., Health Commissioner of Chicago; "Ontario Sanitary Legislation, its Strength and its Weakness," by John Coventry, M.D., Medical Health Officer of Windsor, Ont., Canada; "The Destruction of Organic Matter by Fire as a Sanitary Measure—Garbage Furnaces," by S. S. Kilvington, M.D., President of the Board of Health of Minneapolis; "Vaccination as a Protection from the Infection of Small-pox," by D. W.

Hand, M.D., President of the State Board of Health of Minnesota; "Tuberculosis, its Origin, Detection, and Control," by D. E. Salmon, D.V.M., Chief of the Bureau of Animal Industry, Washington; "Veterinary Sanitary Work in Wisconsin, with Special Reference to Diseases Communicable to Man," by V. T. Atkinson, D.V.M., State Veterinarian of Wisconsin; "The Relations of Bacteriology to the Discovery and Prevention of Causes of Infectious Diseases among Men and Animals," by Theobold Smith, M.D., of the Bacteriological Laboratory of the Bureau of Animal Industry, Washington; "Popular and Scholastic Education in Hygiene," by J. T. Reeve, M.D., Secretary State Board of Health of Wisconsin; "Remarks on the Classification of Diseases," by Henry B. Baker, M.D., Secretary of the Michigan State Board of Health; "Meteorological Observations as Respects Disease Prevalence," by Professor Payne, Director of Observatory, Northfield, Minn.; "Some Personal Observations on Yellow Fever and its Habitudes as Opposed to the Fallacies and Dangers of Personal Quarantine," by A. N. Bell, M.D., Brooklyn, N. Y.

THE CHAIR OF ANATOMY at the College of Physicians and Surgeons, made vacant by the death of Dr. Sabine, has been filled by the appointment of Dr. R. J. Hall. Dr. Charles McBurney has been made Adjunct Lecturer on Surgery.

BEQUEST TO A HOSPITAL.—The late John Guy Vassar bequeathed in his will, for the completion of the Vassar Brothers Hospital, $25,000, and $200,000 in securities is given to be a part of the permanent maintenance fund; $17,000 more is bequeathed to this institution with the condition that certain annuities be paid from it.

DR. O. W. WIGHT, a brother of Professor J. S. Wight, of this city, died in Detroit, Mich., aged sixty-five. He was a pioneer in sanitary work, a man of great literary as well as scientific ability. The immediate cause of his death, says the *American Lancet*, was typhoid fever. But on his return from his voyage around the world last spring he brought with him what he called Egyptian fever, contracted while in Africa. He has never since his return exhibited the vigor characteristic of him while health officer of Detroit. Besides, he closely confined himself to writing a book giving an account of his winding journey round the world. This book has just been given to the public, and to it we will direct attention another time. He was a man who would impress the casual observer as more than ordinary in his physical and mental make-up. His education was far beyond the average, his energy ceaseless, and the marvel has always been to us that, at the age of sixty years of uninterrupted health, he was willing to take the position of health officer of Detroit, at a salary of $3,000 per year.

THE DEATH OF DR. JOHN S. LYNCH, of Baltimore, is announced. Professor Lynch was one of the leading physicians and most successful teachers of Baltimore, and his death is widely lamented.

THE DOCTOR AT HOME.—A doctor's wife, says the *Boston Medical and Surgical Journal*, was not long since overheard telling her husband that he was pleasant everywhere save in his own family; and the doctor admitted that his good-nature was so exhausted in his daily visits to his patients that he was irritable when he reached his home. "Exactly how true the doctor's admission was in that particular instance," our contemporary continues, "it is impossible to say, but it seems as though in the ordinary course of a doctor's existence such a condition might often occur. Physicians certainly meet with many things in their daily rounds that try their tempers. Life is for most of them a constant study how to coax or compel obstinate or ignorant, perhaps silly or even insane, patients to follow the course thought to be for their good. All these troublesome individuals must be reasoned with or influenced by some means to do as they ought. To carry his point the doctor must keep his temper. He usually preserves an outward calm, but if he is naturally quick tempered it is often at the cost of an effort which is exhausting. After such a struggle he reaches home in a state of irritability combined with mental and physical weariness, and under such circumstances it is not easy to meet little home trials with patience." We regret to notice in our esteemed contemporary a vein of apology for the irritable doctor which is hardly justifiable. The physician has no right to exhaust his good humor abroad and bring only an irritable mind to the domestic hearth. The doctor is expected to be a Christian or a philosopher, or both; and, if he is either, he can find no justification for being cross to his wife, and good-natured to his patients. We have known this evening irritability, which is not a characteristic of doctors by any means, to be relieved by a cup of bouillon, a five o'clock tea, or even a buffet-indulgence of a stronger character. Some physicians claim that effervescing caffein, or a good draught containing some mineral acid, relieves the tired and overstrung nerves. At any rate, the resources of religion, philosophy, the lunch-counter, and the drug-store, are open for the relief of this sunset erythism that follows hard work.

STROPHANTHUS AS AN ANTIPYRETIC.—Strophanthus in large doses has been found by Martini (*Rev. des Sciences méd.*) to reduce the temperature for a time.

A HOT-AIR CONTROVERSY.—Dr. Louis Weigert, late of New York, now of Berlin, and Dr. Halter, are having a heated controversy as to priority regarding the discovery of the utility of hot-air in the treatment of phthisis; Dr. Halter is accused of having patented his apparatus, contrary to the medical ethics.

DEATH OF THE LARGEST WOMAN IN THE WORLD.—There died at Baltimore, on September 4th, a colored woman who weighed, it is stated, eight hundred and fifty pounds. If the figures are correct, the deceased was, in a physical sense, the greatest woman in the world, if not the greatest that ever lived. Even the famous Daniel Lambert only reached the comparatively ordinary weight of seven hundred and thirty pounds. We have no record of any man exceeding the supreme obesity of the Baltimore lady, with one exception. In the year 1798 the modest State of North Carolina became the birthplace of Mr. Miles Darden, who, in the course of years, reached the height of seven feet six inches, and the weight of over one thousand pounds. North Carolina has shown pride in her agricultural and political resources, but she has really never done historical justice to the Darden half-ton of obese humanity.

Society Reports.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 10, 1888.

W. P. Northrup, M.D., President, in the Chair.

Dr. T. H. Myers presented, on behalf of a candidate, a *small vesical calculus*, which was discovered by the cystoscope, dislodged, and subsequently passed per urethram.

Dr. T. Mitchell Prudden presented two candidate-specimens, the first showing some pieces of *iron wire perforating the stomach of a pig*, the second being one of *multiple abscesses of the liver.*

Dr. Hodenpyle presented some microscopical specimens prepared according to

WEIGERT'S CORRECTED METHOD FOR STAINING FIBRIN IN SECTIONS.

The method, which is described in detail in the *Fortschritte der Medicin*, vol. xviii., p. 693, 1888, is as follows: The sections are spread out on glass slides, dried with filter paper, stained for five minutes in gentian anilin water, and again dried with filter paper. They are then placed in Lugol's solution of iodine for from thirty to sixty seconds, and finally decolorized in a mixture of zylol one part, and anilin-oil two parts. They are mounted in balsam. The specimens should he hardened in alcohol. By this method the shreds of fibrin are stained a deep blue, all the other parts being decolorized. They show much better in the daytime than by artificial light.

Dr. Mary A. Dixon-Jones presented a series of seven specimens showing that

MISPLACEMENTS OF THE UTERUS

are in many instances due to and complicated by diseases of the uterine appendages.

All the patients gave a history of long suffering and sterility, and had been through the usual course of treatment with pessaries and other supports, but without relief. Operation disclosed the uselessness of such forms of treatment, as the pelvic organs were displaced and bound down by inflammatory exudates, and extensive disease of the ovaries and tubes coexisted. In some instances the ovaries were atrophied, in others enlarged, and in still others they were the seat of purulent degeneration. Pyosalpinx was also of frequent occurrence.

Laparotomy was successfully performed in all seven cases, and the patients have been free of pain since.

Dr. Van Santvoord presented a specimen of

RUPTURE OF THE ARCH OF THE AORTA.

The patient was a man, forty years of age, who was admitted to hospital for some cerebral trouble, of which no definite history could be obtained. It was thought that the affection was syphilitic in its origin, and the man was put upon appropriate treatment. Eight hours before death the patient became markedly cyanotic, and a murmur was heard which was supposed to indicate aortic trouble. At the autopsy the aortic valves were found to be unaffected. There was, however, an aneurism of the arch of the aorta, situated just above the valves, which had ruptured into the superior vena cava. The rent was about one-third of an inch in length. The cerebral lesion was found to consist in multiple spots of softening from vascular disease.

Dr. Van Gieson exhibited two slides showing specimens of

ACCESSORY PANCREAS IN THE WALL OF THE DUODENUM, SIMULATING A TUMOR.

One of the specimens formed a whitish nodule, about 8 x 4 mm. in diameter, situated in the musculosa of the duodenum of a new-born child, and projecting in the lumen of the gut. The nodule was composed of lobuli of the pancreas lying between the mucosa and serosa.

The second specimen was taken from a man aged thirty-five. There was a white flattened mass, 1½ ctm. by 6 mm. in diameter, in the wall of the duodenum, through which the common bile-duct passed. The mass consisted of lobuli of the pancreas, lying between interlacing bands of the musculosa.

Dr. Ferguson had seen a similar case some time ago in St. Luke's Hospital. The supernumerary organ was about half an inch in thickness, and it was identical in structure with the true pancreas. The speaker had neglected to note whether there was an excretory duct present.

Dr. Prudden said that these cases were interesting in that there was danger of mistaking the glands for carcinomatous tumors, as they bore a very close resemblance, in gross appearance, to the latter when the sections were made in a certain direction. In the specimens presented there was no difficulty in recognizing the ducts as ducts, but if they had been cut in another direction the resemblance to that form of carcinoma which looks like adenoma would have been very striking.

The President said that he had been interested in the specimens for the very reason mentioned by Dr. Prudden, for he had seen one of them before, and at the first glance had pronounced it carcinoma.

Dr. H. M. Biggs presented a specimen showing

RUPTURE OF THE HEART,

which had occurred in a man seventy-four years of age. He was an inmate of the almshouse, and was working in the kitchen one day when he suddenly fell down, and died before the physician could reach him. At the autopsy it was found that a rupture of the anterior wall of the left ventricle had taken place. The tear was a ragged one, 6 or 7 mm. in length. The pericardium was distended with blood.

A second specimen presented was one removed from the body of a girl, showing

PRIMARY TUBERCULOSIS OF THE KIDNEY.

The other organs were free from disease, except the lungs, in which some recent miliary tubercles were found. Tuberculosis of the genito-urinary organs is not very uncommon, but it was rare, in the speaker's experience, to find it localized in the kidney.

Dr. Biggs also presented a specimen of

MULTIPLE GALL-STONES IN THE LIVER,

removed from the body of a man who had died in Bellevue Hospital. No history of the case had been obtainable. At the autopsy were found evidences of extensive fibro-serous peritonitis; there were also pleural adhesions and acute pericarditis. All through the liver the smaller bile-ducts were dilated, some forming cysts of considerable size and containing gall-stones. Small abscesses had formed on the upper surface of the liver and there were adhesions between this viscus and the diaphragm. There was one abscess in the left lobe, 3 ctm. in diameter, which, like the cysts, contained gall-stones.

There was also a smaller abscess in the right lobe. From one of these abscesses the inflammatory process had extended into the pericardium, and from the other into the pleural cavity. The gall-bladder contained no calculi, and the larger ducts were also free from them.

Dr. Prudden said that he had never seen a case in which the gall-stones in the liver were so numerous.

Dr. L. Emmett Holt presented the lungs of a child, nineteen months old, an inmate of the New York Infant Asylum, which showed

BRONCHO-PNEUMONIA AND PULMONARY ABSCESS COMPLICATING ULCERATIVE COLITIS.

The child was taken, on August 11th, with acute diarrhœal symptoms and high temperature. The fever subsided after four or five days, but the diarrhœa persisted, with variable severity. The movements were from four to six daily and varied in color from yellow to yellowish green and black, with much mucus but no blood. At times they were quite offensive. On September 11th the temperature again rose rapidly, reaching 104.8° F. It continued elevated until death, fluctuating between 100° and 103° F. The signs of commencing broncho-pneumonia were found at this time, first at the left base behind, then extending to the right base, and finally along the whole spine on the left side. No exacerbation of the diarrhœa accompanied these symptoms, the movements continuing about as above throughout the illness. The spleen was markedly enlarged, so that it could be felt an inch and a half below the ribs. The child emaciated rapidly, was exceedingly irritable, and it was only by the greatest patience that any physical examinations of the chest were made. She died, October 8th, having lost six pounds during the two months of her illness.

Autopsy, twenty hours after death. Brain: Pia œdematous; otherwise normal. Lungs: Adhesions over middle and lower lobes, mostly old and firm; similar adhesions over the whole left lung, behind and laterally. The breaking up of the adhesions opens, at the apex of the left lung, an abcess with ragged walls, containing about an ounce of thick, creamy pus, not fetid. Pus welled up in the trachea upon pressure, but it seemed rather doubtful whether a free communication with a bronchus had existed during life, as no pus to speak of was expectorated. The posterior part of the rest of the upper lobe and the whole lower lobe showed the usual changes of acute broncho-pneumonia. The same appearances were seen in the right lower lobe, posterior half, and a few scattered spots elsewhere. No small abscesses were present; bronchial glands much enlarged, not cheesy. Heart pale. Liver: Enlarged and quite fatty; weight, one pound two ounces. Spleen: Firm and adherent to abdominal wall, and about four times the usual size; weight one ounce six drachms. Kidneys: Enlarged; weight, one ounce two drachms; very marked cloudy swelling. Stomach: Contained large firm curds, and showed small ecchymoses in mucous membrane, near pyloric end; otherwise, no gross changes. Intestine: Small intestine pale throughout; has a "washed out" appearance; villi distinct; Peyer's patches normal; intense congestion in the rectum and sigmoid flexure but only moderate in the rest of the large intestine; rectum markedly thickened; solitary follicles not much enlarged. In the transverse and descending colon and rectum are many irregular ulcers, the largest half an inch broad; for the most part they involve the mucous membrane only. In the transverse colon some go to the circular muscular coat. They are all old in appearance. Mesenteric glands were enlarged and pale; not cheesy. The association of broncho-pneumonia with entero-colitis was something very commonly met with. A process in the lung, such as shown in the specimen, was decidedly uncommon. It suggested, however, some possible connection between it and the intestinal lesion.

The ground had been taken by some that all the cases of broncho-pneumonia complicating intestinal disease were due to infection.

GENERAL MILIARY TUBERCULOSIS.

Dr. Holt also presented specimens from an infant thirteen weeks old, illustrating general tuberculosis with obscure symptoms. The child was premature, mother delicate, and grandfather tubercular. On admission in July the child weighed four pounds; two days before death its weight was five pounds six ounces. The mother had but little milk, and this deficiency was made up by malted milk.

Except a very large spleen and dyspeptic symptoms, as shown by occasional vomiting and abnormal stools, the child gave no evidence of disease beyond the fact that it did not thrive. There was no cough. During the last five days the temperature was kept at, and it never rose above, normal. It was occasionally subnormal, and this condition existed for twenty-four hours before death. The autopsy was made thirty-six hours after death.

The brain showed a few miliary tubercles, but no evidences of meningitis.

The lungs were closely studded with miliary tubercles throughout, and showed many minute cheesy nodules, but no large ones; no pleurisy, and not much broncho-pneumonia. Bronchial glands were enlarged, cheesy, and broken down.

The spleen was five times normal size, miliary tubercles were seen on its surface, and the whole organ was thickly studded with small cheesy nodules.

The mesenteric glands were large and cheesy, slight catarrhal changes were found throughout the intestinal tract, and in the ileum two or three minute ulcers, not connected with Peyer's patches, which were normal.

The case was of interest as showing how few symptoms even a wide-spread tubercular process often gives in a very young infant, and, secondly, in view of the great enlargement of the spleen. This symptom had been advanced by some recent writers as of a good deal of value in making a diagnosis of tuberculosis in infancy. The speaker, however, had found it a very untrustworthy symptom.

Dr. Van Santvoord said that in his experience the diagnosis of tuberculosis in young children was very difficult. The symptoms were very irregular, and there was often nothing upon which to base a certain diagnosis.

The President thought that there was no rule as to the relation between enlargement of the spleen and tuberculosis.

On motion, the lung shown by Dr. Holt was referred for examination to the Committee on Microscopy.

Dr. Frank Ferguson presented a specimen, showing the lesions of

ANGINA LUDOVICI,

removed from the body of a man thirty years of age, a native of Italy, married, and a laborer by occupation. He was admitted into New York Hospital on September 1, 1888. For five days previous to his admission he had noticed a swelling in the floor of his mouth, and a gradual stiffening of his jaws. He was, on admission, unable to move the inferior maxilla, and suffered great pain. He could give no cause for the swelling, but says it commenced opposite the angle of the lower jaw. He had much swelling and induration in the floor of the mouth, extending upon the outer side of the inferior maxilla as high as the alveolar margin. The anterior surface of the neck was also swollen and indurated down as far as the cricoid cartilage. There was distinct fluctuation beneath the floor of the mouth on the left side. Dark-colored offensive pus was drawn from this region by the aspirating needle. The mucous membrane was raised from the alveolar margin of the inferior maxilla, along the incisor and canine teeth behind, and as far back as the first molar on the left side. On the day of his admission an incision was made two and one-half inches in length, and running obliquely downward and backward from the hyoid bone to the inferior maxilla. This incision was carried through skin and superficial subcutaneous tissue, and opened into a cavity filled with several ounces of offensive pus. The cavity was irrigated daily with a solution of bichloride, 1 to 5,000, drainage-tubes inserted, and a bichloride dressing applied. On the night following his admission he had a chill, and complained of a difficulty in breathing and flatulency. He was very restless during this night. During the second, third, and fourth days in the hospital he perspired very profusely, his pulse was very rapid and weak, and his temperature rose from 101° F. to 104° F. On the fourth day he continued restless, frequently attempting to get out of bed. He was constantly and carefully stimulated, but he gradually sank and died, having a temperature just before death of 103° F.

At the autopsy there was found a pint of purulent fluid in the pericardium. Both layers of the pericardium were covered with recent lymph. There were numerous gangrenous cavities under the root of the tongue, which communicated with the wound along the lower border of the jaw, and from which pus extended downward through the mediastinum to the pericardium. The pus infiltrated the planes of fibrous tissue along the trachea, œsophagus, and great vessels in the neck. The other organs were normal. The fluid in the pericardium, as well as sections of the necrotic tissue beneath the tongue and lymph covering cardiac surface, were stained for micro-organism, and large colonies of micrococci were everywhere observed. They were the same as those ordinarily found in erysipelas.

Dr. Ferguson also presented a second specimen, showing

ACUTE MILIARY TUBERCULOSIS,

removed from the body of a boy, thirteen years of age, who was admitted into the New York Hospital on September 27, 1888. He gave no morbid family history, and had no bad habits. It was learned from his mother that he had been treated in St. Luke's Hospital, five years previous to his admission into this hospital, for hip joint disease, and was discharged cured. At the same time he suffered from a fractured patella, which also healed. He was in his usual health until two weeks before his admission, when he commenced to complain of pain in his left knee, varying with pain in left hip, for which no cause could be assigned; there was no swelling, heat, nor redness of the knee. About one week later he began to complain of a very severe general headache. At this time the pain seemed to leave his knee. He vomited, but not frequently or severely, his bowels were fairly regular, and there were no ocular symptoms. He had no chills, but suffered from high fever, with maximum elevation of temperature toward night. He had recently suffered from burning pain in his eyes, dryness of mouth and throat, and great thirst. He had a slight cough. He had epistaxis on two different occasions. His appetite was poor. On his admission he had no nausea nor vomiting, but his bowels were constipated. He complained of no abdominal pain or tenderness. He was very weak and suffered much from headache. A harsh, respiratory murmur was audible over both lungs, and the respiration was prolonged and accompanied by an occasional subcrepitant râle. His urine was alkaline, of amber color, specific gravity, 1.025, and had a trace of albumin, and microscopic examination showed some pus and blood-cells. On October 2d he commenced to develop a delirium of a low, muttering type; later, cephalalgia and subsultus tendinum, with well-marked restlessness; and later on he became entirely unconscious, having irregular convulsive movements of the muscles of the body, especially marked in the muscles of the arms and forearms. The pupils were both markedly dilated, the tongue was dry and brown in the centre, the abdomen was slightly distended and tympanitic, and the abdominal veins were enlarged and very prominent. There was some resistance to motion of the neck, but there was no pain nor tenderness. He vomited twice on the night of October 3d, and he had conjugate deviation of the eyes to the right, and his head was also turned to the same side. On the afternoon of the third he was quieter, sinking into a comatose condition, with the left side of the body motionless and apparently paralyzed. On the fourth he was perfectly comatose, the eyes were partially closed, but there was no strabismus and the pupils responded to light. On the sixth he seemed much improved, and was apparently conscious, making attempts to respond to directions given him, and he executed voluntary movements of the right side, but still showed much lethargy. The pulse had been getting gradually more rapid and feeble, but he remained in much the same condition as on the day before. There was a slight ulceration on the right cornea. On the sixth the coma gradually deepened, the temperature rose, the respiration became deep, labored, and rapid, and he continued to fail until 9.30 P.M., when he died. The temperature ranged from normal to 104 F., the pulse from normal to 160. and the respiration from 20 to 44 per minute. The urine, toward the close, had to be drawn with the catheter; it contained a trace of albumin, and responded to Ehrlich's test. It contained hyaline casts and a small quantity of pus. The bowels were persistently constipated. Ice was applied to the head, strophanthus and whiskey were given, and the patient was fed on peptonized milk.

Autopsy.—On inspection the body was found extremely emaciated. The rigor mortis was fairly well marked. The left leg was found two inches shorter than the right, and everted. The left hip-joint was anchylosed. There was a sinus in the upper third of the thigh, on its outer aspect, leading to the joint. The convolutions of the brain over the vertex were slightly flattened, and there was slight œdema of the pia mater. There was pus in the meshes of the pia mater covering the interpeduncular space, and the pia mater in the Sylvian fissures was studded with tubercles. The lateral ventricles were slightly dilated and filled with pale fluid. The floors of the ventricles were softened, as were also the corpus callosum and septum lucidum. On the right side there were a few young tubercles found in the ascending frontal convolution. The lungs, kidneys, spleen, and small intestines contained numerous small miliary tubercles, and there were very small tubercular ulcers in the ileum.

Dr. T. Mitchell Prudden presented a specimen of

CIRRHOSIS OF THE LIVER IN A RABBIT,

showing small nodular areas scattered throughout the liver-substance. There was nothing in the nature of the experiments to which the animal had been subjected to explain the occurrence of cirrhosis.

The Society then went into executive session.

Chromatic Asymmetry of the Iris.—It is well known that the iris may change color with the lapse of time, and pass, for instance, from blue to green. M. Féré directs attention to the color of the iris in the subjects of nervous disease. In lunatic asylums a blue iris is considered by the uninitiated to indicate insanity, but Féré's statistics do not lend any support to this idea. Asymmetry in the color of the irides, however, appears to show that its possessor belongs to the neuropathic class. It is very frequent in the insane, in epilepsy, and in hysteria; twenty-six per cent. of epileptics were found to have the sign, and about the same percentage obtained in hysterics. This iridic stigma, it is thought, may prove of practical value.

Gouty Urethritis.—Gouty urethritis is a disease the existence of which is not by any means universally admitted, but in a thesis published in Paris by M. Turbure some observations are made which claim attention. The discharge, he states, in gouty urethritis appears suddenly, and is abundant, and at first thick. Its color and nature are those of ordinary gonorrhœa at the acutest period. The pus is yellowish green, and it gradually diminishes in quantity and consistency until it disappears. The functional symptoms which accompany this urethritis are said to be almost negative. The inflammatory reaction is *nil*, there is no redness, and no swelling of the meatus. No pain is caused during micturition, and no burning sensation is noticeable in the urethra. In some cases, however, there is more or less complaint of pain. The prognosis is generally favorable, because, in the opinion of the author, general treatment is all that is necessary to bring about a good result.—*Medical Press*.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 1, 1888.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

DR. J. LEWIS SMITH read a paper on

SUDDEN HEART FAILURE IN DIPHTHERIA.

Physicians who had had experience in the treatment of diphtheria had met cases in which symptoms, usually of sudden development, indicated dangerous heart failure, and death usually ensued, although the physician a few hours previously had made a favorable prognosis. The patient had perhaps been improving, when suddenly the scene changed; the pulse became feeble and abnormally slow or rapid—usually at first, slow and subsequently rapid—the respiration superficial, the surface pallid, and perhaps slightly cyanotic. In the more favorable cases the patient might rally by active stimulation, and perhaps eventually recover, or, after some hours, or a day or two of comparative comfort, succumb to a return of heart failure. Dr. Smith thought there was no other disease in which sudden, unforeseen, and fatal attacks of heart failure occurred so frequently as in diphtheria, and on this account, among others, physicians were frequently deceived in prognosis. A clear idea of the clinical history of heart failure could best be learned by a recital of typical cases. Such cases had doubtless occurred in the practice of physicians of experience in New York, but the author selected some from M. Cadet de Gassicourt because of the completeness of his records.

A child of two years entered Cadet de Gassicourt's service with diphtheritic pharyngitis of ten days' duration. The tonsils were large, still covered with pseudo-membrane, and the submaxillary glands were also enlarged. There were no laryngeal symptoms; no albumin in the urine. On the following day the velum and pharyngeal muscles were slightly paralyzed, the speech nasal, and deglutition moderately embarrassed. He was quiet the second night after admission, and also the next morning, but at 10 A.M. became chilly, the face and extremities slightly cyanotic; some dyspnœa. The pulse, at first abnormally slow, became rapid, the boy was agitated, groaned, and fell into a state of prostration. Suddenly, at 11 o'clock, he was violently agitated, uttering loud screams of distress, and fell back cyanotic and dead. The death-struggle did not occupy more than a minute. Two other similar cases were recited. Severe precordial, epigastric, and abdominal pain was present in some, if not most, cases of sudden heart failure in diphtheria, but these three patients were probably too young to call attention to it.

Gombault made a minute microscopic examination of the affected organs in these three cases. The point of special interest in the examination was the apparently healthy state of the pneumogastric and myocardium in the one case in which they were examined, and of the medulla oblongata in the three cases, while the gray matter of the spinal cord, which had no immediate nerve connection with the heart, showed marked degenerative changes.

Some other cases gave a somewhat different clinical history, the difference in one consisting in the fact that there was no agitation or moaning at the close of life, and that the heart-beat remained abnormally slow unless during the last moments; in another case paralysis of the velum and palate began on the third day of diphtheria, while the pharyngeal and nasal inflammations were in full activity; the urine was slightly albuminous. Three days later the muscles of the nucha and right shoulder were paralyzed. A few hours later the child complained of violent abdominal pains, followed by nausea and vomiting; the vomiting was partially relieved, but dyspnœa and a rapid heart-beat followed, and death resulted three hours after commencement of symptoms referable to heart failure. In some instances the loss of power in the heart occurred more gradually. Cadet de Gassicourt had met with one recovery to fourteen deaths after sudden and alarming symptoms of heart failure, and Sanné, Billard, and others had also reported recoveries.

Dr. Smith asked the questions: "What is the cause of sudden loss of power in the heart in diphtheria, occurring usually during apparent convalescence? Does it result from disease in the muscular structure of the heart, from thrombosis or ante-mortem clots in the cavities of the heart, or does it result from disease of the central organ of innervation—the medulla oblongata—or from disease and deficient conducting power in the nerves which control the heart's action—the pneumogastric—or in the branches which this nerve supplies to the heart as well as lungs and stomach, for these three organs appear, in most instances, to be affected simultaneously?"

Bouchut and Lagrange attributed sudden heart failure in diphtheria to endocarditis, and yet it was very seldom that a bruit or heart-signs indicative of endocarditis had been observed during life. Their belief was founded on the roughened appearance of the free edge of the mitral valve, and sometimes of the aortic valve; but Cadet de Gassicourt claimed that this was not of inflammatory origin, but an anatomical peculiarity originating during fœtal development, and Sanné, Parrot, and others had denied the existence of endocarditis as a cause of the heart failure. A more probable theory was granulo-fatty degeneration in the muscular fibres of the heart, consequent upon a prolonged and severe diphtheritic attack; but this could account only for a part of the cases, and not for the larger number of instances in which the weakening of the heart was sudden and during convalescence, at a period when the degenerative changes were not likely to occur. In most of the recorded cases the contractile power of the heart did not appear to have been notably weakened previously to the heart failure, as it probably would have been had degenerative changes in the myocardium been the sole or chief cause. Then in some typical cases the myocardium appeared normal.

Cardiac thrombosis had been regarded as a cause, but, as several writers had pointed out, the clots were identical in appearance and kind with those found in the heart after death from other diseases than diphtheria. There was every reason to believe they occurred during the death-struggle and were secondary to heart failure. French writers generally still referred to Dr. Beverley Robinson's thesis of 1871, in support of the view that death was due to heart-clot.

In searching for a cause of sudden heart failure in diphtheria we should bear in mind the fact that, as a rule, in typical cases it was preceded by palatal, and often multiple paralysis. The paralysis had continued for a time, extending perhaps from one group of muscles to another, when suddenly the heart passed under some powerful influence which restricted and overpowered its action. The theory of deficient innervation, or true cardiac paralysis, appeared most tenable, and applicable to the largest number of cases. This theory also afforded an explanation of the occurrence of concomitant symptoms in cases of sudden heart failure, such as vomiting, epigastric pain, dyspnœa, or irregular respiration, for the heart derived its innervation from the same source as the lungs and stomach, *i.e.*, through the pneumogastric. In classifying the forms of diphtheritic paralysis he felt satisfied in making a distinct class having the designation, cardiac paralysis, or to anglicize a French expression, cardio-pulmonary paralysis.

Speaking of etiology, the author said that what was true with reference to the cause and nature of palatal and multiple paralyses, and even of abolition of the tendon reflexes, was probably also true of cardiac paralysis. The theory which was most strongly advocated, and which appeared to be accepted by a large proportion of specialists in nervous diseases, under the lead of Charcot, was that diphtheritic paralysis resulted from a peripheral neuritis. Others, observing central lesions in the nervous system, had inferred they had an important share in the production of the paralysis.

Objections to these explanations were the following:

1. Cases occurred in which a carefully conducted microscopic examination revealed an apparently normal state of the nerves supplying the paralyzed part, and also of that part of the cerebro-spinal axis from which the nerves arose.

2. Palatal paralysis sometimes occurred as early as the second or third day of diphtheria, and loss of the tendon reflexes as early as the first day, and it seemed improbable that a peripheral neuritis, or anatomical changes in the cerebro-spinal axis, had occurred at so early a date as to cause the paralysis.

3. In its commencement diphtheritic paralysis often exhibited what Trousseau designated mutability, suddenly shifting from one group of muscles to another. This mutability of the paralysis militated strongly against the view that it was caused by structural changes in the nervous system.

4. Where degenerative changes had been found in the peripheral nerves some of the fibres had remained intact. Would there be complete paralysis were this lesion the cause?

5. A clinical fact in opposition to the view that the lesion in the cerebro-spinal axis was the cause of the paralysis, had been alluded to by Dr. Suss and Dr. W. H. Thomson, namely, that the diphtheritic paralysis was frequently limited to a single branch of the nerve.

The theory relating to the etiology of diphtheria which was gaining ground was, that the specific germ acted only locally on the surface, and the systemic infection occurred through ptomaïnes, which were produced upon the surface by the agency of the microbes, and entered the system through the lymphatics and blood-vessels.

Treatment.—It was evident that the cardiac paralysis should be treated promptly and with the most active remedies. The patient should be as quiet as possible in bed, with the head low, and alcoholic stimulants administered at once. In sudden seizures hypodermic injections of brandy acted most promptly in sustaining the heart's action. Ammonia, camphor, musk, and the electrical current aided. The predigested beef preparations, peptonized milk, and other concentrated foods designed for those with feeble digestion, were useful. If the urgent symptoms were thus relieved, such remedies should afterward be used as had proved beneficial in other forms of diphtheritic paralysis. Iron, quinine in moderate doses, and alcoholic stimulants were indicated; the electric current was suggested by the nature of the attack. Strychnine was regarded by good observers as the most efficacious nerve stimulant.

THE PRESIDENT suggested that the paper raised the following points for discussion: Was the heart failure occurring early in the attack and that occurring at a late period identical, or had they a different cause? The author had spoken of cases with a slow pulse and others with a frequent pulse. Were they identical, or had they different causes? And, lastly, was the cause the same in cases preceding general paralysis and in those following general paralysis?

DR. A. L. LOOMIS was requested to open the discussion, but said he had seen comparatively little of heart failure in diphtheria; in fact, only two cases. In both the heart failure took place during convalescence, in one about the twentieth day after the commencement of diphtheria. In both death was instantaneous. In one the child, aged twelve, had attempted to rise from the sofa and fell back dead. The heart cavities were distended with a firmly organized blood clot, and the right cavity was much dilated; the walls were flabby and granulo-fatty. No autopsy was obtained in the other case.

He had supposed sudden heart failure in diphtheria was not always dependent on the same cause. When it occurred early in the disease he had supposed it depended on the diphtheritic poison, whatever that might be, and that it was a part of the history of the disease. It was not unlike sudden death from heart failure in typhus fever. He had rather yielded to the general opinion that the cause was a peripheral neuritis when heart failure occurred late in diphtheria, but he had no evidence to offer.

DR. CAILLÉ had held the view, during the first years of his practice, that children with diphtheria should be kept as much as possible in the fresh air, but he had changed this view, and now believed they should be kept in bed to prevent heart failure. A girl, ten years of age, had a diphtheritic deposit on both tonsils. She did not appear to be very sick, and he gave his usual order, to have her take moderate exercise out of doors. On the eighth day she developed paralysis of the velum; on the ninth, while walking slowly with her mother, she appeared suddenly to be in great distress, and had to be carried home and put to bed. He found her suffering from heart failure. She remained abed two months, and developed the following complications: Thrombosis of the right leg, then hemiplegia of the entire left side with aphasia, finally pneumonia, subsequently acute nephritis with abundance of albumin in the urine and granular casts. She finally recovered, and was still alive, but had contractures on the left side, and showed atrophic disturbances. The girl had refused to take whiskey, and he attributed the heart failure to want of stimulants and to taking exercise. In one case he thought fatal heart failure was due to an error in diet.

He thought there would be few cases of heart failure in diphtheria if all patients were kept in bed, not permitted to commit errors in diet, and were sufficiently stimulated.

DR. BEVERLEY ROBINSON had at one time made many autopsies on children who had died of diphtheria, and had entertained rather definite opinions regarding heart failure in the acute stage. He had come in after Dr. Smith's paper had been read, and did not know whether it advanced proof against the view which he yet held, that heart failure, at least during the acute stage of diphtheria, was in the majority of instances dependent upon ante-mortem formation of clots in the heart, more particularly on the right side. Granulo-fatty degeneration of the heart muscle was frequently met in diphtheria, and was probably always present in some degree in heart failure during the acute stage. He had been unable to detect any lesions in the peripheral nerves. The color, the consistency, and the effects of the clot upon the valves of the heart had led him to believe it had been formed at a time when the heart still retained considerable vigor, and the clot seemed to be the immediate cause of death. Sometimes there was more or less bronche-pneumonia in such cases; he could not discover any changes in the nerves of the heart. Tincture of chloride of iron was very commonly givne in large doses to children with diphtheria, and he questioned whether it was not a cause of the formation of heart clots. At any rate it was not altogether good practice.

DR. J. H. FRUITNIGHT hardly thought heart clot, granulo-fatty degeneration of the cardiac muscle, or peripheral neuritis would account for the sudden death; but toxæmia from ptomaïnes seemed a very plausible explanation. He differed from Dr. Robinson regarding tincture of chloride of iron, and recommended its use. If this were a cause, heart clot should be much more frequent.

DR. SEIBERT thought there were two classes of heart failure. He recited a case illustrating the first class, in which the heart failure or collapse was due to the direct action of the diphtheritic poison on the central nervous system in the beginning of the disease. The other class was in persons who had suffered from gangrenous condition at the seat of the false membrane, and death took place suddenly upon some exertion, as an attempt to rise in bed, and was undoubtedly due to pathological changes in the heart.

DR. DESSAU believed that sudden death in diphtheria might be due to different causes; in the acute stage particularly, to heart clot; and in some cases, it would seem, to paralysis of the pneumogastric nerve. Regarding treatment by strychnine, he thought this was a dangerous remedy to administer to children, as they were very susceptible to its influence. He had reason to believe that in one case it was the cause of death, although given in not very large doses.

DR. LOOMIS said, regarding heart clot, that he did not believe it was possible in these cases to have heart clot until after heart failure, in which event the cause of death was the heart failure and not the clot. In true cardiac thrombosis, in the condition in which there was interlacing of the fibres with the chordæ tendineæ and valves, with decoloration of the clot, and possible occlusion of the large vessels, there had been a degree of heart failure for quite a time preceding death. He could hardly conceive how any remedial agent could increase the coagulability of the blood beyond the point reached in most inflammatory diseases. It was not because the blood coagulated more easily, although that might have a little influence, but it was because of retardation of the blood-current, which allowed thrombosis either of the blood-vessels or heart.

DR. ROBINSON replied that the heart clot differed from that commonly found after death from other diseases; it was absolutely fibrinous, often in layers, and had certainly lain in the heart a goodly period previous to death. Its presence was not pointed to by any symptoms during life. Experimentation had shown that clots might form in the heart when there had been no change in the structure of the organ.

THE PRESIDENT, before discussing the paper, gave notice of the anniversary meeting to be held November 15th, which he hoped would be largely attended by the profession and public. Regarding sudden death in diphtheria, when there was fatty degeneration in the heart, it was sufficient to account for death. Patients with this disease and others which left them in a weak state, were liable to sudden death from anæmia of the brain. One condition might be mistaken for heart failure in the later stages of diphtheria, namely, paralysis of the respiratory organs. There was dyspnœa, with necessarily frequent and shallow respirations, and as there was frequency of heart beat we might mistake it for heart failure. He recommended electricity, short sessions frequently repeated; also strychnine, which should not be relied upon by internal administration alone, but by hypodermic injection. Since the majority of cases of heart failure in diphtheria died, all things possible should be done to prevent its occurrence. Save the strength of the patient, add to it by correct feeding, by tonics so-called, employ stimulants, particularly alcohol. The most courageous gave usually too little alcohol in diphtheria.

DR. SMITH recapitulated some facts contained in his paper. Since in a very considerable number of typical cases of death from heart failure in diphtheria there were symptoms referable to the stomach, lungs, and heart, the inference was that the pneumogastric was involved. Then many patients could be rallied by stimulants, go on some hours or days and have a recurrence; did that fact not contra-indicate heart clot? Again, in many cases there was multiple paralysis, which seemed to point to a similar cause for the heart failure.

SECTION IN OBSTETRICS AND GYNÆCOLOGY.

Stated Meeting, October 25, 1888.

JOSEPH E. JANVRIN, M.D., CHAIRMAN.

DR. CHARLES CARROLL LEE read a paper on

THE VALUE OF HYSTERORAPHY AS A PRIMARY OR CONSECUTIVE OPERATION IN UTERINE DISPLACEMENTS.

A comparatively new surgical procedure, which, on the one hand, was not very difficult to perform, and, on the other, afforded certain relief in cases hitherto intractable, was of sufficient interest to justify the paper. The name hysteroraphy, which signified suturing the uterus, had been given by Dr. Howard H. Kelly to the process of sewing the displaced uterus to the anterior wall of the abdomen. For ten years, or more, efforts had been made to fasten the uterus to the abdominal wall, to retain it in a corrected position supplementary to laparotomy done for other purposes. Dr. Lee here reviewed the subject from a historical standpoint, making some use of Dr. Kelly's article published in 1887. As far as he was informed, the first person who urged resort to hysteroraphy as a primary operation, for the sole purpose of securing in position an otherwise intractably displaced uterus, was Professor Olshausen, who discussed the subject in a paper in 1886. Sänger adopted the procedure, and in comparing hysteroraphy with Alexander's operation, condemned the latter

Dr. Lee then gave the histories of six cases in which he had performed primary hysteroraphy. The operation had been done so frequently, secondary to laparotomy for other purposes, that he did not refer to his experience with such cases. In all the six there was retroversion of the uterus, with strong adhesions and attendant symptoms which all other means had failed to relieve. Laparotomy was performed and the adhesions broken up, although usually with much difficulty, and the uterus was fastened by suture to the anterior abdominal wall. In one case the uterine appendages had previously been removed, but the patient continued to menstruate and to suffer severe pain. Finally he again performed laparotomy, broke up perimetric adhesion, fastened the uterus to the abdominal wall, and there had been relief, although the final result could not be stated, the operation having been done the present month. In one instance the operation failed to give relief.

Although the operation was sometimes difficult of performance, yet it was certainly less dangerous than extirpation of the uterine appendages or a morbid growth, and it often gave relief from as severe symptoms. It was indicated in retroflexion of the uterus with fixation, great suffering which finally ruined the health, where pessaries were not borne, and if borne had no effect. Unless it should be supplanted by the massage and gymnastics practised by Brandt, hysteroraphy would be a great blessing to many patients. He had not practised Brandt's method, but he had felt sceptical regarding its claims. Regarding the relative value of hysteroraphy and Alexander's operation, he thought it useless to speak, for they were indicated in different classes of cases. If there were no adhesions, no fixation of the displaced uterus, even the most enterprising laparotomist would hesitate to advise hysteroraphy, while it had been claimed that in only such cases was Alexander's operation to be performed.

Regarding the steps in the operation, Dr. Lee said that after a number of experiments he had concluded the sutures should not be passed through the fundus uteri, which was often excessively vascular, but through the proximal end or edge of the broad ligament, so as to encircle the round ligament, and above, not only through the parietal peritoneum, but through the supra peritoneal fat; for otherwise they were liable to tear through and allow the womb to fall back again While silkworm gut answered well if previously soaked to make it flexible, the very best material was fine Chinese twisted silk rendered aseptic. Catgut was inadmissible from liability to rapid absorption, and silver wire was much more likely to tear the broad ligaments. The aim was to have the ligature remain and become encysted. In separating the adhesions, the fingers alone were to be used, and the adhesions about the ends of the broad ligament were to be torn through first, and when the uterus was drawn up one could better distinguish the utero-sacral ligaments from adhesions. The operation was only to be done with all antiseptic precautions. The subsequent treatment was like that in other laparotomies. Thus far he believed no death from hysteroraphy had been recorded.

DR. HOWARD KELLY, of Philadelphia, present by invitation, said that since writing his first paper he had learned that Käberle, of Strasburg, was the first to perform hysterorapby, it being in March, 1869, an account of the operation being published in 1877. Then followed Olshausen, then Kelly, then Sänger. The operation was suitable to cases of retroflexion in which Alexander's operation was contra-indicated. He took occasion to state that his former objections to Alexander's operation were only theoretical, and the paper of Dr. Mundé seemed to show that it had a legitimate field. The method of massage and gymnastics practised by Brandt would not do away with hysterorapby, but simply limit its applicability. Dr. Kelly also spoke of the importance of doing hysterorapby in connection with laparotomy for other purposes, since in these cases it was impossible to say just how much the symptoms were due to the disease or to the displaced uterus.

There were two classes of cases, those in which the adhesive bands were light and easily broken up, and those in which they were very tenacious, making of the operation one of the most difficult in abdominal surgery. In the first class the uterus was likely to be fixed at an acute angle, was large and vascular. The relief which the operation afforded in these cases was very striking. When the patient had been suffering a long time from displacement, had usually passed thirty-five years of age, had a short vagina, a small uterus bound firmly down by adhesions, it was a question whether the operation would prove useful.

In performing hysterorapby the abdominal incision should be made much lower than in ordinary laparotomy; it should come close down to the pubes, in order to be able to attach the uterus as near the pubes as possible, and prevent the intestines from entering between the pubes and uterus and developing ileus. Sänger used four sutures, passing them through the broad ligament. Dr. Kelly used at most two. The method of attachment varied with different operators. Sometimes the broad ligament was spread out and very vascular, in which case Dr. Kelly thought it best to pick it up, and pass the sutures where no blood-vessels were apparent which might be wounded. He had sutured the broad ligament, also the tube, and had in two cases reached over the uterus and attached the ovarian ligament, which was of advantage when the ovary was displaced.

Dr. Kelly regretted to record the first death after hysterorapby. He wounded the vessels in the broad ligament, and as a matter of safety, followed the example of Sänger and sutured the vessels to stop hemorrhage. The operation was somewhat prolonged, and he put in a drainage-tube. The patient got along very well for a time, and he took out the tube, but adhesions formed to the intestine along its track which caused ileus and death. He had the records of over ninety cases of hysterorapby without one other death.

Dr. P. F. Mundé had attempted hysterorapby in only one case, in which he found the uterine adhesions so strong that he abandoned the operation. He thought Dr. Lee had clearly shown the field of the operation, while that of Alexander was entirely different, for in the latter uterine adhesions constituted a positive contra-indication.

Dr. H. J. Boldt considered hysterorapby a very valuable operation in properly selected cases, but he was positive that the primary operation could be much restricted by the employment of Brandt's method of gymnastics and massage, which should first be given a fair trial. A prerequisite to Brandt's method was a correct diagnosis. Dr. Boldt's method of doing hysterorapby at present was to make the abdominal incision as small as the case would permit, tear up the adhesions with the index-finger, then pass his guarded tenaculum behind the uterus, slide the guard off the sharp hook, at the same time introducing the latter into the muscularis of the uterus, which he brought to the surface of the abdominal wound; while his assistant held the womb, he passed a silkworm gut through the entire thickness of the abdominal wall, and then through the fundus uteri just beneath the peritoneal covering.

If circumstances required him to operate on a large, soft uterus, he would prefer to pass the sutures through and around the round ligaments.

As to ventral fixation at a consecutive operation in uterine displacement, he would regard any operation as incomplete without it when once the abdomen was open.

Dr. Coe spoke as follows: In considering the indications for this operation, we must not forget that it was undoubtedly performed originally as an adjunct to oöphorectomy. A review of the papers by Olshausen, Leopold, Sänger, and other German writers, will show that they, like every other laparotomist, had encountered cases in which pain and hemorrhage were not relieved after removal of the appendages, when the uterus remained retro-displaced and adherent. Hence their attempt to avoid this failure by replacing the uterus at the time of the operation. Long before I had heard of ventro-fixation, I was interested in seeking for the cause of persistent pain after oöphorectomy, and had noted that it was commonly associated with retroflexion and fixation of the uterus; so that, when I observed this condition at the operating-table, I was able to predict with considerable certainty that the patient would not be entirely relieved. In fact, I would not limit the probability of failure to cases of laparotomy. We all know that as long as the uterus is adherent in a position of retroflexion, minor operations upon the organ, such as curetting or repair of a lacerated cervix, are only of partial and temporary benefit, while operations on the pelvic floor are worse than useless. At the risk of being severely criticised for making such a sweeping statement, I would thus summarize: It is doubtful if pelvic pain and hemorrhage can be relieved by operative interference, so long as the uterus is fixed in the malpositions referred to. It is assumed that the adhesions are of the firm fundal variety, which resist pressure and stretching by both the tampon and massage. My views regarding the futility of tamponing in such cases were expressed in a paper read before the Obstetrical Society, two years ago. When the uterus cannot be replaced before operation, this must be done at the time; hence the inference that ventro-fixation is simply the natural course to follow under the circumstances. It seems to me that there is no need of making a sharp distinction between what the reader had denominated the "primary" and "consecutive" operations, since we can never decide positively whether we shall remove the appendages or not until the abdomen has been opened. The difference really exists in the mind of the operator; if he performs the operation with the express purpose of freeing the adherent uterus, then it is primary; if this measure occurs to him as an after-thought, subsequent to removal of the tubes and ovaries, it is secondary. Understanding the difference of the terms thus, I have had two cases of primary hysterorapby, in one of which I introduced a temporary, in the other permanent uterine sutures. The appendages were removed in both instances, and I think that this will usually be found to be the wiser course, since tubes and ovaries that have long been buried in adhesions seldom present such anatomical integrity that they can be left with safety. Both patients had been great sufferers, and had been under constant treatment for two or three years. In both, the relief was immediate and permanent, although in the case of the first patient (who was operated upon nearly a year ago), the uterus has, in consequence of severe muscular efforts, been detached from the anterior abdominal wall and is again retroverted, but small and movable, while there is no tender spot in the pelvis. The second patient has not been under observation sufficiently long to allow of a positive inference in regard to the permanence of the cure.

I am firmly convinced of the value of the procedure in all cases of laparotomy in which the uterus is retro-displaced and adherent, although while I agree with Dr. Boldt that such a laparotomy is imperfect without an attempt to restore the organ to its normal position, it is not possible to do so in every case, even after the adhesions have been separated, as the shortened utero-sacral ligaments sometimes do not allow the uterus to be elevated sufficiently to suture it to the abdominal wall. Under these circumstances the operator will be greatly aided if an assistant lifts the organ with two fingers introduced into the vagina.

I believe that the operation has a future, and that although it may sometimes fail from a mechanical standpoint, the result will be equally satisfactory as in the case which I reported, when the uterus dropped backward, but not until the raw surfaces had healed and the organ was atrophied, so that the displacement no longer gives rise to the former distressing symptoms.

Dr. W. Gill Wylie thought this or a similar operation justifiable, although he did not regard displacement of the womb as of so much importance as some gynæcologists did. It had been the tendency to look upon displacements of the uterus as a disease rather than as a complication, and the same was true of uterine adhesions. It was his belief that in many cases in which Alexander's operation had been performed, a cure could have been effected by much simpler means. The same fact promised to prove true of hysteroraphy. In many cases, retroversion and fixation were unaccompanied by marked symptoms, and the women bore children. Suitable treatment of the subinvolution would often result in disappearance of adhesions. He thought the suggestion to attach the uterus to the abdominal wall in the course of a laparotomy was first made by Dr. J. Marion Sims, about twenty years ago. He did not approve of passing the needle and suture through the uterine wall, since the attachment could be secured by a much simpler method. Dr. Wylie had always practised breaking up the adhesions of the uterus when doing laparotomy, and in seven cases he had secured the anteversion of the organ by shortening the round ligaments within the abdomen. In three cases he opened the abdomen for this purpose alone. He took up a loop in the round ligaments, did not ligate them sufficiently tight to destroy vitality, but simply to create plastic adhesions after scraping the peritoneal coat. The result was much like that attending hysterorаphy.

Dr. Dudley had not done the operation, but he could not conceive how the sutures could retain the uterus against the abdominal walls in the face of such mechanical resistance.

Dr. Buckmaster spoke of the benefit of the vaginal tampon and massage.

Dr. E. C. Wendt added two cases to Dr. Kelly's list, being those at which he assisted Dr. Wido, of Freiburg, to do the operation. The indication for the operation in one case was different from those given to-night, it being a case of extreme mobility of the uterus in a primipara. The other was a case of prolapsus of a large, heavy uterus which could not be kept up by other means. Up to the time of his departure, the operation had been successful in both cases.

Dr. Lee replied to Dr. Dudley by saying that in his cases the uterus had remained in its new position, was fairly movable, and the patients had been relieved of pain. He had never dragged on, or tied the sutures so tightly that the uterus was immovable.

The Section then continued the discussion on papers read at the last stated meeting by Drs. Buckmaster and Hawley, on the relative value of electricity and primary laparotomy in extra-uterine pregnancy.

Drs. Buckmaster, Rockwell, and Malcolm McLane testified to the value of destroying the fœtus by electricity; while Dr. Hawley and the Chairman, as laparotomists, preferred to remove the fœtus through an abdominal incision, and thus get rid of a foreign body which might cause sepsis.

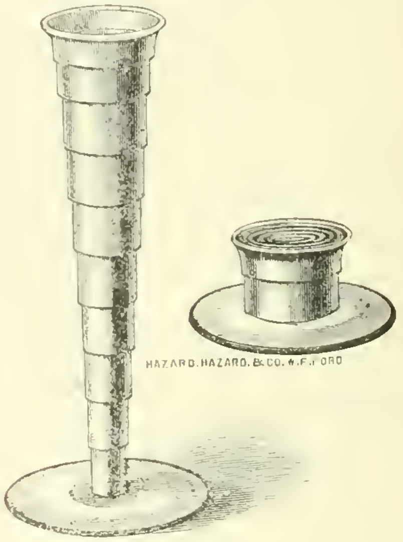
New Instruments.

A NEW POCKET STETHOSCOPE.

By D. M. CAMMANN, M.D.,

NEW YORK.

Laënnec's monaural stethoscope was a foot in length, with thick walls, and was cumbersome and heavy to carry. The stethoscopes of our day are rarely more than six inches long, with thin walls, and are light and comparatively easy to carry. All of those at present in use, however, are somewhat of a nuisance to take with us from place to place. The pocket stethoscope, the cuts of which are seen below, is offered to the profession, in the belief that it is more compact and easily carried than any at present in the market. The one cut shows it open and ready for use, in the other it is closed. It works on the principle of the telescope, or of the folding drinking-cup, so commonly used by travellers. It has nine joints. To the joint at one extremity is attached the ear piece, and at the other extremity the free end of the joint is curled, and forms the chest piece. When it is closed it is a compact mass, which can readily be kept in the vest or coat pocket. When opened it is so arranged, by a series of grooves on the outsides of the inside joints, and a series of projections on the insides of the outer joints fitting into these grooves, that by giving a turn to the joints the stethoscope is locked, and there is no chance of its collapsing when in use. The diameter of the aural end is one inch and seven eighths, and the length of each joint is three-fourths of an inch, and these are the dimensions of the instrument when closed. When open it is about six inches long. It is made of metal, and conveys sound in a very satisfactory manner.



I am much indebted to Mr. Ford, of Hazard, Hazard & Co., for carrying out my ideas, and from him the instrument may be obtained.

19 East Thirty-third Street.

A Fatal Case of camphor-poisoning is reported in the *Australian Medical Journal*. The patient was in the habit of nibbling at the drug, and carried it in her pocket. Nothing distinctive was discovered at the autopsy except a slight cerebral congestion. The quantity of camphor found in the stomach was very small.

He Missed the Mark.—Young physician (to patient): "What you need is exercise, sir. You should walk more." Patient (reaching for his pocket-book): "How much, young man? I was walking all last night with the baby."

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 28 to November 3, 1888.

BAILY, ELISH J., Colonel and Surgeon, and JOHN J. COCHRAN, Captain and Assistant Surgeon. Detailedf or duty on Army Retiring Board, to meet at San Francisco, Cal., for the examination of such officers as may be ordered before it. Par. 3, S. O. 253, A. G. O., Washington, October 30, 1888.

GLENNAN, JAMES D., and BRADLEY, ALFRED E. Appointed Assistant Surgeons, with rank of first lieutenants, to rank from October 29, 1888.

NORRIS, BASIL, Lieutenant-Colonel and Surgeon. Will be relieved from duty in the Department of the Columbia by the commanding general of that department, and will report in person, on or before November 14 1888, to the Commanding General, Division of the Pacific, for duty as medical director of that division, and of the Department of California. Par. 14, S. O. 255, A. G. O., Washington, November 1, 1888.

VOLLUM, EDWARD P., Lieutenant-Colonel and Surgeon. By direction of the Secretary of War, on being relieved from duty as Medical Director, Department of Texas, by Lieutenant Colonel Joseph C. Baily, assistant medical purveyor, under War Department order, dated October 31, 1888, S. O. 255, A. G. O., will repair to New York City, assume the duties of acting assistant medical purveyor, and take charge of the medical purveying department at that place. Par. 2, S. O. 255, A. G. O., Washington, November, 1888.

ALEXANDER, CHARLES T., Lieutenant-Colonel and Surgeon, is relieved from further duty in the Department of Dakota, and will report in person to the Commanding General, Department of the Columbia, for duty as medical director of that department. Par. 14, S. O. 255, A. G. O., Washington, November 1, 1888.

BAILY, JOSEPH C., Lieutenant-Colonel and Assistant Medical Purveyor, is, at his own request, relieved from the charge of the Medical Purveying Depot in New York City, and is, by direction of the President, under the provisions of the Act of Congress, approved June 23, 1874, assigned to duty as surgeon in the Medical Department. He will report in person to the Commanding General, Department of Texas, for assignment to duty as medical director of that department, to relieve Lieutenant-Colonel E. P. Vollum, surgeon. Par. 1, S. O. 255, A. G. O., Washington, November 1, 1888.

WEISEL, DANIEL, Captain and Assistant Surgeon. Died at Fort Sill, Ind. Ter., October 30, 1888.

STRONG, NORTON, Captain and Assistant Surgeon. By direction of the Secretary of War, relieved from duty in the Department of Arizona, and to report in person to the commanding officer, Fort Schuyler, New York, for duty at that post, and by letter to the Commanding General, Division of the Atlantic. Par. 4, S. O. 255, A. G. O., Washington, November 1, 1888.

ARTHUR, WILLIAM H., Assistant Surgeon. By direction of the Secretary of War, relieved from duty at Fort Bowie, Ariz., and to report in person to the commanding officer, Fort Bayard, N. M., for duty at that post. Par. 21, S. O. 250, A. G. O., Washington, D. C. October 26, 1888.

OWEN, W. O., JR., Captain and Assistant Surgeon, Fort Leavenworth, Kan., will proceed at once to Fort Sill, Ind. Ter., and report to the commanding officer for temporary duty at that post. Headquarters, Department of the Missouri, S. O. 133, Par. 1, Fort Leavenworth, Kan., October 30, 1888.

GLENNAN, JAMES D., First Lieutenant and Assistant Surgeon, recently appointed by direction of the Secretary of War, will repair from this city to Willet's Point, N. Y., and report in person to the commanding officer of that post for duty. Par. 3, S. O. 255, A. G. O., Washington, November 1, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending November 3, 1888.

GIHON, A. L., Medical Director Ordered to Naval Hospital, Brooklyn, N. Y.

TAYLOR, JOHN Y., Medical Director. Detached from Naval Hospital, New York, and ordered to Examining Board.

HUDSON, ADRIAN, Medical Inspector. Promoted to be Medical Director.

BRADLEY, MICHAEL, Medical Inspector. Promoted to be Medical Director.

BATES, NEWTON L., Medical Inspector. Promoted to be Medical Director.

WOOLVERTON, T., Surgeon. Promoted to be Medical Inspector.

WHITE, C. H., Surgeon. Promoted to be Medical Inspector.

WOODS, G. W., Surgeon. Promoted to be Medical Inspector.

DUBOIS, F. L., Surgeon. Promoted to be Medical Inspector.

COOKE, G. H., Surgeon. Promoted to be Medical Inspector.

WELLS, HOWARD, Passed Assistant Surgeon. Promoted to be Surgeon.

BERTOLETTE, D. N., Passed Assistant Surgeon. Promoted to be Surgeon.

GAINES, J. H., Passed Assistant Surgeon. Promoted to be Surgeon.

DEER, EZRA Z., Passed Assistant Surgeon. Promoted to be Surgeon.

STEPHENSON, F. B., Passed Assistant Surgeon. Promoted to be Surgeon.

THE ORIGIN OF DIPHTHERIA FROM ANIMALS.—It has been known for some years that birds and poultry are subject to a disease which corresponds to what in the human being is known as diphtheria. Several observers have gone a step further, and have endeavored to show that the disease is capable of transmission from animals to human beings. Last year Dr. Turner drew up an interesting report bearing on this alleged transmissibility, and he adduced a large number of observations which seemed to indicate a connection between a diphtheritic affection, not only in fowls, but in rabbits and cats, and a similar affection in man. The report comprised several instances in which the "strangles" in horses appeared to give rise to a like train of symptoms. In a thesis by Dr. Menzie, the transmission of the disease from animals to man is attributed to the dejections of the former. Diphtheritic affections among fowls are very common in Italy, and he quotes an instance in which four out of the five children of a medical man were attacked and died. In this case he incriminates the thatched roof, which was inhabited by colonies of fowls, geese, pigeons, etc. The dejections of these animals, washed off by the rain, found their way into the cistern or well from which the supply of drinking-water was drawn.—*Medical Press and Circular.*

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 3, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	40	5
Scarlet fever	104	20
Cerebro-spinal meningitis	3	2
Measles	135	6
Diphtheria	105	38
Small-pox	2	0
Yellow fever	0	0
Cholera	0	0

ELASTIC LIGATURES TO THE LIMBS FOR INTERNAL HEMORRHAGES.—As a result of experiments of two years' duration, Dr. E. Haffter, of Frauenfeld, highly recommends (*Correspondenz-Blatt für Schweizer Aerzte*, August 15, 1888, p. 515) the application of elastic ligatures to the limbs as an excellent substitute for venesection in cases of pulmonary congestion, venous hyperæmia of internal organs, hæmoptysis, certain cardiac diseases, etc. The extremities must be encircled at their base with sufficient tightness, if possible, to arrest the venous, without interfering with the arterial, circulation. The constriction—provided it is properly applied—is said to be safely borne for a very prolonged period. It is best to employ for the purpose a black rubber tubing, as thick as a lead-pencil. A similar procedure is warmly recommended by Dr. L. M. Sweetnam, of Toronto, in surgical operations of every kind. (See the *New York Medical Journal* of December 17, 1887.).—*British Medical Journal.*

DEATH FROM SWALLOWING BICHROMATE OF POTASSIUM.—A correspondent of the *British Medical Journal* reports the following case: H. McC——, aged forty-six, a notorious drunkard, during a drinking bout obtained one ounce of the salt "for a French polisher." She took the packet to her home, emptied its contents into a basin, filled up the basin with boiling water, allowed the crystals to dissolve, and drank off the contents of the basin. She was proceeding to refill the basin, so as to dissolve some remaining crystals, when her movements excited suspicion in those around her, and the basin was taken from her. Within five minutes she became unconscious. When first seen by us, twenty minutes after swallowing the liquid, she was still unconscious, and there was evidence on the furniture around her that she had suffered vomiting and purging. There was extreme pallor, with perspiration; pulse small, thready, and irregular; respiration slow, irregular, and gasping. It is not common to say that the corrosive poisons have a specific action on any organ. It would seem that this salt has a specific action, and that on the respiratory centres. From the very first the respiratory movements were markedly affected, sometimes a quarter of a minute intervening between the gasping respiratory acts, and respiration ceased fully a minute and three-quarters before the cardiac movements. An interesting point is the rapid action of the poison, in this case the patient being dead within forty minutes after taking the draught. Unfortunately a post-mortem examination was not obtainable.

EDUCATION IN RELATION TO HEALTH.—Dr. D. Clark, Superintendent of Toronto Asylum for the Insane, concludes an article on the subject as follows: "Were I to formulate the prominent natural features of the mind which need education, I would say: Quality (tone), quantity (power), tension (endurance), variety (scope), control (habit). These are given to us as a legacy, and to no two alike, but proper training increases them to a wonderful degree, if guided with wisdom and discretion. Education should be conducted somewhat as follows: 1. No teaching beyond object-lessons up to six years of age. 2. Object-lessons with reading and writing up to nine years of age. 3. Reading, writing, arithmetic in its four primary divisions, and geography, up to twelve years of age. 4. The preceding, with history and primary arithmetic and grammar, up to fifteen years. 5. From this age such studies as will assist the girl in feminine duties, and the boy to some definite employment or profession. 6. No studies in the evening until after fifteen years of age. 7. Three hours daily of school-time up to nine years of age, four hours to twelve, and six hours until fifteen years of age. 8. After fifteen years of age studies to be intermingled with congenial and useful mechanical work. This to apply to both sexes."—*Journal of Insanity.*

THE PHYSIOLOGY OF THEATRICAL EMOTION.—The innervation of the muscles which govern facial expression is, under ordinary circumstances, so intimately connected with certain psychological conditions that the two go hand-in-hand, more or less independently of the will. If anger be the dominant feeling for the time being, the face reflects that condition by the contraction of certain muscles which we have learned to associate with an angry mind both in ourselves and others. If, on the other hand, we voluntarily impart an angry expression to the face, the thoughts immediately become tinged with the sentiment of which the features bear the impress. It is only by long practice that we are enabled to intervene between the psychological and the muscular (or vascular) conditions. Our social education accustoms us, from infancy upward, to the exercise of some sort of control over the exhibition of the emotions, and to the well-trained individual it is comparatively easy to prevent his face divulging his thoughts and feelings. In the same way actors gradually become enabled to "tear a passion to very tatters" without showing the emotion to which their mimicry gives rise in the onlookers. An actor who really wept or who really laughed would be as little fitted for his task as a medical man who really experienced the sympathy which his speech and manners are intended to convey. Not that there is anything hypocritical in either case, but both have acquired the ability to disassociate the feeling from its normal manifestation. From a theatrical point of view it is surprising what education and practice can do toward converting into voluntary acts phenomena which in other people are utterly beyond the sphere of the will. It is reported that Baron, a disciple of Molière, could change from pallor to carnation at will, and many of the ladies who play the parts of *ingénues* can certainly command the rosy blush which is so becoming in injured innocence, and that too quite independently of the aid of carmine. Clowns have been known to acquire a wonderful mastery over the muscles of the external ear, which enabled them to move their pinnæ in a way which amused the populace as much as it interested the physiologist. The possession of such powers to a marked extent is, however, very rare, and is by no means common in or necessary to the histrionic art. It is far more difficult to acquire a face which can be made to blush at will than one which will not blush at all.—*Medical Press.*

CHANGES IN THE INSPIRED AIR IN PASSING THROUGH THE NOSE.—Dr. Kayster has repeated some experiments made by Aschenbrand, and has found that in an outside temperature of 50° F., the air in its passage through the nose is raised to 88°, and becomes saturated with moisture.

FORTY-THREE GALL-STONES PASSED BY A CHILD.—Dr. J. K. Cantrell reports, in the *International Medical and Surgical Synopsis* for August, 1888, the case of a child, two and one-half years old, who passed forty-three gall-stones, from the size of a pea to that of a marble, in the course of about two weeks.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 20 NEW YORK, NOVEMBER 17, 1888 **Whole No. 941**

Original Articles.

A CONTRIBUTION TO THE TREATMENT OF PYO-THORAX AND PYO-PNEUMO-THORAX BY THE SETON METHOD OF THROUGH DRAINAGE, WITH SOME CASES FROM PERSONAL EXPERIENCE BEARING ON THE MATTER.[1]

BY THOMAS E. SATTERTHWAITE, M.D.,

PROFESSOR OF PATHOLOGY AND GENERAL MEDICINE IN THE NEW YORK POST GRADUATE MEDICAL SCHOOL AND HOSPITAL.

AT the present time, when some of our best practitioners are urging more radical measures for the treatment of empyema, and when statistics prove that under these newer procedures the mortality has been largely diminished, I venture to lay before the profession my experience in the matter. While serving as an interne at the New York Hospital in 1867, I first had my attention directed to the large mortality from pyo-thorax in cases that fell under my care in the surgical wards. For it so happened that five penetrating wounds of the chest were admitted within a comparatively short space of time under my immediate observation, one-half of them dying of suppurating affections following their chest-wounds.

CASE I.—One instance in particular impressed itself remarkably on my mind. The patient was a policeman, C. T——, who was stabbed in the chest on November 4, 1867. The instrument was an ordinary butcher's knife, an inch in width. It had penetrated two and a half inches (as subsequently determined), entering the left side of the chest between the clavicle and the second rib, making an external wound two inches long. The patient was spitting blood when brought to the hospital. The wound was sealed tightly, but empyema appearing subsequently, it was opened. Pneumo-thorax was soon established, and the patient died some three weeks later of septic poisoning, numerous small abscesses having been found in both lungs at the post-mortem examination.

During my hospital service of twenty months, seven cases in all, of a somewhat similar nature, fell under my observation. The almost invariably fatal character of the accident, after suppurative pleurisy had ensued, produced a great impression on my mind, and I immediately set about devising some plan that should meet the indications. I was greatly encouraged in my endeavors by the following case:

CASE II.[2]—A man entered the ward one day who had been shot through the left arm by a pistol-bullet that also pierced the chest-wall, chipping off a fragment of the sixth rib, and carrying into the chest-wound a piece of the patient's flannel shirt. Being called to the patient almost immediately after his admission, and perceiving no sign of hemorrhage, I at once removed with my forceps the small fragments of bone and cloth that lay in the wound, and sealed the wound hermetically. Pleurisy with effusion ensued but the patient recoveued.

The other cases I briefly note as follows:

CASE III.—H. C——, aged twenty-nine, was stabbed in a brawl on December 25, 1868. The knife entered the lung, as was supposed, through the fourth left intercostal space. The wound was hermetically sealed, and the patient was discharged cured in sixteen days.

CASE IV.—W. L——, aged thirty, received a pistol-shot wound in the left side on July 4, 1867. Bloody expectoration followed. The wound was tightly closed, but on the sixteenth day pleurisy with effusion had developed. Under blistering the fluid disappeared.

CASE V.—J. S——, aged forty-one, received a pistol-shot wound of the thorax on November 16, 1867. The bullet entered the right side of the chest, between the third and fourth ribs. He died on the fourteenth day of empyema. Six pints of fetid matter were removed by me at the post-mortem examination from the right pleural cavity. There was one pint of bloody serum on the left side.

CASE VI.—C. N——, aged twenty-nine, received a pistol-shot wound of the chest, March 27, 1868. The bullet entered the second right intercostal space. The wound was hermetically sealed, but the patient died in about two weeks of empyema. As in the former instance, at post-mortem examination the right lung was found collapsed, while in this instance about a quart of greenish pus occupied the right pleural cavity.

I subsequently found, as is now well understood, that the hermetically sealing of a wound does not necessarily prevent suppuration. Consequently it became a matter of the first importance to have a method of successfully treating the empyema which may follow any line of treatment. For I will venture to add, at this point, that suppuration cannot always be prevented, even under the most rigid antiseptic principles.

My first attempt in this new direction was during the year 1868, in the case of a policeman (CASE VII.) who received a shot in the left lung, the exterior wound being situated in the anterior wall of the chest, a little to the left of the heart. After suppurative pleurisy had developed in the regular fashion, I attempted to pump out the matter daily through the single opening, and the instrument here delineated (Fig. 1) was made for me at the time by my friend Dr. Allan McLane Hamilton, then a student of medicine.

Dr. Hamilton's instrument was, as is seen by the cut, extremely simple in its mechanism, and answered the purpose for which it was made. The metal plate *A* was fitted with a short cannula, *E*, placed over the wound, the cannula entering and remaining in the pleural cavity. The plate was then fastened down to the surface of the chest by adhesive plaster. The stop-cock *F*, having been closed so that air could not enter by the evacuating tube *C*, the trocar *B H* was gently passed through the cannula *E*, so as merely to clear the wound. [It was intended, in other cases where the chest was to be punctured, that this trocar and cannula be introduced simultaneously into the pleural cavity.] It was then quickly removed and the cap *D* was screwed into the upper opening of the plate, effectually preventing the ingress of air through the cannula at this point. Then, by applying an ordinary Davidson apparatus to the tube *C*, the matter could be pumped out.

The advantages and disadvantages of this instrument were, in the main, those that are associated with the ordinary aspirators in use to-day; though this particular evacuator had some advantages over them, in so far as that the pleural cavity was at all times accessible, while the pus could be withdrawn as frequently as thought desirable without making a fresh puncture of the chest. It is also interesting, from an historical point of view, that the instrument antedated the aspirator of Dieulafoy; for it will be remembered that he first brought "aspiration" to the notice of professional men in November of 1869, when he read a paper on the subject at a meeting of the French Academy.

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[1] Read in part before the Clinical Society of the New York Post-graduate Medical School and Hospital, March 3, 1888.

[2] The patient was a printer, aged thirty-three, who entered the hospital on May 23, 1868.

Personally, while I have recognized aspiration as desirable in some cases of pleurisy with effusion, and have practised it successfully, I have never believed that aspiration is a sufficiently radical measure in pyo-thorax; and it proved unsatisfactory in my case here mentioned, largely from an error in my method, not from any fault of the instrument, which accomplished the work intended for it to do in a satisfactory manner. Of course I am willing to admit that aspiration in suppurative pleurisy is capable of effecting some cures, as Dr. Bowditch[1] showed years ago.

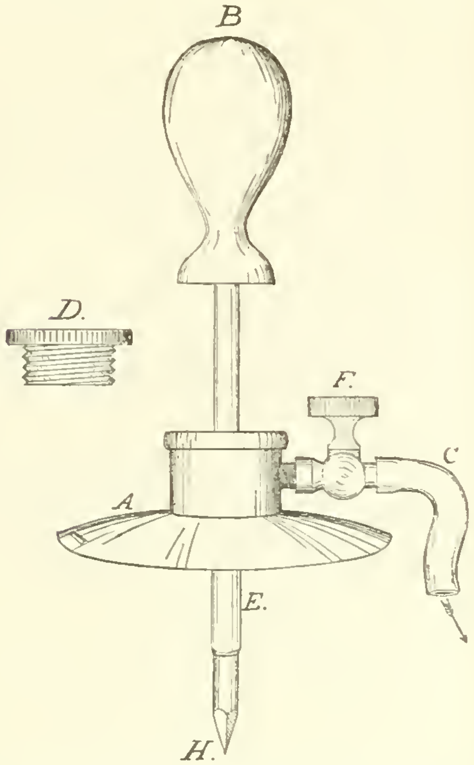

FIG. 1.—Hamilton's Evacuator, from a Drawing by the Inventor. *A*, Plate to be bound to chest; *B*, *H*, trochar; *C*, evacuating-tube attached to syringe or for drainage; *D*, cap; *E*, cannula; *F*, stop-cock.

At this point it is convenient to note that Dr. Bowditch (*American Journal of the Medical Sciences*, October, 1850) had previously used and recommended to the profession an apparatus made by my friend Dr. Morrell Wyman, of Cambridge, Mass., and quite similar in its mode of action to the Weiss stomach-pump. His apparatus consisted of a trocar a little larger than the ordinary exploring trocar, and a silver cannula, with a stop-cock in silver, as light and small as possible, capable of being connected with a syringe by an intermediate piece of brass, also provided with a stop-cock. The trocar and cannula were plunged into the fluid, and having withdrawn the trocar, leaving the cannula, the double-barrel syringe was applied, the effusion slowly drawn away, until the lung had undergone as much expansion as it could with safety. But consider for a moment the mortality According to Aitken,[2] in 24 of Dr. Bowditch's cases, where "pus flowed at the first tapping," only 7 recovered; 7 died—a mortality of fifty per cent.[3]

Nor have I been hopeful of the more radical method of simple incision, for, according to Dr. Fraentzel,[1] who advocates it, and gives most particular and methodical rules for the operation and the after-treatment, the mortality was forty-five per cent. And yet his method was based on careful antiseptic measures.

Some two or three years later, while in the German and French military hospitals, I saw quite a number of cases like those already described, where empyema had followed upon gunshot wounds of the chest; sometimes, indeed, where the patients had recovered in part from the acuteness of the attack, but were gradually losing health and strength from month to month, owing to the exhaustion incident on long-continued purulent discharges. Keeping in mind my experience in the past, I resolved, when the opportunity offered, to try a more radical method. It came in the year 1877.

Case VIII.[2]—A boy was brought to me in January of that year. He was about two years of age, and had been under medical care some three weeks, having been sick in all about four weeks with what the parents called "erysipelas." The right side of the chest was swollen anteriorly. It was also red and painful. The incision that had been made was in the second interspace (if I remember correctly), and the mother thought that about half a pint of matter had escaped at the time of the operation. When I saw the child it was feverish, and in a septic condition. I introduced a long bullet-probe into the opening and passed it about freely in various directions. When the child was made to sit up, the matter discharged freely. I then washed out the cavity with a two per cent. watery solution of carbolic acid by introducing a flexible catheter and syringing through it. The child bore the procedure well, and after it slept nursed, and took beef-tea and milk-punch. On the day following I again introduced my probe, and finding that matter had collected in about the same quantity as the day before, and that carbolic acid did no harm, but rather benefited the child, I resolved to try to secure a perfectly free exit for the pus, which I did in the following manner: Passing my probe along the inner surface of the ribs I pressed it against the fifth intercostal space, and then, cutting down upon the end of the instrument, brought it out through the opening. In these cases it is well known that the orifices have a strong tendency to close; to avoid such a mishap I attached a number of stout ligatures to the end of the probe, and, drawing the instrument through, carried the ligatures with it. For safety's sake I took the extremities of the ligatures, as they depended from the two incisions, and tied them together. In this way, of course, the discharges passed through two openings, and the mother was directed to give the setons "a little pull" whenever the matter did not escape easily enough. The child now was materially better, took its nourishment freely, and played with its toys. The temperature was 102° F. The wound was syringed out daily with the two per cent. solution of carbolic acid. After this treatment had been begun the temperature fell a little at first, but in a few days suddenly returned, while the discharge diminished; the child refused everything except the breast, and I thought the end was near. On the third day of this complication I found an area of dulness above the point of incision, with finely crepitant râles. There was also a troublesome cough. Pneumonia had ensued, while, to add to our troubles, the child took the measles about a week later. Its eyes were suffused and the body covered with a measly eruption. The temperature rose to 104¼° F., and, with all the opportunity offered for the free escape of matter, the phlegmonous inflammation had not entirely disappeared. More than this, there was a decided fulness just above the free border of the ribs and below the first incision. I hesitated some time before incising at this point, because I was

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[1] Bowditch: American Journal of the Medical Sciences, vol. xxiii., p. 320.

[2] Science and Practice of Medicine, vol. ii., p. 587.

[3] Of the remaining 10 it is presumed no record was kept. But this bad record is even surpassed by an analysis of all his 75 cases, wherein it appears that only 29, about thirty-eight per cent., recovered entirely (loc. cit.).

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[1] Ziemssen: Cyclopædia of Practice of Medicine, vol. iv., p. 722.

[2] This case was reported in part under the head of Demilt Dispensary Reports, New York Medical Journal, July, 1877.

afraid of cutting into the peritoneal cavity. Finally, on March 1st, I made the incision and was relieved by seeing the pus squirt out. No counter-opening was made. A tent of lint was then introduced. In a few days oakum was substituted for the lint. But there was not as yet entire relief. A fulness with pain and a doughy swelling subsequently appeared in the right iliac region. I could not account for this new development but on the supposition that pus had passed downward through pouching of the diaphragmatic pleura. I made an incision about one inch above the anterior superior spine, and was greatly relieved by finding a collection of matter.[1] This was the last incision. By May 7th all the openings had closed, and so, after a long and obstinate struggle with the disease for about five months, it finally yielded.

I now exhibit the boy to you. It is more than eleven years since the operation, and you have a good opportunity of seeing the final result. There is hardly any appreciable difference between the measurements of the right and left sides, and the boy is perfectly straight. Both sides of the chest dilate about equally and he is said to be in perfect health, though one may detect that the respiration is a trifle harsh. This may be due to a slight cold.

This case illustrates a well-known fact that in empyema. no matter how free the drainage is made at one particular spot, areas will remain where matter will be chambered up. Dupuytren[2] saw a case in which sixty-three separate fistulous openings formed during the attack.

The operation which I did on this occasion was a modification of Chassaignac's described by him in his work which was published in 1859, for he appears to have been the first to have advocated a *counter-opening*. His plan, however, was different. He employed a trocar with a curved needle about a foot and a half long.[3] Introducing it at the point where suppuration was indicated, he carried it through the purulent collection, piercing another intercostal space. These openings having been enlarged, he threaded his trocar needle, and, attaching the silk thread to a drainage-tube, withdrew the needle and drew the drainage tube after it. Chassaignac reported two cases cured out of three. Campbell de Morgan, of London,[4] operated successfully in a few cases, following the example of Chassaignac. The operation was also advocated by Gosselin, of Paris, and some have written favorably of it, though I have not been able to find any record of their cases; others have condemned it in unsparing terms. Fraentzel, for example, in an article (Ziemssen's "Cyclopædia," vol. i., p. 725) says: "No physician would now carry out drainage of the pleural cavity as first advocated by Chassaignac."

Since neither Flint (in his last edition), Quain, nor Fagge mention the subject of through drainage, it may fairly be inferred that the operation has not been generally practised in suppurative pleurisy.

It is singular that this operation of Chassaignac is also rejected by so excellent a surgeon as Mr. Bryant;[5] yet he advocates free incision and subsequent daily washing of the cavity, and records two good results. And though the counter-opening is recommended by the late Dr. Gross,[6] he rejects the drainage-tube as "harsh and dangerous."

J. Clifford Albutt has about the same ideas of the drainage-tube, though he recommends the counter-opening, saying that it should be practised after one or two days, according to the state of the patient. The opening should be made sufficiently large to admit the passage of a sound, which can be passed about in the pleural cavity so as to determine the lowest point in the axillary or infrascapular line, and an opening should be made upon the point of the instrument so as to drain the cavity of the last drop. After the pus has run out the upper opening is to be closed. No drainage-tube is used, and no injections are permitted.[1] He does not give us the percentage of success. At the present moment, however, a manifest change of opinion is taking place toward a more radical measure than simple incision. Thus Dr. J. Q. Blake[2] reports 16 cases out of 19 saved (84.2 per cent.), though of these cases only 10 were reported well at date of writing. Dr. A. T. Cabot saved 11 out of 14, or 78.5 per cent.[3]

The following clause, in my opinion, taken from an excellent source, is worth careful consideration as reflecting the attitude of many of our best practitioners at this present time.

"In the hands of Boyer, Delpech, Dupuytren, and Sir Astley Cooper the bistoury gave bad results, but as now used, with all modern appliances and antiseptic precautions, it affords infinite relief and many cures. We claim that by early pleurotomy, with Listerism scrupulously used at every stage of the operation, and, if necessary, with detergent washings, the mortality from this extremely grave disease can be very materially lessened."[4]

CASE IX.—The following case I saw in Dr. Billington's practice. It was reported a little less than ten years ago.[5] J. C——, aged six, was first seen by Dr. Billington and Dr. A. A. Smith on July 16, 1878, and pus was withdrawn from the pleural cavity by an aspirator. On the 17th, at the invitation of Dr. Billington, the child was seen by Drs. W. T. White, A. A. Smith, O. B. Douglas, M. J. Roberts, and myself. An incision was made in the fifth left space, half an inch to the left of the nipple. Twelve ounces of pus were withdrawn. It was proposed by some to make a counter-opening, and introduce a drainage-tube, but there was opposition by others to this procedure on the ground that a drainage-tube would probably prove a source of irritation to the pleura when the lung began to expand. Accordingly, further operation was deferred. On the next day I saw the case with Dr. Billington, but the opening had closed. It was, however, reopened and the cavity washed out with two per cent. tepid carbolic acid water. A tent was then left in the wound. On the 27th I was again invited to see the patient with Dr. W. T. White, with a view to a counter-opening, as the matter did not discharge with sufficient freedom. But now, owing to the crowding of the ribs from the sinking in of the chest, the probe could not find any intercostal space, and the conclusion was reached that a counter-opening should have been made at an earlier date. To add to the difficulties, it soon became plain that we had to do with a pneumo-thorax, as after the washing the child would bring up by the mouth the fluid injected through the wound. A similar case is recorded by Trousseau[6] in a child aged six, where recovery ultimately ensued.

It subsequently appeared, from the introduction of a catheter, that there were two cavities, one an intrapleural, the other a pulmonary. If, however, the external wound closed, as it did on one occasion when there was no escape of the pent-up secretions for two days, the symptoms became very alarming, and once the child appeared to be moribund from the toxic influence of the septic matter. Immediate relief followed the reopening and thorough cleansing of the wound. The patient subsequently recovered though no counter-opening was made; but phthisis developed some years later. This case is remarkable, from several points of view. It illustrates (1) the toxic effects on the system of pent-up secretions; (2) that if a counter-opening is to be made it should be done at an early stage of the disease, else the operation by the double incision may be impossible; and (3) that pulmonary cavities may be advantageously treated by direct injection. Certainly the objections laid against this operation in that it allows air to enter the pleural cavity had no weight on this occasion, because air had existed in the pleural cavity before the operation.

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[1] A somewhat similar case was observed by Chappe, who finally made an incision in the hypogastric region to reach pus that had migrated from the pleural cavity. The case terminated successfully. Chassaignac: Traité pratique de la Suppuration, vol. ii., p. 341. Fagge also reports a case resembling mine in many particulars, Practice of Medicine, vol. i., p. 948.

[2] Chassaignac, vol. ii., p. 341

[3] D. P. Smith: American Journal of the Medical Sciences, July 6, 1861, p. 13.

[4] De Morgan: Medico-Chirurgical Transactions, 1859. vol. xlii., p. 231.

[5] Bryant's Practice of Surgery, 1873, p. 154.

[6] System of Surgery, vol. ii., p. 455.

[1] Quain: Dictionary of Medicine, 1883, p. 1222.

[2] Medical and Surgical Report of the Boston City Hospital, second series.

[3] Boston Medical and Surgical Journal, August 16, 1883.

[4] Dr. Frank Donaldson in Pepper's System of Medicine, Art., Diseases of the Pleura, vol. iii., p. 562.

[5] New York Medical Journal, November, 1878.

[6] Clinical Medicine, vol. iii., p. 257.

CASE X.—C. L. W——, Belleville, N. J., a gentleman, aged twenty-seven, consulted me in the year 1884, stating that in 1883 he had been taken with "pneumonia." Being sent by the physician whom he consulted in New York to the Adirondacks, he came under the observation of Dr. Riley, of Au Sable Forks, who discovered that he had pyo-thorax. Accordingly, on the next day he punctured the chest, drawing off four quarts of matter, and on the following day two additional quarts. In the spring of 1885 he consulted me in reference to the continued discharge from the opening. I recommended through-drainage, and requested his physician, Dr. Riley, to use my instrument for that purpose. The operation was performed successfully by Dr. Riley, and his health improved steadily from that time. He, however, appears to have been taken in the summer of the same year with something like apoplexy, which carried him off in a few moments. The sinus was practically healed at the time of his death.

This is an instance of an adult who had been suffering for two years from the continuous discharge of an empyema. An operation carried out in the way described in Case VIII. restored him to apparently good health. Such an example is surely a good test for the efficacy of the method.

But supposing for a moment that the fistulous opening had been treated by the expectant plan, let us hear what Fagge says: "A pleural fistula may go on discharging for five, ten, or fifteen years, or even longer, until lardaceous changes develop themselves in the abdominal viscera and cause death by renal dropsy." "At the same time, all the structures which surround the pleura become dragged inward so as to reduce it within the smallest possible limits. The ribs fall in and may almost come into contact with one another; they remain motionless during inspiration, or (as was once observed by Dr. Gee) their anterior parts may actually recede and move backward each time that the healthy half of the chest expands and draws the sternum forward. The dorsal spine becomes curved so as to present a concavity toward the affected side. The shoulder sinks, the diaphragm is dragged upward with the abdominal viscera beneath it, etc."[1]

CASE XII.—The case which I now show you I saw with Dr. Seneca D. Powell about ten days ago. There was the usual phlegmonous inflammation of the wall of the chest, with the other characteristic symptoms of pyothorax. I recommended through drainage, and it was performed by Dr. Powell on Monday week, 1888. The child had no unfavorable reaction after the operation, though about three pints of matter were removed. The probe was passed in through an incision in the ninth intercostal space anteriorly, passing beneath the pericardium and out posteriorly just beneath the angle of the scapula. Five ligatures of twisted silk were then carried through, being attached to the end of the probe. Their ends were then fastened together.

The history of this patient is thus given by Dr. Burwell, resident physician to the Post-graduate Hospital, where the child was taken after it had been decided to operate. "N. B——, two and a half years of age, was taken sick at home about the third week of December, 1887. The symptoms, as described by the mother, were those of convulsions, with a bad cough and labored breathing. The child was thought to have simple pneumonia, but entire recovery did not take place, and, in fact, the mother noticed that the left lung did not expand. About March 1st a lump appeared in the left side anteriorly, just above the tenth rib. Just prior to March 7th there was pointing, with considerable phlegmonous infiltration of adjacent parts. On March 8th an incision was made by Dr. Powell at the seat of the pointing and an aluminium probe carried through the pleural cavity; a counter-incision was made, to admit of the instrument being carried completely through, from one side to the other. Setons of heavy silk were carried through and their extremities tied together. Temperature prior to the operation, 97.8° F.; pulse, 114; respirations, 30. No improvement followed the operation; in fact, there was no change apparent in the child. On March 17th the temperature rose to 102° F., the pulse to 122, the respiration to 40. Strict antiseptic precautions had been carried out. Under free stimulation, however, these unfavorable symptoms disappeared, and the temperature, pulse, and respiration became normal. On April 4th, however, there was a recurrence of the fever, the temperature reaching 103° F., the pulse 142, the respiration 60. Twenty-four hours later the child was dead. The drainage was at all times perfect, though as a measure of precaution the abscess-cavity was washed out almost daily with a weak antiseptic solution."

This little patient was an unfavorable subject for an operation; coming of a phthisical family, reduced almost to a skeleton, deprived of mother's milk, with pyopneumo-thorax from the time she was first seen, it was an instance where a cure could hardly have been anticipated.

CASE XIII. is described by Dr. Richard N. W. Horner, of this city, with whom I saw the patient in consultation on March 20, 1888.

"Frank F——, aged seven, was seen by me on Saturday, March 17, 1888. He had been ill for eight weeks. Had been healthy previously. Had lost considerable flesh. Was pale and thin when I saw him. He complained of pain in his chest on the left side, had cough and thick, tenacious expectoration; was sleepless. No marked fever (99.2° F.); dulness all over the left side of the chest. Anteriorly it amounted to flatness, extending from the seventh or eighth rib upward till it was lost in the cardiac dulness. A tumor was seen at the lower border of this flatness about an inch to the left of the nipple. The diagnosis of empyema was made, this tumor evidently being the point at which pus was trying to escape.

"On the following Tuesday Dr. Satterthwaite, assisted by Dr. Crowell, opened the chest at the point of the abscess anteriorly and at a corresponding point posteriorly, chloroform being used as the anæsthetic. Pus poured out freely as soon as the openings were made. The exact amount was not determined. A few strands of braided silk were drawn through, and the wounds dressed antiseptically. After the operation the expectoration entirely ceased for forty-eight hours. After the chest was washed out it stopped again. The solution used for washing was bisulphate of quinine. His treatment has been stimulating and tonic. He is gaining flesh and strength, and is comparatively comfortable."[1]

At this point I may say that the operation I have described is a comparatively simple one, and, from the point of view of my experience, is safe. In this connection I may mention a case that bears out this statement.

CASE XIV.—On the evening of April 12, 1888, I saw, at the request of my friends Drs. E. C. Titus and W. A. Shufelt, a patient who had been slowly convalescing from an attack of right-sided pneumonia. The patient was a man of middle life, of strong physique, rather inclined to be fleshy. Everything had progressed satisfactorily with the right lung, but shortly before our visit an effusion had been formed at the left base, while almost simultaneously there appeared in front immediately below the free border of the ribs and to the left of the median line a boggy swelling that showed some inclination to point. The patient, however, was suddenly taken with a violent attack of expectoration, and brought up about a pint of matter. Finding, however, that there still remained the physical signs of a liquid which I presumed to be purulent, I aspirated along the line of the pointing, carrying my aspirator needle upward and backward. I entered a large cavity, but could obtain no matter, though the largest needle of the Potain instrument was used. Failing from in front, I turned the patient around and aspirated him from behind in two places, each time with the large needle. About four ounces of bloody serum was the only result. The patient was in bed, extremely weak, and in a septic condition. He began improving, however, after the operation, and now is convalescent, though Dr. Titus informs me that he has the well-defined signs of a large pulmonary cavity.

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[1] Fagge, vol. i., p. 940.

[1] I understand that the little patient has now (November 9, 1888) made a good recovery.

In this instance I presume that pyo-thorax existed, constituting a circumscribed abscess, which was aiming to discharge externally when the pulmonary pleura gave way, and, the matter being forced into the air-tubes, was expectorated in the manner that has been described. At another point in the pleural cavity was a circumscribed collection of non-purulent fluid, which I removed by aspiration.

The instrument which is applicable for establishing the point for a counter-opening in pyo-thorax is a probe about thirteen inches in length (Fig. 2). It is about the length of a Hamilton's bullet-probe, but is made in one piece, either of copper or of aluminium, and should be quite stout. It is well for it to have a cleft at one extremity, in order to carry the seton. In the accompanying cut one sees in the illustration marked 1 the probe in miniature; in 2 there is a sectional view of it, still somewhat reduced from the normal size. I have been in the habit of carrying through the pleural cavity several stout ligatures, the object being to facilitate the escape of pus on the one hand, and to obviate the use of a drainage-tube, which is difficult to pass between the ribs from the back; whereas, if a puncture can be made from behind, a seton can in all cases be introduced. In addition, it may be said that ligatures will cause less irritation to lung-tissue against which pressure will be made as the lung expands.

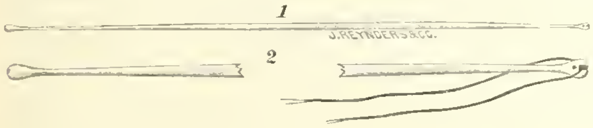

Fig. 2.

From a consideration of the foregoing cases it will be seen that the operation of "through drainage" is one that can be practised both in infancy and in adult life, though sometimes, where the sinus has been discharging for a considerable time (Case IX.), it may be difficult or impossible to make the entry into the pleura from behind, owing to the insufficient space between the ribs; and yet, even when the sinus has been discharging more than two years, the entry has been successfully made (Case X.), and I think it well to emphasize the matter on this occasion when I am entering a plea for the radical treatment of pyo-thorax. I will concede that there may be extreme cases where the incision or excision of ribs may be necessary.[1]

But in all such instances I think the surgeon will do well to consider whether the object to be attained cannot be accomplished by a less radical method. I have never, in my experience, seen cases that would call for the cutting away of a considerable portion of the bony walls of the thorax, as recommended by Estlander, and I can only conceive that the operation is admissible when the unfortunate patient has failed to have the benefit of intelligent medical attention during the earlier stages of his attack. It is singular that writers should have differed so greatly as to the point of election in puncturing the chest. Hippocrates and Vesalius elected the ninth left and eighth right; Paul Æginata, the fifth space; Scultetus, the sixth; Paré, the fourth; Chopart, the tenth.

To summarize: 1. The operation of "through drainage," the merit of which belongs essentially to Chassaignac, is one that can be successfully practised both on infants and on adults, though cases may possibly occur in chronic empyema where it is not practicable.

2. It is the operation that should be attempted in pyo-pneumo-thorax at the earliest possible moment; and in all cases of chronic empyema. In acute empyema the indications are not so plain.

3. The location of the openings is not so important as that one, at least, shall be in the most dependent part of the thorax, according to the position that the patient occupies. If in bed, one opening should be in the axillary line; if not confined to bed, preferably behind and about four inches below the angle of the scapula and four inches from the spines of the vertebræ.

4. The cavity should be washed at least twice daily with some antiseptic solution, and all known means should be adopted to permit the free escape of matter.

5. In acute empyema, where as yet there is no external opening, aspiration should be resorted to for three reasons: (*a*) To determine the character of the liquid in the pleura, and (*b*) to draw off a portion of the liquid before resorting to *through drainage*—by this latter procedure the lung is allowed an opportunity to expand and a possible pulmonary hemorrhage or œdema is prevented; (*c*) because under one or more aspirations recovery has ensued.

6. When, however, the incisions have been made they should be enlarged so that they cannot close, and any subsequent contraction of the orifice should be prevented by using some form of dilator.

7. Should a new collection of matter be found in the pleura, it may be treated in the same manner as the first collection.

8. The success of treatment depends chiefly upon providing a free exit for the matter as soon as it forms, but nutritious, and even stimulating, diet should be enforced.

9. It is a comparatively easy and safe operation, the only danger being puncture of the heart, liver, or spleen.[1]

10. To judge by my cases in which the operation of through drainage was performed (Nos. VIII., X., XII., XIII.) the percentages of cures may, I think, be fairly placed at seventy-five per cent. That it may be of great benefit in phthisical cases where pyo-thorax or pyo-pneumo-thorax has developed I have no doubt in my mind.

11. The radical operation of exsecting a rib, first performed by Celsus,[2] then by Peitavy and Roser, and later popularized by Estlander,[3] is an operation that may occasionally be necessary in neglected cases.

17 East Forty-fourth Street.

The Sanitary Condition of Nice is said to have been notably improved within the past year by a new system of sewerage and of disposal of night-soil. Since the completion of these works the mortality of the city has decreased from 32.77 to 24.34 per thousand inhabitants.

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[1] An operation revived by Roser, Arch. für Phys., vol. vi., I., but first practised in this country by Warren Stone, of New Orleans, Medical Record, June 9, 1883.

[1] Though it seems hardly worth while to state that the operator should see to it that he does not puncture such organs as the heart, liver, or spleen, they have all been punctured at various times, and with fatal results in some instances.

[2] Celsus says: "'Tis common for fistulas to extend beneath the ribs. When this case occurs the rib in that part must be cut through on both sides and taken out, lest anything corrupt be left within." Celsus, trans. by James Grieve, M.D., London, 1756.

[3] Estlander recognizes the value of the counter-opening, but states that when the operation does not succeed resection of a rib may be called for. His results were, in 7 cases, 2 cured, 4 relieved, 1 died. He makes a single incision and removes portions of two or more ribs. He then inserts a large drainage-tube. (Estlander, Resection des Côtes dans l'Empyême chronique, Revue mensuelle de Méd. et de Chir., iii., 1879.)

THE PHONOGRAPH IN PHYSICAL DIAGNOSIS, WITH EXPERIMENTS, AND ITS FUTURE.

By J. MOUNT BLEYER, M.D.,

NEW YORK CITY.

Although some ten years have elapsed since Mr. Thomas A. Edison startled the world by inventing a machine that stored up sound and reproduced it at will, it is only within the past few months that this wonderful invention has been brought to such degree of perfection as makes it of practical utility to the public at large. Some time has passed since I began to investigate the practicability of this machine, so as to give to the medical world a better and more certain means of teaching, recording, reproducing, and demonstrating the physical signs or sounds of the normal as well as of the diseased condition of the heart and lungs.

At this early stage of my experiments I must say that I predict a great future for it, and the opening of a new field for investigation in physical diagnosis and teaching.

I am not ready to give an entire account of my experiments with the phonograph in this line of investigation, but will only touch upon some of the already known and practical points which I have been able to satisfy myself of thus far.

Before going into the details of some of the points of my late experiments, I think it is necessary that I give a description of what the phonograph is, does, and how the sounds are recorded and reproduced, so that those who are not familiar with this apparatus may grasp the ideas connected therewith.

The original phonograph, while valuable as demonstrating the possibilities of human invention, and as opening up a field of research in acoustics previously unexplored, lacked the elements essential for practical use. The metallic, and sometimes indistinct, sound-waves that were emitted from the primitive tin-foil, the lack of proper mechanical appliances, the want of a suitable material for the impression-plate, and numerous other defects, made the invention useful principally in the laboratory of the scientist or in the museum of curiosities.

These early defects have at last been all overcome, and the perfected phonograph (so called by Mr. Edison), for the multitudinous purposes for which it can be used, is as practical as the type-writer or the telephone in their respective spheres.

Since the time of Lucretius the movements of atoms have been invested with an intense interest for philosophers and scientific students, and the wave-motions of light, heat, and sound have engaged, with a constantly increasing degree of importance, the attention of modern investigators. When we consider the relations of these motions to mathematics and to music, the conception of Pythagoras, that number and harmony constituted the principle of the universe, does not seem to be very far out of the way. In the phonograph Mr. Edison finds an illustration of the truth that human speech is governed by the laws of number, harmony, and rhythm, and by means of those laws we are now able to register all sorts of sound and all articulate utterances, even to the lightest shades and variations of the voice, in lines or dots which are an absolute equivalent for emission of sound by the lips; so that, through this contrivance, we can cause these lines and dots to give forth again the sounds of the voice, of music, and all other sounds recorded by them, whether audible or inaudible.

For it is a very extraordinary fact that, while the deepest tone that our ears are capable of recognizing is one containing sixteen vibrations a second, the phonograph will record ten vibrations or less, and can then raise the pitch until we hear a reproduction from them. Similarly, vibrations above the highest rate audible to the ear can be recorded on the phonograph, and then reproduced by lowering the pitch until we actually hear the record of those inaudible pulsations. Mr. Edison gives the following for an example, in order to make the general idea of the recording of sound more clear:

"We have all been struck by the precision with which even the faintest sea-waves impress upon the surface of a beach the fine sinuous line which is formed by the rippling edge of their advance; almost as familiar is the fact that grains of sand sprinkled on a smooth surface of glass or wood, on or near a piano, shift themselves into various lines and curves according to the vibrations of the melody played on the piano keys. These things indicate how easily the particles of solid matter may receive an imparted motion, or take an impression from delicate liquid waves, air-waves, or waves of sound. Yet. well known though these phenomena are, they apparently never suggested, until within a few years, that the sound-waves set going by the human voice might be so directed as to trace an impression upon some solid substance, with a nicety equal to that of the tide in recording its flow upon a sand beach."

Description of the Phonograph. How the Sounds are Registered and Reproduced. — The cylinder is run by an electric motor of a special kind, differing from all others which are now used, in place of the old clock-work. This motor turns the cylinder noiselessly, uniformly, and easily. Instead of tin-foil, Mr. Edison now makes use of a cylinder of wax for receiving the record of sound-pulsations, as in the original experiment. One diaphragm ("the recorder") receives these pulsations, which are incised on the wax, in exceedingly fine lines, hardly visible to the naked eye, by means of a small point pressing against the wax. A turning diaphragm pares off the surface of the wax, removing any record which may previously have been left there, and smoothing the way for whatever you wish to speak or transmit into the "recorder." When you have finished speaking, or recording, etc., two simple motions bring the reproducing diaphragm into place, directly over the wax, and this diaphragm, provided with a very delicate but durable needle, takes up and reproduces the vibrations registered in the fine lines of indentations, bringing them to the ear by means of a tube. Sometimes, indeed, one can hear the recorded words as they are thrown off by the needle from the revolving cylinder, without using a tube at all, and simply by putting the ear close to the wax. The adjustment of these receiving and transmitting diaphragms, known as the "recorder" and the "reproducer," are very exact, but very easily arranged, and a machine, once adjusted after being set up, will run well, with very little attention or readjustment, for a long period of time. The battery will last for six weeks or more if placed out of the way. A scale and indicator, running the whole length of the cylinder in front, enable you to observe at what point you began talking or recording, etc., so that the reproducer may be set at that point on the wax as soon as you wish to take off the record which you impressed or stored up. Another very handy attachment supplies a key for suspending the reproduction of sounds when it is going too rapidly for the listener or copyist. A second key, when pressed down, will run the reproducer back, so as to repeat anything which has not been clearly understood, and this may be done any desired number of times. A single wax cylinder, or blank, may be made use of for fifteen or twenty successive records before it is worn out. But if the record is to be kept, the wax blank must not be talked upon or have anything transmitted upon it again, and is simply slipped off from the metal cylinder and filed away for future reference.

For instance, if you have made a physical examination of the lungs or heart by means of the phonograph, and you would like to have and keep a record of this case. If, then, in the course of a week or month, or even a longer period has elapsed, and you then for some purpose, such as teaching, or consultation, or for demonstration to a class of students, or otherwise, would again like to reproduce all of the physical sounds of that particular case, all that is necessary to bring to your ear all the sounds of that case and period of time before you, simply fit on that wax cylinder which has that record to the phonograph, and listen to it. At once it talks and gives forth all that has been registered upon that wax cylinder, and again your patient of that period of time is before you, as a living example and model, for whatever purpose you wish to make use of him. One of these wax blanks will repeat its contents thousands of times with undiminished clearness.

I have long waited for the perfection of Mr. Edison's phonograph, in order that I might again satisfy myself and resume experimenting with this instrument in this branch of medical science; all of the old obstacles have been overcome, and it has been put before us as the perfect phonograph.

By the kind permission of the Metropolitan Phonograph Company, I was able to gain access and carry out my further experiments. There was long a wish to place into the hands of our profession an instrument by which we could record, reproduce, and demonstrate sounds, so as to teach our students the physical sounds from the stage of the college, or directly from the phonograph. The sounds can by this means be previously stored up, in these wax cylinders, direct from patients that are at our disposal in the hospitals, or from our private cases. Thus, also, all physical sounds can be stored up and preserved for any length of time, so that one could have a collection of cases to illustrate from the old, as well as from the new, cases, some interesting and profitable points of physical signs at will. This is done by simply replacing upon the steel coil the recorded wax cylinder.

From what observations I have already practically made, I am satisfied that the phonograph has a great future, and has opened up an entire new field of investigation in that line.

Experiments.—The method which I adopted in making these experimental physical examinations by the phonograph was carried out in the following manner:

The phonograph was placed on a suitable table before me; a tube in the shape of the deaf conversation-tube was then attached to the recording cylinder of the phonograph; the other end was placed on that part of the chest which was to be explored; then the phonograph was set in motion before placing the tube in contact with the chest. In order to register or record upon the wax cylinder that part of the chest which was intended to be examined, it was found necessary, either before or directly after examining any part, to register by its anatomical name that part of the chest. This was done by speaking into the phonograph, so as to be able, in reproducing, to distinguish those physical sounds found in one part from the other.

For example, if I intend to examine the supraclavicular region, I speak into the phonograph while in motion, before placing the tube on the chest, "*Supraclavicular region.*" By so doing, these words were directly registered. I now place the tube on that part of the chest and examine slowly and thoroughly. In this way I continued to explore the entire heart and lungs. It will be found advantageous to allow the cylinder to make a number of revolutions before removing the tube to another part, in order that more than one respiratory heart-sound might be registered.

This is also to be carried out on examining the heart-sounds.

When I was finished with my examination, I returned back the reproducer, so as to repeat that which was registered during the examination. The phonograph was now set in motion; a direct attached stethoscope was applied to my ears, from the phonograph. All the sounds were heard, in their varied pitch and tone as they came along, with perfect clearness. The words and sentences that I had spoken into it, for the purpose of recording the landmarks, were all reproduced.

These experiences have taught me in how many other ways and manners the phonograph may be practically applied to aid us for all purposes.

With some extra experimenting I was able to apply the use of the phonograph in such a manner as to throw the physical sounds, which had been previously registered upon one of these wax cylinders, into the auditorium, and thereby teach directly a larger class of students. It is a known fact that one can learn the tune of a song quicker, when he repeatedly hears it, than when he tries to remember such tones and sounds as they are taught by means of words without the material and thought together simultaneously.

To carry out my purpose for this manner of teaching and throwing out the sounds some distance, I was obliged to make the following additional trials, which finally led to success.

To adapt the phonograph for the above aim, the sounds had to be magnified by means of the microphonic stethoscope, thence transmitted to the phonograph, and upon the cylinder a trumpet of tin was then made use of, which acted as a resonator for the purpose of throwing out the sounds in a still more magnified state. The trial proved to me that, with some extra attachments, it will be the instrument for carrying out that purpose.

It is further possible to construct a physical-sign cabinet which has all registered cylinders representing the different diseases of the lungs and heart. When one wishes to study any of the normal or abnormal sounds of the heart or lungs, he can pick out of his cabinet that cylinder which has registered upon it such physical sounds.

From the phonograph, as it is now constructed, a half-dozen or more can study any physical sound by means of, a branch stethoscope attachment which I have constructed.

I hope in a few weeks to have finished my entire investigation on this subject, and will then be able to demonstrate before some of our medical societies its future possibilities.

It must be borne in mind that I am not talking now of things which may be made possible, but the functions above mentioned are those which the present perfected phonograph is able to fulfil at this moment. To use the phonograph a little instruction and practice are needed, but much less than the type-writer requires, and hardly more than the training needed for the operation of a sewing-machine.

Various other uses for which the phonograph is now fully ripe might be mentioned, but I am not ready to give memoranda of these.

83 Second Avenue.

Spinal Manifestations of Gonorrhœa.—Drs. Hayem and Parmentier describe certain affections of the spinal cord as directly due to gonorrhœa. The authors have endeavored to extend the range of certain observations made by recent writers in this country and in England, and add to their precision. It seems that in a few persons suffering with gonorrhœa such spinal phenomena are met with as a zone of pain, fulgurant pains in the lower limbs, double sciatica, hyperæsthesia, exaggeration of the patellar reflex, epileptoid trepidation, enfeebled motility, and atrophy of the muscles of the legs and thighs. Ordinarily these phenomena appear in company with articular affections, and with them show periods of exacerbation and amelioration.. The time of their onset seems to bear no definite relation to that of the beginning of the gonorrhœa. They may be grouped in three classes: Disorders of sensibility, those of motility, and those of both sensibility and motility. The manifestations are always confined to the lower limbs, and the spinal lesion is generally a congestion or a meningo-myelitis affecting the posterior or the postero-lateral columns of the cord.—*New York Medical Journal.*

DILATATION OF THE CERVIX UTERI VERSUS DIVULSION.[1]

By AUGUSTIN H. GOELET, M.D.,

NEW YORK.

On May 9th I read, by invitation, before the Medical Society of the State of North Carolina, a paper entitled "The Use of the Dilator and Intra-uterine Stem in the Treatment of Dysmenorrhœa and Sterility," which appeared in the *New York Medical Journal* of May 12th. In this I denounced divulsion, and made the assertion that moderate dilatation, if maintained by the proper use of a stem, was sufficient for all conditions of constriction of the cervical canal. I substantiated this assertion by quoting some fifteen examples selected from my case-book, which show the conditions relieved by this procedure.

To avoid repetition, and in order to take up as little of your time and attention as possible, I will refer you to that paper for more complete details of the operation.

Why do I denounce divulsion? Because it is a dangerous operation and unnecessary. A prominent surgeon recently remarked that he would as soon use dynamite as a divulsor in the male urethra. If divulsion *there* is to be condemned, why should it be considered necessary or safe in the cervical canal? It is neither safe nor necessary. It is irrational in the extreme. The best authorities upon the subject acknowledge its danger, and confess that they frequently find it necessary to repeat the operation. A certain operator admits that there are a number of those operated upon by him, who were only temporarily benefited, and should have it repeated; but they will not permit it. He is an advocate of divulsion, and has invented a dilator much stronger than is generally used. Another operator says he has often been obliged to repeat the operation several times in the same case. The reason for this is obvious. If divulsion or rupture of the constricting fibres, either with or without scarification or incision, is done, and no means adopted to prevent reunion of the severed tissues, even if no untoward consequences follow, recontraction will surely result in many instances, and a repetition of the procedure therefore becomes necessary. Can we accomplish permanent dilatation of a stricture of the urethra, or of any other location, by passing one sound, or a series of sounds, at one sitting, with no further treatment? Can we obtain permanent dilatation by divulsion (even where it is permitted) without proper treatment to maintain it? Then why expect it in the cervical canal? Why look for good results from expedients here, which we know would fail elsewhere? Is this rational?

I do not wish it to be inferred that I believe the same treatment which is applicable to the urethra or strictures elsewhere is proper or sufficient in the cervical canal. The structures are very different. But, to permanently overcome a stricture or constriction anywhere, two things are essential: First, to dilate; and, second, to maintain that dilatation. The principle is the same wherever the constriction occurs, but the method of accomplishing the result varies with the location of the stricture. In the urethra, for instance, gradual dilatation is effective in the majority of cases; but, owing to a difference of structure, it is waste of time in stenosis of the cervical canal. In addition to this difference of structure, a stenosis of the cervical canal is increased by time—the increased weight of the uterus, from chronic congestion, causing an exaggeration of the normal or the original curve of the canal, and a consequent added obstruction. Dilatation alone will not remedy this, or straighten the canal, although it may temporarily relieve the constriction. Divulsion can only increase it by adding to the congestion, from the irritation it provokes. Not only is the curve of the canal increased by time, but a chronic hypertrophy, or thickening, of the lining membrane occurs, which still further increases the difficulty to be overcome. Dilatation or divulsion alone is not sufficient to remove this. Then, to relieve a constriction of the cervical canal, we must not only dilate and maintain the dilatation, but we must correct the abnormal curve in the canal, and overcome or remove the thickened condition of its lining membrane. How to accomplish this, and keep within the bounds of safety, is the question now under consideration.

Dilate sufficiently (under an anæsthetic) to overcome the constriction, taking care to do it slowly, and use no more power than is actually necessary; introduce a straight stem of sufficient size to be grasped by the constricting fibres remaining after dilatation; increase the size of this stem as the constriction relaxes, and withal keep the patient prone in bed, and the indication will be fulfilled. Now let us see what we accomplish by this method. The stem maintains and increases the dilatation produced by the dilator, splints up and straightens the organ, and removes the hypertrophy by the constant and increasing pressure exerted by its presence in the canal. At the same time, if properly cannulated, it encourages free drainage from the uterine cavity. Compare this method with divulsion or with dilatation as ordinarily practised. It should be apparent to all that it lacks the element of danger which surrounds the former, and the uncertainty of the latter. But is this all we can say of it? Does it not fulfil every indication required?

The principle involved in the use of the stem may be very simply illustrated. By stretching a piece of rubber tubing over a hard substance larger than its calibre, and leaving it there for a time, its size is permanently increased, because its power of resistance has been overcome. But, you may say, this is not living tissue, and the ultimate result will not be the same. Very true! It will not be exactly the same, for the canal will not remain dilated the size of the stem after its removal. It would not be normal if it did. It will contract, but it will not contract to its former abnormal state, because the conditions which existed there before have been interfered with. The constricting fibres, if any existed, have been kept overstretched for a week, and have lost a part of their power, and remain in a partially relaxed state. If these fibres are muscular tissue, as some believe, this is readily understood, for we know that muscular tissue under certain conditions will remain relaxed. We know, likewise, that a contracted muscle may be permanently relaxed by constant stretching or overstretching; but we know, also, that this power must be constantly applied. In addition to this, the continuous pressure of the stem sets up an alterative action in the lining membrane and the surrounding tissues of the cervix, and in consequence we have an altered condition. In simple stenosis without flexion, the stem acts by keeping the parts overstretched until they become permanently relaxed. But in flexion its action is also that of a splint which corrects the malposition.

It is of the greatest importance in doing the operation to be careful of every detail. As the constriction is usually at the internal os, this is the important point. You must get the stem through the internal os, and you must keep it there by means of a properly adjusted tampon; and to be sure that it has remained in position, you must ascertain by a digital examination, every day, before the tampon is removed, if the cup of the stem is hugging the cervix closely. If it is not, the next tampon must be arranged with more care. You cannot be too particular upon this point. It is for this reason, as well as for cleanliness, that I advise the removal of the tampon and stem every day. As movements of the patient are apt to misplace the stem, she must be kept strictly upon her back or side, and must be allowed, under no condition, either to rise or sit up in bed. And she must be lifted from the bed to the examining table, and back to the bed, for every examination.

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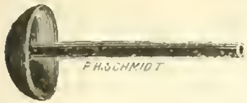
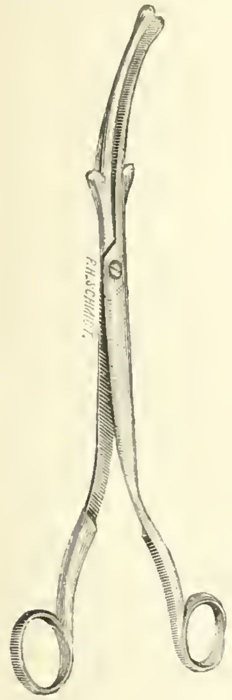
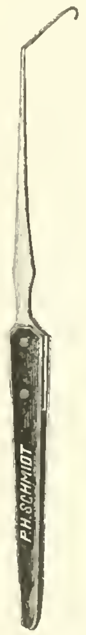
[1] Read by invitation before the New York State Medical Association, third district branch, at Norwich, June 21, 1888.

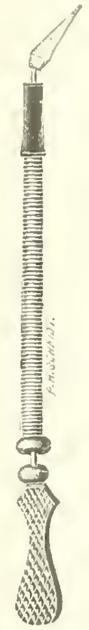


The Sims speculum is considered necessary, because it allows a larger field of operation at the vulva, and the view of the cervix is not entirely obstructed by the cup extremity of the stem while it is being introduced, as is the case with other instruments used with the patient on the back. Its necessity is evident where a flexion exists.

It will be impossible to introduce the stem unless the cervix is fixed by a tenaculum, and if a straight one is used, the shank of the instrument will crowd the stem out of the proper line of direction as the cup nears the cervix, and before the point of the stem enters the internal os. By using the angular tenaculum, as shown in the figure, this will be avoided, and the cup of the stem can be pushed up in position close against the cervix, without even touching the shank of the instrument. The angular tenaculum, instead of pulling against the point and digging into the tissues, as the straight one does, and tearing out, pulls against the curved side of the point, and does not readily tear out. It is decidedly preferable in every instance where much traction is to be made. It is fixed in the cervix with a twisting motion of the hand, similar to the motion used in introducing a corkscrew.







Unless you are particular in the introduction of the stem, a pouching will occur in front of the internal os and a false passage will be made, and of course the constriction cannot be benefited by such a false position of the stem.

In introducing the stem an applicator, with a proper curve near the point, is obviously indispensable. We must get around a corner with a straight stem, and there must be a curve between the point of the stem and the power applied, so that the force exerted will not be in a straight line.

It seems hardly necessary, in this age of antiseptic craze, to warn you that the vagina should be thoroughly washed out with a carbolized solution before any manipulation of the cervix or cavity of the uterus is attempted. And the free use of a four per cent. solution of cocaine over the surface of the vagina and cervix, will add to the patient's comfort after the effect of the anæsthetic has passed off.

It would be a grave mistake to expect a complete cure of every case from the operation alone. In many instances it is only the first step in the treatment, and more care even is necessary in the details of the subsequent treatment than in the operative procedure. More importance should be attached to this part of the treatment than is usually considered necessary. Its value is apt to be underestimated in consequence of the immedate relief which the operation affords, and its neglect will allow failures which reflect upon the operation.

Let me add a note of warning. This is not an operation to be undertaken by everyone indiscriminately. A thorough familiarity with the necessary details is prerequisite to success. While I may have been able to simplify the details so that they may be understood by anyone, there are many points requiring nicety of action which is only to be acquired by experience in gynæcological manipulation. At the same time, let me remind you that it is impossible to foresee exactly what conditions are to be met with in all cases which may happen to come under your observation, or outline their appropriate treatment. Experience has taught me that every case presents some new phase, different often in many important particulars from others with the same symptoms and same general condition, which necessitates a change in the usual methods to meet the required indication.

243 West Fifty-fourth Street.

A STUDY IN PHYSIOLOGICAL ACOUSTICS—PRELIMINARY NOTICE.

By J. A. Maloney,

Washington, D. C.

Many months since, I commenced a line of experiments to obtain, if possible, true graphic delineations of the voice, and had not proceeded far before coming to the conclusion that several things were needful in the mechanism, necessary for such work, as follows :

1st. The material into which the stylus impressed itself should be of such character that intonations or inflections would be preserved. 2d. The diaphragm should be comparatively rigid, and of material different from that formerly used in attempts at this kind of work. 3d. That the mouth-piece should be so constructed that air in the speaking-tube should be partially compressed, without retarding the lip movements of the speaker. 4th. That the same speed of instrument be used for every record.

After months of patient work these requirements were met.

The difficulties attending past efforts in this direction are set out clearly by Clarence J. Blake, M.D., in the *American Journal of Otology*, vol. i., part 1, January, 1879, and part 2, April, 1879. In the latter he compares the value of the graphic and photographic methods for the permanent transfer of waves of sound, and gives undeniable pre-eminence to the photographic representation for purposes of exact research, because of existing defects in the phonograph, but speaks of the still important mechanical difficulties in the way of photography (viz., the preparation of large plates, evenness of motion, etc.), which are, however, not inseparable ; also by Dr. Oscar Wolf, of Frankfort-on-the-Main, in "Arch. Otol.," vol. viii., p. 58, wherein he gives the results of his experiments with an Edison phonograph, using tin-foil as a phonogram. He admits defects in form of instrument used. The greatest obstacle to his success was in the use of tin-foil, which was too yielding. This was manifest in the character of impressions. He gives the letters, A, O, S, R, and says, page 62 : "The consonants B, K, T, F, when spoken alone, give, on account apparently of their weak tone-intensity, no definite 'sound figures.'" I desire to call attention to the difference in conformation between my results and those of Dr. Wolf, and also the letters B, K, T, F, successfully recorded by me. These figures I denominate "Composite Tone Figures," to distinguish them from what is known as "Chladni Figures," formed on vibrating plates of metal, by sand set in motion, due to drawing a violin bow over the edge at different parts of the plate.

In addition to letters recorded, I have taken two words used by some in "Oral Tests" for the deaf, together with responses as follows: "Boy, Hoy, Toy, Fish, Fit, Thish," and by the record show the variation in amplitude of vibrations in the deaf ear, a fact of interest to otologists, going to show clearly a middle ear, or defect in the mechanical branch of the organ of hearing.

I have shown the number of vibrations to inch, entire length of letter or word, total number of vibrations to each, and also depth of imprint. Upon the completion of this, the first branch of my work, I had an assurance of its correctness when I found that no two figures were alike, and that the configurations were in accord with Tyndall's graphic representations of vibrating strings and rods as shown in his illustrations.

Of all letters A has led in number of overtones, as deduced by Helmholtz, Tyndall, and others; in my record you will find it has the greatest number of vibrations —twenty-three to inch, or one hundred and sixty-one vibrations to length of letter (seven inches).

The most difficult word to record and magnify was mamma. This was to me very strange at first, as I thought of it as generally the first word spoken in childhood, and upon investigation, I found the cause in the curious fact that the whole mechanism of phonation, except the lips, is nearly, if not entirely, quiescent during its utterance. This can be readily discovered by placing the index-finger upon the thyroid cartilage, and the thumb upon the side of the neck while sounding it. Another very curious fact is shown in the record of "Thoon and Screech." The "oo" of one and the "ee" of the other, have been considered the representations of "high and low" in audition, yet when combined with consonants, as here shown, the difference in number of vibrations and length of word is very slight. Strange as it may seem, the word "Mississippi," the longest word recorded by me, should give the least number of vibrations of all words or letters used —there were only thirty-two and a half vibrations to a length of three and a quarter inches for the word.

I would call attention to the two words used in testing the deaf, viz., "Boy, Ftish," and the responses made in many cases, "Hoy, Toy, Fit, Thish." The second part of my investigations, which is not yet complete, will, I hope, prove more interesting as an attempt to solve some of the mysteries of audition, by addressing the unexplained workings of the mechanism of the middle ear for clues to abnormities, which may be due entirely to changes in the middle ear hitherto unsuspected.

Fracture of the Symphysis Pubis during Labor.—Dr. Faux has reported the case of a primipara, aged twenty-five, to whom he was summoned during her difficult labor, the presentation being right occipito-posterior. The pelvis was slightly contracted in its antero-posterior diameter. Tarnier's forceps were applied, and traction made for intervals during an hour. As the head reached the perineum, crepitus was distinctly perceived by the operator. Tarnier's forceps slipping, Pajot's were substituted, and labor terminated. At the moment when the head was born the crepitus was again perceived. The head of the child was of normal size, and showed no marks of violence; the child was dead, Faux thought from the long duration of labor (forty-eight hours). The mother had moderate post-partum hemorrhage. On catheterizing her the fracture was plainly felt, and the subpubic tissues were bruised and œdematous. Faux had no opportunity to examine the patient's pelvis before labor. No special malformation was evident. She made a speedy recovery. —*The American Journal of the Medical Sciences*, November, 1888.

Boro-tartrate of potassium is the first remedy for calculus in pelvis of kidney; a weak solution must be used and for a long time, a strong solution being detrimental. (Bartholomew.)

Clinical Department.

PROLAPSE OF THE RECTUM EXISTING FOR TWENTY YEARS.

By FRANK P. HUDNUT, M.D.,

BROOKLYN, N. Y.

M. M——, aged sixty-eight, a fisherman, called to see me complaining of hæmorrhoids. Upon examination I found a large mass, the size of an orange, protruding from the rectum. It was of a bluish color, and divided into three distinct parts. He said that for the last twenty years he had had the most violent pain during defecation, the pain being so severe that he was at times obliged to cry out. He consented to an operation. Calling at his house the next day and giving him an injection, I brought the parts well into view. I proceeded to operate. At his special request no anæsthetic was given. Taking one part of the tumor at a time and cutting a groove around its base, I tied it with a strong ligature as tightly as possible. While doing this the blood was forced out of the mass like water from a sponge. I proceeded with the other two parts in a like manner and opened a small external hæmorrhoid at the same time. He complained of some pain, but was easy in a few minutes. After cutting off the most prominent part of the tumors I found that they could not be reduced, and was obliged to leave them exposed. The parts were dusted with iodol, and pressure was made with a bandage; then one-sixth of a grain of morphia was exhibited and the patient was put to bed. There was considerable oozing from the parts for two days. On the second day they became very fetid, and there was considerable inflammation around the anus. I ordered a poultice and gave quinine, the temperature getting up to 101°. On the third day I detected fluctuation one inch to the left of the anus, and upon opening the abscess about one ounce of pus was discharged. The fetid masses kept up a good deal of inflammation around the rectum, and I decided to hurry matters up by removing the remaining parts by means of Bosworth's nasal snare. This I successfully accomplished in about an hour without losing a drop of blood. The abscess ceased discharging spontaneously and the bowels were moved without pain. The patient was allowed to get up on the seventh day and made an uninterrupted recovery.

SUCCESSFUL PREGNANCY IN HEART DISEASE, WITH SPONTANEOUS PREMATURE LABOR.

By GIDEON C. SEGUR, M.D.,

HARTFORD, CONN.

Early in September, 1888, Mrs. —— was received into my home for treatment. She had been having diarrhœa for several days, attended with nausea and vomiting. The stomach was so irritable that she was able to retain her food but for a few minutes after swallowing it. Twenty grains of sub-nitrate of bismuth, with one drachm of paregoric in an ounce of water was given, and repeated in two hours with good effect. She was expecting to be confined the latter part of November, dating the beginning of her pregnancy from February 20th. I afterward learned, by more careful questioning, that her last menstrual period began January 20th, and continued about one week, and consequently I placed the date of her expected confinement at about the 27th of October.

March 12th, she had an attack of what she called at the time, "indigestion;" when for several weeks she was unable to keep anything upon her stomach, and for about four weeks was confined to her bed. "Morning sickness" continued until early in June, when she experienced "quickening," which was the first that she knew she was pregnant. The physician who had attended her in

March and April, had pronounced that she was not "in the family way." About this time (June) she noticed that her feet and hands began to swell, but she thought little of it; also she found that micturition was more frequent. In July she was much troubled with "canker sores" of the mouth, an increase in the swelling of feet, legs, hands, and face, and frequency of micturition, which was attended with much pain. These symptoms increased gradually until the first of September, when nausea and vomiting, with diarrhœa, were added. At this time she came under my care. An examination of the urine at that time, and repeatedly afterward, failed to reveal any indications of kidney disease. During the succeeding week alkalies were successfully used for the frequent and painful micturition, and cocaine given before eating greatly modified the nausea.

On September 11th, while sitting upon the piazza, she was startled by being addressed by a drunken fellow, who had approached unperceived until close beside her. Meeting the same fellow, while walking in the street a short time afterward, startled her again. That evening she began to have pain in the abdomen and back, which continued more or less all night and increased the next morning. About ten o'clock, when vomiting, she felt something "give way," and there was a gush of water. The membranes had ruptured.

An examination at 6 P.M. revealed a dilating cervix and a vertex presentation. She was very restless and was given thirty grains of chloral in three doses at intervals of twenty minutes. When the expulsive pains began there was marked shortness of breath, and on listening at the heart it gave an almost continuous murmur with accentuations at the time of the pulsations. A few drops at a time of chloroform upon a handkerchief were given by inhalation when the expulsive pains began, which was gratefully received and called for upon the beginning of subsequent pains.

A male child was born at 8.30 P.M., fairly well nourished but quite weak, and comparing in development to a seven-months' fœtus. One drachm of Squibb's fluid extract of ergot was given. The placenta was delivered readily in about twenty minutes. During this time a tendency to cough was developed, the breathing was shallow and rapid, and a feeling of prostration experienced. A cup of warm milk and tea was given; the toilet was made and binder applied. The uterus was well contracted. A smaller dose of ergot (gtt. xv.) was given later, but being followed soon after by vomiting, which increased the dyspnœa, no more medicine of any kind was given during the night. The frequent desire to pass water continued during the night, and the patient was allowed to sit up each time. The rapid respiration continued all night, gradually decreasing in frequency, but not becoming natural for two days. During the following week micturition occurred, upon an average, every two hours.

Five minims of tincture of digitalis were given three times a day; also a two-grain pill of citrate of iron and quinine. On account of the irritable condition of the stomach the only form of nourishment given during the first twenty-four hours was kumyss, of which three or four ounces were given every three or four hours: it was greatly relished by the patient and retained.

Although efforts were make to stimutate the secretion of milk, there was only a very little obtained. The child made feeble efforts at nursing the first few days, but the very small secretion ceased and artificial feeding had to be resorted to. On account of the weak condition of the baby, it was thought best to tax its strength no more than was necessary. It was freely anointed with sweet-oil, wrapped in blankets, and placed in a basket with three hot water-bottles—one on each side and one at the feet—in a room, the temperature of which was not allowed to fall below 80° F. night or day for the first three weeks. During the first forty-eight hours it was placed to the breast at intervals of six hours; when milk appeared every three hours. Efforts at suckling were quite short and feeble. A little cool water was given the child at intervals during each day, and upon the third and fourth days he was given a teaspoonful of half milk and half water. The mother's milk was drawn and fed to the baby, and efforts to promote the secretion of the milk by hot applications, lubrications, castor-oil, etc., were used without success. The milk gradually decreasing rather than increasing in quantity (I was never able to get more than ʒ j. from either breast at any one time), recourse was had to feeding with the bottle, and peptozenic milk powder was used in the preparation of the food, beginning with ℥ ss., and gradually increasing the quantity until now, at the end of the fifth week, he is taking ℥ jss. every two hours.

The mother is now free from all disturbing symptoms of the heart disease, though the imperfect action of the valves can be readily perceived upon auscultation. She has had no trouble with digestion, eating many articles of food that she had shunned for years, and can be pronounced none the worse for her pregnancy. About three weeks after confinement she had, what at any other time would have been called a menstrual period, differing but little, if at all, from her experiences when regularly "unwell."

The special points of interest to me in this case are:

1. That a woman with valvular disease of the heart can carry a fœtus in utero until it attains a viable age, pass through the trials of premature labor, and be apparently none the worse for it.

2. Spontaneous premature delivery occurring after viability was attained.

3. That a weak, premature infant, of not more than 236 days (the time from the *beginning* of last menstruation to the day of birth was 236 days), can be kept alive by the careful use of ordinary means, particularly in keeping it warm, and also when obliged to use artificial food.

The child at birth weighed four and a half pounds; during the first week it lost a half pound, but each succeeding week has gained a half pound, until now, at five weeks, it weighs six pounds. Had the child remained in utero it would now be approaching the time of its birth. Its chances seem to me to be as good to-day, if not better, than if it had not been prematurely born.

EPISTAXIS: ITS TREATMENT BY OLEUM ORIGANUM.

DR. LOUIS FISCHER, of New York, writes: "My attention having recently been called to the astringent effect of the above remedy, I thereupon used it in the treatment of epistaxis with very gratifying results.

"Nor was its effect shown in any specific case, for I took occasion to use it in every case that presented itself, in the same manner as I would have used our other internal remedies. With a view of benefiting others in the same way as my patients were benefited, I hereby recommend it to the profession.

"The literature on this drug is totally obscure, it therefore took some time to learn the real effect of it.

"I have commenced by giving gtt. v., t.i.d., an hour after meals, and increased the dose gradually until in one case I gave gtt. xii., t.i.d.

"Owing to the disagreeable smell and taste (oleum origanum being one of the turpentine series) I gave it in the form of an emulsion or in gelatine capsules."

PROFESSOR to Medical Student—"How would you treat post-partum hemorrhage?" Student—"I would tie the post-partum artery." That student is now carrying the hod.—*Nashville Medical Journal.*

This is a mistake. That student is now practising his profession successfully in a town in Northern Indiana. His specialty is obstetrics, and every woman for miles around is morally certain that no child can be successfully ushered into this wicked world without his assistance. —*Indiana Medical Journal.*

Progress of Medical Science.

Operative Treatment of Peritonitis.—Professor Luecke has reported the following case: A youth, aged sixteen, drank a glass of beer, and soon afterward felt severe abdominal pain. He was admitted into hospital with all the signs of acute peritonitis; temperature 106° F. The abdomen was opened the same evening, and half a litre of pus removed; it was then washed out with weak sublimate solution, and a thick drainage-tube was placed in Douglas' pouch. The patient went on well for six weeks, when a subphrenic abscess developed on the right side, which soon broke into the pleural cavity. Resection of the seventh rib was performed, and drainage instituted with perfect success. There was doubtless a latent intestinal ulcer with first perforative peritonitis, and subsequently localized peritonitis, which broke through the pleura. Dr. Heuser, of Barmen, has lately operated in three cases of perforation of the vermiform appendix. Two of the operations were successful, but in the third there were metastatic abscesses in the liver, which soon caused death. In each case the abscess was sharply defined, though without extensive adhesions. Dr. Heuser thinks that many such cases which end fatally might be saved by surgical treatment. Professor Czerny, of Heidelberg, operated in perforative peritonitis in an obscure case; a large quantity of odorless gas escaped, and the stomach was found adherent to the liver and anterior abdominal wall. The intestines were normal. Unfortunately no attempt was made to free the stomach, and the patient died on the fourth day. On post-mortem examination there was found a gastric ulcer and subphrenic peritonitis. An odorless gas in such cases indicates perforation of the stomach; a fetid gas intestinal perforation.—*The British Medical Journal*, September 15, 1888.

Treatment of Enuresis by White Sumac.—Dr. Unna, after three years' experience, recommends the fluid extract of the bark of the root of the sweet sumac (*Rhus aromatica*) in the nocturnal enuresis of children. The drug has also been of benefit in hemorrhage of the bladder, uterus, and rectum, and in atonic diarrhœa. In the enuresis of children it acts as a specific, but its effects are not permanent, the paresis of the sphincter muscles of the bladder returning soon after the remedy is discontinued. It should therefore be used in conjunction with other means, such as training to a habit of regularly emptying the bladder, cold baths, douches, cool bedding, etc., and then be only gradually withdrawn. For children of two years and under, Dr. Unna gives five-minim doses of the fluid extract in the morning and at bedtime; two to six years, ten minims; and for older children fifteen minims twice daily.—*Denver Medical Times*, October, 1888.

Human and Animal Blood.—Dr. Cevera asserts that human may be distinguished from animal blood by the following method: If the blood be mixed with a little bile, small crystals are formed which are of different shapes in different species of animals. In man, it is claimed, they are right-angled prisms; in the horse cubes; in pigs right-angled prisms very similar to those seen in rhomboids; in sheep rhomboidal plates; in dogs the same as seen in human blood; and in chickens more or less regular cubes.

Chloride of Zinc for Intra-uterine Use.—Following the recommendations of Rheinstaadter, Dr. Brose has employed chloride of zinc for certain uterine diseases, such as endometritis, subinvolution, erosions, and even gonorrhœa. He claims excellent results from this method of treatment. A solution of equal parts of chloride of zinc and water is used. A pledget of cotton wrapped on an aluminum sound is introduced through a Fergusson speculum. After the size and direction of the uterine canal is ascertained by the sound, the cotton is dipped in the solution, introduced into the uterine cavity, gently pressed in various directions, and withdrawn. The procedure must be completed quickly, for the uterus, from the effects of chemical irritation, contracts very rapidly, and if the contraction should occur before the internal os is passed, in most cases the effort to reach the fundus must be abandoned. The fluid which flows from the uterus after cauterization must be caught up or washed away in order to prevent it affecting the vagina. This cauterization is repeated once or twice a week, and can be performed in the physician's office. Many patients after cauterization have no pain. A few suffer from uterine colic. The author has never seen unfortunate results follow this plan of treatment. Stenoses were not observed. If fresh inflammatory processes exist in the neighborhood of the uterus this procedure should not be undertaken; with old inflammations, too, one must be very careful. That the mucous membrane of the uterus after cauterization is not atrophied, but returns to its normal condition, is proven by the fact that many cases conceive immediately after the termination of treatment.—*Archiv für Gynäkologie.*

Hip Disease from an Unusual Cause.—Mr. Henry G. Rawdon reports, in the Liverpool *Medico-Chirurgical Journal* for July, 1888, a case of hip-disease with unusual causation. The boy was six years old, and had been well up to six weeks before admission to hospital, when he was suddenly seized with a succession of convulsions alternating with periods of unconsciousness, which extended over a period of three weeks. At the end of this time it was found that the boy was unable to walk or to use in any way the right leg. On admission to hospital the boy presented well-marked symptoms of hip-disease. The head of the femur was resected, and was found to be only slightly diseased, this fact indicating that the disease was secondary in its origin. The incision gave exit to a large amount of pus. The joint did well, but the boy did not improve, some sinuses remaining in the high. These were explored, and at the bottom of one a swelling could be detected. On making firm pressure on this a large mass of solid fecal matter was expressed. The sinuses were then thoroughly washed out, and the boy made a slow recovery. The author believed that this curious occurrence was to be explained by an attack of perityphlitis which had given rise to suppuration involving the walls of the cæcum causing perforation. Pus had doubtless formed and passed through the pelvic peritoneum until it reached the obturator foramen. Having passed through this it would be likely to follow the path of least resistance and enter the joint under the transverse ligament, along with the intra articular vessels. The mass of fecal matter in the thigh he was inclined to regard as of gradual accretion, probably taking place some weeks after the resection, although it might possibly have been forced down between the muscles during a single straining effort at defecation.

The Best Internal Remedy in Laryngeal Diphtheria.—Perhaps the most useful internal remedy is mercury. Empiricism has often praised calomel in small and large doses. My acquaintance with mercury in this connection is not at all new. More than four years ago I published a number of cases which got well under its use, at the same time that Dr. Thallon, of Brooklyn, published an article on the same subject. Since I have employed it, I prefer the bichloride; my conviction of the utter uselessness of internal medication in laryngeal diphtheria, so-called pseudo-membranous croup, is thoroughly shaken. Until about six years ago I felt certain of a mortality of ninety or ninety-five per cent. of all the cases not operated upon. These figures were not taken from small numbers, for I compared those I found with my own. The latter are not a few neither; for within the last thirty years I have tracheotomized nearly 600 times, have assisted at as many more operations, and have seen at least 1,000 cases of laryngeal diphtheria which were not operated upon at all. During the last six years I have seen no less than 200 cases, perhaps many more. Among them recoveries have not been rare at all, at all ages. from four months upward. The uniform internal medication consisted in the administration of a dose of the bichloride every hour. The smallest daily dose ever given by me in the beginning was 15 milligrammes, ¼ grain, to a baby of four months; this was continued a few days, and the dose then somewhat diminished. Half a grain daily may be given to children of from three to five years, for four or eight days or longer. The doses vary from one-sixtieth to one-thirtieth. They require a dilution of 1 in 6,000 to 10,000 of water or milk. There is no stomatitis, gastric or intestinal irritation is very rare. It occurred in a few cases, but then it was found that the dilution had not been sufficient, 1 in 2,000 or 3,000 only. If ever it exist, small doses of opium will remedy it. The benefit to be derived from the remedy depends greatly upon the time of its administration. Tracheotomy or intubation is required, as a rule, after some days, and can often be avoided if mercury be given in time. If the operation become necessary after all, the treatment must be continued diligently. Never have I seen so many cases of tracheotomy getting well, since 1863, as when the bichloride was being used constantly in 1882, and the five subsequent years. Nor am I alone with these favorable results. There are dozens of practitioners in New York City with whose methods and results I am well acquainted, some of whom are connected with me in some capacity or other, who confirm the above statements.—DR. A. JACOBI, *British Medical Journal.*

INCISION OF GANGRENOUS LUNG.—An interesting case of gangrene of the lung was reported at the first meeting of the Clinical Society by Dr. W. Pasteur. The patient, a boy aged seven, was admitted with a history of acute illness in which he had coughed up some bright blood, and it was said that since then his breath had been very offensive. The physical signs were those of a cavity at the right apex, the rest of the lung being pneumonic. He coughed up from two to four ounces daily of a watery, stinking fluid, mostly saliva. The cavity was incised at the anterior extremity of the second right intercostal space, an inch from the sternum, and large quantities of gangrenous lung and putrid fluid were expelled through the wound. A counter-opening was made in the sixth space, a drainage-tube was put in, and for a week all went well; but the boy then failed rapidly, and died in three days with pericarditis. At the post-mortem the œsophagus was found adherent to the right bronchus, and a sinus communicating was evidently the cause of the gangrene. It was suggested that the child might have swallowed a foreign body, and thus set up the œsophageal trouble. There was a large gangrenous cavity in the apex of the right lung.—*London Cor. New York Medical Journal*, November 3, 1888.

FILARIOSIS.—Dr. Lancereaux has recently contributed an important monograph, entitled "La Filariose." to the Académie de Médecine (*The British Medical Journal*). He gives full credit to the labors of Drs. Mackenzie and Manson. The term "filariosis" he applies to the entire group of pathological conditions resulting from infection of the organism by the *filaria sanguinis hominis*, including lymph-scrotum, chyluria, and chylous dropsy of the peritoneum and tunica vaginalis testis. Dr. Lancereaux has seen some cases in Paris, and read two clinical reports as part of his paper. The first patient was a law student, aged twenty-three, and very sickly; he was a native of the Isle Réunion, came up to Paris in 1884, and began to suffer from lymphatic varices in the groin in 1885. Chyluria and dilatation of some lymphatic vessels in the arms followed; the scrotum was not affected. A finger was pricked, and the blood which exuded was found full of filariæ moving actively. In the second case, the patient was also a law student, in Paris, who left his native island, Hayti, in 1866. Severe chyluria set in on his return home a few months later; in January, 1888, after he had come back to Paris, he had hæmato-chyluria. At present the urine passed on rising is always more or less chylous, though no blood is now mixed with it; that passed in the afternoon is often normal; urine passed at midnight presents the maximum of chyle. At ten minutes to nine one evening the patient's blood was examined, and no filariæ were found; a quarter of an hour later the finger was again pricked, and nine filariæ were detected in the blood. A physician, now at Beauvais, who practised for sixteen years at Hayti, informed Dr. Lancereaux that he was seized with chyluria when thirty-five years old, during the height of the hot season, and much fatigued by professional work. It lasted for several days; a few more attacks followed. After living a few months in Europe the patient had no recurrence of chyluria for six years. Three times during the period he has been established at Beauvais he has had a transitory attack of chyluria. On every occasion it followed night work in very cold weather.

THE GROWTH AND DEVELOPMENT OF THE TONSILS.—The subject of the growth and development of the tonsils has just been carefully studied by Retterer. His statements are to the effect that the tissue elements of the tonsils proceed both from the epiblast and from the mesoblast, the former supplying the cellular elements, the latter the connective-tissue septa, the blood-vessels, and probably also the lymphatics; while in most glands the basilar layer of the epithelium forms the whole of the involution, in the tonsils, the whole thickness of the epithelial investment proliferates. In most glands, again, the primitive invagination remains as the excretory canal, but in the case of the tonsils the primitive involutions form the crypts or diverticula lined by a layer of pavement epithelium. Another curious point is that the tonsils are homologous with the bursa Fabricii of birds, both as to their origin, development, and structure. During the greater part of their existence the epithelial elements of the tonsils preserve the general form and characters of the basilar cells of the epithelium, but toward the close of life they disappear by fatty degeneration, and alveoli make their appearance. In the adult the lymphatic system occupies the whole thickness of each lobule; it forms a net-work of canals lined with endothelium. The walls of these lymphatics are everywhere perfectly closed, and do not open into the connective-tissue reticulum either by stomata or by open extremities. The memoir is accompanied by many well-executed drawings of the tonsillar region of the horse, pig, dolphin, cat, dog, rabbit, and other animals, as well as of man.—*The Lancet.*

ELECTRICAL TREATMENT OF INTESTINAL OCCLUSION.—At a recent meeting of the Academy of Medicine Dr. Larat read a note on the treatment of intestinal occlusion by electricity. According to the author, galvanic electricity of the intestine deserves to be employed in all the cases of occlusion where medical means had failed, and where the obstacle has become insurmountable by the action of purgatives. Moreover, purgatives are useless when the intestine is impermeable, and become injurious in exciting vomiting, which would aggravate still more the condition of the patient. Dr. Larat says that it is essentially of importance not to lose time, and that electricity should be employed as early as possible; in the first place, the procedure would have a better chance of success; and, secondly, if it should fail, surgical intervention would still be possible and have some chance of success. One application of electricity only is often powerless to obtain movement of the bowels; four or five sittings on an average are necessary, and at intervals of several hours. Of sixteen cases, Dr. Larat removed the occlusion of the intestine by electrization in ten.—*The Lancet.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, November 17, 1888.

A SCIENTIFIC ATTACK ON THE CORSET.

THE crusade against lacing and the use of corsets has never been taken up very warmly by the medical profession. Perhaps this is because the doctors' wives and doctors' daughters are continually showing them that lacing, like tea-drinking, is a practice which will be followed despite all that science may disclose. Perhaps, too, it is because the attacks of reformers upon the corset have been of a too hysterical and sweeping character, and based upon general grounds rather than any carefully collected observations.

Dr. Kïanovsky, of St. Petersburg, has, however, lately presented an array of facts physiological and pathological telling severely against the corset (*Wratch*, Nos. 20 and 21, 1888; *London Medical Recorder*, October 20, 1888).

The observations of his predecessors in this line of investigation are first given. Professor Flower's work on "Fashion in Deformity" is rather a scientific than a critical study of the question. Professor Lesshaft, in 1884, however, made some observations on school-girls and found spinal curvatures far more often in boys than in girls. This he attributes to the use of corsets by the latter, a conclusion which is, however, a *non sequitur*, considering how many other factors are at work. Professor Lesshaft, with more reason, thinks that the use of corsets weakens the osseous and muscular structures of the trunk, and causes protuberant bellies and lax abdominal walls. Perhaps if young women knew that corsets which constricted the waist would eventually give them an obtrusive abdomen they would be more careful in their lacing. According to Dr. Kïanovsky, "masses of women (in institutions for young girls, among certain Caucasian peoples, etc.), feel ashamed to have full or large mammæ, and strive as much as possible to acquire flat, 'youthful' breasts; hence, during the period of development of breasts the women not only lace themselves tightly in stays and bodices, but, in addition, sleep on their breasts with some hard object (book, etc.) below." Professor Bouchut draws attention to the fact that pressure of stays on the intercostal spaces in tight-lacers suffering from intercostal neuralgia, may give rise to paroxysms resembling angina pectoris. Meyer states that tight-lacing decidedly manifests an injurious influence on the eye, in consequence of congestion resulting from obstructed reflux of blood from the head along the jugular veins. Almost every handbook of pathological anatomy describes a peculiar, more or less deep, groove on the surface of the liver, which is very often found on the post-mortem examination of female bodies, and which is caused by tight lacing.

According to Professor N. Kïanovsky, of St. Petersburg (*Handbook of Special Pathological Anatomy*, p. 204), "the hepatic capsule adjacent to the grooves proves to be considerably thickened from chronic inflammation, while the hepatic tissue itself at such spots is dense, atrophied to a more or less considerable depth, and sometimes even void of any glandular elements." Professor V. A. Manassein has for many years drawn the attention of his students to an important *rôle* appertaining to stays (and tight petticoat bands) in the etiology of gall-stones. His observations are supported by Dr. Rotter (*Deutsche med. Wochensch.*, February 14, 1884), according to whose researches on gall-stones, of 1,034 necropsies at Munich the stones were present in men in 3.9 per cent. of the whole number, and in women in 9.9 per cent.; in as many as forty per cent. of the female cases, simultaneously with gall-stones, there were found grooves and constrictions caused by stays. An important work recently published by Professor Marchand (*Deutsche med. Wochensch.*, March 22, 1888) throws a strong light on the mechanism of the formation of gall-stones in tight-lacers. Dr. W. J. Collins' experimental researches (*The Lancet*, March 17, 1888, p. 518) similarly elucidate pretty well why "deficient bile, dyspepsia, sickness, constipation, clayey stools, headaches, chlorosis, debility, may form a natural sequence" of tight-lacing.

Dr. Arini has reported a case showing that tight-lacing may cause wandering liver.

Drs. Graily Hewitt, Meyers, and Helene Belts assert that tight-lacing may cause displacements and flexions of the womb. Neftel's experiments showed that thoracic and abdominal compression cause anæmia. Schuter found that a lasting compression of the chest could cause albuminuria.

Kïanovsky, experimenting on fourteen habitual tight-lacers, found the average decrease of vital capacity of the lungs, when corsets were worn, to be 357 cubic inches. The strength of inspiration and expiration was decreased also, and the respiratory excursion of the chest. Hence he concludes that the corset dooms the wearer to oxygen starvation. He also found a lowering of blood-pressure and "arterial anæmia" as a result of the lacing.

The list of ills which the corset brings with it may here be repeated for the benefit of the fair and willing victims of the fashion:

Local inflammation of the liver.
Gall-stones and biliary colic.
Wandering liver.
Protuberant abdomen and enteroptosis.
Prolapse and flexious of the womb.
Lateral curvatures of the spine.
Anæmia, chlorosis.
Dyspepsia.
Diminished lung capacity and oxygen starvation.
Intercostal neuralgia.
Weak eyes.
Bright's disease.

This is a list that ought to convey dismay to the hearts of corset-makers and corset-wearers. But we suspect that women will continue to wear stays, and will answer to the complaints of science that the life of woman is, despite her dress, longer than that of man.

A REACTION AGAINST ANTISEPTICS.

THE movement against the use, except in a limited degree, of antiseptics, or, as they are now called, antimycotics, has received strong support from the investigations of Dr. E. Senger (*Deutsche Med. Zeitung*, No. 43, 1888), who shows the dangers of strong antimycotics in surgery, and the inutility of mild ones. Dr. Senger clearly states his position in a discussion following his paper (*London Medical Recorder*): All operations, he said, might be divided into two groups. In the first group strong antimycotics were applied, and these were the less dangerous operations. In the second group weaker solutions, particularly of boric and salicylic acid, were used. Antiseptics were introduced with the intention of killing any fungi that might have settled in the wound; in short, to disinfect. Antimycotic treatment was supported by the classical researches of Koch. Perhaps, however, it would be better, from the practical surgeon's point of view, to establish a basis by means of experiments in the disinfection of pus cocci. No doubt strong antimycotic solutions, such as sublimate and carbolic acid, destroy the staphylococcus aureus, but the weaker solutions do not effect this, though where they are employed there is a greater, nay a fatal, danger from a faulty antisepsis. Just in such cases in which strong solutions should be applied, they are inadmissible on account of the danger of poisoning; and again they are applied when they are much less needed. The theory and practice do not harmonize. To kill a pus coccus that has fallen into the abdominal cavity, washing with a four per cent. solution of boric acid is not sufficient, for you could let the man lie immersed in such a solution for five days and not accomplish that object. The same may be said of salicylic acid. Yet the results of operations in the abdominal cavity are excellent, and Senger believes that it is only necessary to wash the wound with sterilized water. He lays no particular stress on the common salt solution. The disinfection of a living tissue he considers to be impossible. Either the tissue is free from germs, in which case there is no need of an antimycotic, or it is infiltrated with pathogenic fungi, in which case it is impossible to destroy the fungi without at the same time seriously injuring the tissue. Disinfection answers admirably on dead objects, but in the case of living organs more importance must be attached to vital energy. Did not Virchow, at a time when it seemed as if the whole of pathology depended on pathogenic bacteria, especially direct attention to the conflict between the cells and bacteria? Surgical examination showed this in wounds in connection with syphilis, tabes, diabetes, and other exhausting diseases, so that, in spite of the strongest antiseptics, it was impossible to prevent purulence and purify the wound, because the energy of the cells had much abated and disinfection was impracticable. By all means let dead objects, such as instruments, the operating-room, etc., be thoroughly disinfected, but after the first incision no antimycotic whatever should be used. In how far these theoretical demands can be met in practice must be decided by those who have great opportunities of practice. The latter alone can determine the cases in which antimycotics are indispensable; but the general rule of avoiding their use should be observed.

LAPAROTOMY FOR GUNSHOT WOUNDS OF THE INTERTINE.

DR. H. C. DALTON, of St. Louis, reports a case of gunshot wound of the stomach and liver, in which laparotomy was successfully performed. The patient, a man twenty-two years old, was shot with a pistol of thirty-eight calibre at a distance of four or five feet. He was driven a mile and a half after the injury. The abdomen was opened, and two holes found in the stomach; the left lobe of the liver had been ploughed through by the bullet, which, however, could not be found. The liver and stomach were sewed up, and the abdominal cavity closed. The patient, after nearly losing his life from a hypodermic injection of grain $\frac{1}{120}$ of hyoscyamine given to relieve a distressing hiccough, finally recovered.

Dr. Dalton gives a table of sixty-nine cases of abdominal section for gunshot wounds, with twenty-seven recoveries and forty-one deaths.

Before the operation of laparotomy was introduced the mortality was ninety-two per cent.

Dr. Dalton states that he is the first to successfully suture the liver in such cases as these.

THE ANNIVERSARY OF THE ACADEMY, AND THE NEW BUILDING.

THE plan which has been adopted by the New York Academy of Medicine of having annual addresses to which the public are invited, is seen every year to be wise and beneficial. The addresses have been given by representative members of our profession, and have been creditable to the speakers and to the Academy.

One cannot but feel, however, in inviting lay guests to the hard board seats and narrow walls of the Academy, that the impression given of the material resources of our profession here cannot be a favorable one. The physicians of New York number between two and three thousand; the Academy numbers nearly a thousand members, and includes the most prosperous portion of our medical workers. The Academy ought to have better quarters, and to receive public guests in a less barren, white-walled, inacoustic audience-room. Distinguished laymen must find it hard to get *en rapport* with medicine while seeking for sedentary comfort on a perforated board, dodging draughts, or stifling in a heated mixture of pulmonary exhalations and alleged atmospheric air.

The Academy anniversary discourse suggests, as has already been seen, that the functionaries of that learned institution ought to take some early action in the matter of a new building. Reports agree that quite enough money has been raised to make a start, and it will be vastly easier to raise more money when a building has been begun, and something tangible can be shown to those of whom donations are asked. It is only fair that by the application of the bond system those who come after us and who will enjoy the present generation's work be given an opportunity to pay for part of it.

THE MORTALITY OF PNEUMONIA.

The mortality of pneumonia, it has recently been alleged, is higher proportionately now than it was fifty years ago before venesection had been abandoned. The figures upon which this assertion is made were put forth by Dr. Hartshorne, of Philadelphia, last February, and were discussed in this Journal of May 19th. In the November issue of the *University Medical Magazine* Dr. William Osler takes up the question and contradicts the views of Dr. Hartshorne. Dr. Osler has secured statistics of the pneumonia mortality for a series of years at the Montreal General Hospital, the Pennsylvania Hospital, and the Charity Hospital at New Orleans. At Montreal the statistics were available since 1853. In the decade 1853-63 there was a mortality of 16.2 per cent.; decade 1863-73, 16.1 per cent.; decade ending 1883, 23.7 per cent.; and in the years 1883-87, a mortality of 20.3 per cent; a total of 1,012 cases with 206 deaths, equal to 20.4 per cent. In Charity Hospital, New Orleans, the death-rate has been as follows:

	Per cent.
1830-39	44.6
1840-49	35.3
1850-59	32.2
1860-69	43.9
1870-79	40.2
Average	38.01

As to the Pennsylvania Hospital, Dr. Hartshorne, in his paper before the College of Physicians of Philadelphia, quoted the mortality in three years of the 4th, 6th, and 8th decades to show a progressive increase in the death-rate, which might possibly be attributed to changes in the methods of treatment. There is indeed an increase, as shown in Table I., but Dr. Osler shows in Table II. that four other periods of three years in successive decades indicate that the mortality "has, if anything, been reduced."

Table I.

	Per cent.
1845-46-47	16.0
1855-56-57	25.4
1865-66-67	24.1
1875-76-77	39.2
1885-86-87	36.1

Table II.

	Per cent.
1848-49-50	37.9
1858-59-60	21.2
1868-69-70	22.8
1878-79-80	32.7

A combination of the two tables, however, does certainly indicate an apparent increase in the mortality-rate.

In the other tables, also, the figures seem rather to show an increase than otherwise. The other statistics of mortality-rates under Laennec (10 per cent.), Diett (19.5 per cent.), Grisolle ($15\frac{11}{12}$ per cent.), are also to be taken into account. Bennett asserts that the old death-rate from pneumonia in the army and navy was $7\frac{9}{13}$ per cent., while the modern death-rate is $14\frac{2}{7}$ per cent.

The death-rate in the United States Army is said to have been less during venesection times than later, viz., 1 in 11.5 as against 1 in 6.67.

All of the foregoing show that figures are not very trustworthy, and that the question of increased mortality-rate in pneumonia is still not settled. The probabilities, however, are strongly in favor of an increased rate in general hospitals, at least. This may not indicate a worse system of therapeutics, however, but rather that patients have a less degree of vital resistance, owing to an increase of poverty and alcoholism. In this connection, also, the communications upon the general question by our esteemed correspondents in this issue will be read with interest.

A SAFE ANTISEPTIC SOLUTION.

The idea that combinations of antiseptics are more powerful than the single chemicals is not a new one, but any practical application of the idea has not, so far as we know, had any wide adoption.

Dr. Emil Rotter, in an article in the *Centralblatt für Chirurgie*, No. 40, 1886, brings up the subject again and offers an antiseptic solution which he claims is very powerful, yet not toxic to any dangerous extent. The solution that he desired to obtain was to have, he said, the following characteristics: It should contain no poisonous agent in quantity sufficient to cause any harm if absorbed; it should be non-irritating and easy to keep; it should be clear and free from odor; it should mix easily with ordinary water; it should be so compounded that the essential constituents could be carried as a powder or pastille.

The following was the result of his experiments:

℞.	Corrosive sublimate	0.05 (1 to 20,000, gr. j.)
	Sodii chlorid	0.25 (gr. vss.)
	Acid. carbolic	2.00 (gr. xxx.)
	Zinci chlorid.,	
	Zinci carbolat ãã	5.00 (ʒ j½.)
	Acid. boric	3.00 (gr. xl.)
	Acid. salicylic	0.60 (gr. x.)
	Thmyoli	0.10 (♏ ij)
	Acid. citric	0.10 (gr. ij.)
	Aquæ q. s. ad	1,000.00.
M.		

This solution was tested in both laboratory and surgical cases. In the laboratory he found it to have a more potent effect on pyogenic microbes than sublimate in solutions of 1 to 1,000.

He gives a list of twenty-three, mostly minor, surgical cases in which it acted most efficiently.

THE TITLE OF DOCTOR.

In olden times the title of doctor was considered justly as an honor, and an evidence of sound education and academic training.

The extraordinary fondness in this country for titles of all kinds, especially those of doctor, professor, and colonel, or some military equivalent, have taken away all prestige from the name. The druggist at the corner is a doctor, the chiropodist is a "professor," the advertising columns of the newspapers are emblazoned with pictures of long-haired "doctors" and "professors."

To a man who has been a groom the bestowal of the title of "doctor medicinæ" no doubt still confers an honor; but, on the whole, the title has become rather a trade-mark and a convenient means of unobtrusive advertisement rather than a badge of distinction or evidence of scholarly attainment.

There seems to be a growing feeling that, after all, the title of "mister" is as noble a one as a gentleman needs or can desire.

Says *The Lancet*, regarding this matter: "There is one title that is highly honorable, and is almost now a distinction among medical men who feel their own strength and rest on their consciousness of being masters of their art—the good old title of 'mister,' which some of the best men in the profession find ample for all social and professional purposes. It is certainly infinitely more honorable than any unacademic or unwarranted use of the title of 'doctor.' And we see many indications that this view is shared by the profession, and by many who think they have a right by courtesy to something more."

News of the Week.

New York Obstetrical Society.—Officers elected for 1888-89: *President*, Dr. H. T. Hanks; *First Vice President*, Dr. Bache Emmet; *Second Vice-President*, Dr. H. D. Nicoll; *Recording Secretary*, Dr. Egbert H. Grandin; *Assistant Recording Secretary*, Dr. A. M. Jacobus; *Corresponding Secretary*, Dr. H. M. Sims; *Treasurer*, Dr. J. L. Morrill; *Pathologist*, Dr. H. C. Coe.

A New Journal has been started in London, *The Illustrated Medical Journal*. It is to give a colored lithograph weekly, and copious illustrations are promised in the text.

Gum Chewing.—Our esteemed and conservative contemporary, *The New York Medical Journal*, has taken a great responsibility upon itself, for, according to the Maryland *Medical Journal*, it is inclined to endorse the habit of chewing gum.

Poisoned by Cheese.—Over two hundred cases of sickness, caused by eating cheese, have been reported to the Ohio State Board of Health, within a few months, the towns of Urbana and Mansfield contributing about fifty cases each. Grave symptoms, even to complete syncope, appeared in some cases, but there were no deaths.

Execution by Electricity.—The Committee of the Medico-legal Society, composed of Drs. Frank Peterson, R. Ogden Doremus, Frank H. Ingram, and J. M. Bleyer, made a report last Wednesday evening, in which the following description was given of the proposed methods of executing criminals by electricity:

"The electric current, in passing through the body from one pole to another, undergoes more or less diffusion through the tissues. A current passing from the top of the head to the small of the back will be diffused throughout a great part of the brain, and all of the tissues of the neck. The medulla oblongata—a part of the brain which is most vital—together with all of the great nerves of the neck and the spinal cord, which exercise jurisdiction over the movements of the lungs and heart, will be thoroughly permeated by the current applied in this way. As the seat of consciousness is in the brain, and particularly in the cortex of the cerebrum, it is clear that this faculty of the mind will suffer at once if the current be sufficiently strong. The electric stream flows from the positive to the negative pole, and there might be some possible advantage in placing the positive pole on the vertex of the head, nearest the centre of consciousness, although death in any case will be instantaneous. After mature deliberation, we recommend that the death-current be administered to the criminal in the following manner:

"A stout table covered with rubber cloth, and having holes along its borders for binding, or a strong chair, should be procured. The prisoner, lying on his back or sitting, should be firmly bound upon this table or in the chair. One electrode should be so inserted into the table, or into the back of the chair, that it will impinge upon the spine between the shoulders. The head should be secured by means of a sort of helmet fastened to the table or back of chair, and to this helmet the other pole should be so joined as to press firmly with its end upon the top of the head. We think a chair is preferable to a table. The rheophores can be led off to the dynamo through the floor or to another room, and the instrument for closing the circuit can be attached to the wall.

"The electrodes should be of metal, not over one inch in diameter, somewhat ovoidal in shape, and covered with a thick layer of sponge or chamois-skin. The poles and the skin and hair at the points of contact should be thoroughly wet with warm water. The hair should be cut short.

"A dynamo generating an electromotive force of at least three thousand volts should be employed. Either a continuous or alternating current may be used, but preferably the latter. The current should be allowed to pass for thirty seconds."

The Society was not prepared last night to take action upon the report, because the committee took them by surprise. The report was not expected until the December meeting, and so it was laid on the table until that time to admit of all being present.

The law provides that executions by electricity shall take place only in Sing Sing, Auburn, and Clinton. New York City murderers will be executed at Sing Sing.

The Pasteur Institute, Paris.—The Pasteur Institute was opened, November 14th, in the presence of President Carnot. Pasteur received an ovation from the people present. In an address, he expressed his thanks for the support he had received in fulfilling a humane task.

Woman's Hospital, New York.—Dr. Henry D. Nicoll has been appointed Dr. Thomas's successor as Surgeon to the Woman's Hospital.

The Boylston Medical Prize of four hundred and fifty dollars has been awarded by Harvard University to Dr. George H. F. Nuttall, of San Francisco, for a dissertation entitled, *A Contribution to the Study of Immunity*.

Doctors and the New West Side.—If doctors' signs are any indication of disease, says the *New York Sun*, the new West Side must be one of the unhealthiest parts of the city. There is a doctor's sign on every large apartment building, and they average about one sign to every five or ten private houses. The real secret of their frequency is not that there is business in that part of the city for all the doctors, or for one-quarter of them, but that the recent rapid development of that section has led scores of young doctors to go there to grow up with the community in the hope of some day getting together practice enough to live. About one in a dozen of the earliest comers did really find a practice growing up around him, and a few of the West Side doctors therefore are getting rich fast, but for the rest they come, stay a few months, or as long as their capital lasts, waiting for the practice that never comes.

The Whitechapel Murderer and Physiology.—The Paranoiac Anti-Vivisectionist, Miss Frances Power Cobbe, has a theory that the Whitechapel murderer is "a physiologist delirious with cruelty."

Vaccinating Against Cholera.—Dr. Gamaleia has left Odessa for Paris, in order to explain his system of vaccination against Asiatic Cholera to the Académie des Sciences. In March he proposes to go to India, to test practically the efficacy of his method on cholera patients.

Laymen in Medical Positions.—The Chicago Medical Society has established a new test of medical ethics. At a meeting held recently the following resolutions were adopted by a two-thirds vote:

"*Resolved:* That this Society regards any physician who attempts in any manner to place a layman in a medical position as guilty of the most unprofessional and disgraceful conduct.

Resolved, further, That a committee of five be appointed to wait on the County Commissioners and demand that all county medical institutions be placed and kept under medical control.

"Furthermore, That it demand the same privileges for the Chicago Medical Society in the matter of the county hospital as are now granted to the Chicago Homœopathic Society."

The object of the resolutions, is, we believe, to secure competent medical management of the Cook County Medical Institutions.

Chicago seems to have an unfortunate time with her public medical institutions. Without possessing a single one which can be considered entirely creditable to a great city, there is a cloud of contentiousness hanging over those which she does support. The Chicago Home for Incurables is now in trouble, and the Medical Board has resigned.

To Limit Marriage.—A bill has been introduced into the Legislature of Kentucky which prohibits marriage with an idiot, lunatic, pauper, vagrant, tramp, gambler, felon or any person rendered physically helpless or unfit for the marriage relation, or any person with a violent temper, or who has, within one year, been a frequenter of any immoral house.

Trouble in the Garfield Hospital.—The Washington correspondent of the *Maryland Medical Journal*, writes: "It is not unlikely that some effort will be made to secure a reorganization of the Board of Directors of the Garfield Memorial Hospital, for of late many things have occurred, for which the present Board is entirely responsible, that cannot be pleasing to those by whose efforts the institution was founded, and who have control more or less over the Congressional purse-strings upon which it is dependent. It will probably be their wish to know why a reputable physician was summarily dismissed from the attending staff to make place for a surgeon of one of the divisions of the Canadian Pacific Railroad, who is an Irishman by birth and not a naturalized American citizen; why the nurses hitherto employed were ejected and Canadians substituted; why a resignation was virtually forced from the gentleman who had served the hospital faithfully as Assistant Resident Physician; why the applicants for the position of resident physician, who were graduates of local colleges, were passed over with so little consideration, and a Canadian, about whom the board practically knew nothing and had never seen, was chosen to fill this post."

The University Medical Magazine is the title of a new monthly, edited under the auspices of the alumni and faculty of medicine of the University of Pennsylvania.

The Fever at Jacksonville dies hard. On November 13, despite a frost, there were reported 30 new cases. The total number of cases now is 4,511, with 388 deaths.

The Empress Eugenie has given directions that her body be cremated after death.

M. V. M. A.—Emperors may die, dynasties may fall, presidential elections may come and go, the stars may drop out, the sun weaken its fires, Mr. Sullivan, of Boston, may be ill of alcoholic gastritis, the base-ball player may become an object of apathy and contumely, Professor Nichtweissetwass, of Germany, may patent a new antipyretic, or discover a new method of treating consumption; but all this is nothing to the recent meeting of the M. V. M. A. at St. Louis, or elsewhere, recently, as described and echoed by our esteemed contemporary the *Medical Weekly Review*.

"Vesuvius," says our enthusiastic contemporary, "Vesuvius never erupted more grandly, nor did Pompeii ever fall more gloriously than on the evening of Tuesday, the first day of the session, when their efforts were directed toward the particular pleasure of the M. V. M. A. members. The burning sentiment 'Science and Sociability United' was a pronounced and perfect announcement of an obvious fact, although the pyrotechnic artist who constructed the mechanism was a little off on his orthography when he made it read 'Sciance.'

Truly, what are the palsying restrictions of orthography when compared with the Pompeiean splendors of a M. V. M. A. banquet? What is still better, the eruption and the fall all took place before the hour of 8.30 P. M., until which blighting moment "All went merry as a marriage bell, and all too soon time rudely clipped the wings of eloquence and sped the parting guests," to a concert by Colonel Gilmore, of brass band and Coney Island fame, where, "the vibrations which wafted out upon the evening air the divine tones of Home, Sweet Home, completed the capture of the hearts of the visitors, and it was a rude awakening when the hour came for separation and the final good-byes."

Next to being Agamemnon or Achilles, it is most important to have a Homer to sing of the great deeds. The members of the M. V. M. A. as they rode home on the M. C. & St. P., on the B. & Q., and I. C. R. R., reading the admirable accounts of what had happened at St. Louis, must have felt that they were fortunate mortals, individually and corporately. Yet we hear almost nothing of all this in our esteemed and supposably enterprising Chicago exchanges. Thus does the gnawing tooth of jealousy excavate the vitals of the progressive journalism of the Lakes.

The Maritime Medical News is the title of a new medical journal which has just reached us. It is edited by five medical gentlemen, and published monthly at Halifax, Nova Scotia.

Society Reports.

NEW YORK NEUROLOGICAL ASSOCIATION.

Meeting held October 2, 1888.

PRESIDENT, DR. GEORGE W. JACOBY, IN THE CHAIR.

DR. B. SACHS presented three cases of

MUSCULAR DYSTROPHIES,

comprising the original part of his paper before the American Neurological Association in Washington. The author referred to the relation between pseudo-muscular hypertrophy and other forms of muscular dystrophies, particularly Erb's form. Erb had stated that the two were identical. Erb's juvenile form consisted in atrophy attacking the upper extremity, particularly the deltoids, the infraspinatus, and sometimes the latissimus, the lower extremity being intact. The question was whether pseudo-hypertrophy and Erb's atrophy were distinct or merging types.

CASE I. was twelve and one-half years of age. The child had suffered from severe fright at ten months. She had never walked well. She had diphtheria when four years of age, and after this her gait had been worse. When six and a-half years of age, increased size of the legs had been first noticed. The characteristic difficulty in getting up from the floor had been present. There was atrophy, commencing in the palmar interossei and affecting the arm and forearm. The thenar and hypothenar eminences had not been involved. There was hypertrophy of the whole lower extremity, but the hypertrophy of the legs had not kept pace with that of the thighs. It was apparent that atrophy of the legs would soon supervene. The atrophy of the hands had not been present two years ago. The case proved that in the atrophy associated with pseudo-hypertrophy it was not necessary that the shoulder should be first affected, as in Erb's form. For the interossei to be attacked first was rare, but only proved that any muscle could be affected by the disease, while Erb had stated that the hand was exempt to the last.

CASE II. was that of a boy ten years of age. There was no history of heredity and no constitutional taint. The patient was a newsboy. He had walked late and had been treated for rickets. He had never been able to run, and had been always easily fatigued. The hypertrophy in this case was most marked in the thighs. A peculiarity of the case was the fact that the boy could rise from the floor without climbing upon himself, as was customary in the disease and considered by Gowers a differential test. There was some atrophy of the serratus anticus of the right side. The upper extremities were not affected.

DR. BIRDSALL suggested that the face had a peculiar appearance.

DR. SACHS had not referred to this peculiar puffiness because, while suggestive, it was not sufficiently characteristic of the Landouzy-Dejerine type. It was possible that it might develop into this appearance.

CASE III. was that of a girl twelve years of age. She had walked at nine months. At the age of ten months she had fallen, and later had had something the matter with the knee. This was treated with the plaster splint in St. Petersburg, and recovered. The circumstance was mentioned because it had been denied that so young a child could be successfully treated with this instrument. At the age of three the child had measles, at four smallpox, at six scarlet fever, and at six and one half typhoid fever. The loss of power in the limbs was not preceded by fever or convulsions. Five months ago it was noticed that motion was impaired in the toes, there was a modified gait, fatigue, and difficulty in mounting the stairs. There was no pain. There had been at times a creeping sensation of the skin, and once fibrillar contractions had been noted. The atrophy affected the right leg, thigh, and gluteal region. The electrical reactions were normal. For four months the knee-jerk had been absent upon both sides, but now it was exaggerated upon the left side, while upon the right side it was still absent. The gait was that of poliomyelitis affecting the anterior group, while the history was one of progressive muscular atrophy of the peroneal form. The gradual onset, without convulsions or fever, and the progressive character of the affection, and the atrophy, which was not so profound, distinguished it from atrophies of spinal origin. On the other hand, however, the exaggerated knee-jerk suggested a substratum of spinal or neuro-spinal implication. The case was an anomalous one of a type seldom seen. The author inclined to a diagnosis of progressive muscular atrophy.

DR. BIRDSALL had been interested in the types shown, and was not inclined to question the doctor's diagnosis. The last case was, he thought, allied to the progressive muscular atrophy type rather than to that of an acute poliomyelitis; he thought, however, that there might be grades between the two, that there was no sharp line of demarcation between them. The former presented the characters of a degeneration while the latter was an acute inflammatory condition which might involve not only the gray matter but extend to the neighboring tracts. The speaker had a case in mind diagnosed acute inflammatory poliomyelitis. There was involvement of the muscles of the anterior and posterior aspects of the thigh, slight affection of the anterior tibial group, and exaggerated reflex, showing extension to the lateral collum. In the speaker's opinion the different varieties of atrophy represented grades rather than distinct pathological entities. The fact that the atrophy in one case had affected an arm, a leg, in one was hemiplegic and in another paraplegic, should not blind one to the possibility that the pathological processes might be the same. In the present stage of our histological knowledge he thought that we were not even able to separate cases into those of myopathic and myelopathic origin. The number of the cases was meagre and our methods of examination were not calculated to reveal minor degrees of atrophy. In the muscles, nerves, and cords it might be possible to have a gradual destruction and regeneration going on which would escape detection. The value of the electric reaction was equally open to doubt. If fibres degenerated one by one, it was probable that the reaction would remain normal until the number of atrophied fibres had attained a certain grade. The degeneration-reaction would be, in any case, interfered with by the normal reaction of the healthy fibres. The question was whether there was great uniformity in these various types or great diversity; he predicted the latter, the types running into each other.

DR. PUTNAM-JACOBI suggested that the gluteal muscles were unaffected in the second case presented. This accounted for the lack of the usual difficulty in getting up from the floor.

DR. SACHS was of the same opinion. He referred to the point because Dr. Gowers had mentioned the symptom as pathognomonic.

DR. DANA referred to a case of pseudo-hypertrophy in which the disease had advanced from the calves to the thighs, and thence to the shoulder-girdle. There was slight hypertrophy of the forearm, the part said to be unaffected in Erb's form.

The fundamental distinction between the symptoms of chronic anterior poliomyelitis and progressive muscular atrophy was the retrogressive or stationary character of the former and the progressive character of the latter.

It was difficult to criticise the diagnosis in Dr. Sachs' last case. He would prefer to postpone his decision, but would suggest that a careful examination of the urine be made for lead. A number of cases of anterior poliomyelitis in children had been recently ascribed to lead.

DR. GRAY would, upon *à priori* reasoning, decide the case as one of chronic anterior poliomyelitis, but that anterior-horn myelitis was, as had been suggested, retrogressive. Muscular atrophy could be, he thought, divided into that of spinal and peripheral origin; of the latter, however, we must distinguish between that arising in the muscles and that due to peripheral neuritis.

The results of treatment varied. There were cases which, with rest in bed, faradism, and gentle massage, improved, while other cases were unaffected by treatment. He thought that the former were of spinal while the latter were peripheral, either neural or muscular in origin.

Formerly the diagnosis of a central or peripheral origin was determined by the presence or absence of the reaction of degeneration. Now confusion surrounded this test also. The doctor inquired in regard to opinion upon this point. Was the degeneration-reaction present only where the muscles were degenerated?

Dr Sachs closed the discussion. He was pleased that Dr. Birdsall, who had not heard his paper in Washington, had been in substantial agreement with it. While there was diversity of types there was no anatomical distinction between pseudo-hypertrophy and atrophy. The primary and secondary affections were distinguished by their symptoms. The primary affection occurred early, there was absence of fibrillary contractions, and absence of the reaction of degeneration. This group included pseudo-hypertrophy, Erb's type, and that of Landouzy and Dejerine.

Dr. Gray begged to refer to a case recorded by Schultze which had been assumed to be primary, but in which there had been found changes in the cord.

Dr. Sachs explained that the change referred to was independent and unconnected with the muscular symptoms. It was in a part of the cord unconnected with the muscular tract. He suggested that in Dr. Dana's case the atrophy in the arm might have given rise to a fictitious appearance of hypertrophy in the forearm.

Dr. Dana added that the muscles had also the peculiar feel of pseudo-hypertrophy.

Dr. Sachs did not question the doctor's diagnosis. He believed that all present had agreed upon the desirability of getting rid of the present classification upon anatomical distribution of the hypertrophy or atrophy. He had retained the term peroneal form for convenience only.

Dr. M. D. Field followed, with a paper entitled

OTHÆMATOMA OR INSANE EAR.

The title referred to a shrunken, shrivelled condition, preceded by a period of active congestion during which the organ was swollen, hot, and very painful. Between the cartilage and the perichondrium there was effused a sero-sanguinolent fluid which might become purulent. This was absorbed, or rupture occurred, with healing and the deformity described. The deformity was not uncommon among the insane. It had been attributed to trophic change. The most general opinion had been that othæmatoma was characteristic only of chronic cases, and usually indicated an incurable condition.

The question of a traumatic origin had received some attention. It had been remarked that a Greek statue represented a boxer with this deformity. The author could not recall the reference. It had been said to result in boys from the violence of the game of foot-ball. It had also been observed among soldiers.

The author had had under his care the case of a professional pugilist who had presented the deformity in question. Upon directing his attention to it, the man had remarked that it had resulted from a blow upon the head, and that it was common in his profession—that he knew as many as a hundred men similarly injured. Arrangements were made with this man to be present at the meeting. He had been unable to come, but had sent substitutes. Several undersized, meek-looking professional men—pugilists—here appeared, all presenting the deformity. It should be added that only one had ever been in an asylum. This one had been in for delirium tremens. It was evident that the insane ear could proceed from traumatism; also, that it was more common than was commonly supposed.

Dr. Petersen felt indebted to Dr. Field for the opportunity of examining the cases. He had seen the condition frequently in the insane, and believed that it was always due to traumatism. It was more frequent among the insane, probably on account of the necessity for restraint, also because the insane were apt to injure themselves in many ways. He also believed that the changes in the walls of the vessels in insanity predisposed to the result. Retrograde metamorphosis of the cartilage and perichondrium, like that of senility, was common in general paresis and other varieties of chronic insanity.

Dr. Parsons exhibited a cast of othæmatoma in the recent state taken some years ago. He had always considered the condition a result of nerve-degeneration. The exhibition this evening had, however, demonstrated that it could result from traumatism alone.

Dr. Douglas had seen a considerable number of instances of the insane ear, and thought that it had been due to violence in every instance, either from the attendants, other patients, or the sufferer himself.

Dr. Ingram could corroborate this statement. The insane had the habit of rubbing the ears, which might account for some cases. He could add to Dr. Field's record that of a case of recovery after double hæmatoma during an active maniacal attack. With improvement of the mental condition there was improvement in the ear. Upon recovery there was diminution in the size of the ear, but no deformity.

Dr. Petersen added that the reference to the Greek statue had been by Fuerstner, Arch. f. Psych., III.

Dr. Field, in closing the discussion, referred to the case reported by Dr. Hunn; after the patient had been struck with a broom-stick the hæmatoma appeared upon the opposite ear. Dr. Hunn cited the case as an instance in which traumatism could not have been the direct cause.

Catalepsy in both Mother and Child.—Dr. Van Schoot reports a case of convulsive seizures of a peculiar kind in a woman in the seventh month of pregnancy. When he first saw her she was motionless, her face being cyanotic, but her temperature, respiration, and pulse normal. She was quite unconscious, and the slightly dilated pupils did not react to light. The arms were flexed at right angles, requiring some force to move the forearms. By means of chloroform all the contracted muscles relaxed, and some hours' sleep was obtained. Afterward she remembered nothing of the fit, but she stated that all movements of the fœtus seemed to have ceased, and no heart-sounds could be detected. These attacks were repeated frequently for a fortnight, the urine being quite normal all the time. Large doses of bromide were given without effect, but some amelioration was produced by sulphate of atropine. Latterly the attacks were associated with considerable movements of the abdominal muscles. Some temporary benefit was obtained by subcutaneous injections of pilocarpine. At the conclusion of a fortnight from the first attack labor came on, a female child being born alive, which, however died in a week's time, after repeated convulsions similar to those affecting the mother. The mother had no attack till the fifth day (the same day that the child's first attack occurred). After this there was only one more attack, two days later, complete recovery ultimately taking place. The author, referring to the diagnosis, is disposed to exclude eclampsia, because, although there were clonic contractions of the abdominal muscles, the main spasm—indeed, at first the only kind of spasm—was tonic. The entire absence of albuminuria, too, tends to exclude eclampsia. Again, epilepsy may be excluded, as after the tonic no clonic spasms occurred, and as the limbs remained fixed in a certain position for one or two hours. He therefore considers that the attacks were of a cataleptic nature, both in the mother and child.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE CLINICAL SOCIETY—A CASE OF INJURY TO THE ELBOW-JOINT INVOLVING THE ULNAR NERVE—PULMONARY GANGRENE TREATED BY INCISION AND DRAINAGE—A CASE OF EXTENSIVE ANCHYLOSIS OF THE SKELETON—MEDICAL SOCIETY OF LONDON—A CASE OF ABDOMINAL SECTION FOR INTESTINAL OBSTRUCTION—TREPHINING THE STERNUM—THE HARVEIAN ORATION—THE RELATIONS OF MICRO-ORGANISMS TO DISEASE—THE ARMY MEDICAL SCHOOL—THE COMING AMALGAMATION OF THE DUBLIN MEDICAL SCHOOLS—A SIMILAR SCHEME FOR LONDON—THE LESSENED MORTALITY OF ABDOMINAL SECTIONS AND THE CAUSES THEREOF—CASES OF RECOVERY FROM BRAIN INJURIES—A CONVENIENT METHOD OF OPERATING FOR AUDITORY EXOSTOSES—A NEW METHOD OF RAISING THE EPIGLOTTIS.

London, October 19, 1888.

At the first meeting of the Clinical Society, after a few introductory remarks from the President, Mr. Nunn read a case of injury to the elbow-joint involving the ulnar nerve. Dislocation forward of the radius had occurred, and when the patient was seen by Mr. Nunn (two months after the accident) there was loss of sensation in the ring and little fingers, and some indistinct thickening in the ulnar nerve above the elbow. Mr. Heath remarked that such cases were difficult both to diagnose and to treat. In doubtful cases the best treatment was to flex the elbow and lay the forearm obliquely across the chest, so that the hand rested on the opposite shoulder.

Dr. Pasteur then described a case of pulmonary gangrene which had been treated by incision and drainage. The patient was a boy, seven years of age, whose illness began insidiously but developed rapidly. On the tenth day of his illness he was admitted to the Northeastern Hospital for Children. He was then febrile, with coated tongue, quickened breathing, and gangrenous fetor of breath. His breath had become offensive the day before admission, on which day also he had coughed up a quantity of bright blood. There were signs of consolidation over the right upper lobe. During the next three weeks cavity-signs developed at the right apex. The rest of the right lung became pneumonic. The temperature ranged from 100° to 103° F. Three weeks after admission the pulmonary cavity was opened by an incision in the second right space, one inch from the sternum. A large quantity of gangrenous lung and putrid fluid was expelled from the wound. The cavity was found to extend to the sixth space, where a counter-opening was made, and flanged tubes inserted. Great improvement ensued, but was only temporary. Fetor of breath reappeared on the tenth day, and the patient sank rapidly three days later. At the necropsy a huge gangrenous cavity was found occupying the anterior part of the lung, and implicating all three lobes of it. It was lined for the most part with a thin layer of granulation-tissue. The necrotic process had invaded the pericardium and set up acute pericarditis. The œsophagus was adherent to the bronchus, and the two tubes communicated by means of a narrow sinus three-quarters of an inch in length. Dr. Pasteur remarked that the gangrene was undoubtedly due to the passage of some irritative material from the œsophagus to the lung along this sinus. The amount of repair which took place under unfavorable circumstances was encouraging, and an earlier operation might have saved the life of the patient. Mr. Godlee referred to a case of Dr. Poore's in which he had operated, but unsuccessfully as regarded saving the life of the patient. Mr. Nunn alluded to a case of abscess of the lung in which Mr. R. W. Parker had operated with a most successful result.

Dr. Alexander Morison then related a case of extensive anchylosis of the skeleton, with diaphragmatic breathing. The patient was a man, forty-four years of age, with a neurotic and rheumatic family history, and himself rheumatic. He had had gonorrhœa, which was followed by the anchylosis. The joints chiefly involved were both shoulders, both hips, all the ribs, and the vertebral column. Thoracic respiration was abolished, but its place was taken by exaggerated abdominal breathing. The expiratory capacity of the chest was much reduced, and the pectoral muscles atrophic. The patient had recently begun to deposit fat. Mr. Godlee referred to the case of a man with chronic knee trouble who had contracted gonorrhœa, since which all his joints had stiffened. Mr. Hutchinson said he thought there were cases of spondylitis deformans, without a suspicion of gonorrhœa, which were quite as bad as Dr. Morison's case. He believed that cases of gonorrhœal rheumatism only occurred when there was a very strong tendency to rheumatic gout. Dr. Barlow said he had seen four cases of general anchylosis, and only in one was the disease due to gonorrhœa. Dr. Angel Money said he had seen some cases in which the condition was the outcome of a peripheral neuritis. He had also seen a case in which there was a blue lead-line on the gums, and suggested that lead-poisoning, which was productive of gout and peripheral neuritis, might have something to do with these cases.

At the first meeting of the Medical Society of London the President (Sir William MacCormac) gave an introductory address, in which he dwelt at some length on the distinctions between ancient and modern surgery. Mr. Edmund Owen then narrated a case in which he had operated for acute intestinal obstruction. The patient, a woman, aged fifty, had long been in the habit of taking a purge every Saturday night, and one Sunday morning she was seized with violent abdominal pains. Vomiting ensued, and constantly occurred throughout Sunday and Monday. The abdomen became distended and tympanitic. Mr. Owen performed abdominal section and found (and tore through) an omental band constricting the small intestine. A few inches higher up the bowel was a permanent annular constriction, which had evidently been caused by the long-continued pressure of the same band. Mr. Owen suggested that this piece of bowel had become gradually accustomed to the pressure, but that probably the action of the purgative had caused displacement and subjected a fresh piece of bowel to the strangulation.

Mr. Ballance related the case of a woman in whom symptoms of suppuration in the anterior mediastinum manifested themselves. Examination with a probe revealed the presence of pus, and the sternum was trephined. It was then found that the suppuration was due to caries of the posterior surface of the sternum. The carious bone was removed, the cavity frequently washed out with sublimate solution, and the patient made a good recovery. Mr. Sheild said he had seen pyæmic abscesses perforate the sternum.

The annual Harveian oration at the College of Physicians was delivered on Thursday last by Dr. P. W. Latham, who took a somewhat novel departure. Previous orators have mostly confined themselves to a eulogy of Harvey's life and labors, and to describing, and pointing out the significance of the discoveries made by him. Dr. Latham remarked that these topics had been exhaustively discussed by his predecessors, and he therefore proposed to discuss some of the discoveries which had been made in modern times in matters connected with the circulation. After briefly referring to the discoveries made by Malpighi, Leeuwenhoek, Hales, Cowper, Haller, Lieberkühn, Prochaska, and others, he went on to consider the relations of micro-organisms to disease. It had been proved that certain diseases, as anthrax, relapsing fever, and tubercle, could be produced in healthy animals by inoculation with the bacilli characteristic of those disorders. When certain "non-pathogenic" bacilli, however, were introduced into the blood of the lower animals, even in large numbers, they were speedily destroyed by the living blood, or, when injected into the tissues, by the cellular elements of the latter. If the bacilli were not destroyed, but were such as were able to live in the blood or tissues of living animals, various chemical products were formed in connection with their growth, and among these were certain chemical poisons capable of destroying life. The chemical constitution of ptomaines was then discussed. Not only, however, had it been shown that certain poisons or ptomaïnes could be derived from dead putrefying animal substances, but it had also been shown by Gautier that certain bodies (leucomaines) having poisonous properties were formed within the living organism and independently of the action of bacteria. Dr. Latham suggested that these various substances (ptomaines and leucomaïnes) might be derived from the disintegration of albumen. He had, he said, in the Croonian Lectures for 1886, endeavored to show that there were grounds for regarding living albuminous compounds as made up of certain cyan-alcohols united to a benzine nucleus. He now proceeded to point out, by the aid of chemical equations, how ptomaïnes and leucomaïnes could be derived. As an illustration of the view advanced that in living animal organisms, various substances, such as extractives and alkaloids, were produced by slight departures from normal nutrition, and entirely independent of any bacterial action, Dr. Latham referred to the pyrexia which, even in healthy individuals, might follow excessive fatigue. Reverting to the consideration of the bacilli, Dr. Latham observed that it was only in particular conditions of a tissue, or at special times in its growth, that it furnished suitable soil for the growth of the bacilli. An example of this in the vegetable world was quoted from De Bary, and as an instance in the human subject, Dr. Latham remarked on the rarity with which ringworm of the scalp was seen in children over sixteen; some change had taken place in the tissue of the scalp which rendered it less suitable for the growth of the parasite. In phthisis the resisting power of the tissues to the bacilli was an important element, and in the prevention and treatment of consumptive mischief our aim must be not so much to fight against the bacilli as to strengthen the parts attacked. In concluding his oration, Dr. Latham said there was one important point to refer to in connection with these micro-organisms; could harmless organisms acquire (under any mode of cultivation) virulent properties enabling them to attack living animal matter? Pathologists and bacteriologists differed strongly on this point, but in the vegetable kingdom instances were not rare of cells possessing poisonous properties at one time and not at another.

It is always well to hear both sides of a question. I referred last week to the proposed obliteration of the Army Medical School at Netley. The general opinion as to this scheme is that it would be a misfortune should it be carried into effect. I have, however, just heard the opposite view very forcibly put forward by a very distinguished and well-known retired army medical officer. To his mind it would be an unqualified benefit if the Netley course were to be abolished. The teaching there he regards as of doubtful value, being largely theoretical, and not calculated to prepare the young army doctor for the practical duties of his daily life. While there, also, the future army medical officer is likely to acquire absurd notions about rank and precedence, and to imagine that the medical staff is a separate corps like the engineers, all of which ideas may hereafter cause him trouble. Such were some of the aspects of the question as presented to me by my informant. He further deplored the abolition of the "regimental system," under which one surgeon was attached to a regiment, three junior medical officers acting under his directions being styled "assistant surgeons." The latter acquired practical experience of great value while acting as juniors, and the title of "surgeon" was then much more valuable than now, being only conferred after several years service. In lamenting the decay of the regimental system, I know that my friend has many sympathizers. It was certainly of incalculable advantage to the soldier himself, for when it was in vogue he was attended, when sick and wounded, by a medical officer who knew him personally, and was intimately acquainted with his medical history.

LONDON, October 27, 1888.

THE approaching amalgamation of the medical schools in Dublin is exciting some comments in the metropolis. There are not a few who say that a similar step should be taken here. Out of our eleven schools of medicine, only about half can be said to be completely equipped with teaching appliances, the paucity of students and of funds in the remainder preventing them from competing with their rivals on equal terms. This could be remedied if amalgamation of some of the smaller schools were to take place. It is no answer to those who advocate this to point out the (in many cases) superior advantages of the smaller schools for the purposes of clinical study. These would still remain, for no one proposes to close any of the London hospitals, or to disuse for clinical instruction any of them thus used at present. A union of schools, or of some of them, would, however, be of unquestioned value as regards the more strictly scientific parts of medical study. One difficulty at the outset would, undoubtedly, be how to deal with the superfluous teachers. For example, there are at present eleven lecturers on anatomy in the London schools. In Dublin the difficulty is being met by granting an allowance to some of the professors equal to four years' fees and allowing them to retire. Some such plan would doubtless be adopted here, if the scheme were to be carried into practical operation in any form.

At the last meeting of the Royal Medical and Chirurgical Society Mr. W. A. Meredith read a paper on "Some Points Affecting the Mortality of Abdominal Sections." Tables of cases were given—chiefly in reference to ovarian disease—from which it was shown that the mortality of such operations has greatly diminished of late years. Mr. Meredith attributed this chiefly to a diminution in the number of deaths from septicæmia, a diminution largely due (in his opinion) to the adoption of the intra-abdominal treatment of the pedicle, the general abandonment of the practice of tapping, the better systems of drainage, and the free washing out of the peritoneum. Mr. Doran congratulated Mr. Meredith on his tables. As to antiseptics, they were, he said, without doubt useful, for, whatever might be their other properties, their careful use was a kind of drill for nurses and surgeons. Every beginner should use them most carefully, though it might be that his most brilliant results would come later, when he had given them up. A hospital nail-brush in common use was dangerous, for it conveyed more infection than it swept away. The flushing-out of the peritoneum was a very important matter, combined with drainage properly understood. Mr. Knowsley Thornton said he disliked the use of the drainage-tube much less than he had done, but could not consider it as safe as Mr. Meredith did. He always washed out the peritoneum now in cases where it contained any septic material, for he thought that flushing the peritoneum often broke up septic material into tiny particles which were unable to withstand the healing power of the peritoneum. He was of opinion that all should begin with antiseptic methods. It was a most important training which made careful forethought absolutely necessary. The advantages of the nail-brush to the surgeon were very clear to him, and anyone who felt as Mr. Doran did should always have a private brush in his waistcoat pocket. Mr. Meredith, in reply, observed that the use of the drainage-tube seemed to him to be of great advantage, and in cases of antiseptic treatment he did not find it desirable to change it more than once in every twelve hours. The treatment of cases occurring about the menopause was important, for women were then passing through a critical time, when kidney trouble often developed, which would impede absorption of peritoneal fluid. After that period drainage was not so often wanted.

At the Medical Society of London, on Monday last, Dr Fletcher Beach read notes of a case in which a lacerated wound of the brain (an inch in depth) in the occipital region was caused by a window pole. There was fever and some delirium. Four weeks after the accident a cerebral abscess broke through the wound. Complete recovery, however, ensued. The treatment, apart from the local use of antiseptics, was confined to tincture of opium in five-minim doses given at first, and afterward draughts composed of ten grains of chloral and fifteen grains of bromide of sodium, to subdue the restlessness and relieve the pain in the head. Mr. Knowsley Thornton mentioned the case of a boy, aged seven, who was accidentally struck on the head with a manure fork, one of the prongs of which, laden with filth, passed through his skull. The wound was dressed with cold compresses and the patient made a perfect recovery. Mr. Thornton suggested that children bore these injuries better than adults. Dr. Symes Thompson concurred in this remark, and referred to the case of a boy who was trephined for suspected abscess of the brain. The abscess was only reached after the trocar had been plunged three times, for a depth of two inches, into the brain substance. Nevertheless a good recovery ensued. Dr. Beevor mentioned the case of a boy who sustained a compound fracture of the frontal bone but recovered perfectly, although a good deal of dirt and straw was forced into the wound.

Mr. Marmaduke Sheild then narrated a case of exostosis of the auditory canal. The growth nearly blocked the canal, and the symptoms were urgent. It was removed by the following operation: The auricle was divided posteriorly where the pinna joins the cranium, the cartilage of the canal was exposed, divided, and displaced from the bone. The chisel was applied to the bone at the base of the exostosis, and the latter then easily removed. The auricle was then replaced, sutured with catgut, and soon united in its normal position. All pain disappeared on the following day, and the hearing was satisfactorily restored. The adaptability of the operation to cases of exostosis and foreign bodies was pointed out. Where drilling was necessary, the procedure adopted in this case would enable the operator to obtain complete command over the growth, which was brought directly under eye and touch, enabling the surgeon to use a short drillhead, by which greater power could be exerted and the risk of slipping obviated.

Dr. Benjamin Howard then read a paper on a new method of raising the epiglottis. He said that when the epiglottis fell back over the laryngeal aperture, just as apnœa deepened into unconsciousness, traction on the tongue was altogether without any effect in raising the epiglottis. On the other hand, as he showed by the aid of diagrams, extension of the neck and raising the chin produced direct traction on that organ, and thus facilitated a return of respiration. He dwelt on the importance of recognizing the fact in chloroform narcosis and other forms of impending death from apnœa, and recommended in such cases that the head of the patient should be allowed to hang over the edge of the table, forcible extension being applied if necessary.

OUR PARIS LETTER.

(From our Own Correspondent.)

THE INCREASE OF RABIES IN PARIS—WHOLESALE DOG SLAUGHTER—A CASE OF CEPHALIC TETANUS—CORROSIVE SUBLIMATE AS A PROMOTER OF ADHESIVE INFLAMMATION IN RADICAL CURE OF HYDROCELE—LACTIC ACID IN THE DIARRHŒA OF NURSLINGS.

PARIS, November 2, 1888.

WHEN, a short time ago, M. Pasteur declared before a meeting of the Council of Hygiene of Paris that human rabies was on the increase in this city, and that in one day, viz., on the 19th of June, 16 persons bitten by rabid dogs (11 of whom were of Paris) presented themselves at his laboratory to undergo the anti-rabic treatment, the Prefect of Police issued orders to the effect that all stray dogs, whether with or without a collar, should be seized and taken to the pound, where they were at once destroyed. The Parisians, of course, soon protested against the summary manner in which their canine companions were disposed of, for since the publication of the police order about one hundred dogs per day were captured and killed. In consequence of the protestations of the owners of dogs the orders of the Prefect of Police have been somewhat relaxed, and it has been observed that rabies is not on the increase. All dogs unaccompanied are taken to the pound. Those wearing a collar with a brass plate on it, indicating the address of the owner, are kept for three days, at the end of which time, if they are not claimed, they with the others are destroyed without delay. Dogs that are known to have bitten, however, whether they be provided with a collar or not, are preserved in separate cages until they have been examined by a veterinary surgeon, with the view that if the animal is rabid the necessary measures be taken with the persons that may have been bitten. Immediately after their arrival at the pound the dogs that are to be destroyed are put into a cage with bars. As soon as this cage is filled (the number it contains being about thirty) it is wheeled into a metallic reservoir of a capacity of two or three cubic metres. The reservoir is hermetically closed. By the aid of a tap placed in the centre, lighting or coal gas is introduced. One side of the reservoir is covered with glass, through which it may be seen when all the dogs are entirely asphyxiated. The time necessary for this operation does not exceed three minutes. This done another tap, placed in the upper part of the reservoir, is opened, which permits the escape of the gas by a special chimney. The cage is then wheeled out of the reservoir, and the corpses of the dogs are taken out and are sold to a knacker for thirty centimes each. In looking through the glazed opening mentioned above, it is observed that the dogs fall almost immediately asphyxiated, without manifesting any sign of suffering. I may note that a certain number of dogs are made over alive to the faculty of medicine for the purposes of vivisection.

At a recent meeting of the Societé de Chirurgie Dr. Terrillon read a note for Dr. Charvot, on the case of a patient suffering from a contused wound in the right molar region, caused by a kick from a horse, producing what the author termed a "cephalic tetanus." The following is a summary of the case: Contused wound of the right molar region, right facial paralysis on the eighth day, trismus on the fifteenth day, accompanied with convulsive attacks of the face; then death suddenly followed four days after the onset of the accident. The temperature of the body remained low to the moment of death. Dr. Terrillon, who had to report on the note, remarked that this case was analogous to that which he had communicated to the Society in 1887, but in which death took place on the nineteenth day. Dr. Charvot, considering that the pain in the molar region was aggravated by pressure, divided the suborbital nerve without result. In concluding the reading of the note, Dr. Terrillon made the following extraordinary remark: "Here, also, is found confirmed the theory of the equine origin of tetanus defended by M. Verneuil," but what the horse had to do with the production of tetanus I am not able to understand. *Apropos* of this communication Dr. Reclus stated that he had just observed a case of tetanus at the hospital. Death took place in a ward where there had already been two cases of tetanus. As tetanus developed itself on the seventh day after the healing of the wound in all three cases, he concludes that the period of incubation of tetanus appears to be seven days. The first case was that of a female patient, who died in twenty-six hours. The symptoms consisted of trismus and pharyngeal symptoms, the latter constituting what has been termed hydrophobic tetanus, which Dr. Tillaux considers a just expression, as patients so affected resemble those that are suffering from rabies. It is also used in contradistinction to cephalic tetanus, which, according to Dr. Terrillon, is that which succeeds traumatisms in the zone of the trifacial nerves. Facial paralysis is one of the first and most important symptoms. It may kill without being generalized.

Struck with the fact that corrosive sublimate easily determines adhesive inflammation, Professor Richet has had recourse to it at the Hôtel Dieu for some years in the treatment of hydrocele. It is employed in the same manner as the tincture of iodine. The hydrocele emptied, a certain quantity of the liquor of Van Swieten is injected into the vaginal sac without distending it. The solution should be previously raised to about the temperature of the body, and this renders the injection painless. After three or four minutes the solution is allowed to run out. On the next day a moderate reaction takes place, but less intense than with the tincture of iodine. About the third or fourth day a thick plastic liquid is perceived by palpation, the vaginal sac, then ulteriorly the scrotum, diminish in volume and the patient is cured, having suffered less during and after the operation than if he had been treated with the tincture of iodine. Professor Richet has obtained good results by treating cold abscesses in the same way.

Experimenting with lactic acid, lauded by Professor Hayem for the diarrhœa of nurslings and against the diarrhœa of adults, Drs. Sézary and Aune, of Algiers, have recognized that this medicament succeeds perfectly in the diarrhœa of tuberculous subjects. It may be noted that lactic acid had already given good results in the treatment of local tuberculosis, and particularly in laryngeal tuberculosis. The lactic acid is administered at from two to six or eight grammes in a mixture of one hundred and twenty grammes per day, and by spoonfuls in the twenty-four hours. At this dose the patients often complain of the sensation of the teeth being set on edge, of gastric troubles which may be made to disappear by adding one gramme of chlorodyne to the mixture. From the second day the stools diminish in frequency, and become normal about the fourth day.

Dr. Ferran, so celebrated for his anti-choleraic inoculations, persists in forwarding his claim to the Academy of Sciences for the Bréant prize of one hundred thousand francs for the cure of cholera, against that of Dr. Gamaleia, of Russia, whom he accuses of having simply counterfeited his experiments.

HAS THE MORTALITY IN PNEUMONIA INCREASED?

To the Editor of The Medical Record.

Sir: The article by Dr. Gouverneur Smith, in your issue of October 20th, on the increase in the mortality from pneumonia, interested me greatly, as, stimulated by Dr. Hartshorne's paper, I have recently looked into the subject.

In the November number of the *University Medical Magazine* I discuss certain aspects of the problem, and present figures from three representative hospitals—the Montreal General in the North; the Pennsylvania Hospital in the Middle States; and the New Orleans Charité in the South—to show that there has not been any striking increase in the death-rate. In fact, at New Orleans, the percentage for the decade from 1830 to 1840 is the highest of the series, while at the Pennsylvania Hospital the record for the three years 1848–50—37.9 per cent.—was not exceeded, except in the triennial period of 1875–77, when the mortality rose to 39.2 per cent.

It is natural that the hospital records of our large cities should show an increasing death-rate in all acute diseases, for of late the pauper element has increased relatively, and probably the number of individuals admitted to hospital in a debilitated condition is much greater now than at any former period.

We need the accurate records of private practice, and, were they available for the past half-century, I believe the mortality under our more rational treatment would show the same striking reduction as is illustrated in the well-known figures which Bennett gives as the result of a change in methods at the Edinburgh Infirmary. I know of but one tolerably extensive series of this kind—that of Dr. Palmer Howard, of Montreal, who treated one hundred and seventy cases, with a mortality of only six and a fraction per cent. We should get at the truth of this matter, and, before accepting the statement of Dr. Hartshorne or acquiescing in the suggestion of Dr. Smith that a change in the method of treatment has been followed by an increase in the mortality, let us be certain of our figures. So far as I can ascertain, the evidence does not point to any specially augmented death-rate.

Pneumonia remains now, as then, the most serious acute disease with which physicians have to deal; serious, because it attacks the old, the feeble, and the drunkard—persons who are not in a condition to withstand the sudden, sharp onset of the malady. But pneumonia is now, as it was formerly, a comparatively safe affection in healthy adults, easily managed, and with a low death-rate. Half a century ago a certain number of patients in the former class were hurried to the grave by heroic treatment. Now and again, to-day, we lose a member of the latter group by failing to resort to the active measures which so often proved harmful in the hands of our predecessors. I have the honor to be, dear sir,

Yours truly, William Osler, M.D.

Philadelphia, Pa.

PURE AIR IN PNEUMONIA.

To the Editor of The Medical Record.

Sir: It is with great pleasure that I have read the article entitled "Pneumonia," and your editorial comments on the same, in the issue of October 20th. The subject is one to which attention has not been sufficiently called, yet I venture to say that a little more consideration for the ventilation of the sick-room (even, if necessary, taking the risk of the "eastern draughts of air that are arrows of death") will result in a reduction of the average mortality from this disease that will be as gratifying as it would doubtless prove surprising to many a clinician. New York is not alone in the higher mortality from pneumonia; our Cincinnati Hospital shows an annual death-rate of not less than thirty-five per cent., frequently more. The value of the "fresh-air treatment," for so we may justly term it, was particularly impressed upon me by a case observed in the wards of the London Hospital, under the care of that genial physician, Dr. H. J. Sutton, some eight years ago. The patient was a young woman, aged twenty-three, of the lowest social status, addicted to alcoholic excesses, a prostitute, who was admitted to the house during the latter part of January, with a lobar pneumonia of the right upper lobe. In the course of the next four days the whole of the right lung and the apex of the left lung became involved in the process. The general aspect of the case, the extent of the inflammatory process, and the familiar severity of the disease in this and other northern cities, involuntarily led to the framing of an unfavorable prognosis. Yet, despite the fact that the pneumonia did not terminate in resolution, that a large pulmonary abscess formed in the right upper lobe, that patient was walking about in the open air in the early part of April, in better health than she had enjoyed a long time before. The one thing that has kept the case so clearly before me was the singular line of treatment pursued. On the second day of her stay in the house after careful examination by Dr. Sutton, he ordered the window alongside her bed to be opened for five minutes every hour (this in a London atmosphere in January), to have the chest, arms, and face sponged every hour, and in addition free stimulation with sherry, whiskey, and carbonate of ammonia, together with Dover's powder, if there should be much pain. This practice seemed almost heretical to me; to open the window directly alongside of the bed of a patient suffering from pneumonia, in the coldest air of winter, seemed like wantonly hastening the fatal issue; yet the result proved the wisdom of the physician's directions.

Twice since then have I resorted to this plan of treatment myself. Both cases occurred in children, and both were desperate cases. One occurred in the latter part of December, the other in March. In both of these cases the bed was moved just alongside of the window, the sash was raised at least six inches, and this procedure was followed until the physical signs indicated the occurrence of resolution. Both of these children are now alive, strong, and hearty; and, though the *post hoc* does not always prove the *propter hoc*, I feel very sure that the fresh air had more to answer for the recovery than any other feature of the treatment.

Let our brethren not dread the fresh air in pneumonia. If it is impossible for the fever-stricken patient to catch cold, what is there to fear? The contact of the cold air upon the surface will lead to deeper inspiration; the colder air will find its way more readily into the deeper alveoli by mere displacement, and, according to the well-known laws of density, the cooler the air the larger the actual amount of life-bringing oxygen it contains. I hope that fresh air will be considered as the prime factor in the treatment, never, of course, to the total disregard of cardiac stimulants; and I am sure if this plan is more universally adopted, one of the most dreaded affections of our northern latitudes will lose many of its terrors.

Very respectfully yours,
Joseph Eichberg, M.D.

Cincinnati, O.

THE COUNTY SOCIETY AND THE PUBLIC WATER-SUPPLY.

(To the Editor of the Medical Record.

Sir: It is my belief that The Medical Record voices the sentiment of a large majority of the physicians of this city when it disapproves of the action of the County Medical Society in indorsing a private scheme for supplying the city with water. When Mr. Bartlett was invited to read his paper at the meeting in September not a member of the Society, unless by private understanding, knew that resolutions were to be presented indorsing his scheme. While there was a fair attendance on the meeting, and those present had listened with interest to the lucid description of our water-supply, both present and prospective, yet, when the resolutions indorsing Mr. Bartlett's scheme were offered for adoption, it seemed evident that but few of the members present understood them to mean more than an expression of thanks to the author for his trouble in preparing a paper for their instruction, and to voice the opinion that it would be better for the sanitary condition of the city to have as plentiful and pure a water-supply as is possible, and to warn against the present insufficiency. Some of those who spoke in favor of adopting the resolutions stated that such was their interpretation of them, and no one supporting the resolutions tried to disabuse them of that view.

It seems evident, therefore, that the action of the Society at that meeting not only failed to voice the sentiment of the great body of the profession belonging to the County Society as to supplying New York City with water by a private corporation, but that it also failed on that point to voice the sentiment of the limited number then present.

When at the next meeting in October Dr. Washburn offered resolutions rescinding those passed in September, there had been no previous notice given of his intention to do so; it was late, and the majority of those in attendance had left, and the handful remaining probably felt little inclination to open a discussion which might be continued by some hot heads far into the night. Consequently the resolutions, by a majority of one or two votes, were laid on the table.

I fully agree with The Medical Record that it will react to the injury of the County Society and of the entire profession for the Society to leave itself on record as in favor of supplying this city with water by some private scheme; but if its action in this matter is to be reconsidered I hope due notice will be given to all members, and that no one will be excluded from voting because he has not paid his dues. To exclude such from voting on such an occasion would not be the way to elicit the views of the profession of this city, particularly not of a large part whose sympathies, by reason of like surroundings, are more closely linked with those of the common people. Incidentally, I might suggest that the by-law permitting only those who have paid their dues to vote might well be suspended when it comes to assessing dues for another year. It seems rather unfair, when hard times have caused many members to fall, temporarily at least, in arrears of dues, to permit only those whom the hard times appear to have affected least to fix the dues which all alike must pay or be considered not in good standing in the Society.

At any rate, the Society can hardly expect to flourish if the comparatively few who may happen to be at a meeting are allowed to pass resolutions without previous notice, indorsing schemes like that which would give to a private corporation the power to say whether a million people shall have more or less water, of purer or less pure quality, and pay thus much or more per gallon. It may be, and I think doubtless is, well for physicians to take part in politics and the conduct of public affairs, but let them act as individuals, and never as a body except as it relates strictly to medical and sanitary interests.

If the action of the Society at its meeting in September is to be reconsidered, I trust notice of the fact will be printed on all cards of invitation. Sincerely yours,

A Member of the County Society.

New York, November 5, 1888.

DIPHTHERIA.

To the Editor of The Medical Record.

Sir: In reading Dr. Hope's article upon the use of peroxide of hydrogen in diphtheria, I was struck with his just criticism upon the vague way we talk about diphtheria being a follicular tonsillitis, and *vice versa*. I have attended many hundred cases of diphtheria—in all, including cases I have seen with my father and cases given over to my assistant, about four hundred. I was constantly puzzled, and still am puzzled, by the following cases: I am called to see a child with diphtheria; I examine the throat; I find several large ulcers upon the tonsils or upon the soft palate, or a nasal diphtheria with a high fever, glandular enlargement, albumen in urine, etc. I am about to isolate the child, when I am told that the other children, one or more, perhaps, have had sore throat and fever, and that they are now well. I examine the other children and sometimes find what looks to be a follicular tonsillitis almost gone. Again, I am called to see a child with a sore throat. I diagnose follicular tonsillitis. It is recovering, when another child is taken ill, and now I have a severe diphtheria; and the child almost dies, or even does die, with a most terrible diphtheria.

What are we to think? Is every case of follicular tonsillitis a diphtheria? My father has often told me, when he first came to New York, in 1846, and was studying medicine, that diphtheria was unknown. Croup there was, and tonsillitis, but no diphtheria. From this we must conclude that there is a special germ in diphtheria which has arisen from conditions in the atmosphere acting upon a diseased surface which we will call a tonsillitis, and is continued as a special poisonous germ. Or certain corditions of modern sewerage produce a gas or germ which, when powerful enough, will, with or without a tonsillitis, produce a disease known as diphtheria. I am inclined now to consider diphtheria a local disease. I consider that croup and diphtheria are not the same disease, and I think the reason why true croup almost always runs into a diphtheria is, that the germs which produce diphtheria are almost continuously found in the atmospherical condition in cities. Children are especially subject to diphtheria, and that is why we all dread a simple laryngitis, or a simple follicular tonsillitis in a child. I do not believe the subject of diphtheria has received sufficient scientific study. The literature upon the subject is vast but bulky, and as vague as voluminous.

There is no special method of curing diphtheria. It is a self-limited disease. Children get well without treatment. Children die with the best of treatment. Local treatment, if thorough, as the actual cautery, should, in my opinion, do well; but local treatment which merely irritates does harm. I now, except in adults, use no local treatment save the local treatment caused by the tincture of iron and quinine passing over the fauces. I simply help nature to resist the disease and, if you will, disinfect the ulcers and harden the surrounding tissues, until the fury of the disease is over and the child can resist the poison more effectually. I use mercury, but must confess that turpentine pleases me more. I have given mercury as thorough a trial as could be, and lost cases, and I have given nothing but brandy and saved others. I would, of course, insist upon cleanliness. Douche the nostrils thoroughly with a good disinfectant. Do not meddle much with the throat. Support the system with quinine, iron, and whiskey. In croup, calomel and turpentine do best in my hands. Steaming is good sometimes, but must be watched. A last resort is O'Dwyer's tube, or tracheotomy. I think we will have less now of the latter operation. The tubes have done away with tracheotomy.

Most truly yours,
MARTIN BURKE, M.D.

147 LEXINGTON AVENUE.

MISTAKEN DIAGNOSIS, PERHAPS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In THE MEDICAL RECORD of October 6th is given a detailed account of what purports to be a case of "Pneumonia with Delayed Resolution—Abscess Opening Externally—Recovery." With becoming respect, the question is raised as to whether the trouble described was in reality pneumonia. From the history given, the writer must be excused for coming to a different conclusion. Indeed, the case, as outlined by Dr. Benjamin Edson, has all the ear-marks strongly and sharply defined, it would seem, of suppurative pleuritis. Having no disposition to be hypercritical, and fully recognizing the fact that none of us are infallible, and consequently are not free from mistakes in diagnosis, even where much care has been exercised, the task of calling in question the correctness of a brother-physician's opinion is not especially pleasant and is assumed with reluctance; yet in the interest of medical science, and for the benefit of that brother, as well as others who may have read the article, it is thought to be the right thing to not let it go unchallenged. The case is suggestive, and of much interest, not only on account of error in diagnosis, perhaps, but because it shows up in a strong light the wonderful restorative processes of nature, and gives us better defined and more restricted notions of therapeutical aid. The lesson revealed, that the "vis medicatrix naturæ" is all-powerful and mighty to save in the battle with disease is a most important one, and should never be overlooked nor underestimated in efforts at treatment. The treatment in this case for the first five weeks was not only of no benefit, but must surely have been more or less harmful according to history of treatment. Evidently the first physician in charge did not know what was the matter, failed to locate the disease, and made severe applications where they should not have been made—over the left lung. According to admissions, the second physician in charge did but little to aid nature in the work of restoration. The patient is said to have "*ate* her way through." If the supposition be true that it was a case of suppurative pleuritis instead of pneumonia, then in that condition timely assistance, it must be admitted, would have been a great help to nature in such a trying ordeal. Possibly if fluid absorption in the early stage had been promoted by hydragogue, catharsis, diuretics, blisters, and restricted drink, or, failing in that, the fluid had been drawn off by aspiration or otherwise, resolution would have taken place without purulent action, thus preventing life from being placed in such great jeopardy. But even should purulence have characterized the fluid from the beginning, very great advantage in all probability would have resulted from its early withdrawal through surgical help. The powers of life would not have been so nearly exhausted, deformity not so great, and the danger of plastic exudations, binding the lung down, and preventing proper expansion after the fluid had been evacuated, would be lessened in a marked degree. It is hardly worth while to go into a critical analysis of the symptoms in this case, to show that it was suppurative pleuritis. If anyone interested will examine Flint's "Practice," and various surgical works on the question, after reading the history of the case, no doubt he will be well satisfied that it was plainly and unmistakably marked pleuritis of the empyemic order. Instead of an abscess forming, as mentioned, it was simply spontaneous perforation of the chest-walls to give vent to purulent pleuritic effusion, which always finally takes place in that way unless previously withdrawn through surgical interference, provided life should hold out so long. The contraction of the thoracic walls and deformity of the spine following evacuations clearly indicate the previous state of things. Besides, the character of the sputa, and the immediate subsidence of all bronchial and lung-tissue irritation, plainly tell us that parenchymatous inflammation could not have been the trouble. It is not improbable that in this case there was also some acute trouble of the kidneys. The consolidation spoken of was not lung hepatization; for the dulness doubtless resulted from pleuritic accumulation. The treatment to "allay irritative cough, stimulate the appetite, and sustain the strength" was quite in the right direction; but to do this and neglect the far more important consideration of evacuating the purulent fluid reminds one of "stopping the spigot and opening the bung." The diet of "steak, potatoes, bread and butter, clam-fritters, mince-pie, bananas, and oranges; used, in fact, without restraint to the quantity of double that required by a daily laborer," seems to be remarkable for its grossness and liberal supply. True, the child stood up to it, as she did to other things; being another manifestation of how wonderfully tenacious some persons are of life. The conviction cannot be resisted, however, that had the diet been more restricted and better suited for digestion under the circumstances, the child would, to say the least, have progressed equally well and perhaps better. Even if only a short time before natural evacuation took place the purulent fluid had been drawn off more gradually by aspiration or trocar, cannula, and suction, the resultant depression and general distress would have been much less marked, because time would have been given for the parts to adjust themselves to their new relations. While this case seems to have done reasonably well after evacuation, it has been settled beyond question that similar cases generally would be greatly benefited by washing out the pleural cavity at least once a day with weak solution of carbolic acid or other disinfectant tempered to that of the body. A study of this case forcibly impresses one of the need of a close acquaintance with the various processes of nature in removing disease and establishing health; and more especially does it impress the great importance of giving closer attention to the study of diagnosis. Physical diagnosis, in particular, should receive a larger share of consideration in student and college life, for most of us at some time in after-life feel but too surely the effect of this early neglect. No part of college and chemical study can be more profitably spent than in making oneself thoroughly familiar with physical diagnosis in all its aspects; and if college instruction would more strongly stamp this thought on the student mind, requiring at the same time a more thorough training and perfect knowledge in this behalf, it would confer an everlasting and untold blessing on the medical profession, and many sufferers from disease.

B. F. Hart, M.D.

Brownsville, Mo.

MATERNAL IMPRESSIONS.

To the Editor of The Medical Record.

Sir: A clinical note in No. 16, October 20th, of The Medical Record, page 479, on "Supernumerary Nipple" contains this statement: "The interesting point in the case centres in the possibility of the malformation being due to a so-called maternal impression." I would not trouble you with this reference if I did not constantly see similar expressions in medical journals of standing, like the Record, *Medical News*, *Journal*, etc., until the repetition of such nonsense becomes extremely wearisome. There is not a scientific physician on the face of the earth, who has any respect for his own reputation, who would accept a diagnosis of any obscure disease upon the evidence presented in this case, even where the disease named was well known to him. In this case the doctor never knew the mother of the patient, takes the statement of a woman on a matter said to have occurred seven months before the witness was born, to account for what he calls a malformation, when said malformation is one of the simple processes of nature quite common in the human species, both male and female, and a condition present in the great majority of mammalia of the lower orders. Again the said fright, the evidence of which would not be accepted in the commonest kind of a police-court, or even by a backwoods justice of the peace, was simply the scratch of a kitten, and the party frightened, having no *impression* of a nipple on her mind, nor anything else of that nature. Besides, the fact of the fright or the malformation, as is usually the case, was only brought to mind years afterward, and in this case the evidence given to the doctor came from a person who did not even pretend to know anything about the matter in any way whatever. It is a matter of some astonishment to every thinking man how certain superstitions of the past cling to the people, and especially to the uneducated, even where there seems to be some rational explanation for these superstitions. But when educated physicians, who are supposed to be the most critical observers, who accept nothing except that which has been demonstrated by the cold logic of science, who are forced daily to glean the truth from the multitude of falsehoods laid before them, who hold the lives of people in their hands and the saving of these lives may depend upon their faithfulness to demonstrated science—I say, it is still stranger that minds educated in such a school of experience should continue to be muddled by this baseless, nonsensical superstition, handed down by word of mouth from the ages of the past without the first principle of scientific reason ever having been produced to support it. Every writer of repute on teratology for a hundred years has utterly scouted at the idea, and no embryologist of to-day will even give the subject a passing notice. And since the experiments of Erciloni upon the placenta showing that the fœtus *in utero* is perfectly independent of the mother so far as nerve and vascular supply is concerned, but is joined wholly as a matter of nutrition just as it is while nursing, the repetition of this nonsense is calculated to make the searcher after truth extremely weary, to put it in the mildest form possible.

E. P. Murdock, M.D.

Chicago, Ill.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 4, 1888, *to November* 10, 1888.

Baily, Joseph C., Lieutenant-Colonel and Assistant Medical Purveyor. By direction of the Secretary of War will transfer at once the public funds for which he is now responsible to Captain Henry Johnson, medical storekeeper, who will assume temporary charge of the Medical Purveying Depot in New York City, retaining charge thereof until relieved in person by Lieutenant-Colonel E. P. Vollum, surgeon, under his assignment as Acting Assistant Medical Purveyor, to whom Captain Johnson will then transfer the public funds. Par. 1, S. O. 257, A. G. O., Washington, D. C., November 3, 1888.

McElderry, Henry, Major and Surgeon. By direction of the Secretary of War leave of absence for two months, to take effect on the completion of his present duties, is granted. Par. 3, S. O. 256, A. G. O., Washington, D. C., November 2, 1888.

Ewen, Clarence, Captain and Assistant Surgeon, is relieved from duty at Fort Sidney, Neb., to take effect on the expiration of his present leave of absence, and will report in person to the commanding officer, Madison Barracks, New York, for duty at that post. Par. 2, S. O. 258, A. G. O., Washington, November 5, 1888.

Appel, Daniel M., Captain and Assistant Surgeon, is relieved from duty at Fort Davis, Tex., and will report in person to the commanding officer, Fort Sill, Ind. Ter., for duty at that post, reporting by letter to the Commanding General, Department of the Missouri. Par. 2, S. O. 258, A. G. O., Washington, November 6, 1888.

Hoff, J. Van R., Captain and Assistant Surgeon, is granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 134, Headquarters Department of the Missouri, Fort Leavenworth, Kan., November 1, 1888.

Price, Curtis E., Captain and Assistant Surgeon, is granted leave of absence for two months, with permission to apply for an extension of ten days. Par. 2, S. O. 257, A. G. O., Washington, November 3, 1888.

Wood, Marshall W., Captain and Assistant Surgeon, is granted leave of absence for one month, with permission to apply for an extension of ten days. Par. 2, S. O. 257, A. G. O., Washington, November 3, 1888.

Cochran, John J., Captain and Assistant Surgeon. By direction of the Secretary of War is relieved from temporary duty at Headquarters Division of the Pacific, and will report in person to the commanding officer, Fort Adams, R. I., for duty at that post. Par. 2, S. O. 256, A. G. O., Washington, November 2, 1888.

Bradley, Alfred E., First Lieutenant and Assistant Surgeon (recently appointed). By direction of the Secretary of War will report in person to the commanding officer, David's Island, New York, for duty at that depot, reporting by letter to the Superintendant of the Recruiting Service, New York City. Par. 14, S. O. 260, A. G. O., November 7, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending November 10, 1888.

Dickinson, D., Surgeon. Ordered to Naval Hospital, Mare Island, Cal.

Bradley, G. P., Surgeon. Detached from Naval Hospital, New York, and to Iroquois.

Persons, R. C., Surgeon. Detached from Army and Navy Hospital, Hot Springs, Ark., and to Naval Hospital, New York.

NORFLEET, ERNEST, Passed Assistant Surgeon. Detached from Naval Hospital, Mare Island, Cal., and to the Trenton.

HARRIS, H. N. T., Assistant Surgeon. Detached from Naval Hospital, Mare Island, Cal., and to the Kearsarge.

SAYRE, J. S., Assistant Surgeon. Ordered to examination for promotion.

BEYER, H. G., Passed Assistant Surgeon. Detached from Trenton, and granted six months leave, with permission to leave the United States.

PATRICK H. BRYANT and LUTHER L. VON WEDEKIND, commissioned Assistant Surgeons.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 10, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	27	8
Scarlet fever	157	24
Cerebro-spinal meningitis	1	0
Measles	161	7
Diphtheria	83	27
Small-pox	0	1
Yellow fever	0	0
Cholera	0	0

POISONING BY ARTIFICIAL MINERAL WATER.—Between thirty and forty cases of poisoning were reported several months ago in Rendsburg, Germany. Inquiry showed that only those were poisoned who drank freely of Selters water, and an examination of this water revealed the fact that it contained a very appreciable amount of arsenic. The water was a manufactured product, and had been imported from another city.

THE CONTAGIOUSNESS OF ALOPECIA.—The committee appointed by the Academy of Medicine in Paris, to consider the question of the contagiousness of alopecia areata, has just rendered its report. The rules enjoined upon those afflicted with this disease in the public schools, etc., could hardly be more rigorous if it were scabies which ailed the children, and indicate the conviction in the minds of the committee that this disease is contagious.—Philadelpha *Medical Times*.

EXCELLENT SENTIMENT BUT POOR SURGERY.—The following sensational story from the Atlanta *Journal* is going the rounds of the secular press:

"*Brave in the Face of Death.*—One day during the last part of the war Dr. Willis Westmoreland was dressing the wound of a soldier who had been shot in the neck near the carotid artery.

"Suddenly the blood-vessel gave way, and just as quickly the surgeon thrust his finger into the hole to stop the flow.

"'Doctor,' said he, 'what does that mean?'

"'It means death,' said the surgeon.

"'How long can I live?' asked the soldier, whose mind was perfectly clear.

"'Until I remove my finger,' said Dr. Westmoreland.

"'The soldier asked for pen and paper, wrote his will, wrote an affectionate letter to his wife, and, when these were done, said quietly:

"'Let it go.'

"The surgeon withdrew his finger, the blood rushed out, and soon the man was dead.

"The body of the brave fellow was buried in Oakland, and every year since Dr. Westmoreland has gone on Memorial Day and placed flowers on the grave. This year, when Memorial Day came, the doctor was at Salt Springs. He left the scene of gayety, came to Atlanta, and carried his tribute of flowers to the grave of one who was calm and brave in the very presence of death."

We hope this is not founded on fact. If so, it was bad surgery. Scientifically speaking, it would have appeared better to have tied the bleeding vessel in the wound, but it would have possibly spoiled a pathetic story.

ARTIFICIAL COLD FOR YELLOW-FEVER HOSPITALS.—Dr. M. S. Leslie, of Lexington, Ky., writes: "On the same principle as that employed in the artificial manufacture of ice, might there not be a sort of hospital constructed so as to reduce the temperature of the apartments occupied by the patients to about the freezing point, and thus contribute largely to the cure of those already suffering from yellow fever, as well as to the prevention of the disease in those who have been exposed to the poison?"

THE STORY OF MR. BAKER BROWN, as recently told by Mr. Tait in the *Hospital Gazette*, is perhaps unknown to most of our readers and it is worth publishing here. When one compares the persecution of Mr. Brown for cutting off an inconspicuous projection like the clitoris, with the tremendous applause which has accompanied the operation of removal of the ovaries, one marvels at the changes in professional opinion of to-day. "Some thirty years ago," writes Mr. Tait, "there lived and flourished in London a surgeon of great ability, Mr. Baker Brown, whose influence in the history of ovariotomy will be displayed in its appropriate place. Mr. Baker Brown was not a very accurate observer, nor a logical reasoner. He found that a number of semi-demented epileptics were habitual masturbators, and that the masturbation was, in women, chiefly effected by excitement of the mucous membrane on and around the clitoris. Jumping over two grave omissions in the syllogism, and putting the cart altogether before the horse, he arrived at the conclusion that removal of the clitoris would stop the pernicious habit, and therefore cure the epilepsy. He operated in an enormous number of cases, for epilepsy is very common, and patients and their guardians will submit to almost anything which promises a hope of relief. There can be no doubt that many cases were temporarily benefited, just as cases of epilepsy are benefited for a while by castration (in the male), removal of the uterine appendages (in women), and trephining (in both sexes). Besides, Mr. Baker Brown's operations had no mortality, and the reduction of the sexual distemper of a number of epileptics, even for a while, or to some extent, was of itself a benefit. But Mr. Brown carried his efforts to a most injudicious extent, due to the fact that he was suffering from very extensive cerebral softening, and really was incapable of forming a sound judgment. His subsequent illness and death proved this, and I have a large amount of documentary evidence in my possession, which some day will see the light, which will place the terrible story of this most unfortunate man in a light altogether different from that in which it has hitherto been regarded. As a result of the disease from which he suffered, he resisted the advices of his colleagues and the committee of his hospital, and he ran his hobby until he got into trouble with the Commissioners of Lunacy for a technical infringement of the conditions under which lunatics may be detained in places not licensed for their reception. This would have been of little consequence had he not been a successful ovariotomist, and had he not been pursued by a rival as relentless as he was cruel and persevering. The authorities of the Obstetrical Society were induced to take up the matter, and Mr. Baker Brown was expelled from the Society, a large part of the evidence against him being furnished from the common-place book of a rival who seemed to have been dogging his steps for years."

THERE IS SAID to be a barber's sign near the Palais Royal, Paris, bearing the following legend in the vernacular: "Callileucocapillaire water which colors the hair white. For the use of young physicians and magistrates."

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 21 New York, November 24, 1888 Whole No. 942

Original Articles.

ON THE DIAGNOSIS OF DUODENAL ULCER.

By WILLIAM OSLER, M.D.,

PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF PENNSYLVANIA.

It has recently been suggested by Bucquoy[1] that the duodenal is to be distinguished from the gastric ulcer by certain well-defined clinical characters. Dr. W. W. Johnston, of Washington, has reported[2] an interesting case which seems to bear out this author's statement. I have expressed myself somewhat sceptically on this point, although one of the nine cases which formed the subject of my recent paper[3] was regarded during life, by Dr. Palmer Howard, of Montreal, as probably duodenal, on much the same grounds as Bucquoy lays down.

Physiologically, the portion of the duodenum above the bile papilla belongs to the stomach. Peptic digestion only ceases where the acid chyme is neutralized by the bile. When we consider how limited is this region, and how close to the pyloric ring many gastric ulcers lie, it is not surprising that difficulty should exist in the diagnosis.

The points upon which Bucquoy lays the greatest stress in the diagnosis of the duodenal ulcer, are as follows:

First. Sudden intestinal hemorrhage in an apparently healthy person, which tends to recur and produce a profound anæmia. Hemorrhage from the stomach may precede or accompany the melæna.

Second. Pain in the right hypochondriac region coming on late; two or three hours after eating.

Third. Gastric crises of extreme violence; the hemorrhage being more apt to occur about the time of these attacks.

The following cases are of interest in connection with possible existence of duodenal ulcer.

Case I.—*Dyspepsia. Hæmatemesis and melæna in* 1870. *Repeated attacks during the past eighteen years, with the exception of the three years,* 1877–1880. *Frequent attacks of hemorrhage from the bowels without vomiting of blood. Severe gastralgia.*

Henry C——, upholsterer, aged forty, was brought to the Philadelphia Hospital by the ambulance, on January 4, 1888, in a condition of profound exhaustion. The next morning he gave the following account: For a month he had had diarrhœa, and on several occasions had passed blood in the stool, without any vomiting. On the night of January 1st, he vomited nearly two quarts of blood. On the 2d he remained in bed very much prostrated, and that night again vomited a large quantity of blood, "half a basinful," he said. On the 3d he had no vomiting, and on the evening of the 4th, when in hospital, he vomited three or four times and brought up clots of dark granular matter. On inspection, the patient was found to be profoundly anæmic and unable to sit up in bed without fainting; his skin was like alabaster; pulse 130, small; respiration 20; blood-count, 950,000 r.c. per c.mm. Hæmoglobin, twenty per cent.

The history which he gave was remarkable. He had been healthy as a young man, with the exception of dyspepsia. In February, 1870, he had a hemorrhage from the stomach and brought up, he says, two bowlfuls of blood, and also passed blood in the stool. During the next two years he had several attacks, and suffered constantly with pains. In 1873 he nearly died of hemorrhage, and during the next four years, three months did not pass without a recurrence. In 1877, he was four weeks in the Pennsylvania Hospital, having had profuse hemorrhage from bowels and stomach. He returned to France after this, and on August 10th had bleeding from the bowels. For the next three years he had no hemorrhage, though he was never free from uneasy sensations in stomach, and at times had attacks of severe pain.

In 1881 the hæmatemesis recurred, and since then he has had repeated attacks. In 1883 he was in the hospital sixty-five days; lost sixty-five pounds in weight, and was believed to have cancer of the stomach. From this time he had more or less gastric disturbance, consisting of pain after eating, usually delayed for several hours. At intervals of a few weeks there would occur severe gastric crises, in which the pain would be agonizing in character, shooting from the stomach, back, and sides; he vomited sometimes large quantities and occasionally had attacks of diarrhœa. When in hospital, in 1883, he was taught to wash out the stomach with a tube, and he has done it ever since, at intervals, with great benefit. He remained under observation until March 26th, and the blood condition was carefully studied, with the following results:

January 5th, r.b.c., 950,000 per c.mm.; 6th, 770,400; 7th, 1,053,000; 8th, 1,086,400; 9th, 1,175,000; 10th, 1,179,000; 12th, 816,400 (bleeding the night before); 13th, 1,034,400; 15th, 916,320; 19th, 1,300,000.

From this time the rate of increase was rapid. When he left the hospital the blood-count was over 3,500,000 per c.mm.

On January 14th he had a large movement of the bowels containing blood, but there was no vomiting. From this time on the bleeding ceased. His appetite became ravenous, and it was with the greatest difficulty that he could be confined to proper diet. Examination of the abdomen revealed slight distention; no tenderness; no trace of tumor. The abdominal walls were thick, and it was difficult to outline the stomach, the gastric tympany extending a hand's breath below the costal margin. The organ appeared to be slightly enlarged; liver dulness normal; splenic dulness not increased. There were the usual cardiac and arterial phenomena of profound anæmia. Throughout the month of February the improvement was very rapid. He gained in weight; began to have a little color and had no gastric distress, even after a full meal. He had diarrhœa at times; three or four stools in a day. Early in March he was anxious to go to work, and was with difficulty kept in hospital. He had no vomiting, and stated that he felt perfectly well with the exception of a slight weakness. He had a ravenous appetite, and I repeatedly had to warn him against eating too much. He returned to work March 26th, and through the spring and summer remained fairly well.

On August 4th the hemorrhage from the stomach recurred and continued four days. He lost much blood and grew rapidly weak. In the course of a week he returned to work, and on September 5th called to see me at my office, having come directly from the workshop. He was profoundly anæmic, extremely short of breath, and could scarcely get up the stairs. For nearly a week he had been passing blood from the bowels, without vomiting. He was admitted to the University Hospital September 5th. He complained of slight gastric distress, but had no bleeding until the 20th, when he vomited nearly a pint of blood, dark in color, mixed with food. The same evening he passed large quantities from the bowels. With the exception of weakness he insisted that he felt well, and was always asking for more to eat. There was no further vomiting during his stay in hospital, and his blood-count, which had been about 1,500,000 on October 8th, rose rapidly to nearly 3,000,000 per c.mm. He gained seven pounds in weight within a month.

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[1] Archives Générales, April, May, and June, 1887.

[2] American Journal of the Medical Sciences, 1888, i.

[3] Canada Medical and Surgical Journal, March, 1887

On the 8th the examination of the abdomen gave results as follows: Somewhat dilated; uniformly tympanic; no tenderness; no tumor to be felt; obscure sense of increased resistance at a point midway between the navel and right costal margin; liver dulness from the sixth rib to costal margin.

He has periods of freedom from abdominal pain, but not of long duration. After a full meal he is at first comfortable, but in three or four hours there are uneasy sensations in the stomach, often positive pains, which may become severe. When the stomach is empty and the pain becomes intense, taking food, even a biscuit or half a glass of milk, will give relief. As stated, there is no epigastric tenderness, and he always locates the pain along a line from the ensiform cartilage to the spine of the left ilium.

CASE II.—*From 1869 dyspepsia and occasional attacks of gastralgia. In 1880 hæmatemesis and melæna. In 1882 slight melæna without vomiting. Since then repeated attacks of gastralgia.*—A. B——, aged forty, good family history; was delicate as a lad, but after the age of fourteen enjoyed the average health with the exception of dyspepsia, to which he was liable, and he would at times regurgitate food without discomfort or nausea. In 1869 he had gastric distress sufficient to make him at times press hard against the stomach; no nausea; no vomiting. With the exception of attacks of dyspepsia he remained well until September, 1876, when he had fever, and, during convalescence, violent attacks of gastralgia. These occurred sometimes with vomiting. He had more or less gastric distress until 1879, and he was believed at this time to have malarial gastralgia, and was ordered quinine and arsenic in large doses. In September, 1880, after a hard day's work, he returned home at 10 P.M., and had a great deal of gastric trouble, and before he went to bed regurgitated his food and, mixed with it, some black material. He slept well that night, and in the morning had a large bloody stool. That day he vomited a large quantity of blood and became very exsanguine. After this time the pain increased very much, but it was always relieved by a hearty meal.

In November and December he was in the hospital on the strictest diet, and lost in this time about forty pounds in weight. He improved after this, and in July, 1881, went abroad and was away for two years, during which time he had much discomfort but no very severe attacks of pain.

He consulted many of the leading physicians of Europe, and the diagnosis was uniformly gastric ulcer. While in Paris he had slight hemorrhage from the bowels without vomiting blood. He returned to this country in December, 1882, and has been working off and on ever since, but never entirely free from gastric distress, occasionally having severe attacks of pain.

In January, 1887, he had such an attack which lasted fourteen days, and lost twenty-eight pounds in weight. He has repeatedly had to take morphia in large doses to relieve the pain. The patient looks well; weighs one hundred and sixty-five pounds; tongue clean; good appetite; good digestion. Examination of the abdomen, negative; no tenderness; no tumor.

REMARKS.—These two cases have certain points in common. In the first place, the long duration; the symptoms in one instance recurring over a period of eighteen years; in the other at least twelve years. The peptic ulcer, gastric or duodenal, may be an exceedingly chronic malady, lasting ten, fifteen, twenty, or, according to Brinton, even thirty, years. Anatomical observations show that a large proportion of these ulcers heal, yet there are others which, from their general condition, can scarcely be repaired. The deep excavation, the size of a dollar-piece, with hard fibrous base, thickened peritoneal coating, and indurated edges, which we find so often in fatal cases, is an unlikely ulcer for cicatrization. The time element in these two instances gives no clue whatever to the situation of the ulcer.

The pain in gastric and in duodenal ulcers is very similar, with the exception of the time of onset, which, as a rule, in gastric ulcer more closely follows ingestion of food, while in the duodenal it is deferred two or three, or even four, hours. This is, however, an uncertain symptom.

In Case IX. of my series, close questioning elicited the most positive statement that food had no special influence, one way or the other, in inducing or in aggravating the pain, which was more likely to come on while the stomach was empty than subsequent to a meal.

The late onset of pain in duodenal ulcers has usually been attributed to the action of acid chyme passing out of the pylorus toward the close of gastric digestion. It is to be remembered, however, that the chyme passes continuously from the stomach, commencing, probably, within a half-hour after taking food. The increased acidity of the gastric contents toward the close of digestion may have something to do with it.

While perhaps too much stress has been laid upon this point in the differential diagnosis between gastric and duodenal ulcers, it does hold good in certain instances. A more important criterion, I think, is in the occurrence of gastric crises, agonizing attacks of colic, which seem to be more severe in the duodenal disease. A feature worthy of notice is the occurrence of severe gastralgic attacks at night.

Absolute immunity from all gastric distress in the intervals between taking food is more common in duodenal than in gastric ulcer. It is to be noted, in the cases here reported, that gastric distress has been more or less constant. A feature common to both ulcers is the prolonged interval of freedom. In Case VIII. of my series, a diagnosis of malarial gastralgia was made by an eminent clinician, based largely upon the fact that the patient had repeated periods of complete immunity from all symptoms, but followed by attacks of the most aggravating character.

The point upon which the greatest stress has been laid in the diagnosis of duodenal ulcers is the occurrence of melæna without hæmatemesis. Bucquoy and Johnston both hold that it can be recognized by this symptom alone. If so, the diagnosis in the patients whose history is given above is plain. The first case had repeatedly passed blood from the bowels without hemorrhage from the stomach, and the second on, at least, one occasion. As already stated, it was this symptom which, in Case VIII. of the series I have reported, led Dr. Palmer Howard to suggest the existence of duodenal ulcer. In the above-reported cases I should hesitate to give a positive diagnosis on this symptom alone, with the co-existence of such marked gastric disorder. In Johnston's case and in several of Bucquoy's patients, I grant that the conditions for a correct diagnosis were fulfilled, and I accept the importance of melæna alone as a valuable localizing index; but I submit that instances such as I have given illustrate the uncertainty, rather than the certainty, which still pertains to the diagnosis of duodenal ulcer.

CHROMIC ACID IN EXCESSIVE SWEATING.—A circular has been sent to all the Prussian Army medical officers, advocating chromic acid as an economical and efficient means of checking excessive perspiration. In hyperhydrosis of the feet the application of a ten-per-cent. solution, repeated every three or six weeks, is sufficient to prevent any inconvenience from this source.—*Medical Press.*

A NEW AND ONLY WAY OF RAISING THE EPIGLOTTIS.[1]

By BENJAMIN HOWARD, A.M., M.D., F.R.C.S. Edin.,

LONDON, ENGLAND.

The epiglottis, as regards its functions, from the time of Plato to that of Magendie was conspicuous as a subject of dispute. Respecting the epiglottis as a factor in apnœa, on the contrary, that which was taught at the first has been taught ever since, and is to-day everywhere the rule of universal practice. This teaching is, 1st, that in apnœa the epiglottis falls backward and closes the glottis. 2d. That the elevation of the epiglottis is the first thing in order and in importance, as without this, respiration, whether natural or artificial, is impracticable and the result fatal. 3d. The only way by which the epiglottis can be elevated is by means of the tongue; as the tongue is brought forward, the epiglottis is moved upward.

As a summary of results of prolonged and repeated investigations and experiments the author proposed to show:

1. The effect of traction of the tongue; what is done by it, and what is not done by it.

2. A new and only way of raising the epiglottis.

3. Some important changes in the relations of certain parts of the upper air-passages to each other induced by complete extension of the head and neck.

By the aid of a series of diagrams made by the author from sketches he had made from nature he then showed:

1. Contrary to general belief, traction of the tongue, however and whatever the force employed, does not and cannot raise the epiglottis, as supposed, because:

(*a*) The tractile force supposed to be exercised upon the epiglottis is arrested chiefly by the frænum linguæ, and through the muscular fibres within is expended upon the inferior maxilla, into the genial tubercles of which they are inserted.

(*b*) The surviving force is expended almost entirely upon, and intercepted by, the anterior pillars of the fauces.

(*c*) For any tractile force which might survive, a continuous and sufficient medium for its transmission to the epiglottis is wanting.

Proof.—The glosso-epiglottidean fossa being filled with water, the subject being so placed that the floor of that fossa is formed in part by the fallen epiglottis itself, traction upon the tongue, however forcible, does not cause the water to be spilled.

As the author had just been publishing an improved way of seizing the tongue for the above purpose, this discovery was a great disappointment and a great dilemma, as no other way of raising the epiglottis seemed to have ever been contemplated. After a search by no means easy nor short the author discovered,

2. The only way by which the epiglottis can be certainly raised, which is by extension of the head and neck. By this means its elevation is instant and complete.

Because (*a*) by a three-linked chain, of which the hyo-epiglottic ligament is the lower link, the body of the hyoid bone the central link, the combined genio-hyoidei and mylo-hyoidei muscles the upper link, the epiglottis is so coupled to the inferior maxilla, just where it has its greatest range of motion, that above a certain point, as the lower jaw is moved upward, the epiglottis instantly, irresistibly, and inevitably moves upward exactly in unison till it is erect.

The customary wrenching asunder the clinched teeth, in proportion as it depresses the body of the lower jaw, antagonizes a distinct effort of nature to maintain the elevation of the epiglottis, and specially favors, sometimes helps, sometimes greatly increases, its depression.

The author indicated on his diagrams the way in which other anatomical causes of obstruction, in addition to the epiglottis, respectively bar the air-way, for all of which he submitted a positive and complete remedy, and showed,

3. The way in which, by extension of the head and neck, carried to the utmost completeness, the backward fallen tongue, the velum palati, and uvula are all simultaneously shifted from the air-way, and the entire pharynx is enlarged throughout, as follows: (*a*) The tongue, the dorsum of which before fell by gravitation upon the then horizontal posterior wall of the pharynx, falls upon the now horizontal arch of the palate.

(*b*) The velum palati, by means of the great tension of the palato-pharyngei muscles, is pulled away from the posterior wall of the pharynx, the entire membrane being stretched tightly forward and downward behind part of the dorsum of the tongue, forming a partition which helps to shut the tongue out of the pharynx, and into the mouth, where it belongs, and with part of the dorsum forms the anterior wall of a now post-oral air-way, thus created and maintained.

(*c*) The pharynx, anteriorly, is stretched far forward by the extremely tense sterno-thyroidei muscles acting through the thyroid cartilage. By the semhyoidei and mylo-hyoidei muscles acting through the os hyoides, the base of the tongue and the velum palati are shifted forward in the manner already described, the posterior nares being shifted by the extension of the head by its occipito-vertebral articulation about sixty degrees.

Posteriorly, the wall of the pharynx is shifted back its whole length by the extension of the cervical vertebræ upon each other, in all about thirty degrees, the extension being particularly great just opposite the glottis.

Thus the upper air-way, which before was a tortuous angular, flaccid canal, barely, and if at all uncertainly, permeable, is made an enlarged, firm, but slightly curved tube, free throughout from the glottis to the nares.

The way to make complete extension of the head and neck.—Having, by bringing the patient to the edge of the table or bed, or by elevation of the chest, provided that the head may swing quite free, with one hand under the chin, and the other on the vertex, steadily but firmly carry the head backward and downward; the neck will share the motion, which must be continued until the utmost possible extension of both head and neck are obtained. Sometimes a slight extension or elevation of the chin merely will at once check stertor, or irregularity of breathing; but the extension, which can in no case do harm, should be always rather more than less than appears necessary. It should never be forgotten, however, that the full effects of extension, as above described can be secured with certainty only by making the extension complete as directed.

That the customary pulling forward of the tongue is followed by relief the author admits to be true in some cases, but in some cases only; the inversion of the entire body, the chucking under the chin, the jerking the angle of the jaw, in each of these the good done, and which was the only and all-sufficient reason for the habit, is an interesting corroboration. Each tended to raise the epiglottis, but the operators did not know it.

Further corroboration is in the familiar position instinctively assumed by the croupous, the diphtheritic, the asthmatic, the dying.

A diligent search has failed to discover a single record in which any observer states that by pulling forward the tongue he has seen the epiglottis raised, nor is there a single reference to anybody who is supposed to have seen it. On the contrary, the facts here submitted have all been many times examined, and have been verified by distinguished anatomists at demonstrations made by the author at the Royal College of Surgeons, England; at King's College Hospital, and at Guy's Hospital, London; and at the Hospitals la Pitié, and Salpetrière, Paris.

The position of complete extension enables certain operations on the throat and pharynx to be done in anæsthesia without the usual peril from drainage into the trachea. The sum of what has been submitted is:

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[1] Abstract of a paper read before the Medical Society of London, October 22, 1888.

1. That, contrary to universal belief, traction of the tongue cannot raise the epiglottis.

2. By sufficient extension of the head and neck, whether by volition, instinct, reflex action, or by the effort of another, whether in the healthy, the dying, or the dead, the epiglottis is instantly, and beyond prevention, made completely erect.

3. By complete extension of the head and neck the tongue and velum are, as respiratory obstructions, simultaneously with the epiglottis, removed, and without a moment's delay the entire air-way can be straightened, enlarged, and made free throughout by the nearest person.

If syncope happens to be a chief or a secondary factor, this also thus gets the quickest and best correction.

The author expresses the hope, as he has the confident belief, that the facts submitted will be found to be permanent additions to our means of averting death, in which case it is not by the raising of the epiglottis. In the stage and the case in which the backward-fallen tongue happens to be the chief cause of obstruction, by pulling forward the tongue that cause of obstruction is removed, nothing more. There are other cases, other stages, in which it does no good at all. From over thirteen thousand fatal cases of asphyxia in England alone, the last three years, the author selected over one hundred unequivocally attributed to administration of anæsthetics, and in which, in every probability, the tongue was skilfully pulled forward in the recognized way, but they died. The author would be sorry to pretend to state of what they died; but he could not avoid the belief that, in each case, the epiglottis, in all probability, was not raised and continued uplifted till death was complete. It could but be thought a happy feature that instruments, the delays in getting them and in using them, the occasional violence and the invariable wounding with them, yet the utter helplessness without them, are, in the procedure submitted, so entirely superseded.

It was not pretended that never before had the epiglottis in this way been lifted. For more than twenty years the author himself had published and illustrated a certain position in the treatment of apnœa. This position inevitably opened the epiglottis, but he did not know it.

COMBINED COCAINE AND CHLOROFORM ANÆSTHESIA.—Dr. Obalinski advocates the use of cocaine injections as a means of aiding and prolonging chloroform narcosis. The patient first inhales chloroform up to the point of tolerance, which is usually reached in five or six minutes, with the consumption of four or five drachms of the anæsthetic. Then the author injects from one-half to three-quarters of a grain of cocaine at the seat of the proposed operation. After this injection no more chloroform is given, unless the operation is a very long one, in which case a little is inhaled from time to time at long intervals. The author has employed this method in several major operations with satisfaction, and, as the result of his experience, comes to the following conclusions: 1. This method combines all the advantages of general chloroform anæsthesia and of local anæsthesia from cocaine. 2. Vomiting very rarely occurs when the combined method is employed. 3. The awakening from the narcosis is more easy, and the after-effects are less pronounced.—*Journal de Médecine de Paris*, No. 7, 1888.

A DRUG ON THE MARKET.—The Madras government has so much difficulty in disposing of its cinchona febrifuge (the mixed alkaloids), that it is suggested that the drug be distributed to postmasters for sale, or given away to the poor, through the dispensaries and minor officials in malarial districts. The latter recommendation has been adopted.—*Philadelphia Medical Times*.

A SUCCESSFUL CASE OF COLO-COLOSTOMY.[1]

BY WILLY MEYER, M.D.,

SURGEON TO THE GERMAN HOSPITAL.

ALTHOUGH there is not much to be seen and felt on the patient whom I want to present to you to-night, I should nevertheless like to show her to you on account of the good result of the operation I performed on her three months ago. The operation was an enterostomy between the ascending and transverse colon, a colo-colostomy, for cancerous stricture at the hepatic curvature of the large intestine

Before describing the operation, allow me, Mr. President, to give a short history of the case. Mrs. F. S——, thirty-three years of age, mother of three children, had a miscarriage last January. A short time afterward she was attacked with painful cramps in the bowels, accompanied with constipation and vomiting. Suitable medical treatment gave temporary relief, but as other similar attacks soon followed upon the first, she entered the medical division of the German Hospital on March 28th. Here she was treated for chronic intestinal catarrh. Regulation of the diet and the administration of suitable drugs and large enemata improved her condition so much that, by the middle of May, she was able to leave the hospital. But the improvement did not last long. She went to stay at the house of an old friend, and as soon as she began to take the regular meals with the family, thus interrupting the diet to which she had been subjected, the old trouble returned, and in two days again she was admitted to the German Hospital (May 21st), and again was greatly benefited by the former treatment. But although retaining a fair appetite she constantly lost flesh. At that time I was kindly invited by Dr. L. Conrad, then physician in charge of the medical division, to see the patient with him, as local examination of the right groin discovered in it a resistance. We decided to make a thorough examination under ether. This revealed a hard, uneven, movable mass in the depth of the right hypogastric region, somewhat upward and inward from the anterior superior spine of the ileum, from which latter point a firm cord could be traced, extending downward and parallel with Poupart's ligament. Digital exploration by the vagina proved both parametria to be perfectly smooth. It was not very easy to make out the differential diagnosis. Of course we thought first and mostly of a malignant tumor of the gut; but the condition might also be explained by assuming that, in consequence of a subacute pericolitis, one of the lowest loops of the ileum might have become attached to the colon at a sharp angle, thus causing the recurrent intestinal obstruction. The long, firm cord, of which I spoke before, would then have been the thickened and elongated vermiform appendix.

Under the circumstances the patient seemed to require surgical interference, and for that purpose was transferred to my department.

The only operation advisable was that of opening the abdominal cavity, in order to ascertain the cause of the obstruction, and then to remove it if possible.

On July 2d I performed laparotomy in the region of the tumor, making my incision parallel with the linea alba. The incision, five inches long, divided the peritoneum in the same length. Then, searching with two fingers for the tumor, I was able without any difficulty to bring it into sight and in front of the abdominal wound. It was found that a little above the hepatic flexure of the colon there was an infiltrating cancer, and a great many smaller and larger secondary growths spread over the whole surface of the ascending colon. The long, hard cord, mentioned above as running parallel to Poupart's ligament, was an infiltrated (carcinomatous) ligamentum coli.

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[1] Presented to the Society of German Physicians, September 28th, and the New York Surgical Society, October 10th, 1888.

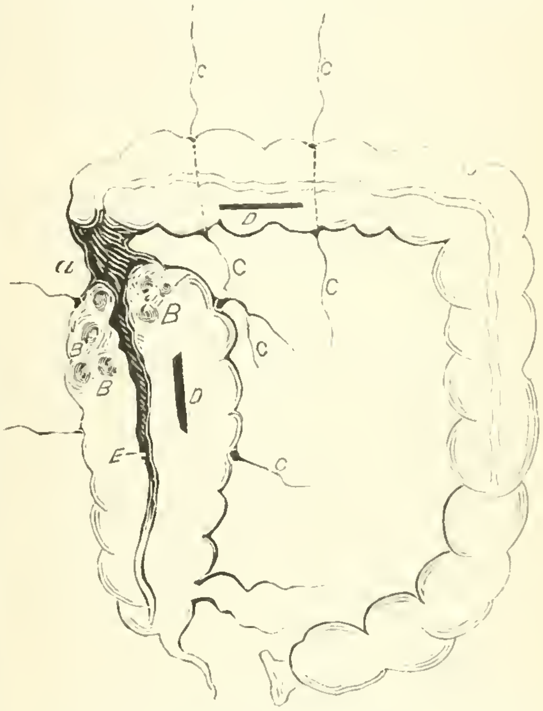
It was at once evident that a radical operation—resection of the diseased gut and uniting of both divided ends by suture—was out of the question, even if the patient's condition would have been more promising than it then was. The establishment, on the one hand, of an artificial anus in the lowest portion of the ileum, just before the ileo-cæcal valve, or, on the other hand, enterostomy, were the only procedures which could be taken into consideration.

In view of the great annoyance the patient would certainly have had to bear after the first operation, owing to the more or less liquid condition of the intestinal contents at the lower end of the ileum, I rejected the first plan, and decided to perform enterostomy. No doubt the most reasonable procedure would have been to establish the artificial stoma between the end of the ileum and the transverse colon, both being perfectly healthy, thus eliminating the entire diseased portion. But the retraction backward of the tumor (owing to its scirrhous nature) at the seat of the disease determined a bulging forward of the parts of the gut which lay just above and below the tumor. These protruding portions came so well forward and so near each other that it seemed an easy thing to attach the ascending to the transverse colon. By this union, moreover, not too long a part of the intestine would be excluded from the passage of the fæces. The danger of the stagnation of fæces would be thus diminished. I therefore resolved to perform the operation for colo-colostomy.

The whole operation was performed extraperitoneal, the abdominal wound and the intestine having been well protected by several layers of iodoform-gauze and flat aseptic sponges. I selected two parts of the gut, above and below the tumor (see figure) as far as possible from the growth, but easily adaptable to each other, pushed two strong catgut ligatures through the mesocolon, near the gut, at a distance of about three and a half inches on either side, taking care that before tying them temporarily the portion of the gut was well emptied of its contents by squeezing it with the fingers in a direction opposite to the location of the cancerous growth. Then I made a longitudinal incision of nearly two inches into both segments of the bowel, brought them together, and united them by a double row of a continuous catgut suture (Lembert's method). The posterior margin of the incision in the ascending colon was stitched to the posterior margin of the incision in the transverse colon from within outward, the mucous membrane not being included. After careful cleansing the parts were reduced, and the abdominal wound was closed. The peritoneum was stitched separately. An antiseptic dressing, held by broad strips of adhesive plaster, covered the wound, and a roller bandage compressed the abdomen. The patient was then brought to bed. There having been no loss of blood at all, the shock was very slight, although the operation lasted nearly two and a half hours.

Concerning the subsequent history there is not much to be said. Patient did not receive food in the first twenty-four hours. Then she was kept on liquid food and small doses of laudanum, three drops every two hours; two ice-bags covered the abdomen, as there was some pain. Temperature never arose above 100.2° F; the pulse was somewhat rapid in the first two days, ranging between 100 and 110 (probably the effect of the chloroform), afterward it was normal. On the second day icterus developed, gradually getting worse, and disappearing exactly two weeks after the operation. I do not hesitate to pronounce this as one of those rare forms of icterus known as hematogenous. First I feared that the reduced bowels might press in some undefinable way upon the ductus choledochus. But the patient being, apart from the icterus, in perfectly good condition, I soon came to the conclusion that the icteric discoloration of the skin and conjunctivæ was due to the reabsorption of the bloody serum that had filled the abdominal cavity at the time of the operation, and which, in order to save time, was not completely sponged out. (Lauenstein has seen the same kind of icterus upon a gastro-enterostomy [1]) On the eighth day after the operation the bowels moved without any trouble, and from that time did so regularly by the aid of a teaspoonful of castor-oil daily. When the first dressing was removed, on the eleventh day after the operation, the wound was closed and firmly united by primary union. Soon the patient's appetite became very good, she gained constantly and was allowed to leave the bed on the twenty-third day post operationem. She left the hospital on the 24th of August. Up to that time she had gained sixteen pounds, weighing one hundred and twenty-eight (to one hundred and twelve before the operation).

To-day she has a strong and healthy appearance. She eats anything, even German cabbage and salads, though, of course, this is without my sanction. Her bowels move every morning regularly, sometimes two and three times a day without help. She is cheerful, feels able to work, and weighs one hundred and forty-eight pounds, which means a gain of thirty-six pounds in three months. She was anxious to resume her former occupation of stewardess on the North German Lloyd steamer Elbe; but as I was opposed to this plan she is now going to fill a place as cook in a small family.[2] She has no idea that the tumor has not been removed, and believes herself perfectly cured. Only now and then she has a painful sensation in the right groin and a slight weakness in walking. The tumor has not increased in size since the operation; rather decreased, as far as we can judge by palpation, according to its nature as scirrhus.



A, Cancer: *B*, *B*, *B*, metastatic growths: *C*, *C*, temporary catgut ligatures; *D*, *D*, longitudinal incisions; *E*, ligamentum coli (infiltrated).

Of course, Mr. President, it is difficult to say whether the former stricture is now entirely unpassable by fæces. But as all the former troubles the patient complained of have disappeared, it is sure that the most part of the fæces, at least, are easily pushed forward by the way of the artificial opening.

My case shows very well the benefits of Woelfler's operation, and furthermore, that it can easily be applied in any portion of the intestinal tract with the same good result as in gastro-enterostomy.

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[1] C. Lauenstein: Zur Anlegung der Magendünndarmfistel. Centralbl. für Chirurgie, 1888, p. 472.

[2] At time of correcting proof (November 10th) patient attends to cooking and general house-work since four weeks. She weighs 155 pounds (gain of 43).

It is well known that besides the stomach and jejunum the gall-bladder has been artificially and successfully connected with the jejunum in perfect obstruction of the ductus choledochus (cholecysto-enterostomy[1]), and the ileum with the colon[2] for stricture of the cæcum (ileo-colostomy.) As Dr. F. Lange, of this city, told me he sewed the ileum to the sigmoid curvature in a child of six months, who had invagination of the ileum into the ascending colon which could not be separated. It died four hours after the operation (May 1887), having been very low before the operation.

Woelfler says, in his first publication on gastro-enterostomy:[3] "Perhaps further experience will show that this plastic operation of the intestinal tract (gastro-enterostomy) will not only obviate the necessity of establishing a fistula of the intestine in cancer of the pylorus, but also in cancer of the gut." So far as I am aware, after a careful perusal of the literature of the subject, this is the second case (first by v. Hacker, l. c., for recurring cancer of cæcum) where the artificial intestinal anastomosis has been successfully performed for cancer of the intestines, and the first where union has been obtained between two different portions of the colon.

105 EAST FIFTY-NINTH STREET.

TEMPERAMENT AND DIATHESIS IN DISEASE.

By F. B. STEPHENSON, M.D.,

SURGEON, UNITED STATES NAVY.

STUDY and observation have given rise to the idea that knowledge of temperament and diathesis may be systematically applied to aid in the diagnosis, prognosis, and treatment of disease; and also in the discovery of personal physiological habit, or idiosyncrasy, in virtue of which certain disorders often appear. It is difficult, even if possible, to separate mind from body in this consideration, so intimately conjoined, if not identical in principle, are their modes of physiological action. We should not forget that the physician himself is influenced by such conditions, which modify his observing judgment, and remedial conduct.

According to the philosophers,[5] there are three normal temperaments:

1. The nutritive, of which typical forms are seen during infancy and youth, when nature is building up the individual. This is somewhat analogous to the lymphatic (*v. infra*), also recovering or sinking quickly. The feminine organism, in nervo-muscular mobility and weakness, resembles that of infancy.

2. The sexual. At the natural age for reproduction, growth of the person is subordinated to the formation of a future generation, influences tending thereto finding fullest fruition in an ennobling maternity.

3. The cerebral, controlling in later life. Intellect is now the force that decides, rather than those before mentioned.

As an instance of the nutritive unduly prolonged, we note obesity, which is unfavorable to reproduction or to mental energy; the converse relations of action often give corresponding results.

There are also masculine and feminine normal temperaments; but we find, not infrequently, the body of one united with mental and moral features of the other.

Predominating forms of temperament are, as it were, morbid states, deflections from the equilibrium of perfect life.

Resistance to the evolution of natural temperament, from whatever cause, may bring about disorder, perhaps disease.

During the various epochs of development, vicious activity, localized in divers organs, may occur, resulting in defects of normal growth in one part with morbid hypertrophy in others. Distinct pathological manifestations and moral affections belong to the different ages of the individual. Death from disease at these periods is characteristic; the child knows it not; the youth hopes to the last; the mature man resigns himself to the inevitable; while the advanced in years fall asleep, though loath to leave the loved ones.

Concerning what may be termed morbid temperaments (constitutions), the classifications of the ancients do not differ essentially from those of the moderns.

Although the sanguine, nervous, bilious, phlegmatic, and melancholic are generally recognized, we may for the present purpose, in illustration, consider only the sanguine, nervous, and phlegmatic.

1. The sanguine, which predisposes to violent physiological reactions, acute and excessive inflammations, complete evolution of disease, well-marked crises, plethora, hemorrhage, gout, rheumatism, quick and strong response to the use of remedies.

2. The nervous, where are found conditions favorable to intensifying of sensations, mental troubles, melancholia, hysteria, epilepsia, convulsive disorders, neuralgia, seasickness, insomnia, insanity, various neuroses, febrile delirium, lithiasis, dyspepsia, intestinal and hepatic obstruction. Morbid tendencies are increased by tea, tobacco, and alcohol. The course of disease is apt to be irregular, and its termination uncertain.

3. The phlegmatic, affording few manifestations beyond those essential to disease. Individuals of this somatic crasis show little evidence of pain; they do not feel much. A stolid physiology enables them to bear, with comparative ease, what would be agony for others. They may be fairly strong or impulsive in mind, but weak and easily exhausted in body; often the skin is pale, and the extremities cold. Reactions tending to health are slow and feeble. There is less power of resistance to acute maladies, and proneness toward disorders arising from, or connected with, low vital energy; such as strumous changes, catarrh, dropsy, especially asthenic and chronic processes and degenerations. Phthisis pulmonalis, scrofula, diabetes, and albuminuria from organic affection, seem to occur most frequently in persons of a lymphatic or nervo-lymphatic habit.

The above-named types are rarely seen distinct, but ordinarily shade into each other, appearing combined in varying proportions. Nevertheless one form usually predominates, while secondary indications have a meaning that merits interpretation: all are significant, in both normal and morbid activity. Characteristics of temperament are, as a rule, more marked in early life than during later years. Inherent modifying qualities belong to successive ages of the individual. Sex[1], occupation, seasons of the year, different centuries and historic epochs, race, and nationality, seem at times to be almost synonyms for temperament. Scandinavians are generally phlegmatic in bodily function, and slow in mental action. The volatile Celtic nature lacks the solidity of Saxon strength. A nervo-choleric manner belongs to the French. Acute manifestations of disease are common among the Italians, especially south of Florence, there is an intensity of all vital processes.[1] Idiosyncrasy may be regarded as a very special temperament. The occurrence of accidents may be due to definite physical or mental qualities. Diseases find congenial lodgment with particular temperaments; or, one has the diseases of one's temperament.[2] Disturbance of the balance of health, bodily or mental, brings on diseases which are of more gravity, because of the organs being already enfeebled by temperamental departure from normal form or perfect type.

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[1] A. von Winiwarter: Ein Fall von Gallenretention, bedingt durch Impermeabilität des duct. choled. Anlegung einer Gallenblasendarmfistel Heilung. Prager Med. Wochenschr., 1882, pp. 21-22. Kappelter: Die einzeitige cholecystenterostomie, Korrespondenzblatt für Schweizer Aerzte, 1887, p. 17. Ref. Centralblatt für Chir., 1888, p. 18. F. Socin: Fall von einzeitiger Cholecyst-Enterostomie, Correspondenzbl f Schweiser Aerzte, 1888, p. 471.

[2] v. Hacker: Ueber die Bedeutung der Anastomosen bildung am Darm für die operative Behandlung der Verengerung desselben Wiener klin. Wochenschr. 1888, No. 17 u 18. Ref: Centralbl. f. Chir. 1888, p. 765 (2 cases). The first patient operated in this way by Billroth, died soon after the operation. (A. Woelfler, Centralbl. f Chir. 1883, No. 23, Beilage, p. 44). N. Senn (an experimental contribution to intestinal surgery, etc. Annals of Surgery, vol. vii. 1-6) performed different artificial intestinal anastomoses on animals (jejuno-ileostomy, ileo-colostomy and ileo-rectostomy, incidentally no colo-colostomy). The use of his prepared bone-plates (perforated disk) will greatly facilitate and shorten these operations.

[3] Anton Woelfler: Gastro-enterostomie, Centralblatt für Chir., 1881, p. 705.

[4] Read, in part, before the Norfolk District of the Massachusetts Medical Society, March 27, 1888.

[5] Cabanis.

[1] Characters which appear late in life in one sex are transmitted exclusively to the same sex.—Darwin.

Diathesis may be regarded as an aberration of nutritive processes. As typical we mention the strumous, rheumatic, and gouty.

1. The strumous (scrofulosis, tuberculosis) predisposition, very marked in early life, is often noticed in an organization generally delicate, of nervous temperament. It may be indicated by apparently slight caries, fragile or easily decaying teeth; chronic inflammations of joints, serous membranes, and connective tissue; phlebitis, long-continued discharges from mucous surfaces, and impetiginous eruptions. In youth scrofula is observed, the same person in more advanced life showing signs of tubercle. Hyperopia is frequent in offspring of such parentage; they readily appear prematurely old. Favorable conditions may cause an outbreak of unmistakable tuberculosis, which may also come on in connection with, or as a sequence of, syphilis, cancer, and nephritis. Sterility is sometimes due to tubercle in the ovaries or Fallopian tubes, with or without evidence of inflammation. Uncontrollable passion for alcoholic drinks (with its indirect dangers, as exposure, accidents, etc.), phthisis, neuralgia, epilepsia, paralysis, and insanity have been noticed, seemingly as complementary manifestations of this diathesis; derangements of mind and body thus replace each other. Composite portraiture is of use in establishing a diathetic type, *e.g.*, of phthisis.

2. In one of rheumatic habit, most pronounced in mature age, we expect various localizations of the *materies peccans* in the brain, heart, joints, and serous membranes, connective tissue seeming to be specially implicated. As diathetic alternates may be mentioned arthritis, pericarditis, chronic blepharitis, iritis, laryngitis, bronchitis (acute or chronic), meningitis, cerebritis, insanity, hysteria, chorea, partial paresis, erysipelas, herpes, pityriasis, erythema nodosum, itching of integuments without apparent lesion, and chronic diarrhœa. Changes of weather are noticed more quickly by persons of this tendency.

The quick healing of herpes cervicis uteri brings to mind the like in regard to cancer; fatal carcinoma has been observed to follow eczema. It appears that cancer occurs by preference in one of rheumatic disposition, as tubercle with the lymphatic. "Erysipelas has been known to cure insanity,"[3] it is stated; but we should prefer to say that erysipelas was the diathetic alternate of such insanity.

As a possible example, the following is presented: A woman, in circumstances of fair living, had been affected with chronic bronchitis and slight cervical endometritis. After a month's treatment (with drugs and local uterine applications) these diseased conditions had disappeared; but œdema then occurred, more or less transient, in divers parts, with occasional emesis, hysterical symptoms, semi-coma, etc.[4] The bronchitis, and other localized troubles, had evidently served as an conduit for the materies morbi, or malign influence of, we may suppose, diathetic origin. It may not always be wise to stop (cure?) a slight discharge.

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[1] Rome in Winter, and the Tuscan Hills in Summer, by David Young, M D.

[2] Nouveau Dict. de Médecine.

[3] The New York Medical Journal, December 17, 1887.

[4] Some Unsolved Clinical Problems. The New York Medical Journal, May 7, 1887.

3. The gouty diathesis, usually an apanage of full age, presents many features similar to those of the rheumatic. Among the probable forms of alternate manifestation we give, as illustrative, anæmia, hypochondria, hysteria, chorea, irrepressible temper,[1] acute meningitis, neuritis, neurotic disturbances, migraine, localized paralysis, disordered action of the heart, continuous spasms or convulsive twitchings, urticaria,[2] erythema, eczema, psoriasis, asthma, dyspepsia (with grainy or fissured tongue), gastritis, hepatic and intestinal disorders, diabetes, nephritis, cystitis, gravel, calculus, and inflammations of the smaller joints. One form can, hereditarily, give rise to another, often not easy to recognize. As in the consideration of temperament, so, in relation to the habits of the body, varied diathetic interminglings should be taken into account when examining individual cases.

We may regard the foregoing as a number of illustrative alternating symptoms due to the same basic cause; when one portion of the disease wave goes up, a corresponding fall takes place elsewhere (metastasis). One of these diathetic alternates does not produce the other, but all have similar genetic relation. under the laws of organization; and appear in the same person or in kinsman of various degrees. Investigation of such physiological connection might lead to the simplifying of nosonomy.

There seems. moreover, to be a difference of susceptibility to disease in individuals, families, and races, quite irrespective of temperament and diathesis.

A diathesis may arise in the individual. lead to the formation of a cachexia, become hereditary, be transformed or destroyed by hygienic measures, or through selection of sexual union in transmission of life to another generation. It may be modified by particular diseases: scarlatina thus develops an incurable eczema; or a long fever works a favorable change in some inveterate complaint. The irregularities of such ailments as whooping-cough and variola might seem more clear when viewed in connection with constitutional peculiarities. Lack of perfect development in one part of the organism suggests the same in others. A half-formed palate may coincide with a weak mind depending upon an unfinished brain. Mental moods are affected according to the stages of these diathetic morbid processes.

Diathesis may be looked upon as a soil in relation to the production of disorder; and temperament comparable with atmospheric conditions, considered the means through which exciting causes act, or gain access—it is the proper physiognomy of each person.

Temperaments and diatheses being combined in different and varying proportions, render more complex the problem as to diagnosis, prognosis, and treatment; but it is not annihilated by ignoring facts.

In diagnosis, we may be better able to judge the real value of symptoms by remembering that indications of temperament and diathesis, as well as signs of disease, vary with climate. social surroundings,[3] and political eras. Families, communities, and races may become comparatively safe, through inheritance, a disease-virus losing original force in successive generations. Such constitutional states become known by heredity, atavism, examination of other consanguineous members of the family,[4] evidence of former disease. intolerance of certain articles of food, characteristics of gait, (limping),[1] physiognomy, and environments (circumstances in which diseases arise, *i.e.*, cause). By these the course of physiologic action in any given idiocrasy is apt to be modified, hastened, or retarded. When a disease does not pass through its usual regular series of changes, some perturbing morbid habitus, permanent or transient, is to be suspected. Passing mental humors, whims, etc., are sometimes of importance; *e.g.*, quietness, or depression (*tristesse*) may presage bodily sickness (fever); or, unnatural activity may portend grave illness. Irritability of pulse, nerve, and brain, frequently depends on weakness. The alteration of moral manifestations is in direct ratio to changes in corresponding organs, the condition of which may furnish the observer a measure of the disturbance in cerebration. Singular appetites are noticed in certain disorders. The vague "something" termed malaria seems to modify the temperature in other diseases, so as to cause sudden and great variation. When, from any cause, the system is debilitated, this influence is apt to show itself. Transitory thermal states modify indications of morbid action. Axillary adenitis is believed to be an early sign of pulmonary phthisis.

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[1] Anatomy and Physiology in Character, by Furneaux and Jordan, p 66.

[2] Urticaria and migraine seem to be related as to their origin, and to belong to the same diathetic stock.—Rapin, Boston Medical and Surgical Journal, July 7, 1887, p. 22.

[3] It appears that effluvia from one set, or one race of man is poisonous to others. The lower animals have similar relations with themselves, and toward man.—Darwin.

After talking with physicians of actual experience in the matter, it seems probable that some of the commonly received statements alleging immunity of negroes, as such, from certain diseases lack logical support in fact. Dr Woodward (quoted by Dr. E. N. Whittier) gives, for typhoid fever: White mortality, 35 89 per cent.; negro mortality, 55.68 per cent. Typho-malarial fever: White morality, 8.13 per cent; negro mortality, 17.37 per cent.

[4] Family Predisposition to Fractures. Boston Medical and Surgical Journal, July 7, 1887, p. 22.

Cancer usually occurs in mature or old age, and is regarded as an affection of the white race, being rarely observed in negroes. Wounds (of bones and soft parts) in course of repair are influenced by temperament and diathesis; they are also modified by acute infectious maladies.[2]

Mutilations affect physical and mental development, and alter native inclinations, thus showing their material foundation. Moral dispositions with troubles of the chest are not the same as in abdominal disorders. A mild continued fever enlivens the spirits, causes one to see life in a more genial mood; and unusual mental qualities often appear in the course of active disease.

As to prognosis, the indications of temperament may enable one to decide more accurately the probable intensity of pathologic activity. With a certain diathesis we expect a congruous departure from the typical evolution of any particular malady, or repetitions of morbid processes. Accidental causes (a strain, blow, or fall) sometimes excite well-marked phenomena, bring on an attack of gout, rheumatism, or strumous inflammation in persons of the respective peculiar generative modus. With individuals of some blood connections certain diseases are likely to occur at definite periods of life, by heredity. Functional troubles of little importance, perhaps, in an otherwise healthy body, may, in peculiar diathetic conditions, become the forerunners of serious organic lesion, or end in cachexia. Each one has his strong and his weak part, with relative predominance of physiologic action. Very great activity in any particular system may announce change of highest moment to the whole economy. Personal habit in conduct of life, previous and present occupation (muscular or mental, indoors or out), may favor illness, by over- or under-work of certain organs. In the ability to resist forces inimical to health, and bear the strain of life, some men seem to be made of granite, some of marble, some indeed of clay.

Treatment.—The necessity for rational medicine is apparent when care of the sick becomes a duty. Practitioners know that individuals are differently affected by remedial measures (drugs, diet, external applications, exercise, travel, etc.); but might not much in this way be scientifically formulated, enabling one to foresee, instead of waiting to grope along, in each case, as symptoms arise?

Temperament may suggest diathesis; as the nervous, the strumous. A person of any diathesis (strumous, *e.g.*), properly cared for, may escape positive disease, to which another, in untoward circumstances, would, almost of a moral certainty, fall victim. Inasmuch as scrofula of youth is often a precursor of phthisis in mature age, efforts at prophylaxis are self-suggested.

Diathesis is to be combated by cutting off its supplies, factors, and conditions of causation. Physiognomy, properly based on anatomical and emotional data, as showing temperament and diathesis, may indicate ability to undergo treatment or operation. A patient of nervous type should exhibit more excitement than one of different organization. Neuralgia in such a one may cause a catarrh which will follow the phases of the nerve trouble. Neurotic persons often see mountains in mole-hills, and are annoyed by interior impressions. Relief may frequently be obtained through skilfully directing their attention away from the seat of alleged disease.

Asthma often comes on as eczema disappears; thus a hint is furnished for the conduct of the case. The effect of previous medication should not be forgotten. Untimely measures, the stoppage of habitual discharges (diarrhœa, hæmorrhoids, dermal exudations), or periodic migraine, by active treatment, without thorough knowledge of previous history, may cause the disappearance (so-called cure) of a comparatively harmless form of diathetic manifestation, only to be followed by some other perhaps more dangerous, or by grave perturbation of the general health. Hæmorrhoids, bronchitis, and headache have been observed to replace each other, one being always present. It is stated that, in the case of the Duchess of Cumberland, after heroic treatment for articular rheumatism, a tendency to mental disturbance was developed; later she became insane.[1]

In practice the recognition of blended diathesis is often more useful than an elaborate physical diagnosis.[2] The significance of idiosyncrasy, and its bearing upon treatment, has not received from specialists the consideration its importance demands.[3] A knowledge of the phenomena of health and comparative health, may be made more exact by considering those of disease.

It is believed that alcohol, mercury, and lead favor the outbreak of hysterical symptoms in those predisposed; the influence of railroad accidents (shock), etc., may be borne in mind. Parasitism, if often a sign of temperament, seldom annoys some individuals, and when so, during a very short time only—the soil is not propitious. Care of the same maladies properly varies in different climates. It is recorded that in its course intermittent fever has been destroyed by a determinate number of paroxysms,[4] without specific treatment.

In regard to children, unusual thought and management are necessary, inasmuch as their tissues and force are more impressionable, and pathological conditions tend to become general with more rapidity than in adults.

Immunity from disease and capacity for work (of both body and mind) depend greatly upon the quality of food, and its physiological fitness of ingestion as to time and regularity. Many individuals seem able to use alcoholic and other stimulants without apparent shortening of life or serious inconvenience; but in some instances a shattered economy or premature death is the result. Irregularities of life (errors of diet, and of passion) add to innate aberrations from the normal type. Tendency to physical disorders, outbreaks of anger, and morbid modes of thought, may be lessened by appropriate sustenance. Bulky food engenders slowness and rudeness in motion and intellection. Particular substances may be employed to further definite kinds of product. Taking of exercise, for purposes of health, should be modified according to temperament, climate, and the circumstances of the individual in view.[5]

The athletic régime is not suited for those who work chiefly with their brains, since it tends to increase rather the grosser forces of the economy. Intellectual labors diminish, relatively, muscular energy; the converse appears equally true. Mental medicine may advantageously accompany the physical. The proper therapeutics of gout should be based upon the study of the history of generations and races. Anyone hereditarily or diathetically inclined to disease might be wisely warned concerning probable ailments, particularly of brain, heart, lungs, and intestines.[1]

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[1] T. L. Stedman, M.D., in THE MEDICAL RECORD, New York, January 28, 1888.

[2] Éléments de pathologie générale, par M. le professeur Baudry (de Lille), quoted in Journal de Médecine et de Chirurgie, August, 1888, p. 367.

[1] New York Sun, March 27, 1887.

[2] J. Milner Fothergill.

[3] Boston Medical and Surgical Journal, June 9, 1887, p. 558.

[4] Cabanis, tome ii., p. 371. Paris, 1828.

[5] Physiologie des exercices du corps, par le Dr. Ferdinand Lagrange.

The degree to which a person, in the various parts of body and manifestations of mind, has developed in the line toward perfection, may be significant as a guide in forecasting ability to withstand the wear and tear of life, or the strain of disease.[2]

Although the ultimate constituents of different individuals are the same, their proportion, manner of combination, and mode of action require anticipation of unlike effects under stress of the various demands of life—the willow cannot replace the oak.

Physical and mental degeneracy may result from incompatible or unphysiologic unions[3] (marriage) between those of similar or nearly allied temperaments and diatheses. Reproduction of undesirable characters, corporeal or psychic, might be avoided by consciously intelligent choice with respect to the significance of organization and inheritance. Political law is of slight effect in such matters. Knowledge, education, and an enlightened self-interest are the potent means. Upon man is bestowed the power of procreation, and with this intellect, to enable him to discover and obey the conditions necessary for transmitting a healthy organism to his posterity.[4] There is nothing really accidental in human nature, or other nature. Servility as to doctrine is sad in all things, but in medicine or physiology it is more dangerous than elsewhere, because it may hazard the life or welfare of the individual.[5] A knowledge of disease must be supplemented by careful study of the patient[6]—of man well and man sick—in various degrees of evolution, approximating more or less the normal type. In the application of the afore-mentioned ways of thinking, light may be thrown upon the formation of ideas, and a basis for moral conduct offered.

Temperament and diathesis might furnish data whereon to found timely advice for the prevention of illness. Hygiene, directed by physicians imbued with a scientific spirit, may be made vastly efficacious for the physical, mental, and moral improvement of animate beings.[7]

Comparable with the large dosing of late modern, half-learned practitioners, specialism forces unscientific measures upon the trusting sufferer. Sugar (diabetes), or albumen (nephritis), seems less in consequence (or mere sequence) of active treatment, with a chemical examination. The time that the patient's life may have been shortened through eager meddlesomeness, is not so conspicuous.[8]

Since the history of medicine shows fashions in treatment which succeed each other, and sometimes reappear in a following generation, the idea is forced upon our attention that a more perfect knowledge of physiology would reveal a better founded, more correct course of action.[9] Strict attention to the laws of evidence would enable us to discover truth, while avoiding fallacious inferences.[1] "The thorough medical mind requires not only accurate data, but the digested facts which nourish thought." "Truth is often reached through relations the least obvious to common observation."

The physician and others may advantageously learn the limit of their personal force, in both health and sickness, in order to obtain best results from effort.

A wise practitioner is an intelligent observer and comparer of things, searching for the conditions (cause) and natural history of disease, trying to find means of prevention,[2] guiding self-limited maladies toward a desired end, knowing when and how to act (or hold his hand from meddling), in aiding the economy to throw off morbific matters and resist unhealthful influences. Anyone with a panacea may be looked upon as a quack or an enthusiast—both as ignorant. In order to rightly use remedial agents, we should first know the effects produced thereby on all the organs and functions of the healthy body (therapeutic physiology).[3]

When human art can no longer help toward life, the duty of making easy the passage of the weakening body and conscious mind to repose in nature's sleep becomes apparent.

We may observe that the study of temperament and diathesis has been, in late years, comparatively neglected, whereas particular organs, and individual modes of morbific action, have received special attention. Nevertheless, a knowledge of the underlying, far-reaching influences that modify both natural and diseased function is requisite to the full understanding of physiology and pathology;[4] even as a large chart is needed by the world-navigator at times, though one showing more details is used when he draws near the coast; the latter is more thoroughly comprehended because of the general principles learned from the former. It is said that the present advanced condition of electro-dynamics has been attained in such a short time, because science had been evolved before art had wandered through long ages of vague and unsatisfactory empiricism.[5] May this idea be applied to medicine?

While, in many directions, the literature of modern medicine is rich with new and valuable information, the student of ancient physic can find much to guide him amid the maze of current professional writings.[6] To those who imagine that nothing is of worth save what recent science has brought to light, we commend the following, from an eminent practitioner: "Whoever, rejecting and disdaining the past, tries other principles (than those of which the profession has long been in possession), and pretends to have found something new, deceives himself, and deceives others.[7]

A Double Pyosalpinx Cured by Aspiration.—Mr. R. H. Bourchier Nicholson deserves thanks for reporting a case (*British Medical Journal*) in which he diagnosticated double pyosalpinx, removed several ounces of pus by the aspirator through the vagina, and cured the case. He was advised to do laparotomy, which would have been "a more brilliant operation," but he demonstrated that such a procedure was not needed.

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[1] Holstis' Views on Arterio-capillary Sclerosis, New York Medical Journal, November 20, 1886.

[2] Typical Man, Scribner's Magazine, July, 1887.

[3] "Do not take wife from a witless family, or one infected by a constitutional disease; you perpetuate sorrow by so doing." Jerome Cordaro, in Libellus Præceptorum Filiis (A.D. 1547).

[4] Constitution of Man, by George Combe.

[5] Bouchut.

[6] Gueneau de Mussy.

[7] In regard to inmates of jails, Leigh Hunt says: "Their criminality was generally proportioned to their want of thought."—Autobiography, chap. xiv.

[8] Those who are familiar with the pages of Boerhaave, Morgagni, Sydenham, and even of the physicians of antiquity, will find in them many of the very cases, methods, and opinions which are unwittingly offered to us as novelties in the medical writings of our own day.—Holland's Medical Notes and Reflections, p. 491.

[9] Conservative Medicine in Medical Essays, by Austin Flint, 1874. Loomis, from observation, came to the opinion that there is no necessary relationship between the temperature range and other febrile symptoms.—The Medical News, February 11, 1888.

[1] Holland's Medical Notes and Reflections.

[2] Von der Erfahrung in der Arzneikeurst, by Zimmermann; Disease a Part of the Plan of Creation, by B. E. Cotting; Modern Inquiries, by Jacob Bigelow; and the works of Thomas Sydenham, author of the phrase "Natural history of disease."

[3] Life of Sir Robert Christison, vol. ii., p. 184.

[4] Specificity and Evolution in Disease, by W. T. Collins, 1884; and papers of Sir William Aitkin, Glasgow Medical Journal, 1885-86.

[5] A Century of Electricity, by T. C. Mendenhall.

[6] Compare the ancient humoralism (at least as old as the Grand Old Man of Cos) with the modern pathology of the Animal Alkaloids (ptomaines, leucomaines, extractives).—Writings of Sir William Aitken.

[7] Hippocrates.

Progress of Medical Science.

Acetic Acid as a Disinfectant in Midwifery.—Dr. F. Engelmann, being much impressed by the numerous fatal cases which are constantly occurring from the employment of intra-uterine injections in obstetrical practice, and feeling that there is doubt whether they ought not to be given up, brings before the profession another antiseptic which he has used for the last two years in a large number of cases, and which has given him excellent results—acetic acid. Some years ago he was led to use and to recommend the employment of acetic acid in diphtheria, and he is convinced that it possesses antiseptic properties in as high a degree as carbolic acid itself, and has at the same time the great advantage of being non-injurious, even when used in a tolerably concentrated form; besides, it has a decidedly styptic effect, and this is an additional advantage in obstetric practice. Again, acetic acid is very diffusible, thus penetrating the tissues to a much greater extent than most other antiseptics. Corrosive sublimate, as is well-known, forms insoluble albuminoid compounds on the surface, and thus does not act upon the deeper parts of the tissues. In one respect acetic acid is similar to corrosive sublimate, viz., in its action on instruments; but the latter is the more prejudicial of the two. The forceps may remain for a quarter of an hour in a three per cent. solution of acetic acid without being injured. The irrigator is, however, liable to be affected by the prolonged use of acetic acid solutions. It should be remarked that the hands must be washed twice after using acetic acid, as of course soap will not dissolve where this is present. The skin is rendered peculiarly soft and pleasant to the feel. As to the strength to be used, Dr. Engelmann, as a rule, employs a three per cent solution, but he has sometimes employed a solution as strong as five per cent.; this, however, is apt to cause a smarting sensation in any spot where the surface is broken. All the cases in which acetic acid was used recovered without abnormal rise of temperature.—*The Lancet.*

The Destruction of Micro-organisms in the Blood.—Dr. v. Fodor has made a number of experiments by injecting bacteria into the veins to determine the part taken by the blood in the destruction of micro-organisms. He had shown in a previous communication that hundreds of millions of non-pathological bacteria injected into the blood completely disappeared from it in the course of a few hours. By further experiments he showed that this power of the blood to destroy bacteria was not diminished by a moderate degree of anæmia, but was lessened by dilution of the blood with water so far that the bacteria were destroyed more slowly and with greater difficulty. Even pathogenic bacteria disappear rapidly out of the blood, for example, typhoid bacilli, which even a few hours after injection are no longer demonstrable in the blood, while the animals are in some cases simultaneously infected by the injected material, and die with symptoms identical with those of typhoid. Anthrax bacilli injected in large quantities disappear within four hours, but within from twenty to forty-four hours they again appear in the blood, and the animal dies. In the period in which it is free from bacilli the blood contains, so far as the negative injection experiments show, no material producing anthrax; this is the best proof that it is the bacilli that produce the disease. In the same period, however, in which the blood is free from bacilli, in the internal organs (spleen, liver, kidneys) they are constantly present, from which it is evident that the pathological development of anthrax does not take place in the blood, but in the internal organs. Anthrax is not a blood disease, but the blood is rather the protector of the organism against the pathogenic bacteria. A very small quantity of anthrax material is not lethal, and further, the rapidity with which the disease is fatal is in direct proportion to the quantity of injected material. According to von Fodor, the bacilli injected into the blood are destroyed by it; some, however, reach the organs and there develop. When the colonies steadily multiply in these parts, then the blood, the chemical constitution of which is changed thereby, is no longer able to destroy the bacilli that are present in it.—*The Medical Press.*

Oxygen in the Capillary Bronchitis of Children.—Dr. Sinainski gives some notes of a case of capillary bronchitis in a child a year and a half old, which seemed likely to prove fatal, where oxygen exerted a rapid and beneficial effect, resulting in complete recovery (*The Lancet*). Hot baths, ipecacuanha, and emetics of sulphate of zinc, sulphate of copper, and apomorphia, had been tried, but the pulse was decreasing, and the child was growing more cyanotic and breathing with more and more difficulty. Three or four inspirations of oxygen produced a marked change, the breathing becoming easier and the cyanosis disappearing. The next day the child presented quite a different aspect. Tonics, expectorants, and stimulants were given, and in about four days' time the patient had quite recovered. Dr. Sinainski thinks that in apparently hopeless cases, where there are signs that the blood is not sufficiently oxygenated, the inhalation of oxygen presents us with a means of obviating the danger arising from that source, and in that way of perhaps saving the patient's life.

The Streptococcus Pyogenes found in Healthy Saliva.—Of one hundred and twenty-seven healthy individuals examined by Netter seven times, a micro-organism having the characters and behavior of the streptococcus pyogenes of Rosenbach was found in the saliva. In previous researches the author had found in healthy saliva Friedländer's microbe four times out of one hundred examinations, and Fraenkel's micrococcus in twenty per cent. of the number of individuals examined, and this without any of the examined having had pneumonia. The presence of this streptococcus pyogenes in the mouth may give some explanation of the frequency of suppurative inflammations in the course of scarlatina, diphtheria, and other pharyngeal diseases. So long as the epithelium is intact the microbe does not reveal its presence; it only becomes dangerous when an entrance for it into the tissues is effected.

On the Value of Pilocarpine in Pregnancy, Labor, and the Lying-in State.—At a recent meeting of the Obstetrical Society of London (*The British Medical Journal*, October 13, 1888), Dr. John Phillips read a paper on this subject. He treated the questions at issue under five heads: (1) The use of pilocarpine as an abortive; (2) for the induction of premature labor; (3) intra-partum; (4) post-partum and during the puerperium, and (5) in albuminuria with or without eclampsia. Seven cases had been experimented upon and the results given in detail. Forty-eight cases under the second heading had been collected from all sources, of which twenty-seven had been arranged in two tables, while two original cases had been appended in full. The author concluded that five only of these could be considered as unqualified successes, and thought that pilocarpine was able in a certain number of cases to induce labor, but that it was not in any way reliable as an ecbolic; those cases in which there was a tendency to premature termination of pregnancy being most suitable for its administration. Pilocarpine intra-partum was considered under three heads: (*a*) The "latent period" of labor; (*b*) the dilating stage of labor; (*c*) the expulsive stage of labor. Five instances occurred in the author's practice, and in one sphygmographic tracings were taken at various intervals. The result of thirty-nine cases was worked out, twenty-eight being successes, and eleven failures. The author concluded that during the dilating and expulsive stages of labor pilocarpine was equally productive of increase and intensification of labor-pains with ergot, but with more certainty of action and with none of its ill-effects. Cases of simple uterine inertia were the most suitable for its administration. The drug was useless post-partum and to stay hemorrhage. In a third table the results of thirty-nine published cases of puerperal eclampsia were given, with recovery of thirty-one mothers and eight maternal deaths, or 20.5 per cent. Although good effects were produced in twenty-eight cases, yet in nine such dangerous symptoms manifested themselves that the author felt bound to warn others against its use, especially when coma was pronounced. He recommended bleeding in conjunction with pilocarpine where it would not act alone, and adduced evidence to show that the mortality was not greater under this mode of treatment than in any other.

The Urine after Intermittent Fever.—According to the Paris correspondent of *The Lancet*, Professor Bouchard presented to the Academy of Medicine a note for Dr. Mossé, of Montpellier, on the "Composition of the Urine after Intermittent Fever." It is known that Professor Verneuil had drawn attention to the existence of glycosuria consecutively to paludism. Dr. Mossé, from observations made in a hospital where cases of intermittent fever are frequent, was able to prove that glycosuria occurred only exceptionally in patients having or having had intermittent fever. It did not appear to the author even that paludal intoxication had any kind of influence on the development of diabetes, the coexistence of the two maladies being a pure coincidence. Dr. Mossé has established, on the other hand, consecutively to marsh fever, an acute form of polyuria, the excretion amounting to ten litres of urine in the twenty-four hours. This polyuria, free from azoturia, would approach the polyuria of convalescence, and should not be considered critical.

Toxicity of Alcohol.—Dr. Laborde has made a communication to the Paris Academy of Medicine, on "Alcohol and its Toxicity." He referred particularly to the toxic substances contained in wine, brandy, and liqueurs. He remarked that the question of alcoholism is becoming every day more and more important. At the present time it may be estimated that the maladies due to alcoholic drinks constitute one-fourth at least of the diseases observed in France. The author studied the subject from a scientific point of view only, and carried out researches with the specimens obtained from the Municipal Laboratory, assisted by Dr. Magnan, well known for his researches with the essence of absinthe. It is in the manufacture of "bouquets," which give the wines their flavor, that the adulterations are practised. They are known in commerce under the terms of "huiles de vin Françaises," and "huiles de vin Allemandes;" the latter are mostly employed because they are more active. MM. Laborde and Magnan studied the toxicity of these substances by injecting them into the veins of dogs. They caused the death of these animals after having produced symptoms of excitement followed by nervous prostration and great difficulty of respiration. These substances are toxic in an extreme degree. Even alcohols are adulterated with odoriferous substances which mask the alcohols of bad flavor. Dr. Laborde had particularly studied furfurol, the odor of which is very agreeable, being similar to that of cinnamon or bitter almonds. The intravenous injection of furfurol produces in a dog an attack of epilepsy and then kills it. Liqueurs are also adulterated with analogous substances. The salicylate of aldehyde is substituted for the essence of the "queen of the meadows." It is found in vermuth, in bitters, and in whiskey. It is a colorless liquid, reddening when exposed to the air, and is of a very agreeable aromatic odor. Like furfurol, it kills dogs after having produced epileptiform attacks. As regards the salicylate of methyl, which is substituted for the essence of winter-green, it does not cause epileptic fits, but it produces rigidity and trembling, which also lead to death. Hence Dr. Magnan now recognizes that divers adulterated alcoholic drinks can produce epilepsy as well as absinthe, and it must be admitted that a still greater number have a baneful action on the nervous system.—Paris Correspondent of *The Lancet.*

The Prognosis in Syphilitic Diseases of the Nervous System.—Professor Naunyn has collected three hundred and twenty-five cases of nervous affections due to syphilis, one hundred and fifty-five (forty eight per cent.) of which were cured, and one hundred and seventy (thirty-two per cent.) in nowise benefited. Cases of epilepsy yielded the best results. Similar good results were obtained in neuralgic affections and paralyses of the basal cerebral nerves. Poor results were obtained in monoplegia, hemiplegia, and paraplegia. The treatment, if beneficial, will manifest itself immediately. If by the end of the first week after the administration of iodide of potassium, and the end of the second week after energetic mercurial treatment no benefit is obtained, then the outlook is hopeless. Any benefit derived from the specific treatment is first seen in improvement of the general condition. Heroic medication is necessary. Inunction is preferred in the administration of mercury.—*Sacramento Medical Times.*

The Relations of Sarcoma, Prurigo, and Nævi to the Nervous System.—Professor Campana, of Genoa, relates facts that lead him to believe that sarcoma of the skin is intimately related to the nervous system (*The British Medical Journal*). He states that this affection is commonly accompanied by sarcoma and fibroma of the peripheral nerves, and that the nerves have a considerable influence in the spreading and reproduction of the disease in the skin. He insists that sarcomatous changes in the skin and nerves are found associated, and that the changes in the nerves often antedate those of the skin; that many vascular and lymph angiomata are distributed in the territories of certain nerves (Recklinghausen), and that many fibromata of the skin have relations to neuromata and fibro-neuromata; that a form of sarcoma of the skin which he described had appeared symmetrically like an exanthema, in the manner of various erythemas which are at present accepted as of nervous origin (Lewin), and which frequently correspond to the peripheral distribution of certain nerves. He calls attention to the fact that, in the neoplasm, all the elements in the growth are not sarcomatous cells, and, further, that in places in which there is special accumulation of indifferent cells, nerve terminations with sarcomatous swellings are found. He has made the observation that recurrent nettle-rash or itching in the extremities frequently precedes sarcoma, and that these are symptoms which can only be ascribed to the nervous system; that there is severe pain in the course of the nerves which lead to the affected parts, especially on pressure; and that in these forms of sarcoma a period of hyperplasia and a period of atrophy can be observed, an atrophy without ulceration, which is rare in other forms of sarcoma. Campana considers that the first localization takes place either in a tumor of the skin or in a tumor of another organ. Thence there is localization in the nerves that are in connection with it, and, through the medium of the nerves, development of tumors in other parts of the skin. In another section of the same paper Campana discusses the nature of the changes that cause prurigo, the pathology of which he assigns to the nervous system, although he remarks that inflammatory affections of the nervous system are common, whilst cases of prurigo are rare, and that every neuritis is not accompanied by itching. In this connection he points to the fact that, in a case of multiple fibro-sarcomatous neuritis, the prominent symptom was neither anæsthesia nor hyperæsthesia, but itching. In prurigo he has found changes in the peripheral terminations of the nerves, and has seen that many of the nerves of the skin in subcutaneous tissue have lost their form, and are much thicker than in normal conditions. He has observed that on the parts where these changes are found, even in a dead body, the skin was observed to be rough, scaling, and pigmented in small spots. In this connection he refers to a case in which sarcomatous changes in the nerves were not preceded, but followed, by itching, and in which afterwards changes took place in the skin which were suggestive of prurigo. In the same paper, in a section on nævi, Professor Campana states that he has a record of fifty cases in which the distribution of nævi showed unmistakably their relation to the nervous system. He considers that changes in such cases should be looked for not in the nerve-centres, but in the peripheral nerve branches.

CONSTIPATION IN INFANCY.—In those cases which do not recover under proper dietary management, Dr. Eustace Smith recommends :

℞. Tinct. nucis vom .... ♏ ss.
Tinct. belladonnæ .... ♏ x.
Infusi sennæ .... ♏ xv.
Infusi calumbæ.................ad ʒ j.

This may be given thrice a day at first. After a time, two doses will be enough ; and before long, one dose at bedtime. An equally good or better prescription is :

℞. Tinct. nucis vom................ ♏ ss.
Ext. cascaræ sagradæ liq......... ♏ xx.
Tinct. belladonnæ................ ♏ x.
Inf. calumbæ....................ad ℥ j.

The keynote is the combination of nux vomica with belladonna and some gentle laxative. Dr. Eustace Smith also recommends, where the motions are very dry, a saline aperient :

℞. Quiniæ sulph.................. gr. ¼
Acid. sulph. aromat .... ♏ j.
Tinct. nucis vom................. ♏ ss.
Aquæ .... ad ℥ j.

This for a child of six months.

INFECTION OF FŒTUS THROUGH PLACENTA.—The precise manner in which the fœtus is infected by a disease which has attacked the mother has often been disputed. Small-pox, tuberculosis, and syphilis may infect the fœtus. If these diseases depend on micro-organisms, these germs must pass through the placenta; if so, the placenta is not a filter which arrests all solid or noxious bodies, as an old theory supposes. If it be a filter, how is it that, as experience has proved, it does not always let the same micro-organism pass? This is the case with charbon in rabbits. And how is it that the placenta always gives transit, on the other hand, to certain specific micro-organisms, as in the case of chicken-cholera? These questions have been propounded in the *Archives de Tocologie* for August. They appear to be solved by certain experiments conducted by M. Malvoz, of Liége, recapitulated in that periodical. M. Malvoz contends that micro-organisms only clear the placental barrier and enter the fœtus when the placenta itself presents pathological changes in its chorionic villi, changes generally due to the micro-organisms themselves Thus Malvoz injected into the blood of pregnant rabbits emulsions of Indian ink, an inert substance, and into others solutions containing non-pathogenic bacilli. In no case were any granules of the ink or any bacilli found in the fœtus, and in all far less of the infected substances were detected in the placenta than in the liver of the mother. After similar infections with bacillus anthracis, the tissues of 32 fœtuses were subjected to cultivation, but, in 163 tubes of cultivating fluid, only 4 showed the charbon bacillus. Lastly, M. Molvoz inoculated pregnant rabbits with chicken-cholera. In every case the specific bacillus was found in the fœtal tissues. On examining the placentæ in the latter case, they were invariably found to be diseased; in the charbon experiments the placentæ were but rarely diseased; in the Indian ink and non-pathogenic bacilli cases the placenta was never diseased. The placenta was diseased in all the few cases where the charbon bacillus infected the fœtus. The germs were found abundantly in hæmorrhagic areas disseminated over the placenta. Clinically, placental lesions are found in syphilis and small-pox, diseases often communicated to the fœtus. Thus it would appear that the placenta allows the transit to the fœtus of those micro-organisms only which have the property of first setting up morbid changes in its own substance.—*The British Medical Journal.*

SARCOMA OF THE BLADDER.—Dr. Southam thinks that sarcoma more commonly affects the bladder than is generally said to be the case, and that such growths are usually primary. They are most common at two periods of life, viz., under ten and between forty and seventy. Males are more commonly affected than females. The growths usually originate in the connective tissue of the submucous layer and are most often met with at the face or on the posterior wall. They are often multiple, especially in children. The surface of the growths may or may not be villous in character, and the tumors usually remain confined to the walls of the bladder. Secondary deposits in other parts of the body are more frequently absent than present. Evidences of chronic cystitis are found, as a rule, in the bladder structure. Secondary changes in the kidneys are after a time usually produced, either in the form of distention from ureteric obstruction, or from pyelitis. Secondary deposits are rarely seen in the kidneys. The general symptoms are those of hæmaturia with vesical irritability. In discussing leading signs in detail, Mr. Southam says that hæmaturia is a prominent and often an early symptom. It frequently precedes the signs of irritability, sometimes it comes on at the same time, and occasionally it follows afterward, and cases are recorded where it has been altogether absent. Micturition becomes more painful and frequent as the disease progresses. Sudden stoppages sometimes occur when the tumor is pedunculated and is drawn over the vesical outlet. Only when the tumor is of firm consistence can we obtain evidence of its existence by digital examination from the rectum or by careful sounding. Microscopic searching of the urine for small detached pieces of the growth is of the greatest possible value. A diagnosis of sarcoma from papilloma or cancer is often quite impossible. Untreated cases sooner or later terminate fatally in a period from one to four years. With regard to treatment, Mr. Southam argues that as palliative measures are of little use, the bladder should be explored and an attempt made to remove the growth with forceps, scraping, or écraseur. He gives preference to the suprapubic incision, because of the free access it gives to the whole interior of the bladder cavity. Speaking of recurrence after removal, he says this is to be expected, especially when the growth is sessile and infiltrates the walls. The results of operative interference show that life is undoubtedly prolonged and symptoms much relieved. Whether permanent cure is ever to be obtained, future observation can alone determine.—*Birmingham Medical Review*, October, 1888.

CHRONIC VOMITING RELIEVED BY ABDOMINAL SECTION AND THE BREAKING DOWN OF ADHESIONS OF THE PYLORIC END OF THE STOMACH AND OF THE DUODENUM.—Professor Loreta has reported the following case, which demonstrates anew that heroic surgical measures do not always lead to a cure, even if the immediate operation is "successful." The case is published in full in the *Gazzeta degli Ospitali*, and the *London Medical Recorder*, October 20, 1888, adverts to it as follows: The subject of the operation was a young woman, twenty-two years of age. She had a family history of phthisis, and had suffered from enteric fever at the age of sixteen. The gastric disturbances commenced five years ago, that is, about a year after the fever. At first they were limited to a sense of fulness and some pain at the epigastrium after meals, followed by eructation, and occasionally (every three or four days) by vomiting. She gradually became worse. The pain was continuous, and chiefly in the region of the pylorus. Vomiting took place about half an hour or an hour after every meal. The vomited matter was partially-digested food, and presented no peculiarity. There was never any admixture with blood. On examination of the epigastrium succussion could readily be obtained, and there was some increased resistance in the region of the pylorus. Frerich's effervescing mixture was given, and the stomach, becoming distended with gas, was easily mapped out. The cardiac end and the greater curvature were readily distinguished, but the pyloric end could not be clearly defined. It was evident that there was no considerable dilatation. The vomiting was unchecked by medicines, nor was it in any way influenced by dieting. It was decided that carcinoma, gastric ulcer, chronic gastritis, and nervous vomiting could be excluded, and that the diagnosis lay between stenosis of the pylorus and adhesion of the stomach to the surrounding viscera preventing the free peristaltic movements, and so interfering with the pressure that is normally put on the contents of the stomach to force them through the pylorus. It was felt that either of these conditions could only be relieved by an operation, which was, consequently, performed under chloroform. An incision, five inches long, was made from an inch below the ensiform cartilage downward, and to the right. The liver presented itself in the wound, and when it was pushed upward out of the way, an attempt was made to bring the stomach into the opening. This was found at first to be impossible, on account of extensive adhesions. After much trouble some of these were broken down, a small opening was made into the stomach, and a No. 8 catheter passed through the pylorus. Using the catheter as a guide, the finger was subsequently passed through the pylorus, which was found to be quite free. The remaining adhesions of the stomach and of the duodenum were now torn through, the opening in the stomach stitched up by continuous suture, and the abdominal wound closed. There had been very free venous hæmorrhage from the torn adhesions, but this was disregarded, the blood being allowed to remain in the peritoneal cavity, and no special means being used to check the hæmorrhage. The reason for this unwonted procedure is explained in the following theory, put forward by Professor Loreta, but which will not gain general acceptance. Hæmorrhage from the liver, or venous hæmorrhage generally within the abdomen, is not fatal, either by the quantity of blood poured out, or by the influence which the latter exercises on the peritoneum, which actively absorbs the blood, and restores it to the circulation. Notwithstanding this theory, the patient was very collapsed after the operation, and was only revived by the subcutaneous injection of ether, and the application of warmth to the extremities. She recovered from the operation, but, some months later, all the old symptoms and the vomiting returned.

Silver Poisoning from the Prolonged Application of Caustic.—Dr. Svonnikoff mentions a case of argyria, following constant applications of lunar caustic to the throat. The patient was a peasant woman, fifty-three years of age, who had had syphilis sixteen years previously. She was treated by frictions and applications with the brush of a fifty per cent. nitrate solution of silver to the throat for several weeks, she herself using the brush whenever the throat was painful. The pharynx, the hard palate, the gums, and the upper part of the chest and back became stained a deep-gray color, and the discoloration was even more marked on the face. A similar case has been reported by Dugiel.—*The British Medical Journal.*

The Treatment of Club-foot by Immediate Restoration of the Parts to their Normal Position after Tenotomy.—Discussion has letely taken place as to the best and safest method to be used in the cases of talipes. Mr. Walsham, as surgeon to the orthopædic department at St. Bartholomew's Hospital, gives his experience. He originally employed the slow method, but was dissatisfied with the delay and difficulty in obtaining the expensive appparatus necessary for this method. By slow degrees he reduced the foot to a greater extent after the operation, and, meeting with no untoward results, finally reduced the deformity immediately. His method is to divide the tendon; break down any adhesions by forcible but gentle wrenchings; close the puncture with a dossil of lint soaked in carbolic oil or iodoform gauze; carefully enclose the foot in a domett or cotton-wool bandage according to the age of the patient, and secure it in plaster of Paris. The plaster is left on for ten days or a fortnight unless any special reason is seen for removing it earlier. He claims for this operation the following advantages over the slow method: (1) Great saving of time; (2) the doing away with the necessity of an expensive extension-apparatus. The disadvantages attending the rapid, but not applying to the immediate method are: (1) Considerable pain is often caused by the force which has to be employed in stretching the uniting material at each changing of the plaster, and (2) that in severe cases the reparative material cannot always be stretched sufficiently to overcome the deformity, and it is occasionally necessary to divide the tendon.—*The Annals of Surgery.*

Bloodless Methods of Treating Ingrowing Nail.—Dr. Patin recommends the following procedure for removal of ingrowing toe-nail, which he has employed with excellent results in many cases. After thorough cleansing of the nail, a solution of gutta-percha ten parts, in eighty parts of chloroform, is applied with a brush to the interstices between the nail and the granulations. This is repeated several times on the first day, and subsequently at longer intervals. By exercise of care and patience it will be found that the nail is gradually lifted from the underlying parts, and can then be removed without pain with the scissors. If a properly fitting shoe is worn, no recurrences need be apprehended. The solution applied in this manner exerts a double effect, the chloroform is an anæsthetic, and the gutta-percha acts mechanically, forcing its way between the granulations and the nail, and finally liberating it from its abnormal position. Another method is described by Dr. Hoffman, as follows: "The toe is first thoroughly washed with an antiseptic solution. A few drops of liq. ferri. chloridi are then applied to the granulating surface, the nail slightly raised, and the solution allowed to dry. After two to three days the scab is removed, and the application of the solution repeated. In a few days the edges of the nail become brittle and can be cut away with a fine scissors or blunt knife. To prevent a return of the trouble thin shavings of cork are inserted under the nail-border."

Inhalations in Phthisis.—Dr. C. T. Williams has found antiseptic inhalations useless *quâ* antiseptic action. Carbolic acid has sometimes a useful effect by its anæsthetic action, but any means which dulls the sensibility of the mucous membrane ought to be used with great care; there are greater dangers in bronchitis, especially of old persons, than a considerable cough and expectoration. Most of the drugs used either had no effect or acted better given by the stomach. Turpentine may possibly be an exception; at any rate it is readily absorbed and quickly appears in the urine. In the treatment of hæmoptysis and chronic bronchitis there are few drugs which equal turpentine. In hæmoptysis inhalations are good (℥ ss.) repeated frequently. In the subacute exacerbations of chronic bronchitis turpentine often works wonders, especially if preceded by nauseating doses of ipecac. This is old-fashioned pharmacy, but I find that a great many, like myself, after trying all sorts of new-fangled dodges and drugs, fall back on the old plan.

Arsenic in Rheumatoid Arthritis.—Dr. Osler recommends Fowler's solution in initial doses of five drops three times a day in the treatment of rheumatoid arthritis. This dose is gradually increased to the limit of tolerance and then held there, the effects of the drug being carefully watched.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, November 24, 1888.

MEDICAL EDUCATION AND LEGISLATION.

WE think few will deny that legislation is in itself more or less of an evil, albeit a necessary evil, and that the less there is of it in a community, over and above what is absolutely needed for the protection of society, the better off that community is. The more freedom a people enjoys, the happier it is, and the tendency of law is to restrict the freedom of the individual, although it may be for the best interests of the greater number. This is as true in regard to matters concerning the medical profession as it is in other things. Theoretically, every person should be as free to give advice to the sick, if he so desires, and if the sick one seeks advice from him, as he is to build a house. If the sick, the opponents of medical legislation say, are willing to intrust their lives to the care of any individual, they should be allowed to do so, whether the person selected be presumed to be a competent physician or not. It is a matter that concerns only the patient and his medical adviser, and the State has no right to step in and say whom he shall or shall not employ in that capacity.

But the State does interfere in the matter of housebuilding. It does not, it is true, prescribe certain qualifications without the possession of which no one shall be allowed to lay bricks or join timber, but it passes judgment on the completed work. It recognizes that an insecurely built house is a menace to the lives of those who dwell in it, and it condemns the structure so erected. By establishing a standard to which the finished work must conform, it practically ordains that none but competent workmen shall have a hand in its construction. But in medicine the case is different. The State cannot judge of the results, except in a few most evident cases of malpractice, for it is manifestly impossible to set up a certain criterion of health by which to gauge the skill of the physician. It is obliged, therefore, if the lives of its members are to be protected, to establish a standard for the physician himself, and to forbid all who do not conform to that standard to take upon themselves the responsibilities of medical practice.

There is an element of selfishness, possibly, in the demand of the profession for laws regulating the practice of medicine, for such laws might tend to lessen competition by shutting out the quacks; yet that that is not the real motive for their request must be admitted by all fair-minded men. None knows so well as the educated physician what a power for evil the ignorant and unskilled practitioner is, and it is solely for the protection of the community that legislation of this nature is sought. If a child does not know enough to keep away from what is liable to do him harm, he must be restrained by others who are wiser than he, and if the members of a community are incapable of selecting a competent medical adviser, they must be prevented from selecting an incompetent one.

This much will probably be conceded by most men, but another difficulty presents itself in deciding who are to be regarded in the eyes of the law as competent physicians. Are only regular physicians to be allowed to practise the healing art, or is the same privilege to be granted to homœopathists, eclectics, faith-healers, Christian scientists, herb doctors, and all other irregulars? Manifestly the State cannot discriminate between two educated physicians, one of whom adheres to scientific methods and the other calls himself a follower of Hahnemann; and if not between them, how can it do so between a faith-curer and an herb doctor, if both give proof that they are thoroughly grounded in the principles of medicine, and differ only in their therapeutic methods? This is a real difficulty, and one that cannot be overcome, but it should not discourage us from doing what we can in the way of securing medical advisers who are well grounded, at least, in the principles of their art. The only feasible way of getting round the difficulty, for the present at least, is to ignore the question of therapeutics while insisting upon a thorough knowledge of all the other branches of medical science.

In a paper read before the American Social Science Association, September 5, 1888, which has been the occasion of these reflections, Mr. W. A. Purrington proposes a scheme of legislation for promoting a more thorough medical education, by refusing the right to practise to all who are unable to give evidence of possessing the proper mental equipment for such work. He suggests that the licensing power be vested in a central Board of Medical Examiners, and that the law prescribe regulations governing the admission of applicants to the ranks of the medical and allied professions. The examinations shall be held on all the branches of medical study except therapeutics, the author holding that one who should prove himself to be thoroughly grounded on these subjects, and to be educated in a true sense to observe and draw sound deductions from observation, might well be trusted to form his own conclusions and pursue his own studies as his judgment should dictate in the science of therapeutics.

This is, perhaps, the best that could be done under present circumstances, although it can hardly be regarded as entirely satisfactory, for a good education in one branch of science does not necessarily imply that its possessor will exercise common sense in drawing his conclusions concerning another branch. A man might be an excellent pathologist and diagnostician while holding the most heretical and absurd views of therapeutics. Nevertheless, some legislation on the lines laid down by Mr. Purrington might be most beneficial. The Illinois State Board of Health has effected much good in this direction, although there is still room for improvement, and something of a similar nature might well be expected to accomplish good results in this State. Even our present registration law is an improvement on no law, and the practice of medicine might be restricted still further before it could be maintained that the liberties of the people were being unjustly curtailed.

THE FOOD OF AMERICAN AND EUROPEAN LABORERS.

Professor W. O. Atwater, of Wesleyan College, has been lecturing on food economics, and claims to have data which show that the American laborer, by reason of better food, does more work per day than the European laborer. Food is force in potential form. Its amount may be measured in calories or heat units, and a day's food for a healthy man should be sufficient to furnish 2,500 to 3,000 calories. The dietary of the European laborer, we are told, rarely furnishes 2,500 calories; while that of the American furnishes from 3,000 to 5,000 calories.

The data for demonstrating that American laborers of all classes do more work because they are better fed must be very considerable, in order to satisfy critical examination. It has been abundantly shown that hard labor cannot be performed on an insufficient diet; but it is also known that a sufficient diet is not a difficult or expensive thing to get. A working-man must have a little over 20 grammes of nitrogen, and 300 grammes of carbon, daily, with water, and the latter practically costs nothing. A half a pound of meat or cheese, with a pound and a half of bread and butter, or farinaceous vegetables, furnishes all the calories needed. And because the American laborer has meat twice daily and plenty of vegetables, it does not follow that he can work more.

Just as much work can be done on a sufficient diet as on an excess. As for the class of laborers who are furnished with daily food representing 5,000 calories, representing six or seven pounds of meat daily, they must be highly fed and enviable persons; but whether they can do more work because their diet contains 5,000 calories of potential energy may be questioned.

DEATH BY ELECTRICITY.

The special method for executing criminals by electricity has been studied by a committee of the Medico-Legal Society, with results that leave still in doubt the question whether the new law is a wise one.

The plan suggested by the committee consists briefly in pinioning the prisoner to a table or chair. One small electrode covered with sponge, is fastened to the top of the head, the other to the spine between the shoulders. A current of at least 3,000 volts is then passed through the victim for thirty seconds.

Most persons who have been killed by powerful electrical currents have been severely burned, and even disfigured. It is not impossible that a 3,000-volt current of thirty seconds duration would produce severe cauterization in the region of the electrodes.

There is little doubt that so powerful a current applied in the way indicated will kill a man. But it does not seem much more humane, or civilized, or even scientific, to strap a condemned prisoner to a chair and throw him into a convulsion, or possibly burn the top of his head off, than to have him neatly despatched by strangulation or the guillotine.

News of the Week.

The Death of Dr. Sands leaves New York without a surgeon of such pre-eminence as to entitle him to be called the leading surgeon of the city. There are plenty of admirably equipped and skilful men, surgeons of as great promise or attainments perhaps as our late lamented colleague. But the time of men who attain such striking and extraordinary surgical skill as to place them far above the plane of their brother-workers seems to have passed. This means, probably, only that the very best surgeons are more numerous than they used to be.

Dr. N. S. Davis is reported to have resigned his position as editor of the *Journal of the American Medical Association.* Dr. John B. Hamilton, Surgeon-General, United States Marine Hospital Service, has been elected in his place.

We receive at Intervals communications from country practitioners, enclosing the circulars of a so-called "infirmary" or "maternity home." Its objects are to furnish opportunities for single women who have become pregnant to be confined. "Superior accommodation," "strict privacy," and the attendance of a skilful physician are promised. Last year it is said that over fifty thousand of the circulars advertising this place were sent out to physicians all over the country. It is hard to find language strong enough to fitly condemn this abominable trading in the misfortunes of women. There is, however, so far as we know, no means of stopping it.

A New Academy Building.—We have received a number of communications warmly supporting the views expressed by us a week ago with regard to a new building for the New York Academy of Medicine. There is a wide-spread feeling that something should be done promptly, and that plenty of money will come in when there is something in actual existence on behalf of which the public can be appealed to.

Antipyrin and Belladonna.—A correspondent writes, asking if there is a physiological antagonism between antipyrin and belladonna. Prescriptions were given to two patients suffering from whooping-cough. One contained antipyrin, gr. xx., tincture belladonna, ♏ v. The other contained fifteen grains of antipyrin and five drops of tincture of belladonna. The patients, who were adults, both suffered severely from great respiratory oppression, sensations of cerebral pressure, and intense discomfort and fright. Both had at various times taken antipyrin before, in large doses, without feeling bad effects.

American International Congress of Medical Jurisprudence.—The Medico-Legal Society of New York will hold an International Congress of Medical Jurisprudence, which representatives from other countries will be invited to attend. The Congress will last four days, and will meet next year, but neither the place nor the exact date have yet been fixed. A sub-committee, consisting of Moritz Ellinger, Esq. (Chairman), Clark Bell, Esq., Dr. Isaac Louis Peet, Dr. Stephen Smith, Judge Noah Davis, and E. W. Chamberlain, has been appointed to make the necessary arrangements

Sulphonal, according to Dr. Max Engelmann, sometimes causes a scarlatinous eruption.

CONSULTATION BY CABLE.—In a recent serious illness of a patient stopping in British Columbia, Sir Andrew Clark, of London, was consulted. Wires were arranged so that there was direct communication from London to New York, and thence to the patient. For three hours he examined and advised regarding his transatlantic patient's condition. This is a very remarkable achievement of modern science, but we should prefer a sensible and experienced physician near by to the most eminent doctor in the world five thousand miles away.

THAT NINE THOUSAND.—It is estimated that in the last decade about nine thousand improperly educated doctors have been graduated from the medical schools. This makes nearly one thousand poorly educated and inadequately prepared physicians who are turned upon the public every year! We have already given the facts upon which the above estimates are based, viz., the examinations of the Virginia Board. Dr. Wood writes, in the *Therapeutic Gazette:* "From 1877 to 1887, inclusive, thirty-six thousand and ninety-seven graduates from medical colleges have entered practice in the United States. If these had all been efficiently examined according to the results just given, eight thousand three hundred would have been rejected, or about one-fourth the number. Our own opinion is that this proportion of rejections is less than it ought to be. We have gone over the class-books of the Medical Department of the University of Pennsylvania, and find that one-third of those who entered that institution failed to get their degree. Practically all of these people graduate at one college or another, and our own belief is that at least twenty per cent. more go through the University examination than ought to. Can any one estimate the amount of damage that nearly nine thousand improperly educated doctors can do in ten years?"

A SUCCESSFUL OPERATION.—Sir Henry Keating, the eminent judge, whose death at the age of eighty-four took place last week, owed the whole of his judicial career to a successful surgical operation; he survived the performance of ligature of the external iliac artery for femoral aneurism for nearly thirty years. The operation was performed by Sir William Ferguson in 1859, while Sir Henry Keating was Solicitor-General, and it was mainly owing to his illness that he accepted a puisne judgeship, an office entailing no fatigue of standing.

THE SALE of Sir Morell Mackenzie's book is said to have reached nearly 100,000 copies in the first fortnight of its issue. We are informed that the Empress-Queen Frederick has sent the author a long autograph letter expressing her complete approval of the manner in which he has performed his difficult task, and confirming some of his statements by her own independent knowledge.

DR. D. HAYES AGNEW.—It is stated that Dr. Agnew, Professor of Surgery in the University of Pennsylvania, is about to retire from the chair which he has so long filled.

ANOTHER MAD KING.—Reports are circulated that King Milan, of Servia, is insane or on the verge of insanity, as the result of heavy drinking and other forms of debauchery.

A NATIONAL LABORATORY AT WASHINGTON.—Dr. Frank S. Billings, of Lincoln, Neb., sends us a copy of a bill which it is proposed to introduce into Congress at its next session. It has the following features: 1. The bill divides the work into two distinct divisions, human and animal diseases, and thus at once creates a point of noble rivalry between them. 2. It places it in charge of the Surgeon-General of the Marine Hospital Service, thus supplying him with the means of acquiring a body of competent workers, with whom he may become acquainted beforehand. 3. It gives him the world to choose from for Directors of the two institutes, while it limits the selection of assistants to this country, thus providing the way of Americans of ability to rise to chief positions. 4. It gives a chemist to each institute, thus keeping up the stimulating rivalry. 5. It opens the way to independent workers, and thus increases the number, while the country has the benefit of the results. 6. It opens the way for students, thus providing the means for Boards of Health and Medical Schools to obtain competent men, and stimulating research in all parts of the country. 7. It tends to make our national capital a centre of learning and culture, which should be the ambition of every citizen.

A NATIONAL BOARD OF HEALTH.—At a meeting of the Councillors of the Massachusetts Medical Society, held October 3, 1888, the following resolves were unanimously adopted: "That in the opinion of the Councillors of the Massachusetts Medical Society the present epidemic of yellow fever, in several States of this Union, has again made evident the imperative need of some organization on the part of the General Government for the protection of the public health—an organization that shall be independent of existing bureaus, and solely devoted to this most necessary function of any form of government. That this resolution be sent to the President of the United States, to Members of Congress, and to the Boards of Health of the several States."

YELLOW FEVER.—The Jacksonville bulletin of November 19th showed that there had been 4,621 cases up to date, with 402 deaths.

ASSOCIATION OF ACTING ASSISTANT SURGEONS OF THE UNITED STATES ARMY.—We are requested to publish the following: An Association of past and present Acting Assistant Surgeons of the United States Army has been formed for the purpose of securing, so far as possible, a correct history of those who have served in this capacity, and also for mutual protection and benefit. The Association desires to obtain a complete list of all medical men who have served as Acting Assistant Surgeons in the United States Army, and, so far as possible, their complete medical history, date and place of birth, date and place of graduation, date of appointment, medical service and stations, list of contributions to medical literature, inventions, etc., date of termination of service, professional positions held in civil life, present residence and address. All information from friends concerning deceased Assistant Acting Surgeons will be gratefully received. All past and present Acting Assistant Surgeons are cordially invited to become members of the Association. The badge of the Association is the Geneva Red Cross. The enrollment fee is $1. The necessary blanks will be forwarded upon application. W. THORNTON PARKER, M.D., *Recorder A. A. A. S.*, Newport, R. I.

THE AMERICAN MEDICAL ASSOCIATION meets at Newport, Tuesday, June 25, 1889. The committee of arrangements consists of H. R. Storer, Chairman ; C. F. Barker, M. E. Baldwin. C. A. Brackett, J. P. Curley, P. F. Curley, J. P. Donovan, H. Ecroyd, Jr., V. M. Francis, T. A. Kenefick, G. M. Odell. F. H. Rankin, W. C. Rives, Jr., S. H. Sears, W. S. Sherman, H. E. Turner ; W. Thornton Parker, Local Secretarr.

THE INTERCOLONIAL MEDICAL CONGRESS.—Next year there will be an exhibition at Melbourne celebrating the centennial of Australia. At this time an Intercolonial Medical Congress will meet, and preparations for it are being made on a large scale. We learn from Dr. H. B. Allen, General Secretary of the Congress, that the Royal Mail Steamship Company will grant passages to members at twenty per cent. discount, and on arrival visitors will be furnished with free passes over the railways. It will be, therefore, a favorable opportunity to see the newest world. Of the meeting, Dr. Allen writes that it will take place at Melbourne, January 7, 1889, and that all that is representative in Australian medicine will be gathered there. At the inaugural meeting the President, Mr. T. N. Fitz Gerald (author of the article on Hydatids in Heath's "Cyclopædia of Surgery"), will deliver the inaugural address, and speeches will be made (we expect) by His Excellency the Governor, and by the Premier of the Colony. Subsequently addresses will be given by the presidents of the nine sections into which the Congress will be divided. Thus in the Section of State Medicine, Dr. Mac Laurin, the Medical Adviser of the Government of New South Wales, will describe the difficulties in the way of Sanitary Administration in these Colonies. In Psychological Medicine, Dr. Manning, Inspector of Asylums in New South Wales, will deal with the Curability of the Insane, and with Sporadic Cretinism. In the Section of Pathology, Dr. Bancroft, of Brisbane (of the Filaria Bancrofti), will submit his general experience in parasitic disease. In Pharmacology, Baron F. von Mueller, K.C.M.G., will deliver the address. Numerous papers will be submitted in all the sections. A special congress museum is being prepared. General discussions will be held concerning hydatid disease, fevers in Australia, Australasian climate, etc.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION meets at Birmingham, Ala., December 4, 5, and 6, 1888, Dr. W. D. Haggard, of Nashville, Tenn., presiding. The following is a partial list of the papers to be read : "Gastrostomy," by W. B. Rogers, M.D., Memphis, Tenn.; "Superinvolution of the Uterus following Trachelorraphy," by Virgil O. Hardon, M.D., Atlanta, Ga.; "Indications for Operative Interference in Cerebral Troubles," by T. O. Summers, M.D., Jacksonville, Fla.; "A Case of Tubal Pregnancy, presenting Interesting Medico-Legal Relations," by E. P. Sale, M.D., Memphis, Tenn.; "The Extravagancies and Impractical Requirements of Modern Antiseptic Surgery, so far as the Country Practitioner is Concerned," by J. M. Taylor, M.D., Corinth, Miss.; "Antiseptics in Surgery and Gynecology," by F. T. Meriwether, M.D., Asheville, N. C.; "My Antiseptic Bags; or, Practical Aseptic Surgery," by J. W. Long, M.D., Randleman, N. C.; "Floating Kidney, with Vicarious Menstruation," by DeSaussure Ford, M.D., Augusta, Ga.; "New Treatment of Intra-uterine Fibroids," by E. J. Beall, M.D., Fort Worth, Tex.; "The Medical Treatment of Fibroid Tumors of the Uterus," by Bedford Brown, M.D., Alexandria, Va.; "Alexander's Operation," by W. L. Nichol, M.D., Nashville, Tenn.; "The Present Status of Electro-therapeutics in Gynecology," by J. T. Wilson, M.D., Sherman, Tex.; "Surgical Tuberculosis," by W. Locke Chew, Birmingham, Ala. Adjournment at 1.30 P.M. Afternoon session at 3 P.M. "Treatment of Certain Forms of Menorrhagia, with Report of Cases," by W. D. Bizzell, M.D., Atlanta, Ga.; "Electrolysis in the Treatment of Urethral Strictures," by S. M. Hogan, M.D., Union Springs, Ala.; "Operative Procedures in Hypertrophy of the Prostate," by R. D. Webb, M.D., Birmingham, Ala.; "Electrolysis in Morbid Alterations produced in the Prostate by Gonorrhœa of the Urethra," by J. D. S. Davis, M.D., Birmingham, Ala.; "Dermoid Cysts of the Coccygeal Region," by E. J. Beall, M.D., Fort Worth, Tex.; "Hysterectomy in Cancer of the Uterus," by W. H. Wathen, M.D., Louisville, Ky.; "Fractures of the Fore arm," by John Brownrigg, M.D., Columbus, Miss.; "Treatment of Fractures with Plaster-of-Paris Splints," by W. F. Westmoreland, Jr., M.D., Atlanta, Ga.; "Interesting Cases of Surgery," by R. M. Cunningham, Pratt Mines, Ala.; "The New Departure in Uterine Therapeutics—The Dry Method," by T. A. Means, M.D., Montgomery, Ala.; "A Study of the Various Methods of Treatment of Laceration of the Perineum, and Rectocele, with Report of Cases," by J. H. Blanks, M.D., Meridian, Miss.; "Perineal Lacerations," by M. C. Baldridge, M.D., Huntsville, Ala.

THE MACKENZIE CONTROVERSY.—Our esteemed contemporary, *The Evening Post*, expends itself in a silly tirade against Sir Morell Mackenzie and his recently-issued book. Ignoring entirely the questions of fact and of justice in the case, the editorial writer thinks of, and deals with, nothing but the question of the propriety of publishing the work as Mackenzie did, and of the personal issues brought up in it. While all this is to be most seriously regretted and deplored, something must be granted to the natural instincts of anger and revolt when a man has been scurrilously attacked. We would invite the attention of our contemporary to an article in the *Nineteenth Century*, by Mr. R. E. Prothero, on "Frederick the Third and the New Germany." The writer is endorsed by *The British Medical Journal* as a writer "who has throughout been in a position to obtain the most authentic information, and is able to express the views entertained by those devoted friends who surrounded the late Emperor during his last illness. After a masterly analysis," says *The Journal*, "of the false issues raised in the 'official' report, Mr. Prothero discusses the true issue, which has already been put forward with admirable clearness in the letter of the Empress Frederick, which was published in the *Daily News* of October 12, 1888." That document refers to May, 1887, when the radical treatment was first proposed. "Mr. Prothero, who speaks as a layman well informed of the views held by the late Emperor himself, presents what he believes to be the *true* issue between Sir Morell Mackenzie and his German colleagues, as follows :

"In May, 1887, two German doctors, without special skill in diseases of the throat, unsupported by any pathological evidence, trusting to the infallibility of their diagnosis, and concealing from their patient and his family the nature of the proposed radical treatment, advised an external operation, which in 27.2 per cent. of the cases results in immediate death, which in 54.54 of the cases hastens death, which nearly always destroys the voice, and which in only two cases (and in one of those Dr. Lennox Brown doubts the existence of cancer) has effected a complete cure. The *Kölnische Zeitung*, commenting upon the proposed operation, remarks with complacent frankness; 'Death consequent on the operation would have been easy, nay, almost painless.' Against this proposal Sir M. Mackenzie took up a position from which he never swerved a hair's breadth. Without asserting an opinion whether the growth was or was not malignant, he maintained that no external operation was justifiable without pathological evidence of the existence of cancer; and that, even if cancer were thus proved to exist, a palliative treatment, which prolonged life under normal conditions of health for at least a year, and for another year under less favorable conditions, was to be preferred to a radical treatment. When the alternatives are so terrible, the patient must himself determine. In November, 1887, the Crown Prince deliberately refused to run the immediate risk of the external operation, with its remote possibilities and miserable conditions of recovery. This decision, in the opinion of every impartial critic, concludes the controversy. The sole responsibility of reopening the question rests with the German doctors. It is the multiplicity of their charges against the honor and the skill of the English specialist which compelled him to reply, and provoked him to retaliate in the same strain.

"A most important piece of evidence is furnished by Mr. Prothero on one of the crucial questions, to which we have had more than one occasion to refer, and of which we were the first to publish the details (*Journal*, May 12, 1888, p. 1029), namely, the events which occurred on April 12, 1888, when Professor von Bergmann was summoned to the Emperor on account of 'difficulties with the cannula,' to use the words of Sir Morell Mackenzie. The following is the account given by Mr. Prothero, on the highest authority:—[The scene] 'was thus described to me by an eye-witness who is not one of the principals in the struggle. A slight change in the cannula was considered necessary by the physician, and, from courtesy to the surgeon engaged in the case, Sir Morell summoned Von Bergmann. The Professor arrived in a state of extreme excitement. Striding across the room, and ignoring the English doctors, who wished to explain the object for which his presence was required, he made his way to the table on which the tubes were placed. Among them was a German tube, modified indeed after the experiences of February, but still with sharp edges and the shape of a cheese-scoop. Seizing this instrument, and placing his two thumbs on the shield, he endeavored to force it away from his body into the patient's windpipe. Unable to find the well-worn passage with the instrument, he thrust his finger into the orifice, and tried again. The blood spurted out; the Emperor was choking, and blowing the crimson bubbles into the air. The strength which the professor employed forced the tube, not into the windpipe, but into the tissues of the neck in front. At length, sinking back into a squatting posture upon his heels, he asked that Bramann should be summoned. The assistant came, and, while the professor held open the sides of the incision, slipped the cannula into its place. Upon these surgical laurels Von Bergmann practically retired. But his excited violence left a deep impression on the Emperor's mind, and, in Sir M. Mackenzie's opinion, fatally influenced the course of his malady.'"

Obituary.

HENRY B. SANDS, M.D.,

NEW YORK.

Dr. Henry B. Sands, the acknowledged leading surgeon of this city, died suddenly of heart failure, on November 19th, in the fifty-eighth year of his age. Although Dr. Sands had had some warnings of impaired health, his death was most unexpected. He had been apparently well the morning of his death, and, after attending church, had driven to the residence of Dr. A. A. Smith, with whom he started off again to see a patient in consultation. While returning home, with very little warning he fell back in his carritge seat, dead.

Dr. Sands was born in this city, September 30, 1830. His preparatory education was obtained at a high school in this city. He graduated from the College of Physicians and Surgeons in 1854, and subsequently became interne at Bellevue Hospital, and then went abroad to pursue his studies. On his return, in 1857, he was made Demonstrator of Anatomy at the College of Physicians and Surgeons, and, subsequently, Professor of Anatomy, and then of Surgery. From 1860 to 1870 he was business partner of the late Dr. Willard Parker. In 1861 he was made attending surgeon to the New York Eye Infirmary and St. Luke's Hospital. These he retained until 1863, when he became surgeon to the Bellevue and New York Hospitals. His last position was visiting surgeon at Roosevelt Hospital, from which he resigned only last spring. He was married in 1859 to Miss Curtiss, of Brooklyn. Two of his children by this marriage—Dr. Robert A. Sands and Miss Josephine Sands—survive him. His second marriage, in 1875, was to a daughter of Peter Hayden. One son by this marriage is living.

Dr. Sands was a member of the New York Academy of Medicine, the County Medical Society, the Pathological Society, the Physicians' Mutual Aid Association, the Society for the Relief of Widows and Orphans of Medical Men, and of the Medical and Surgical Society. He was also connected with the New York Philharmonic Society.

At the time of his death, Dr. Sands enjoyed the largest consulting surgical practice in the city. This was due, not only to his high reputation with his professional brethren as a surgical adviser and operator, but largely, also, to the estimate which the general public placed upon the value of his professional services. By an extensive hospital experience of over a quarter of a century, he won for himself a standing, as an authority on all branches of surgery, which was not approached by any of his associates. Although not an old man, he was naturally looked to as the fatherly adviser of everyone who aimed to make his mark in surgery. As an operator, he was cool, precise, determined, and judicious in his methods; and as a teacher, was interesting, impressive, practical, and instructive. Affable in manner, and firm in his own convictions, he always encouraged free discussion of the points in debate, and was always courteously respectful of the opinions of others. Consequently, at society meetings, when surgical matters were brought up, and he was present, the discussion was never considered complete until Sands had also given his opinion. His contributions to surgical literature, although not voluminous, were of great value as detailing the results of a remarkably extensive experience, backed by ripe and sound judgment.

Society Reports.

AMERICAN ACADEMY OF MEDICINE.

Twelfth Annual Meeting.

Tuesday, November 13, 1888—Morning Session.

The Academy met in the Governors' Rooms of the New York Hospital, at 10.30 A.M. The President, Dr. Frederick Henry Gerrish, of Portland, Me., in the chair.

The minutes of the last annual meeting were read and approved. The deaths of the following members were reported: Dr. C. R. Agnew, of New York; Dr. M. H. Bosland, of Pittsburg; Dr. Howard Pinkney, of New York; Dr. Theodore T. Wing, of Susquehanna, Pa.; Dr. E. S. Dunster, of Ann Arbor, Mich.; and Dr. Stephen B. Kieffer, of Carlisle.

Dr. Leartus Connor, of Detroit, Mich., read the

REPORT OF STANDING COMMITTEE ON THE REQUIREMENTS FOR PRELIMINARY EDUCATION IN THE VARIOUS MEDICAL COLLEGES IN THE UNITED STATES AND CANADA.

There are in the United States 116 medical schools. According to their announcements, 89 exact certain educational requirements, but 19 of these require no more than they can help.

It is futile to endeavor to directly influence medical colleges to make these requirements. It can only be obtained by awakening in the mind of the profession and people a sentiment that a definite preliminary education is necessary to the medical student.

Dr. A. L. Gihon, United States Navy, offered the following resolution, which was adopted:

Resolved, That the American Academy of Medicine expresses its high approval of the aid afforded to the cause of higher medical education by the College of Physicians and Surgeons of New York, in its recent requirements for matriculation, which it commends to the profession as worthy of adoption.

The paper was discussed by Drs. Canfield, of Baltimore; Sell, of New York; Stoddard, of Rochester, and McIntire, of Philadelphia.

Dr. J. C. Wilson, of Philadelphia, read a paper on

THE CAUSES AND PREVENTION OF THE OPIUM HABIT AND KINDRED AFFECTIONS.

The causes may be grouped under three heads: First, example, as is shown in the case of those who become opium-eaters through the example of friends. Second, suggestion, as is shown in those who fall into this habit through the reading of literature concerning it, or from familiarity with the drugs, as in the case of doctors, druggists, nurses, and students of medicine. Third, medical prescriptions. It is an unfortunate fact that the greater number of the victims of habitual vicious narcotism become so through the prolonged abuse of narcotics originally prescribed for the relief of pain.

Among the measures suggested for the prevention of the formation of such habits, were, first, the dissemination of a wholesome knowledge of the methods by which the opium habit and kindred affections are induced; of the serious character of these affections, and of the danger attendant upon an ignorant and careless employment of narcotics. Second, a reasonable and temperate presentation of the facts in the popular works upon hygiene. Third, the exercise of every possible precaution on the part of physicians in prescribing narcotics. It is good practice to keep the patient in ignorance of the character of the anodyne used and of the dose. Physicians should personally control, as far as possible, the use of such drugs, and see that they are taken infrequently and in the minimum amounts capable of producing the desired effect; the occasional alternation of anodyne medicaments is desirable. Prescriptions for drugs of this kind should not be renewed by druggists without the written order of the physician. Finally, a merely palliative treatment should not be allowed to assume too great importance in the management of curable painful affections.

Under no circumstance, except in the final stages of hopelessly incurable painful affections, should the hypodermic syringe be placed in the hands of the patient.

Uniform and efficient laws to regulate the sale of narcotic drugs are desirable. Existing laws, relating to this subject, are a dead letter; they are neither adequate to control the evil nor is their enforcement practicable.

Dr. Theophilus Parvin, of Philadelphia, read a paper on

THE IMPORTANCE OF PRACTICAL OBSTETRICS IN THE COURSE OF INSTRUCTION GIVEN BY MEDICAL SCHOOLS.

A recent visit to Munich, where he spent some time observing the method of teaching obstetrics in the University of Bavaria, pursued by Professor Winckel, made him conscious of the great deficiencies of the American plan of obstetric instruction. The science of obstetrics is admirably taught in our medical schools, but the vast majority of American medical students graduate without having witnessed a case of labor. There is also reason to believe that the mortality of private practice is greater than that of hospital practice. While attendance on poor women at their homes is better than no practice at all, yet the student will derive more benefit from the study of cases collected in a maternity hospital, where many cases can be studied under the instruction of a competent teacher. There should, therefore, be a maternity belonging to every medical school in which obstetrics is taught. Through the efforts of the author, the Trustees of the Jefferson Medical College authorized the establishment of a maternity department in connection with the hospital; 34 women have been confined without a death. The room being insufficient, an out-door department was established. Here there have been 151 applicants; 106 have been confined, with but one death. This occurred two weeks after labor. The cause of death was not positively ascertained.

The author then described the methods employed at the Bavarian University, basing his remarks on a report furnished by Dr. J. Clifton Edgar.

In concluding, Dr. Parvin said: "Why would it not be wise for this Academy, which should be a light and a guide to the American profession, leading it to higher, and giving it larger, views on those duties and responsibilities, with hearty unanimity declare that practical obstetrics should be made a part of the regular course in every medical college? With the seal of your approval, those who are laboring to this end will be given strength and hope. May the time soon come when every medical school upon the continent which does not take steps to make this necessary reform, shall perish under the common and condign popular and professional damnation."

Afternoon Session.

The first business was the delivery of the Presidential Address by Dr. F. H. Gerrish, of Portland, Me.

Reference was first made to the necessity for something more than a mere grammar school education as a preparation for the study of medicine. The course of a student without proper preliminary education was traced at length. Until recently, any male of the human species who would pay the necessary fees, found no difficulty in entering. A few years ago several medical schools established a preliminary examination. This was attributed by the speaker largely to the action of the Illinois State Board of Health, to the effect that if the schools wished their diplomas to be recognized in that State, they must have a preliminary examination. He thought that the labors of the Academy should be to elevate the standard of medical education, rather than the investigation of scientific problems.

The next portion of the paper was devoted to a consideration of the methods by which the membership of the Academy could be increased.

The President then referred to certain amendments which had been proposed at previous meetings. One of the amendments considered related to Art. VIII., Sec. 1, which now reads: "The Fellows of the Academy, in their relations with each other and with their fellow-men, agree to be governed by the principles embodied in the present code of ethics of the American Medical Association, and by the constitution and by-laws of the Academy." The amendment suggested is: "The Fellows of the Academy will be governed by those principles which actuate educated, cultured, and honorable men in every profession and by the constitution and by-laws of the Academy." The speaker favored the adoption of the amendment.

Never before had it been appropriate to address the Academy as "Ladies and Gentlemen," but to-day it was his privilege to use this significant expression. It is not creditable to our country, or in keeping with the liberality which theoretically characterizes our institutions, that a discrimination should have so long been made against women in scientific associations.

Dr. R. Lowry Sibbel, of Carlisle, delivered

A FEW WORDS CONCERNING OUR ACADEMY.

The Academy was organized in 1876, at a time when the standard of medical education was at its lowest point. The Academy has strongly insisted upon the necessity of preliminary education. At the time of the organization of the Academy there were in no State laws relating to the practice of medicine that could be enforced. Most of the States now have laws which can be carried out, and many have State Boards of Examiners. Graded courses have been adopted in the best medical schools, with preliminary examination and frequent written examinations. The "diploma mills" no longer exist.

The Academy is the only society in which an academic qualification is required. The Academy had set a high standard for admission, but he believed that the doors should not be closed against those eminent practitioners who, although they did not possess the degree of A.B., had pursued protracted courses of preliminary study in literary schools.

Dr. George Jackson Fisher, of Sing Sing, N. Y., read a paper on

THE FAMOUS HISTORIC MASTERS OF THE HEALING ART WERE MEN OF CLASSICAL EDUCATION.

The author showed that Hippocrates had bestowed upon the world a symmetrical and systematic body of medical and surgical science, founded on the tradition and records of his predecessors; that the ancient Greek Asclepions were hospitals and clinical schools, presided over by priest-physicians, of whom Hippocrates was one of the most distinguished. Reference was made to the extent and influence of the Alexandrian school of philosophy in the days of Aristotle, Herophilus, and Erasistratus. From this the author came to speak of the first century of the Christian era, and gave an account of Celsus, the Roman. Pliny, Dioscorides, and spoke of the advanced condition of the healing art in that early age. The second century gave birth to Claudius Galen, of Asia Minor, who flourished chiefly in Rome. It was shown that Galen, as well as all the previous historic masters of the healing art to which allusion had been made, was a man of genius and profound learning. Having shown that Galenic medicine was broader and deeper in its scope and influence than that of antecedent ages, the essayist proceeded to tell the interesting story of the manner in which medical science was preserved from extinction during the dark ages. He traced the modes by which it was conveyed into Persia, translated into Syriac and Arabic, annotated, tinctured with Oriental ideas, and returned to Europe in the "studies of the Saracens."

The invention of printing and its potency in distributing the existing science of that day was next considered. Then followed the period of the new birth, the revival of letters, the discoveries in anatomy, physiology, and surgery. Vesalius and his great work, the labors of Fabricius and Harvey, and of their contemporaries were briefly mentioned. All these teachers were also shown to have been men of classical education. Dr. Jenner, and the inestimable blessings which he conferred upon mankind, were next considered. The invention of the stethoscope by Laënnec in 1815; the contributions of Sir James Y. Simpson to obstetrics and gynecology; and the still more brilliant services of Dr. J. Marion Sims, were strongly and justly held up for our admiration. Dr. Ephraim M. Fowell, the "Father of Ovariotomy," his followers, and their triumphs were duly remembered. All of these great leaders in medicine and surgery were shown to be men of classical education.

The speaker next referred to the extent of medical literature, to the necessity of being trained to study and research as a preliminary to entrance into the sacred temple of Æsculapius. He emphasized the fact that all the enduring literature of medicine, and all the substantial improvements, discoveries, and progress through all time, have emanated from learned and talented men; that scarcely anything is owed to the illiterate of our profession. The paper concluded by urging the necessity of keeping a vigilant guard at the doors of the temple of Æsculapius, and if possible to prevent any from entering who are not "duly and truly prepared," not possessed of kindness of heart, of good common sense, of fair ambition, and of sobriety, honesty, and industry.

Dr. L. Duncan Bulkley, of New York, read the last paper of the session, entitled

THE RELATIONS BETWEEN THE GENERAL PRACTITIONER AND THE CONSULTANT, OR SPECIALIST.

In a previous paper the author had shown that specialism was a necessary and healthy outgrowth of general medicine. The object of the present communication was to point out the mutual relations which should exist between the general practitioner and the consultant, or specialist.

Adjourned.

The annual banquet was held Tuesday evening.

Wednesday, November 14th—Morning Session.

Dr. Charles Carroll Lee, of New York, read a paper on

THE NECESSITY FOR POST-GRADUATION INSTRUCTION IN THE PRESENT STATE OF AMERICAN MEDICAL EDUCATION.

The first post-graduate medical school was opened in New York in 1882. There are now six in operation in different medical centres. These courses are attended by practitioners anxious to brush up on certain subjects.

It is difficult to conceive how London, Berlin, or Vienna can offer greater facilities for clinical teaching than are to-day available in this city. To the medical teacher, a frequent European visit is desirable, not only to perfect his methods of instruction, but to liberalize his mind; but the time has arrived when, if the American teacher of medicine does his whole duty, the American student should lack no practical knowledge of his profession.

Dr. Henry I. Bowditch, of Boston, read a paper entitled

TOLERANCE AND INTOLERANCE IN MEDICINE; CODES OF ETHICS; WHAT CODE SHOULD THIS ACADEMY ADOPT?

He took, first, the ground that tolerance and intolerance are, in the world at large, two great moral forces, and in the line of resultant of these two powers the world has been, and will be forever, carried forward He then referred to history to show how these forms, at times, have actually changed places and made vice appear to be virtue, etc. Hence they must be used cautiously and understandingly.

Turning to medicine, he found that intolerance has almost invariably been ready to oppose *any new* idea. Ambroise Paré, Jenner, etherization and Morton, thoracentesis by Wyman's method, are brought forward as proving the above assertion.

The fact is, however, that *toleration* has invariably at length come to the rescue, and overwhelming success has been given to any really good idea. Bacteriological researches and antiseptic surgery, with their marvellous triumphs, were referred to as having produced a degree of tolerance of new ideas unknown before, and added to the importance of specialism. He next spoke of the American Medical Association, of his great interest in it in its early days, of the gradual tyranny of its "code," even to the expulsion of the New York State Society which act produced evil results elsewhere than in New York; and, finally, he brought forward the action of the American Medical Association last year, preparatory to voting, that *no signature to codes should be required hereafter!* In connection with the New York imbroglio he referred to homœopathy and eclecticism, and expressed freely his disgust at the tyranny exhibited at the time of the expulsion of the homœopathists from the Massachusetts Medical Society. He gave his testimony, from personal knowledge of some members of these two sects, to the integrity and intelligence of some homœopathists. Finally, he cited the fact of the great success of these two sects, consequent, in part at least, on our bigotry toward them. Under this course the regular medical profession has lost caste, because of its wild attacks upon others rather than in the quiet and dignified carrying onward of its own principles. He concluded this part of his subject by advancing what some may deem the heterodox opinion, that the Academy will not recover its just position until it rescinds the vote adopting the American code of ethics. He claimed that the only true code, viz., that of the gentleman, is the golden rule of "doing unto others as you would have them do to you," a rule which, though coming down from earliest ages before Christianity, was nevertheless made sacred by Christ's words. He closed in these words:

"Gentlemen of the Academy, if all of us would make that divine rule the guide of our professional relations, tolerance and intolerance would join hands in peace; and this Academy, if it could induce all physicians to act upon it, would have accomplished one of its highest missions. God grant that this body may with each year of its growth, by the work of its individual members and by its own joint labors, tend to bring the whole profession of America up to higher grades of thought, of sentiment, and of action, so that we may at length *really become* what we have hitherto, but with unconscious falsehood, *claimed* to be—a truly *liberal* profession."

Dr. Charles McIntire, of Easton, Pa., read a paper on

WHICH IS THE LIBERAL SCHOOL?

The consideration of the following amendment to the constitution was taken up: "The Fellows of the Academy will be governed by those principles which actuate educated and honorable men in every profession, and by the constitution and by-laws of the Academy." After a prolonged discussion the amendment was laid on the table for one year.

The following resolution was presented by the council and adopted: That the Academy heartily endorses the suggestion of Dr. Parvin in his address, that practical obstetrics should be made a part of the regular course in every medical college.

Dr. Charles C. Bornbaugh, of Baltimore, read a paper on

THE MULTIPLICATION OF USELESS DRUGS.

The author referred to the continually increasing unwieldiness of the U. S. Dispensatory. The index of the fifteenth edition extends through seventy-six three-columned pages, embracing about seventeen thousand names of medicinal substances. Deducting one-third—a liberal allowance—for repetitions, there are in round numbers eleven thousand. Of this number he thought that ten thousand could be transferred to the *Index Expurgatorius* without being seriously missed. Of the 324 constituting the primary list, it has been shown that 108—one-third—are very active, 100 frequently do their work, and 16 are untrustworthy. In this connection reference was made to the very limited number of remedies deemed worthy of classification in Dr. Wood's "Therapeutics." In the sixteenth edition of the Dispensatory there is an addition of 15 pages to the index, a total of 91 pages. The editors intimate that they have discarded all the material they considered "effete," so that, although they added 600 pages, the net increase was only 167 pages. As it is time to commence the discarding process and throw overboard the rubbish, this preliminary aggressive movement on the effete is most welcome. There is an irruption of newly discovered mediums and newly devised combinations which demands arrest. The only ground for tolerance is that now and then one comes to stay with the stamp of authoritative approval.

The speaker adverted at length to the declining sovereignty of empirical conclusions, and the coming reign of pharmacology which is concerned with the action of drugs on the healthy body. The time has come for future dependence upon experiments with medicinal agents upon animals.

Dr. H. A. Johnson, of Chicago, read a paper on

THE INFLUENCE OF THE WORK OF THE ILLINOIS MEDICAL PRACTICE ACT UPON MEDICAL EDUCATION.

The Illinois State Board of Heatlh was created in 1877. One of the first acts was the passage of a resolution that the diploma of a college graduating two classes in one year would not be considered in good standing after July 1, 1878. This compelled some of the prolific schools to adopt a single graduating term. In 1880 the Board made a comprehensive study of requirements of medical schools. In 1884 the Board adopted a schedule of the minimum requirements for graduation in the State of Illinois. This has led to an increase in qualifications required by many of the schools. There are now 114 colleges which require evidence of preliminary study as a condition of admission. In 1883 there were only 45. Forty three colleges now exact a three years' course, as compared with 22 in 1883. The Board has now adopted the following resolution, defining the phrase "Medical Colleges in good standing" to mean "only those colleges which shall, after the sessions of 1890–91, require four years of professional study, including any time spent with a preceptor, and three regular courses of lectures, as conditions of graduation, and shall otherwise conform to the schedule of minimum requirements heretofore adopted by the Board."

One of the principal causes of efficiency of the Illinois Board was the fact that it was a "mixed" board. At this time the numbers who gain access to our ranks are not so numerous, but they are better qualified, and there are therefore not so many inferior men to struggle for existence. The percentage of graduates to students is lower, which means a higher standard of attainments.

"The Treatment of Uterine Disease by other than Surgical Means," by Dr. W. F. Waugh, of Philadelphia, Pa., was read by title. "The Evils of a Medical Dialect separated widely from Classical English," by Dr. Edmund Andrews, of Chicago, was also read by title.

MEMBERS ELECTED.

O. G. Given, Carlisle, Pa.; G. H. Hill, Independence, Ia.; Wm. N. Swift and Garry De N. Hough, New Bedford; H. B. Allyn, Philadelphia; Charles K. Hutter, Charleston; Charles W. Hitchcock, Kalamazoo, Mich.; Frederick A. Packard, Philadelphia, Pa.; Richard Van

Santwood, New York; Peter R. Furbeck, Goversville, N. J.; Charles A. Peabody, Worcester, Mass.; Silas D. Presbrey, Taunton, Mass.; Anthony Learned, Fall River, Mass.; Samuel L. Ziegler, Philadelphia; David C. Cocks, New York; T. M. McKeenan, Pittsburg; James S. Knox, and Addison Foster, Chicago; Henry H. Herbst, Allentown; Walter Woodman. F. E. Small, Henry H. Hunt, and Charles O. Hunt, Portland; Everett Flood, Baldwinsville, Mass.; E. V. Scribner, Worcester, Mass.; George Cary, Houlton, Me.; A. R. G. Smith, North Whitefield, Me.; William S. Searmans, New York; Albert Woodside, Tenant's Harbor, Me.; W. H. Shimond, Bangor, Me.; Alfred Hitchcock, Strong, Me.; Thomas M. Coe, Bangor, Me.; Frank W. Ring, New York; S. Q. Diven, Carlisle, Pa.; George M. Wells, Philadelphia; Edward T. Tucker, New Bedford; A. O. Williams, Ottumwa, Ia.; Matthew K. Elmer, Bridgeton N. J.; David B. Cotton, Portsmouth, O.; Edward Hitchcock, Ithaca, N. Y.; Edwin F. Wilson, Pomeroy, O.; H. D. V. Pratt, Jr., Elmira, N. Y.; George James Thomsend, South Natick, Mass.; Joshua B. Rich, Worcester; H. A. Fairbairn, Brooklyn; George G. Needham, New York; Charles L. Weed, Philadelphia; William H. Helm, Sing Sing, N. Y.; Charles A. Kirsch, New York; Frank R. Fry, St. Louis; George S. Isham, Chicago; H. A Grim, Allentown; George H. Cummings, Charles E. Webster, and Charles D. Smith, Portland, Me.; Francis E. Hitchcock, Rockland, Me.; Stanley P. Warren, Portland; Emma B. Culbertson, Boston, Mass.; William S. Dennett. New York; H. B. Hill and O. C. S. Davies, Augusta, Me.; G. L. Goodale, Cambridge, Mass.; F. C. Heath, Detroit, Mich.; John W. Eveleth, Hallowell, Me.; W. G. Reed, Sturbridge, Mass.; Edward B. Weston, Chicago; George A. Wheeler, Castine, Me.; E. H. Trowbridge, Worcester, Mass.; Charles W. Foster, Woodford, Me.; F. H. Crocker, Boothbay, Me.; Adaline S. Whitney, Boston, Mass.; W. C. Mason, Bangor, Me.; Charles Edward Grom, Calais, Me.; R. G. Stanwood, Newark, N. J.; F. T. Simpson, Hartford, Conn.; Charles O'Donovan, Baltimore; Martha M. Waldron, Hampton, Va.; W. E. Rice, Bath, Me.; Julia Tolman, Arlington, Mass.; John C. Lester, Brooklyn; A. H. Burbank, Yarmouth, Me.; Charles Fuller, Lincoln, Me.; E. A. McAllister, Gray, Me.; Thomas P. Smith, Soccaroppa, Me.; John E. Walker, Thomaston, Me.; C. A. Baker, Portland, Me.; Saul B. Thombs, Knightville, Me.; John G. Park, Worcester, Mass.; A. C. Gibson, Bangor, Me.; Anna H. Johnson, E. Orange, N. J.; George W. Hale, Nashville, Tenn.; Charles C. O'Brien, Groveton, N. H.; George A. Rex, Philadelphia; R. H. Johnson, Chestnut Hill, Pa.; Wells Van Hook, Greenville, Ind.; Charles C. Cummings, Pittsburg. Total number of new members elected, 98.

The following honorary members were elected: Dr. J. H. Rauch, Springfield, Ill.; Sir Joseph Lister, London; Sir Spencer Wells, London; J. Lucas Championière, Paris; H. D. Didama, Syracuse.

OFFICERS FOR ENSUING YEAR.

President—Dr. Leartus Connor, Detroit. *Vice-Presidents*—Drs. Peter D. Keyser, Phila.; L. Duncan Bulkley, New York; Theophilus Parvin, Phila.; George J. Fisher, Sing Sing, N. Y. *Secretary and Treasurer*—Dr. Richard J. Dunglison, Philadelphia. *Assistant Secretary*—Dr. Charles McIntire, Jr., Easton, Pa.

Place of next meeting, Chicago, Ill.

Adjourned.

ALCOHOLISM AND CRIME.—In a recent communication to the Academy of Medicine on alcoholism and criminality, M. Maramhas stated that in examining the history of three thousand criminals undergoing sentences of various lengths, he found that of the vagabonds and beggars there were 79 per cent. who were confirmed drunkards; of assassins and incendiaries from 50 to 57 per cent.; of thieves and swindlers 71 per cent., while of those convicted of violence to the person there were 88 per cent., and 79 per cent. guilty of violence to property.

NEW YORK ACADEMY OF MEDICINE.

Anniversary Meeting, November 15, 1888.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

IT being the anniversary meeting, the regular business was suspended, and the President, in some written remarks, explained to the mixed audience present the objects of the Academy, its democratic organization, what it had done, was doing, and expected to accomplish for the benefit of the public health and the advancement of science, and then in eulogistic terms introduced the orator of the evening, Dr. D. B. St. John Roosa, who chose for his subject,

THE UNITY OF THE PROFESSION, AND THE MEANS OF PROCURING IT.

In accepting the honor conferred upon him by the Council of the Academy for the second time, of preparing and delivering the anniversary discourse, retrospections and reflections arose which were at once tinged with sadness and illumined with cheer. Fourteen years ago, when he filled the same place, there was a goodly list of names upon the rolls which had since become sadly broken. Austin Flint was President, and there were among the fellows Clark, Delafield, Hamilton, Van Buren, the two Drapers, Elsberg, Krackowizer, Post, Parker, Peaslee, Marion Sims, James R. Wood, Agnew, and others who had gone over to the majority. This array of the departed awakened the saddest of reflections, but at the same time it stirred the liveliest feelings to think that our profession had made for them an arena of intellectual and moral triumph, and that we had been at all worthy to be their associates.

Although the Academy, with such a membership, held a high position in medical circles throughout the civilized world, and was the medical association of the highest rank in our city, it then had no hall of its own, and held its meetings in the lower lecture-room of the College of Physicians and Surgeons, having just migrated from the small chapel of the University. Its library was unknown to the average member. The membership was about one hundred and sixty. During the past fourteen years we had obtained a hall in a house of our own; we had a library of no mean proportions, and a reading-room richly supplied with journals and magazines from all parts of the world; while sections representing nearly every department of our art vied with each other in attendance and interest. The membership had increased to nearly six hundred. Besides this, we had hopes of soon obtaining a hall and rooms in some degree adequate to our needs and proportionate to the high position of the Academy in the medical world.

After these introductory remarks Dr. Roosa turned to the subject of the unity of the profession. In the profession of the law the members, however they might differ in opinions, ability, or experience, had no qualifying or distinguishing prefix to indicate their mode of practice, and there was no good reason why this condition of things should not obtain in medicine, and every member of this profession be simply a physician or a surgeon. But how far were we from this ideal? In this State we had three distinct classes of physicians, besides a host of unclassified irregulars not recognized by the Legislature, but having more or less influence upon the community. A profession which held such vital relations to the welfare of the human race should not be divided into conflicting parties, for there is but one science of medicine. He thought a little reflection would convince even those who may not have given the subject any consideration, that the medical profession of this country did not, as a body, hold quite the same rank, did not have quite the same authoritative influence upon the public at large as did the church, the law, or the press. But in what might be called private, or personal, relations, no man was more potent than the physician. But this individual relation to the patient had nothing to do with the profession as a body. The day had passed when the physician should be regarded solely in this isolated relation. There was the specialist, who was conscious of having but the temporary acquaintanceship of his patient; the expert hygienist, who labored for the prevention of epidemics and their repression; and the scientist in the laboratory, working at the great problem of the cause of disease; also the chemist, the medical journalist, the teacher of anatomy and physiology, and. in fact, the many specialists; and yet all members of the medical profession quite as much as the general practitioner. During the nineteenth century the profession had been passing through a stage of disintegration, about which many had been unduly anxious. Yet it must be admitted that, just as society in the nineteenth century had not caught up with many of the changes introduced by steam and electricity, and found some of them inconveniences rather than blessings, in the same way the medical profession had not as yet adapted itself to the apparent divisions in the activity of its members; the point of complete fusion had not yet been reached. The time was not yet ripe for the complete adjustment of specialism to general medicine, but it was very fast becoming so.

But it was of a unity of a higher, or rather of a broader, character than that between specialism and general medicine that he was to speak about. It was of the condition once existing in this State, which allowed all those who in any way by their work in life, either in studying the structure of the human frame or the causation and nature of disease, were contributing to the mitigation or cure of physical suffering, to unite as members of the medical profession under the common name of physicians. In discussing the means for again securing this unity he wished only to consider the State of New York. In studying its medical history, and reasoning from it, we might find ample ground for re-establishing that unity.

At this point Dr. Roosa contrasted the social standing of the physician in America with that of those in other countries, particularly in England. Here no obstacle stood in the way of the physician securing any position which his merits justified, whereas in England, unless, under unusual circumstances, the disability was partially removed by knighthood, he did not rank as a gentleman; yet the profession there, on a scientific basis, was one of the most honored in the world. But regarding many things, the medical profession in this country had not sufficient power, as in private and public sanitary affairs, in the prevention of epidemics, the government of hospitals, etc. We were divided into so many parties, each crying its shibboleth, that the public at large had come to believe that, however skilled the doctor might be in the management of the sick, he needed a good deal of lay oversight and repression when he assisted in matters pertaining to public health or hygiene. Fortunately, however, the United States Army and Navy had been trained differently. Our lack of unity depended not upon want of social position, nor upon the estimate of us which the public had voluntarily assumed, but upon our own bickerings and quarrels. When the present century was entered upon, the medical profession in New York State was a unity. The doctor was a doctor, without any further recognition. He was a graduate of the medical schools and licentiate of the county society, and was allowed to practise after a rigid examination. The State Medical Society was a part of the legal machinery of the State, and although the science of medicine did not have the exalted position it has to-day, yet the medical law gave excellent tone to the profession. But not content with its position as recognized by the political power of the commonwealth, the medical profession undertook to repress opinion as to treatment of diseases. The heresy was not as to the ascertained facts in anatomy or physiology; it was not a question as to how the human body was constituted, but as to what drugs were to be given in cases of ascertained disease, and as to what was the principle upon which they acted. A heresy, in short, upon subjects—however it may have been fifty years ago—regarding which there was no orthodoxy to-day; and the heretics whom they tried to punish were not, like the Thomsonians, uneducated men, but trained in schools with other members of the profession. and in good standing in societies, and under the protection of the law. Let it be granted that the theories of the heretics were absurd, and their remedies useless; what, he would ask, had become of many of the theories and remedies of our ancestors? The followers of Hahnemann were driven out, they appealed to the State, the State recognized them, a new Medical Society was formed; the Thomsonians, or Eclectics, as they preferred to be called, took advantage of the amnesty then claimed for all irregulars, and the unity of the profession was broken. The standard as to what constituted a doctor in medicine fell to the requirements of the three State Medical Societies and the tone of the several colleges from which they got their recruits. The State had actually stepped in to lessen the requirements necessary to constitute a doctor. It was now easy to see that no harm would have come from little pills, or vegetable remedies, or cold water, if the absurd opinions had been treated as they are now; while the educational requirements for practice might have been rigidly maintained.

What was the remedy for the present disunited condition of the profession in this State? It was not to be found in making a common standard for the degree of doctor of medicine, but in making a common standard for the license to practise medicine. The degree should be conferred, as now, by each college according to its own ideas as to what constituted a sufficient education for that honor; but the liberty to practise medicine should not be left in the hands of bodies, however respectable and however distinguished, who were only responsible to themselves. This view had twice in succession been unanimously approved by the Medical Society of this State. The necessity for it had been plainly set forth by Dr. Loomis, its late president, and also by the able counsel for the Medical Society of the County of New York, Mr. Purrington. The colleges in this city were excellently equipped, and their faculties of the highest standing, yet no graduate could enter the army or navy, and treat sick soldiers and mariners without a further rigid examination; nor be accepted as interne to any of our city hospitals. Surely the public should demand as strict a scrutiny into the qualifications of the doctor as was required for the protection of persons in hospitals or serving in the army? Dr. Roosa did not approve of exacting a Latin and Greek collegiate course. A certain preliminary education should be demanded, but students ought not to be required to spend as many years as it took to pass through Yale or Harvard, and in the study of subjects not essential in their professional duties. The composition of the medical examining board could be such that none would be excluded from practice because of peculiar views on therapeutics.

At the conclusion of the oration the audience was invited to inspect the halls and library.

Disease in Books.—The man who is not prevented from turning book leaves with a wet finger by fastidious refinement may well pause for fear of microbes. The authorities at Dresden have been investigating the question whether circulating libraries are not mediums for the spread of infectious diseases. They rubbed the dirtiest leaves of the books, first with a dry finger and then with a wet, microscopically examining the product in each case. In the first case, scarcely any microbes were found on the finger; in the second case, plenty. Though all these appeared to be of a non-infectious character, the committee winds up with a recommendation to readers not to wet the finger in the mouth for the purpose of turning over the leaves

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE SURGICAL ASPECTS OF TYPHLITIS AND PERITYPHLITIS—THE VALUE OF EARLY SURGICAL INTERFERENCE—MEDICAL MATTERS IN PARLIAMENT—THE LUNACY COMMISSIONERS—THE VACCINATION VOTE—A CURIOUS LAW CASE—THE PREVALENCE OF DIPHTHERIA—A WANT OF ISOLATION ARRANGEMENTS—DIPHTHERIA SPREAD BY CATS—DEATH OF DR. LAVIES—THE METROPOLITAN POLICE SURGEONS' ASSOCIATION—ANOTHER MURDER AT THE EAST-END.

LONDON, November 13, 1888.

THERE was a very good audience at the Medical Society on Monday evening last to hear Dr. Bull, of New York, read his paper on "The Surgical Aspect of Typhlitis and Perityphlitis." He advocated early surgical interference. While surgeons had preached early intervention, their practice, he said, had not always been early enough to save the life of the patient. He divided the cases into three groups, viz.: (1) Those in which the abscess was opened without penetrating the peritoneum; (2) those in which the peritoneum was opened for supposed perforation; (3) those in which the abdomen was opened on the strength of threatening symptoms. The general rule of opening up purulent collections as soon as detected was one which had met with general approval. The first advance was made by cutting down for pus before fluctuation had been detected, thus preventing the possibility of an accumulation. Then came the idea that constitutional signs alone might be sufficient to show whether or no pus was present. This, however, did not help them in peritonitis from perforation. Such cases were anxious ones, and would continue to be so until they insisted upon an exploratory operation before the peritonitis became general. Among the symptoms, he especially insisted upon the importance of fever and shivering. The abdomen and rectum should be frequently examined, tenderness and the presence of an area of dulness indicating the presence of pus. The outline of the cæcum might be made out, filled with fæces, and that might exist alone or in connection with a less distinct area of induration. The abdomen might become tympanitic with debility, loss of appetite, sweating, and marked anæmia. To determine the presence of pus under these circumstances the exploring needle was the best instrument. The risk was small with proper precautions. Exploration in case of doubt was preferable to waiting for unequivocal information. The operation for perityphlitis might be laparotomy or mere incision. In washing out the cavity no solution should be used stronger than 1 in 10,000 of corrosive sublimate, or 1 in 100 of carbolic acid. He concluded by remarking that the risk of operation was less than that of waiting. Mr. Treves said that, clinically, one heard a good deal of inflammation of the peritoneal investment and cellular tissue of the cæcum, but the fact was no cellular tissue existed round the cæcum. He thought the appendix vermiformis played a prominent part in the production of typhlitis; in seventy per cent., of the cases it had been found to be the source of the mischief. Referring to extra peritoneal abscess, he said it was difficult to understand how pus originating within the cæcum could find its way outside, but, as Dr. Bull had pointed out, it was rare to find pus round the cæcum except in connection with pus inside the peritoneal cavity. He thought the early employment of the needle risky, and disapproved of ligaturing and cutting off the appendix; it was an integral part of the intestine. Alluding to the aptitude of typhlitis to recur, he said he would operate after the second attack and remove the appendix, which was the cause of the trouble. Dr. Paramore observed that he was himself operated on by Dr. Heath sixteen years ago, and a large quantity of pus and fecal matter removed; there had been no recurrence. Dr. Weir, of New York, said that, according to some statistics he had collected, seventeen per cent. of those operated on after the eighth day had died, whereas only eight per cent. had succumbed of those operated on before that date. In most cases the trouble was due to perforation of the appendix; perforation of the cæcum was rare, occurring only three times in three hundred cases. The needle was a good means of arriving at a diagnosis, provided one fell upon the pus; but the not finding pus was no proof that pus was not present. Sometimes, where general suppurative peritonitis was suspected, no tumor could be felt, and in such cases he thought it was advisable to operate. Mr. Thornton said no surgeon of the present day would hesitate to operate when pus had been recognized to be present. He had never found washing out necessary, and thought good drainage was all that was necessary. He had often seen Sir Spencer Wells ligature and cut away the appendix, and had never seen any ill effects follow. Dr. Kingston Fowler protested against the idea that the disease was one which would not get well except by surgical interference. Dr. Bull, in replying, said he had purposely dealt only with the surgical aspects of the disease. He doubted whether patients could often be persuaded to undergo any operation after an attack had subsided, as suggested by Mr. Treves. He remarked that he had himself never met with any accidents in the use of the exploring needle. He defended the plan of washing out, and said no one would hesitate to wash out fecal matter; why should they hesitate to wash out pus that smelt as bad as fæces, and was as injurious in its effects? In reply to a question from Mr. Barker, he said he made his incision from the middle of Poupart's ligament vertically upward, and even a little outward, and he much preferred this to the median incision.

During the past week several matters of medical interest have come before Parliament. On the vote for the Lunacy Commission, the work of the Commissioners was assailed with considerable acrimony. Mr. A. O'Connor said they had discharged their duties in a singularly perfunctory manner. The increase in lunacy had been principally among the poor. He should like to know whether there was not a connection between the accumulation of the poor in the borough and county asylums and the extraordinary high death-rate there discovered. He referred also to the falling ratio of cure. A radical defect of the system was that the medical superintendents were not regarded by the Government in their scientific capacity, but as so many stewards or clerks engaged in financial and other arrangements. The present number of medical officers was totally inadequate. Mr. S. Smith protested against the plan at present in force of placing idiot children in asylums with adult pauper lunatics. Dr. Tanner said he hoped the time would come when all lunatics, whether pauper or otherwise, would be taken charge of by the State. The Commissioners did not visit often enough. It was almost criminal that patients restored to health should be allowed to associate with lunatics. There were a great many insane persons in work-houses, and boards of guardians were not fitted to deal with them, nor was proper means of treatment to be found in those places. After some time had been spent in discussing the subject, the amendment to reduce the vote by five thousand pounds was withdrawn by leave. Probably the free ventilation in the House of Commons of the matter will do something toward ameliorating some of the grievances complained of.

At the same sitting of the House a discussion on vaccination took place in connection with the grants in aid of public vaccinators. Mr. Bradlaugh moved to reduce the vote by the amount of the bonuses paid to vaccination officers in England. These bonuses were not paid in Ireland and Scotland, and he contended that they had failed to accomplish their object in this country. The president of the Local Government Board (Mr. Ritchie) defended the grants. If vaccination were a good thing (and he thought it must be conceded that it was), it was right to take precautions that the vaccination should be carried out under conditions which would secure the greatest amount of safety and the greatest amount of efficiency. Only one payment was made to the vaccination officer, but a portion of that payment was contingent on the vaccination being successful. In response to a query from Mr. Picton, he said he had arranged with the Registrar-General to let the Local Government Board know of any case where death was in any way attributed to vaccination, and he would at once direct full medical inquiry into the whole circumstances of the case. In reply to a suggestion as to the use of calf-lymph, he said it would be impossible for the Government to set up all through the country establishments for that purpose, but they did all they could to provide public vaccinators with calf-lymph. The motion to reduce the vote was defeated by 154 to 45 votes, and it is gratifying to reflect that it will be impossible to start a debate on the subject in the House of Commons in the same way on any future occasion. In consequence of the passing of the Local Government bill, the grants in question will in future be made from the local rates, and there will, therefore, be no opportunity for discussing them in the House of Commons.

A somewhat curious case has just been before our law-courts, and discloses the still unsatisfactory condition of our lunacy law. A medical man sued a lunatic and his duly appointed representative for professional fees due for attendance upon the former. In the county court the representative of the lunatic set up as a defence the plea that the claim was not recoverable without an order from the Lord Chancellor obtained in compliance with Section 11 of the Lunacy Regulation Act. The county court judge concurred in this opinion and non-suited the plaintiff, who has appealed. The result is that the judges hearing his appeal have disagreed. Lord Coleridge decided against the appeal. Mr. Justice Grantham, however, was of opinion that the Act did not mean that proper expenses, properly incurred, could not be recovered except after an order by the Lord Chancellor allowing the same; but, as junior judge, he withdrew his judgment, with the result that the unfortunate plaintiff has lost his appeal and may possibly be mulcted in costs as well. There is an old saying about doctors disagreeing, but in the present case it is a doctor who has to suffer through the lawyers disagreeing.

Diphtheria is still unduly present in London and its environs. This is probably partly due to there being no proper arrangements for isolating the cases, and thus limiting its spread. Owing to a defect in the Acts of Parliament dealing with the subject, the fever hospitals of the Metropolitan Asylums Board cannot be utilized for isolating diphtheria patients. During a recent epidemic, it was observed by a medical inspector of the Local Government Board (Dr. Bruce Low) that cats suffered much from illness, the mortality being large, and it is suggested that, in some instances, diphtheria may have been spread through their agency.

One of the most popular medical men at the West-end (Dr. J. S. Lavies) has just died. He was not only liked in his profession, but possessed social and musical talents which made him a universal favorite.

The Metropolitan Police Surgeons' Association, founded only last year, has just had a highly successful annual dinner, about eighty members and guests being present.

Another woman has just been murdered in the East-end of London, under somewhat similar circumstances to the preceding murders, and as in them, the crime has been accompanied by a barbarous mutilation of the body, the extent to which the mutilation has been carried being, however, more extensive, and the details more revolting. The opinion is gaining ground that the crimes are all perpetrated by one person, and that the perpetrator is a lunatic.

ANTIPYRINE IN SEA-SICKNESS.

To the Editor of The Medical Record.

Dear Sir: In your issue of November 10th you publish an editorial on "The Uselessness of Antipyrine in Sea-sickness," which I think is a little too disparaging.

Having lately crossed the Atlantic twice, I had ample opportunity in myself and in others to test the virtues of antipyrine in sea-sickness. Both the outgoing and the return voyage began with a storm which lasted three days, and almost all the passengers, including myself, were laid up.

I took in divided doses thirty grains of antipyrine on each of these days, and although they did not enable me to go on deck while the storm was at its height, yet I was made comfortable enough in my berth to pass away the time in reading. Other passengers who took this medicine on my recommendation agreed with me that, while the remedy did not cure them of their sickness, it made it more bearable by lessening their nausea, by relieving them of their headaches, and by soothing the pains in their bowels.

But it was in the sequelæ of sea-sickness that I found the antipyrine of great value. It acted like a charm for the headache, the abdominal pain, the nausea, and other nerve-phenomena which so often linger on indefinitely after the brunt of sea-sickness is over. By five-grain doses given every two hours during one morning, I got on deck the next day two ladies, who lay on their backs for over a week, unable to keep down any nourishment whatever. One of them was a lady physician from Syracuse, N. Y., whose name I have forgotten, but who I hope will see this letter and corroborate my statements. The first dose made a new woman of her.

This success gave the antipyrine such a reputation that my stock was soon exhausted by a run upon it from those who were suffering from the after-effects of sea-sickness, all of whom were invariably relieved by it.

Yours truly,
William Goodell, M.D.

Philadelphia, November 14, 1888.

THE CURABILITY OF URETHRAL STRICTURE BY ELECTROLYSIS.

To the Editor of The Medical Record.

Dear Sir: I am sure you will allow me, as an act of justice, a short space in your esteemed journal for an explanation regarding Dr. Keyes' paper, reported in The Medical Record, September 22d, and commented upon in your editorial of November 3d. The paper referred to was read by Dr. Keyes at the annual meeting of the Genito-Urinary Surgeons in Washington, and entitled "The Curability of Urethral Stricture by Electricity: An Investigation."

Case 8 of Dr. Keyes' paper, which is commented on by your reporter as "the case treated by Dr. Newman, apparently the most conspicuous failure," has been incorrectly reported by Dr. Keyes. Against my earnest protest it was withdrawn from my treatment, when improvement had fairly progressed, and I had written, June 28th, to Dr. Keyes that "the patient is not well, nor cured." The case was sent to me under the following circumstances: Dr. Keyes asked me to treat it as a charity case for his (Dr. Keyes) benefit, and the man was escorted to my office by the doctor's assistant for treatment, and taken away again in his custody. Dr. Keyes personally never came near me. I knew nothing whatever about the patient, except what Dr. Keyes wrote me, and nothing of him in the intervals of treatment. Up to the withdrawal of the patient Dr. Keyes never intimated to what use he wished to put this case, but led me to believe that I was treating the patient for his benefit, that he might see the progress. When I heard what use was to be made of the case I personally went to Dr. Keyes and protested against his using it in so unfair a manner. Then Dr. Keyes answered that he could not very well rewrite his paper, but might state verbally my objections.

More details of explanations would be given, if space for such was allowed; but without any comments I leave it to your readers to draw their own conclusions regarding the value of this case as a test one against my method of treatment.

Now as to Case 9. This case, as related in the paper mentioned, is by no means a test one. The patient, as Dr. Keyes himself acknowledges, had been made worse under the electric treatment of a physician in Brooklyn. The man then came to me for treatment, and after a few times seeing and improving him, I refused for good reasons further treatment. He then asked me to name him a reputable genito-urinary surgeon, and I sent him to Dr. Keyes.

This case also the doctor uses against me, and as a proof against the success of electrolysis.

That Dr. Keyes, with his assistant, have not cured their patients with electrolysis, only proves that they have failed, but not that electrolysis is a failure, and by no argument of sophistry or stretch of the imagination do their failures undo the great number of successes obtained by other men. If I had been the only man who succeeded with electrolysis some might doubt such reports; but the success is well established throughout the world, even to Australia, by hundreds, well, thousands of cases, and so reported by most trustworthy medical observers. I will mention only a few whose reports of successes cannot be contradicted, as, W. F. Hutchinson, T. F. Frank, David Prince, Jacob Butler, J. H. Glass, T. H. Burchard, W. T. Belfield, George E. Pitzer, C. A. Bryce, G. W. Overall, A. T. Douglass, D. O. Farrand, A. S. Wolff, J. B. Green, G. C. H. Meier, R. J. Nunn, T. F. Sanders, J. Craft, W. C. Wile, and many others in the United States. In Great Britain we find pre-eminent W. E. Steavenson, W. Bruce Clark, Edwin Morton, T. J. Hayes, F. Swinford Edwards, etc. Next comes Canada with C. R. Dickson, J. J. Cassidy, E. King, A. Lapthorn Smith, etc. Here is success of electrolysis in urethral stricture by an array of talent, against the failure of Dr. Keyes and a few inexperienced operators. The readers may make their own comments.

ROBERT NEWMAN, M.D.

63 WEST THIRTY-SIXTH STREET, NEW YORK.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department. United States Army, from November 11, 1888, *to November* 17, 1888.

BAILY, ELISHA I., Colonel and Surgeon. By direction of the Secretary of War his retirement from active service this date, by operation of law, under the provisions of the act of Congress approved June 30, 1882, is announced. Colonel Baily will repair to his home. Par. 1, S. O. 266, A. G. O., Washington, November 14, 1888.

NORRIS, BASIL, Lieutenant and Surgeon, and TILTON, HENRY R., Major and Surgeon. By direction of the President detailed as members of the Army Retiring Board appointed to meet at San Francisco, Cal., by War Department order dated October 27, 1888, published in Special Orders, No. 253, October 30, 1888, from Headquarters of the Army, vice Colonel Elisha I. Baily, Surgeon, and Captain John J. Cochran, Assistant Surgeon, hereby relieved. Par. 13, S. O. 261, A. G. O., Washington, November 8, 1888.

MCCLELLAN, ELY, Major and Surgeon. Relieved from duty at Jefferson Barracks, Mo., and to report for duty at Chicago, Ill., as attending surgeon and examiner of recruits. Par. 13, S. O. 261, A. G. O., Washington, November 8, 1888.

BARTHOLF, JOHN H., Major and Surgeon. Relieved from further duty in the Department of Texas, and to report to the commanding officer at Plattsburgh Barracks, N. Y. Par. 15, S. O. 261, A. G. O., Washington, November 8, 1888.

WATERS, WILLIAM E., Surgeon, Vancouver Barracks. Granted leave of absence for one month, to take effect on or about the 1st proximo, with permission to apply for an extension of one month. Par. 1, S. O. 129, Headquarters of Department of the Columbia, November 9, 1888.

ARTHUR, W. H., Assistant Surgeon. Upon being relieved by Acting Assistant Surgeon J. L. Ord, will proceed to comply with par. 21, S. O., No. 250 c. s., Headquarters of the Army. Par. 5, S. O. 123, Headquarters of Department of Arizona, Los Angeles, Cal., November 5, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending November 17, 1888.

SWAN, ROBERT, Past Assistant Surgeon, ordered before Retiring Board on the 19th inst.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 17, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	22	10
Scarlet fever	130	27
Cerebro-spinal meningitis	1	2
Measles	164	12
Diphtheria	84	23
Small-pox	0	0
Yellow fever	0	0
Cholera	0	0

REGISTRATION OF MARRIAGES AND BIRTHS.—Office of the Board of Health of the Health Department, 301 Mott Street, New York City. *To whom it may concern:* At a meeting of the Board of Health of the Health Department of the city of New York, held on October 18, 1888, at said office, the following resolution was adopted:

Resolved, That the attention of "clergymen, magistrates, and other persons who perform the marriage ceremony in the City of New York," and also of physicians and midwives who attend on births in the city of New York, is respectfully called to the following sections of the laws relating to the Health Department of the city of New York.

New York City Consolidation Act of 1882.

SEC. 602. It shall be the duty of the clergymen, magistrates, and other persons who perform the marriage ceremony in the city of New York, to keep a registry of the marriages celebrated by them, which shall contain, as near as the same can be ascertained, the name and surname of the parties married; the residence, age, and condition of each; whether single or widowed.

SEC. 603. It shall be the duty of the parents of any child born in said city (and if there be no parent alive that has made such report, then of the next of kin of such child born), and of every person present at such birth, within five days after such birth, to report to said Board in writing, so far as known, the date, ward, and street number of said birth, and the sex and color of such child born, and the names of the parents. It shall also be the duty of physicians and professional midwives to keep a registry of the several births in which they have assisted professionally, which shall contain, as near as the same can be ascertained, the time of such birth, name, sex, and color of the child, the names and residences of the parents, and to report the same on or before the first Monday of each and every month, to the Board of Health.

SEC. 605. For every omission of any person to make and keep the registry of marriages and births required by the preceding sections, and for every omission to report a written copy of the same to said Board within ten days after any birth or marriage provided to be registered; and for every omission by any person to make the report of any death or birth, with the particulars as herein required, any person guilty of such omission shall be liable to pay a fine of ten dollars, which may be sued for and recovered in the name of such department for the benefit of said department. But no person shall be liable for such fine for not making the report herein required, if he or she shall prove that such report has been made to the Board by some other person before suit brought for such penalty, or that he or she was ignorant of such birth or death.

The frequent failures of the aforesaid persons to properly report marriages and births, due to ignorance of the law or to thoughtlessness, invalidates the value of such returns for statistical purposes, and not infrequently is of injury to those who are directly interested in such births and marriages. The Sanitary Code, in Sections 160, 161, and 162, prescribes the same duty, and regulates the manner and time of such reports to be made to the Sanitary Bureau of the Health Department. Violations of the Sanitary Code may be punished as misdemeanors, and in civil suits for a penalty of fifty dollars. The Commissioners of the Health Department desire to impress on all persons who are responsible for such neglect, that the public good demands a faithful and prompt compliance with the requirements of these sections, and that a failure to properly comply with these legal requirements will subject the offender to the penalty of the law. JAMES C. BAYLES, *President*; EMMONS CLARK, *Secretary*.

THE FUTILITY OF PASTEUR'S ANTIRABIC INOCULATIONS.—The Paris correspondent of *The Lancet* writes that M. Pasteur has had a run of ill-luck with his antirabic inoculations lately, as reported by the *Semaine Médicale*. On July 23d last a man, aged twenty-eight, died of rabies at the Hôtel Dieu of St. Etienne. He had been bitten by a rabid cat on June 16th, and was treated at the Pasteur Institute at Paris from June 20th to July 7th. After having completed his treatment by the antirabic inoculations the man returned to his work as a domestic at St. Etienne, where the first symptoms of rabies manifested themselves on July 18th, that is, thirty-two days after he had been bitten. On August 8th a young man, aged twenty-two, died at the Necker Hospital, at Paris, from convulsive rabies. He had been bitten by a mad dog on the 13th of July, and was treated at the Pasteur Institute from the 16th. Death from rabies took place twenty-six days after the bite. On June 20th last a child, aged eighteen months, died from rabies at Gentilly (Seine), thirty-six days after having been bitten by a rabid dog and inoculated at the Pasteur Institute. The child, who had been bitten on May 15th last, was first treated by the doctor of the place. Two days after—that is, the 17th—the inoculations were commenced and continued for twenty-four days. The first symptoms became manifest about the eighth day after the completion of the treatment by the antirabic inoculations. A child at Marseilles, aged thirty-one months, who was bitten on May 9th last by a rabid dog, and treated at the Pasteur Institute from May 14th to June 9th, died from rabies on June 23d—fourteen days after the end of the treatment. An inhabitant of Chatenay, aged forty-four, who was bitten on March 25th last by a rabid cat, and treated at the Pasteur Institute from March 26th to April 12th, died from rabies on July 30th. Madame Sarazin, of Saint-Maurice, in Switzerland, aged forty-four, who was bitten on July 1st last by a mad dog, and treated at the Pasteur Institute from the 4th of the same month, died from rabies at the Hôpital Broussais, in Paris, on August 4th. To this list may be added the name of a workman of Chatenay, called Labeaume, who died from convulsive rabies at the beginning of the month of July last at the Hospital of Versailles, but who had not undergone the treatment regularly. Bitten on May 29th, 1888, by a rabid cat, Labeaume was put under treatment on the 30th of the same month, but he left the Pasteur Institute on June 2d without signifying his intention to do so, and only returned on the 14th. At that time he experienced severe pains in the bitten arm, accompanied with headache. The inoculations were resumed and continued till June 29th.

MERCURY SUCCINIMIDE FOR SUBCUTANEOUS INJECTION.—Dr. Vollert, assistant in the Strasburg Syphilitic and Dermatological Clinic, writes in the *Therapeutische Monatschrift* on the employment of mercury succinimide for hypodermic injection. This compound was discovered by Dessaignes in 1852, and has recently been brought into the market at a price equivalent to about two shillings an ounce. It occurs as a white shining powder, freely soluble in water, the solution being quite clear and without any tendency to become cloudy or to form a deposit, even on long standing. It does not precipitate albumen, or the fluids of pleuritic effusion or of hydrocele. Mercury succinimide appears to have several advantages over mercury glycocoll, its solution being much more stable, and the injection being less painful and causing a smaller amount of infiltration at the seat of puncture, besides which its cost is decidedly less. When properly applied, the injection rarely, if ever, sets up suppuration. According to Professor Wolff, the best way of operating is to run the needle into the middle of the subcutaneous fat of the buttock, not perpendicularly to the surface, but parallel to it, then to inject the liquid very slowly, gently stroking the swelling formed so as to distribute and disperse the liquid over a somewhat extensive area. The daily injections are made alternately into the right and left buttocks. The strength of the solution recommended by the author is two per cent., corresponding to about one per cent. of mercury, so that each Pravaz syringeful contains one sixth of a grain of mercury. The average number of injections given to each patient is about nineteen; in severe cases, however, thirty to thirty-five injections are required. Dr. Vollert has not as yet been able to make any observations on the excretion of mercury by the organism after the treatment; but, speaking from the point of view of clinical experience, after having given five hundred and twenty-three injections to twenty-eight patients, he considers mercury succinimide bids fair to prove a very valuable drug for subcutaneous injection in cases of syphilitic disease.

A TRUSS FOR MOVABLE KIDNEY.—Dr. Niehans, of Berne, has recently devised a special truss for the palliative treatment of movable kidney. He observes that Lindner, who has recently written on the affection in question, strongly recommends treatment by bandaging, since it palliates the severe pain which so often accompanies the displacement of the kidney. Extirpation of the kidney is a perilous proceeding, not only on account of the risk of the operation itself, but also because the surgeon cannot always feel certain that the opposite kidney is in working order. We may note that Landau, in his standard work, translated for the New Sydenham Society by Dr. Champneys, in 1884, strongly discountenances the operation, and shows that not only is the fellow-kidney occasionally diseased, but that Beumer has collected, out of a long series of cases of movable kidney, no fewer than forty-eight where only one kidney was found. Nor, Landau warns us, must we assume that one healthy kidney can always satisfactorily discharge the renal functions. Dr. Niehans does not think that the published results of nephrorrhaphy, or stitching the kidney, on Hahn's principle, are encouraging. Pads, such as those advocated by Guéneau de Mussy and Lindner, are hot, uncomfortable, and readily displaced; and Dr. Niehans does not notice Landau's "artificial abdominal wall," simply stays lengthened as far as the pubes and Poupart's ligament. He had under his care, in August, 1887, a woman, aged twenty-three, who suffered from pallor, dyspepsia, constipation, nausea, and other symptoms, as well as the usual pain caused by movable kidney. That condition evidently existed in her case, and she wished the offending organ to be extirpated. Dr. Niehans, however, contrived an apparatus which afforded her great relief. On the principle that the basis of support should be at the pelvis, he made an ordinary double inguinal truss. To this was fitted a steel spring, which ran vertically upward for a few inches, and then bent inward, fitting by a ball-and-socket joint into the back of a concave steel pad, oval, with its long axis horizontal. The spring was contrived so that it could be fixed on the truss in such a position as to allow the pad to lie over the right place on the abdomen. The pad, well lined with soft material, was held in place by an elastic waistband, which buttoned on to its right and left borders. This band was made light, and not too strongly elastic, lest it should pull up the truss. The pad was thus placed at the proper level, the spring next made fast to the truss, and then the kidney was pressed backward, and the waistband fastened. the patient, in the meanwhile, lying on her back. The apparatus was taken off at night. The patient was delighted with the result, all unpleasant symptoms disappeared. and she was recently in excellent health, able to do her housework. Whenever she omits to replace the truss in a morning before beginning to dress, she feels the old local pain, which lasts for about a quarter of an hour, but steadily disappears after the apparatus is adjusted.—*The British Medical Journal.*

Success in Practice in the Last Century.—Sir Walter Scott, in his essay on Dr. Smollett, the novelist, gives an idea of what was thought necessary to success in practice in the eighteenth century. Smollett "was not successful as a physician, probably because his independent and haughty spirit neglected the by-paths which lead to fame in that profession. One account says that he failed to render himself agreeable to his female patients, not from any want of address or figure, for both were remarkably pleasing, but more probably by a hasty impatience of listening to petty complaints and a want of sympathy with the lamentations of those who labored under no real indisposition. It is remarkable that. although very many, perhaps the greatest number, of successful medical men, have assumed a despotic authority over their patients after their character was established, few or none have risen to prominence in practice who used the same want of ceremony at the commencement of their career. Perhaps, however, Dr. Smollett was too soon discouraged and abandoned prematurely a profession in which success is proverbially slow."

A Peculiar Case of Rumination.—Dr. Alt has described a case of this rare affection. The patient was twenty-four years of age, and had suffered from merycismus for fourteen years. All food and drink in a few minutes or hours, sometimes even after several days, would be regurgitated into the mouth, without having undergone digestion. About fifteen seconds before the food was returned the patient knew what would happen, from a peculiar local sensation referred to the stomach. All the patient's organs were found normal, except his stomach. This was moderately dilated.

Dry Mouth.—At a recent meeting of the Clinical Society, London, among other papers read was one by Mr. Hutchinson on "Dry Mouth," or "Persisting Aptyalism," as he proposed to term it. In the paper a brief account was given of the five cases already on record, and another one was described, which had recently come under the author's observation. The patient was a widow of fifty, and, with the exception of her having gone through a great deal of trouble, there was no ascertainable cause for the condition. In the course of a few months the tongue, inner surface of the cheeks, lips, and palate became absolutely dry. The dryness had persisted for about four years. It was such that the patient had difficulty in talking so as to be understood. The pharynx was also dry, but there was no defect of nasal secretion. Neither was there any dryness of the conjunctivæ, and the tears flowed freely. Perspiration was also free, and any slight emotional excitement caused the face and forehead to perspire freely. Mr. Hutchinson remarked that in all the recorded cases the patients were women past middle age, and, in all, the condition, having once begun, proved persistent. In none had it been the precursor of any other disturbance of the nervous system. The President (Dr. Broadbent) said he had seen a case which had been somewhat relieved by iodide of potassium. Mr. Butlin related two cases. Mercury, jaborandi, and iodides gave no good results, but pilocarpine, in doses of one-twelfth of a grain, was of some benefit. Dr. Crocker narrated two cases. In one of these some relief had been afforded by keeping the lips anointed with boracic-acid ointment, and applying a lotion of chromic acid (gr. v. ad ℥ j.) to the inside of the mouth.

Dr. Hubbard's Article.—In Dr. Hubbard's article, in the issue of November 10th, the name of Dr. Samuel Ketch appears as Dr. Ketel; and "clinical experience," as *chemical* experience.

A New Use for Ether during Anæsthesia.—Dr. H. A. Hare writes to the *University Medical Magazine* that if, during anæsthesia, respiration stops, he has found that in a large number of instances, both in man and in the lower animals, the free use of ether poured upon the belly causes so great a shock, by the cold produced by its evaporation, as to cause a very deep inspiration, which is often followed by the normal respiratory movements.

One-Child Sterility.—Out of 1,081 gynecological cases, Dr. Kilenwachter, in the London *Medical Record*, noted 90 where the parents had borne one child at a more or less distant period, and had remained sterile since, although still cohabiting with their husbands. In 21 of the cases the single pregnancy had ended before term. He divided the causes of this kind of barrenness into 10 groups: 1. Sequelæ of inflammatory processes beginning during the puerperium. 2. Catarrhal endometritis. 3. Sequelæ of inflammatory processes traced to a non-puerperal origin. 4. Displacements of the uterus. 5. New growths in the uterus. 6. Constitutional sources of sterility established after the first pregnancy. 7. Impaired potency of the husband. 8. Excessive involution or atrophy of the uterus. 9. New growths in the ovary. 10. Uncertain or unknown causes. These groups are arranged in the order of frequency. Forty-three were traced to uterine and extra-uterine pelvic inflammations, that is, to the first three groups; 19 to displacements and tumors.

Treatment of Acute Cystitis.—As the urine is often highly acid in the early stage, the alkalies would be indicated; and in the later stages benzoic acid to counteract alkalinity. Various specifics have been praised—notably buchu, hyoscyamus, uva ursi, lupulin, cubebs, copaiba, and belladonna. Gross thinks copaiba in small and often-repeated doses one of the best, if not the best remedy; and, as he thinks that a combination of remedies in this particular disease better than any one individually. he combines the copaiba with, I think, uva ursi and hyoscyamus. I found in one case the capsules of copaiba, cubebs, and santal-wood apparently act well. I believe this fondness for copaiba did not originate with Gross, for Sir Astley Cooper used it extensively for the same disease.—*Canada Lancet.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 22 New York, December 1, 1888 Whole No. 943

Original Articles.

THE INJURIES OF FOOT-BALL PLAYERS.

By A. H. P. LEUF, M.D.,

DIRECTOR OF PHYSICAL EDUCATION AT THE UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA.

A NOTICE in THE MEDICAL RECORD of November 3d, of this year, calls attention to Dr. George Werry's paper in *The Lancet*, and refers to an injury to the front or outer side of the thigh that is known as "the poop." THE RECORD says:

"The description of the injury given by Dr. Werry is this:

"During the game a player receives a blow on the front and outside of the thigh; there is at once a feeling of utter helplessness, but he may recover so far as to be able to continue the play after a short rest, and feel little of it next day, except that he cannot run. The patient comes to consult the physician the day after the injury, with little pain. He limps in walking. On examination there may be effusion into the knee-joint, a soft and somewhat tender area over the quadriceps extensor femoris, and the patient cannot lift the limb when it is kept extended. Ecchymosis is not common. The amount of knee-joint effusion depends on the position of the injury with regard to the bursa behind the quadriceps tendon, and whether the man has tried to continue his sport, or walked much after the accident. The blow may be in the middle of the thigh, and cause an effusion into the joint; the patient may have forgotten the 'poop,' and come to complain of the swollen knee. The recovery of the damaged muscle is generally complete. It seems probable, therefore, that in the 'poop' the muscle is more bruised than broken."

My object in writing this note is to call attention to the fact that these injuries are very common with us in our games of foot-ball, and that they are not limited to this game, for they also occur in base-ball, though not as frequently.

Etiology.—These injuries are almost invariably due to severe direct violence, and may affect muscles, bones, periosteum, ligaments, and aponeuroses. Some are due to over-action and occur spontaneously, that is, without direct external injury.

Pathology.—The muscles are affected most commonly, and after these follow, in the sequence of their frequency of being injured, tendons, aponeuroses, ligaments, periosteum, and bone. With the exception of the muscles, these structures enter upon a condition of subacute inflammation, and rarely get well within many months, or several years, unless properly treated. Some of these cases even carry with them through life some permanent weakness, or even visible lameness, due to injuries sustained in playing foot-ball. The myositis is often quite acute, and hence painful. It is not uncommon in muscle or aponeurosis injuries to find an unmistakable inflammation of the adjacent connective tissue. If these cases are not properly handled, there results more or less atrophy of the affected muscle, and a contraction of the previously inflamed connective tissue. That this is plainly so is evidenced as follows: The injured muscle is very tender at the site of injury. There is a diminishing area of tenderness around this focal point, always extending further in the direction of the affected muscle than across its longitudinal axis. Contraction of the muscles invariably causes pain at the seat of injury or tenderness. If now an adjacent muscle, showing no tenderness, be contracted independently of the other, there will result a deep, tearing sensation that alarms the patient. From this I feel safe in concluding that there is an inflammation of the connective tissue between the contracted and injured muscle. I believe that much of the permanent stiffness in many cases is due to the adhesion of muscles to their enveloping sheaths. Tendons seem also occasionally limited in their freedom because of adhesions between them and their surroundings. Much lameness is due to chronic localized osteitis, or periosteitis, at the attachment of ligaments that have been severely strained. At other times chronic bone trouble remains at places that have been very forcibly struck in a game, say with the heel of an adversary's shoe. Joints and tendon-sheaths also very often become filled with fluid. Pathologically, these foot-ball players' injuries do not seem to me to be at all different from all low-grade inflammatory conditions of the same structures; but they are peculiar in that they are almost uniformly neglected through carelessness, over-confidence, or because of the ignorant assumption that if they do not get well of their own accord, they also cannot get well under treatment. I may also say that many boys and young men purposely hide from their parents the seriousness of an injury, because it is feared that a physician's bill of attendance will cause the parental veto of all future foot-ball aspirations. So it is readily seen that neglect makes these injuries more intractable when sustained on the field than when they are the result of accident in "ordinary every-day life." From this it naturally follows that most foot-ball injuries that come under the general practitioner's care are somewhat old and chronic, and therefore intractable. Such injuries may be divided into acute and chronic varieties, and the acute may be subdivided into those that are moderate and those that are severe. Each kind has its own symptoms and requires distinct treatment.

Symptomatology.—Almost in all of these cases that are the result of direct violence there is for a time the feeling of utter helplessness of which Dr. Werry speaks. But this symptom is not confined to foot-ball casualties, as it is well known that being hit with a swiftly pitched base-ball produces the same effect, as also a localized blow resulting from a collision in base-running. These hard, sudden blows cause a paralysis of a reflex or functional character. It is often necessary for the player to leave the field to rest, be "rubbed down," and to recover lost confidence. If not too badly hurt, he will limp back to his position and continue play. On the other hand, the injury is often so severe that he cannot play for a few days, or even weeks. If it is not great, the sufferer feels little or no pain next day, but he experiences an unusual stiffness under the skin at the site of the injury. If it happens to be at the usual place in the upper half of the front of the thigh, he will find, while running and in the act of drawing the thigh forward for another step, that it appears to be held by a band from going back as far as usual. It is this restricting band-like sensation that is meant by stiffness, and which repeated careful examinations have convinced me to be due to connective tissue and muscle infiltration of plasma. The parts are invariably swollen. The tenderness diminishes in proportion to the depth of the injury and the natural softness of the tissues. At first the pain is usually very severe for a short time, after which it is vague. The vagueness and dulness of the pain I attribute to general bruising of the nerve-fibres connected with the affected area. After a period, varying from one to four or five days, well-marked inflammatory conditions supervene, leading to increased tenderness, more or less continuous pain, additional tumefaction, and decided stiffness in walking. After two or three weeks those symptoms subside, and the patient has little or no discomfort, except during a rapid walk or while running. Ordinary pressure produces very little or no pain; but deep, firm, digital pressure at once causes decided wincing, thus making it readily possible to locate and circumscribe the disease that is in progress. Once arrived at this stage there is usually a standstill, the patient gets neither worse nor better, unless properly treated. He will rejoice in being sound and well again after several months or a year, provided that he does not exert himself very much; but as soon as he attempts to accomplish his former feats of running, dodging, and jumping, his disability returns, and if he perseveres in his efforts for a few days, the previously injured part is as bad as ever.

When aponeuroses are affected, all the symptoms are less decided, the pain is more indistinct, and the progress of the case slower.

Osseous, ligamentous, and periosteal injuries have one peculiarity that is very marked. The symptoms are those which generally accompany injuries and subsequent sub-inflammatory disease of the structures; but the patient finds that though he has no pain, and but slight and irregular tenderness, his joint, while he is walking or running, suddenly gives way under him so as to almost let him fall. This *treachery* of the joint immediately adjacent to the affected tissues is a constant, marked, and characteristic symptom. It should not be forgotten. Hydrops articuli is very common, and due more to wrenches, I believe, than to direct blows upon a joint Dropsy develops quickly, as a rule, sometimes becoming very decided within a few hours. Tendons occasionally slip out of their grooves, and either tear their sheaths or pull them partly out of their beds. The signs of this consist in well marked local tenderness, swelling, and painful and impaired motion, with resulting lameness. Without treatment these cases cause lameness for many months, and even for years.

Treatment.—In all acute cases I invariably make use of a compression support, and prescribe rest. My usual method in the most severe cases is to apply a suitable bandage, and sometimes, either because of a natural hollowness or much tenderness, I place over the seat of injury a soft cotton pad. Pressure and rest are continued for several days until moderate motion of the limb causes but a slight and indefinite feeling of pain, accompanied by a sensation of stiffness. If the pain is so severe at first as to cause much loss of sleep, I give just enough opium to cause relief, and have cloths wrung out of hot water applied locally at frequent intervals. During this period the patient keeps his room. After a few days, when the very marked symptoms have abated, the patient feels much as though he had just received a fresh injury of average severity, and such is practically his condition. The treatment is the same in both instances. It consists of regular moderate exercise despite some pain and considerable stiffness. The injured part must always be kept warm with scrupulous care. Morning and night there should be gentle kneading, and vibratory massage of the affected parts and surrounding area. At the end of another week or ten days recovery is either complete or the injury begins to get chronic. In this latter stage no little care is required to watch daily changes, for the symptoms are ever changing, and the spots of tenderness flitting about from place to place. At this stage almost any amount of exercise is admissible, provided that the part is not struck another blow, or (in the case of a joint, ligament, or tendon) does not receive another wrench. The main therapeutic reliance now is galvanism. This must be applied daily, in moderate strength, for about fifteen minutes. Interruptions of the current should cause distinct muscular contractions. The positive pole, as a rule, does best at the seat of injury. The skin should be reddened by the electrode. During a sitting the tenderness will shift under the electrode, and when followed up with the positive pole, it will shift its place again. At the beginning of the sitting the patient, as a rule, repeatedly jabs his thumb or finger firmly toward the bone in the affected area, so as to be able to identify the focus of the trouble.

I have found many times that these cases will remain permanently at a subacute stage unless they are properly handled. To me it seems that the electricity is all-important, for it appears to have a revivifying effect upon the disordered functions of the part that has been injured. I believe that it sets up a cell reaction that causes resolution.

Heat has a charming, soothing effect in all these sub-inflammatory diseases of muscle, bone, and fibrous tissue incident to injuries received during active physical exertion. The best way to apply it is by means of hot water. This may be as a hot bath (local), cloths wrung out of hot water, bottles filled with hot water and wrapped with flannels, and rubber bags filled with hot water. All are good, but I prefer the bath or rubber bags, because they are the most efficient and easily handled.

The few cases that follow may serve to illustrate the foregoing remarks.

One of the best foot-ball players now at the University, while playing last year (fall of 1887) with Princeton against Yale, was running at top speed with the ball and dodging all opponents who attempted to make a tackle, when he collided with one of the Yale team whose flexed knee struck him in the front of the thigh at the junction of the middle with the upper third. He had the symptoms of a severe injury of this kind. His gait was defective afterward, and last summer, while playing base-ball at Cape May, he found base running very difficult because of his bad thigh. At the beginning of this year's football season he came to me. He walked with a limp, had some pain at the site of the injury, which was increased upon exertion; there was tenderness on firm digital pressure, but it was not well defined; the pain was shifting; there was a sensation while running as if a band prevented the thigh from being fully extended; and he had lost his confidence in running. He was advised to keep up his foot-ball practice; he was instructed so as to treat himself to local kneading and vibratory massage; and I used galvanism daily for several weeks, at the end of which time he was well. Some weeks ago he sprained his ankle so that it swelled to at least double its former size and was discolored. I advised the hot local bath thrice daily for twenty or thirty minutes at a time, and gradually increasing exercise from the beginning. A counter-irritating liniment was also given, but mostly with an idea to the discutient effects that would result from the rubbing. He was well in about three weeks.

Another player on the team, also an ex Princetonian, had two subluxations of the left shoulder within one week. I reduced one myself on the field, and was at first certain that it was a complete subglenoid dislocation. I felt the subacromial hollow of the shoulder, noted the stiffness and abduction of the arm, the undoubted pain of the player, his relief from pain in the axilla, forearm, and hand during traction, and the audible snap when the head of the bone slipped into place. We raised him from the grass to his feet, and I put the hand of the injured arm in his breast, telling him to leave the field for the office, where a bandage would be applied. When a little way off, he tried his arm by swinging it around forward and then backward "to see if it was all right." It did not come out again, but I then concluded that the dislocation had only been partial.

The centre rush of the same team had a bad knee wrench in a game with Yale, and had to be carried off the field. Treatment soon brought him around, but he still has a little pain on the opposite side of the knee at the upper part of the femoral condyle.

One of the students at Swarthmore College last fall (1887), while pole-vaulting, either fell upon or wrenched his knee, he could not tell which. This was between five and six P. M. The next morning he had a large effusion into his knee-joint. I left him in bed and bandaged his knee for about ten days. His knee had been blistered with iodine by a well-meaning nurse, and I had given him the iodide internally. Most of the fluid was absorbed in a few days, but after that there was hardly any appreciable progress. After he left the bed and began to run around again, the effusion was absorbed in a few days.

The right fielder of a prominent National League baseball club played his position during the past season while on a trip from home, though he had so severe a dropsy of one knee that only very slight flexion was possible. The skin over it was very red, and it was painful. After six or seven weeks it troubled him no longer. That he did wisely in playing in such a condition I do not believe; but I am fully convinced, from numerous instances that have come directly under my observation, that while rest and compression of the joint are indicated until the very acute symptoms have subsided, free but not violent exercise will tend to the most rapid absorption of the fluid that may remain within the joint.

The full-back of the University foot-ball team sustained a peculiar injury. He fell upon his knee during a game, and felt the helplessness of which Dr. Werry writes, but only for a few moments. At the end of the first half I saw him in the dressing-room, and found the bursa patellæ quite distended with fluid. It was excruciatingly painful. The ground man "rubbed him down," and he continued play. He made a spontaneous recovery in about two weeks.

Another member of the same team has an effusion (well marked) at the inner side of the knee. I find it difficult to tell whether it is between the vastus internus and the joint capsule, or in the joint, but I incline to the former belief because no effusion can be felt on the outer side of the joint. He is improving rapidly under galvanism and exercise.

The same team's quarter-back in the last game against Yale, at New Haven, was piled up in a mass of players in a scramble for the ball. He did not feel injured, but when he attempted to pass the ball to one of the halfbacks, he found that his wrist was useless. He then ceased playing. I saw him on the next day, and at first suspected a fracture of the lower end of the ulna, but I was mistaken. The whole lower half of the forearm was swollen and tender. Most pain was felt along the tendon of the extensor carpi ulnaris, opposite the lower end and a half-inch of the ulna. Extension and flexion of the fingers caused pain in the forearm. I believe that his injury was due to severe squeezing of the lower half of the forearm, with perhaps a little twisting. I advised, with very satisfactory effect, elevation of the hand to reduce tension; hot applications to hasten resolution, and a counter-irritant and anodyne liniment to relieve pain, lessen and subdue inflammatory action, and for the discutient effects of rubbing.

Many more cases could be cited, but it seems to me that those mentioned will suffice to illustrate some of the remarks I made at the beginning of this note. So far I have not yet met an injury caused by foot-ball playing, that has received medical treatment, that would impair a man's future health, strength, or general usefulness, and yet the opinion is current that the game is dangerous to life and limb. Certainly it has its drawbacks, as all will admit, but, then, what has not?

I could find no player here who ever heard the term "poop" applied to a foot-ball injury. The term is probably unknown among American players, though the affection is an old and familiar acquaintance.

129 South Thirty-sixth Street.

SPLENECTOMY FOR FLOATING HYPERTROPHIED SPLEEN.[1]

By J. R. NILSEN M.D.,

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I HAVE delayed publishing these notes from my case-book to allow time to keep the patient under observation. As nothing new of interest has occurred in the case, and she has not been seen since eighteen months after the operation, I shall probably not gain anything by waiting longer.

Mrs. A. W——, aged thirty-six, married fourteen years, one child. The patient came to my clinic seeking relief from abdominal pains, which she describes as constant and general, sleeplessness, anorexia, menorrhagia, and constipation. She said nothing about "a swelling" until after it was discovered during the examination. She showed a conspicuous lack of animation. Facies long-drawn and careworn; eyes hollow; skin puffy and dark below the eyes, without œdema. Complexion unhealthy, ashen. She was poorly nourished, and anæmic. Tongue coated; breath foul. The lungs were sound; the heart irritable, with intermittent beat, and a mitral systolic murmur (anæmic?). Liver slightly enlarged, not tender. Urine normal, except for a slight cloudiness from the presence of mucus. The appetite has been poor for years. She had had frequent nausea and vomiting after eating, and occasional epistaxis. Constant pelvic pains, especially on the left side, greatly aggravated at the approach of and during menstruation, which has occurred with fair regularity. Examination per vaginam revealed enlargement of the uterus and appendages, with great tenderness of all the pelvic organs. In the left iliac fossa a tumor, clearly mapped out, although the abdomen over its site is very sensitive. It is freely movable; can be pushed upward against the diaphragm. Its shape suggests an enlarged spleen; seems about eight inches long by four or five wide. Its upper margin quite sharp.

Close questioning elicits the history of severe attack of chills and fever twelve years ago lasting six months; also that for over ten years she has noticed a swelling on the left side.

By exclusion the diagnosis is limited to either floating kidney; much enlarged, floating, hypertrophic spleen; or some form of omental or mesenteric tumor, not adherent to any of the abdominal organs, unless possibly to intestines, although there have been no symptoms to warrant the supposition. Symptoms and signs betoken considerable pelvic congestion. By the aid of her history, and chiefly from the shape and mobility of the tumor, I finally arrive by exclusion at the diagnosis of dislocated, hypertrophied spleen.

Patient at once put under active treatment for symptoms. No improvement, rather worse. Operation proposed.

Contraindications for operative interference:

1. The patient's general poor condition; the anæmia; the condition of her heart.
2. Disagreement of most of the consultants.

Reasons for operating:

1. Confidence in the correctness of diagnosis.
2. The danger of the pedicle becoming twisted, leading to death of the organ by gangrene.
3. Constantly increasing pain and sense of weight in the abdomen.
4. The pain is greatest when lying down, wherefore she is deprived of the needful rest and sleep.
5. The abdomen is tender to slight pressure over the area through which the tumor moved, and this tenderness has of late been rapidly increasing.
6. The pain is dull and heavy from pressure upon the pelvic organs, and there is probably a constantly maintained or increasing congestion of these organs.

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[1] This operation was reported in December, 1886, but the details were not then published.

7. If so, this may lead to serious inflammatory troubles. But, even without acute inflammatory manifestations the congestion may be accompanied by or occasion plastic exudations, and if so, as in the case of more common forms of abdominal tumors, dangerous adhesions may be forming between the abdominal organs.

8. The spleen is not essential to life, as has been demonstrated before, other organs assuming either compensatory or vicarious functions where it has been removed. The percentage of recoveries after splenectomies for causes other than leucæmia has been fairly encouraging.

9. Absence of leucænia. A week before the operation the blood was examined by Professor Satterthwaite, who found it normal.

Operation submitted to.—The patient was prepared by acting upon her bowels with licorice powder, and sulphate and citrate of magnesia for about a week. She was toned up with good food, digitalis and brandy, etc., and all the emunctories made active. During the four hours preceding the operation enough brandy was given to stimulate her perceptibly. On the day before, by letting her, while in bed, raise her head to contract the recti muscles, I observed that the interspace between these diverged from the navel toward the pubis considerably to the left from the dark median line of the skin, and I took advantage of this discovery in making the incision.

The operation was performed November 21, 1886, with the kind assistance of Professor Hanks and Drs. Dudley and Molloy. Ether was used.

I made the incision from a little below the navel, downward and about four and a half inches long. Considerable bleeding. Kolberle's clamps were used. No vessels were tied. Plastic formations in the parietes made the entrance a little slow. The anatomical "layers" entirely lost. A director was used with difficulty. Peritoneum deeply congested, bleeding freely. The omentum long, lying over to the right, its left edge only showing in contact with the right end of the tumor but not adherent to it.

It occurred to me right here that I had made the mistake of making the opening below instead of above the umbilicus, unconsciously, perhaps, influenced by the fact that others did not agree with me in the diagnosis. But for this I probably should have made the incision high, to get at the base of the pedicle and also to lessen the possible chance of a subsequent ventral hernia. However, I knew that the pelvic organs were in a bad condition and might need attention, and this influenced my choice.

The tumor, being the spleen, was lying as diagnosed, hilum posterior, and was tilted out right end first entirely free from adhesions, but followed by its pedicle, exhibiting a vein so large that the first impression was that a coil of the small intestine had in some way become incorporated with it. The artery was the size of an ordinary lead-pencil, but the vein five or six times that size. The artery was straight, the vein varicose. There was very little tissue besides the peritoneal covering.

A heavy silk ligature was placed around the pedicle about three inches from the spleen, to test the tissues and the silk and to prevent spattering when severing the pedicle. Two of the assistants were asked to watch the pulse at the wrist on either side, and one of these had a clamp in position to grasp the pedicle above in case of cutting through of the ligature, which was now slowly tightened. The assistant on the right felt the pulse grow fainter at once, the one on the left noting no change. Eight or ten seconds after the maximum tension of the ligature was reached the assistant upon the right felt the pulse growing much weaker and the one upon the left now also noting a marked decrease in strength, not in rhythm. No change in the respiration. The change in the circulation, verified by all present, became so marked that for a brief moment I considered the wisdom of cutting loose the ligature, and if this restored the circulation going no further, but fortunately I kept on. Brandy, ether, and camphor were injected under the skin, and in a few minutes the heart regained strength. (Since then I have noticed that the patient's pulse upon the left is much stronger than on the right side.)

A heavy clamp was put on above the ligature; spleen, with about three inches of pedicle, cut away close below the clamp. Pedicle tied in two parts as high up as possible; clamps removed; stump trimmed; end of artery in stump tied with catgut; ligature ends cut very short and pedicle dropped back.

When the spleen was first lifted out I noticed a fair quantity of free fluid in the abdominal cavity. This I left there, expecting to act freely on the bowels after operation, and did not enter with a sponge. I used silk sutures for the would, including in them the peritoneum, as I have continued to do in my operations ever since, although I now use silk-worm sutures exclusively. I took particular care to unite the abdominal fascia with catgut, but did not treat the peritoneal edges similarly, as they rolled well together without it. The dressing was four layers of lint ten by six inches, impregnated with carbolized glycerine, and over this a thick layer of absorbent cotton covering the whole abdomen, and a flannel binder.

Before tying the pedicle it occurred to me, as it also was suggested, that by compression of the spleen a considerable portion of the blood in the gland might be forced back into the circulation and saved, but I desisted from so doing, not being certain of the condition of the parenchyma of the organ. It measured about seven and a half inches by nearly four and a half inches; two inches thick, and weighs a fraction less than two pounds. Time of operation, thirty minutes (guessed at). Owing to the shock I attempted no intra-abdominal examination of the pelvic organs.

She rallied soon from the immediate effects of the anæsthetic. There was a tendency to vomiting for two days, well controlled by small doses of hot water every fifteen minutes and by occasionally causing the patient to fill her stomach with warm water or tea, which gave rise to free momentary vomiting but insured rest for one or two hours after. She vomited a little blood now and then, and at such times complained of pain like needles piercing her side.

Two hours after the operation she suddenly began looking blue in her face, expressing at the same time a sense of great heat. Her pulse then beat at the rate of 108, but the temperature, taken by mouth, registered only 97$\frac{5}{10}$°. The brandy taken before the operation may have had something to do with this. About six hours after operation temperature rose to 100$\frac{4}{10}$°, the highest at any time. The only thing that gave us much trouble after this was her inability to pass urine unaided until the tenth day. The sutures were removed by the ninth day.

The stomach was rebellious for about two weeks, but after that she improved rapidly and grew fatter. The symptoms which marked her condition before operation reappeared now and then at irregular intervals, but gradually subsided. Sleeplessness and shooting pains remained longer than the other symptoms. The temperature rose to 100$\frac{4}{10}$° about six hours after operation, and for two days flucuated between this and 98°. After this it did not reach 100°.

Having no home the woman remained in the hospital until January 17, 1887, although she was well enough to be dismissed some time before that. She evidently became demoralized by the unwonted good care she had there received, and by the help extended to her after she left, for, although she improved steadily in appearance she refused even to try to work up to the time of her last visit, about eighteen months after the operation.

I was happily disappointed in not meeting with any of the grave sequences which I had been led to expect after the operation from the writings of Credé, Collier, Bryant, Spencer Wells and others. There was no secondary hemorrhage, no marked temporary anæmia, no sudden enlargement of the thyroid or other glands, no perverted appetites or sensations, no apparent disturbance in the functions of glands and organs supposed to assume the functions of a lost spleen, in short there was nothing remarkable in the patient's condition while convalescing, except what is referred to above.

A CONTRIBUTION TO THE STUDY OF HAY FEVER.

By J. M. W. KITCHEN, M.D.,
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One would think that many propositions relating to hay fever should justly be considered as proven. Those who dispute them can hardly be judged to be thoroughly informed as to the observations and experiments already made, and which, with other evidence, are on record. But various points may still fairly be regarded as *sub judice*. Herewith I present observations and conclusions relating to sundry of these, some of which I believe are original, while others are in substantiation of opinions already expressed by other observers.

Every hay-fever case that I have studied seems to have had an exalted sensitiveness of those receptive centres that are in intimate communication with the intranasal surfaces. In many cases this appeared to be the only peculiar nervous condition present that could be considered as being related to the affection. Although such a condition may result from pathological causes and apparently is always present in hay-fever subjects, I cannot consider that it is necessarily a pathological state. In many cases it seems to be merely a higher development of the common property of receptive sensitiveness that is present in every normal individual, being analogous to the trained visual centres of the painter, the aural centres of the musician, or gustatory centres of the tea and wine taster.

In the great majority of cases I do not believe the nervous condition alone to be a sufficient cause of the disease—intranasal hyperæsthesia or vulnerability being also a necessity.

In most cases this exalted sensitiveness is not confined to the particular receptive centres referred to, but is a general condition that seems to be the natural concomitant of an exalted development of the intellectual centres. When the condition is not generalized I have quite frequently been able to trace the increased central activity to exaggerated intranasal or reflex irritations. In some cases a superficial observation would lead one to think that there was not any particular central receptive hypersensitiveness; but close study of cases, especially as to the details of their lives, and through inquiry of relatives, reveals this peculiarity. Such persons are likely to be unduly disturbed mentally by unusual causes, and to be morally sensitive. They bear pain badly. A mustard-plaster is terrible to them. The idea of an intranasal operation is intolerable.

I think it will be found that if a person is centrally receptively hypersensitive to moral and other irritations and does not have hay fever, his intranasal and adjoining mucous surfaces will be found so well nourished or otherwise structurally resistant as to be invulnerable to atmospheric hay-fever irritants, even though such surfaces may be in a pathological state in comparison with his other tissues. But if a person have non-resistant and structurally vulnerable tissues in these surfaces and does not have hay fever, he will be found to be devoid of this central receptive hypersensitiveness, even though he may be outwardly demonstratively nervous.

The great majority of cases that I have studied have had chronic intranasal disease of sufficiently marked a character to warrant the conclusion that the excitability of the centres must have been augmented, and that the property of nervous irritability in the peripheral parts affected had been greatly increased on that account. Such inflamed parts, besides being hyperæsthetic, are generally in an abnormal structural condition readily affected by the physiological, mechanical, and chemical action of atmospheric irritants. It will be remembered that pollen acts physiologically by the protrusion of its inner coat as an elongated process in the act of impregnation. It acts as a mechanical irritant on account of peculiar formation, especially when covered with sharp spines. Chemical irritation also occurs when it contains acrid principles. It is probable that the physiological action is performed when pollen is deposited on a sufficiently vulnerable nasal mucous membrane. Such conditions of vulnerability may be hyperæmic or anæmic. Marked malformations seem to be most frequently present, while chronic hypertrophic catarrh ranks next in prevalency. The malformed cases of evident congenital origin gave histories of attacks of hay fever running back beyond memory into childhood. Quite a number of cases refer the commencement of the attacks to periods shortly subsequent to the beginning of chronic catarrhs. A few cases were apparently due to extranasal causes, such as enlarged tonsils, peculiarities in the dental formation, etc., which had caused mouth-breathing, the result of which is, of course, loss of tone, due to insufficient intranasal stimulation from deficient nasal respiration.

I at one time thought that all cases of hay fever had local intranasal disease other than the specific attacks, but further research has demonstrated the contrary. A few cases—a very small minority—had no apparent local pathological condition during the intermissions; but these few cases had a possible structural cause, viz.—a thin, delicate mucous membrane seemingly deficient in connective fibres and epithelial covering, the vulnerability of which to special irritants could be readily imagined. This peculiarity extended as well to the skin generally of these cases. Many of them are particularly sensitive to those acrid, poisonous emanations that are given off from the *rhus* tribe of plants. All of those thin-skinned cases were centrally sensitive to a marked degree, so that no conclusion could be formed as to this structural condition being a sufficient cause without particular central exaltation. Probably this condition is the result of the generally poor and inharmonious nutrition of these individuals.

So far as I could ascertain, the diseased states referred to were mostly causes and *not* effects of hay-fever attacks. I have seen a number of severe cases of many years' standing whose nasal cavities during the intermissions were quite free from diseased conditions, though apparently vulnerable from structural causes. I do not think that hay-fever attacks alone would produce hypertrophic or other lesions to any great extent, as the remittent periods are so extended that the parts have ample time to return to the normal state. The attacks would, of course, aggravate ordinary catarrhal conditions already existing.

I cannot consider it scientifically correct to speak of hay fever as a *neurosis*, for it has not been shown that a *disordered* nervous condition, although a frequent predisposing cause, is essential. In a great majority of cases studied by me the nervous element was not sufficiently marked to warrant a belief that without concomitant intranasal hyperæsthetic conditions there would be susceptibility to irritation from plant-pollens and irritants of the like nature. The term neurosis is misleading, and at best only describes one predisposing condition. To be sure, most cases have marked general nervous peculiarities; but some few are not generally sensitive, and, in view of the great peculiarities of periodicity marking the disease and of the most prominent exciting cause, to speak of a predisposing cause as the disease itself is somewhat like playing "Hamlet" with the *Prince of Denmark* left out. The fact that hay fever occurs in many neurotic and hysterical subjects, though such morbid conditions of a nervous character in such individuals undoubtedly predispose to hay fever in many cases, I think has misled various observers into concluding that such conditions are essentials. I hold that they should be more justly considered as predisposing causes and aggravating complications. Every being differs physiologically from others in the degree of susceptibility to peripheral irritations, and various hay-fever irritants are strongly irritating. The bronchial mucous membrane may be a tissue having minor resistance to many direct and reflex irritations; but morbid attacks due to such causes are not denominated neuroses. Neither should irritative affections of other mucous membranes be so designated, especially when the periodicity of such affections can be absolutely shown to be coincident with the presence of atmospheric irritants, and their severity be shown to be in strict sequence to the amount of the special irritant present. Persons subject to hay fever have the common physiological property known as nervous irritability highly developed, and this is the only apparent essential idiosyncrasy of a nervous character, and I hold should not be called a morbid condition. Even the most healthy and nervously insensitive person, with the toughest tissues, could be given a periodic irritative nasal catarrh by an intelligent local application of a selected irritant at the proper time. One proof that an attack of hay fever is essentially an irritative catarrh of the parts principally affected is, that the first symptoms are of peripheral irritation. I have never met a case having so-called prodromic symptoms where these could not be referred to introspective anticipation, or to various depressing climatic and malnutritive non-neurotic disturbances. I have been surprised to find how many of these "nervous" patients have acknowledged uncertainty as to the exact day and hour of the attack. Many who believe in an exact date of the recurrence are mistaken. A formed habit might possibly account for some of these cases. The great majority say that this time varies somewhat, and that the period of its occurrence, as well as its severity, depends upon the peculiarities of the season and upon the general state of the health at the critical season or shortly before; depreciated general states of nutrition result in loss of tone locally, as well as a general increase of irritability, due to the larger blood-supply following weakened inhibitory centres.

I do not even consider that the beginning of an attack of hay fever should be considered as pathological; but only as a normal effort to expel objectionable foreign matter by sneezing and by an efflux of serum. I regard the ability of the nasal mucous membrane to suddenly pour out large quantities of serum as a physiological function, the office of which is to wash out excessive foreign matter that would naturally be liable to collect at the external extremity of the air-tract. I do not know that such an interpretation of this action has hitherto been made. In hay fever I consider this function to become pathological only after undue continuance.

Summarizing, I conclude that an individual may be susceptible to hay-fever attacks:

1. Because of local nasal and neighboring hyperæsthesia plus localized normal, central exaltation, without neurotic manifestations.
2. Because of local hyperæsthetic conditions plus generalized exaltation non-neurotic in character.
3. Because of local hyperæsthesia plus general neurotic conditions.
4. Because of normal local structural vulnerability plus general nervous abnormalities.
5. Because of general hyperæsthesia, centrally and peripherally (infrequent).
6. (Possibly) Because of peripheral hyperæsthesia plus localized central neurotic conditions.

Furthermore, I conclude that to designate as hay fever catarrhal attacks in nervous persons due to reflex and other causes than the atmospheric irritants produced by flowering plants, even if occurring in hay-fever subjects, is unscientific nomenclature.

OBSERVATIONS ON POLLENS DURING THE SEASON OF 1888.—Those specimens studied previous to June 10th were procured from Central Park, New York City; after that date, mostly from Gilmanton, N. H., which place has an elevation of 1,000 feet, a very dry and exceptionally pure atmosphere, peculiarly favorable to most irritable conditions of the air-tract, but only affording partial exemption from hay-fever attacks. Great differences exist in pollens as to their form, size, atmospheric buoyancy, and chemical properties. Some, like those of common garden-rhubarb and mignonette, are smooth. That of Indian corn is very large, is smooth, but does not float very readily in the atmosphere. The pollen of ragweed (*Ambrosia artemisiæfolia*) is quite small, is easily detached from the plant, floats in the air readily, and is covered with multitudes of minute very acute spines, looking not unlike a miniature chestnut-burr. The pollen of the golden-rod is small, covered with spines, and is shaped and looks like a small horse-chestnut burr; but this pollen is not so readily detached from the plant and apparently does not float readily. Although the plant is abundant at Gilmanton very little of its pollen was deposited from the atmosphere on my microscope-slides. I judge, on this account, as well as from the fact that golden-rods having pollens of the same appearance grow abundantly in exempt regions, that the pollens or other productions of this plant have little to do with hay-fever causation. I received specimens from locations extending from Cape Cod to Hillsborough, N. B. The most irritating pollen that I have studied is that of timothy-grass (*Phleum pratense*). Although not a hay-fever sufferer, and although I have a fairly healthy nasal mucous membrane, I succeeded in giving myself a typical attack of hay-fever by inhaling timothy-pollen freely—an attack which persisted twenty-four hours, and which was so distressing that I should seriously object to repeating the experiment. In a few seconds after the inhalation sneezing occurred, followed within less than a minute by a profuse discharge of serum. Only later was the deeper layer of the mucous membrane affected, it becoming swollen. It will be noted that this action differs from the commencement of an ordinary acute rhinitis due to "taking cold," where the swelling precedes the discharge. This is evidence of the peripheral character of the irritation in hay fever. Timothy-pollen is large, and when freshly collected from the plant has facets, looking somewhat like a grain of Indian corn. When moistened it immediately becomes symmetrically globular, and commences it physiological action by protruding a process from its periphery, around the inner extremity of which the fovilla in the pollen grain seems to accumulate. Later on this fovilla appears to escape through this process and is seen adhering to the external surface of the grain near the process. Ragweed grows in moderate quantities at Gilmanton, though of a stunted growth. Its flowering products were collected from the atmosphere in varying amounts—hay-fever patients being affected in direct proportion with the amount found to have been deposited on my slides. Of the clouds of dust that every breeze and touch detaches and carries from this plant during its flowering stage, only about one-fifth is pollen. The bulk of it is vegetable *débris*, such as cells, scales, etc., and this corresponds to the deposits from the atmosphere on my slides. This ragweed dust is a pungent irritant. The whole plant has a marked aromatic principle in its various parts. When shaken in the face, this dust causes immediate smarting and burning of the skin, of the conjunctivæ, and of the intranasal and pharyngeal mucous membranes. During the periods of fruit-tree and rose blooming a great amount of vegetable *débris* was in the atmosphere, but little or no pollens; and during those periods in which an abundant quantity of vegetable matter was present in the atmosphere, I noticed a distinct tendency to local irritations in those suffering from bronchitis and rhinitis who were not hay-fever patients. I therefore conclude that vegetable *débris* of various kinds, especially when of an aromatic pungent quality, may be considered, with pollen, an exciting cause. I did not find any grass-pollens, other than a few timothy-grains, on my slides at any time. This may have been due to the exceptionally dry character of the early part of the season. The day after a light frost I did not collect any perfect pollen on my slides, the grains being ruptured and spineless. Pollen collected from the plant at the same time preserved its form, but the spines were imperfect. Fresh pollen, exposed dry to an all-night severe freezing, with a salt-and-ice mixture, was blackened, somewhat changed in shape—wilted, as it were—and the spines destroyed. The same pollen, moistened and under the same circumstances, loses its identity, becoming mere masses of granular matter. The form was preserved in some, excepting that their peripheries showed a row of round granules instead of sharp spines. I conclude that pollen in a damp, freezing atmosphere is destroyed, and becomes innocuous so far as its physiological and mechanical capabilities of irritation are concerned. The plant is, of course, destroyed by hard frosts as well as by heavy rain-storms. No pollen or vegetable *débris* was deposited on the slides immediately after rains. Here, then, is probably seen the cause of relief experienced by sufferers after hard frosts and after rains.

A study of the peculiarities of certain localities reputed to give exemption from hay-fever attacks seems to show that the exemption is due partially to the favorable effect produced on the general nutrition of patients, as well as on the local parts, by change of scene; favoring conditions of altitude, amounts of atmospheric moisture, moderate degrees of heat, and general purity of the air. But diminution or entire absence of pollen and vegetable *débris* in the air breathed is the great peculiarity of exempt localities; and after all allowance is made for the nervous, local hyperæsthetic, and other elements, irritation or poisoning by plant-products is the great etiological factor that is pre-eminent in hay fever. The absence of pollen, etc., may be due to a variety of circumstances; *e.g.*, California is exempt because the long dry season is unfavorable to the production of pollen and other flowering products. Europe is exempt late in the season because these inimical weeds do not grow there that are so abundant in most parts of the United States. England has a favorable climate for the flowering of the grasses during early summer, while the reverse is the case with us, our hot, dry, and variable climate affording us comparative freedom from the exciting cause at that time. The White Mountain resorts owe their immunity to the facts that they are located in the centres of very large regions which produce little of the irritating plant-products, and also that they are situated in the lee of high hills, the windward slopes of which intercept and hold such irritants as fall from the higher atmospheric currents and which may have been borne from far-distant sources.

ABDOMINAL PRESSURE IN HYSTERIA.—Dr. A. M. Dokhman, in a note communicated to the *Russkaja Meditsina* on the arrest of hysterical paroxysms by pressure on the ovary, points out that the treatment is by no means new, as blows on the abdomen used to be administered by means of iron instruments in the Senmedarski epidemic, and were employed very largely by Goltz as early as 1727. He suggests that, although pressure is made over the region of the ovary, it does not appear that the ovary has much to do with the effect produced, for similar pressure is efficacious where no ovary exists—that is to say, in male patients. He is disposed to compare the effect to that produced by compression of the carotid artery, which will sometimes arrest a paroxysm, and he suggests that the sudden stimulation of the splanchnic nerves may produce an alteration in the vaso-motor relations, and in this way may cause the arrest of the paroxysm.—*The Lancet.*

VIGIER'S CORYZA POWDER.—This powder is composed of equal parts by weight of pulverized starch, boracic acid, and tincture of Siam benzoin. Care must be taken to see that the tincture of benzoin, and not the powdered gum, is used, as the former by its evaporation leaves a finer powder, that does not cake like the pulverized gum.

SUCCESSFUL LUMBAR COLOTOMY, WITH SPHINCTER FORMATION, IN A CASE OF CONGENITAL ABSENCE OF RECTUM AND ANUS.[1]

BY GEORGE E. BREWER, M.D.,
NEW YORK.

THE following case of congenital malformation, involving the rectum and anus, recently came under my observation.

Mrs. S——, of Block Island, R. I., was delivered, on July 5th, of a well-nourished and apparently healthy male child.

Fifty-two hours later, at the request of the attending physician, Dr. C. H. Hadley, I saw the child in consultation.

The mother stated at that time that, although the child had nursed almost constantly since its birth, there had been no discharge from the bowels; that during the past twelve hours there had been noticed a marked restlessness, a gradual distention of the abdomen, and a slowly increasing lividity of the skin. In reply to questions, she further stated that there had been no vomiting, and that the urine had been passed normally.

An examination of the perineal region showed not the slightest trace of an anus, the skin extending from the scrotum to the coccyx in an unbroken outline. There was, however, a slight thickening of the raphé midway between these two points. Pressure over the abdomen gave no visible or palpable impulse in the perineal region. An aspirating needle was introduced in several directions, with negative result.

I stated to the attending physician that, in my opinion, we had to do with a case of imperforate anus, but that the lower portion of the rectum could, in all probability, be found within the pelvic cavity; and advised an exploratory perineal operation on the following morning, with a view to finding the rectal pouch and, if practicable, to establish an outlet in the normal position; if in this we were unsuccessful, to open the colon in the left lumbar region. An exact statement of the child's condition, and of the nature of the operation, was made to the parents, who were left to decide the question of operative interference; and although the chances of recovery, in case the colotomy was found to be necessary, were roughly stated to be but one in ten, their decision was favorable, and they readily consented to any operation which would offer hope of saving the child's life.

On the following morning, therefore, assisted by the attending physician and Dr. Frederick H. Hoadley, of this city, I undertook, without an anæsthetic, the exploratory perineal operation. An incision was made in the raphé of the perineum from the base of the scrotum to the coccyx, and the various structures of the pelvic outlet divided layer by layer, care being taken not to wound the urethra or bladder, the exact position of the former being indicated by a previously-introduced gum-elastic bougie.

During the progress of this dissection frequent attempts were made to detect an impulse, caused by the crying of the child, or pressure made over the abdomen, which would indicate the presence of a blind rectal pouch. The result of these examinations was, however, always negative. After the perineal incision had been carried to a depth of nearly two inches, so that the thin layer of tissue separating the pelvic cavity from that of the abdomen moved freely with each respiration, an examination was made by each one present to determine, if possible, any sign which would indicate the presence of the blind extremity of the gut. The entirely negative result of this examination led me to abandon further search in this locality, to close the wound antiseptically, and to attempt to find the colon in the lumbar region.

The child was placed on the right side, and the left lumbar region exposed and made prominent by means of a folded sheet placed underneath. An oblique incision was made, three inches in length, parallel with the last rib and midway between it and the iliac crest. This included the skin, superficial fascia, and a thin layer of adipose tissue. The underlying structures were then carefully divided on a director until the transversalis fascia was reached. Through this could easily be distinguished the distended colon pressing against the outer border of the left kidney. The fascia was next divided and the kidney pushed aside, the colon then presented in the wound, and that portion which is free from peritoneum, lying between the two lateral longitudinal bands of muscular fibres, was easily transfixed with a needle and drawn to the external surface of the wound. Here the gut was united to the skin by two rows of sutures, three on each side. A longitudinal incision was then made into the bowel, midway between the two rows of sutures, and a large amount of meconium evacuated. The external wound was then closed to the border of the intestinal opening, and a dressing of absorbent iodoform gauze applied. It may be added that after the bowel had been opened, a probe was passed downward to determine the length of the blind extremity of the gut, which was found to be about two and a half inches.

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[1] Read by invitation before the Surgical Section of the New York Academy of Medicine, November 12, 1888.

The immediate effect of the operation was a marked relief from the abdominal distention and a noticeable change for the better in the color of the skin. As soon as the spontaneous discharge of meconium ceased, the child was placed in a previously warmed bed, and within ten minutes was sleeping quietly. An hour later he awoke, appeared hungry, was placed at the breast and nursed vigorously, after which he again slept quietly for several hours.

The operation was followed by only a slight reaction, the temperature on the second day reaching 101°. There was a slight redness and inflammatory induration about the lumbar wound, which subsided when the dry dressing was changed and a flaxseed poultice applied. The perineal incision healed by first intention, and the sutures were removed on the sixth day.

An interesting feature of the case was the prolapse of the opposite wall of the intestine through the incision. A tendency toward this was noted at the time of the operation, but was thought to be due to the great intra-abdominal distention. On the following day a nodule appeared at the orifice of the wound, which gradually increased until a T-shaped portion of inverted intestine lay on the external abdominal surface. At either end of the cross piece was an opening; the upper. connecting with the transverse colon, extended only about half an inch from the wound, while the lower, leading to the blind extremity of the bowel, extended from this point nearly two inches. Each of these openings was closed by the sphincter-like action of the double layer of circular muscular fibres present in the prolapsed portion. At first attempts were made to reduce this prolapse, until it was found that the muscular contraction at the upper orifice served to prevent a constant discharge of fæcal matter; and that, while ordinarily closed, it was easily overcome by contraction of the abdominal muscles. The prolapsed portion was therefore allowed to remain in place for eight weeks, to insure a firm union between the peritoneal surfaces; when the lower portion, connecting with the blind extremity, was ligated off, leaving only the upper opening connecting with the transverse colon. I was obliged to leave the island two days after this last operation, and have not since seen the patient. Dr. Hadley, however, informs me that the child is in excellent health, although another slight protrusion occurred after the strangulated portion had sloughed off.

From the day of the operation the child never presented an unfavorable symptom; it gained rapidly in weight, slept well, and was noticeably free from the ordinary stomach and bowel complaints occurring in children of that age.

The rarity of such malformations, and the rather more than ordinary success which attended the operation for relief in this instance, led me to careful study of such cases as presented by surgical authors. Regarding the frequency of congenital deformities about the rectum and anus, Cripps,[1] reviewing the statistics of a large number of observers, gives the average as 1 in every 4,500 births. Gay,[2] in an analysis of 104 cases of such malformation, notes entire absence of rectum and anus in eight cases, or about 8⅓ per cent.; while Bodenhamer,[3] in his tables, which include 285 such cases, refers to 28 in which the rectum was entirely absent, or about ten per cent. of the whole number.

If these statistics can be relied upon, cases similar to the one which I have reported may be expected once in something over 4,500 births.

In a discussion upon the etiology of imperforate bowel, Geraldès[4] calls attention to the fact that in early fœtal life the intestinal canal is blind, its lower portion communicating with the atlantois, which afterward enters into the formation of the bladder and urethra. At a later period of development this communication is shut off, and the rectal pouch descends to meet and become continuous with the anal depression. Arrest of development may result in absence or malformation of either rectum or anus, or of both combined, and may take place at a time before or after the separation of the intestinal from the genito-urinary tract has been effected. As a result, therefore, we may have many varieties of malformation, which have been classified by Curling as follows:

I. Simple stenosis of the anus.

II. Imperforate anus without deficiency of rectum.

III. Imperforate anus, the rectum being wholly or partly absent.

IV. The anus opens into a cul-de-sac, the rectum being partially absent.

V. Imperforate anus in the male, the rectum being partially deficient, communicates with the urethra or bladder.

VI. Imperforate anus in the female, the rectum being partially deficient, communicates with the vagina or uterus.

VII. Imperforate anus, the rectum being partially deficient, opening externally in an abnormal situation by a narrow outlet.

Regarding prognosis little need be said. It is evident that cases in which total obstruction is present lead speedily to a fatal termination, the only recorded exception to this being the case, cited by Cripps, of a child, aged thirteen, who obtained relief every three or four days by copious vomiting of fæcal matter.

The cases also in which relief is attempted by surgical interference show a death-rate far above that shown by cases where the cause of interference is other than a congenital malformation.

Cripps, in 1882, reported 100 cases where operations were undertaken for the relief of imperforate bowel. This list includes all the recognized operative procedures, *i.e.*, simple puncture, perineal incision, with or without excision of the coccyx, recto-vaginal fistula, inguinal and lumbar colotomy. Of his 100 cases, 50 resulted fatally. The highest death-rate occurred in cases where simple puncture was employed. Of the 17 cases so treated, 14, or eighty-two per cent., died. The lowest mortality occurred in those cases where relief was afforded by the establishment of a recto-vaginal fistula. This was reported in 14 cases, with but one death. The percentage of deaths following perineal incision was 36.0; following inguinal colotomy, 69.0; lumbar colotomy, 66⅔.

The advisability of further operative interference in cases where the establishment of an outlet in the perineal region is found to be impossible, has been seriously questioned by several surgeons. Bigelow,[1] in a discussion which followed the reading of Dr. Gay's paper, pronounces emphatically against it; and Gross, in his "System of Surgery," goes so far as to say that "he is struck with astonishment that anyone possessed of the proper feelings of humanity should seriously advocate a procedure so fraught with danger, and followed, if successful, by such disgusting consequences." Few surgeons, however, entertain such extreme views, and most are willing, especially if the parents desire it, to render in such cases what small measure of relief the resources of their art afford.

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[1] St. Bartholomew's Hospital Report, 1882.
[2] Boston Medical and Surgical Journal, 1858.
[3] Congenital Malformations of the Rectum, 1860.
[4] Nouveau Dictionnaire de Médecine et de Chirurgie.

Limiting the consideration of treatment to those cases in which the establishment of an artificial anus in the perineal region is impracticable, two methods of procedure present themselves for choice, namely, inguinal and lumbar colotomy. The idea of opening the colon at the sigmoid flexure and establishing a permanent outlet in the inguinal region, was first suggested by Littré in 1710. As his method involved an opening into the peritoneal cavity, the mortality resulting from this operation, before the days of aseptic surgery, was very great. Toward the close of the eighteenth century Callisen suggested the plan of tapping the colon in the left lumbar region, without opening the peritoneum. In three excellent memoirs upon the subject, Amussat reviews with unfavorable comment the twenty-one cases of Littré's operation performed up to that time, and recommends, with a slight modification, the operation of Callisen.

He reports four cases in which he operated, three of which were successful, and establishes, for a time at least, the superiority of the lumbar over the inguinal operation.

The reaction from this opinion began with the publication of Bodenhamer's exhaustive treatise upon the subject. This author, reviewing the histories of all the cases which he was able to collect up to that time, pronounces mildly in favor of the inguinal operation. Since that time writers have become gradually more emphatic in the expression of their views, until at present the weight of modern authority[2] is overwhelmingly in favor of the operation of Littré.

In determining which of two operations should be chosen to afford relief in a case of this kind, attention should be directed, first, to the difficulties attending each procedure; second, to the resulting inconvenience to the patient; and third, to the mortality, which can only be determined by an analysis of a large number of cases.

Regarding the first of these considerations, it may be fairly stated that, while neither method presents insurmountable difficulties, the inguinal is rather more simple than the lumbar. In either event the resulting inconvenience to the patient may be great, and neither operation offers any special advantage.

Concerning the question of mortality, we have no accurate data. Several attempts have been made to tabulate the cases with a view to determining this point, but the results have been incomplete, and the number of cases too small to furnish reliable information.

In reviewing the literature of the subject, including the tables of Amussat, Bodenhamer, Gay, and Cripps, I have been able to collect 73 cases, of which 56 were inguinal and 17 lumbar colotomy. Of the former, 21 were successful, while 35 died; of the latter, 8 recovered, and 9 died. The mortality in the cases where Littré's operation was employed was 62½ per cent.; in those where the operation of Amussat was made, fifty-three per cent.

While the number of cases is not sufficient to settle the question, it clearly shows that the advocates of Littré's operation in such cases have not, at least from a statistical point of view, established beyond controversy the superiority of their method.

Cases of Inguinal Colotomy for Imperforate Bowel.

Operator.	Reference.	Date.	Result.
Dubois	Amussat: Mémoire sur la possibilité d'établir un anus artificiel	1783	Death.
Duret	Amussat: Mémoire sur la possibilité d'établir un anus artificiel	1793	Recovery.
Dessault	Journal de Chir., iv., p. 248	1794	Death.
Degranges	Annales de la Société de Méd. de Montpellier, vi	1800	Recovery.
Voisin	Amussat: Mémoire	1802	Death.
Surgeon of Lyons	Thesis de Serrand, 1814	1813	Recovery.
Surgeon of Brest	" " "	1813	Death.
Legris	" " "	1813	Death.
Serrand	" " "	1814	Recovery.
Frier	London Med. Phys. Journal, 1821	1815	Death.
Miriel	Thesis de Miriel fils, 1835	1816	Recovery.
Ouvard	" " "	1820	Death.
Miriel	" " "	1822	Recovery.
Textur		1826	Death.
Miriel	Thesis de Miriel fils, 1835	1827	Recovery.
Bizet	" " "	1830	Death.
Bizet	" " "	1830	Death.
Klerig	Gazette Med., Berlin, 1835	1835	Recovery.
Roux		1839	Death.
Danzel		1846	Death.
Nélaton	Gay: Boston Med. and Surg. Jour., 1857.	1854	Death.
Lenoin		1858	Death.
Johnson	Lancet, 1860, i., 243	1860	Death.
Humphreys	Boston Med. and Surg. Jour., 1864, i., 230.	1864	Death.
Dente	Bull. Soc. Anat., Series 2, vol. xviii.	....	Death.
Campenon	" " " 1871, p. 276	1871	Death.
Clutton	Lancet, 1877, ii., 311	1877	Death.
Goède	Journal of Medicine and Surgery, 1878	1878	Recovery.
Simons	Trans. South Carolina Medical Ass., 1878	1878	Recovery.
Clutton	Lancet, vol. ii., 1887	1879	Death.
Charion	Bull. Soc. Chir., Paris, vol. iii., Series 2	....	Death.
Bryant	British Medical Journal, 1863	....	Death.
Marjolin	Bull. Soc. Chirurg., Paris, vol. iii., Series 2	....	Death.
Giraldès	Bull. Soc. Anat., 1862	....	Death.
Willett	Pathological Transactions, London, xxxi.	....	Death.
Owen	Hareian Lectures	..	Death.
"	" "	....	Death.
"	" "	....	Death.
"	" "	....	Recovery.
"	" "	....	Recovery.
Pooley	American Journal of Obstetrics, 3, xlix.	....	Recovery.
Warren	Boston Medical and Surgical Journal, 1883	1883	Death.
Campbell	Trans. W. Lond. Medico-Chir. Soc.	1884	Recovery.
Tuckerman	Columbus Medical Journal, 1885	1885	Death.
Redwood	British Medical Journal, 1886	1886	Death.
Hashimoto	Archiv Klin. Chir., xxxii.	....	Recovery.
"	" " " "	....	Recovery.
"	" " " "	....	Recovery.
"	" " " "	....	Death.
Moullin	Lancet, 1885	....	Recovery.
Stott	Lancet, 1886	1886	Recovery.
Weinlechner	Aertz. Bericht d. K. Kally Krank	1886	Recovery.
Robson	Medical Press and Circular, 1887	1887	Recovery.
Pitts	Lancet, 1885	....	Death.
Stretton	Lancet, 1888	1888	Death.
Goodman	Medical Register, 1888	....	Death.

Whole Number	56
Recoveries	21
Deaths	35
Mortality	62½ per cent.

Cases of Lumbar Colotomy for Imperforate Bowel.

Operator.	Reference.	Date.	Result.
Dupuytren	Leçons orales de clin. chirurgicale, iii.	1818	Death.
Bougon	Amussat: Troisième Mémoire	1828	Death.
Amussat	Amussat: Troisième Mémoire	1842	Recovery.
Amussat	" " "	1842	Death.
Amussat	" " "	1843	Recovery.
Baudelocque		1848	Recovery.
Guersant		1855	Death.
Erichsen	British Medical Journal, 1860	1864	Death.
Duncalfe	" " " "	1873	Death.
Baker	" " " 1879	1879	Recovery.
Farland	" " " "	1879	Death.
Byrd	St. Louis Medical Courier, 1881	1881	Recovery.
Wier	Medical Gazette, 1882	1882	Death.
Fowler	Medical Record, 143	1883	Recovery.
Barkwell	Lancet, 1886	1886	Recovery.
Power	Transactions Pathological Soc., Lond., 1887	1887	Death.
Brewer		1888	Recovery.

Whole Number of Cases	17
Recoveries	8
Deaths	9
Percentage of Deaths	53 + per cent.

RHIGOLENE FOR MUSCULAR SPASM.—In a case of spasmodic contraction of the left trapezius muscle, in which the circle of ordinary remedies had been tried in vain, Sinkler used the rhigolene spray. In two weeks most marked improvement was noticed. Weir Mitchell has used this treatment successfully for spasm of the facial muscle. Be careful not to apply the spray too long, as an ulcer has followed three-quarters of a minute's spray.—*Medical Times.*

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[1] Boston Medical and Surgical Journal, 1858.

[2] Giraldès, Allingham, Kelsey, Cripps, Pooley, and others.

A CASE OF SCIATICA TREATED WITH LARGE DOSES OF ANTIFEBRIN.

By AUSTIN FLINT, M.D., LL.D.,

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M. G——, aged twenty-five, laborer, was admitted to Ward 19, Bellevue Hospital, August 14, 1888. The family history was negative. As regards the previous history there is nothing special to note until about a year ago, when the patient had pain, with soreness and tenderness, at the back of the right thigh, extending as far as the knee. This became so severe that he was compelled to keep the bed for two or three weeks. Under treatment at that time he improved, but has not been entirely free from pain since.

For the past three weeks the pain has been so severe that the patient has been confined to the bed most of the time. He has been treated with blisters, iodine, and a variety of internal remedies. Electricity had been tried before his admission to the hospital, but this gave on relief.

August 16, 1888.—The right leg was buried in flowers of sulphur for thirty-six hours. The patient said the pain was "perhaps a little better" after this application.

August 18th.—Sulphur was again applied for forty-eight hours, but without relief. At the end of that time the urine had a distinct odor of hydrogen monosulphide.

August 25th.—The patient was brought under the influence of ether, and the nerve was stretched by forced flexion of the thigh. This gave no relief.

August 26th.—I requested Dr. Rutson Maury, the house-physician, to administer antifebrin in as large doses as could be borne, watching the patient carefully. This treatment was carried out even more vigorously than I had expected. At 11 A.M., Dr. Maury gave twenty grains of antifebrin; at 1 P.M., fifteen grains, and at 3 P.M., fifteen grains, making in all fifty grains within four hours. The patient became somewhat cyanotic, and a half-ounce of whiskey was given with the last dose.

August 27th.—The pain was nearly, but not entirely, relieved, and the antifebrin was given again in the following doses: 10 A.M., twenty grains; 12 M., twenty grains, making forty grains within two hours. It was not necessary to give whiskey.

August 28th.—The pain was completely relieved, and the patient walked about the ward without difficulty. The large doses of antifebrin taken on August 26th and 27th had no unpleasant effects, and the patient expressed himself as feeling perfectly well, absolutely free from pain, and able to move about as he did a year ago, before he was first attacked.

August 31st.—The patient was discharged. He insisted on leaving the hospital to go to work. He promised, however, to report himself in case the pain should return. At the date of writing (November 12, 1888) no report from the patient has been received.

The treatment with flowers of sulphur was tried in accordance with a suggestion quoted from Guéneau de Mussey, in the *Therapeutic Gazette*, April 16, 1888, page 276. This suggestion was followed out efficiently. The parts were covered with flowers of sulphur spread upon a cloth, and the characteristic odor of hydrogen monosulphide was recognized in the urine after the second application.

Guéneau de Mussey recommended that the application be continued for twenty-four hours. I have since learned that this treatment had already been tried in the hospital, but without satisfactory results.

In the treatment that was finally successful, I intended to push the antifebrin to the extreme limit of safety, which, apparently was done, and certainly, in this case, with entirely satisfactory results, although it was thought necessary to administer these large doses carefully, and to watch the patient very closely.

Clinical Department.

MALARIA IN A DOG.

By THOMAS DARLINGTON, M.D.,

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So much has been written and said of late in regard to diseases that animals have in common with man, that I thought the following case might be of interest to some of the profession.

Recently I was asked to see a dog, belonging to a lady in a family that I usually attend, and found the following history of symptoms:

On Tuesday he was taken, while in the house in the sitting-room, with a violent shaking. After this passed off, he seemed very hot; and toward morning was wet with sweat. During that day he seemed somewhat listless and indifferent to tramps, etc., in which he had previously taken a decided interest.

The following day, at 6 P.M., the previous symptoms of shaking, heat, and sweating were repeated, and again on Saturday, and also on Monday he was taken in the same manner; each time one hour sooner.

I did not use the thermometer, as I am not familiar with the normal temperature of dogs. On the following day—Tuesday—I ordered for him sixteen grains of quinine, four grains every three hours, which he took and retained. The next day there was no return of the fever; but for several days he seemed listless and did not have his customary vigor. So I ordered Fowler's solution, four drops, t.i.d., and within a week he was all right again.

November 19, 1888.

ACTION OF SULPHATE OF SPARTEINE.—Professor Levascheff has completed an experimental study on the action of sparteine, from which he concludes (*The Therapeutic Gazette*) that the sulphate of sparteine has incontestably the property of reinforcing and regulating the contractions of a feeble or arhythmic heart, while at the same time slowing the pulse if that should be accelerated. Sparteine increases the blood-pressure, and causes the disappearance of symptoms of blood stasis and œdema, thus acting favorably on diuresis. The respiratory movements, under the influence of this remedy, become slower and more regular. Clinical studies have not yet determined a diuretic action for sparteine, and it is not yet known as to whether it possesses any direct action on the renal epithelium. Sparteine is less active than the other cardiac tonics—digitalis, adonis, and strophanthus. In inveterate cases, where the heart-muscle shows symptoms of degeneration, or where œdema is very excessive, sparteine is without effect, even although the other cardiac remedies may act in a more or less favorable manner. Sparteine is indicated in recent cardiac affections, when compensation is but little disturbed, and when the degeneration of the cardiac muscle is inconsiderable. Sulphate of sparteine has a decided and yet not transient action on the heart, but this action is too feeble to produce well-pronounced therapeutic effects. Sparteine acts very rapidly, fifteen minutes being sufficient to produce its characteristic action. Thanks to this rapidity of action sparteine has a certain value in cases of acute enfeeblement of the action of the heart, as is often observed in different infectious diseases. Small quantities of sparteine (three-fourth of a grain daily) produced a therapeutic effect, but pronounced and constant action is not procured with doses smaller than from two to five grains daily. Larger doses do not produce more marked effects. The daily dose of sulphate of sparteine should be from three-fourths of a grain to five grains, taken in three or four doses. The inconveniences of sparteine are irritation of the mucous membrane of the intestine, and, as a consequence, diarrhœa, vomiting, and nausea.

Progress of Medical Science.

Engorgement of the Spleen in Pneumonia.—According to the Berlin correspondent of the *Medical and Surgical Reporter*, Professor Gerhardt, of Berlin, has published a study on the engorgement of the spleen in pneumonia. He examined twenty-five cases for the above purpose, and found that in seven cases there was no swelling of the spleen; in six the engorgement was noticeable only in the early phases of the affection, while in ten cases the splenic tumefaction lasted throughout the course of the fever. The important point of the study is, of course, Gerhardt's conclusion regarding the pathogenesis of this symptom. He believes that the actual cause of the engorgement of the spleen in pneumonia does not depend upon febrile processes, nor upon microorganisms, but upon an aggregation of broken-down red and white blood-cells in the spleen—a view that is confirmed by certain other appearances in the affection, such as peptonuria and grass-green stools.

Aneurisms and Tubercle Bacillus.—In a paper read before the Academy of Medicine, M. Germain Sée stated that he had been struck by the fact, especially since the discovery of the tubercle bacillus, that patients suffering from aneurism of the aorta often become tubercular, and die of pulmonary phthisis, attended with the formation of cavities, and progressing slowly without fever. This had been observed by Stokes, and numerous instances can be found in the records of pathological societies. Out of twenty-four cases of aneurism under his own care, seven were thus affected with pulmonary tuberculosis. It is now well known that patients with cardiac affections are not exempt from phthisis. M. C. Paul has demonstrated the frequent occurrence of phthisis in cases of narrowing of the pulmonary artery. Aortic aneurism must now be considered one of the agents favoring the development of the tubercle bacillus. In aneurism, from the disturbance of the circulation, there is a stagnation of the venous blood, and diminished activity of the gaseous exchanges between the gases of the blood and those of the atmosphere. In this internal gaseous medium (in the alveoli of the lungs and smallest air-passages) the bacillus appears to multiply when it enters the body by the respiratory tract. In aneurism the air is imperfectly renewed in the whole of the lungs, just as in normal conditions it is imperfectly renewed in the apices as compared with the rest of the lungs. In short, excess of oxygen hinders, deficiency favors, the development of the bacillus. In this way the multiplication of the bacillus is accounted for; the way in which it penetrates into the pulmonary parenchyma in patients of all ages who are affected with aortic aneurism, remains to be shown. Lately it has been found that ulcerative endocarditis, or even simple endocarditis, with vegetations, is caused by a staphylococcus; rarely by a streptococcus; more rarely still by the tubercle bacillus. The analogies between endocarditis and endarteritis allow us to suppose the existence of an endarteritis, due to the presence of a microbe. Are the lesions that affect the internal and middle coats of an artery which has undergone aneurismal dilatation, caused by a bacillus? If this question is answered in the affirmative, one can easily explain how the bacillus is washed away from its position in the aneurismal wall to the lung, and there multiplies. In the treatment of aneurism, M. G. Sée relies on iodide of potassium; its mode of action he explains as follows: 1. It relieves the dyspnœa due to catarrhal affections of the bronchial tubes by liquefying the effused secretions. 2. It aids the intra-pulmonary circulation, and diminishes venous stagnation. 3. The volume of the aneurismal tumor is diminished by contraction of the adventitious coat and the tissues surrounding it. 4. By reducing the size of the tumor, the pressure on the adjacent nerves is relieved, and pain therefore mitigated. M. G. Sée gives the iodide in the amount of thirty grains daily, divided into three doses, to be taken at the beginning of a meal. For the relief of pain he has found subcutaneous injections of antipyrin most efficient. When a cardio-vascular tonic is required, he has obtained good results from sulphate of sparteine, and rejects altogether caffeine and digitalis.—*The Bristol Medico-Chirurgical Journal.*

Pyridine.—M. de Renzy has come to the following conclusions about pyridine: Internally administered, in doses of from 6 to 10 drops in water, it is well borne; it increases the strength of the cardiac contractions and diminishes the sensations of anxiety and oppression; it diminishes the number of cardiac pulsations and also the respirations; the blood-pressure is raised. Pyridine has regulated an irregular pulse. It is very valuable in angina pectoris and in cases of cardiac failure.

Phlogogen Secreted by Germs.—M. Arloing has made observations on a phlogogenic matter secreted by certain microbes, especially those of contagious peri-pneumonia cultivated on bouillon of sterilized beef and on potato. (*The Lancet.*) In cultures on gelatine at 113° F. this microbe secretes a substance which, injected into the connective tissue, excites inflammation and fever, often followed by death. In the exudation this phlogogen is found again in abundance. The liquid has the appearance of a citrine-like serosity, and, treated with absolute alcohol, gives a white clot-like precipitate which is easily redissolved in water. Obtained in a state of purity, it presents a yellowish aspect in the dry state, and a viscous consistence if still liquid. The chemical characters of this substance are similar to those of the diastatic ferment, pepsin. In contact with cane-sugar, it gives a precipitate with the cupro-potassic solution. Animals do not secure protection by injections of this phlogogen, since the same series of events occur in the same animal, no matter how many times the material may be injected. But some animals—*e.g.*, rabbits and guinea-pigs—enjoy a specific immunity from its effects.

The Development of the Fœtus.—Dr. La Torre has published his views on this question. His conclusions differ in many respects from those of previous observers. He believes greatly in the influence of the father's health and strength on the development of the child. He maintains that the sex of the fœtus has no influence on the development of the fœtus itself. The height, weight, and health of the mother do not, according to Dr. La Torre, influence the growth of her offspring. In respect to the health of the father, it is his height, breadth of shoulders, and cranial development which chiefly influence the development of the fœtus. When the father is in ill-health, locally or generally, the fœtus is much affected, especially in weight. Dr. La Torre declares that the sex of the fœtus depends greatly on the health and strength of the father; healthy fathers begetting more sons than daughters; sickly fathers more daughters than sons. He insists that multiparity alone does not exercise on the development of the fœtus an influence sufficiently marked to justify the clinical importance hitherto attributed to it. If there be any influence at all, it disappears entirely before the hereditary influence of a sickly father. When the father is healthy, the most favorable age of the mother for the development of the fœtus is from twenty-five to thirty-four; but, when the father is sickly, the age of the mother has no influence on fœtal development. The length of the fœtus is more in relation to its weight, and less in relation to the age of the mother, than is generally supposed, especially by those who rely on Dr. Duncan's statistics.—*The British Medical Journal.*

Atrophy of the Inactive Mammary Gland.—Throughout the Swabian Bavarian tableland the rate of infant mortality is very high, chiefly on account of the almost universal practice among peasant women of bringing up children by hand. Dr. Altmann has discussed this subject in an inaugural thesis. He finds that the custom arises from the deficient secreting power of the mammary glands of the mothers. He carefully examined the glands of thirty Bavarian women, between fourteen and fifty years of age, noting the weight of each gland, with and without fat, and the character of the glandular tissue, and its relation to the connective tissue around. He compared the specimens with four pairs of glands from Silesian women, who, almost invariably, suckle their own children. According to Hennig's researches, the weight of the mamma should range from 160 to 556 grammes (454 grammes = 1 lb. avoirdupois). Out of 29 mammæ from Bavarians only 8 exceeded 100 grammes, but it is known that the smallest breasts in healthy women are the best for suckling. On examining the mammary tissue from Bavarian nulliparæ and mothers who had never suckled, and comparing the samples with sections from Silesian nulliparæ and sucklers, Dr. Altmann found marked elements of difference. In the Bavarian specimens the ducts were scanty and the acini ill-developed; the connective tissue abundant and dense; in the sections from the mammæ of Silesians the glandular tissue was well developed, with a plentiful vascular supply, and the connective tissue loose and relatively scanty. Dr. Altmann traces the atrophic condition of the mammæ in Bavarians to the disuse of the gland, owing to the custom of rearing children by hand, which has prevailed for many generations. The atrophy has become hereditary. No doubt a far larger series should be examined in order to prove the accuracy of the above researches.—*The British Medical Journal*, October 6, 1888.

Large Congenital Ovarian Tumor.—Mr. Alban Doran, at a late meeting of the Pathological Society of London (*The British Medical Journal*, October 20, 1888), exhibited a pair of ovarian tumors, removed after death from an infant, which survived its birth but a few minutes. Mr. C. Hooper, of Aylesbury, who attended the case, reported that the infant's abdomen was distended with ascitic fluid and the superficial veins were engorged, as in malignant tumors of the ovary in the adult. Each tumor looked like a cystic kidney when fresh, and consisted of a single cystic cavity surrounded by a thin wall composed of a highly reticulated tissue. The trabeculæ, which traversed this tissue in all directions, were composed of collections of round cells in a transparent matrix, an arrangement recalling the structure of the inter-follicular tissue of the ovary in the earlier stage of fœtal life than that which this patient had attained. The growth appeared to represent persistence and hyperplasia of the entire embryonic tissue of the parenchyma of the ovary rather than round-celled sarcoma, which, even when congenital, was in every respect of a different character, as proved by a recent case described by Dr. John Phillips. Graafian follicles were found in the substance of the tumor, which, therefore, originated in the ovarian parenchyma and not in the hilum, but the tumor was clearly of extra-follicular origin. The cavities and the large central cyst appeared to be the result of breaking down of the tumor substance; they bore no epithelial lining. The tumors thus bore no resemblance to the common multilocular ovarian cyst.

The Weakening of Virulent Bacteria and Acquired Immunity.—A series of articles on this topic have recently appeared in the *Zeitschrift für Hygiene*. The introductory article by Flügge is an attempt to place the processes of weakening and immunity on a scientific basis, and it is owing to his labors, and, in fact, under his direction and advice, that other work in the same direction, that finds its memorial in the same number, has been carried on. Dr. Smirnow, of St. Petersburg, one of the co-workers under Flügge, discovered that not only was there a loss of a specific quality, but an actual general degeneration of the excitors of disease, which found expression in a diminished power of resistance against injurious influences. In general the susceptibility to the action of disinfectants rose in proportion to the degree of weakening, *i.e.*, the highest degree of virulence was associated with the highest resisting power against disinfectants.

Dr. Sirotinin, also of St. Petersburg, directed his attention more particularly to the part played by the products of tissue changes of bacteria in arrest of their development and the so-called retention hypothesis. The view is very widely extended that recovery from infective diseases and immunity against recurrences are due to the products of the tissue changes of the bacteria themselves, that the tissue changes of the schizomycetes cause their own death, and that they are at the same time a certain degree of protection against reinfection. His researches in elucidation of the question demonstrated that *outside* the organism free acids, excess of alkali, and carbonic acid cannot be retained for long in the living body. He found no support for the retention hypothesis, and concluded that within the living organism bacteria formed quite different products of tissue change from what they do outside the body.

Bitter, of Breslau, took up the next stages of the question: What are the products of tissue change produced by bacteria within the system? and is the continued development of bacteria, after invasion has once taken place, arrested by failure of nutrient supplies? As regards common forms of disease, anthrax, swine fever, and fowl cholera, he was able to give the definite answer that these diseases do not die out from exhaustion of the nutrient fluids. For those diseases that leave immunity against further attacks behind them, the exhaustion hypothesis was absolutely without support. As likely to throw light on the *modus operandi* of immunity from preventive vaccination, the same worker, Dr. Bitter, has studied the immediate changes set up by vaccination, the special points of interest being, where and to what extent the weakened inoculated bacteria develop, what temporary and permanent changes they set up at the point of insertion or throughout the whole body, whether the protection is absolute or conditional, whether the choice of points of entrance and the number of them are of importance. He has limited his inquiries to splenic fever, and by concentrating his powers has made some little advance. He at first ascertained that the development of weakened anthrax bacilli in the body of the sheep was very limited, extending very little beyond the region of the point of inoculation. Their absence from the organs and blood, which was determined with certainty, was in favor of neither the retention nor the exhaustion hypothesis. The animals thus experimented on showed, by-the-by, that they were completely protected.

The two next articles relate to the so-called phagocytes of Metschnikoff, and the supposed germicidal influence of the animal system. The phagocyte theory has met with a considerable amount of favor. This, shortly stated, is that the white blood and other meso-dermal cells devour and digest pathogenic bacteria entering the body. As some bacteriologists, notably Baumgarten and Weigert, have raised objections to this, it became of importance to determine the preliminary question: Do phagocytes digest bacilli, and are they the only tissues that do? If a portion of the bacilli that enter the system die off or are destroyed before coming into contact with the phagocytes, not only is the importance of the latter rendered doubtful, but the assumption is not remote that they destroy only degenerated bacilli, that they are only "crematories," as it were. The researches showed that the leucocytes took in and devoured "large quantities" of splenic fever bacilli; but, on the other hand, quite as many, if not more, became completely degenerated outside the phagocytes. This fact, which was determined with certainty both on frogs and warm-blooded animals, led to the assumption that the moment inimical to the bacilli was really to be sought in the fluid around the cells. This assumption rises in probability from the fact further ascertained that in fluids poor in leucocytes, such as the fluid from the pericardium and the aqueous humor, degeneration of the bacilli rapidly sets in. It still remains to be seen what the agent destructive of bacilli is.—*The Medical Press.*

Sixty Cases of Cerebral Paralysis in Children.—These patients were observed by Dr. Lovett during a period of four years. Twenty-six of them were cases of hemiplegia—half of the right side and half of the left. The ages ranged from eighteen months to fourteen years, and the sexes were about evenly distributed. About two-thirds of them were of the simple adult type, but the remainder combined with the hemiplegia a more or less advanced spastic paralysis of both legs. When the disease had lasted some time there was some bone shortening in addition to the muscular atrophy. One case showed a shortening of two inches in the length of the arm after a paralysis of seven years' standing, and three others showed a shortening of one inch. The muscular atrophy was comparatively slight, and nothing like so marked as in infantile spinal paralysis. The arm was in all cases affected more severely than the leg. Facial paralysis had been present in at least half the cases, and strabismus existed at the time of observation in more than half. Athetosis was noted in only two cases, but the intellect was so much affected that only six could be accounted of average intelligence, and seven were idiotic. Aphasia was present in four cases of left, and in three of right, hemiplegia. With a view to discovering the cause of the paralysis, the mothers were questioned as to the severity of the labor. In eight, the labor had been normal; in four, "very hard;" in seven, instruments were used—two of these still showing a depression in the skull on the side opposite the paralysis; and in the remainder no information could be obtained upon this point. Of the twelve cases of spastic paralysis mentioned later on, nine were born after an easy labor. Of the twenty-six hemiplegia cases, seven were noted immediately after birth, five in the first year, and twelve in the second year. One only followed upon any of the exanthemata—diphtheria. Sixteen of the sixty cases were the subjects of bilateral spastic paralysis, in addition to the seven described above, where it complicated hemiplegia. The ages ranged from two to twelve years. In eight it was noticed immediately after birth, in one of the others it ensued upon a fall of thirty-six feet, in two it followed upon "slow fever," and in the remainder no information was forthcoming. The intellect was very greatly affected, six being low-grade idiots, three very stupid, two backward and mischievous, and one apparently bright, though the mother said the child had "no sense;" in four cases the notes were defective. Seven were completely aphasic. Twelve were unable to walk—five of these having the cross-legged deformity due to spasm of the adductors. In seven, the hands were also impaired. Strabismus was noted nine times. Knee-jerk was increased in all, and ankle-clonus was elicited in a few. The palate was high in a small proportion of the cases. The remaining eighteen cases were not susceptible of much classification; nearly all were idiotic.—*The Boston Medical and Surgical Journal.*

The Contagion of Measles.—Dr. Ollivier states that it is wrong not to isolate children affected with measles before the eruption appears. The disease is contagious from the moment of onset, which is usually four or five days before the appearance of the eruption, and may be recognized by certain symptoms. If the little patients were isolated as soon as these symptoms are observed the chances of contagion would be considerably diminished. In all doubtful cases he advises isolation for a few days.

Antipyrin Rashes.—Dr. Claremont has described two cases of enteric fever treated by antipyrin, in which an exanthem due to the drug was observed. They are recorded in *The British Medical Journal*, of October 27, 1888. In the first case ten doses of fifteen grains had been given in the course of ten days when the eruption appeared. It came out simultaneously on the abdomen, thorax, back, and limbs, in the form of papules, darker, larger, and more solid than the spots of enteric fever. There was a considerable resemblance to measles. The eruption developed into enormous erythematous blotches, with much infiltration, their vivid red color being removed by pressure, leaving faint yellow pigmentary discoloration. The rash began to subside on the sixth day, and on the tenth day was only represented by faint coppery maculæ, resembling an old syphilitic eruption. Antipyrin was omitted on the appearance of the eruption. In the second case the drug had been given in 15-grain doses, generally twice a day, and omitted altogether for four days. The enteric exanthem had been unusually copious. On the twentieth day of the exhibition of the drug there was a papular erythematous rash on the extensor surfaces of the arms; this spread to the flexor surfaces, and also affected the calves. The antipyrin was omitted. On the fourth day the rash had almost gone, leaving only slight redness and desquamation. The patient had a relapse of fever, and was again treated with antipyrin without suffering from a return of the eruption. Dr. Claremont states that antipyrin rash generally is of the papulo-erythematous type, and begins on the extensor surfaces of the elbows and knees. It had been described in one case as commencing on the face, and in another as extending to the mucous membranes. Once vesicles had been present. Its most constant characters were its bilateral symmetry and its duration of about five days, irrespective of the continuance or withdrawal of the drug. The entire absence of subjective symptoms was exceptional. A scarlatiniform rash had been mentioned, but Dr. Claremont had been unable to ascertain that it was more than a transient flushing, such as is produced by belladonna.

Resorcin in the Treatment of Keloid.—Dr. Audeer has observed a case in which the application of resorcin was of great service in the treatment of keloid. The patient was a woman, whose right foot was curved over two-thirds of the dorsum, with an irregular star-shaped mass of scarry, raised tissue. It was very tender, so that walking was impeded. At night when in bed, and at changes of weather, the pain of the keloid was almost unbearable, so that at times the patient could not do her housework. A one-per-cent. ointment of resorcin was applied, and the foot bandaged. The patient was soon relieved, and the continued application of the treatment brought about a permanent cure of the pain.

Spontaneous Gangrene of Scrotum and Sheath of Penis.—Dr. Oltramare, of Geneva, describes a case of idiopathic sloughing (*gangrène foudroyante*) of the scrotum and sheath of the penis occurring in a merchant, aged thirty-seven. He was a robust man, enjoying excellent general health in spite of habitual alcoholic excesses. One evening, having imbibed a considerable quantity of spirits, the gentleman returned home with complaints about general lassitude, drowsiness, and severe lumbar pain. In the course of a sleepless night his attention was drawn to his penis, which was tumefied, hot, and tender. The next morning his wife discovered a brown violet patch on the dorsal aspect of the sheath of his penis. Forty-eight hours after the first symptoms, Dr. Oltramare found the man's penis greatly swollen, the scrotum being as large as a fœtal head; the gangrenous process of the penis' sheath reached backward nearly to the root, while the scrotal integuments were only highly congested and tender. The glans, urethra, and testicles were normal. On the third day of the disease there appeared a violet patch about the scrotal raphe, which in the course of the fourth and fifth days gradually spread over three-quarters of the scrotum. From the sixth day the dead portion of the integuments commenced to rapidly fall off in the shape of large flocks and strips, leaving a red, rough, suppurating, and easily-bleeding surface. It became now obvious that the sloughing process had been limited to the skin and subcutaneous cellular tissue. Cicatrization set in, and about the forty-fifth day the patient could go out.—*Revue Médicale de la Suisse Romaden.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, December 1, 1888.

THE CONTAGIOUSNESS OF PHTHISIS.

THE question of the contagiousness of pulmonary phthisis is one that has been debated for centuries, and even now is not regarded, by all whose opinions are worthy of consideration, as actually closed. The discovery of the tubercle bacillus, or sclerothrix, as Metschnikoff prefers to call it, and of its relation to the pathological processes of this disease, seemed to offer at once a solution of the problem, and to establish beyond question its contagiousness. Yet there are not wanting those who question the fact, notwithstanding. These say that the germs of the disease are floating everywhere in the atmosphere, and if the affection were contagious a much larger proportion of the population even than is now affected should be tuberculous. They instance, also, the commonly observed fact that the attendants and other patients in large hospitals, where many phthisical patients are collected together, seldom themselves contract the disease.

Those who hold to this view, however, overlook the fact, which is characteristic of contagious diseases, that a nation gradually acquires a certain degree of immunity, so that the individuals become less susceptible to the action of the organic poison, the soil, as it were, becoming exhausted from the too persistent cultivation without any rotation of the crops. It is among a new people, in a virgin soil, that the contagiousness of a disease is most apparent.

In a thoughtful paper on this subject, read before the Medical Society of the State of Pennsylvania in 1888, Dr. Lawrence F. Flick, of Philadelphia, dwells upon this very point and brings it forward as one of the arguments in support of the theory of the contagiousness of phthisis. The history of the disease in all new countries, he says, shows that it has in them a rise, a climax, and a decline in prevalency. In New York City the mortality from consumption fell from 1 in 4.2, in 1804, to 1 in 8.46 in 1859. A similar decline is seen in all the older localities in this country. Among the negroes the mortality was formerly very great, but it is now diminishing. Consumption was unknown among the American Indians prior to the settlement of the country by the white man, and for some time after it was a rare disease among them. But when it once obtained a foothold it spread very rapidly, as many as half the deaths among some tribes being attributed to it.

Another characteristic of contagious diseases, not without some exceptions, however, to which Dr. Flick refers, and which he says is very noticeable in phthisis, is that they will not tolerate the active presence of any other contagious disease. As regards comsumption, the author asserts that he has not been able to find a single authenticated case in which any contagious disease existed in a person suffering from well-marked and advanced phthisis. He made numerous inquiries concerning this point, and obtained negative replies in every case but one. This one was from Dr. Seaman, of the Riverside Hospital of this city, who wrote that he had seen deaths from small-pox, measles, scarlet fever, and diphtheria in persons suffering at the time from phthisis.

Still another fact adduced in support of the contagiousness of the disease is, that in many places which were formerly looked upon as health-resorts for consumptives, the disease is now prevalent so that they have lost their reputation and are even shunned. Dr. Flick mentions Santa Rosa, in California, as one of these places. In the early part of the eighteenth century even New York City was regarded as an excellent place of residence for those suffering from commencing phthisis, and the absence of the disease was attributed to the delightful climate. The author explains this deterioration of health-resorts by the influx of phthisical patients bringing the contagion with them.

Dr. Flick brings forward a number of additional arguments in support of this view, all of which are more or less weighty, but we cannot quote them here and must refer doubters of the theory to the original paper. It is a curious fact that the opposing theories concerning the contagiousness of the disease have had a geographical distribution in Europe for many years, the southern nations holding to the affirmative, while the northern ones, England especially, have vehemently denied this character.

THE URIC-ACID DIATHESIS.

SOME months ago Dr. Burney Yeo, in an article on the therapeutics of the uric-acid diathesis, drew up a table of the principal morbid conditions depending upon, or associated with, this condition. The table is so complete and conveniently arranged that we believe our readers will be glad to have it recorded for their convenience here.

Arthritic Affections.

Acute uritic arthritis (acute gout).

Chronic uritic arthritis	Anchyloses, Deformities. Uratic deposits (tophi).

Gastro-intestinal Affections.

Dysphagia from œsophageal spasm.

Dyspepsias...........	Cardialgia, or Gastrodynia (heartburn), Pyrosis, Enterodynia.

Circulatory Affections.

Palpitation of the heart and large vessels, irregular cardiac action, angina, chronic arteritis (aneurism), and phlebitis (embolism).

Respiratory Affections.

Laryngo-pharyngeal catarrh, bronchitis, asthma, and pleuritis (dry).

Renal and Urinary Affections.

Chronic interstitial nephritis.
"Primary renal gout" (uratic deposits in kidneys, and absence of arthritis).
Uratic gravel and calculi (renal and vesical), oxalate of lime.
Cystitis and irritable bladder.
Prostatitis.

Nerve Affections.

Neuralgias	Of various nerves, Lumbago, Sciatica.

Headaches (hemicrania), cramps of muscles, hysteria, and hypochondriasis, (epilepsy ?).

Organs of Sense.

Ophthalmia, conjunctivitis ("hot eye"), iritis, etc., and otitis (deafness).

Cutaneous Affections.

Eczema, psoriasis, prurigo (anal and vulvar), and acne.

PRINCIPAL PROPOSED REMEDIES FOR AFFECTIONS CONNECTED WITH THE URIC-ACID DIATHESIS.

Diet and Regimen Drugs.

Colchicum, salicylates, benzoates, guaiacum, iodide of potassium, arsenic, and sulphur.

Alkalies and Alkaline Earths.

Salts of potassium, sodium, lithium, ammonium, calcium, and magnesium.

Various Local Applications to Affected Joints.

Mineral Waters and Baths.	*a.* Alkaline (bicarb. of soda) for example, Vichy. *b.* Alkaline and aperient (carbonate and sulphate of soda), Carlsbad. *c.* Chloride of sodium, Wiesbaden, Homburg. *d.* Lime (earthy) waters, Contrexville, Bath. *e.* Indifferent (thermal), Buxton, Gastein. *f.* Sulphur, Harrowgate, Aix.

Water hot (and cold).

Dr. Yeo gives an interesting summary of the present views regarding the pathology of the uric-acid diathesis. Charcot and Murchison think that the liver is at fault, and that its function is disturbed so as to give rise to the production of uric acid in excess. Latham thinks it is a disorder of the constructive processes, on account of which glycocin is carried to the liver in excess, or is not acted on by the liver with sufficient vigor. The uric-acid diathesis is a muscular and hepatic constructive torpor, either or both. Ebstein thinks that uric acid is formed to excess in the muscles and bones. It is carried in the blood as a urate, here it irritates the capillaries, and causes local necroses about the joints. The necrosis develops an acid which precipitates the urates from the blood, forming the chalky deposits.

Frerichs and Wohler maintain that the formation of uric acid is an intermediate step in the transformation of albuminoid substances into urea, and that its accumulation in the blood is an indication of arrested oxidation in the progress of urea formation. This view has been hotly contested.

Beneke, Voit, and Lecorché assert, on the contrary, that the formation of urea and uric acid occurs in the organism quite independently of one another.

Bartels supports the theory of incomplete oxidation, and Bouchard asserts that in the uric-acid diathesis uric acid is not the chief factor, but is only thought to be so because we can see it! The diathesis in question is not a "uricæmia," but depends chiefly on the development of an excess of organic acids.

In the remarks made by Dr. Yeo on treatment, many practical hints are given, but there is no radical change from the ordinary views, as will be seen by the table.

English writers do not recognize yet the fact, observed by many American physicians, that in certain cases of the uric-acid diathesis a strongly nitrogenous diet is far more beneficial than the one ordinarily asserted to be indicated.

THE TREATMENT OF PULMONARY HEMORRHAGE.

PROBABLY the great majority of physicians, in cases of pulmonary hemorrhage, would put the patient to bed, apply ice to the chest, and administer ergot, morphine, quinine, turpentine, acetate of lead, or some vegetable astringent. Antipyrin has been recommended highly, and, being the vogue, would perhaps be tried.

Dr. Gustav Seiz (*Deut. Archiv. f. klin Med.*, Bd. xlii.) asserts that a larger proportion, at least, of these canonical measures are irrational and practically, in severe hemorrhage, quite useless. Ergot, as is well known, has theoretically no place in pulmonary hemorrhage, since the blood-vessels of the lungs have no vaso-motor nerves. The use of cold is said to be irrational also, because it cannot cause any reflex vascular spasm, while, by chilling the blood, it only lessens its power of coagulability.

Dr. Seiz advocates a return to the old Hippocratic method, revived by Traube, of ligaturing the extremities so as to stop the venous but not the arterial flow. Seiz found, by experimenting upon various persons, that there was a diminution in the intensity of the second pulmonary, and sometimes of the first pulmonary, sound after binding the extremities. His theory is that the heart, having a smaller amount of blood to manage, does not have to beat so hard; arterial and endocardiac pressures fall, the blood flows more slowly, and has a greater chance to coagulate. He found generally a fall in arterial pressure after the ligatures were put on. In two cases in which the method was applied it was very successful.

Though the method may be a good one, it seems a clumsy way to obtain arterial relaxation when we have drugs like aconite, veratrum, nitro-glycerine, and ipecac. Venesection, which is supposed to act by lowering blood-pressure, was strongly recommended by Graves and Trousseau.

THE HYDROGEN-GAS TEST.

VERY few medical or surgical procedures are perfect at the outset. They undergo gradual perfection through improved technique and a knowledge of their limitations. Not differing from this experience is likely to be the discovery of Dr. Senn. The latter's announcement in June last was positive, and seemed justified by his long series of careful experiments. He said, "in puncture or gunshot wounds of the gastro-intestinal canal, insufflation of hydrogen gas enables the surgeon to demonstrate positively the existence of the visceral injury without incurring the risks and medico-legal responsibilities incident to an explorative laparotomy."

As is always the case, the first results in the hands of others were confirmatory of the above assertion, and with some surgeons gas insufflation has become a recognized measure. Others are still sceptical, requiring further and more conclusive proof before giving adherence to the new theory and practice. The latter will read with interest the report of a case recently presented to, and discussed by, the St. Louis Medical and Surgical Society.

A Chinaman, aged twenty-five, was wounded in the stomach, while in a stooping posture, with a 38-calibre ball. The bullet entered between the fourth and fifth ribs, a little anterior to the left axillary line. The usual shock, pain, etc., were but slight. The fourth rib was resected about an inch in order to get at the wound, and the omentum was seen protruding through the diaphragm about two inches from the abdominal wall. There was considerable hemorrhage from the diaphragm, and considerable blood in the pleural cavity. A glass tube was inserted through the diaphragm. Care was taken that the omentum did not occlude the distal extremity. The insufflation of the gas gave negative results, and the conclusion was drawn that there was no injury to the alimentary canal. A speedy cessation of the hemorrhage took place. A rubber tube was passed through the diaphragm and the latter sewed tightly around it. The extremity of the tube passed out of the thoracic wound, which was treated with the usual antiseptic precautions.

The patient died twenty-six hours after the injury. The autopsy showed two holes in the stomach, about three or four inches from the cardia, a hole in the kidney, blood in the pelvic and abdominal cavities, and the bullet in the psoas muscle. The stomach contained a large quantity of food. When it was raised up none passed out. The operator thought that if his patient had been turned upon his side the gas would have escaped through the holes, and so given some positive indication as to the internal conditions. Eructations of gas during the insufflation proved that the alimentary canal was well inflated therewith.

The narration of this case is simply illustrative of the fact that we have very few diagnostic tests which are absolutely pathognomonic. Every procedure has its limitations, and what these are to be cannot easily be foretold. Clinical experience is the only safe guide. It is worthy of note that the surgeon in the case alluded to expressed his belief in the Senn method, notwithstanding its apparent failure in this instance.

CHLOROFORM OR ETHER ANÆSTHESIA.

WITH the present admitted tendency to use chloroform in place of ether as an anæsthetic, two articles on anæsthetics, by Dr. O. Kappeler (*Archiv f. klinischer Chirurg.*, Band 73, Hft. 2) and Dr. Buxton, will be read with interest. Dr. Kappeler's communication relates chiefly to the effects of ether and chloroform on the circulation. Dr. Kappeler finds that there is no fundamental difference between the action of chloroform, chloroform and morphia, methyl-bichloride, æthyl-chloride, hydrobromic ether, and dimethyl acetal. The æthyl-chloride ether (or A. C. E.) mixtures acts like ether at first, but, later and in smaller quantities, like chloroform. All the above-named mixtures have a decidedly different action on the circulation to ether.

Dr. Buxton's work includes a full discussion of the relative merits of chloroform and ether anæsthesia. Some of the well-known statistics on the subject are given. Of these a reviewer in the *Medical Chronicle* says:

"We know that between the years 1870 and 1885, 184 deaths have been published in England as occurring under chloroform, that is, slightly over twelve in the year. The number of times that chloroform has been administered in the same period is not known. At St. Bartholomew's, from 1875 to 1880, chloroform has been used 4,810 times with two deaths. Roger Williams has recorded as his personal experience 208 cases of chloroforming with one death. Between 1870 and 1885, 28 cases of death from ether have been recorded. St. Bartholomew's tables give 6,440 cases with two deaths, and Roger Williams' 1,050 cases with one death. Taking into account that chloroform is used in an infinitely larger number of cases in the United Kingdom than ether, and that it is nearly the only anæsthetic used out of the larger towns and hospitals, it will be admitted that 184 deaths from it, against 28 from ether, do not by any means show that it is the less safe of the two agents."

In one hospital in India it is said that 10,000 patients were chloroformed before a death occurred. A lower rate of mortality in chloroform anæsthesia appears to have been observed in the tropics.

Dr. Buxton points out that even admitting greater danger from chloroform, its use is indicated in the following circumstances:

a. In protracted operations about the mouth, jaws, nose, or pharynx, which necessitate the mouth and nose being uncovered.

b. All operations needing the employment of the actual cautery, or lighted candles, lamps, etc., in the vicinity of the mouth, ether being highly inflammable, and when mixed with air detonating, so that the incautious bringing of the apparatus near a light may lead to grave consequences.

c. Persons who are suffering from bronchitis, and those liable to that complaint; the emphysematous (if the condition be very pronounced) and, as a rule, asthmatics bear ether badly, since it creates cough and may clog the bronchial tubes with a quantity of excessive secretion.

d. In renal disease, when extensive, ether is said to induce suppression of urine, so that if given at all in these cases it should be with the utmost caution.

e. The vascular excitement to which ether gives rise contra-indicates its use for persons whose arteries are presumably brittle, etc.

f. In infants and very young children, etc.

g. As ether always provokes rapid breathing and not infrequently coughing, it should not be used when these are prejudicial to the patient, or to the success of the operation.

h. The presence of brain tumors, intestinal obstruction, and cancerous tumors is by some considered contra-indicatory of ether. (Wood.)

To these the *Chronicle* adds two other large groups of conditions:

1. All cases of brain surgery.

2. Where the circumstances of the patient or the requirements of the operation are such as to demand the securing of perfect rest by the free use of opiates, ether must be avoided on account of its action on the kidneys.

CLEVELAND NOT A MEDICAL CENTRE.—Our esteemed contemporary, the *Cleveland Medical Gazette*, announces the close of its third volume, and makes some comments, in a kindly but reproachful spirit, upon the lack of literary and scientific enthusiasm on the part of Cleveland physicians. In the past, some six or eight medical journals have been started in Cleveland, but died from want of support. The *Gazette* enjoys a measure of prosperity, but gets few contributions to its columns from local talent.

News of the Week.

Among the Extraordinary medico-legal cases that occasionally occur is one involving the question, "Can the flaccid penis be introduced by a woman into the vagina?" The question came before a court recently at Stargard, Prussia, a decrepid old man of eighty and his daughter being accused of incest. The court decided in the negative.

A Poem to Professor Esmarch.—The *New Yorker Medizinische Presse* publishes a poem in German, written by Dr. F. Lange, and read at the *Bier Zeitung*, which seems to have been a part of the entertainment tendered to Professor Esmarch by the *Deutsche Med. Gesellschaft*, on October 1st. The poem addressed to Professor Esmarch concludes with two verses which contain a tribute to the change in the bibulous habits of Brother Jonathan:

"'Es hält' sich Bruder Jonathan
Nicht allzuviel an Marzipan
Und kaltes 'Soda'-Wasser;
Statt 'Whiskey Sour' trinkt er Bier,
Damit er Phlegma acquirir',
Sonst wird er immer blasser.

"'Zum Schlusse sei ein 'Hoch' gebracht
Dem Manne deutscher Wissenschaft,
Den jede Sprache ehret;
Er lebe hoch! viel tausend Mal!
Darauf ergreif' ich den Pokal—
Darauf wird er geleert."

Are the Men Dying Out?—Professor Sanford E. Chaille has recently called attention to the well-known fact that the average life of woman is longer than that of man, and in most parts of the United States woman's expectation of life is greater. There is no immediate danger, however, of man dying out, for more males are born every year than females, while of late years the disparity between the expectation of life in women and men seems to be decreasing. For example, although Dr. Farr's and the older English insurance tables show figures that favor women, recent American tables (American Experience, thirty companies) are in favor of men in all but sixteen of the years from 10 to 99.

A Warning.—A stranger went to the house of a Brooklyn physician last week, just after the doctor had gone out, and told the latter's brother that he wanted to pay a bill of $20. The stranger gave a check for $35 and got a receipted bill and $15 in change. The check was a fraudulent one.

The Fifth Annual Medical Students' Missionary Conference was held in this city last week, Dr. D. B. St. J. Roosa presiding. Dr. Boudinot C. Atterbury, of Pekin, gave a very interesting account of the work done by the medical missionaries in China. They first opened a small house and hung over the door the imposing sign, "Everybody's healing place." At first none came. Then a few coolies took courage enough to venture within, and as they came out alive and felt better, they soon gave a basis for securing the confidence of others. The Chinese, he said, were extremely superstitious and suspicious, and commonly believe that the medical missionary mixes with his medicine something which will induce them to believe in Christianity. This was one of the greatest annoyances they had to contend with. Another annoyance was that the Chinaman did not like moderate treatment. He thought that if a small dose would cure a little of his pain, that a big dose all at once would settle it. He first found this fact out by learning of a Chinaman who had saved up powders that had been given him from time to time, and taken them all at once. They nearly killed him. There was an enormous field in China for the medical missionary, Dr. Atterbury said.

Yellow Fever.—One or two new cases are still reported daily at Jacksonville. The United States steamer Boston, from Hayti, arrived in this port last week with several cases of yellow fever on board. Among them, we regret to say, was that of the surgeon.

Protective Medical Insurance Associations.—The following case is of no little interest to physicians interested in checking the abuses of medical charity. A writ of mandamus has been issued in the case of the State *vs.* Insurance Commissioner Charles Shandrew, to compel him to record the certificate of the National Mutual Indemnity Association, a society to provide suitable medical and surgical attendance for its members in sickness or disability. Mr. Shandrew objects to register it, on the ground that experience has shown such associations to be radically defective. They not only fail to protect those for whose benefit they are incorporated, but afford facilities for the organization of insurance schemes, whose primary object is profit, regardless of the rights or interests of the members. Mr. Shandrew expects to make an example of the National Mutual Indemnity Association.—*Medical Standard.*

Quackery in Nebraska.—The *Omaha Clinic* says editorially: "Not more than three years ago a quack, void of all conscience, started out on his career in the North Platte Valley, equipped with recommendations from our best citizens as to his ability—fame does not say whether for cheating or curing the sick. Scarcely a year had elapsed, when a bright member of the Nebraska State Medical Society severed his connection therewith and followed in the footsteps of the quack. Happily, death shortened his career. Another member in another year had to be expelled from the society for the same disorder. And now comes a third, asking to be released from bondage, so that 'he may make good his battle among his compatriots with a moderate use of printer's ink.' Scarcely has this been read when a fourth member breaks loose from all restraint, not from ethical chains, but from all decency, by advertising as follows: 'Dr. ——, in a professional tour, will visit this city in the interest of his specialties, chronic diseases of the nervous system, heart, and blood, kidneys and bladder, organs of reproduction, organs of digestion, diseases of the skin, tumors, and the infirmities of old age, as elaborated at the Salpêtrière by the distinguished Professor T. M. Charcot,' etc."

Soteriology and the Stomach.—Under the head of "Soteriology," or the science of health, Dr. S. P. Crawford, Health Officer of Stockton, Cal., testifies to the importance of clean, well-cooked food as a preservative of health, even in the foulest air. As an illustration, he says (*Southern Practitioner*): "The Chinese race are a peculiar people, as free from disease as any other people, yet they live in an atmosphere so circumscribed and contaminated, that one unaccustomed to their quarters can scarcely breathe in them. I have often "run the gauntlet" of their asphyxiated atmospheres while inspecting their quarters as health officer. I account for their immunity from disease in such quarters, by their simplicity of diet, its exceptional cleanliness, and being thoroughly cooked. The meal for the whole family is cooked together in one pot; meat or meats, potatoes, vegetables, rice, all boiled and stirred together, and when thoroughly cooked, is ladled out in deep bowls and eaten with chop-sticks, which hold but a small quantity at a time, giving ample time for the mess to cool before it reaches the stomach. They drink no water, but use tea, either hot or cold, for drink, without milk or sugar. There is but little chance for microbes to breed between the boiling pot and their stomachs."

Malpractice Suit for Prescribing Antipyrine and Spirits of Nitrous Ether.—The *National Druggist* states that Dr. Castleman, a reputable physician of Houston, Tex., prescribed a mixture containing one and a half grain of antipyrine, and five or six minims of spirits of nitrous ether to the dose, for a child suffering from malarial congestion, the thermometer in the child's mouth registering 105° F. Shortly after taking the second dose the child went into convulsions, and in the course of eight or ten hours was dead. The parents of the child, instigated by a physician who had heard of the reputed toxicity of the combination of the two drugs, have brought suit against Dr. Castleman for malpractice. Two or three similar causes have been reported, which led Dr. Ludwig Bremer, of this city, to make an investigation as to the toxic effects of the compound formed by mixing antipyrine and sweet spirits of nitre. Dr. Bremer gave it as his opinion that the compound possessed no poisonous properties. The editor of the *National Druggist* tested the toxicity of the crystals, not only upon lower animals, but upon himself. His experience confirms the opinion rendered by Dr. Bremer.

A New Theory of Inflammation.—Professor Leber has succeeded in obtaining a chemical substance from cultivations of the *streptococcus pyogenes aureus*, to which he has given the name of phlogosine. This substance, from which all microbes have been carefully filtered, possesses the power of exciting inflammation to a remarkable degree. It is not an alkaloid, and does not contain nitrogen. It is quite distinct from the ptomaïnes which Brieger obtained from the same source, and which do not give rise to inflammation. Injected into the conjunctivæ, even in infinitesimal quantities, phlogosine sets up intense inflammation, followed by suppuration and necrosis. Dr. Leber concludes from his experiments that the substance attacks the leucocytes toward the point of inflammation in order that they may destroy, on the one hand, the pathogenic microbes, and on the other, the necrosed tissues.—*Medical Press.*

A Craze to Become Doctors.—The alarming news reaches us, *via* the *American Lancet*, that all medical colleges east and west, north and south, report enlargement of their classes, and that there seems to be an unusual craze on the part of young men everywhere, to enter the medical profession.

American Medical Association.—The fortieth annual meeting of this Association will be held at Newport, R. I., on Tuesday, June 25, 1889, instead of the *first* Tuesday in June, as appointed at the meeting in Cincinnati. The Address in Medicine will be given by Professor William Pepper, of Philadelphia; the Address in Surgery by Professor P. S. Connor, of Cincinnati; and the Address in State Medicine by Professor W. H. Welch, of Baltimore. The following constitute the Local Committee of Arrangements: H. R. Storer, Chairman; W. Thornton Parker, Secretary; C. F. Barker, M. E. Baldwin, C. A. Brackett, J. P. Curley, P. F. Curley, J. P. Donovan, H. Ecroyd, Jr., V. M. Francis, T. A. Kenefick, G. M. Odell, F. H. Rankin, W. C. Rives, Jr., S. H. Sears, W. S. Sherman, H. E. Turner. Associate Committee, appointed by the Rhode Island Medical Society, G. D. Hersey, W. H. Palmer, G. T. Swarts, all of Providence.

Chicken Cholera Microbes and the Rabbit Pest—Dr. Bancroft, of New South Wales, describes the preliminary experiments made to test Pasteur's method of destroying rabbits (*The Lancet*). The plan was to sprinkle the vegetables upon which the rabbits fed with a liquid containing the microbes of chicken cholera. All the rabbits so fed died, but the greater number of others not fed with the virus survived, notwithstanding that they were in contact for several days with the dead rabbits. In a further experiment, carried on in a larger enclosure provided with artificial burrows, all rabbits treated with chicken cholera died, with one exception—"a wild rabbit, which seems none the worse after having eaten three strong doses of the chicken-cholera cultivation." Hares are found to die, like rabbits, from chicken cholera—a disease, by the way, which has not yet appeared in Australian fowl-yards. In the experiments where artificial burrows were used there were some indications of contagion, one rabbit not fed on the virus having died of the disease; but Dr. Bancroft points out that sufficient time had not elapsed to say much of the contagious property, upon which, of course, would depend the value of the suggested method as an exterminating agent.

Cadaverin is a ptomaïne which has the power of producing suppuration without the presence of micro-organisms. Iodoform has been shown by Behring to destroy it, and hence, perhaps, its utility in surgery.

Competition in Medical Practice.—A Dr. Humphreys, of Camden Town, London, England, was committed for non-payment of debts. He explained that, though he had a practice in Camden Town, "he had so much opposition that he could scarcely get a living." The competition was so great, he said, "that some of the medical men attended patients for five cents per week!" The judge showed his belief in the doctor's plea by refusing to make an order.

Iodoform is said by Dr. Chauvin to be a valuable remedy in hæmoptysis. It is given in doses of two or three grains. As iodoform internally has probably only the effect of an iodide, the attributing a specific effect to the drug can hardly be correct. Besides, M. Chauvin usually adds tannin to his prescription.

Society Reports.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 24, 1888.

W. P. NORTHRUP, M.D., PRESIDENT, IN THE CHAIR.

DR. T. MITCHELL PRUDDEN presented a uterus showing

EXTENSIVE LACERATION OF THE CERVIX.

The case was one of protracted labor with transverse presentation. Version was performed, but death resulted from septicæmia. The history was as follows:

"A woman thirty-five years of age, who had borne three children, and who had chronic phthisis involving both upper lobes, was in the eighth month of pregnancy, had been feeble and in bed for some time, and finally became delirious. This is all that could be learned of her previous history. On her admission to the hospital she was mildly delirious; had a temperature of 100° F.; was feeble; the urine was scanty, with fifteen per cent. albumin and granular casts. The fœtal heart-beats were heard, but there were no symptoms calling more detailed attention to her pregnant condition.

"On the day after admission she, for the first time, complained of abdominal pain. Examination revealed a transverse presentation with the hand and arm protruding from the cervix. On the introduction of the fingers for the performance of version, three or four ounces of a black grumous material came from the uterus. Version and delivery were performed without difficulty, no unusual force being used. There was no hemorrhage—the child was dead; an intra-uterine douche of bichloride of mercury, 1–3,000, was used. Two hours after delivery the temperature rose to 102° F.; but the woman appeared brighter and her general condition improved She was now passing not more than seven ounces of urine. On the following day her temperature was normal, and ranged from that to 101.5° F. Her pulse was better, but her general condition was worse. Under free stimulation she died, without further rise of temperature, about forty-eight hours after the delivery.

"*Autopsy.*—Brain and meninges, heart and spleen normal; lungs, chronic phthisis involving both upper lobes; liver, fatty; kidneys, small, rough, cortices thin and irregular; peritoneum normal, save that over the *cul-de-sac* of Douglas it was thickly bestrewn with small gray tubercles; uterus firmly contracted, its inner aspect posteriorly showing normal surface of placental attachment. The cervical portion was deeply and extensively lacerated, its surface rough and gangrenous. The uterine sinuses and both ovarian veins were filled with dense, firm thrombi. The right ovarian vein was so extremely distended with the thrombus—which was in part white, and apparently of considerable age—as to measure nearly five-eighths of an inch in diameter. The bladder was normal; the urethra presented on the lower side a small whitish patch of croupous exudate.

"This case seems to me to be of interest because it affords an excellent example of the rapid overwhelming of the system with poisonous material from an injured surface, without the occurrence of any well-defined inflammatory lesion. How long in this case the labor may have been going on before its discovery is only a matter of conjecture, but it seems most likely that the laceration, and very probably the infection, had occurred before the admission of the patient to the hospital.

"I think that it is convenient, in the present state of our knowledge—although we have perhaps no strict scientific reasons for doing so—to group

THE PUERPERAL INFECTIONS

into two classes, one which we may call the *putrid infection*—perhaps most often caused by the putrefaction of retained placental fragments, or, as in our case, by gangrene following a more or less extensive injury; and that which is well enough termed *purulent infection* or puerperal pyæmia, in which there are somewhere foci of suppurative inflammation. The latter form of puerperal infection would be that which more strictly comes under the heading of puerperal fever.

"I have taken the liberty of calling attention to this grouping of these puerperal conditions, simply to emphasize that class of which this is so excellent an example, in which women die after delivery, and sometimes very soon after, without much rise of temperature, and without the existence of any appreciable inflammatory lesions. They not only die, but seem often to do so to the great surprise of the attending physician, who is prone to call upon the pathologist for the discovery of a cause for death. And this cause the pathologist has frequently to discover or to postulate without the aid of any well-defined anatomical data. It is perhaps only the bacteriologist who has seen much of the effects of pathogenic bacteria on animals, who is ready to give an unquestioning acquiescence to a "cause of death" which leaves as little trace of its modus operandi as does in many cases puerperal septicæmia."

DR. GEORGE C. FREEBORN presented a specimen of

EPITHELIOMA OF THE BODY OF THE UTERUS.

The patient, aged fifty-six years, has been married forty years. Two years ago she noticed a scanty discharge from the uterus; this increased, became watery in character, sometimes bloody, and finally muco-purulent. She had complained of but little pain. The uterus was removed by hysterectomy.

The uterus measured 12 ctm. in length and 8 ctm. across the horns. The body was rather globular in form. On opening the uterus, an irregular roundish mass, measuring 6 × 5 ctm., was found growing from the posterior wall of the body. It projected about $1\frac{1}{2}$ ctm. above the mucous membrane. The surface was soft, white in color, and had a "cauliflower" appearance. Microscopical examination showed the growth to be epithelioma.

Dr. Freeborn also presented a second specimen, showing

RUPTURE OF THE COLON FOLLOWING OVARIOTOMY.

The patient was operated on October 1st, both ovaries being removed, they being cystic. Several adhesions to the intestines were found with the left ovary, and were broken up. After breaking up a rather firm one, severe hemorrhage followed; the bleeding point was found and ligated, and the operation finished in the usual manner.

On October 4th symptoms of rupture of the intestine occurred. Owing to the weak condition of the patient, exploratory laparotomy was not deemed advisable. General peritonitis set in, and the patient died October 24th.

Post-mortem examination showed general purulent peritonitis, the abdominal cavity being filled with pus, and solid and liquid fæces. In the upper and left portion of the sigmoid flexure of the colon, an oval opening 2 inches long and $\frac{1}{2}$ inch broad was found, the whole of the intestinal walls included in the above dimensions having sloughed away. At the upper end of the opening a silk ligature was found imbedded in the tissue. The rectum was very much contracted, probably from the want of use, as all fæcal matter had been discharged through the drainage-tube from the time of the symptoms of rupture.

The point of interest in this case is whether, in breaking up of the adhesion, the peritoneal and muscular coat was torn away, leaving only the mucous membrane. If this were the case, the latter, being deprived of its means of nourishment, would have sloughed, and thus caused the opening.

DR. H. M. BIGGS presented a series of specimens illustrating various forms of

DISEASE OF THE VERMIFORM APPENDIX.

The first specimen was accompanied by no clinical history, as the patient had died two or three hours after admission to the hospital. At the autopsy a general peritonitis was found. There was a perforation of the vermiform appendix, and a fæcal concretion was discovered in the abdominal cavity.

The second specimen was taken from the body of a patient suffering from typhoid fever, who had died with the usual symptoms of intestinal perforation. The autopsy revealed ulceration and perforation of both the ileum and vermiform. The ulceration in the latter was ragged and did not have the appearance of a typhoid lesion. If it were a typhoid ulcer, however, it would be a rather curious coincidence to have perforation of both the ileum and vermiform appendix.

The third specimen was one of

TUBERCULOSIS OF THE VERMIFORM APPENDIX.

About an inch of the extremity of the process was cut off from the remainder and was filled with a cheesy material. There was tubercular ulceration also in the ileum, but here there were no tubercles on the peritoneal surface of the gut, so that external inspection of the bowel would not have led the examiner to suspect tubercular ulceration.

Dr. Biggs then reported another case, of which the specimen was not shown, of impaction of fæcal matter in the appendix. The body was the size of the end of the little finger, and was situated at some distance from the opening. The opening was very much smaller than the fæcal mass, so that the latter must have been formed within the appendix, and could not have passed into it from the cæcum. These cases of vermiform perforation seem to be growing quite common, the speaker said; he had seen ten or twelve cases within the last two years.

Dr. Biggs then presented another specimen showing

MULTIPLE DIVERTICULA OF THE LARGE INTESTINE.

The pouches were small but quite numerous.

The last specimen was one of

RUPTURE OF THE UTERUS

occurring in a case of criminal abortion. The organ had been removed from the body of a girl sixteen years of age. The abortion had been produced at the third month of pregnancy. On the anterior wall of the uterus were to be seen several punctures, possibly made by a knitting-needle or a straightened hair-pin. In the lateral wall was a large laceration, an inch and an half in length, which had evidently been made by a different instrument, and probably at a later period than had been the smaller punctures. The cervix was bruised, but was not involved in the laceration of the body of the organ.

Dr. Mendelson, referring to the specimens of vermiform disease, asked how much importance, in Dr. Biggs' opinion, was to be attached to the popular belief that the seeds of fruit were a cause of vermiform disease. Considering the great quantities of grape-seeds that are swallowed at this season, and the comparatively few cases of disease of the vermiform appendix, it hardly seems that the swallowing of seeds can be a very efficient cause.

Dr. Biggs said that he had never found any foreign bodies in the appendix other than fecal accumulations. He had, however, sometimes found other substances forming the nucleus around which the fecal matter had accumulated. He remembered one case in which the nucleus seemed to be a raisin stem. He did not believe that seeds had any influence in the production of vermiform disease.

Dr. John C. Peters said that one of the earliest specimens presented to the Society was brought by Dr. Alonzo Clark, in which there were several layers of strawberry-seeds in the vermiform appendix; these seemed to have been accumulating for several years, to judge from the appearance of the different layers. That they were really seeds, and not fecal accumulations resembling seeds, was proved by microscopical examination.

Dr. Prudden said that whether the seeds merely formed the nucleus, or were the whole accumulation, their presence was significant, and he asked Dr. Biggs whether he had often found foreign bodies as nuclei.

Dr. Biggs said that in the majority of cases that he had seen there were no seeds or other foreign bodies except fecal concretions. Out of a dozen or more cases that he had seen, however, during the past two years, there was but one in which a rupture of the vermiform had occurred, and no fecal concretion had been found in the abdominal cavity—aside from the one of ulceration complicating typhoid lesions in the ileum, which he had just reported. He believed that cases of simple necrotic ulceration of the vermiform appendix were not common, if they occurred at all.

Dr. B. F. Curtis referred to a case under the care of Dr. Abbe, in St. Luke's Hospital, in which a pin was found in the abdominal cavity. The case had been operated upon some months before and a sinus had remained. The pin was found at the second operation.

Dr. Prudden said that he had searched for seeds in all the cases which had come under his observation, but he had never yet succeeded in finding any. He had seen some bodies which looked like seeds, but examination had always shown that they were not seeds, but simple concretions.

Dr. L. E. Holt had seen the case referred to by Dr. Curtis, at the time of the first operation, and he was quite positive that no pin was present at that time. As to the case of intestinal tuberculosis, he had also seen one in which there were no evidences of tuberculosis upon the peritoneal surface of the bowel.

Dr. Thacher said that he had recently made an autopsy in which he had found multiple diverticula of the intestine similar to those in the specimen shown by Dr. Biggs.

Dr. Mendelson recalled the case reported to the Society several months ago by Dr. Ferguson. He was present at the autopsy. A diagnosis had been made of abscess of the liver. The cause of the abscess was not evident at first, but it was traced at the autopsy. There was found in the mesentery, behind the descending colon, an abscess which, extending upward, involved the tail of the pancreas. In consequence, thrombosis of the pancreatic veins had occurred, the thrombotic process extending into the liver, and causing multiple abscesses there. The origin of the abscess behind the colon was not at first apparent, but on dissecting out the colon carefully, it was found to have many large and small diverticula, one of which having ulcerated, had given rise to all the trouble.

Dr. Biggs related a case of diverticulum of the ileum, in which a pin was found imbedded in the mucous membrane.

The President asked Dr. Biggs what was the nature of the instrument used in the case of criminal abortion reported by him.

Dr. Biggs replied that there had evidently been two instruments employed, for the punctures in the anterior wall were made probably by a knitting-needle or a straightened hair-pin. The lacerations in the lateral wall must have been caused by the use of a much larger and coarser tool. It was probable also, that the injuries had been inflicted at two different times, and that the first and more simple instrument having failed, more active measures were undertaken.

Dr. L. Emmett Holt presented the lungs of a child two years of age, showing

PRIMARY CROUPOUS PNEUMONIA, COMPLICATED BY PURULENT PLEURISY, AND TERMINATING IN GANGRENE.

Female child, aged two years, an inmate of the New York Infant Asylum. Stout and well until twelve days before death, when she was taken suddenly ill, with a temperature of 102° F., which rose the same evening to 104°. From that time it continued steadily high, ranging between 103° and 105.5° F., on two occasions reaching 106°. It fell only once as low as 101.5°, on the day before death. With the temperature there were present all the usual symptoms of lobar pneumonia, and by the fourth day the physical signs revealed complete consolidation of the right upper lobe. On the sixth day friction-sounds were heard over this lobe, and the signs indicated an extension of the consolidation into the middle lobe in front and lower lobe behind. Up to this time there had been but little prostration. During the next two days there developed a marked change for the worse. The prostration was so great that the child was not disturbed for any further examination of the chest. In spite of very free stimulation she lost ground steadily, and died of exhaustion on the twelfth day. There were no cerebral symptoms present at any time.

Autopsy.—The brain was normal. The right chest contained six ounces of pus which was not fetid. This was contained in two cavities; the larger one embraced nearly the whole pleural cavity, and the smaller one was just beneath the sternum and contained only half an ounce. The visceral and parietal layers of the pleura were covered with a thick, shaggy layer of fibrin and pus.

The right lower lobe was compressed, but was otherwise normal. The whole upper lobe and the upper half of the middle lobe were hepatized, of a brownish-red color. On section there were seen in the upper lobe three or four gangrenous areas in the centre of the lobe, the largest being about three-fourths of an inch in diameter; they were broken down in the centre. The gangrenous odor was scarcely perceptible. The largest artery leading to this region of lung was plugged by a thrombus, white, firm, and adherent, and to all appearance ante-mortem in its formation. In the lower border of the upper lobe another wedge-shaped gangrenous spot existed, extending to the surface of the lung. A similar thrombus was found in a vessel here.

The left lung was somewhat emphysematous above, and congested below; there were a few minute spots of broncho-pneumonia in the posterior border of the upper lobe; otherwise this lung was normal.

The heart, pericardium, stomach, intestines, and spleen were normal. The liver was large and pale. The kidneys were one and one-half time the normal size, the cortex was pale and thickened, and there was the general appearance of quite a well-marked parenchymatous nephritis.

A microscopical examination made from the hepatized lung showed the exudation to be almost entirely fibrinous, only a few small round cells and epithelial cells being seen in the alveoli.

DR. PRUDDEN said that, in the course of the examination with Dr. Northrup of a large number of cases of broncho-pneumonia in children, he had seen four cases, all in children not over three years of age, of genuine acute lobar pneumonia with extensive pleurisy. The gross and microscopical appearances of these lungs corresponded with those of acute lobar pneumonia. The question of these cases being genuine acute lobar pneumonia, similar to that so common in adults, was settled by the results of culture, which showed in all the cases the pneumococcus of Fraenkel in large numbers.

THE PRESIDENT said that these four cases were only four cases out of a very large number, and that they were not cited as evidence of the comparative frequency of the disease in children, but of its rarity.

DR. THACHER asked what these lungs looked like to the naked eye.

THE PRESIDENT replied that they presented much the same appearance as the lungs of adults who had died from croupous pneumonia.

DR. VAN GIESON presented some sections of the spinal cord from a case of compression myelitis, showing

DEGENERATION OF THE ANTERO LATERAL ASCENDING COLUMN.

After hardening in Müller's fluid, a portion of the upper dorsal region, two and a half centimetres in length, was seen to be transversely flattened, the entirety of the gray matter was absent, and a considerable portion of the cord was softened. Above the softened portion the posterior median and direct cerebellar columns were lighter in color than the surrounding white matter. There was also a bilateral narrow, light-colored zone in the periphery, continuous with, and anterior to, the direct cerebellar column. Following the periphery of the cord, it extended forward to a point about opposite the middle of the anterior horn. Below the softened portion there were bilateral light-colored areas corresponding to the direct and crossed pyramidal tracts.

The Society then went into executive session.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN SURGERY.

Stated Meeting, November 12, 1888.

ROBERT ABBE, M.D., IN THE CHAIR.

ENORMOUS TUMOR OF THE ARM AT THE SEAT OF AN OLD FRACTURE.

DR. G. B. PHELPS presented an aged man who, forty years ago, had fallen three stories and injured the arm. He was taken to what he called Quarantine, and when seen by a doctor was told that his arm was broken, but that so long a time had elapsed it was then too late to do anything for it. He remained in the place about eighteen weeks, and since then had been able to do ordinary day labor, but could not throw dirt out of a trench. The coracoid process of the scapula was very prominent, the deltoid was atrophied; an immense tumor projected from the posterior surface of the arm, which the patient said had been increasing in size for years. The joints were free, there was no pain, no disturbance of the circulation.

THE CHAIRMAN thought it was an outgrowth from the humerus, perhaps with a narrow neck, but spreading out beneath the muscles upward and downward.

SUPRA-ACROMIAL DISLOCATION OF THE CLAVICLE.

DR. CHARLES A. POWERS presented the man, the case being an interesting one on account of the marked deformity after the accident, and the excellent results obtained by a splint of adhesive plaster, one strip passing beneath the elbow, up the inner aspect of the arm, over and back of the shoulder, and the other passing from under the elbow, up the outer aspect of the arm, over to the front of the shoulder, the two elevating the arm and pressing down on the clavicle. A pad was placed in the axilla, and the arm was bound to the chest.

DR. JAMES P. TUTTLE had employed a similar splint in a case of dislocation of the outer end of the clavicle four years ago, with nearly as good results.

DRAINAGE IN CEREBRAL SURGERY.

DR. POWERS also presented a man who, about eighteen months ago, had been trephined by Dr. Weir over the motor area for the left arm. This arm was paralyzed and there was aphasia. A blood-clot was found, which, when removed, left a large cavity which would not drain. At the suggestion of Dr. Weir, Dr. Powers made a counter-opening four inches backward and downward, for drainage. Unfortunately a good deal of periosteum was removed from surrounding bone, which necrosed to the extent of about a silver dollar. The wound was for a time dressed antiseptically, but afterward the man acted as a porter and the dura mater was protected only by sticking-plaster, yet this exposure of the membrane to germs did not result in infection.

It was the speaker's belief that to Dr. Weir was due the honor of having first suggested counter-opening for drainage in cerebral cases, although Dr. Nancrede in an article this year made the statement that this had become a recognized surgical procedure. There had been no bone-plantation in this case. The patient showed no mental disturbance.

TETANUS HYDROPHOBICUS.

Dr. G. B. Phelps read the paper, which included the history of a case, that of a boy, aged sixteen, who, on November 16, 1886, applied for treatment at the out-patient department of Chambers Street Hospital for a wound inflicted over the left eyebrow by a stone thrown at him by another boy. The bone was exposed, but there was no fracture. The wound was irrigated with a solution of carbolic acid, and a dressing applied. Two days later Dr. Phelps saw the patient, when the wound was painful to pressure, swollen, the edges adherent. A cold-water compress was applied, to be kept wet. Eight days after the injury the reddened and swollen condition had disappeared, and a perfectly healthy appearence was present, but the patient had left facial paralysis, and had complained of difficulty in opening the mouth since the day before. The paralysis was on the same side as the wound. The patient was sent to Dr. Amidon, who made a careful examination. On the ninth day the paralysis was more marked, and there was still painful spasm of the left masseter muscle. On the eleventh day he was up and about at his home. There was occasional spasm of the temporal and masseter muscles, he could swallow well, but attempts at examination of the palate caused marked spasm of the muscles of the jaw. Bromides were administered. On the twelfth day the jaws were firmly set, the patient could hardly speak, the face was drawn to the right; he was restless, pulse and temperature normal, respiration 36. He was given liquid food. Bromide of potassium, 360 grains, was administered in twenty-four hours, also 160 grains of chloral hydrate. On the fifteenth day the patient, having in the meantime grown weaker, was unable to take anything by the mouth. Any attempt to swallow caused violent spasm of the muscles of deglutition. He died later in the day. The autopsy showed œdema of the lungs.

The case seemed to be a typical one of head tetanus, or tetanus hydrophobicus; it was typical because the paralysis and the trismus were on the same side as the lesion, and the muscles of deglutition were involved.

Of this disease, which was first described in 1870, he had collected 25 cases—20 males and 5 females; the ages varied from 2½ to 59 years. In 22 the paralysis was on the same side as the injury; in 2 on the opposite side; in 1, the injury being on the root of the nose, there was paralysis on both sides; in 10 cases trismus and paralysis developed at the same time, on the average the eighth day after the receipt of the wound; in 11 cases the trismus developed first; in 1 case the trismus developed within twenty-four hours; in 1 not until the fourteenth day after the wound. The percentage of deaths was 68. The average duration of the symptoms was thirty-eight days. Large doses of chloral hydrate seemed to do most good. In 12 cases an autopsy was held, and in some a microscopical examination of the seventh nerve was made, but no cause for the paralysis was found. The wound was the result of an operation in but one case. It had been suggested that the infectious matter came from the horse. This could have been possible from the manner of infliction of the wound in a number of these cases. In 5 cases the symptoms developed after the wound had fully healed; in some, before any reparative process had set in. Various theories had been offered in explanation. The cases were very rare.

Dr. B. F. Curtis had seen this patient, and remarked that his appearance was striking, with the paralysis of the left side of the face, the escape of saliva from the corner of the mouth, the spasm of the muscles of the face and extending down the shoulder and arm on that side. Attempts were made to separate the teeth, but resulted in so great spasm and pain that they desisted. He asked whether the interference with swallowing was shown to be due to paralysis, or whether to spasm of the muscles of deglutition.

Dr. Phelps thought that in this case it was due to spasm, and spasm had been proven to be the cause in one of the cases on record, since an attempt to pass a stomach-tube through the nose was resisted by spasm of the muscles below.

Dr. R. W. Amidon saw Dr. Phelps' case twice. Probably all were pretty well convinced that tetanus is a septic disease, probably arising from a parasite the exact nature of which was not known. The question for discussion should be, he thought, why in these cases the tetanic symptoms were so extraordinarily localized and limited. Why should the symptoms be confined to the head, and why was there facial paralysis, which was not common in ordinary tetanus? The distinctive features of this form of tetanus he understood to be facial paralysis on the same same side as the lesion, which latter was also in the face. But in one case which was treated at the New York Hospital, and which was not included in Dr. Phelps' list, the injury was on the shoulder. Therefore the question of the location of the lesion could be set aside. But Dr. Phelps had also two cases on his list in which the paralysis of the face was on the opposite side from the injury, which fact precluded another apparent characteristic. He had been unable to disassociate tetanus and hydrophobia. It seemed the only difference between them was that in tetanus the tetanic symptoms, the result of an apparently specific poison, became manifest a good deal sooner than hydrophobic symptoms. In hydrophobia the symptoms pointed to lesion about the nucleus of origin of the hypoglossal nerve and spinal accessory, while in tetanus other nerve-origins were implicated as well, as shown by the facial paralysis and opisthotonus. The symptoms in tetanus hydrophobicus became before death more or less general, the patient dying in general convulsions.

It was some years since he had studied the lesions in a case of tetanus in a girl. There were lesions of septicæmia in various organs, and he felt convinced that those in the medulla oblongata and upper portion of the cord fully explained the symptoms from which the patient had suffered. There were signs of vascular irritation and some hemorrhagic spots about the roots of the spinal accessory, the glosso-pharyngeal, the hypoglossal nerves, and evidence of ante-mortem softening in areas from the size of a pin to that of a pea in the medulla. These areas of softening were in the neighborhood of the fifth nerve, particularly of its motor nucleus, and would explain the trismus and secondary paralysis of corresponding muscles.

Dr. C. A. Powers mentioned a case of tetanus brought to the hospital a year ago last September, that of a boy who was in a state of marked opisthotonus. No wound could be found except a small scab beneath one great toe. The house-surgeon, Dr. Dench, gave about nine hundred and sixty grains of bromide in two days, and continued their use afterward according to indications. The patient recovered within three or four weeks.

The Chairman thought the conclusion was evident that the type of tetanus, the subject of the paper, was not essentially different from ordinary tetanus or that arising from wounds in any portion of the body.

Dr. W. K. Otis read a paper on

RECENT IMPROVEMENTS IN ENDOSCOPIC APPARATUS.

The first practical use of the endoscope was made by Desormeaux in 1853. His instrument, which was essentially the one much used to-day, had marked disadvantages. In 1879 Nitzer employed the electric light, but the apparatus was too cumbersome. Leiter's electric light, introduced in 1887, was small, light, inexpensive, and gave an illumination by the reflector as good as could be desired.

Dr. Otis detached the tube from the light, for the least movement of the latter caused sufficient movement at the end of the tube sometimes to give rise to pain. His attention had first been directed to improving the obturator. In order to introduce the tube without causing pain and, if possible, to avoid any bleeding, he employed an obturator the end of which was soft rubber. This, being slightly larger than the endoscopic tube, spread out over its edges and prevented irritation. After introduction, the rod attached to the rubber was pulled upon, elongating the rubber so that it could be withdrawn through the endoscopic tube.

In order to avoid constant swabbing, especially when bleeding was present, he placed a tube about the size of a knitting needle along the inside of the endoscopic tube to within an eighth of an inch of its lower end, piercing it at the upper end at right angles. This end was covered with a small rubber bulb, pressure on which expelled the air, and relaxation caused it to suck up the remains of the blood or water, after flooding the endoscopic tube. By attaching a hypodermic syringe any medicament could be injected.

With the straight tube one could get a view down the angle of the urethra. Dr. Otis exhibited one with a bend near its lower end, and, by the aid of a small mirror introduced down the tube, obtained a view beyond the bend in the urethra. The endoscope had proved of less value in diseases of the urethra than many had anticipated. He did not think the numerous divisions of urethritis made by the Germans were practical.

Dr. F. R. Sturgis preferred kerosene light to the electric light in endoscopic examinations of the urethra. The electric instrument made too distinct markings between light and shade, giving the appearance of a pathological condition where none existed. The four-inch tube was long enough and gave the best view. He preferred that made of silver. He also thought the value of the urethroscope had been overestimated, and that the division of urethritis into many forms by the Germans was fallacious. The instrument had been of value to him in making applications of nitrate of silver directly to the affected parts in certain conditions.

Dr. J. P. Tuttle had discarded the silver tube for the rubber, and employed the gas argand-burner. He had seen two cases of urethritis membranosa, the existence of which variety Dr. Sturgis had doubted.

Dr. W. K. Otis closed the discussion, and said he had not found the objection to the electric light mentioned by Dr. Sturgis.

Dr. George E. Brewer then read a paper (see p. 643) on

A CASE OF CONGENITAL ABSENCE OF THE ENTIRE RECTUM; ARTIFICIAL ANUS BY LUMBO-COLOTOMY.

Dr. T. J. Kearney recited a case of imperforate anus which he saw in 1883. There was no sign of an anus, no depression suggesting the presence of the rectum in the perineal region. The parents rejected lumbo-colotomy. The child died about the fifth day. Its body had a somewhat jaundiced hue, and spots pointing seemingly to commencing decomposition were present on the abdomen.

The Chairman had operated a few weeks ago for imperforate anus, cutting about half an inch to reach the rectum. A free evacuation of meconium took place, but the child died. This patient also had a jaundiced hue.

Dr. B. F. Curtis had recently read, in a French medical journal, the case of a woman who was found to be without an anus in the normal situation, and passed her fæces through an opening in the vaginal wall which had complete sphincter control even when the passages were thin.

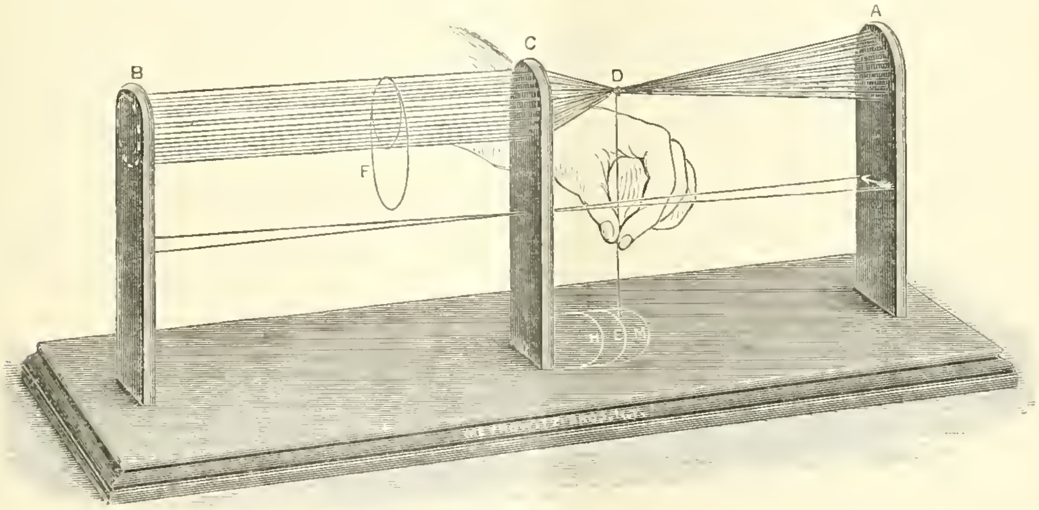
New Instruments.

A NEW INSTRUMENT FOR DEMONSTRATING REFRACTION.

By S. M. Payne, M.D.,

INSTRUCTOR IN OPHTHALMOLOGY IN THE NEW YORK POLYCLINIC, CLINICAL ASSISTANT TO THE MANHATTAN EYE AND EAR HOSPITAL, NEW YORK.

The annexed is a cut of an instrument which I have devised for teaching refraction. It consists of a base and three upright pieces. In the top of each upright is a circle of small holes through which threads are passed representing a cylinder. The three uprights are named *A*, *C*, and *B*—*C* representing the cornea. On the base are represented an emmetropic, hypermetropic, and myopic eye, marked *E*, *H*, and *M*. On one side of the cornea the cylinder of rays is brought to a focus over *E* by drawing the string *D*, showing the emmetropic eye. As parallel rays will not focus on the retina of any but an emmetropic eye, the string *F* is slightly drawn near *C*, to make the rays diverge, and the string *D* is drawn to a focus over *M*. This represents the myopic eye. To represent the hypermetropic eye, a disk larger than the cylinder is placed in it near *C*, causing the rays to converge toward *C*, and the string drawn to a focus over *H*.



To show that when the focus is on *M* the rays converge from *C* to some given point, the string *F* is drawn to a focus near the disk *B*. This also shows the act of accommodation when the focus is held at *H* or *E*. To show astigmatism the string *D* is drawn nearly to a focus and then two fingers press it together in one meridian, showing that the opposite meridian does not focus at that point.

Between the base and cylinder are two threads, one passing from each side of upright *A* to the opposite side of *B*, crossing each other in a hole in the centre of *C*. This shows the comparative size of the inverted image on the retina of a hypermetropic, emmetropic, or myopic eye, showing that the image enlarges with the lengthening of the eye.

This instrument is manufactured and sold by Meyrowitz Brothers, 295 and 297 Fourth Avenue, New York.

266 Madison Avenue.

A NEW URETHROTOME FOR CLOSE STRICTURES OF THE PENILE URETHRA.

By JOHN BLAKE WHITE, M.D.,
PHYSICIAN TO CHARITY HOSPITAL, CONSULTING PHYSICIAN TO HOUSE OF REFUGE, NEW YORK.

Internal urethrotomy is practised in comparatively so large a proportion of cases of stricture, and the means by which the purpose is effected are often so very unsatisfactory, that any offer to improve the same must interest all surgeons.

Among the instruments devised to effect relief in cases of very narrow urethral calibre, none have yet taken precedence of the deft stricture-cutter of Maisonneuve. With all its perfections, nevertheless, this instrument fails to meet the stern requirements of many cases, proving, not infrequently, a hazardous weapon in the hands of many a cautious operator.

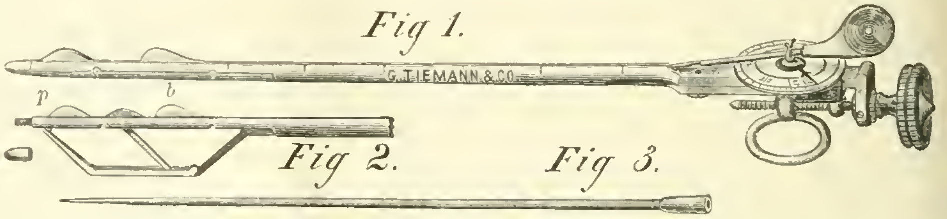


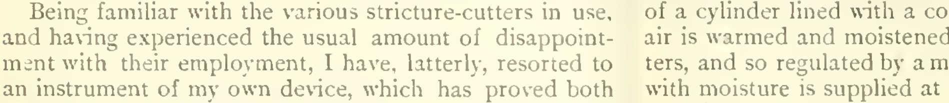
Fig 1.
Fig 2.
Fig 3.

In order to liberate a stricture with this instrument, the blade is urged, with a steady and determined hand, toward the obstruction. By such manœuvre a fold of adjacent healthy structure is likely to be pushed up before the blade, and is, of course, incised together with the morbid tissue. This necessarily complicates the operation by endangering hemorrhage, and exposes, needlessly, a long line of denuded surface to heal by the usual process of cicatrization, which occasions narrowing of the urethra after the operation, and sometimes curvature of the penis follows.

For the reasons stated, therefore, I think all operators will agree with me that an instrument contrived to cut a stricture from behind forward, similarly to the admirable dilating urethrotome of Dr. F. N. Otis, which is only applicable to strictures of large calibre, would be far preferable for operations in strictures of very small calibre.

Being familiar with the various stricture-cutters in use, and having experienced the usual amount of disappointment with their employment, I have, latterly, resorted to an instrument of my own device, which has proved both safe and effectual in my hands, and, furthermore, so devoid of ordinary exceptions that I lay it before the profession with pleasure.

My first experience with this instrument was with a case, in my service at Charity Hospital, of such exceeding narrow urethral calibre that a No. 3 F. bougie could with difficulty be passed. The instrument has a much smaller staff than the ordinary one of Maisonneuve, and is made to cut from behind the stricture forward.



The above instrument consists of two cannulæ, one fitting easily within the other. The distal end of the larger (or outer) cannula is furnished with a bulb, *b*. The smaller (or inner) cannula carries a filiform bougie, *r*, and a grooved prominence, *p*, which acts as a sheath for a blade, *m*. The blade is attached to a delicate rod, made small enough to play freely through the calibre of the smaller cannula, and, by manipulation at *c*, can be made to traverse back and forth between the bulb *b* and the sheath *p*. At *d* is a graduated scale, which serves both to indicate the amount of stricture-tissue involved and to regulate the distance the knife is to be withdrawn, in order to avoid the unnecessary incision of non-morbid tissue.

For strictures of large calibre I have been in the habit of using the following instrument, modelled after the admirable dilating urethrotome of Dr. Otis, which I believe possesses additional very useful modifications.

A filiform bougie is attached to the distal end, as in the other instrument already described, and serves to direct the bulb *p* past the stricture, at which point firm pressure is sometimes necessary, and may be safely exerted. Without the bougie a false passage might easily be made. The stricture-tissue is firmly held between *p* and *b*, by dilating the extremity of the instrument to the required calibre, when the knife is to be drawn forward from *p* to *b* and returned again to *p*, thus severing completely the stricture-tissue without wounding the adjacent sound mucous membrane.

No hemorrhage of moment has yet followed the use of this urethrotome, and the reason is very manifest, viz., the incision is made solely through morbid tissue, and is much less extensive than that which is ordinarily made in performing internal urethrotomy. After the urethrotome is removed, it is my habit to wash out the urethra with the bichloride solution (1 in 20,000) and introduce a full-sized sound, at least beyond the point of incision.

It will be observed that by the above methods of operating the greatest degree of accuracy of incision is attained, and that there is the minimum degree of risk run in wounding normal parts of the urethral canal.

Hot Moist Inhalations in Phthisis.—Dr. Eduard Krull, of Güstrow, in Mecklenburg, in a contribution to the *Berliner Klinische Wochenschrift* (Nos. 39 and 40), describes a new method of giving inhalations, employed by himself in cases of phthisis. The apparatus consists of a cylinder lined with a coiling steam-pipe, in which the air is warmed and moistened; it is fitted with thermometers, and so regulated by a movable lamp that air saturated with moisture is supplied at a uniform temperature of 40° to 50° C. The object of the inhalation is to cause dilatation of the vessels of the pulmonary vesicles, and thus introduce a larger quantity of blood into the lungs without increasing the frequency of the pulse. By this means it is hoped the aëration of the blood would be promoted, in spite of the slight rarefaction of the heated air, and the still healthy portions of lung would gradually gain in vitality from improved nutrition, so as to be better able to resist the inroads of bacilli, and to complete the absorption or resolution of the lowly organized products which perpetuate the disease. The cases published by Dr. Krull are all examples of advanced phthisis, and his results have been such as to insure a wider trial of his method; but he looks for even greater success in cases in earlier stages. The treatment is carried out by administering, once or twice daily, an inhalation at 43° to 44° C., for a period of thirty-five to forty minutes, the patient breathing in, at natural intervals, through the mouth and out through the nose. All medicinal treatment is discontinued, a daily walk in the open air (with all precautions), occasional tepid baths and skin-rubbing, and properly regulated diet, being the only adjuncts. After each inhalation the patient reclines on a sofa for an hour or two.—*British Medical Journal.*

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 18, 1888, *to November* 24, 1888.

Alexander, Richard H., Lieutenant Colonel and Surgeon. By direction of the Secretary of War, leave of absence for four months is granted, to take effect from the date of his relief from duty as Medical Director, Department of Arizona, by Lieutenant Colonel **Joseph R. Smith**, Surgeon. Par. 11, S. O., 268, A. G. O., Washington, November 16, 1888.

Smith, Lieutenant Colonel. After being relieved by Lieutenant Colonel **Alden**, will report in person to the commanding officer, Department of Arizona, for duty as Medical Director of that Department, relieving Lieutenant Colonel **Richard H. Alexander**. Par. 10, S. O. 268, A. G. O., Washington, November 16, 1888.

Alden, Charles H., Lieutenant Colonel and Surgeon. Is relieved from further duty at the U. S. Military Academy, West Point, N. Y., and will report in person to the commanding general, Department of Dakota, for duty as Medical Director of that Department, relieving Lieutenant Colonel **Joseph R. Smith**, Surgeon. Par. 10, S. O. 268, A. G. O., Washington, November 16, 1888.

Smart, Charles, Major and Surgeon. By direction of the Secretary of War, will proceed to Milwaukee, Wis., to represent the Medical Department of the Army at the meeting of the American Public Health Association, in that city, November 20 to 23, 1888, and upon the adjournment of the Association will return to his proper station. Par. 2, S. O. 268, A. G. O., Washington, November 16, 1888.

Newton, Richard C., Captain and Assistant Surgeon. By direction of the Secretary of War, leave of absence for four months is granted. Par. 16, S. O. 272, A. G. O., Washington, November 21, 1888.

Wood, Marshall W., Captain and Assistant Surgeon. By direction of the Secretary of War leave of absence granted in special orders, No. 257, November 3, 1888, from this office, is extended ten days. Par. 12, S. O. 270, A. G. O., Washington, November 19, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending November 24, 1888.

Heffinger, A. C., Passed Assistant Surgeon. Ordered to the U. S. S. Kearsarge.

Bryant, Patrick H., Assistant Surgeon. Ordered to the Naval Hospital, Brooklyn, N. Y.

McMurtrie, Daniel, Surgeon. Ordered to the U. S. Receiving Ship Vermont.

Drennan, M. C., Surgeon. Detached from the Vermont and to the Atlanta.

Winslow, G. F., Surgeon. Detached from the Atlanta and placed on waiting orders.

McClurg, W. A., Passed Assistant Surgeon. Detached from the Tallapoosa and to the Kearsarge.

Von Wederkind, L. L., Assistant Surgeon. Ordered to the New Hampshire.

Heffinger, A. C., Passed Assistant Surgeon. Detached from the Kearsarge and to the Tallapoosa.

Stephenson, B. F., Surgeon. Detached from the Navy Yard, Boston, and to the Wabash.

Oberly, A. S., Medical Director. Ordered to the U. S. S. Richmond.

Jones, W. H., Surgeon. Detached from the U. S. S. Richmond and wait orders.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 24, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	17	4
Scarlet fever	147	26
Cerebro-spinal meningitis	1	0
Measles	233	7
Diphtheria	114	25
Small-pox	0	0
Yellow fever	0	0
Cholera	0	0

For Uræmic Insomnia and for urgent uræmic symptoms of all kinds, Dr. William H. Porter gives ¾ grain of pilocarpine hypodermically, and claims to get rapid relief. He believes that the drug acts as a vaso-motor stimulant and increases blood-pressure, and that the lethal effects of the drug are due to the usage of too small a quantity, which acts in a directly opposite manner, and paralyzes the vaso-motor system and thus causes lowering of blood-pressure. Dr. Porter relates several interesting cases.—*Canada Lancet.*

One Source of Caffeine.—It is said that between 3,000 and 4,000 lbs. of caffeine are annually made in Germany from damaged tea which has been rejected by the British custom-houses.

To Cut the uvula, draw it forward and cut, as this makes an oblique incision, and the raw surfaces are not scraped every time the patient swallows, as would be the case if cut horizontally. Spray with twenty per cent. solution of cocaine. (Sajous.)

Another Fasting Man has begun a thirty-day fast at Edinburgh. The man's name is Alexander Jacques, and he expects to show the utility of a certain herb by which he expects to sustain himself. He will, at least, give his herb a big advertisement.

Ministerial Risk—"I'm very glad to have been of any comfort to your poor husband, my good woman. But what made you send for me, instead of your own minister?" "Well, sir, it's 'typhus' my poor husband's got, and we dinna think it just reet for our ain minister to run the risk!"—*Punch.*

The Expulsion of the Placenta.—The manner in which the placenta is expelled is a subject of high interest, both to the scientific obstetrician and to the practitioner. Baudelocque maintained that the placenta was detached by the effusion of blood between its inner surface and the uterine wall. This theory implied that the uterine muscular apparatus played a passive part in the process, and that flooding was, so far as needed for detaching the placenta, a physiological and not a pathological process. Mathews Duncan's theory, now generally accepted, is very different. The uterus, he still insists, is active in expelling the placenta. Its retraction and contraction progressively diminish the uterine cavity until the placenta is forced beyond the os. Effusion of blood may occur, but that accident is not essential. According to Baudelocque's theory, the fœtal aspect of the placenta should present; after Duncan's doctrine, either side or the edge may present. Dr. Auvard, who has recently considered the whole question (*Archives de Tocologie*, August, 1888), dwells on the fact that on Duncan's theory the presentation of the fœtal aspect is comprehensible. The placenta is first detached by uterine contractions, and blood is accidentally effused between the uterine wall and the placenta during muscular relaxation. A contraction follows, and presses on both the clot and the placenta, the latter turns over and its fœtal aspect presents. Even without hemorrhage the placenta detached from the fundus may fold in on its uterine face, and thus come to be expelled with its fœtal aspect foremost. M. Varnier has described a case where a clot was discovered, and where the placenta was found curled in on its uterine aspect. He believed that this case verified Baudelocque's theory, but Dr. Auvard disagrees with him, and notes that if true it ought to explain every case. Yet the hemorrhage theory could not, he says, explain the detachment of a placenta prævia at the moment of birth. Again, in some labors, there is little or no hemorrhage, so the placenta must be detached otherwise than by blood. Dr. Auvard distinguishes two mechanisms by which the placenta is retained. Bandl's ring may close up, so as to make an hour-glass contraction, completely imprisoning the placenta in the upper or thick segment of the uterus. This Dr. Auvard terms *emprisonnement*. Sometimes, however, an accessary ring forms by contraction high in the upper uterine segment, and contracts sufficiently over the edges of the placenta, so as to retain it, as a stone is retained in the bezel (Fr., *chaton*) of a ring. Hence Dr. Auvard gives to this variety of retained placenta the name *enchatonnement*. He finds that it is much rarer than "imprisonment." When it exists the normal uterine circle is detected above the flaccid lower segment, and the finger passes into the cavity of the upper segment till the placenta can be felt retained high up in this segment.—*The British Medical Journal.*

A Heavy Indictment against London.—The *British Medical Journal* concludes an editorial article suggested by the recent Whitechapel murders in the following strong language: "Here, then, are three chief defendants in the indictment which this series of murders opens against London. Ourselves, the great public of London, stand first in the dock, convicted by flagrant and horrible proof of indifference to the physical and moral degradation of our fellow-citizens; convicted of tolerating darkness, filth, crime, and obscenity as ordinary incidents of metropolitan life; standing aside with intellectual apathy, with pockets closely buttoned, and with minds intent on our own pleasures and businesses, and looking on indifferently at the work of the few devoted toilers who have done so much to redeem London from these horrible disgraces. Next, our municipal authorities stand charged with indifference to the lighting, paving, and cleansing of their streets and courts, and with permitting the inhabitants to carry on a traffic prohibited by law, and one which it lies with them to suppress. Lastly, the police need to be quickened by a higher sense of public morality, to be strengthened in number, and to be encouraged and commanded to a much stricter exercise of their ordinary duties as patrols. At present, night charges are rather discouraged; the opposite tendency ought henceforth to prevail. But this is a measure of repression which can only be effectual if it be accompanied and preceded by an unwearying and unstinting effort to remove the conditions under which criminal and degraded conditions arise. While earnestly hoping, therefore, that the secret of these assassinations may, as there is some reason to hope, be quickly unravelled, there remains the yet more ardent desire that the lessons taught by these horrors will be enduring, and will have a fruitful effect on the social well-being of the metropolis."

Cocaine Conjunctivitis.—Dr. Charles Rice, of this city, referring to the recent paper by Dr. Kipp, writes: "I desire to say that my attention has been drawn repeatedly, by several prominent ophthalmologists, to the very peculiar effects produced by the simultaneous, or nearly simultaneous, use of silver nitrate and cocaine muriate. In some cases these substances produced a most alarming condition of the eyeball, such as intense inflammation, purulent discharges and sloughing. A careful chemical examination of the substances employed showed them to be pure. There appears, therefore, no other explanation possible than a physiological one, namely, a peculiar susceptibility of the tissue, the blood-vessels of which have previously been affected in the well-known way by cocaine, to the action of nitrate of silver. The fact of this peculiar action appears to be beyond doubt, but the explanation is merely a guess.

Mare-meat.—Dr. Huidekoper, of Philadelphia, recently had a very fine mare, and still more recently a very fine dinner, the latter being tendered to some friends at the Philadelphia Club. The mare was served up at the dinner as one of the courses, the part served being, naturally, a *filet.* In explaining the nature of their dinner after it was over, Dr. Huidekoper says: "All horse-meat is as good as beef. It is a pity that horse-meat is not eaten in this country. The horse would not have to be worn out and sold to hucksters at $10 and $12, when they would bring good prices for meat. The people in this city eat beef a great deal more unfit for food than good horse-meat. I can go to the stock-yards in West Philadelphia and pick out a dozen head of cattle any morning that are utterly unfit to eat, that are sent to market. There is no inspection of meat in this city and the law is violated every day. The only beef that is properly inspected is that eaten by the Hebrews, which is killed according to their rule. The Council of the Veterinary School of Belgium even recommended dog-meat for human food after being properly inspected. There are 125,000 human deaths in this country every year from tuberculosis, and nearly one-half of them are the direct result of eating diseased beef."

Boiled Water as an Aseptic.—Microbian cultures flourish in the most concentrated solutions of carbolic acid; and this is also true of sublimate solutions actually as strong as usually recommended. The accidents occasioned by corrosive sublimate, by carbolic acid, and even by iodoform, are so frequent and so well known, in the meantime, that one cannot too warmly urge upon surgeons the use of simple water, which, after filtration and boiling, at 100° F., or, better, at 120° F., if one has the proper apparatus, is certainly the best aseptic we have at our disposition. While solutions of hydro-chlorate of morphine for hypodermic use, made according to the old method, with distilled water, are full of micro-organisms and of microbes at the end of five to ten days of use, they are preserved pure and perfectly limpid during weeks or even months, if water be employed which has been filtered and boiled.—*Gazette de Gynécologie.*

Oxy-propylen-di-iso-amylamine.—A new artificial alkaloid has lately been discovered, to which the name of *oxy-propylen-di-iso-amylamine* is given. It is prepared by the action of hydrochloride of propyl on di-iso-amylamine. It forms an oily, colorless liquid, only slightly soluble in water, but soluble in alcohol, and forming very soluble salts with acids. The physiological action of this body has been investigated by Louise. On the nervous system it acts something like atropine, but in toxic doses causes epileptic seizures of two kinds. In moderate doses it is a powerful cardiac tonic, and an energetic stimulant of the circulation and the cerebro-spinal centres. In its action on the heart it resembles atropine, paralyzing the inhibitory apparatus and increasing the action of the accelerating nerves. There is remarkable augmentation of the intravascular pressure, and marked elevation of the temperature of the body in cases of acute intoxication. The toxic dose for a man is about half an ounce.—*The Provincial Medical Journal.*

Sir J. Fayrer on Cholera.—In an address on the natural history and epidemiology of cholera (*Medical Press*) Sir Joseph Fayrer says that, although much remains to be known about the causation of cholera and its apparent caprices in incidence and diffusion, yet, from what experience and observation have taught us, we seem to be warranted in stating the following to be facts with reference to the disease: 1. That cholera has been present in India and other countries from the earliest times, and that isolated cases occur in almost all countries. 2. That cholera is always present, not only in certain parts of India, but elsewhere, and that in India outside these areas its prevalence varies in different years, and according to the season of the year. 3. That cholera does not attack all the places within an epidemic area. 4. Meteorological changes produce sudden alterations in the activity and intensity of an outbreak. 5. That the rate and direction of an epidemic are not influenced by facilities of communication or by the greatest streams of human traffic, the opening of the Red Sea route, *e.g.*, not having increased its diffusion. 6. That the cases are more frequent and more severe at the commencement than in the continuance of an outbreak. 7. That hygienic measures afford the greatest security, but are not an all-powerful safeguard against cholera; local insanitary conditions and impure water favor its incidence and increase its intensity; that it is important to check all diarrhœa in times of cholera prevalence. 8. That cordons and quarantine have utterly failed to prevent the spread of cholera, but, on the contrary, have done harm. 9. That to enter an area over which cholera is present, or to travel within that area, is especially dangerous to a new-comer, while residents whose circumstances of living are favorable have a better chance of escape 10. That removal is the best course when cholera attacks a regiment or other body of men. 11. That attendants on the sick have not suffered more than others. 12. That impure water, irritating articles of diet, unripe fruit, saline aperients, are liable, during cholera prevalence, to bring on diarrhœa and the disease. 13. That fatigue, exhaustion, fear, and anxiety are powerful predisposing causes. 14. Many circumstances attending the outbreak of the disease and the pathological conditions then developed seem opposed to a specific poison as being the cause of the disease. 15. Having suffered from cholera gives no immunity from recurrence of the disease.

A REMARKABLE POST-MORTEM.—Dr. Dauscher records the following remarkable case: A man, aged thirty-five, was suddenly thrown down by a mass of earth, which fell from a height of about sixteen feet. It struck him upon the back, covering first his feet, then his legs and abdomen, and lastly the thorax, leaving the head and neck free. Workmen at once proceeded to extricate him, but death had taken place before this could be accomplished. At the autopsy the author was surprised to note a large swelling, about the size of an adult skull, in the neck, and extending toward the right shoulder. Upon examination this swelling proved to be the two lungs and the heart, which had been thrust through the upper wall of the thorax. Beyond this the man exhibited no further signs of injury. The abdomen, however, was greatly depressed, and on laying it open the viscera were found to have been displaced into the thorax. The diaphragm was ruptured in several places, and notably around its attachment. The thorax was almost completely filled with the abdominal organs. The spleen and liver were both ruptured, but neither the stomach nor intestines had received any injury. The heart was small, the large vessels and trachea were unwounded, the lungs collapsed, and brain and cranium normal.—*Medical Press.*

CLIMATE FOR CONSUMPTIVES.—Dr. Knight, in the *Boston Medical and Surgical Journal*, makes the following suggestions as to a suitable climate for consumptives: (1) Those presenting the earliest signs of chronic tuberculosis of the apex, with morning cough, but little general disturbance, should live out-doors in Colorado or New Mexico; at an altitude of 4,000 to 8,000 feet. (2) More advanced cases, with some consolidation, but no excavation, if the pulse and temperature range below 100, may go to the same localities; but if not, to Aiken, or the pine woods of South Georgia. When the morbid processes become quiet, a move may be made to the higher altitudes. (3) Hemorrhagic cases should also go to the high altitudes. (4) Advanced cases with hectic or cavities had better stay at home, unless they are possessed of sufficient means to obtain home comforts elsewhere, when they may be sent to Florida. (5) Cases of acute general infiltration should be kept at home. Those commencing like acute pneumonia should stay at home till the acute symptoms subside, and then remove to some low, dry place; cautiously changing to more elevated localities. Cases of acute exacerbations should pursue the same course. (6) Pneumonic cases, if young, should be sent up the hills. If over fifty, or with dilated heart, or very harassing cough, Southern California offers a suitable climate. (7) Those who are threatened with tuberculosis after pleurisy or pneumonia should go to high localities. (8) Laryngeal tubercle. For these cases Southern California answers well. (9) Complications may alter these rules. Dilatation forbids high altitudes, while other cardiac cases should be carefully watched. Acute nephritis is aggravated by high altitudes, but chronic Bright's disease is benefited. Patients with intestinal ulcers do badly everywhere.

THE RECOGNITION OF HUMAN BLOOD-STAINS BY THE MICROSCOPE.—At a meeting of the Medical Jurisprudence Society of Philadelphia, the important and interesting subject of the recognition of human blood was under discussion. (*The Philadelphia Medical Times*). The subject was introduced by Dr. Formad, the Coroner's physician, who read a paper entitled "Microscopical Examination of Blood from a Medico-legal Stand-point." An incidental feature which gave special importance to the paper was the statement by Dr. Formad, which he was reported as having made on the witness-stand in a recent trial for murder in this State, that he could always recognize human blood by the microscopic appearances and tests. This advanced position, however, was not sustained by the remarks of the lecturer, and, when taxed with it during the discussion, he denied ever having made such a positive statement, and explained that the stenographer had failed to get all of the answer he had given to the interrogation in the trial referred to. The drift of the discussion was decidedly opposed to the claim that human blood-clot could be absolutely recognized beyond the possibility of mistake. In many cases, it is true that valuable evidence of a negative character can be thus obtained, but the most that can be affirmed at present of any given specimen is, that the result of the examination is consistent with the theory that the stain was due to human blood, and that it was derived from some of the higher mammals.

TREATMENT OF NÆVUS BY ETHYLATE OF SODIUM.—The treatment of nævus by means of ethylate of sodium was advocated by Dr. B. W. Richardson in an early number of the *Asclepiad*, and in the current issue of this serial its author again reverts to the subject. The method as now employed is as follows: The surface of the nævus is first dried with a piece of cotton-wool, and is then thoroughly coated with the ethylate, applied with a good camel-hair brush, the use of a glass rod not being really essential. The pain which generally ensues is by no means considerable, and soon a few drops of watery exudation appears on the reddened surface, which subsequently becomes dry and pallid. In a few hours a scab forms, which gradually hardens, and on the third day a fine needle with cutting edges is passed through it, and used to break up the vascular surface beneath. On applying firm pressure now to the upper surface a drop or two of blood escapes, and at once a piece of lint steeped in styptic colloid is applied to control the bleeding, on the cessation of which a drop of the ethylate solution is inoculated into the nævus through the punctured opening, a new layer of it is painted over the crust, and the crust left for another four days, when, if firm and dry, the cure is complete; otherwise a repetition of the puncture and inoculation may be requisite.

HINTS FOR THE TREATMENT OF SLEEPLESSNESS.—The following *résumé* of an article by Dr. Eccles, on the treatment of sleeplessness, is published in the current number of *Gaillard's Medical Journal:* 1. *Hot bath,* taken just before settling quietly for the night, is most valuable in producing a dreamless sleep, though this does not usually last more than four hours, and is sometimes followed by a period of great wakefulness, relieved only by a short morning doze.. Method of giving the bath most important. Bath-room should be at temperature of 65° F., and this to be raised during bath to 70° F. Patient to be at once stripped, and then the stooped head and face rapidly douched with water at 100° F., to dilate brain vessels; next whole body, except head and face, to be immersed in bath at 98° F., and this temperature rapidly raised to 105°–110° F. In about eight to fifteen minutes, when the at first accelerated pulse has fallen to a slow, full, steady, and compressible beat, the patient must be slowly raised, closely wrapped in warm blankets (a loose pyjama suit is a good contrivance), and conducted to the bedroom without any haste and at as small personal effort as possible. On reaching the bedroom he will be dry. Let him then at once don his night-clothes and immediately lie down with the head well raised, a hot bottle to the feet, and the body well covered with bedclothes. The bath probably acts by reducing the supply of blood to the whole of the brain, thus decreasing the functional activity equally throughout, and so placing it in the most favorable condition for complete functional rest, to the exclusion of the partial activity of certain centres which would induce dreaming. It has proved most useful for the relief of disturbed sleep in persons who have either ceased to be influenced by ordinary hypnotics, or in whose cases their use is contra-indicated. The bath itself, however, is contra-indicated in extreme anæmia, emaciation, aortic valvular disease, and atheroma.

2. *Massage at bedtime.*—Valuable in organic cardiac mischief, and in the very large number of cases in which functional weakness of the heart and circulation generally is a feature of the nervous debilitated constitution. Two cases of aortic regurgitation mentioned, in which permanent benefit resulted, and one of aortic aneurism where the improvement was only temporary. On conclusion of the kneading the patient must at once compose himself to sleep. Its performance must be rapid, commencing with the abdomen and passing to the back, arms, and legs, with as little exposure of the parts to the outer air as possible, so that a layer of warm air may be maintained between the closely covered limbs and the bedclothes. The manipulations should be directed not so much to the evacuation of the lymphatic and venous vessels of the parts dealt with, as to the rapid and sufficient stimulation of the sensory nerves with the dilatation of the arteries over as large an area as possible. This kneading no doubt acts in the same way as tapping the abdominal parietes of a frog, which Goltz showed greatly dilated the abdominal vessels and distended them with blood, whilst it reduced the frequence of the pulse.

3. *Warm abdominal compress.*—Take two pieces of twilled calico, half a yard wide and four yards long; roll these up lightly and raise them to a great heat in a closed earthenware vessel in a hot oven. Immerse as much of one as is necessary to cover the abdomen in water, and apply closely to the abdomen, then rapidly and firmly roll the rest of the bandage round the abdomen and loins; take the other hot bandage out of the earthen vessel and wrap it firmly round the first. In this way heat and moisture are kept applied to the abdominal walls, keeping up the free circulation of blood and soothing the nervous system. Schüller put a warm compress on the belly of a rabbit, and having removed the cranial walls he noticed that an immediate and long-continued contraction of the meningeal vessels, with slowing of the cerebral movements resulted.

4. *The wet pack.*—This is most useful in those cases of erethetic neurasthenia resulting from prolonged overwork, mental distress, morphine habit, chloral drinking, and chronic bhang-poisoning. Any immediate beneficial results cannot be expected in these cases. The mechanical stimulus of massage temporarily excites rather than soothes the ill-balanced nervous system. Drugs are contra-indicated and moral suasion is useless. Should the patient's surface temperature be subnormal (*i.e.*, foot under 90° F. and palm less than 95° F.), moderately firm friction of the limbs and trunk should be employed to raise the superficial warmth. The bladder should be evacuated. The patient should leave the pack as soon as the previously retarded circulation begins to be accelerated. The night-clothing should be well warmed and put on as quickly as possible. With all four the recumbent position must be maintained in a quiet, cool, well-ventilated room, the diet must be carefully modified, and daily massage performed.

AGE AND CHILD BEARING.—There has always been much mystery connected with the old maid and her first child. Old women shake their heads wisely and solemnly when a woman above thirty marries and comes to her first childbed. Eckhardt has given this subject considerable attention (*Zeitschrift für Gebürtshulfe und Gynækologie,* xiv., 1, p. 44). His field for observation has been an extensive one, viz., the Gynecological Klinic of Berlin. He finds the mortality of the children increases in proportion to the age of the mother. His statistics of mortality of the children reach 19.81 per cent., corresponding very nearly with those of Kleinwachter, 19.26 per cent. The mortality among old primiparæ is nearly three times as great as among the young primiparæ. He observed a regular increase in the rate of mortality when he compared primiparæ in groups of succeeding four years, from twenty to forty years. He found turning done more frequently as age increased among primiparæ, but seldom done after forty years. Forceps deliveries occur three times, and perforation five times as often in old primiparæ as in young. The per cent. of all these operations increases with the age of the patient, and above forty years reaches 58 to 60 per cent.—MCKEE, *Cleveland Medical Gazette.*

DO CONTRACTED PELVES have an influence on the sex of the child? This is a question of considerable interest and has been given some attention. Olshausen, of Berlin, in a series of 521 deliveries of women having contracted pelves, found 211 girls and 310 boys, *i.e.*, 100 to 147. Ahlfeld arrived at much the same results, viz., 133 boys to 100 girls, or 150 to 100. Dohrn (*Zeitschrift für Gebürtshulfe und Gynækologie*, xiv., 1, p. 80) has made the last thorough experiments on the subject in the obstetrical clinic of Königsberg. He collected statistics of 450 deliveries in women who had narrow pelves; 224 were girls and 226 were boys—100 to 100.6. The other deliveries in this clinic were in the proportion of 100 to 101.6. Dohrn is of the opinion that a narrow pelvis has no influence on the sex of a child.—MCKEE, *Cleveland Medical Gazette.*

THE ILLEGALITY OF SICKNESS.—It seems to be considered as much a crime for a person in a summer resort to become sick as it is for the physician in attendance to seek to save others from exposure to contagion. The *Sanitary News* says that at Hamburg-les-Bains this summer two rich New Yorkers—the Messrs. Harriman—were taken down with slow fever in an apartment of the house opposite the Kursaal. When they recovered the landlord demanded two thousand marks for damages, which, after consultation with Frankfort lawyers, they had to pay.

WHAT THEY THINK OF EACH OTHER.—"What is the difference between the allopaths and the homœopaths?" asked Mrs. Cumso of her husband. "Oh," he replied, "the allopaths think the homœopaths are not ortho-docs." —*Life.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 23 New York, December 8, 1888 Whole No. 944

Original Articles.

OXALURIA, ESPECIALLY IN ITS RELATIONS TO URIC ACID.

By DEBOUT D'ESTRÉES, M.D.,

CONTREXVILLE, FRANCE.

"The excessive production of oxalate of lime in the economy is a subject the explanation of which offers one of the most difficult problems to the physician."

So wrote our deceased master, Professor Bouchardat. To-day the problem is still not solved, and I must confess that after a professional experience of twenty years in a town where, on account of its mineral springs, patients afflicted with gravel congregate, coming from all parts of France, I am still unable to clearly define the principles which govern the formation of oxalate of lime in the human system.

It is a fact that in our country deposits of the oxalates are as rare as they are common in the United States, and it is for this reason that I am eager to bring before you, for your judgment, the paper that I have the honor to submit this evening.

The proportion of patients suffering from oxaluria in France is forty-seven per thousand of gravel, as observed at Contrexville, while it is eighty per cent. among those American patients, who, suffering from gravel, came under my care on the continent.

The uric-acid calculi so common among us are, on the contrary, the exception with those of your countrymen who were under my professional care.

My experience concurs with that of the best authorities of both nations; for while in Paris Professor Bonehardat found, on analysis, calculi in one hundred and forty-three cases in a thousand, and Dr. Leroy d'Etiolles thirty-three times in two hundred and fifty-two cases, with oxalate of lime as a neucleus, in *this* country Dr. Bigelow found forty-three cases in a hundred.

Before we look for the cause of these differences let us make a rapid review of the principal theories which have been advanced from time to time to explain the formation of oxalate of lime, bearing in mind that this salt, when chemically pure, is white, while that of the calculi, of which it is a component part, is in nearly every instance black (mulberry calculus), owing to the presence of the coloring matter of the blood.

I have, however, occasionally met with some forms presenting a white color, as illustrated by the two specimens which I submit to you herewith. But in oxaluria renal hæmaturia is the rule, while in uric-acid gravel it is the exception.

Various theories have been advanced to explain the formation of oxalate of lime in the system. Prout (an English author) considers the oxalate of lime so produced as the result of imperfect assimilation of oxalic acid contained in the food; this being true also in the case of sugar, and possibly albuminous and oleaginous food.

The German chemist Lehmann has advanced another theory; he admits that the oxalate of lime may be traced to vegetable food containing oxalic acid, and that the same result might be produced by beers rich in carbonic acid, by the double carbonates, and by the alkalis in combination with organic acids. Aside from the oxalate derived from ingesta, Lehmann admits that a certain quantity is formed spontaneously in certain pathological conditions, and he attributes its formation to a modification of the respiratory function.

The carbonic acid in this case mingling with the blood in excess would prevent its complete oxidation. We will not dwell on the theory of Schmidt, who looked for the origin of oxalate of lime in the mucous membrane of the urinary organs, nor on the theory of another German author, Beneke, who is of opinion that oxalic acid is the direct outcome of a suspension in the successive physiological transformations which nitrogenous foods undergo. To this author, therefore, oxalic acid would appear to be an element existing temporarily in the urine in the physiological state, finally becoming oxidized, and undergoing a change into carbonic acid. When through some cause this oxidation is prevented, oxalic acid appears in the urine.

The exaggerated ingestion of nitrogenous food, want of exercise in the open air, catarrhal conditions of the mucous membrane of the stomach, are some of the causes assigned by this author. In fine, the nervous system is not a stranger to the production of oxaluria. All the causes which depress it cause a delay in metamorphosis, and stand in causative relation to the production of oxalic acid.

But the exaggerated ingestion of nitrogenous food, or lack of exercise, are just as likely to produce uric-acid gravel. Why, then, should there be a formation of oxalic acid?

According to Dr. Beneke this would depend on the time at which the transformation of nitrogenous materials in the blood into urea ceased, when there would be at once a decrease of urea, uric acid, and oxalic acid. According to his views the uric acid derived from the nitrogenous materials of the blood divides into two parts, one being transformed into urea and oxalic acid, the other eliminated in the form of uric acid. In the physiological state the oxalic acid would be transformed into carbonic acid.

But let us suppose that, through one of the causes cited above, oxidation be prevented, then there would be elimination of oxalic acid. Therefore, according to that author, the matter resolves itself into a simple question regarding the precise time at which the transformation ceases.

According to Maclagan (an English author), it is the nervous system which is active in the genesis of oxalate of lime, especially when there is a retardation of the respiratory function.

Owen Rees thinks that the oxalate of lime does not exist primarily in the urine, but that its presence there is due to a secondary formation, because of a simple molecular transposition which takes place between the elements of uric acid and the urates.

I will not dwell upon the works of Vulpian and Gallais, in France, and of Ralfe, in England, but will conclude with the opinion of Professor Bouchard, which is that the oxalate of lime increases in all diseases in which there is a disturbance of the processes of nutrition, and that acid fermentation, with production of oxalic acid, takes place in children into whose food potatoes enter largely, retarding or interfering with the natural functions of the digestive organs, fermentation commencing in the stomach and continuing in the intestinal tract, the alkaline juices of which it neutralizes. This explains the frequency of oxaluria among the children of poorer classes.

I will not encroach upon your time with any further quotations, but will proceed to formulate what I believe to be, in our present knowledge, the nearest approach to truth, in this most interesting question regarding oxaluria.

1st. Oxalate of lime is a body that may be present in normal urine to a greater or lesser extent, owing to the influence of certain foods.

2d. Uric acid is frequently found, together with oxalate of lime, in urinary sediments in gravel as well as calculi.

3d. Oxalic acid owes its existence to the presence and incomplete oxidation of uric acid.

4th. Alkaline mineral waters having lime as a base, present the most effective means at our command to cure oxaluria.

This last assertion is to be credited to Dr. Bouchardat, professor of hygiene, faculty of Paris. No evidence is required to establish the correctness of the first proposition. You will readily find crystals of oxalate of lime in urine twenty-four hours after the ingestion of food containing the salt in large quantities, as, for instance, rhubarb, tomatoes, sorrel, etc.; indeed string beans, oranges, celery, green fruits, apples, and water-cress contain it in notable quantities.

The second point touching the co-existence of uric acid and oxalate of lime in the urine does not call for special proofs. No one who has made an analysis of the urine of a patient suffering from gravel has failed to discover, on microscopical examination, crystals of oxalate of lime associated with uric acid. Moreover, I will venture to say that there is no one present who has not met calculi with a nucleus of oxalate of lime surrounded by uric acid, and those rarer specimens in which deposits of oxalate of lime were found surrounding a nucleus of uric acid.

The specimens of gravel which I brought from Contrexville, and which I have the honor to place before you, and which were voided per *vias naturales*, show two rather exceptional features. In one you will find that oxalate of lime is deposited on two sides of a uric-acid calculus, in the other the stone seems to be formed of two distinct parts, namely, uric acid and oxalate of lime.

Regarding the third statement, Wöhler's experiments would seem to confirm this. He injected uric acid into the veins of dogs, employing the urate of ammonia, and as a result found oxalate of lime in the urine. This justifies the inference as above regarding the presence of this salt in man.

The records of the clinic at Contrexville will serve to further demonstrate the correctness of this assumption.

In fact, without citing cases which would increase the length of this paper beyond its scope, I think that the one fact which those of our confrères, who, like Dr. Keyes, visited the Vosges last year, were in position to verify, will suffice. A patient presents himself whose urine is of high specific gravity, from 1.028 to 1.032 (Sir Alfred Garnod spoke to me of a case in which it had reached 1.040), and showing on analysis the presence of crystals of oxalate of lime alone. Eight days later the specific gravity of the urine is from 1.023 to 1.026, and uric acid is discovered in the form of fine crystals, together with oxalate of lime. Fifteen days later the specific gravity has fallen to 1.015, and on microscopic examination uric acid is found exclusively. What further proof is necessary to show that oxaluria and the uric-acid diathesis are of common origin? The same facts obtain in diabetes, as explained by me in an article in *The Lancet* of May 22, 1887.

Why, then, does the French patient present the complication of uric acid, and the American oxalate of lime? May I be permitted to suggest the causes, and ask you whether you agree with me?

Uric acid is found in patients ill through heredity, overfeeding, and sedentary habits.

Oxalate of lime is found in dyspeptics, in men whose nervous system is exhausted, and in those who take large quantities of food containing the salt.

Is not this the case with your countrymen?

While the French, sedentary by taste or by profession, give themselves up too willingly to high living, the Americans live too fast, fatigue their nervous system beyond reason, without giving their digestive apparatus that proper care and attention which it deserves.

I believe that I am correct in formulating this opinion, based upon an experience of twenty years in cases of gravel, and I lay it before the members of your honorable body, whose kindly aid and valuable counsels I trust may be accorded me.

ON THE MANAGEMENT OF PROGRESSING CEREBRAL HEMORRHAGE.[1]

By ANDREW H. SMITH, M.D.,

NEW YORK.

It not infrequently happens that a physician sees a case in which hemiplegia from cerebral hemorrhage has just occurred, and in which the patient is still conscious and the more pronounced symptoms of intracranial pressure are not yet developed. Perhaps, even while he is looking on, these symptoms begin to appear, mental confusion passes into coma, the respiration becomes stertorous, there is dilatation of one or both pupils. In a word, the first symptoms, those of shock to the brain, have been replaced by those of compression. Now this compression, as we all know, is the result of effusion of blood within the unyielding skull, and the degree of compression will be in proportion to the amount of blood effused. Excluding cases in which there has been laceration in important brain-regions by the force of the out-pouring blood, the prognosis will be determined mainly by the amount of blood which escapes from the ruptured vessel, and the consequent degree and duration of the cerebral compression. Hence all our efforts should be directed to limiting the effusion to the smallest amount possible. Upon our success or non-success in doing this will depend in all probability the recovery or death of the patient.

But it is evident that our efforts in this direction must be guided by a correct appreciation of the manner in which hemorrhage in general is spontaneously arrested. In the case of wounds, for example, this arrest takes place through various agencies. First, if the vessel be small and if it be completely divided, the irritation of the injury produces a contraction of the circular fibres which greatly diminishes, if it does not entirely obliterate, the lumen of the cut extremities of the vessel. Second, the same cause leads to a longitudinal retraction of the vessel within its sheath, and the unoccupied portion of the sheath then affords a receptacle in which the effused blood lingers and becomes coagulated, thus forming a tampon against the bleeding orifices. Third, if there be not a free escape for the blood to the surface it accumulates in the tissues surrounding the vessel, and, exercising pressure upon the divided extremities, acts mechanically to close them. Fourth, if, in spite of these provisions for arresting the flow of blood, the hemorrhage still continues, the heart's action ultimately becomes enfeebled, thus diminishing the *vis a tergo* in the wounded vessel, and giving a better opportunity for the agencies already described to effect their object. This is especially the case when the hemorrhage results in syncope.

Now let us see how many of these provisions are available for the spontaneous arrest of cerebral hemorrhage as it commonly takes place. In the first place, the rupture occurs, in the majority of cases, not in the continuity of the vessel but in the wall of a minute aneurism formed upon the vessel. This wall is practically destitute of contractile tissue, and the vessel, not being entirely divided, retraction does not take place. Hence nature's first two provisions for the arrest of bleeding are of no avail. Secondly, even when the rupture takes place in the substance of the brain, the surrounding tissue is too soft to offer any considerable resistance to the escape of the blood, and therefore the third provision is to a great degree inoperative. The fourth, that of diminished cardiac action, is also useless, since the loss of blood is never sufficient to bring it into play.

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[1] Read before the Practitioners' Society, November 2, 1888.

Hence we see that none of the methods by which hemorrhage in other situations is spontaneously arrested is fairly applicable to cerebral hemorrhage as it usually occurs. There is, however, a limitation imposed upon such hemorrhage, viz., that which results from the rigidity of the bony wall in which the brain is encased. When the brain has been compressed to the utmost, and there is no more space within the skull into which blood can be infused, the hemorrhage must of necessity cease.

Now, while we see in practice many cases in which the symptoms indicate the escape of only a very limited quantity of blood, and in which we must assume either that the rent in the vessel was extremely small or that the resistance of the surrounding brain-matter was sufficient to restrain the extravasation, still, it is much more frequently the case that the hemorrhage goes on until unmistakable pressure-symptoms are developed. In these cases it is highly probable that the flow ceases only because there is no room for more blood within the skull.

Aside from the immediate harm done by this pressure, the ultimate results of this large effusion are of the gravest moment. The larger the clot the longer will be the time required for its absorption, and the longer the brain will be exposed to the disturbing influence of its presence. Indeed, as already remarked, the gravity of the prognosis, other things being equal, is directly in proportion to the extent of the hemorrhage.

If, then, we have reason to believe that in the patient before us the bleeding is still going on, what measures are to be taken to arrest it? The means employed must be such as are prompt in action, for minutes, even fractions of a minute, are of value. It is usual to place the patient with the head raised and to apply cold to the vertex. Formerly a vein was opened, but this is now seldom resorted to. Purgatives or enemata are often employed. Perhaps some would give ergot, on the general principle that it tends to restrain internal hemorrhage.

Let us consider these means in their reverse order.

As to ergot, it is of value only in hemorrhage from the capillaries or arterioles. It constricts the latter, but in cerebral hemorrhage, if the diseased condition of the vessel left any muscular fibre to act, the constriction would be more likely to be on the distal than the proximal side of the opening, and in that case would only aggravate the bleeding. But more important still is the fact that ergot increases greatly the vascular tension, and this would add to the force by which the blood is driven from the bleeding orifice. Ergot is therefore wholly contra-indicated in this, however useful it may be in some other forms of hemorrhage.

Purging and bleeding have for their object to reduce the bulk of the blood in general, and raising the head to diminish the amount within the cranium. In proportion as they are successful in accomplishing these objects they are, I suggest, hurtful rather than helpful to the patient. As we shall in all probability have to rely upon pressure in the end to stop the bleeding vessel, it is vastly better that this pressure be exerted by blood within the vessels than by blood extravasated into or upon the brain. The more blood in the intracranial vessels, the less room there will be for blood outside of them. I contend, therefore, that the correct treatment would be to place the head lower than the body and perhaps even to add to the cerebral congestion by the use of nitrite of amyl, which would at the same time diminish the *vis a tergo* in the injured vessel by its effect in lowering vascular tension.

Of course, the effect of these measures would be to bring on immediately the symptoms of pressure which otherwise might not have appeared until a few minutes or a few hours later. But in half an hour the escaped blood would have coagulated firmly at the point of rupture, the aneurismal sac would have filled with a clot, and the clot would have extended some distance back into the vessel. With the orifice thus effectually sealed the head might safely be raised, and the effect of the amyl allowed to pass off. We should then find the patient gradually emerging from his coma just at the time when, under the opposite treatment, the coma would be growing every moment more profound. Instead of a large clot, implying a corresponding degree of laceration of the brain, or compressing a corresponding area of brain-surface, we should have a relatively small clot with correspondingly little injury to the brain.

I admit that it would require some hardihood to carry out these measures in the face of the seeming aggravation of the symptoms which would immediately result, and that, in the event of a fatal termination of the case, the practitioner might be subjected to severe criticism. But, if the principle is correct, these considerations should not prevent its practical application.

In a case at the Presbyterian Hospital, a few weeks ago, in which I saw the patient within an hour after the hemiplegia occurred, I directed the pillow to be removed and the foot of the bed to be raised. Coma did not supervene, and I cannot be sure that the bleeding had not already ceased before the position was changed.

Cold to the head is indicated, not for the purpose of contracting the intracranial vessels, but because coagulation of the effused blood is favored by reduction of temperature, and it is upon the firmness of the coagulation that the safety of the patient will depend when the pressure within the cranium is reduced.

ON THE NATURE OF THE PHYSICAL PERFECTION OF MAN.

By L. HARRISON METTLER, A.M., M.D.,

LECTURER ON MENTAL AND NERVOUS DISEASES AND ELECTRO-THERAPEUTICS IN THE MEDICO-CHIRURGICAL COLLEGE OF PHILADELPHIA.

In these days of biblical criticism much is being said about an antagonism between science and revelation. The development of life as taught by palæontology is accepted by some as an unanswerable argument against the verity of the Scriptures. According to our present knowledge, they say, man in the beginning could not have been created "perfect," with the perfection of the image of God. To escape the dilemma, many of the orthodox believe that the quality of primitive perfection is to be predicated of man's soul or spiritual essence only, and that, so far as his physical constitution is concerned, the disparaging dicta of science are absolutely true. The latter is in part our own view, but as the presence of the *anima* is the condition requisite to the progressive development of the organism as a whole, we believe that it is ever exerting a perfecting influence upon that organism in accord with its own perfect nature. Hence there is, as we believe and will endeavor to show, a certain perfection of the very highest sort attributable to the body of man, not only as it existed in the past but even more so as it exists in the present. Our knowledge of this perfection will increase with the growth of the study of philosophical anatomy.

Mr. Hubbell says: "Many common beliefs, such as the current one taught in our catechisms that man, some centuries ago, was perfect (without evil tendencies or maladies) overrules every logical palæontological induction and contradicts our experiences. The common assumption that bilateral symmetry prevails in the human organism precludes our recognition of the actual great disparities in correlative features. In truth, the factors of diversity (winds, light, nutrition, etc.) are not uniformly distributed, and hence the variations that are so conspicuous." Our author here runs the risk of assuming too much when he infers that man, "some centuries ago," could not possibly have been perfect in form, because at that time he was presumably subject to the same accidental influences which are transforming him now. The argument belongs to the *non sequitur* class, as the progenitors of both men and trees, for aught we know, may have been perfectly symmetrical when first they made their appearance upon the earth's surface. The variations produced by climate, nutrition, etc., never become established until after long periods of time. The present existing forms of life owe their difference, as compared with the primitive forms, to the cumulative force of heredity. This force is ever receiving, in the individual last in the line of descent, an additional impulse direct from the outer world; so that, as the development of the race proceeds. the power of heredity becomes stronger if the individuals continue to be surrounded always by the same natural influences. Yet even when these influences change as the result of migration or geologic transformation, the force of heredity continues to be cumulative, though now the accretions may be somewhat of a different sort and may become the origin of a new line of development. This, however, is always superimposed upon the old line but is never entirely substituted for it. Thus a wing is not a substitution for a fin, but merely a re-adaptation of the original part to accord with the altered modes of progression required by the altered media. Recognizing, then, the cumulative force of heredity, coupled with the long lapse of time required to produce the present actual disparities in the correlative features of man, it is not so very unreasonable to imagine that for a certain period of his primitive existence he may have been symmetrically perfect. This, of course, accepts the belief in the changeability of varieties but permanency of species. If, on the other hand, we assume that man is but the last link of that vital chain which reaches down to the very lowest forms of life—the protozoa—then we are compelled to admit that the forces of nature, coupled with those of heredity, must have commenced to operate long before his particular advent. Then man will possess only the merest tracings of that perfect symmetry which accompanied the beginnings only of all organic existence. The question of the correlation of species is still *sub judice*, but, however we may regard it, we will nevertheless see that there is an element of perfection in the physical constitution of man as in the forms of far lower and more primitive organisms.

Let us clearly understand, before proceeding further, what is meant by perfection. This attribute, as applied to the form of any object, admits of two conceptions. The one is absolute, and may be spoken of as a mathematical perfection. Thus a sphere and a cube are, in this sense, perfect; so also is any object endowed with such symmetry that portions of it relatively situated are exact counterparts. The other sort of perfection is always relative, and may be characterized as utilitarian. In this case the qualification rests upon the fact that the object fulfils exactly the purpose for which it was created. In outline it may be rough and irregular; yet, on account of that very roughness and irregularity, it is best fitted to accomplish its ends. Eccentric wheels, numerous appliances in the mechanical arts, the bones of the skeleton with all their excrescences, nodules, and roughened surfaces, are certainly perfect in perfectly accomplishing their purposes, though in regard to mathematical symmetry they are far otherwise. These two varieties of perfection, the æsthetic and utilitarian, are frequently met with in the same object; as, for instance, an ordinary cart-wheel. If we regard utility from the broad stand-point of whatever ministers to the pleasure, as well as comfort of man, then these two varieties of perfection are found most frequently combined in the realm of pure art. The artistic manufacturer combines the two when he adorns and beautifies the necessities of life. A simple statue or delicate scroll may have been carved for no other object than to please the eye. A rude four-walled house may have been erected for no other purpose than protection. A magnificent, highly ornamented palace, affording both protection and artistic pleasure, arouses in us the deepest sense of admiration on account of its beauty and utility.

In the physical structure of man we have the same two forces making toward perfection. From the study of embryology we learn that symmetry in the disposition of parts is the primal state of the human frame, and that the fœtus, were it excepted from all the influences of the outer world operating in a secondary manner through heredity, would grow in harmony with the demands of the most rigid mathematical ratios. Evolution, showing us man's susceptibility to variation in accordance with changing externalities, when added to the knowledge which has been acquired from embryology, might readily lead us to imagine that in the beginning of the race there did exist such symmetrically formed beings. But if it be true, as believed by many of the more advanced biologists, that man is simply the climax of an ascending scale of organized development here upon earth, we must look low down in the scale for the clearest evidence of the perfection of form, at a time when the influencing forces of external nature had only begun to operate.

Man is essentially an articulate; for, as Owen says: "A vertebrate may be defined as a clothed sum of segments. But in this highest province of the animal kingdom growth by repetition of parts rapidly gives place to the higher mode of development by their differentiation and correlation for definite acts and complex functions. Nevertheless, I am constrained to affirm, by evidence, that in the vertebrate, as in the invertebrate series, there is manifested a principle of development through polar relations working by repetition of acts and multiplication of like parts." Likewise is the testimony of Cuvier: "Tout être organisé forme un ensemble, un système unique et clos dont les parties se correspondent mutuellement et concourent à la même action définitive par une réaction réciproque. Aucune de ces parties ne peut changer sans que les autres changent aussi; et par conséquent chacune d'elles, prise séparément, indique et donne toutes les autres." Sir Isaac Newton expressed the same idea, though in doing so he did not realize it in its broadest aspect, when he declared that, "Similiter posita omnia in omnibus fere animalibus." The articulates, or homogangliates of Owen, are the first distinct manifestations of the active principle of "vegetative repetition" among the higher orders of animals. In the mollusks or heterogangliates this principle is not at once so apparent as in the articulates, which are above them; or in the radiates, which are below them and which lie upon the borderland between the animal and vegetable worlds. The bilateral symmetry of form, so universal among the articulated and vertebrated animals, is seldom found among the mollusks; yet that they are the connecting link between the symmetrical articulates and radiates is shown in the difficulty often experienced in separating their lowest representatives, the polyzoa or bizoa, from the zoöphytes, and in the marked resemblance which many of their highest representatives, the cephalopoda, bear to the true articulates. With this slight exception on the part of the mollusca, the principle of "vegetative repetition" witnessed in the articulata, of which the vertebrata, as stated above, are but higher examples, becomes more manifest the more we descend in the animal scale, until, finally, we reach a stage in which the individuals all possess regular geometric figures, such as the skeletons of the echini, star-fishes, etc.

Anyone who has extended his studies into the field of general biology, including, particularly, palæontology and comparative anatomy, must doubtless have been impressed with the remarkable similarity existing between the relative members of all the innumerable forms of animal creation. The fin, the wing, and the hand, the organs of locomotion are, in all essentials, identical. The organs of vegetative life, those specially concerned in the processes of waste and repair, such as the heart, lungs, alimentary canal with all its appendages, are singularly alike throughout the different species. The same is true of the centres of consciousness, with all their outlying projections of nerve and organs of special sense. What differences these all apparently do possess belong to their non-essential characteristics as parts of the organism, and are simply the results of the active principle of accommodation.

Let us draw our comparisons still closer and we will be surprised at the remarkable similarity existing between the relative parts of not only different animals of different species and of different animals of the same species, but even between the relative parts of the same animal. We may marvel that the wing of the bird, the fin of the fish, the forepaw of the quadruped, and the hand of man should all have the same anatomical structure; but our astonishment will be only the more increased when we learn of the structural similarity existing between the anterior and posterior extremities of all these creatures, between their shoulder and pelvic girdles, between their vertebral columns and skulls, between their various muscular systems, and between their ventral or anterior and their neural or posterior general cavities. Formerly these resemblances were spoken of simply as analogies. Later on, as the result of a further extended research, they were recognized as possessing a certain amount of mutual interdependence, and hence were characterized as homologies. Thus the humerus of the anterior extremity is homologous with the femur of the posterior, the basilar process of the occipital bone with the body of a vertebra, the laminæ and spinous processes of the vertebræ with the ribs and sternum, while all of these, again, are homologous with some higher and more perfect ideal, the homotype.

The bilateral symmetry of man, such as exists between the two hemispheres of the brain, the two lungs, the two sides of the heart, the two kidneys, etc., was known almost as early as that which exists between the two sides of the face, the two arms, the two legs. This sort of symmetry, though somewhat analogous to that of the homologous series, is yet something entirely different. Bilateral symmetry is what Aristotle and Newton referred to The symmetry of the homologous series is that intended by Cuvier and Owen. The former is not due to any reduplication of parts, but merely to collateral growth; the latter is a manifestation of the principle of reduplication and is dependent upon the articulated or segmented structure of the animal frame. Nevertheless, both bilateral symmetry and the symmetry of the homologous series are elements alike in the general æsthetic or geometrical perfection of the whole. Just as a solid ovoid or rhombohedron may have its diameters all of different lengths, yet, on account of their bearing certain precise relations to one another, we may say that the entire figure is geometrically perfect and harmonious.

We have thus far shown that the tendency in the physical development of all animals, when removed from all external influences, among which we must include those also operating through heredity, is toward a determinate geometrical form of some sort exhibiting a perfect symmetry between all of its correlated parts. Hence there is an ideal form of man, an archetype, from which the real forms are ever being diverted by the external forces of nature, over which the man himself has a limited amount of control in giving them variation by varying his own locality and mode of life.

The goal toward which morphology is urging—a science as far above that of human anatomy or comparative anatomy as the science of the political economist is above that of the mere statistician—is the definite form of this archetypal man. It owes its inspiration directly to the poet Goethe, who first conceived and wrought out the morphological form of plant-life. The notion of such an ideal man has been the source of not a little merriment to many of the self-styled practical men of science, as note, among many other instances, how the French Academy in 1808 ridiculed Dumeril for bringing forward his "vertèbre pensante," as they were then pleased to call it. If the assumption of an ideal type be an adequate means—yea, the very best means, according to our present knowledge—of explaining the uniformity in the appearance and development of man, we cannot see that such an assumption is any more preposterous than that of the principle of gravitation or of atomicity to solve the peculiar revolutions of the heavenly bodies or the strange phenomena of chemistry.

What, then, is the ideal form—the *Bedeutung*, as the Germans have it—of man? Simply a segmented bony column, sustaining, by means of certain bony arches which extend forward and backward, two cavities which contain the necessary organs for vegetative and conscious existence; the whole being enclosed by certain muscular plates for the purposes of support, protection, and mobility. This is the simplest expression of an essential vertebrate. The indefinite reduplication and regular succession of the following ideal vertebra of Owen will present to us a mental conception of the essential outline of the ideal form of man. As soon as the real form begins to deviate from this, we at once recognize the operation of the law of adaptation and selection.

The first appearance of the future being within the mass of cells composing the fecundated ovum is the so-called primitive streak. Immediately succeeding this, both in time and position, is the notochord, which occupies a line coincident with the centres of the bodies of the future adult vertebræ. Thus in the very beginning is raised the central pillar about which the entire superstructure of the adult being clings for support. Through an hereditary tendency impressed upon it by the demands of an increased mental development, one end of this pillar becomes greatly enlarged, the uppermost vertebræ composing the face and cranium. Depending upon the same hereditary impulse, and evoked likewise by certain special demands, the limbs make their appearance at four regular and determinate points of this segmented column. That the limbs belong to the plastic elements of the vital organization is proved by their entire absence in the murænа and anguis, the scapular arch alone here remaining, and by both limb and arch being wanting in the serpents and cyclostomous fishes (lamprey).

The brain or ganglionic centre for consciousness and volition, though never entirely absent where there is a nervous system at all with the power of voluntary motion, is nevertheless subject to very great variations. In the mollusks it usually consists of a single ganglion. In the articulates each segment is supplied with a separate ganglionic brain, though the most forward one of the chain—the one with which the organs of special sense are immediately connected—is sometimes spoken of as *the* brain. In some of the humblest representatives of this order a single segment, when severed from the rest, continues to grow and develop into another individual. It would therefore seem that the brain, so called, is not a portion of the nervous system conditioning existence, but rather an accommodation for a specialized function, for the nervous prerequisite to the vital phenomena evidently coextends with the entire chain. The higher we proceed in the animal scale the more comprehensive are the demands for intellectual and volitional phenomena; therefore the more imperative are they for the increased development of those specialized centres of the nervous system within which these phenomena take place. In man it appears that the encephalic mass (excepting the medulla, which is virtually an expanded part of the spinal cord proper) is this specialized portion of that central nervous system of which the cord itself is the primitive factor. Without the latter life is absolutely impossible, since within it reside the involuntary centres which control the vital organs. Destroy the former and we have loss of volition and consciousness, but not necessarily of life. This has been demonstrated by frequent experiment in pigeons and frogs, and occasionally by accident in man. Unlike the cord, therefore, of which it is merely an attachment added for the sake of a privileged form of neurility, the brain is capable of the most profound variations without impairment of the essential functions of vitality.

The projections from the brain, such as the olfactory, optic, and auditory nerves are also liable to great changes.

Of this fact there is ample illustration. So plastic' indeed, are these elements of the animal economy, that even in the same individual the loss of one will very materially affect the others. Everybody knows that the loss of one eye usually affects the other, while the loss of both sharpens the sense of smell and of hearing. Whether we attribute this result to a greater concentration of mental force or to a finer development of the remaining senses, the fact of the intensification of the perception indicative of cerebral differentiation remains the same. The blind fish inhabiting the waters of dark caves are also apt illustrations of the plasticity of these cerebral projections.

The fact that the brain is but a special development of a portion of the cord receives further support from the vertebrate theory of the skull. This theory, which asserts that the skull is nothing more nor less than certain vertebræ hyperdeveloped, is being rapidly adopted by all of the more advanced anatomists. Its proof depends upon the position, relations, and modes of development of the separate bones. The notochord of the vertebral column extends into the basilar process of the occipital bone, along the body of the sphenoid, as far forward as the vertical plate of the ethnoid. In the vicinity of the occipital condyles this line receives a sharper bend in man than in the lower animals, on account of this erect position. It constitutes, in a general way, the basal or central part of the skull. The remaining parts are made up of the superior or neural arches, consisting of the parietal, frontal, and squamous portions of the temporal and occipital bones; and of the inferior or hæmal arches, formed by the bones of the nose, the superior and inferior maxillæ, the two pterygoids, palatals, and mallei of the ear. These arches are believed to be respectively homologous with the laminæ and spinous processes and with the ribs and sternum of the trunk itself. In passing, we must note that the arrangement of these simple arches within the skull is rendered somewhat complex by the interposition of certain sense-capsules which have become ossified and permanently united to the surrounding osseous structures, such, for example, as the petrous part of the temporal bone; and also by certain extraneous investing bones, like the lachrymal, nasal, molar, etc., all of which are outside of the fundamental osseous structure of the head.

Having thus rapidly pointed out that the head is in reality an accommodating arrangement of one end of the spinal column, having a ventral and neural cavity, with their respective contents, located upon either side of a central pillar, just as we find in the rest of the body, let us now consider the homologous structures of the body itself. In the living anatomy the skeleton here consists of a certain number of vertebræ and ribs, re-enforced by the bones of the shoulder and pelvic girdles, of which we will speak more particularly when we come to examine the extremities. All the vertebræ, from the first cervical to the last coccygeal, have in the ideal their anterior and posterior arches, enclosing the ventral and neural cavities respectively. In the real, we find the posterior arches always present in the laminal and spinous processes, but the anterior ones, represented by the ribs proper, are apparently wanting in the region of the neck, abdomen, and pelvis. We say, apparently, because vestiges of them are still to be found in each of these localities. It will be remembered that the cervical vertebræ have each a foramen in the transverse process, and that the process itself has two ossific centres, one for each portion, in front and behind the foramen, respectively. That portion which is behind the foramen is the original transverse process, while that which is in front is all that is left of the primitive rib, now become ossified and permanently fixed to the vertebra itself. In a few instances a separate supernumerary rib, with its articulations all intact, has been found attached to the seventh, and even sixth, vertebra. In the lumbar region supernumerary ribs have also been discovered, but it is now generally admitted that the outer division of the large transverse processes of these vertebræ are the representatives of the true ribs. And, finally, the large lateral masses of the sacrum cannot be scientifically accounted for upon any other hypothesis than that they are the obliterated ribs which have here become ossified as a part of that bone and more or less firmly united to the proximal surface of the pelvic girdle—particularly of the ilium—instead of remaining free and movable as they are above, beneath the scapula of the shoulder-girdle. The demands for an increased mobility or fixation are sufficient to explain these slight variations occurring in the regions of the neck and abdomen, shoulder and pelvic girdles.

Now a word in regard to the appendages, and we will have completed the skeletal homologies. That the extremities are, indeed, mere appendages, and in no way intimately concerned in the essential vitality of the organism is established by their remarkable variability throughout the entire vertebrate order. Their relative positions and adaptable qualities are continually changing to meet the particular exigencies of the various forms of animal life. Existence is conceivable, even among the highest orders of animals, without their presence. As Owen says: "It is by no means essential to that organic type that it should be 'tetrapodal,' although it best accords with the force of attraction and other conditions of our globe, that not more *or less* [the italics are ours] than two pairs of the latent limbs or appendages of the vertebral segments should be developed to react as locomotor instruments upon its waters, its atmosphere, and its dry land." Oken regarded the limbs as "liberated ribs," but Owen has maintained, with a far better show of reasoning, that they are special developments of costal appendages and not ribs themselves. He believes, furthermore, that the scapulo-coracoid arch of the shoulder is the hæmal arch of the occipital vertebra of the head, and that, therefore, the arms of bipeds and the pectoral fins of fishes are parts of the head and not of the trunk. If the extremities be, indeed, mere appendages or hyperdevelopments of certain parts of the archetypal vertebra, they might theoretically appear anywhere along the vertebral series, and be as numerous as the vertebræ themselves. In some of the lower orders of animals—as, for instance, the myriapoda—in which the principle of segmentation is especially marked, this is amply illustrated. Geoffroy St. Hilaire, as well as some botanists, have remarked that multiple parts are extremely liable to vary in structure (Darwin), while Owen has shown that the degree of "vegetative repetition" bears a certain direct ratio to the lowered type of organization. Hence, in man, who belongs to the highest type, we can understand how the appendages, which originally were subject to the same principle of vegetative repetition, have now become associated with certain definite and determinate points along the vertebral column.

"The repetition of similar segments in a vertebral column, and of similar elements in a vertebral segment, is analogous to the repetition of similar crystals as the result of polarizing force in the growth of an inorganic body." This is the manifestation in the animal world of the principle of æsthetic regularity depending upon geometric ratios. In accordance with it, the symmetry of the limbs should exhibit itself longitudinally as well as bilaterally. In other words, all parts of the arm should have their counterparts in the leg. Such is the fact, the only difficulty in completely establishing it in nature being in some minor homologies between the shoulder and pelvic girdles. The similarity between the rest of the extremities is obvious enough. In studying these minor homologies we must remember that the erect position of man, as well as his slowly acquired but remarkable manual dexterity, have caused the arm and leg to make a turn of nearly a half-circle in opposite directions; so that the thumb and radial border of the former are relatively external to the body, while the great toe and tibial border of the latter are internal. In the embryo, however, both tibial and radial borders are preaxial, *i.e.*, turned toward the cephalic end of the spinal column. This explains why the extensor muscles of the leg happen to be anterior, while in the arm they are posterior.

Note the function, relative position, and mode of development of the os innominatum as compared with the scapulæ and clavicle regarded as one bone. How strikingly similar are the following parts: The spine of the scapula and the ilio-pectineal line of the innominate, the supraspinous fossa of the former and the sacral surface of the ilium, the infraspinous and iliac fossæ, the subscapular fossa and gluteal surface, the precoracoid bone—which is found only occasionally in man but always in the lower vertebrates—and the pubic bone, the coracoid process of the scapula and the ischium, the glenoid and cotyloid cavities! But enough has been said to show the identity of the four extremities.

Starting with the notochord, the very first appearance of the future being, we have now seen how the various parts of the entire skeleton, even those most dissimilar, are homologous with certain various parts of an ideal vertebra which in itself is the type of perfect symmetry. The skeleton is the foundation of the physical being, and if we can discern the elements of symmetry in the foundation we ought to be able to discern them in all those anatomical structures which are the outgrowth and sequence of the same. But now the problem becomes far more complex. For, as these structures partake simply of the character of aids in the production of the vital phenomena, and as their proficiency in the performance of their various functions is more or less dependent upon the nature of the surrounding world in which lie the immediate conditions for their activity, they are liable to far greater degrees of change and are hence occasionally discovered under the most profoundly varied forms. The digestive apparatus of herbivora and carnivora, the respiratory organs of aqueous and aerial breathing animals, the muscular systems of reptilia and mammalia are sufficient illustrations of this diversity of form. Yet, after all, these differences are more apparent than real, for they are not integral, but simply the result of an atrophy or hypertrophy of universally existing structures. In many of these structures the symmetry which accords with the symmetrical nature of the vertebrated type of skeleton is quite discernible. The bilateral symmetry of the respiratory, circulatory, and genito-urinary tracts is too manifest to require more than a passing notice; but in regard to the heart, the stomach, the liver, the spleen, and the extra right lobe of the lungs, there is a little more difficulty. Most of the anomalous conditions in the way of position and inherent asymmetry of these organs are clearly seen to be purely accidental when their embryological development is carefully studied. Originally the lobes of the liver were of equal size and extended for an equal distance on either side of the spinal column, growing out as diverticula from the fœtal midgut. The stomach was simply a dilatation of the continuous intestinal canal. As it went on enlarging it soon turned over upon its right side in such a way as to present toward the left the border which was at first connected with the vertebral column behind, thus carrying away from the median line the rudiments of the liver, pancreas, and spleen, which had already begun to be deposited upon the primitive intestinal tube (Quain). Similar explanations account for the irregularities found in the remaining viscera.

The homologous nature of the muscles of the extremities affords scarcely any more difficulty in its solution than did the osseous structures of these parts. But in regard to the great trunk-muscles, so extensive have been their variations in the human anatomy that now their original symmetrical simplicity seems to have become almost totally obliterated. Nevertheless, certain distinct groups, all possessing more or less similarity, can be quite accurately made out. In some of the lower vertebrates the deep fascia dips down from the surface toward the skeleton in four determinate lines. Two of these are median, constituting the hæmal and neural septa before and behind; and two are lateral, one on each side, extending in the direction of the transverse processes of the vertebræ. In fishes, and in some of the amphibia, the muscles exhibit an astonishing degree of segmentation, partitions spoken of as sclerotomes being inserted transversely across the walls of the trunk and corresponding in number and position with the vertebral segments. In man the same principle of muscular segmentation can be fairly distinguished, though here the modifications from the primitive type are very extensive, owing to the greater development of the limbs, which thus break into the continuity of the mural plates of the muscles of the trunk. Again, the simple primitive division of the muscles into *epaxial* and *hypaxial* is plainly portrayed in the adult human being; the latter being represented by the prevertebral muscles of the neck, together with the psoas and pyriformis, the former by the two great longitudinal masses of muscular tissue, characterized in morphology as the dorso-lateral and ventro-lateral muscles. To enter fully into this subject would require more than a separate essay, but enough illustration has doubtless been introduced to show that even the complex and intricate muscular system of man is subject to a strict principle of symmetry.

We have thus indicated in a few words the general symmetrical character of the human frame, though for want of space we have been obliged to mention only a few of its special features. We have seen how the vertebrate as a unit is simply a spinal column, having a ventral or nutrient cavity for organic life upon one side, a neural or psychological cavity for animal life upon the other, the rigid simplicity of this outline being modified by certain special developments, such as the enlargement of the head, the greater prominence of the anterior general cavity in comparison with the posterior, the projection of the four appendages, and a host of minor, but not less important variations, all of which are the resultants of the active principle of accommodation.

In man, therefore, we can plainly perceive the two operative forces of which we spoke in the beginning. The one is the supernatural, uncontrollable, primitive force which is ever tending to mould protoplasm after some definite archetype, whatever that may be. This force was ideally in existence before any appearance of protoplasmic matter whatever upon the face of the earth. In a word, it represents, as shown by its persistency throughout the entire animal kingdom, the preconceived idea of the Creator of that kingdom, and is hence in direct antagonism to any notions about a fortuitous origin of the same. It is the indelible stamp which He himself has impressed upon it, the line along which he has preordained that it should advance. It represents the elements of the perfection of symmetry, yet not in so rigid a manner as to preclude all future advantages of adaptation. The other force, on the contrary, instead of emanating immediately from above, and at a time previous to the appearance of matter, is dependent for its very existence upon the accidental influences of surrounding matter. This force is manifested in the law of natural selection and results in the survival of the fittest. It is discovered in the influences of climate, of modes of life, of civilization, of places of habitation. It is that force which renders the Esquimaux so different in stature, appearance, health, and mental capacity from the inhabitants of the temperate zone, and these, again, from those dwelling beneath the equator. It is a force largely under the control of the will of man, so far as his power of changing it goes, but one which nevertheless continues ever active in some mysterious way or another, regardless of his volition. It is a force which is forever fashioning the archetype into such forms as shall best adapt it to surrounding circumstances. It is thus a perfecting force, leading up to the perfection of adaptation.

A slight objection may be raised that man is then no more perfect than the lower animals in regard to these two elements of perfection, the archetypal or æsthetic and the adaptive or utilitarian. But as man is at the very summit of the animal kingdom, he necessarily represents the highest perfection resulting from the working together of these two forces in that kingdom. If in some particulars, such as strength or fleetness, he compares unfavorably with any animal, he makes it up and far outbalances it with others in which that animal is deficient. Add to this the fact of his acquired superior mental endowment, and it will be readily seen how vast are all his possibilities for future perfection. With these two powerful forces acting thus conjointly, the idea may not appear too entirely fantastic that their resultant, "some centuries" hence, if it could only be favored by universal proper hygienic conditions, would be an altogether perfect being, both mentally and physically.

> Then say not man's imperfect, Heaven in fault,
> Say, rather, man's as perfect as he ought;
> His knowledge measured to his state and place,
> His time a moment and a point his space.
> If to be perfect in a certain sphere
> What matter, soon or late, or here or there?—Pope.

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OBSERVATIONS ON THE ETIOLOGY OF PNEUMONIA.

By THOMAS DARLINGTON, M.D.,

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The recent papers published on the subject of pneumonia, and the interest of the profession, as winter approaches, becoming more centred in the subject, have led me to give some of my experience as a country practitioner, and suggestions as to the cause or causes of the same.

Combined with a private practice, I have attended to the workmen on eight miles of the new Croton Aqueduct; and during the winter of 1886 alone, saw more than one hundred and fifty cases of pneumonia.

All of the workmen on the line were exposed to numerous causes predisposing to pulmonary disease. First, the tunnel was not well ventilated, and, as there were many workmen, the atmosphere became foul from their breath. Second, the kerosene-oil lamps in their hats smoked, and the mouth and fauces soon became covered with fine particles of carbon. Third, in the hard quartz-rock the steam drills produced a fine glistening powder which shone like diamond dust on the faces of the men as they came out. Fourth, from many crevices spring-water dripped constantly on their heads, shoulders, and chests. Fifth, poisonous gases were developed from the blasting of dynamite, and frequently so noxious were these gases that nearly a whole "shift" at once would be brought up asphyxiated. Sixth, from the warm tunnel (55° to 70° Fahr.), exposed to no drafts, the men would come up thinly clad, and wet with the drippings from the roof and perspiration, in mid-winter, to the surface, where the wind blew and the temperature was more frequently below 15° than above it. Nearly all were intemperate, few properly clad, and many had improper and insufficient diet.

All of the cases to which I refer were intra-alveolar (lobar) pneumonia. There were many cases, undoubtedly, of interstitial inflammation, but these are not included in the above. Most of the cases were removed to some city hospital on the evening of the third, or by the morning of the fifth, day of the disease, therefore I cannot give much information as to the treatment or mortality, but can speak specifically only as to the cause, except in about twenty of the cases which I kept through the disease.

At different shafts the disease manifested itself by different symptoms. There seemed to be no particular difference in the number of cases by changes in the weather, whether muggy and warm with an easterly wind, or very cold, clear, and blustering, with a westerly wind, except in sporadic cases, which occurred principally in the very cold winter weather.

At Shaft 23, in February, I had twenty-five cases in ten days. In these cases the symptoms were practically uniform. All of them commenced with a chill, more or less severe, followed by a temperature from 101° to 104°. There was also slight jaundice, vomiting, spasmodic cough, some diarrhœa or dysentery, no delirium, but frontal headache, sweating—though in a few cases a dry skin—an absence of, or very little bile in the passages, which were extremely fetid in character. The patients complained but little of pain. The sputa was of various colors; it was in most cases of a light rust color preceded by jet-black sputa, composed principally of carbon from the lamps; and in some cases it continued to be more or less so colored to the end of the disease. In all of the cases there were symptoms referable to the liver, but whether these were due to previous alcoholism, or to the disease itself, I was unable to determine. Besides these symptoms there was also generally scanty urine. The vomiting was constant, and in most cases seemed to be watery material from the stomach. This epidemic occurred in one room of a large shanty in which eighty men slept, forty during the day and forty in the night. There were but two windows, and these were never open. The odor was that of a menagerie. The sputa and vomited materials went on the floor; these were covered with ashes or dirt and swept up. On the tenth day I had the room emptied, the sides and ceiling whitewashed, the bedsteads washed, the bedclothes and mattresses taken out into the sunlight and as much as possible washed, the windows opened, and the floor sprinkled with chloride of lime. Then the epidemic as such ceased abruptly. After this cases occasionally occurred in this room, and in an annex building, where four or five occurred at once; but the same disinfecting and fresh-air treatment accomplished the same result. Some of the shanties in the neighborhood, particularly the darkies' quarters, became infected in the same manner.

At Shaft 24, the disease seemed to take a different type. There was little vomiting, no diarrhœa or dysentery, no sweating or jaundice, simply hepatization, dyspnœa, and symptoms of fever. Here there was no overcrowding in the boarding-houses, not so much smoke in the tunnel, and no water. Here, however, the rock was very hard and flinty in character, and the atmosphere in the tunnel was charged with fine particles of quartz. In these cases the predisposing, if not the exciting, cause was due to these.

At Shaft 20, the cases assumed still another type. These were largely among Italians. But few of these went to the hospital. Nearly all commenced with symptoms of pleurisy, and by the second or third day the inflammation extended by contiguity to the lung-tissue itself. Many of these men worked on the surface, and were often exposed to an icy wind that had a sweep for miles. Here also it was quite wet, and rheumatism was common.

The cause here seemed to be rheumatic, or prolonged exposure to cold. All of these cases made good recoveries. The shanties for the Italians were not as well built as for the other workmen, and to this I attribute partly the good results obtained. It was possible to see the daylight from the inside in any portion of the building, so that there was no lack of fresh air.

In a few isolated cases the disease evidently originated from injuries received to the chest. These cases involved invariably one lobe of the lung only.

In other cases the disease occurred immediately after intoxication and exposure all night on the ground.

In all of the cases the cough was peculiar and not entirely due to the pneumonia, but came from a neurosis or irritation of the pneumogastric nerve from poisoning of the gases set free in the explosion of dynamite. It was spasmodic in character and similar to a malarial cough or pertussis.

In some cases fatigue seemed to be either exciting or predisposing cause; which, I could not say.

Is pneumonia the manifestation of a systemic disease with a characteristic local lesion? or is it a purely local disturbance with constitutional symptoms? My experience leads me to say both. Looking at it in the epidemic form, and taking into consideration the fetid character of the passages, the diarrhœa, and symptoms referable to the liver, it seems to me that in some cases it is a systemic disease, while in other cases it certainly is not.

In the infectious cases the stage of incubation did not seem to be over forty-eight hours. Had the character of the discharges from the bowels anything to do with the pneumonia? Did these occur from, or were they assisted in occurring, by the damming back of the portal system? or conversely? Certain I am that purgatives, particularly those of an antiseptic variety, such as mercury, used early in the disease, seemed to modify the course and symptoms greatly.

In regard to the treatment, I believe the less treatment the better. I never used aconite but once, and on that occasion the patient drank it all in one dose. And I did not give whiskey, for it would have disappeared immediately. I feel convinced that if we do not give much aconite, we will not have to use so much whiskey. And I firmly believe that whiskey, as a rule, should not be given, and that if a stimulant must be had, opium, in the form of Dover's powder, is much better. I made no selection of the cases that I kept, they were simply those who would not go to the hospital; but nevertheless I did not have a single death from pneumonia on the line. My treatment simply consisted of cathartics (principally pil. cath. co.), ammonia muriate with ipecac, and last, and of most importance, *fresh air.*

DR. SANDS AND THE NEW YORK PATHOLOGICAL SOCIETY,

By JOHN C. PETERS, M.D.,

NEW YORK.

Dr. Henry Berton Sands was born in 1830, and died, very suddenly, on November 18, 1888. He joined the New York Pathological Society in 1857, when he was twenty-seven years of age, and in less than nine years was elected its President, when he was only thirty-six years of age. He remained a most highly esteemed member for thirty-one years, or until the last day of his honorable and eventful life.

On his entrance into this Society he was thrown into emulation with those grand and scientific workers (who were then in their very prime), Alonzo Clark, Willard Parker, William H. Van Buren, C. E. Isaacs, John C. Dalton, E. R. Peaslee, Robert Watts, John Watson, Gurdon Buck, Gustavus A. Sabine, Louis A. Sayre, George F. Shrady, Fordyce Barker, Ernst Krakowizer, Cornelius Agnew, John W. S. Gouley, George T. Elliott, John T. Metcalfe, A. C. Post, James R. Wood, Louis Bauer, Daniel Ayres, Henry B. Noyes, John C. Draper, T. G. Thomas, Edward Delafield, William H. Draper, F. S. Thebaud, James R. Leaming, William Detmold, Dr. Voss Henschel, Thomas M. Markoe, Abraham Jacobi, and scores of others, and they soon made Dr. Sands their President. Of our long line of illustrious Presidents, sixteen have gone down to their graves. Some have been slowly and gently led there by old age, notably Alonzo Clark, Willard Parker, William H. Van Buren, Alfred C. Post, Gurdon Buck, James R. Wood, and Joseph Hutchinson.

More have been suddenly cut off in the very midst of their usefulness, especially John A. Swett, Charles E. Isaacs, Robert Watts, Edward R. Peaslee, Erskine Mason, and Henry B. Sands. None died so suddenly or more lamented than Dr. Sands. None showed more fully the inestimable value of a good and honorable life and its true nobility. He always had many worthy rivals, few equals, and no superiors.

When Dr. Sands joined this Society he seemed determined to become a great pathologist rather than an eminent surgeon, and appeared to be working with the microscope almost as much as with the scalpel. The first twenty of his specimens were all of cancer, sarcoma, or other malignant or allied diseases. The only exceptions were an hydatid cyst of the neck with echinococcus hooks, a case of hip-disease, a melon-seed in the trachea, diphtheria confined to the larynx, aneurism of the gastro-epiploic artery, and an iron bullet in the omentum. His list of cancers included some of the breast, tibia, lip, knee, stomach, small intestines, ovaries, arm, inguinal glands, rectum, liver, spine, brain, duodenum, heart, uterus, etc. All these came from different subjects, but, finally, he found one which contained such a complete pathological museum of cancer that he deeply regretted that the usages of this Society and the regulations of Bellevue Hospital did not permit his bringing the whole body.

He brought gross and microscopical drawings of his cases, andh is principal discourses were of round, oval, spindle, caudate, and other cells; of fibro-plastic, recurrent, fibroid, epithelial, and other tumors. But in 1860 he became the partner of that great, genial, and ready surgeon, Willard Parker, and gradually dropped more and more into operative surgery. From that time on his operations became countless, and no one was ever done in a slovenly way or rash manner. Dr. Sands pursued no study or science further than it was practically useful to himself and his patients, and although he always kept up his familiarity with the microscope, he soon left its wonders mainly to those who devote themselves exclusively to its mysteries. He devised very few new operations, but not many days ever passed after one was heralded before he would be doing it with a dexterity and perfection which might well make the originator envious. Yet he was also very conservative, for he never totally abandoned an old and well-tried method until he was fully convinced that the new was superior. Good judgment always went hand in hand with his most progressive and aggressive surgery, and he ever showed that great business capacity is not incompatible with delicacy and tenderness of mind.

He was always highly respected by all his colleagues, and was often their mainstay in counsel. But he was the greatest favorite with the public.

Hundreds of grateful patients and enthusiastic family physicians made him their surgical idol, and still delight to recall instances of his great skill and kindness. They dwell upon the delicacy of his touch, the quickness and thoroughness of his work, the sharpness of his knives, and the niceness of his stitches, the brightness of his eye, the clearness of his glasses, the geniality and hopefulness of his manner, the compactness and alertness of his person, the neatness of his dress, the perfection of his hands, and even the smallness of his boots; but above all the pleasantness of his ways. His presence in the sick room brought no terrors, for everyone knew he would inflict no pain that science could prevent, and run no risk that skill could avoid. His bright smile and friendly nod from his carriage window were eagerly looked for; the rattle of his wheels seemed to carry hope; the vigorous slam of his carriage-door gave new confidence; and his rapid steps brought assurance that a skilled friend was quickly bringing help; while his cheerful and confident entrance into the operating-room appeared to prove that all that the brain of man could devise or the hand of man execute would be put forth for the welfare of his patients. He never left a house without leaving hope or courage or both behind. Yet he was one of the most frank and truthful of men. His religious friends maintain that he was endowed with all that was most manly and lovable in the Christian character; that his great capabilities were always watched by an overruling providence, the traces of which were even evident in some of the incidents of his fearfully sudden death. His helpless body was not left to the indignities, shameless curiosity, and savagery which so often attends instantaneous death in the streets, but was carefully sustained in the arms of a devoted friend. It was driven rapidly to his handsome home, where scores of friends, assembled to greet him with music and rejoicing, instantly became the strong comforters of his desolate family.

They tell us to believe that his soul was borne swiftly upward as in a heavenly chariot, and was welcomed with celestial music and rejoicing. They bade us

> "Hark to the bursts of acclamation :
> And hark to the loud triumphant chords."

The more superstitious point to the texts of his birthday and death-day : "I come as a thief in the night ;" "In a moment thou shalt die."

The Pagans say that his mercifully swift cutting-off reminds them of the fate of Æsculapius, the first great physician, and of Chiron, the first great surgeon. They both died young, and are said to have been slain by the thunderbolts of Jupiter, because they saved too many lives and raised too many from the dead. But in recognition of their virtues he translated one into the magnificent constellation of Orion, and the other into that of the Centaur.

> "Let the old Heathens tune their song,
> Of great Diana and of Jove.
> My thoughts surmount these lower skies,
> And look within the veil."
>
> "With glory clad, with strength arrayed,
> The Lord o'er all nature reigns ;
> The world's foundations he strongly laid,
> And the vast fabric still sustains."

Progress of Medical Science.

Eruptions of the Skin occurring during the course of Malaria.—Dr. Retiwzew has made an analysis of the cutaneous eruptions observed by him as occurring during the course of intermittent fever, in two thousand cases of the latter disease. 1. Roseola, which differed from typhus roseola in the fact that it very seldom became petechial, was seen in 2.5 per cent. of all cases. 2. A large macular form of erythema, which was localized principally upon the extremities, occurred in three per cent. Sometimes this erythema involved the whole surface of the body, and it was attended with itching and burning sensations. Occasionally a hemorrhagic form of erythema was seen. 3. Urticaria occurred in 45 (4.5 ?) per cent. of all cases and soon disappeared. It was sometimes combined with erythema, but a hemorrhagic form was not observed. 4. Herpes facialis was quite frequent, being noted in twenty-two per cent. of the cases. In one instance the author met with an herpetic eruption upon the palms of the hands and forearms, combined with purpura of the lower extremities. 5. Herpes zoster was seen in only one case. 6. Miliaria was encountered, but evidently was merely an accidental complication due to profuse perspiration. 7. The most common eruptions met with during the course of malaria were primary purpuric spots, purpura simplex ; and hemorrhages, which were usually complications of the severer forms ofn intermittet fever. These petechiæ were usually situated upon the chest, abdomen, and inner sides of the thighs, occasionally spreading over the whole body.—*The Boston Medical and Surgical Journal*, November 22, 1888.

The Prognosis of Carcinoma after Surgical Interference.—Professor König has called attention to the fact that the risk to life from operations for the removal of cancer is steadily diminishing, owing to progressive improvement of the technique. The most important question now is, whether we stand in a position through operative measures to cure carcinoma. Speaking with strict scientific accuracy. "cure" would mean that after a long series of years not only would there be not the slightest return of the disease at the seat of operation, but also none elsewhere, as metastatic or glandular carcinoma. Practically, however, for both the surgeon and patient "temporary" cure is an important question. If the latter can be freed from a painful disease two, three, or four years and his life prolonged for a portion of that time, an important service is rendered him. At the Göttingen Clinic, of 66 cases of return of the disease after operations for cancer of the breast, nearly half recurred during the first six months, and another third, making 52, during the second six months. Of the remaining 14, the return occurred in 7 at the end of the second year ; in 4 at the end of the third year ; in 2 during the fourth year, and in 1 as late as ten and a half years. Of 77 cancers of the rectum, 60 were operated upon by removal of the diseased bowel ; 16 with extirpation of the anus and a portion of the rectum ; 44 with resection of the rectum but retention of the anus. The peritoneum was opened 15 times, but in only one case did suppurative peritonitis result. Much importance was attached to the preliminary preparation of the patient by diet, emptying the bowels, etc. Eighteen per cent. of the patients remained cured for more than three years ; ten per cent. for more than two years. Of 4 patients upon whom extirpation was practised, 1 had a stricture ; not one had continence of fæces. Of 17 operated on by resection, 2 had stricture ; 9 incontinence ; 6 were able to retain the fæces. The author thinks theser esults not very encouraging, and recommends colotomy as a palliative measure in cases of rectal cancer that cannot be operated upon.—*The American Journal of the Medical Sciences*, December, 1888.

Wound of the Cervical Sympathetic.—Dr. Israel has described a case of excision of a cervical tumor, in which symptoms of paralysis of the sympathetic were observed after the operation. A man fifty-seven years of age was suffering from a large cancerous growth, involving the glands of the neck. After the large vessels and pneumogastric nerve had been carefully separated from the growth, it was found to be impossible to entirely free the sympathetic, and a considerable piece of it was excised. The patient recovered from the operation, but the moment after its performance the following symptoms were observable : Contraction of the pupil and diminution of the ocular aperture, followed the next day by redness of the ear and corresponding side of the face, and considerable swelling of the corresponding side of the tongue. The pulse was not affected.—*Centralblatt für Chirurgie.*

Primary Purulent Pericarditis.—A fatal case of primary purulent pericarditis is reported by Dr. Foureur. The patient was a woman, aged thirty-eight, in the Hôpital Saint-Antoine, in Paris. She was in excellent health till within a week of her death. There was sudden onset of epigastric pain and dyspnœa, and on the day when she came into the hospital, fever ; temperature, 104° F. ; pulse, 120 ; heart sounds distant ; no friction audible. The heart's action rapidly failed, and after some attacks of fainting she died on the sixth day. The autopsy showed great distention of the pericardium with nearly a pint of greenish pus of slightly fetid odor, in which was floating much false membrane. There was no tubercle anywhere, and no pleural effusion. A careful examination of all the organs failed to show any other focus of suppuration or disease to which the purulent pericarditis could be considered secondary. In the blood no bacteria could be found either by the microscope or by methods of cultivation, and no bad results followed its injection into rabbits and guinea-pigs. In the pus the streptococcus pyogenes was easily diagnosed by the microscope, and the same was abundantly demonstrated by cultivation, and further by the inoculation of the fresh pus into a rabbit and a guinea-pig, with rapidly fatal results. After four generations of artificial cultivation, however, the streptococcus lost its virulence, a point characteristic of the streptococcus pyogenes, and its inoculation was followed by trifling local abscesses. —*Revue de Médecine.*

TREPHINING THE STERNUM FOR PUS IN THE MEDIASTINUM.—At a meeting of the Medical Society of London, recently (*The Lancet*), Mr. Charles A. Ballance read a paper on a case in which the gladiolus sterni was trephined for pus pent up in the anterior mediastinum. The patient, aged thirty-five, was admitted into St. Thomas's Home on August 31, 1887, complaining of a discharging abscess over the front of the upper part of the chest, accompanied by constant and severe pain, and great tenderness along the breast-bone; also of fever, anorexia, loss of strength, and want of sleep. There was a history of inflammation of the lungs two years before; for three months there had been mid-sternal pain, and a lump had formed, into which an incision had been made and much pus evacuated. This was followed by a discharging sinus which, on admission, was found to lead down to bare bone at the left second costo-sternal articulation, and the probe could be passed still farther into a space behind the gladiolus. The sternum itself was acutely tender on palpation, and was the seat of constant dull, aching pain. Another swelling had formed over the left fourth, fifth, and sixth costal cartilages, and the discharge from the old sinus was less copious than usual. Two days after admission the lower swelling was incised, and the old sinus laid freely open. During the next five days rigors occurred, and it was decided to explore behind the sternum for pent-up pus. Two trephine-holes were made, and the intervening portion of bone cut away with forceps. The bone removed was found permeated by pus, and on looking into the anterior mediastinum a layer of thick creamy pus was seen on the front of the pericardium; this was carefully syringed away, and much carious bone was then scraped by means of a Volkmann's spoon from behind the sternum. Finally the wound was irrigated with sublimate lotion, packed with wet sublimate dressing, and covered with a dry dressing of the same character externally. The patient made a rapid and complete recovery, the sternal opening becoming filled in by fibrous tissue. Mr. Ballance was not aware of any case in which treatment had been applied to the posterior surface of the gladiolus. He took it from the first that the illness of the patient two years before had been puerperal or septic in origin, and had left some focus of disease in the interpleural space. By scraping the posterior surface of the gladiolus he could not hope to eradicate all the germs of the disease, and the completely successful issue of the case was, he thought, in no small degree due to the constant association of the diseased surfaces during convalescence with corrosive sublimate. The sternum had been trephined for abscess or foreign body in the mediastinum, for paracentesis pericardii, and the operation had been suggested in order to facilitate the ligation of the innominate artery. The two most prominent symptoms of mediastinal suppuration appeared to be dyspnœa and constant severe pain. A carefully compiled list of published cases of mediastinal suppuration accompanied the paper. In the discussion of this paper, Mr. M. Sheild said that he had twice seen pyæmic abscesses perforating the sternum and giving rise to pulsating swelling. They followed acute necrosis; both were opened, and both terminated favorably.

SUPPURATIVE OVARIAN TUMOR CURED AFTER SPONTANEOUS RUPTURE.—In the *Sei-I-Kwai Medical Journal*, of Tokio, Dr. Kawahara reports a case of ovarian tumor in which suppuration and spontaneous rupture through the abdominal walls finally resulted in the cure of the patient. The history of the case was one of gradual tumor-formation after childbirth. Paracentesis was done several times to relieve urgent symptoms. The last time the patient was tapped an offensive dark brown fluid was removed. A little later an ulcer appeared at the site of the last puncture. This began to discharge pus, the patient growing weaker and becoming more emaciated all the time. In the beginning of July pain occurred suddenly in the umbilical region, and the patient was in great distress. On examining the umbilical region it was found to have swelled up in the form of a globe, and to be of a red color. When pressed, great pain was felt and there was also fluctuation. The middle part seemed almost ready to break. The patient was advised to have the part opened, but did not give her consent. Besides, as she was thought to be in danger from being very much emaciated, it was not insisted upon, anodynes and tonics only being ordered. After a lapse of a week, however, the umbilical region suddenly gave away, and thick pus flowed out, the offensive smell of which was almost unbearable. At this time pain was extreme in all parts of the abdomen. Coldness and rigors came on, accompanied by fever. On examining the abdomen three ulcers were found—one in the umbilical region, already broken, which when pressed poured out fetid pus. The other two were the wounds made by paracentesis below the navel, which were almost ready to give way. Under antiseptic irrigation of the wounds and pus-cavity the patient began to mend, and finally made a good recovery. The author appears to think that there was no doubt concerning the ovarian nature of the tumor.

THE VALUE OF POSTURE IN LABORS.—Dr. Rubio, in a paper read before the recent Spanish Gynecological Congress, laid great stress upon the important part that the posture of the patient plays during labor, both physiological and abnormal. (*The Lancet*). During the first stage, he merely keeps the patient from going from one room to another, to avoid catching cold. During the expulsive stage, though he prefers the supine, or, at least, a horizontal position, as a rule, he changes it to a sitting posture where there is asthma or cardiac weakness, also where the pains have become inert through uterine fatigue. Where there is any version of the uterus, it is necessary to pay due regard to its direction. Thus, if there is anteversion, the patient should be placed on her back; if there is lateral version, she should lie on the side opposite that to which the fundus uteri is inclined, so as to bring the fœtal axis to coincide as nearly as possible with that of the pelvis. It is, of course, a recognized fact that a change of posture will frequently facilitate the descent of the head even when there is no abnormality either in the position of the child or of the direction of the uterine axis. When the fœtal position is transverse, the patient should be laid on the side opposite to that occupied by the head, with a pillow under the abdomen. The adoption of the genupectoral position has frequently been found of service by Dr. Rubio. When there is prolapse of the cord, and it is being dragged upon in a dangerous manner, he raises it above the head, and keeps it there during several pains, the woman being placed in the genupectoral position. Again, in complicated presentations, he has found this the best posture for their reduction, and in arm-and-shoulder presentations, where the amniotic liquid has escaped, and the practitioner in attendance has been unable to insert his hand and turn, Dr. Rubio, by the adoption of this position, has found it possible to execute the necessary manœuvre.

THE following general antidote for poison is given in the *American Journal of Pharmacy*: Equal parts of calcined magnesia, wood charcoal, and hydrated oxide of iron, with a sufficient quantity of water. This is a harmless and simple remedy, applicable in cases in which the poison is unknown.

FOR the removal of an obstinate pelvic cellulitic mass, the editor of the Cincinnati *Lancet-Clinic* states that the following prescription proved unexpectedly efficacious:

℞. Extract. belladonnæ,
Camphoræ pulv. . . . . .āā ʒ j.
Unguent. hydrargyri. . . . . ℥ ss.
Lanolin. . . . . ℥ j.

M. Sig.—Apply to the skin over the swelling, on Canton flannel.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, December 8, 1888.

THE TREATMENT OF PNEUMONIA.

It is commonly believed that pneumonia is attended at the present day with an ever-increasing mortality, though we do not know that this belief rests upon any surer foundation than the sum of individual impressions. But whether the fatality of the disease be greater than it was in former years or not, certain it is that the results of the treatment or, more correctly speaking, the management of the affection at the present day are far from satisfactory. The mortality, whether relatively greater than in years past or not, is very high, as high in fact as to constitute a reproach to medical science.

At the first Congress of the Italian Society of Internal Medicine, held recently in Rome, Dr. Maragliano, of Genoa, took this subject as the theme of his address (*La Riforma Medica*, October 30, 1888). He began with the assumption, now pretty generally admitted, we believe, that the disease is infectious in its nature, depending upon the presence of a specific micro-organism. The local inflammatory process in the lung is due, he maintains, to the presence of the micro-organisms, while the general symptoms are the result of the pouring out into the blood of the poisonous material eliminated by them. Lucatello has shown that the injection of sterilized blood-serum, withdrawn from a patient suffering with pneumonia, induced pyrexia, while the injection of blood from the same patient, after his recovery, gave rise to no symptoms whatever. The one symptom in pneumonia which causes the greatest anxiety, since it indicates the chief danger to the patient, is the rapid pulse. This disturbed action of the heart has been attributed by Jürgensen to the increased labor thrown upon the organ and to nutritive changes in the myocardium resulting from the high temperature. Maragliano, however, regards these as merely accessary cases, and believes that the condition is due primarily to the presence in the blood of some toxic material. The cardiac disturbance occurs too early in the course of the disease to be satisfactorily accounted for by Jürgensen's theory, and, furthermore, it has been shown experimentally that the blood of a pneumonic patient does exercise a marked toxic effect upon the heart muscle.

The disease is a self-limited one, it is true, but should the treatment be, on that account, purely expectant? It should not, the author maintains, for daily experience shows that the patient's life may be extinguished before the fires of the disease die down. The ideal indication is, starting with the assumption of a specific infection, to destroy this infective material, but, failing in this, every effort should be made to remove as fully as possible from the circulation the products of this infection, to purify the blood from the toxic material contained in it.

The first of these indications cannot, the author holds, be satisfactorily met. The attempts made to destroy the micro-organism by parenchymatous injections of antiseptic substances into the lung have not given results commensurate with the hopes of those who have undertaken them. Lépine, indeed, claims to have derived great advantage from this method, but Maragliano has never seen any good results in the cases in which he has employed this method, although he says he has never seen any harm so caused. Mercurial inunctions and the internal administration of calomel, potassium iodide, and other substances, have likewise, in his experience, been barren of results.

It remains, therefore, to promote elimination of the toxic matters from the blood. Among the first of the methods having this aim in view is blood-letting. This measure was formerly in vogue to combat the local inflammatory process, and, being found inefficacious in this respect, was abandoned. But now it is proposed to revive it on more rational grounds, as a means of removing from the system a certain amount of the poisonous material at a critical time, when the heart is on the point of being overpowered, and thus enabling it to hold out a little longer until the production of fresh poison has ceased and the old has been eliminated through the normal channels. The author himself bled twelve cases of pneumonia of average gravity, abstracting from five to ten ounces on the fourth or fifth day of the disease, the venesection being repeated once, and in one case twice. He found no change in the temperature or in the local morbid process following this operation, but there was an improvement in the condition of the circulation. The pulse was diminished in frequency and became fuller, and the amount of urine was increased. The twelve patients recovered. The author while speaking with some reserve, as most people do at the present day in respect to blood-letting, nevertheless ventures to affirm that the procedure, when done intelligently and in response to plain indications, will do no harm and may even render good service. It should not be forgotten, he says, that in a disease like pneumonia we must act promptly, and must look to the averting of immediate danger. When it is remembered that it is a question of one day or, maybe, part of a day, and if we can tide the patient over that time he will recover, it will be seen that we have to occupy ourselves with the present and not with the future.

It is believed by some that increased diuresis also aids in removing the toxic agent from the blood, but the author was unable to satisfy himself, by experiment, that elimination occurred in this way. He believes, however, that the sweat carries it off in a measure; hence the increased diaphoresis which is present should not be repressed.

The fever is often a source of danger by reason of its unfavorable influence upon the heart, and it should therefore be combated when it reaches a dangerous point. The danger from a high temperature in pneumonia cannot, the author holds, be judged accurately by the thermometer, but by its effects in the individual case. The means which he favors for reducing temperature is the graduated bath, and he does not fear any evil consequences from its intelligent employment.

Lastly, the heart itself usually calls for help, and its appeal must not be allowed to pass unheeded. In order to sustain the strength of the organ attention must be paid to the diet, which should be as generous as the patient can stand. Alcohol should be used freely, not only after cardiac debility has become manifest, but also as a prophylactic. It need not, however, be given in very large doses, a teaspoonful of brandy every hour being ordinarily sufficient. To sustain the organ when it has begun to flag, preference is given to digitalis, though when rapid action is necessary strophanthus may be very useful. Bloodletting here also may be of great service in relieving mechanically the pressure upon the right heart.

This, in brief, is the plan of treatment which Dr. Maragliano has found most satisfactory in pneumonia, and it is practically a plea for bloodletting. It is true, he advocates it somewhat timidly, and takes pains to declare that he is not a bleeder; nevertheless, he urges its employment in certain cases, when the heart is on the point of laying down its burden, and he believes that its judicious employment may save many lives that otherwise would be sacrificed.

THE DRUGS THAT LIVE.

The public hospitals, dispensaries, and prisons of Paris are all supplied with drugs through the Pharmacie Centrale. Consequently the records of this establishment show the changes in the amount and kind of drugs that take place in pursuance with the progress or vagaries of modern therapeutics. MM. Bourgoni and Beurmann have studied these records of the past ten years and give some interesting facts derived therefrom. The increase in the use of antiseptics is most striking, as shown in kilograms, as follows:

	1876.	1880.	1885.
Carbolic acid	369	2,876	11,217
Corrosive sublimate	102	197	314
Iodoform	22	84	353
Salicylate of soda	0	324	353

On the other hand, the following drugs either did not increase, or fell off in amount very much: Salicylic acid, salicylate of bismuth, thymol, and permanganate of potash. As for other drugs, subnitrate of bismuth increased from 347 to 419 kilos.

Quinine increased from 47.290 to 70, but has fallen off of late, while the minor alkaloids, cinchonin and quinquina, seem to be very much more popular than they are in this country.

The amount of iron sold is on the whole about the same. Of the various preparations the ferro-potassic tartrate and the sirup of the iodide increased in amount, while the chlorides and iodides decreased. Arsenic, in almost all its forms, was dispensed in increasing amounts every year, and is a drug evidently growing in popularity in Paris.

The consumption of purgatives of various kinds was remarkably constant, both absolutely and relatively to each other. Furthermore, the amounts varied little from those sold in the previous decades. So that the eleemosynary purgation of Paris seems to take place under certain very definite laws. The favorite purge is castor-oil, of which over 3,000 kilos are taken yearly, which is equal to about 180,000 doses. Next in favor comes sulphate of magnesia, of which about 2,500 kilos, or 150,000 doses, are taken yearly. Third in the list is sulphate of soda, of which the yearly consumption is about 1,500 kilos. Calcined magnesia, rhubarb, purgative salts *en bloc*, manna, senna, aloes, jalap, and scammony follow, croton-oil standing lowest in actual amount.

It would not be far from the truth to say that for the past twenty years the yearly free purgations have averaged half a million; the various salines, castor-oil, aloes, senna, rhubarb, and croton-oil being the chief agents.

Leeching has fallen off about one-half, the number of leeches sold in 1876 being 50,650; in 1885, 26,320.

The amount of alcohol consumed increased up to 1880, but since then has decreased. The consumption of caffein has increased greatly, but not that of tea or coffee.

Relatively the increase of chloroform sold in 1885 was greater than that of ether.

Chloral increased from 351 to 842; of the three bromides—potassic, sodic, and ammonic—the potassium salt increased most, and the ammonium salt next, while the former is still used vastly more than any other, perhaps because it is cheaper. Opium preparations do not show much change, except that codeïa has become very popular, while narcine has fallen into disuse.

USELESS DISPENSARIES.

Our Brooklyn neighbors are beginning to feel the inroads made upon the doctor's practice by the excessive accumulation of free dispensaries in that city. Dr. Emmett D. Page, writing in the *Brooklyn Medical Journal*, discusses the subject with a great deal of emphasis. At the present time, he says, there are in Brooklyn twenty-three dispensaries, with rumors of three more soon to be started. These institutions each treat from 5,000 to 30,000 patients annually.

He adds: "In these dispensaries are about one hundred and fifty physicians. Their yearly work will average from $1,500 to $5,000 at regular office charges, which would make a yearly gift of $300.000 to $500,000. One high in the practice of medicine here in this city has estimated that in the hospitals and dispensaries of this city alone there is donated free to the inhabitants of the city yearly upward of $1,000,000, and this without any extra charges for surgical operations, which would greatly add to it. Combine this with all the loss entailed by frauds practised, which latter would probably greatly exceed this amount, and one can see that the two amounts are enormously large, far beyond any necessity or justice."

If our Brooklyn confrères are disturbed now, what will they be when the dispensary system reaches New York's proportions? Brooklyn has about one thousand physicians and 665,000 inhabitants; New York has about three thousand physicians, over twice the population of Brooklyn (1,481,920), and about forty dispensaries, at a low estimate. Six of these alone treat about one hundred and twenty-five thousand patients annually.

News of the Week.

Surgical Mishaps.—An interesting pamphlet, just out, is "Surgical Mishaps," by Professor Nussbaum, of Munich. It has often been asserted that the younger members of the profession especially could profit more by the publication of the failures in medicine and surgery than by the publication of successes. Viewed from this point, Nussbaum's paper will be a very welcome and useful novelty. Some mishaps which Nussbaum relates have a comical besides the necessarily tragical feature. He tells us, for instance, of the case of a peasant who, many years ago, was taken to the clinics of a great medical centre in order to be treated for multiple ulcers of both legs. On being examined on the operating-table, the right leg was pronounced to be curable, while the left was declared to be incurable and to require amputation. The amputation had scarcely been performed when the surgeons found, to their great horror, that they had amputated the wrong leg! Their chagrin was still increased when the right leg, which by accident had been saved, healed in a short time spontaneously.—Berlin Correspondent, *Medical and Surgical Reporter.*

Death by Electricity: the New Method of Executing Criminals.—The law requiring electrical executions of death-sentences will go into effect on January 1st. The experiments on dogs made last summer by Harold P. Brown, an electrical engineer, were criticised because the weight of the animals killed was less than that of a man, and it was supposed that more current would be required to kill a human being on that account. On Wednesday afternoon Mr. Brown had an opportunity to make a demonstration before Mr. Elbridge T. Gerry, the author of the new law, and the committee appointed by the Medico-legal Society to report on the best means of putting the law into effect. It was sought to find out the amount and character of current that would be required to make death certain and instantaneous. The experiments were made in Mr. Edison's laboratory in Orange. The first victim was a calf weighing 124½ pounds. The hair was cut on the forehead and on the spine behind the forelegs, and sponge-covered plates, moistened with a solution of sulphate of zinc, were fastened in place. The resistance of the animal was 3,200 ohms. An alternating current of 700 volts was applied for thirty seconds. The animal. however, was killed instantly. It was at once dissected by Drs. Ingram and Bleyer, but the brain, heart, and lungs, were found to be in a normal condition, and the meat was pronounced fit for food. One metal plate carrying the current touched the hair of the forehead and slightly burned it, but otherwise there were no external indications of injury. A second calf weighed 145 pounds and had a resistance of 1,300 ohms. The deadly alternating current at 700-volts pressure was applied for five seconds, and produced instant death. To settle permanently the weight-question, a horse weighing 1,230 pounds was next killed by passing the alternating current at 700 volts from one foreleg to the other. The resistance of this animal was 11,000 ohms. Mr. Brown was assisted by Mr. A. E. Kennelly, and there were present Mr. Thomas A. Edison, Professor R. Ogden Doremus, Professor Charles A. Doremus, Dr. Frederick Peterson, Dr. Frank H. Ingram, Mr. Elbridge T. Gerry, Mr. Galvin, Dr. J. M. Bleyer, H. Bourgouon, and Mr. John Murray Mitchell. The experiments are said to have proved the alternating current to be the most deadly force known to science.

Dr. Carolin R. Conkey.—At the meeting of the New Haven Medical Society, October 18th, Dr. Carolin R. Conkey, of this city, was elected a member of the Committee on Public Hygiene.

Dr Joseph W. Howe has been appointed Consulting Surgeon to Charity Hospital, New York, after a service of twenty years as Visiting Surgeon.

Dr. A. M. Phelps has been appointed Visiting Surgeon to same institution, in place of Dr. F. N. Otis, resigned.

Professor Gerhardt has just been elected to the Rectorship of Berlin University. The confirmation of Virchow's election was withheld for political reasons.

Sir Morell Mackenzie, according to a recent cablegram, has resigned his membership in the Royal College of Physicians.

A Great Subsidy.—According to the *Western Druggist,* $10,000,000 is expended annually in advertising patent medicines. Over half of this goes to newspapers, and chiefly to country newspapers.

Disinfection of Yellow Fever.—Some alarm is expressed regarding the new man-of-war the Boston, on account of the epidemic of yellow fever which appeared on board recently. The fact is recalled that the Susquehanna and the Galena, before the Boston, were known as "yellow-fever ships." They were cleansed and fumigated and exposed to the rigors of Northern winters, but the disease recurred nevertheless. Since that time, however, disinfection has become a science, and there is little doubt that the Boston can be thoroughly cleansed.

Dr. Maximilian Joseph Reinfelder died at Yonkers, on November 30th, from heart disease. He was born at Munich, Bavaria, March 4, 1821. He was graduated from the University of Munich in 1844. He came to the United States in 1854, and matriculated at the University Medical College in this city. He was graduated in 1869, receiving a certificate of honor. He was consulting physician to St. John's Riverside Hospital, at Yonkers, a Fellow of the New York Academy of Medicine, and a member of the Westchester County Medical Society.

Gouverneur Hospital, it is reported, has been temporarily closed on account of the development of diphtheria in its wards. The disease is said to have been introduced by the ambulance surgeon, Dr. Chalmers, who was so unfortunate as to contract diphtheria while attending a dispensary patient.

Beef, Milk, and Phthisis.—There can be no doubt that bovine and human tuberculosis are essentially the same disease, and that bovine tuberculosis may be transmitted to man by means of infected milk and meat. The necessity of prophylactic measures with this point in view has been urged by The Record for many years, and we are glad to see that the public press and legislatures have at last begun to recognize the fact. It is not probable, however, that the cow is the source of phthisical contagion in a large proportion of cases. The (pulmonary) phthisical age is from fifteen to thirty, after which milk ceases to be an important article of diet. Further investigation, however, on this point is needed.

MARINE HOSPITAL SERVICE.—The Supervising Surgeon-General of the Marine Hospital Service reports that during the year just passed there have been treated 43,203 patients, which is the greatest number of patients furnished relief in any year since the organization of the service. The receipts from all sources were $496,441.69, and the expenditures were $528,844.66, which amount was paid from the unexpended balance to the credit of this appropriation in the treasury.

PTOMAÏNIC GASTRO-ENTERITIS.—The last article from the pen of the late Professor Bamberger was a study of a case of gastro-enteritis from poisoning by ptomaïnes. The source of the ptomaïnes was some old sausages which the patient had eaten.

MEMORIAL TO THE PRESIDENT AND COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.—A large number of prominent members of the British Medical Association have drawn up the following memorial: "The undersigned members of the British Medical Association and others beg to direct the attention of the President and Council to the publication in the 1450th number of the *Journal* of the Association of the fac-simile of a 'script' by the late Emperor Frederick of Germany, referring to his treatment by one of his medical attendants. The publication of this document the undersigned regard as a violation of professional confidence, and its appearance in the *British Medical Journal* as discreditable to the medical profession in this country. They accordingly request the President and Council to take such immediate action as may be required to clear the Association and profession from the discredit now attaching to them in respect to this matter." Subsequently it appears that "at a council meeting of the British Medical Association a resolution was passed deprecating the publication of the details of the late Emperor Frederick's sickness as a violation of professional confidence. The council accepted the regrets of the editor of the society's organ concerning the publication of them."

THE CONSULTATION BY TELEGRAPH, described first by the London *Times*, in which Sir Andrew Clarke is said to have held converse with physicians at Vancouver's Island, we are informed, never occurred.

DR. H. D. SCHMIDT, of New Orleans, the well-known pathologist, died on November 23d. He had been an invalid for years.

TYPHOID FEVER IN NEW YORK.—There has been some newspaper discussion regarding an alleged increased prevalance of typhoid fever in New York. The statistics of the City Board of Health show, however, that the number of cases is about the same as last year. During the past two months there have been from twenty to fifty new cases reported monthly.

LEPROSY IN INDIA.—The official report gives 135,000 as the existing number of lepers in India, but there can be little doubt, says an English journal, that they already exceed 250,000, and that their numbers are steadily increasing. No attempt at isolation is made.

THE POPULATION OF FRANCE.—The first volume of the French census of 1886 has just been issued by the Government. It shows that in thirty-seven years the increase in the number of native-born Frenchmen has been less than 1,500,000. The number of births per year appears to be actually diminishing, even with a slowly increasing population. The illegitimate births amount to eight per cent. of the whole, and are increasing year by year. The number of living children per family in France is 2.07, which is believed to be a lower average than can be found anywhere else in the world.

THE WALKING MATCH which took place in this city last week illustrates the fact that the human locomotive apparatus can be made to go almost continuously for six days, that it progresses best at a dog trot or a walk, and that small men can go the farthest. According to the published reports the contestants lost very little in weight during this week's work, not more than one or two pounds. One hundred and thirty to one hundred and forty pounds seemed to be the average weight.

THE GALEN CLUB of London, has ceased to exist for want of support. Yet it numbered 240 members. Its objects were chiefly social.

THE DEATH OF PROFESSOR VON BAMBERGER, OF VIENNA, took place on November 9th, from an affection of the chest. He was born at Prague in 1822, and graduated at that university. In 1854 he was appointed an ordinary professor at Würzburg, which at that time was looked upon as being the leading medical faculty in Germany. At Würzburg Bamberger remained as ordinary professor of Internal Medicine for eighteen years; among his colleagues there were Schönlein, Virchow, and Scanzoni. There he published his chief works, "Diseases of the Heart" (1857), and "Diseases of the Chyliferous System" (1864). The latter has been translated into Dutch and Italian. Among his other writings may be mentioned his work on "Bacon of Verulam" (1865). In 1872 Bamberger was called to Vienna to fill the Chair of Internal Medicine, which had become vacant by the death of Oppolzer; he continued to discharge the duties of this post till the beginning of the present semester. Bamberger was the recipient of many honorary distinctions; he was an Austrian and Bavarian "Hofrath," a Knight of the Leopold Order, and President of the Imperial-Royal Society of Physicians of Vienna. In 1885 he was elected Rector Magnificus of the University of Vienna. The funeral procession, which took place on November 11th, was one of the most splendid which the Imperial city has ever seen.

BAMBERGER'S SUCCESSOR, it is said, will be Professor Schrötter, a gentleman widely known as a laryngologist. He is said, however, to be also a general practitioner of great ability.

VERDI'S HOSPITAL.—A hospital has been entirely built by Verdi, the composer. It occupies a commanding site overlooking the Po at Villanova, with a distant view of the Apennines. There are two wings, one for women, the other for men, and a separate ward is set aside for contagious cases; there is also a hydrophathic establishment, and most elaborate arrangements have been made for the disinfection of linen and other sanitary purposes. An efficient staff of nurses and attendants is also provided, and Signora Verdi has made the housekeeping department her special care. Verdi himself has deposited sufficient funds for the future maintenance of the hospital. It was opened on November 6th, without ceremony, only Verdi and his family, the physician, and the Sindaco of Villanova being present. The Sindaco proposed that the new building should be called "Verdi Hospital," but to this the donor objected, and the name Hospital of Villanova was finally adopted.

The Poor Horse.—Our esteemed contemporary, the *Virginia Medical Monthly*, publishes the picture of a horse which is suffering contemporaneously from thirty-four different diseases. The trouble begins in front, or cephalad as they say in Ithaca with a carious jaw, and ends caudad with what is technically known as a rat's tail. The *Monthly's* polypathologic picture must appeal powerfully to the sympathies of its numerous readers.

A Chicago Christian Scientist has recently come to grief in Birmingham, England, having been sentenced to five years of penal servitude for indecent assault upon a little girl. The man announced himself as "Professor McLean, M.D., former president of the Mind-Cure Association, and editor of the science department of the *Medical Science Journal*, Chicago."

The Origin of the Yellow-Fever Epidemic.—Cuban smugglers are now being blamed for the introduction of yellow fever into Florida. The Sanitary Inspector of the United States Marine Hospital Service at Havana, Dr. D. M. Burgess, has made a report to Surgeon-General Hamilton regarding the matter, in which he demonstrates at least the extreme probability of these illicit purveyors of rum, cigars, etc., bringing disease-germs into the State. There are about fifty vessels, ostensibly fishing-boats, which are engaged in the business, and make little secret of it. They are not only dirty and fit vehicles for contagion, but their surroundings while in port are of the sort most likely to communicate any germs there may be in the sewage of the city to them. Dr. Burgess states, in conclusion, that open, well-regulated commerce in clean ships, observing all the methods of modern sanitation, and carrying only acclimated people, is perfectly safe in comparison to this smuggling trade.

Oxygen not so Important in Respiration.—M. Brown-Séquard, who is nothing if not original, recently read a note at the Société de Biologie in which he asserted that oxygen was not so necessary to respiration as had been supposed, and that carbonic-acid gas was not so poisonous as had been claimed. He had succeeded in keeping animals alive and comfortable in an atmosphere containing sixty per cent. of carbonic-acid gas, while he and M. D'Arsomal had been able to breathe an atmosphere containing twenty per cent. of CO_2 without any inconvenience. It is usually taught that air containing ten per cent. of CO_2 is poisonous. Brown-Séquard thinks that nitrogen is a very important element in respiration.

Virchow on Artificial Deformities.—What is the use, says Virchow, of introducing the principles and appliances of hygiene into the huts of the poor and ignorant, when the scions of wealth, pretended intelligence, and fashion, especially in the gentler sex, show their contempt of hygiene by their dress and general wearing apparel? In days gone by, the speaker said, I have battled against the diabolical invention called the corset; but this crusade has been given up by me as absolutely futile. The French shoe, with pointed toe and the heel under the middle of the foot, is another fashion which, on account of its detrimental influences on the body, cannot be opposed too energetically. Even the modern stocking, pointed and symmetrical, is injurious to health, as it does not conform to the anatomical formation of the foot. To offset this we notice that the professor of pathology at the University of Cambridge, Dr. C. S. Roy, and his demonstrator, Mr. G. Adams, have appeared as champions of tight lacing. Moderate pressure on the abdomen, they say, tends to assist the emptying of the abdominal veins, and experiment showed that the amount of blood expelled by the heart at each stroke was greater, and that consequently the blood-supply of the brain and spinal cord, the muscles and skin, was increased. This increased supply, they say, is useful when violent muscular exertions were being made; consequently tight lacing in women and tight waistbands in men are useful.

An Indianapolis Doctor who will Advertise.—"I'll blow my own horn and they can go to h—l," was the rejoinder of a prominent physician of Indianapolis, about one year ago, when remonstrated with for his unethical and ungentlemanly practices. True to this declaration, he is still blowing his own horn through the mails and the daily papers in the most shameless way; but one of these days the Marion County Medical Society will make old *terra firma* as hot for this auto-hornblower as the region to which he invited some of his compeers. —*Indiana Medical Journal.*

Typhoid Fever Stories.—Dr. Yount, of Lafayette, says that: "The season for snake and sea-serpent stories is now about past, but the woods are full of doctors who claim to have never lost a case of typhoid fever."

For Vomiting of Pregnancy, very good results have been obtained from ʒ ss to ʒ j. doses of fluid extract viburnum prunifolium. It has been extensively tried in Bellevue and other city hospitals. In a series of eight cases, in which it was recently given in ʒ j. doses, a uniformly successful result was obtained. It seems to have a direct action on the uterus itself, thus preventing the reflex irritation which results in vomiting. In some of the hospitals all other remedies have been discarded.—*Canada Lancet.*

The Still Pens in Cleveland.—"The condition of 'solitary confinement at hard labor,'" says the *Gazette*, "to which the profession of Cleveland has allowed itself to become accustomed, is recognized and often commented upon by the profession of the country." We are sorry to learn that Cleveland doctors do not write; but we trust that when they do, they will write well. There are worse things than not writing medical articles, *e. g.*, writing poor medical articles.

Verdict of Malpractice in Administration of Chloroform.—*The Lancet* states that a death from chloroform occurred in Sydney; and a lawsuit brought by the husband of the deceased resulted in a verdict of guilty, setting the damages at £200, on the ground that the anæsthetic was improperly administered.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN PRACTICE OF MEDICINE.

Stated Meeting, November 20, 1888.

R. C. M. Page, M.D., Chairman.

Dr. Debout d'Estrées, of Contrexville, France, read a paper (see p. 665) entitled

OXALURIA, ESPECIALLY IN ITS RELATIONS TO URIC ACID.

Dr. E. L. Keyes said he feared to enter upon the discussion of the broad subject of oxaluria, since it would involve the expression of views regarding the influence of the nervous system, digestive system, heredity, etc., requiring too much time. While he accorded entirely with Dr. Debout regarding the causes of oxaluria, he did not entirely accord with him in the statement that it was only seen in patients who had dense urine. Dr. Keyes had certainly seen oxaluria, and some of the severest examples, accompanying light and phosphatic urine in people of the United States who had more or less catarrh of the intestines and stomach, who were nervously prostrated or had various forms of neurasthenia. Whether the oxaluria was entirely dependent upon the neurasthenic state, with prostration and phosphatic urine, he could not say, for these conditions might exist without the presence of oxalate of lime, or when this was present in the urine the condition named might disappear without the disappearance of the oxalate of lime. According to his view the oxaluria was often an accompanying symptom of the conditions named, and not necessarily a cause of them. But that there was such a place upon the earth where oxalate of lime would disappear from the urine when a certain course was pursued was a pleasant fact to know. He alluded to the springs at Contrexville, in the Vosges. Dr. Van Buren had had some pleasant experience with the springs, and Dr. Keyes had sent patients there who had a catarrhal condition of the pelvis of the kidney, and more or less catarrh of the bladder, and they had been benefited. Of course, it would be absurd to say they were cured. He remembered one case particularly, that of a man who had a great amount of oxalate of lime crystals in his urine, and after staying at the springs a while, fine uric-acid crystals took their place. During the winter after his return the oxalate of lime again rep'aced the uric-acid crystals; consequently it could not be said that he was cured. Further, the symptoms of nervous depression from which he had suffered did not disappear with the disappearance of the oxalate of lime. What would have been the result in this respect had he stayed longer at the springs he could not say. But he was benefited in many ways. This patient passed a stone after his return home, and was subsequently well.

Dr. Keyes thought the proper treatment of a subject of oxaluria who was in robust health was exercise, air, and regulation of the diet. In debilitated subjects, build up the nervous system, control the catarrhal condition of the intestinal tract, if any existed, and restore the general health. The springs of this country had been of some benefit because of their diuretic and mildly cathartic effect, but they had not caused oxalate of lime to disappear from the urine as positively as did those at Contrexville. The latter-named springs he found, during his visit last summer, extremely pleasantly situated, largely attended by well-to-do Englishmen suffering from oxaluria or uric-acid diathesis, and among others he met Playfair, who was very enthusiastic over the springs.

Dr. George B. Fowler agreed with Dr. Goldenberg that the presence of oxalate of lime in the urine, independent of its presence in the food, had a pathological significance; that it was encountered in certain cases of indigestion, associated with symptoms of depression, general nervousness, or the condition which had been called the oxalic diathesis; that it could be present also as a result of imperfect oxidation from heart or lung difficulties. It was a product of imperfect oxidation of nitrogeneous matters, and when good digestion and assimilation were restored, including healthy breathing and circulation, the oxalate of lime disappeared. The question of the origin of oxalate of lime was very difficult to solve.

Dr. Fowler adhered firmly to the view that we had, on the one hand, the ordinary substances taken as food, divided into organic and inorganic, and, on the other hand, the complete oxidation, the acid, and smoke of that food represented by urea, carbonic acid, and water; and that imperfect oxidation and any interference with the preparation of the food in the alimentary tract would cause an excess, a pathological quantity of uric acid and oxalic acid. In order to determine whether the presence of the acid was pathological, it was necessary to eliminate its source in the food, for it was a prominent constituent of vegetables. The urine of all herbivorous animals contained oxalic acid in excess, while the normal urine of man contained it only in minute proportions, if at all. The treatment was dietetic. A simple diet, which could be thoroughly digested, was indicated, and it would depend upon the individual as to what that diet should be. While oxalate of lime was extremely insoluble, and consequently the free use of water could not prove of benefit because of solvent powers, yet it was of benefit in stimulating the glands and promoting assimilation, and it was to the plentiful water drunk at springs that he would attribute their remedial powers.

Dr. Debout d'Estrées closed the discussion. He had made some thousand examinations of urine of patients in France who had oxaluria, and had never found it with phosphatic gravel. He had generally observed in his examinations of oxalic-acid urine that it was more acid than urine in the healthy, or than when the patient had uric acid.

Regarding cure, he had not said that patients when they left Contrexville were cured, but that the urine contained no more oxalic acid until they might return to conditions in which it would again develop.

As to Dr. Fowler's remarks, he also quite agreed with the views quoted from Goldenberg as to nervousness and dyspepsia, but he was particularly anxious to hear from American physicians why their countrymen often had oxaluria while the French people had uric-acid urine. As to the large quantity of water drunk at the springs being alone the explanation of the benefit there derived, it could not be, for patients were not permitted to drink the quantities which they did some years ago at the alkaline springs, as Vichy.

THE TREATMENT OF FUNCTIONAL AND CATARRHAL DISEASES OF THE STOMACH AND BOWELS.

Dr. W. W. Van Valzah said his paper would be entirely clinical, and would treat almost exclusively of catarrhal conditions of the stomach and bowels, with a few remarks on functional diseases.

In all cases the treatment of catarrhal conditions of the stomach and bowels was largely one of diet, and that diet in nearly all was composed largely of animal foods, and in some instances it was necessary to limit the patient for a time exclusively to animal food. In other cases it was necessary to impose only slight restrictions upon the diet. Between these extremes there ranged a great variety. If animal food was called for, the best, as all knew, was beef. In severe cases beef pulp particularly was called for. The best part of the beef was the centre of the round steak, from the well-fatted corn-fed steer, from three to six years old. The steak should be from a half to three-quarters of an inch thick, not pressed too hard, broiled, and to it a little butter, salt, and pepper be added, or some flavor, as that of an extract of meat, might be imparted. In the early stage of a severe case of catarrhal disease the quantity of the steak should be very small. In a few instances no solid beef was borne. Later on, as the patient improved, the amount was increased, say to four or six ounces daily, then to ten, twelve, or even sixteen ounces. If it became very tiresome, change to lean chop, or grouse, or English pheasant. Even in the grave cases it might be well at first to give a small quantity of starchy food, but in the severer catarrhal conditions of the stomach the sooner the patient was brought to an animal diet the more quickly would he reach a state of comfort. Where there was catarrh of the bowel the same rules applied, but less rigidly.

When the appetite was at fault, it was invariably due either to bile on the stomach, indigested food in the stomach, or depression of the nervous system, to such a degree as to make the patient literally too tired to eat. The end should be to cleanse the stomach as rapidly as possible, limit very emphatically the amount of food, and insist on physical and mental rest; at the same time brace the nervous system by medicines, massage, and electricity. It was well in all cases, particularly of catarrh of the stomach, to keep the patient from one to three months on food which he could thoroughly digest from day to day, otherwise a permanent cure could not be expected.

In some cases a desirable food was milk warm from the cow. Ten minutes should be taken in drinking a glass. The next best thing to fresh milk was peptonized milk or half a glass of ordinary milk, to be increased if well digested. The patient might take both meat and milk, and no other food would give as good results.

If other foods, such as peas and string beans, fresh from the garden were given, much stress should be laid upon limited quantity. Little by little the diet might be extended until ordinary diet had been reached, but if the patient did not digest it well, he should return to the restricted diet. One could not be got so well that it would be impossible for him to become sick.

The principle at the foundation of the treatment was to stop the excessive fermentation in the stomach and intestines. The physician should be judge of whether the food was being digested, not the patient. To prepare the stomach for the food which a clean stomach would invariably digest there was no simpler means than hot water. It was a diluent, solvent, and stimulant, and particularly promoted downward peristalis. Among drugs which cleansed the stomach were soda and potash salts. Upward peristalis was in some cases a very annoying and difficult feature to control. Cold water seemed to promote upward peristalsis, while hot water had the reverse effect, promoting downward peristalsis. He could give no explanation.

The specific gravity of the urine should be kept at 1.012 to 1.015. At the beginning of the treatment it was well to tell the patient to take a glass of hot water, from 110° to 120° F., an hour before each meal, and on retiring, to consume twenty minutes in drinking it. If there was marked catarrh of the stomach it should be taken two hours before the meal. If disagreeable to the taste, add a little lemon juice, etc.

The drinks at meals should be limited to one of three things, viz.: black tea or coffee (not more than one clear cup after a meal and one early in the morning), or milk. When there was marked malaise he might give a cup of very strong black coffee to which there should be added from one-sixteenth to one-twentieth of a grain of sulphate of strychnine.

The indications for medicines were, to supplement the gastric juice, to promote appetite, to invigorate the nervous system, to check or stimulate the secretions. Other advanced or marked symptoms might have to be met. Give such medicines as would not disturb the stomach, the less needed the better. In chronic inflammation of the duodenum, medicines directed immediately to the mucous membrane certainly gave good results. Among these none were so good as hydrastis, alone or in combination with bismuth. Small doses of iodide of potash or Merck's salicin might be useful. A free movement of the bowels should be obtained each day, and if necessary a laxative administered, as Carlsbad salts, licorice powder, etc., or a non-irritating enema of olive-oil and glycerine. For acidity, there was nothing better than salicylate of soda, or rhubarb and soda. Salol had not been useful in his hands.

The management of the mental condition of the patient was of extreme importance. He should be seen often, and the doctor's visit was a failure if he did not leave the patient in a hopeful state. Insist upon his resting half an hour before each meal, and sleeping from eleven to thirteen hours daily.

Fermentation in the bowels, even when excessive, was a stimulant, especially when alcoholic, and when checked by treatment it might have a weakening influence on the patient. A little brandy one or two hours after meals would counteract the depression.

Daily examination of the stools should be made, particularly in functional diseases of the alimentary tract. It was very important to study each case carefully and treat it according to its merits.

Dr. A. Caillé opened the discussion. To intelligently treat dyspepsia it was necessary to have in mind a good classification of the different forms, and as such a classification was difficult to found on pathology, he had made it clinical. First, there were acute and chronic dyspepsia. The acute form came from an overloaded stomach, and would pass off in a day or so. Acute gastric catarrh might run a course of one or two weeks, with or without fever. Under chronic dyspepsia he found the classification below of practical value: simple nausea, gastric vertigo, dyspepsia from insufficient mastication (bad teeth), simple loss of appetite, which might be due to old age; acid pyrosis, dyspepsia of pregnancy, of anemia, from disease of the heart, ulcer of the stomach, and nervous dyspepsia.

Regarding diet, he rarely had to order exclusively liquid or peptonized food, and he usually got along better by employing a liberal diet of articles which he had found by experiment were well borne by the patient. Experience had shown that patients of this class could not take cheese, lobster salads, cabbage, fresh bread, pastry, and beans. Some patients could take fruit, others could not. As a rule stewed fruit was less likely to do harm than raw. He agreed with the author that milk should be taken slowly, and in soups; the addition of a little cracker or bread made it coagulate in smaller particles. Contrary to what might seem good advice, he gave his patients liberty to use salt pickles and green salads. They seemed to stimulate the mucous membrane to activity, and usually the patients liked them.

As to medicines, he usually began with a dose of calomel and jalap, or podophyllin. Afterward a mineral acid, as hydrochloric, in combination with wine of pepsin, etc. In pyrosis, or heartburn, an alkali was supposed to be indicated, but he knew by experience that dilute muriatic acid was just as good in many cases. The first dose sometimes caused pain in the tender stomach, and if that occurred, the patients should immediately take some morphine, or morphine and chloroform, and omit the hydrochloric acid a day or two. If the medicinal and dietetic treatment was not sufficient, then wash out the stomach, using the soft tube. If the water came back clear, the irrigation would not prove useful. In anæmic dyspepsia, give iron, strychnine, or arsenic. The strong tobacco used in this country sometimes caused dyspepsia, in which case it should be dropped.

Dr. Henry Schweig thought the subject of diet had been excellently elaborated by the author. In gastritis and gastric catarrh there was, in his opinion, no such thing as an established diet. It should be adapted to each case. The paper seemed to treat of these affections too much as if they were strictly local. He thought they were frequently conjoined with lesions elsewhere, and would not disappear until the latter had received attention. For instance, he had seen some catarrhal conditions of the stomach disappear only after treatment of a catarrhal affection of the respiratory tract. Regarding remedies, he had found nitro-muriatic acid of use, and also oil of wintergreen.

Dr. John C. Peters allowed a great variety of diet in the course of the day, but only a very few articles at one meal. For instance, before rising the patient took a cup of hot coffee or cocoa; for breakfast, simply meat and a bit of bread and toast. Every two or three hours afterward during the day he might take one or two articles, as potatoes with butter, or rice with milk, etc. In simple catarrh of the stomach he relied largely on liquor potassa; pulsatilla was useful; sometimes also astringents, mineral acids, and bismuth.

Dr. F. W. Jackson thought the reader of the paper should have made a clearer distinction between catarrhal conditions of the stomach and those of the intestines. The treatment laid down seemed better suited to severe cases, but it would be difficult to carry it out in but a limited number. He agreed in the view that dietetic treatment was most important, but perhaps the author had not allowed sufficient freedom in this regard. In intestinal disorders certain anti-fermentatives were of value, as salol, salicylic acid, naphthol, etc., which, however, were only adjuncts to hygienic management.

The Chairman, **Dr. R. C. M. Page**, mentioned a case which impressed the necessity for inquiring into the cause of the gastric or intestinal trouble. A boy, ten years of age, had been failing in health two or three years, and was thought to be going into consumption. Dr. Page finally saw the lad, and careful examination revealed no disease of the heart, lungs, or other organs, but in the fæces he found sand. The patient had been accustomed to eat sand which was about the yard, and when he was removed from this, and without any treatment, he became fat and healthy. In all rebellious cases, therefore, examine the fæces, and thus learn, what one may not be able to do otherwise, what the patient eats.

Regarding Carlsbad salts, such as they obtained at the drug stores, it was only sulphate of soda, for which seventy-five cents or a dollar had to be paid, when, if purchased under its true name, it would cost but five cents.

Dr. Van Valzah closed the discussion, and said his paper was a plea for more exact observation and methods in the treatment of gastric and intestinal catarrh.

Blood Calculi in the Ovaries.—Dr. H. W. G. Mackenzie, at a late meeting of the Pathological Society of London (*The Lancet*, October 20, 1888), exhibited a specimen of concretions in the ovaries from a woman, aged forty-one, who had suffered from menorrhagia for two years, and had a large fibro-myoma of the uterus. She had disease of the mitral valve and fatty degeneration of the liver. The uterus was uniformly distended by the tumor, which was a globular mass about four inches in diameter growing inwards from the uterine wall on the left. The uterine walls were themselves hypertrophied. The ovaries, which were enlarged, contained a large number of black, hard, flat concretions of sizes varying from a coriander seed to a bean, of irregular shape, smooth, firm, and hard, although they could be cut with a knife. The concretions were in cavities, two or three together. Microscopic examination of a thin section showed absence of structure. The concretions were exceedingly insoluble in acid and alkaline solutions, and were only slowly dissolved by digestion in the gastric juice. They probably consisted of coagulated proteids, and were akin to the colloid concretions found in the prostate and in old hemorrhages. The specimen was a very uncommon one, perhaps unique. The enlargement of the organs was probably due to chronic congestion, the consequence of the large uterine growth. The concretions, it was suggested, were derived from hemorrhages into Graafian follicles, the effused blood having undergone a rare colloid change.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, November 2, 1888.

Francis P. Kinnicutt, M.D., President, in the Chair.

Dr. Andrew H. Smith read the paper of the evening (see p. 666), entitled,

MANAGEMENT OF PROGRESSING CEREBRAL HEMORRHAGE.

Dr. C. L. Dana said that he had already carried out a part of the treatment suggested by Dr. Smith, in several cases, though not on exactly the same grounds. He had given the nitrites because he thought the indications were to reduce arterial tension. Certainly an atheromatous artery is less liable to break when the tension is low. About a year ago he had seen a case in which cerebral hemorrhage had taken place. He saw the case several days after the hemorrhage had occurred, but the patient had not improved. He gave strophanthus hispidus and nitrite of amyl, and under this treatment the patient improved considerably. He had also had four or five other cases of a similar nature in which the same treatment had been employed, as he believed, with success in all. It is not, however, in all cases that this mode of treatment is indicated, for in plethoric patients the vaso-dilators are apt to do harm rather than good.

Dr. J. W. Roosevelt had tried the same methods of treatment, but without lowering the head. He was led to use the vaso-dilators by the same train of reasoning that Dr. Smith had employed. The idea was to lower the pressure in the cerebral arteries. He was at one with the reader of the paper in condemning the employment of ergot in these cases, and he thought that it was almost a disgrace to the profession that this drug should be so often used indiscriminately in all forms of hemorrhage.

Dr. G. L. Peabody said that it had always been his fate to reach these cases at a time when all activity had ceased. But could they be seen at the time that the bleeding was going on, the indication would certainly be to lower the arterial tension. Nitrite of amyl, contrary to the belief of some, does not increase the blood-supply to the brain. The use of other drugs of the nitrite order is not the same as that of amyl, because the other nitrites cannot exert their influence rapidly enough. He agreed with Dr. Roosevelt in his strictures upon the unreasoning employment of ergot in hemorrhage.

Dr. F. P. Kinnicutt remarked that his personal method of treatment of these cases had been much like that of Dr. Smith. For several years it had been his rule to give the nitrites in cases of cerebral hemorrhage. He gave nitroglycerine in frequently repeated doses, and had seen no harm result; but, on the contrary, was satisfied in his own mind that benefit had followed its employment. By means of moderately large and frequent doses of nitroglycerine we certainly can reduce arterial tension, at least temporarily. He agreed with the previous speakers in condemning the exhibition of ergot in these cases.

Dr. A. H. Smith said that nitrite of amyl was specially indicated in these cases because of its rapid action. It reduces the *vis a tergo* within the arteries, and at the same time causes additional pressure within the cranial cavity, thereby making compression at the seat of hemorrhage and so arresting it.

THE USE OF ERGOT IN ARRESTING HEMORRHAGE

is valuable only when the bleeding is taking place from capillary surfaces. In cases of hemorrhage from the nasal septum, we can often see the blood oozing from the mucous membrane when no lesion is discoverable. This is a true capillary hemorrhage, and in any case of such a kind ergot is indicated.

SOME DIFFICULTIES IN THE DIAGNOSIS OF TYPHOID FEVER.

The adjourned discussion on Dr. Ball's paper (see pp. 225 and 410) was now resumed.

Dr. A. B. Ball said that he had just had a practical illustration of the value of an examination of the blood in the diagnosis of doubtful cases. A physician living in New York had recently returned to the city from the country. At the hotel where he had been passing some time there had been a case of typhoid fever. A few days after his return he began to have chilly sensations in the afternoon. When he came to consult the speaker he had had chills in the afternoon on three successive days, and they were followed by fever, but no sweating. At the time of the visit, which was in the forenoon, he was entirely free from fever, but in the evening of the same day he had a temperature of 101° F. The following morning the temperature was again perfectly normal. At the speaker's request, Dr. W. B. James took three or four specimens of blood from the patient's finger for examination, but was unable to detect the presence of any malarial germs. The fever returned again in the evening, and another examination of the blood at this time showed the absence of malarial germs. The patient had been suffering severely from dyspepsia for several months, and Dr. Ball was loath to give him any quinine, but would have done so on account of the peculiar intermittance of the fever, had not this examination shown the absence of the plasmodium malariæ.

Dr. A. H. Smith said that he was particularly pleased to see that Dr. Ball recognized cases as typhoid fever in which there were no abdominal symptoms nor any eruption. He had seen several cases in which there were no symptoms of this sort. He thought it not improbable that the micro-organisms of typhoid fever were of several varieties, belonging doubtless to the same species, but differing among themselves. As regards

ERLICH'S TEST,

he had had a good many examinations made by the house-physician at the Presbyterian Hospital. The cases embraced a variety of diseases, and in some the reaction was present, while in others of the same disease it was absent. Of twenty cases of typhoid fever, however, the reaction was present in every instance, but in ten cases of convalescence from typhoid, after the fever had subsided, there was no reaction. In five cases of traumatic fever, with high temperature, the application of the test gave negative results. In reply to a question by Dr. Ball, he said he did not know the details of the application of the test in these cases, whether the reaction was found in the sediment of the urine or not.

Dr. Ball said that it was very important to take that precaution.

Dr. C. L. Dana said that he had found that there was a mistaken idea very prevalent as to what the reaction was, and it was not safe to rely upon statements concerning the results of Erlich's test unless the details of the process were thoroughly understood by those who applied the test. He had not found the reaction in many cases other than typhoid fever.

Dr. G. L. Peabody had been much interested in the application of this test. During the past few months about five hundred patients in the New York Hospital had been examined in reference to this point. In three cases of malarial intermittent fever the reaction was present. That the diagnosis in these cases was correct was shown by the fact that the plasmodium malariæ was found in the blood. The reaction was also found in other febrile affections, and also in one case of non-febrile diarrhœa. It was absent in five well-marked cases of typhoid fever, in which the plasmodium malariæ was not found in the blood, and in which quinine had been given without effect. The speaker had been unable to obtain the reaction in the later stages of typhoid fever, and also at earlier periods in almost all the cases in which antiseptics had been given. In these five cases, however, in which the test had failed, no antiseptics had been used, as far as known, and the disease was still in its active period.

Dr. W. H. Draper said that any one who has seen a great deal of typhoid fever must have a doubt in his mind whether he is not dealing with

SEVERAL FORMS OF CONTINUED FEVER

rather than with one. He also doubted whether there was any such thing as an aborted typhoid fever—that is, whether a case of true typhoid fever ever ran its course within one or two weeks. He agreed with Dr. Ball that true remittent fever was very seldom seen in this region of the country. Many cases were called remittent fever at first, but were found later to be true typhoid fever. There is so much confusion in the minds of different observers concerning this disease, that we must believe that there are forms of continued fever that are not typhoid, and which differ from the latter chiefly in their duration.

Dr. C. Cleveland looked upon the temperature as the most important guide in the diagnosis of typhoid fever, and he had frequently seen cases in which this was the only guide, the abdominal symptoms and the roseola being absent; indeed, in most of his cases there had been no eruption. He did not see why there should not be cases of aborted typhoid fever. In the case of scarlatina it is not unusual to see patients with very slight symptoms, which quickly pass away, yet they are undoubtedly suffering from scarlet fever. It is merely a difference in degree in the amount of poison taken into the system.

Dr. F. P. Kinnicutt said that he would only refer to one or two points in Dr. Ball's paper. He would emphasize the occasional most prominent localization of the typhic infection, even at the onset of the disease, in other portions of the body than the intestine. He cited a case which he believed to be an illustration of such a localization. An outbreak of typhoid fever occurred in a New York household, in which three of its members developed typical typhoid fever within a few days of each other. The disease in these cases pursued its usual course. Two other inmates (servants) of the same house were taken ill within a week from the occurrence of the first case, and were removed immediately to St. Luke's Hospital. In one the symptoms and physical signs at the onset had been those of a pneumonic process in the upper lobes of both lungs, with an accompanying acute nephritis (the urine containing blood, albumin in large amount, and casts of various kinds). Defervescence of the pneumonia occurred on the seventh or eighth day, the nephritis diminished, but the fever continued until the end of the third week. In the second case the symptoms and physical signs at the onset were those of a pneumonia of the lower lobe of one lung, running its course in seven or eight days, the fever only disappearing, however, on the fourteenth day. Dr. Kinnicutt had questioned, in the latter case, whether the pathological process had been a simple pneumonia or whether it should be regarded as an illustration of the localization referred to by Dr. Ball. Its development in an infected household, and the continuance of the fever after the subsidence of the pulmonary symptoms and signs, were certainly points of interest.

He would add a few words in regard to Erlich's test. The reaction to this test, it is well known, may obtain in various diseases, but without much regularity in such diseases. The important point, it seemed to him, was to determine whether it occurred in so large a proportion of cases of typhoid fever as to render it an important aid in diagnosis. This he believed to be the case. There were sources of error which had been mentioned by Dr. Ball, in employing the test, which might render it valueless in a given case. The rule at present adopted in St. Luke's Hospital was to use fresh preparations for each testing. In fifty consecutive cases of typhoid fever, treated in St. Luke's Hospital during the past year, the characteristic reaction had been obtained in all but four. These four had occurred during the hottest weather of the summer, and there had been a doubt at the time whether some chemical change in the reagents had not occurred. The failure of the test had been of much service to him in the probable exclusion of typhoid fever in several cases, an exclusion which the subsequent course of the disease justified. It was exceeding desirable that the failure of the test, carefully used, in any well-observed cases of typhoid fever, should be reported.

Dr. Kinnicutt believed that Laveran's discovery of the plasmodium malariæ promised increased facilities for differentiating malarial from typhic infection.

Dr. Ball said that Erlich himself had admitted that the reaction was occasionally absent in mild cases of typhic infection, and the speaker had also seen cases in which it was not present. Its absence certainly argued against the disease being typhoid, yet its presence did not point absolutely to the existence of this affection.

Dr. Dana had found the reaction present in all but one of his cases of typhoid fever, and that case was a very atypical one; the eruption was absent and the fever ran a very irregular course.

Dr. Draper said that his remarks had possibly been misunderstood. He admitted, of course, that there were cases of typhoid fever varying greatly in their severity. But he would not be surprised if we should find that other diseases existed in which the symptoms were similar to those of this affection, which were nevertheless not cases of true typhoid fever.

Dr. Peabody did not wish to be understood as calling in doubt the value of Erlich's reaction, for he agreed with Dr. Ball that it was a very valuable negative test.

Dr. A. A. Smith reported a case which simulated very closely typhoid fever, and had been diagnosticated as such, but the fever continued for so long a time that the correctness of the diagnosis began to be doubted. A more careful examination was then made, and it was discovered that pyelitis was present. The urine had been previously examined, but the presence of pus in the urine was not constant, and the pyelitis had thus escaped detection.

Dr. Beverley Robinson related a case which had been supposed to be one of typhoid fever, but at the autopsy no typhic lesions had been found. Small infarcts were discovered in the lungs and spleen and a phimosis being present, the prepuce was slit up and a suppurative disease of the glans penis was found to exist. In this case Erlich's reaction was not present. In another case, now under treatment, in which the urine responded to the test, and which was believed to be typhoid fever, a similar condition was present, the prepuce being gangrenous. It was probable that infarcts in the internal organs were present, yet it was believed that typhoid fever existed.

The Society then adjourned.

Where has 'Opkins gone?—*The Hospital*, of England, states that nurses in hospitals are rather apt to lay too much stress on the advantages received by the patients and their duty of thankfulness, but still it is the poor soldier who suffers most from always having his causes to be grateful flung in his teeth. Witness the following true story: Chaplain.—So poor Hopkins is dead. I should have liked to speak to him once again, and soothe his last moments; why didn't you call me? Hospital Orderly.—I didn't think you ought to be disturbed for 'Opkins, sir, so I just soothed him as best I could myself. Chaplain.—Why, what did you say to him? Orderly.—"'Opkins," sez I, "you're mortal bad." "I am," sez 'e. "'Opkins," sez I, "I don't think you'll get better." "No," sez 'e. "'Opkins," sez I, "you're going fast." "Yes," sez 'e. "'Opkins," sez I, "I don't think you can 'ope to go to 'eaven." "I don't think I can," sez 'e. "Well, then, 'Opkins," sez I, "you'll go to 'ell." "I suppose so," sez 'e. "'Opkins," sez I, "you ought to be wery grateful as there's a place perwided for you, and that you've got somewhere to go." And I think 'e 'eard me, sir, and then 'e died.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK

Adjourned Annual and Stated Meetings, November 26, 1888.

Dr. L. Bolton Bangs, Vice-President, presided at the adjourned annual meeting, and after reports of certain standing committees had been received he declared the meeting adjourned.

Dr. Alexander S. Hunter, President-elect, called the stated meeting to order. Before introducing the speaker of the evening, he made some remarks on the objects of the Society, dwelling upon that for the promotion of medical science and art. The best papers from the best men in the profession should be read at this Society, and the best discussions should be called forth. The subjects should be practical, and of a kind which interested all members of the profession. He had the promise of interesting papers by distinguished men, assuring them of a good audience, and he appealed to the members to be present at each meeting.

Dr. Hunter then appointed the following standing committees: On Ethics, Dr. F. A. Castle, Chairman, Drs. William H. Draper, H. E. Crampton, A. N. Jacobus, and N. J. Hepburn; on Hygiene, Dr. Richard Van Santvoord, Chairman, Drs. William H. Flint, Cyrus Edson, J. E. Andrews, and Sanger Brown; on Prize Essay, Drs. E. H. Grandin, M. Allen Starr, and William G. Thompson; Auditing Committee, Dr. C. E. Billington, Chairman, and Dr. William Stevens.

Dr. William H. Thomson then read a paper, entitled

SIGNIFICANCE OF COUGH AND USE OF EXPECTORANTS.

In this climate, he said, there was scarcely anything for which the physician was so often asked to prescribe as cough. To many persons it was such an ominous thing to hear that its prompt removal was earnestly sought for; if it was not removed it was regarded as the note of death. There was much to justify this dread. He doubted also whether any other kind of prescriptions were so little varied, after some years' experience, as each one's cough mixtures. They became as much a fixed habit as other habits, and were likely to last for life.

Cough was a reflex act usually, whose efferent mechanism was brought into play by a great variety of afferent impressions. Its one important object was expectoration, but much oftener than not the reflex act occurred without accomplishing its object, and it was therefore useless. One of the commonest indications to be met by the physician was to suppress a useless cough and allow only that which would accomplish its natural purpose.

To support this statement he would enumerate a number of useless or non-expectorant coughs. His list included not fewer than fourteen kinds of the most common, and doubtless those present could add others. All non-expectorant coughs had one marked feature in common, and that was the peculiar sound.

The sound of a non-expectorant cough, whatever its kind or origin, was single, while that of the expectorant cough was never single. That was to say, the non-expectorant cough, no matter how constantly or rapidly repeated, consisted of a series of separate acts, and might be likened to the separate blows of a hammer, which might be few or many, loud or just audible, occurring only now and then or in rapid succession, for a brief period or in paroxysms. The expectorant cough, on the other hand, was never single. It might consist of only one act of real coughing, but if so, it was immediately followed by a sound, an evidence of clearing the pharynx, which was the last step in expectoration as far as the respiratory tract was concerned. Generally, however, it consisted of a number of coughs, in which the sounds, instead of resembling the strokes of a hammer, were more like the sound of a chain passing over a pulley.

The secretions excited cough only when they reached the sensitive points in the respiratory passages, the existence of which had been pointed out by experimenters. Below the second division of the bronchi the secretions did not excite a desire to cough, but from this point up to the trachea the sensitiveness of the tract to foreign bodies increased, while in the trachea there was little sensitiveness. It reappeared, however, in the larynx. The continuous character of the expectorant cough was well illustrated in chronic bronchitis with very viscid expectoration, the catarrh sec of Laennec.

Passing to the varieties of non-expectorant cough, the first mentioned was that due to simple inflammatory irritation, without secretion, of some portion or of the whole respiratory tract from the epiglottis down to the third division of the bronchi. An instance of this was seen in the purely hyperæmic stage of bronchitis. The indication, was to turn the dry into the expectorant cough as soon as possible, by starting the secretions. He used tartar emetic, small doses in water, repeated until expectoration took place. A much more common example of this cough occurred in ordinary bronchitis, both acute and chronic, where, owing to the co-existence of secretions and more or less expectoration, it might be confounded with expectorant cough. The patient had a number of distressing, painful hacks, without bringing up anything; the cough, however, now and then terminating in the continuous kind. It was especially frequent in phthisis. He gave chloral and morphine in these instances for the non-expectorant cough exclusively; so far as the expectoration itself was concerned, they acted rather as drawbacks.

A second variety of useless cough was seen in inflammatory irritation of the pharynx. This was common enough in ordinary colds, but it was also one of the most obstinate troubles in advanced phthisis. Ringer's suggestion, to apply with a brush morphine with starch to the throat, would often enable the patient to get a night's rest. The specific effect of aconite on this part of the mucous membrane was frequently beneficial.

A third variety of useless cough was due to irritation of the pleura, and the importance of recognizing the pleuritic origin of coughs could scarcely be over-estimated. His rule was to strap the whole affected side six months or more after an attack of pleurisy. There was a dry, hacking cough of early phthisis which might be excited by laying the cold hand on the shoulders. The pleuritic cough could not be otherwise than harmful and provocative of increased inflammation in the lungs, and consequently he strapped the side. The objections thereto were only theoretical.

A fourth variety of useless cough was spasmodic, seen in pertussis. This could be wholly suppressed within a week by bringing the patient under the physiological effects of belladonna. If the child afterward took a cold there would be a new reason for cough.

A fifth variety was the malarial cough, sometimes mistaken for whooping-cough, and curable by quinine. A sixth variety was the nocturnal cough of children from irritation in the intestinal canal. A seventh variety was the so-called uterine cough, although it might start from the uterine appendages rather than the uterus. It was also present in hysterical women, and was often very loud. Purgatives, as of rhubarb, also asafœtida, valerian, and bromides, were of benefit, but when disease of the genital organs existed it should be treated.

Then there was the useless aneurismal cough, the diagnosis of which could be facilitated by listening over the trachea for a persistent croupy sound, no matter how quiet the respiration. It was best relieved by morphine, but it could often be warded off by a couple of leeches over the sternum. Similar to it was the useless cough induced by pressure of an enlarged gland against the pneumogastric. With it there was hoarseness and vomiting, which the doctor could assure the parents would disappear after a while with the softening of the gland. It might be relieved by dry-cupping between the shoulders. Another instance of reflex useless cough was due to wax or foreign bodies in the ear. There were coughs also from irritation of the phrenic nerve, in perihepatitis, abscess of the liver, and some cases of splenitis. Cerebral cough was of grave import, and likely to be excited by affections at the under surface of the cerebellum, or tumors or abscess pressing down upon the medulla oblongata.

The indications for the treatment of expectorant coughs were simple, and two in number, namely, first, to make the phlegm more liquid and easy to expel, and, second, to make the cough powerful enough to be effective. A third might be added, to check or diminish superabundant secretion. There was a close connection between the œsophagus and the respiratory tubes, and in the dyspnœa of pneumonia he had often kept the children swallowing half a teaspoonful of milk and lime-water for long periods, with the best results in promoting expectoration.

All oils increased the flow from the mucous membranes, but certain oils affected more certain secretions. Experience had taught him that the best oil for increasing the secretions in the respiratory tract was linseed. He had not found this mentioned in any of the books. When prepared by emulsion it was not difficult to administer. It was more effectual than any other expectorant in rendering the bronchial secretion less albuminous, less viscid, and facilitating expectoration. It markedly diminished bronchial irritation. It was of use in the asthmas affected by change of weather, etc. It was useless in capillary bronchitis, and of little value in broncho-pneumonia. Where the bronchitis was primary and local in origin linseed-oil was indicated.

The emulsion when made in quantity was composed of 15 ounces of linseed-oil; 2 drachms each of oil of wintergreen and oil of cinnamon; 10 ounces of powdered acacia; water, 24 ounces; glycerine, 5 ounces; simple syrup, 10 ounces, dilute hydrocyanic acid, 2½ drachms. To be churned. Half an ounce constituted a dose. To six ounces he might add forty minims of Magendie's solution, and a drachm and a half of chloral.

Dr. A. Jacobi took exception to some statements in the paper. For example, he doubted whether we could make a reliable diagnosis of enlarged bronchial glands as the cause of non-expectorant cough, and he enumerated the difficulties. He also called attention to some neurotic useless coughs, not only in women, to which class Dr. Thomson had alluded, but also in men and children. Pharyngeal cough was frequent, and when due to an elongated uvula was likely to be present when the patient lay down. Often this cough was present at night, or when the patient arose in the morning, and was due to dry secretions acting as a foreign body. The enlarged tonsil could be excised or burned. A further remedy for the symptom consisted in frequent sips of warm alkaline water.

Dr. Beverley Robinson insisted upon it that the physician should not mix all sorts of things together in his prescriptions. If he had a good thing it should rest on its merits. If linseed oil was good, give it as linseed-oil, and not mixed with a variety of things which would make it impossible to say to which drug the beneficial effect was due. Scarcely any mention had been made of conditions of the nose and naso-pharynx producing cough. He would not want his chest strapped six months for pleurisy; better remove the effusion and prevent adhesions. From certain experiments he had been at one time disposed to think the area of cough was in the apex of the lungs.

Dr. Clarence Rice dwelt somewhat upon conditions of the naso-pharynx as a common cause of cough, and mentioned particularly enlarged veins or papillæ at the base of the tongue.

Dr. Simon Baruch thought the paper gave too much attention to semiology, especially as a basis for diagnosis and treatment. He believed in the experiments which went to show that of so-called expectorants there were only two in fact, namely, apomorphine and pilocarpin. There was only one way of removing an irritating or so-called non-expectorant cough, viz., by the use of a neurotic.

Dr. O. K. Tansley mentioned some affections of the ear, causing irritation of the external canal, as giving rise to cough.

Dr. Darlington had known linseed oil to be used considerably in the country in cough, with good effects. Until recently he had noticed it only in the hands of housewives. They did not mix it with any other remedies. He called attention to a cough in men who worked in the New Aqueduct, caused by the gases given off after explosions of dynamite. It was an irritant cough, and had been mistaken as a symptom of other diseases by some hospital physicians. It was relieved only by large doses of morphine or chloral.

Dr. Thomson in closing the discussion pointed out the diagnostic signs of enlarged bronchial glands; said the scope of his paper was necessarily limited, and with regard to mixing together a variety of drugs for a given indication, that those added to the linseed-oil, with the exception of the hydrocyanic acid, were to effect an emulsion.

Dr. H. T. Hanks then read,

A MEMORIAL OF DR. J. B. MCINTYRE.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE BOWMAN LECTURE—THE VALUE OF EYE-SYMPTOMS IN THE LOCALIZATION OF CEREBRAL DISEASE—A PECULIAR CASE OF ASCITES—ARTHRECTOMY *VS.* EXCISION OF JOINTS—THE RADICAL CURE FOR HERNIA AND ITS PERMANENCE—THE ARMY MEDICAL RESERVE—THE EPIDEMIC OF DIPHTHERIA IN LONDON.

London, November 17, 1888.

In the "Bowman Lecture" recently delivered before the Ophthalmological Society, Mr. Swanzy, of Dublin, chose for his subject "The Value of Eye Symptoms in the Localization of Cerebral Disease," and gave a valuable summary of the present state of our knowledge on the matter. He divided the subject into two parts, according as there were oculo-motor disturbances or disorders of the visual apparatus. Of the former the most common was conjugate lateral deviation of the eyes, which might indicate a lesion either of the cortex, the internal capsule, or of the pons. In the former cases the eyes were turned toward the lesion and away from the paralyzed limbs, while in a lesion of the pons the opposite condition was present. The exact location of the lesion in the pons might be ascertained by additional ocular symptoms. Thus ptosis or paralysis of the sixth nerve might be also present; in the latter case the affected eye would remain permanently deviated. A lesion low down in the pons would cause paralysis of the sixth nerve, without any conjugate deviation. Paralysis of the other associated movements of the eye was rare, and generally corresponded with a lesion of the corpora quadrigemina. Ptosis alone was not uncommon, and, when present along with paralysis of the opposite side of the body, would point to disease of the crus. If the paralysis did not come on at the same time it would be probable that two separate lesions were present. Complete paralysis of the third nerve pointed to a basal lesion, as also did isolated paralysis of the fourth or sixth nerves. If the paralysis of the sixth nerve were accompanied by hemiplegia on the opposite side of the body, the pons was probably affected; if the hemiplegia were on the same side, a cortical lesion was indicated. Nystagmus was of no value in localizing a cerebral lesion, and Mr. Swanzy did not think the state of the pupils afforded much information. Persistent dilatation of one pupil, however, indicated paralysis of the third nerve.

In the examination of visual defects the co-operation of the patient was necessary, and he must possess some intelligence. Hemianopsia was the most common visual defect, and was of great localizing value. The lecturer treated this portion of his subject at some length. He pointed out that hemianopsia might be due to a lesion of the posterior third of the internal capsule, or of the optic tract. In the former case it would be accompanied by hemianæsthesia of the opposite side of the body, and, if the brain-lesion were on the left side, by aphasia also. If a lesion of the optic tract were suspected to be present, an examination of the state of the pupil would afford assistance in diagnosis. If the light were concentrated on the blind side of the field and the pupil did not react, the lesion must be in the optic tract; if the pupil did react, the lesion was evidently not in the optic tract.

At the Medical Society, on Monday evening, Dr. Gulliver read the notes of a case of ascites simulating ovarian tumor. The patient was sixty-three years of age, and the symptoms from which she had suffered previous to admission were pain in the back, swelling of the legs and abdomen, inability to retain her water, and vomiting. On admission the abdomen was found enlarged, and there was dulness on percussion all over, this being more marked on the right side. There was a zone of resonance in the left flank. It was thought that there was an ovarian tumor and the patient was tapped, nearly a gallon of fluid being drawn off. The dulness immediately became more unilateral, but later on became as extensive as before. The vomiting persisted and albumen was found in the urine. The albuminuria and the age of the patient precluded the idea of operative interference. It was thought that the diagnosis lay between ovarian tumor and ascites shut off by vertical adhesions. The patient died a few weeks later. On opening the abdomen a quantity of ascitic fluid escaped. A smooth, thickened membrane was found lining the whole interior of the abdomen from the under surface of the diaphragm down to the pubes; it had a free border on the left side. This membrane invested most of the abdominal viscera, but the organs themselves were apparently normal.

At the Medical and Chirurgical Society Mr. Edmund Owen read a paper on erosion of joints, or, as he termed it, arthrectomy. He remarked that the operation of scraping a diseased tissue was not a new procedure, but its adoption in the treatment of pulpy or of chronic suppurative disease of a joint was comparatively recent. The construction of the hip-joint rendered it unsuitable for treatment by arthrectomy, though the latter might prove of value as a supplementary measure to resection of the head of the femur. In the case of pulpy or chronic suppurative disease of the knee-joint the operation was admirably adapted, provided the disease was not too far advanced so that the bones were extensively implicated, and that the patient was suffering neither from general tuberculosis nor albuminoid degeneration. Mr. Owen held that arthrectomy was the proper operation in most cases in which resection had hitherto been performed. It had the great advantage over resection of taking away from the articular surfaces only such tissues as were actually diseased. On several occasions it had been noticed that after the joint had been thus thoroughly cleared of elements which were of a diseased or suspicious nature the health of the patient had shown an immediate and marked improvement. The improvement which followed upon the clearing out of all diseased tissues was as marked as that which often followed the amputation of a sarcomatous limb or a scirrhous mamma.

Mr. Bryant observed that the principle of the operation was by no means new; it was that the surgeon should take away merely the diseased structure and leave the rest to take care of itself. That was a practice to which he had himself adhered for some five and twenty years. Where there was diseased bone, that part of the bone, and that only, should be removed. In the earlier days of excision it was discussed and set aside; the earlier operators took away all the structures forming the joint. Such treatment was easily applied to the knee and elbow, but not to the hip. In his own practice, in 1866, he had treated a case of chronic suppuration of the knee by scraping away the diseased bone only, and there had been excellent healing. In a case of disease of the elbow he had also removed only the head and neck of the radius and a good result had ensued, the movements of the joints being free. He had also, with good results, removed only the head of the tibia in a case of diseased knee. Mr. Macnamara said he believed the pulpy disease of the joint, so called, began in the ends of the bones, and this was an important point, for it led us to understand that the end of the bone was generally found to be greatly indurated, and required perforation either by nature or the surgeon. Mr. Barwell said the full operation of excision was wanted when the disease had begun in the bone underneath the cartilage, as by this means both bone and synovial membrane were removed. As to removing every bit of diseased tissue, he thought it would not often be possible to do so, especially if bacilli had to be sought out from all folds of the synovial membrane. In his own practice he cleared out membrane as much as bone, and drained the joint from the back. Arthrectomy might be useful, but he could not admit that it would suit all diseases of the joint. Mr. Parker said he regarded the operation as one of the most useful lately introduced, though it was not well suited as an operation on children. It was most adapted for those cases in which there was no bone disease and no sinuses, for if there were sinuses it was practically impossible to have the wound aseptic.

The last meeting of the Harveian Society was occupied with a discussion on the radical operation for hernia and its results. The subject was introduced by a paper read by Mr. Mitchell Banks, of Liverpool, in which he gave the results of 116 cases on which he had operated. In every case the operation selected had been removal of the sac and stitching together the pillars of the ring. Mr. Banks divided his cases into two groups according as they were strangulated or non-strangulated, and those under the latter heading were again arranged in two subdivisions, comprising respectively herniæ of moderate size and those which were very large (some enormous) and not capable of support by trusses. There were 59 cases of non-strangulated herniæ of moderate size, viz., ventral (double), 1; inguinal, 40 (two double); femoral, 18. Two of the inguinal cases terminated fatally, one being a man aged 47, the other a child two years of age. There were 16 cases of very large strangulated herniæ, viz., umbilical, 1; ventral, 3 (two double); inguinal, 11; femoral, 1. Four of these cases terminated fatally, viz., 3 inguinal cases and 1 femoral. The latter case ended fatally from septicæmia, and so did one of the inguinal cases. Of the other two patients 1 died from the sudden bursting into the peritoneum of an unsuspected iliac abscess after the wound had healed and the patient was walking about, the other died on the third day after the operation, which it was found impossible to complete owing to the enormous size of the hernia. There were 41 strangulated herniæ, of which 1 was umbilical, 21 inguinal, and 19 femoral. One of the inguinal cases (an old man aged 77) died from bronchitis and septicæmia, and two of the femoral cases proved fatal. As regards the permanence of the cure Mr. Banks said he had been able to follow up the subsequent history of his patients in many cases, and for periods varying from three to seven years. He had arrived at the following results: Grouping together for this purpose all the herniæ of moderate size, whether strangulated or non-strangulated, he had been able to trace for considerable periods 77 out of his hundred cases. Of these, 48 remained quite sound, 17 were only partial successes, and 12 were complete failures. Of the 16 cases of very large and enormous herniæ, he had been able to follow up 10, and of these 5 remained partially sound (though all requiring some support), 3 were partial successes, and 2 were complete failures. Mr. Banks remarked that he had gone into the matter without prejudice, but he contended that his results were in favor of the radical operation. He was not inclined to recommend operation in cases in which the hernia was non-strangulated and could be kept up by a truss. He thought the wearing of a light truss after the operation was a useful precaution. Many of his patients wore one.

A lively discussion followed the reading of Mr. Banks' paper. Mr. Bryant was inclined to caution in dealing with very large herniæ. Mr. Kendal Franks, of Dublin, was strongly in favor of the operation for radical cure, and was not inclined to restrict it to cases in which the hernia was either strangulated or could not be kept back by a truss. To athletic young men even the wearing of a truss was a drawback. He mentioned the cases of two young medical men on whom he had operated by their own request. Dr. Granville Bantock referred to his own experience, and remarked that he never employed antiseptics. Mr. Keetley advocated operating, and said he had himself employed almost every form of operation for the radical cure of hernia. He did not think that all cases in which hernia recurred some time after the operation should be put down as failures, because the tendency to hernia increased very much in later life. He referred to the value of diet (a more or less modified "Banting system") in reducing the size of some enormous herniæ. He also commented on the much greater mortality of femoral as compared with inguinal hernia, though the latter was much the more common of the two. Mr. Edmund Owen favored the operation in many cases, and referred to the case of a young athlete who had been successfully operated on by one of Mr. Owen's colleagues. He disapproved of the practice of wearing a truss after the operation, and always forbade his patients to wear one. He thought it tended to produce (by pressure) absorption of the inflammatory lymph, plugging the canal. Mr. Page uttered a word of caution against drawing too hasty conclusions as to the permanence of the cure, and said that for this reason he preferred waiting longer before publishing his own cases.

The establishment of the Army Medical Reserve continues to excite heart-burnings both among army and volunteer medical officers.

The epidemic of diphtheria in London shows no signs of abating.

OPEN-AIR TREATMENT OF PNEUMONIA; DIPHTHERITIC PNEUMONIA.

To the Editor of The Medical Record.

Sir: Dr. Gouverneur M. Smith's article on pneumonia in The Medical Record of October 20th has been successful in bringing valuable testimony to the importance of what may be called open-air treatment.

I read a paper before the Medical Society of the County of Kings in 1874, on the paramount necessity of such a plan in the management of acute febrile diseases, illustrating the subject by some cases of pneumonia and typhoid fever, including a letter from Dr. C. R. Agnew, in which he stated that in his service in the New York Hospital, during the war, he made a practice of removing out of doors those of his patients who were most seriously ill, placing their beds on the south side of the hospital, keeping them there all day, and continuing the practice into the autumn, providing each bed with a spirit-lamp and funnel, so that a stream of warm air might be thrown under the bedclothes when the weather was cool enough to require it. The immediate and the final results were very favorable. My paper was published in *The*

Sanitarian of December, 1874, at the request of Dr. Bell, the editor.

Dr. Ellsworth Elliot, in a memoir of Dr. Alonzo Clark, in the last volume of the "Transactions of the New York State Medical Association," relates that Dr. Clark, having 250 cases of typhus under his care in Bellevue Hospital, and being dissatisfied with the condition of the atmosphere, had the windows entirely removed, although it was winter—placing stoves under the open spaces and clothing the patients warmly—with a result that in a fortnight he had no deaths, while the mortality in the other wards was great.

Liebermeister says, in his article on typhoid fever in Ziemssen's "Cyclopædia," "A patient with a high temperature cannot take cold."

As to the increased mortality by pneumonia—which the reports of the Health Departments of New York and Brooklyn certainly show—I wish to suggest that there is no evidence that simple lobar pneumonia is more frequent than it was thirty years ago, or more fatal. At that time, under the rational treatment in vogue, simple, uncomplicated lobar pneumonia in the adult was very rarely fatal. I know no reason to think it is more often fatal now, under the same treatment. But the deaths by pneumonia reported of late years include not only the large number of cases supervening upon chronic diseases of other organs than the lungs, and the pneumonia of children and aged persons—which have always furnished the chief part of the fatal record—but they also include many cases of diphtheritic pneumonia, not recognized as such. I think that before long evidence will be generally accepted that the increase in the reported mortality by pneumonia is due to diphtheria of the lungs, and not to any increase in idiopathic pneumonia. This opinion is based upon observations of diphtheritic pneumonia of considerable prevalence in other parts of the country, and which further investigation will probably show to be present in some degree in this vicinity.

William Henry Thayer, M.D.

Brooklyn, N. Y., November 26, 1888.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 25, 1888, to December 1, 1888.

McClellan, Ely, Major and Surgeon. Having reported to the Division Commander, on the 23d instant, as required in Par. 15, S. O. 261, current series, A. G. O., is assigned to duty as Attending Surgeon at these headquarters, and as Examiner of Recruits at Chicago, Ill., from that date. Headquarters Department of the Missouri, Chicago, Ill., November 24, 1888.

Cronkhite, Henry M., Major and Surgeon. By direction of the Secretary of War leave of absence for two months is granted, to take effect upon his being relieved from court-martial duty at Little Rock Barracks, Ark. Par 7, S. O. 276, A. G. O., Washington, November 26, 1888.

Hoff, John Van R., Captain and Assistant Surgeon. By direction of the Secretary of War the leave of absence granted in S. O. 134, November 1, 1888, Department of the Missouri, is extended one month. Par. 3, S. O. 274, A. G. O., Washington, November 23, 1888.

Moseley, Edward B., Captain and Assistant Surgeon. By direction of the Secretary of War the leave of absence granted in S. O. 67, November 12, 1888, Division of the Pacific, is extended three months. Par. 13, S. O. 275, A. G. O., November 24, 1888.

Carter, William F., Captain and Assistant Surgeon. Leave of absence for one month is granted. Par. 4, S. O. 116, Headquarters of the Department of Texas, San Antonio, November 12, 1888.

Clendenin, Paul, First Lieutenant and Assistant Surgeon. Leave of absence for fifteen days, to take effect December 4, 1888, is granted. Par. 3, S. O. 116, Headquarters of the Department of Texas, San Antonio, November 12, 1888.

Benham, Robert B., Captain and Assistant Surgeon, Fort Laramie, Wyo. Leave of absence for one month granted. Par. 1, S. O. 111, Headquarters of the Department of the Platte, November 24, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending December 1, 1888.

Gaines, J. H., Surgeon. Detached from the Dolphin and ordered home.

Anderson, Frank, Passed Assistant Surgeon. Detached from the Pensacola and to the Dolphin.

Jones, William H., Surgeon. Detached from the Richmond and to the Pensacola.

Russell, A. C. H., Passed Assistant Surgeon. Detached from the Naval Academy and to the Wabash.

Drake, N. H., Passed Assistant Surgeon. Detached from the St. Mary's and to the Coast Survey.

Whitaker, H. W., Passed Assistant Surgeon. Ordered to the Nautical School-ship St. Mary's.

Lewis, D. O., Passed Assistant Surgeon. Detached from the Coast Survey and to the Naval Academy.

Wentworth, A. R., Assistant Surgeon. Ordered for examination preliminary to promotion.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 1, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	18	4
Scarlet fever	161	26
Cerebro-spinal meningitis	2	2
Measles	344	10
Diphtheria	108	42
Small-pox	2	0
Yellow fever	0	0
Cholera	0	0

Seal Rings and Antiseptic Surgery.—A correspondent sends us the following: "In these days, when one sees and hears so much about antiseptic surgery, we are apt to go into details and want to know the why and wherefore of everything connected with this most important branch of surgical practice. The writer has been attending lectures where he has been told, and it has been impressed upon him, that in all operations, no matter how trivial, he must use the greatest antiseptic precautions. He has been told that in going from the post-mortem to the operating room it is imperatively necessary, if the operation be a grave one, to change the clothing as an additional antiseptic precaution. This is eminently good teaching, and is what we should accept and practise. But what has particularly struck the writer and what called forth this communication is the fact that the very men who teach this doctrine can be seen at the operating-table, wearing the same seal rings which they had on less than five hours previously at the post-mortem table. Not one of these gentlemen would excuse the error of taking a post-mortem knife into the operating room, and yet their seal rings are just as capable and as liable to carry the micro-organism which we so much fear. We fear a wooden-handled knife in our operations, it will carry germs. We should fear our rings, they can carry germs also."

Lanolin and Boric Acid.—Dr. Russell Sturgis, Boston, Mass., writes: "Will you allow me to correct through your columns a statement made by the *British Medical Journal* which is copied by you on page 542, issue of November 3, 1888. In referring to an article by me on the use of lanolin and boric acid, I am stated as using an ointment composed of thirty per cent. lanolin and eight per cent. boracic or boric acid. What I do use is lanolin, ℥ j.; boric acid. ʒ j.; or eighty per cent. lanolin, boric acid, twenty per cent."

The Late Dr. Henry B. Sands.—At the last meeting of the New York Pathological Society the following preamble and resolutions were adopted:

Whereas, Dr. Henry B. Sands was a most highly esteemed member of the New York Pathological Society for more than thirty years, and was considered worthy of being its president when he was only thirty-six years old. And

Whereas, He was a devoted and successful student of pathology all the days of his professional life, had long stood in the very foremost rank of the greatest and best of surgeons, was a learned professor and a brilliant lecturer, a wise physician and a trusty counsellor; to all of which positions he had attained unassisted, solely by his own industry, ability, and integrity. And

Whereas, He was a truly genial and benevolent man, a pleasant friend, and a sincere Christian;

Therefore, We sorrow for ourselves and our profession, which has suddenly sustained so great a loss in his untimely death; we will cherish his memory among those of our most illustrious dead and hand down the remembrance of it undimmed to our successors.

"We sympathize sincerely with his desolate family, but remind them of the inestimable value of his good and honorable record and assure them that the name of Sands will long be held in glory and honor among physicians and surgeons.

Resolved, That the foregoing be incorporated in the minutes of this Society and that a copy thereof, duly authenticated, be sent to his family.

(Signed) John C. Peters, M.D.,
Elsworth Eliot, M.D.,
Louis A. Sayre, M.D.

Shakespeare and the Pia Mater.—Dr. B. W. Richardson writes to *The Lancet*: "The mode in which William Shakespeare obtained his knowledge about the pia mater is, I think, fairly explainable from a curious literary discovery which I was so fortunate as to drop upon, in my readings, a few months ago. I came across a large volume of anatomy published in the year 1615 by Helkiah Crooke. It may be said without hesitation that this compendious volume was the first great work in anatomy ever published in the English tongue. It fills 1,111 pages of imperial-quarto size, closely printed, and it is illustrated throughout by drawings on wood of anatomical subjects. Such a book would cost the most industrious writer, even in these days, several years to compile and bring out, and I should think did cost at least fifteen to twenty years of labor. It contains not only anatomy pure and simple, but various passages of a physiological and psychological nature which had descended from Aristotle and Galen, with references also to the Pythagorean controversies and other subjects of metaphysical cast. The book is one we may speak well of, although it is really nothing more than an industrious compilation from Gasper Bauhinus and Andreas Laurentius; and, in so far as the plates are concerned, from Vesalius out and out, being, in point of fact, a kind of new edition of the anatomical compendium of Germinus which that systematic plagiarist from Vesalius printed, published, and dedicated to Queen Elizabeth in the year 1559. In the volume of Crooke the membranes of the brain are well defined and described, the pia mater takes a very distinct place, and the brain and cerebro-spinal system are figured with a clearness which would excite no small degree of wonder in one who for the first time studied them even in this day. What connection has the book of anatomy by Helkiah Crooke with the plays of Shakespeare? This remarkable connection: that the man who printed the works of Crooke was W. Jaggard, of the Barbican in London, the same man who was the printer for Shakespeare. Within easiest walking distance from the Globe Theatre, the scene of the great William's managerial glory, was the printing-office of Jaggard, where the plates and letter-press of Crooke would for long seasons be the most remarkable press-works of the time. To that office the indefatigable playwright would often be drawn by his own business, and there he would hardly fail to see unfolded before him the anatomy of man from a sure source, and just in the form that would most readily appeal to his ever-absorbing mind. In this school of anatomy, ready prepared for his hand, our immortal dramatist learned, as I believe, the fact of the existence of the pia mater, saw the drawing of it, and learned the function of it as the feeding mother of the brain. I might go a long way further in exposition of the source of Shakespeare's anatomical knowledge generally, for the closer this book of anatomy and the book of plays are read together the more clearly it is detected where and how the dramatist became the student of anatomy. But at this moment I am content to stop with the proposition placed before the reader, that the pia-mater argument of Shakespeare was simply derived from the work and plates of his industrious contemporary, Helkiah Crooke, 'doctor of physic, physitian to his Majesty and his Highness, and professor in anatomy and chirurgery.'"

The Question of Recurrence of Malignant Tumors.—Dr. Verneuil strongly favors medicinal treatment after the excision of malignant growths, while the morbid process is in abeyance, and advises a prolonged course of alkaline medication, such as may be obtained by the use of Vichy water, magnesia, etc., together with arsenic, with a view of neutralizing the gouty diathesis, which he believes to be the predisposing cause of cancer. Dr. Mollière, of Lyons, thinks that the great point to attend to in estimating the probability of recurrence is the patient's age. If he be young, the disease is so certain to return that he doubts if it is worth while to operate; after fifty there is a fair chance that recurrence may not take place; after seventy it is almost certain that the patient will remain free from the disease.—Quoted by Dr. Gouley, in *New York Medical Journal*.

Hysteria in a Mare.—Bay mare, about fourteen years, partly cob bred; used for light carriage work. She is ordinarily quiet, but for some months at her horsing period she becomes absolutely unmanageable. She kicks and bites in the stall, destroying all the wood-work. The entrance of anyone or any sudden noise starts her up into a paroxysm of mixed rage and fear. The harness is put on with difficulty; when harnessed she may drive quietly for a time, but with any unusual sight, or with no apparent cause, she will have attacks similar to those in the stable. At the end of a few days the trouble disappears for a variable period of several weeks. Examination of uterus and ovaries showed no abnormal condition. Treatment with large doses of asafœtida, ʒ iij., several times daily), commenced with the first symptom, allayed the trouble: but, when omitted, they returned with old everity. The case was lost sight of after six months.—Dr. Huidekoper, *Journal of Comparative Medicine*.

Urine as an Emetic.—Dr. F. J. Hutton, of Fergus Falls, Minn., writes: "About one year ago Mrs. Charles R—— asked me the following question: 'Do you know, doctor, that urine-of-lye is the best thing in the world for croup ?' I replied that I was not aware of the fact, and forthwith solicited details—what was the urine-of-lye, and how did she administer it ? She answered, volubly enough, that urine-of-lye was composed of equal parts of urine and sirup; and that her three children, now living and well, would have died of croup many a time if it had not been for this golden remedy. She administered it by the mouth, half a teacupful at a time, whenever the children got croupy, and it vomited them so quickly and so well they got well right away. I had no good reason to suppose that Mrs. R—— was consciously and deliberately lying, but that an element of the white-lie order had crept into her narrative seemed highly probable. I therefore determined to test this thing for myself, and have done so several times since, and am pleased to be able to fully corroborate her statement that urine is an excellent emetic. My experiments were made on rural urchins whose stomachs are not over finicky. Ignorant of its composition, they knew the remedy to be unpalatable, but were induced to quaff it on various sweetmeat and pecuniary considerations. It does seem late in the day to advocate such crude and barbarous therapy, and yet it requires no strain of imagination to conjure up cases and circumstances in which, to-day, the use of this remedy would save life as this woman declared. Grant that a prompt and powerful emetic is needed, and that there is none other at hand, and the urine-of-lye is not an idle fable."

PARALYSIS PENIS IN A GELDING.—Black gelding, six years old, coach-horse. Was purchased three months previously. Penis has been gradually dropping, until it hangs from the sheath most of the time. No cause can be discovered, except a tumor on the cord of the testicle—off side—the near cord is very long and fastened to the cicatrix. Cast and removed a fibroma the size of a lemon. Recovery.—DR. HUIDEKOPER, *Journal of Comparative Medicine.*

A PERPLEXINGLY UNCERTAIN FEE.—Dr. Benjamin J. Baldwin, of Montgomery, Ala., writes: The Trojan war, celebrated in the songs of Homer, appears in Greek antiquity as a luminous point in the midst of profound darkness. Before this memorable expedition, and for a long time afterward, the history of medicine rests on uncertain traditions often mingled with interesting fables.

Coming on down through the unending lane of medical history, we find many amusing incidents recorded in the pages of our early writers.

Certainly there is no more pleasing picture than that of the old village-doctor sitting on his horse in the streets of the village, prescribing for the congregated community. Simple in dress and manner, yet self-important and proud in the eyes of himself and patients, he was monarch of the field, and wielded an influence felt throughout the neighborhood, and second only to the priest's.

Can you not see him as he sits in the saddle before the door of the squire, where all the headaches, side aches, backaches, and toothaches have come to consult him ?

First comes the old man holding his arm to have his pulse counted; then the incorrigible boy, with his jaw tied up, on the back of his larger brother; pushing to the front is the anxious mother leading her timid daughter; while standing in the background is seen the fat and jolly middle-aged farmer drinking the health of his less fortunate neighbors.

Off by the hay-stack stands the eldest son, guarding the doctor's fees. The first patient has brought a fat Berkshire pig, the next some home made tobacco and dried beef, and here and there may be seen a jug of molasses, a dried skin, a pair of buck-horns, and a barrel of apple-cider.

Ah ! who could have been more independent ?

Why, the autocrat of Regent's Park could not be more *absolute* than was this honored and rare old village-doctor.

Now, while the fees of the modern doctor are of a less miscellaneous and domestic nature, yet they are sometimes just as unique. I am going to tell the wealthy doctors of Murray Hill, who know little of the oddities of the practice of medicine in smaller and less wealthy places than Gotham, of a rare visit and extraordinary fee which was offered me in Montgomery not long ago.

There came to consult me a man from the "Piny Woods." He was plain, honest, candid, and rural. A jeans coat, home-spun hickory-shirt, red copperas breeches, and long straggling hair constituted his make-up. He entered without ceremony, and made known his wants at once.

"Doc, I'se hearn tell that you fix people's years," he said.

I remarked that I confined my practice to the eye, ear, and throat.

"Well," said he, "I've been er gitting deefer an' deefer for now guine on fore yeer, and I hearn that broth' Josiah Sykes had his years fixed up by you, and I come all the way from Pike to see ye."

I asked him to sit down, and said that I would examine him and tell him what I could do. Upon examination I found both ears tightly packed with wax. I told him I thought I could relieve him, and, after saturating the wax with sweet-oil, the *excavation* and *dislodgement* began. An enormous amount of wax was gotten off each ear.

The old fellow saw it and to him it was incredible.

"Doc, you didn't git all that thar corription outen my head, did ye ?" I replied that I did.

"Well, by grannie, if you don't lay o'er anything I ever seen in Pike, I gin it up."

After such an effusive compliment, of course, I felt better. *It had been a great operation.*

"Now, doc, how much is ye guine to tax me ?" he said.

"Oh, I hardly know what to charge you," I replied, seeing he was very limited in means.

"Well, doc, if I had a thousand dollars I'd make ye rich. I ain't got much, but I'll do my bess."

"Never mind about that, it's all right, you can pay me some other time."

"No, doc, I muss pay ye. *Here's a dollar, but touch 'er light, I've got to git back home on the train.*"

The fare was sixty-five cents.

A VICTIM TO WATER.—A bulky tomb in the form of a dwelling-house is the monument to "Dame Mary Page," relict of Sir Gregory Page, Baronet. Her epitaph relates in four lines that

In sixty-seven months she was tap'd sixty-six times.
Had taken away 240 gallons of water
Without ever repining at her case
Or ever fearing the operation.

She died in 1728, in the fifty-sixth year of her age.—*Pall Mall Gazette.*

THE TREATMENT OF UTERINE COUGH.—According to M. Chéron certain functional and organic lesions of the utero-ovarian apparatus sometimes give rise to a dry, irritating cough, not to be explained by the condition of the lungs or throat. This symptom readily yields to the valerianates. If the cough be associated with derangement of the cerebral circulation—flushes of heat, vertigo, etc., the best drug is the valerianate of quinine in the following form: ℞. Valerianate of quinine, 1 gramme; sirup, 40 grammes; infusion of black coffee, 120 grammes. Two or three tablespoonfuls to be taken half an hour before or two hours after meals. If the cough be troublesome only at night or shows a tendency to periodicity, the same drug is of benefit: ℞. Quininæ valerianatis, 1 gramme; ext. cinchonæ, q. s.; fiat 20 pilulæ. One before each meal.

A REMEDY FOR TAPE-WORMS.—Bernard Persh has obtained excellent results in the treatment of tape-worm by the aid of the following formula: ℞. Ol. crotonis, gtt.j.; chloroform, ʒ j.; glycerini, ℥ j. This dose is taken on an empty stomach in the early morning without any preliminary preparation. It is not disagreeable to take, and operates very promptly.

Ointment for Obstinate Acne.—℞. Resorcine, 3 to 5 grammes; powdered starch, 5 grammes; oxide of zinc, 5 grammes; vaseline, 15 grammes. Apply this ointment on going to bed, and rub it off in the morning with olive-oil and wadding. It never gives rise to irritation, and its effects begin to be felt within three days. Incidentally one may recall the proverb *matrimonio curat varus—varus*, in this case, being acne. At the same time the patient should abstain from beer, wine, liqueurs, and fatty food.

The Treatment of Fetid Sweats.—For fetid sweating of the feet, Dr. Bardet recommends washing the feet at least once daily, following it up with frictions with alcohol. The stockings to be changed daily, sprinkling them with a small quantity of a powder containing: Talc, 40 parts; trinitrate of bismuth, 45; permanganate of potassium, 13; salicylate of sodium, 2. Misce. When the objectionable perspiration is general, the body should be powdered with ℞. Rice-powder, 60 parts; subnitrate of bismuth, 15; permanganate of potassium, 10; talc, 5. Misce

The Treatment of Dysmenorrhœa.—For young girls Dr. Goubert prescribes: Iodoform, ½ grain; ext. belladonna, ⅙ grain; asafœtidæ, 1⅓ grain. In pill form. Beginning six or eight days before the time of menstruation, six pills should be taken daily. For adult women he prescribes: Potass. iodid., ʒ j.; tinct. croci, ʒ ij.; tinct. belladonna, ʒ vj.; syrup. aurant. cort., ad. ℥ vj. Dose, a tablespoonful morning and evening, in any convenient liquid, for a week preceding menstruation.

Unglazed Tissue-paper as a Surgical Dressing.—According to Dr. Bedoin unglazed tissue-paper, such as is used in making cigarettes, is useful in the form of compresses composed of one or several double sheets, as bandages, or in very fine shavings in the form of lint. Applied in this manner it has the same effect as gauze, and is much less expensive. It may be used with all antiseptics either in a dry or moist state. In the latter case the paper is dipped into the antiseptic solution, or merely into pure water when the spray is not employed. In ordinary dressings this paper is an excellent medium for most antiseptic remedies which were formerly applied by means of compresses or lint in the form of ointments or solutions. Thus dressings of this paper may be prepared beforehand with morphine, belladonna, cocaine, iodine, etc., with the greatest facility. The application of these dressings has been attended with excellent results in the most varied surgical affections. Comparative experiments have shown that the hydrophile property possessed by paper lint is one-third greater than that of thread lint. It is absolutely necessary to cover the dressing with an impermeable outer covering like mackintosh, to prevent the edges of the paper beyond the borders of the wound from stiffening.—*L'Union Médicale.*

What the Antiseptic Midwife should have Ready.—Dr. Clement Godson states that, when engaged to attend a patient in labor, he orders the following to be ready in the house: 1. Chloroform, ʒ ij., placed in a stoppered and capped bottle. 2. Extracti ergotæ liquidi, ʒ j. Dose, teaspoonful in a half wineglass of water. 3. Acidi carbolici, ℥ j.; adipis benzoate, ℥ ijss., mix and make into an ointment to be labelled carbolized cream. This is always to be used in making vaginal examinations, but I also order a pot of ordinary. 4. Vaseline—which I use freely when the child's head is on the perineum, externally as well as internally. If the carbolized cream is used for this purpose the patient is sure to complain severely of burning and smarting in the passage after delivery. 5. A tube of corrosive sublimate. 6. A three-pint douche-can. 7. A half gallon glass-stoppered bottle, empty, labelled "corrosive sublimate solution, 1 to 1,000," to be used with an equal part of hot water as a lotion. 8. An eight-ounce bottle of carbolic acid, liquefied, labelled: "To make, with a gallon of water, a lotion of 1 to 20." The author goes on to say: "I am strongly of the opinion that midwifery should be more in the hands of midwives and less in the charge of medical men. The loss of time in watching the first stage of labor is deplorable. One woman may unnecessarily absorb the whole attention of a busy doctor when the lives of others may be sacrificed by his absence. On the occasion of the birth of George IV., the queen was delivered by Mrs. Stevens. Queen Victoria was brought into the world by a midwife, as were all the children of George III."

Absence of the Uterus.—Dr. R. Milbret-Damskaya reports a case of this rare defect in *Vratch*, No. XXXIX., 1888. A woman, twenty-seven years of age, applied to her for the relief of a chronic dyspepsia. In the course of the examination it was learned that she had never had any menstrual flow, although its absence seemed to cause her no inconvenience. She had been married seven years. She stated that she had sexual desires, but coition was somewhat painful and was productive of no pleasure, although it gave satisfaction to the husband. She was below the medium height, but well developed, and of a wholly feminine appearance. The external genitals were normal in appearance, but the vagina was shallow and terminated in a cul-de-sac a short distance above the hymen. A most careful examination failed to detect the existence of a uterus. In the normal situation of the ovaries were two very soft bodies, insensitive to pressure, of the shape of the ovaries but somewhat larger. The woman was examined repeatedly by several different observers, and all failed to discover any body which could be taken for the uterus.

A Peculiar Case of Intestinal Invagination.—Dr. Felice Ibba is the authority for the following case, which he reports in *Il Raccoglitore Medico* of October 10 and 20, 1888: A woman, forty years of age, gave birth to a well-developed child at term. Soon after the termination of labor the woman began to complain of atrocious pains in the abdomen, her temperature rose to 106.8° F., and she vomited a little. Her condition remained about the same for six days and then began rapidly to improve, so that she was soon out of bed and walking about Four or five days later, while at stool, she passed a piece of the small intestine, fourteen inches in length, containing about a hundred grape-seeds and the undigested portion of some other fruit which she had eaten the day before her child was born. A few days later she ate freely of melons and suffered a return of pain, vomiting, and fever, but was soon up again and attending to her household duties. Once more she partook of a great quantity of watermelon, and died in consequence of her indiscretion four weeks after the birth of her child. At the autopsy it was found that invagination had occurred at a point about twelve inches from the pylorus. The invaginated portion had sloughed away, leaving, however, enough of the upper end telescoped in the lower to prevent any escape of fecal matter into the peritoneal cavity. This had finally slipped out and about a quart of the contents had passed into the abdominal cavity. A large part of this matter consisted of the seeds of watermelons and grapes.

Opium-smoking.—The English colonial physician in Hong Kong refers in his last annual report to the opium-smoking habit among the Chinese, and holds that it is hardly worse in its effects, when used in moderation, than tobacco-smoking: The sudden abstraction of opium from those accustomed to smoke it causes no special physical disturbance. He has seen numbers of hearty old men who had smoked opium all their lives, yet were in good flesh and strength, enjoyed a fine appetite, and slept the sleep of the just. He maintains that the injurious effects of this habit are not to be compared with those of the abuse of alcohol.

Dextrocardia.—In the report of a case of dextrocardia by Dr. Michel, on page 479, the area of "heart dulness" is referred to as merging into "line dulness." This should read "liver dulness."

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 24 NEW YORK, DECEMBER 15, 1888 Whole No. 945

Original Articles.

A NEW METHOD OF TREATING CONSUMPTION BY INHALATIONS OF HOT DRY AIR.

By LOUIS WEIGERT, M.D.,

BERLIN, GERMANY.

THE indisputable fact that the temperature optimum for tubercular bacteria is 37.5° C., and that higher or lower degrees of heat hinder or entirely destroy their capacity for development and propagation, has led me to make experiments the results of which I have briefly embodied in the following:

When in rooms the temperature of which averages about 20° C., air heated to 150° C. is inhaled, the temperature of the body rises about $\frac{1}{2}$° to 1° C. within a few minutes, returning to its normal degree in about one hour after such inhalations; at the same time the number of respirations is decreased, the decrease being the greater the greater the frequency of respiration was prior to the inhalation; the inspirations become deeper, the pulse is accelerated slightly and only during the first few minutes the temperature of the exhaled air rises to at least 45° C.

These inhalations, when taken by consumptives, produce the following effects:

1. The removal of dyspnœa. 2. Decrease of coughing spells. 3. During the inhalations, more especially within the first few days, increased expectoration; later on, a remarkable decrease of the same. 4. Increase of appetite. 5. Increase of bodily strength. 6. In most cases a complete cessation of the acute process within a short time. 7. Removal of catarrhal symptoms. 8. Clearing up of previously infiltrated parts. 9. Disappearance of bronchiectasis. 10. Cicatrization of cavities.

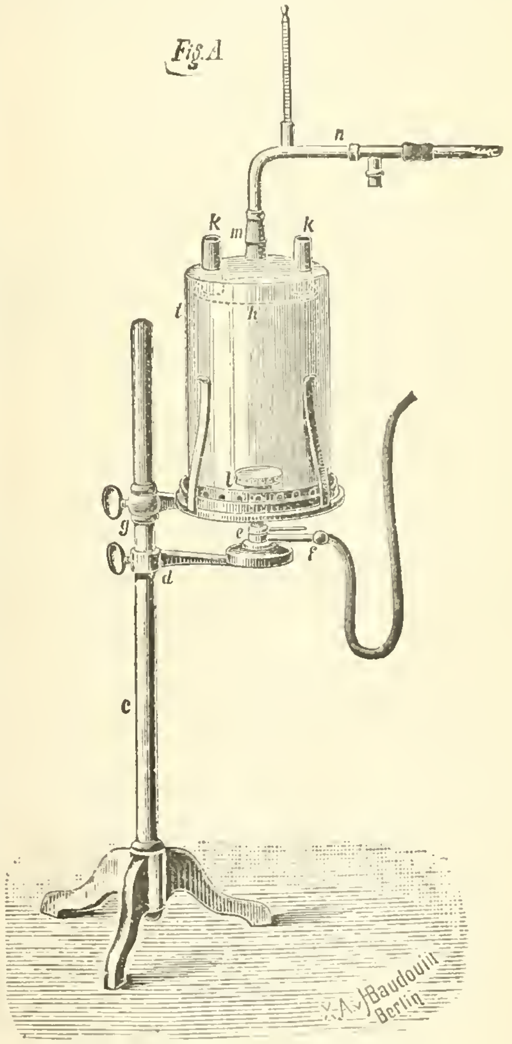
The following is a description of the apparatus which I have caused to be constructed for the purpose of these inhalations:

Figure *A* shows the apparatus *in toto*. It consists of stand with burner; heating cylinders; inhalation-tube with mouth-piece.

The stand (*c*), made of galvanized iron, consists of a slim rod, affixed to a tripod; to this rod a movable support (*g*) is attached by a screw with three steel springs holding the apparatus in place. Below this, movable by means of a screw, is a small plate carrying the burner (*e*), either one of Bunsen's gas-burners on a spirit-lamp with a "*mitrailleuse*" burner (eight or ten small nicks in a circle) being employed. In case the gas-burner is used, a rubber tubing (*f*) connects it with the gas.

The heating cylinders are made of copper, the inner one (*h*) having on its lower edge a rim upon which the outer one, which has a cover of asbestos, rests. The inner one has two small funnels (*k*, *k*) serving as vents and penetrating the outer cylinder. The air, entering through the small air-holes (*l*) in the rim of the outer cylinder, becomes heated by passing through the interspace between the walls of both cylinders, and is then drawn through the tube (*m*) of the outside cylinder into the inhalation-tube (*n*).

Figure *B* shows the inhalation-tube with mouth-piece. The tube is made of copper and consists of the main tube (*o*), into which the small tube (*q*) intended to hold the thermometer (*p*), fastened by a well-fitting cork, is affixed. In the main tube (at *r*) there is a valve (*s*) made of aluminium. At *t*, another small tube is fitted in containing the aluminium valve (*u*). A hard-rubber mouth-piece is fastened to the end of the tube at *w*, which, in case of complaints being made by the patient of objectionable rubber taste, is lined with aluminium. The small rods *x*, *x* serve to keep the valves in place, which, during respiratory action, alternately open and close, so that the air inhaled through the main tube (*o*) is exhaled through the small tube *t*.

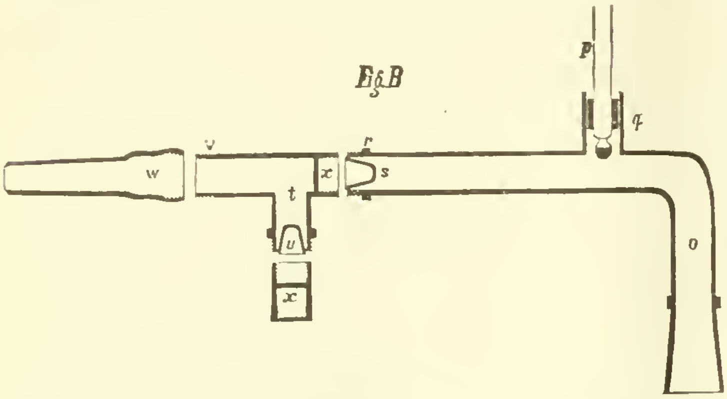


For the use of patients too weak to inhale while seated, the inhalation-tubes are differently constructed; either the mouth-piece is connected with the tube by means of a flexible tubing about ten inches in length, or the entire tube has a curved elongation long enough to reach into the mouth of the patient resting on a couch or lying abed. The temperature of the air inhaled through these elongated tubes is 25° F. less than through the ordinary tubes. To avoid the discomfort caused to patients by the heat from the cylinders, I use a movable screen of sheet-iron which surrounds the apparatus and to which a small reading-desk is fastened. My experience proves that the use of the apparatus is most efficacious if the following directions are observed:

1. The duration of the inhalations, at first half an hour twice daily, must be extended gradually, but as quickly as possible, to two hours twice daily or more; the quicker or slower increase, or the decrease of the same, is to be determined upon by the attending physician according to the patient's condition. With many patients, long sittings do not agree, whereas short ones have a beneficial effect; in other cases it is necessary to extend the time of inhalation to six hours a day before an improvement takes place.

2. The patient is to be instructed to take deep, and even forced, inspirations.

3. The temperature of the heated air inhaled, beginning with 100° C., is to be raised as quickly as possible to 250° C., which can easily be done within two or three days without any discomfort to the patient. The degrees given above refer to the temperature indicated by the thermometer inserted into the tube. As the valves do not close hermetically, they allow some of the outside air to pass into the tubes, so that the temperature of the air inhaled, shown by the thermometer to be, say, 250° C., is actually only about 160° C.



4. In case of hæmoptoë the inhalations are to be interrupted for a few days.

5. In case of hæmoptysis they are to be continued, but with the proviso that the inspirations be only superficial.

6. Should attacks of pleurisy set in, same directions as in No. 4 hold good.

7. After each sitting the patient must remain in-doors for at least half an hour; not until then, and only in fair weather, ought the patient to be permitted and prevailed upon to take out-door exercise.

As a matter of course, this treatment does not exclude the use of any other therapeutic agents, whenever they are indicated; as, for instance, antipyretics, alcoholics, etc. In consideration of the fact that by means of these inhalations we merely render the conditions for the development of the tubercular bacteria less favorable, and that only for the time of the inhalations, it is evident that the cure can only be a gradual one.

Out of the number of cases treated in accordance with my method, I cite the following as illustrating the results of the treatment:

I. K——, aged twenty-seven, glazier; no hereditary taint; sick since 1881; since then several attacks of hæmoptysis every year, the last one taking place the end of last May. Came under treatment June 7, 1888. *Status præsens:* Marked cachexia, great debility, evident dyspnœa. Physical signs, right anterior region: Flatness on percussion down to the fourth intercostal space; bronchial respiration, with plentiful subcrepitant râles over the entire lung in the supraclavicular region with amphoric intonation. Left anterior region: Dulness on percussion in the supraclavicular region; bronchial respiration with plentiful subcrepitant râles over the entire lung. Right posterior region: Dulness on percussion over the entire lung, absolute flatness between the second and fifth ribs; respiratory murmur not audible from the second to the fifth ribs; over the rest of the lung, weak bronchial respiration; over the lower lobe, pleuritic friction murmur. Left posterior region: Dulness on percussion in the fossa suprascapularis; plentiful subcrepitant râles over the superior lobe.

Status of same, November 5, 1888. Patient feels perfectly well; had last attack of hæmoptysis August 19th; breathing upon bodily exertion somewhat rapid, but normal in rest. Physical signs, right anterior region: Percussion sound normal, only in the supra- and infra-clavicular region somewhat shortened; bronchial respiration in the supra- and infra-clavicular regions without râles. Left anterior region: Normal percussion sound; vesicular respiration. Right posterior region: Normal percussion sound down to the fifth intercostal space—from there on to the seventh rib, dulness on percussion; vesicular breathing with but few subcrepitant râles down to the fifth rib; from there to the seventh rib, weak respiratory murmur with but few subcrepitant râles, heard only during deep inspirations, and pleuritic friction murmur. Left posterior region: Normal percussion sound down to the third rib; vesicular respiration with sharp and prolonged expiration sound without râles; over the other parts, loud vesicular respiration.

O. W——, aged eighteen, apprentice, hereditary taint, sick since November, 1886; repeated attacks of hæmoptysis every year since. Came under treatment August 1, 1888. Physical signs: Great emaciation, costo-abdominal breathing; number of respirations, 45; pulse, 104. Right anterior region: Normal percussion sound, only somewhat shortened down to the third rib. In the superior lobe, weak, jerking respiratory murmur; elsewhere, weak, vesicular respiration. Left anterior region: Flatness on percussion down to the fourth rib; down to the fourth rib, loud bronchial respiration above the clavicula with amphoric intonation and bronchophony and subcrepitant râles. From the fourth rib downward, very weak broncho-vesicular respiration with some pleuritic friction murmur. Right posterior region: Percussion sound normal, somewhat shortened only in the suprascapular region. Feeble broncho-vesicular respiration, with a few crepitant râles down to the fourth rib; elsewhere, feeble vesicular respiration. Left posterior region: Flatness on percussion down to the sixth intercostal space; weak bronchial respiration with many subcrepitant râles within the limits of the flat percussion; elsewhere, weak vesicular respiration. Status of same on November 5, 1888: Quiet respiration; pulse, 90; increase in weight, eight pounds. Physical signs, right anterior region: Normal percussion sound, only somewhat shortened above and just below the clavicula, over the superior lobe somewhat sharpened vesicular respiration, being, over some few spots, slightly jerking, with very few subcrepitant râles, audible only in deep inspiration. Left anterior region: Flatness on percussion down to the fourth intercostal space; down to the fourth rib, low, weak respiratory murmur with subcrepitant râles; elsewhere vesicular respiration; in the axillary region, weak respiratory murmurs. Right posterior region: Normal percussion sound; everywhere vesicular respiration; down to the third rib, few subcrepitant râles. Left posterior region: Dulness on percussion down to the fourth rib, only in the suprascapular region flatness on percussion; within those limits weak bronchial respiration with but few subcrepitant râles; in the sixth intercostal space very weak pleuritic friction murmur.

D. B——, aged thirty-eight, merchant; no hereditary taint; sick since February, 1888; profuse hæmoptysis in March, 1888; since then repeated attacks of hæmoptysis. Came under treatment August 28, 1888. Physical signs, paralytic thorax; respiration abdominal; during the respiratory action the left lung is less active than the right. Right anterior region: Flatness on percussion down to the sixth rib; the liver-dulness begins at the sixth rib and extends to the arcus costarum. Down to the sixth rib loud bronchial respiration; above the clavicula bronchophony; below the sixth rib weak respiratory murmurs. Left anterior region: Above the clavicula percussion sound somewhat shortened; above the clavicula bronchial respiration with crepitant râles; below the clavicula down to the fourth rib, weak respiratory murmurs with crepitant râles; from the fourth rib downward weak vesicular respiration. Status of same, November 5, 1888: Normal respiratory action. Right anterior region: Moderately marked dulness on percussion over the supraclavicular region; over the clavicula, somewhat shorter percussion sound; above and below the clavicula, strong respiratory murmur, with bronchial expiratory sound and but very few subcrepitant râles; elsewhere vesicular respiration. Left anterior region: Normal percussion sound; in the supraclavicular region, weak broncho-vesicular respiration with few crepitant râles; below the clavicula, vesicular respiration with prolonged expiratory murmur; otherwise weak vesicular respiration. Right posterior region: Moderate dulness on percussion down to the fifth rib; within those limits loud bronchial respiration without râles; elsewhere weak vesicular respiration. Left posterior region: Normal sound on percussion, shortened only in the fossa suprascapularis; weak bronchial respiration with subcrepitant râles in the fossa suprascapularis; otherwise vesicular respiration everywhere.

C——, aged thirty-eight, joiner; no hereditary taint; sick since 1875, hæmoptysis, August, 1876; since frequently repeated. Came under treatment September 26, 1888. Physical signs: Thorax paralyticus. Right anterior region: Dulness on percussion over the entire lung. Over the superior lobe bronchial respiration, below the clavicula, with amphoric intonation and subcrepitant râles; in the inferior lobe, bronchial respiration with pleuritic friction murmur. Right posterior region: Dulness on percussion down to the seventh rib; weak bronchial respiration without râles. Left anterior region: Dulness on percussion down to the third rib; within these limits broncho-vesicular respiration; elsewhere vesicular respiration. Left posterior region: Normal percussion sound, shorter only in the suprascapular region; auscultatory signs as in left anterior region. Status of same on November 5, 1888. Right anterior region: Moderately marked dulness down to the fourth intercostal space; in the fourth intercostal space somewhat shortened on percussion sound; in the supra- and infra-clavicular regions, broncho-vesicular respiration with sharp and prolonged expiratory murmur and subcrepitant râles; otherwise vesicular respiration everywhere. Left anterior region: Shortened percussion sound down to the third rib; above the clavicula, without resistance or palpatory percussion; in the axillary region, on both sides, loud, full percussion sound; vesicular respiration everywhere. Right posterior region: Moderate dulness on percussion down to third rib; shortened percussion sound from there downward to fifth rib; over the superior lobe, weak bronchial respiration; from the third rib downward, vesicular respiration. Left posterior region: Normal percussion sound; vesicular respiration everywhere.

O. P——, aged sixteen, page; no hereditary taint. Pleuro-pneumonia in 1884; pleurisy in March, 1888. Since then dyspnœa. Entered treatment, October 10, 1888. Physical signs: At present, feverish condition. Dyspnœic costo-abdominal respiration. Slight built; thorax moderately well formed, the latitudinal diameter being greater in its lower portion. With every inspiration the intercostal muscles of the sixth, seventh, eighth, and ninth intercostal spaces are put into action, the thorax being drawn at the same time upward and backward. The heart choc is plainest in the parasternal line in the left fourth intercostal space. Right anterior region: Flatness on percussion down to the fourth intercostal space; down to the fourth rib loud bronchial respiration, with weak bronchophony and very many subcrepitant râles; from the fourth rib, loud bronchial respiration with weak bronchophony and very many subcrepitant râles; from the fourth rib downward, vesicular respiration with but few subcrepitant râles. Left anterior region: Flatness on percussion down to the seventh intercostal space; down to the third rib loud bronchial respiration; from there downward weak bronchial respiration, subcrepitant râles over the entire lungs. Right posterior region: Flatness down to the fifth intercostal space, loud bronchial respiration with many subcrepitant râles, and loud bronchophony down to the fifth intercostal space. Left posterior region: Flatness down to the sixth intercostal space; in the fossa infraspinata, bronchial respiration with amphoric intonation and very many subcrepitant râles; over the rest of the lung weak bronchial respiration with but few subcrepitant râles. Status of same, November 5, 1888. Respiration somewhat accelerated, temperature normal; pulse, 120. Right anterior region: Flatness in the fossa supra- and infra-clavicularis; loud bronchial respiration with many subcrepitant râles over the same region; over the rest of the lung weak bronchial respiration with but few râles, and pleuritic friction murmur. Left anterior region: Flatness down to the sixth rib; in the axillary region normal percussion sound, bronchial respiration down to the third rib; from there downward weak broncho-vesicular respiration without râles; in the axillary region, vesicular respiration with but few râles. Right posterior region: Flatness down to the third rib; sharp bronchial respiration in the fossa supra-scapularis; loud bronchial respiration in the first, second, and third intercostal spaces; in the fourth, fifth, and sixth intercostal spaces loud bronchophony. Left posterior region: Flatness on percussion down to the fourth rib; bronchial respiration with many crepitant râles in the first three intercostal spaces; over the rest of the lung sharp vesicular respiration without crepitant râles.

CLINICAL NOTES ON ELECTRO-THERAPEUTICS.

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The growing importance of electricity as a remedial agent may warrant the publication of the following results of its use. The cases are grouped according to their nature, and as the point of view is exclusively therapeutical, all unnecessary details are omitted for the sake of brevity.

ARTICULAR DISEASES. CASE I.—Rheumatic synovitis of the right knee-joint. Redness, swelling, and pain upon movement after a various treatment of two months' duration.

July 22d.—Placed an electrode, 1.77 sq. in., upon each side of the joint, and passed a galvanic current of five milliampères through the parts for fifteen minutes. Daily treatment.

July 31st.—Redness and swelling gone, pain much abated. Treatment continued.

August 6th.—No pain upon locomotion.

August 20th.—All symptoms absent since last note. On duty as orderly during four hours a day, going up and down stairs frequently. No treatment.

September 1st.—No return of symptoms.

CASE II.—Gonorrhœal rheumatism of five weeks' duration affecting left knee and both ankle-joints, which are much swollen and painful upon pressure and locomotion. No constitutional disturbance.

July 15th.—After a trial with ol. gaultheriæ, acid. salicylic., etc., without improvement, an electrode, 1.77 sq. in., was applied to opposite sides of each joint in turn, and a galvanic current of three milliampères passed for five minutes. Daily treatment.

July 21st.—Puffy swelling about the patella has quite subsided; no pain in the knee except upon locomotion. Ankles less swollen, but still tender. Treatment continued.

July 29th.—No pain in knee upon locomotion; slight hard swelling over the inner tuberosity of the tibia. Has a little swelling at the ankles and slight discomfort upon walking. Galvanism continued.

August 10th.—Goes about without discomfort. Knee looks well, but left ankle swells a little after use.

August 15th.—Virtually well, all symptoms gone.

Case III.—Gonorrhœal rheumatism in right ankle and instep, of four months' duration. The affected parts are tensely swollen, hot, and very tender. No constitutional disturbance except debility. Treated with alkalies, ol. gaultheriæ, acid. salicylic., etc., without benefit.

July 15th.—With the anode upon the instep and cathode in the palm of the hand, electrode 1.77 sq. in., passed a galvanic current of two milliampères for five minutes.

July 24th.—Pain and swelling noticeably diminished, no redness, and the foot can be shifted with less discomfort. Treatment continued.

August 1st.—Swelling about the same; no pain except upon movement of the foot. A very strong faradic current passed through the metatarsus is substituted for the galvanic. Time and electrodes same as above. Primary current used.

August 8th.—But little swelling remains. Moves the foot without pain. Treatment continued.

August 13th.—Swelling nearly gone. Walks upon the foot without pain.

August 19th.—Except a little stiffness upon locomotion, all trace of inflammation has disappeared. Faradism continued.

September 1st.—All symptoms absent except slight stiffness at the metatarso-phalangal joint. Treatment continued.

September 8th.—Discharged to duty.

Case IV.—Gonorrhœal rheumatism of left foot; instep hot, tender, and tensely swollen. Duration seventeen days. No sleep at night on account of pain.

July 29th.—With an electrode, 1.77 sq. in., on each side of the instep, passed a galvanic current of three milliampères for five minutes. Lead-water and laudanum lotion.

August 1st.—Redness gone, pain abated, but swelling remains. Primary faradic current substituted, as strong as the patient can bear, ten minutes daily.

August 8th.—Pain and swelling abating steadily. Patient expresses much relief from the treatment.

August 16th.—No pain and but little swelling remain. Tenderness and swelling about the right inner malleolus, which is faradized as above.

September 1st.—Except a little soreness during locomotion, the left foot is well. Right ankle swollen, but less painful.

September 7th.—Pain and swelling absent from both feet, but some stiffness is felt upon walking.

October 1st.—Goes about all day without pain or subsequent swelling, but the parts are still a little stiff.

October 22d.—Well. Discharged to duty.

Case V.—Rupture of anterior crucial ligament of the right knee-joint.

February 6th.—Joint much swollen, hard, and painful upon standing.

June 30th.—A strong faradic current from the primary coil is passed through the joint for ten minutes; electrodes, 1.77 sq. in.

July 3d.—Joint less painful and swelling reduced.

July 8th.—Swelling nearly gone; pain felt only upon standing.

July 12th.—Same. Galvanism substituted, three milliampères for five minutes; electrodes, 1.77 sq. in., each side of joint.

July 20th.—No swelling remains. No further improvement was effected by electrical treatment of this case.

Case VI.—Female, nine years of age. Subarticular ostitis of right knee, neurotic (?). Duration five years. Joint much enlarged, with effacement of anatomical outlines, swelling most marked over inner side, which is the site also of tenderness. Skin somewhat red and marked by enlarged veins. The child passes a part of each night crying with pain. Partial anchylosis from muscular spasm.

August 5th.—With electrode, 1.77 sq. in., applied the anode labile over the joint, using a galvanic current of one-half milliampère for five minutes. Daily treatment.

August 12th.—No pain in the joint since the first treatment. Swelling appreciably diminished.

August 19th.—Swelling reduced one-half. No recurrence of pain. Joint less tender.

August 26th.—But little swelling remains, except over inner side of joint. Outline of patella easily made out. Cutaneous veins smaller.

September 10th.—No cutaneous veins appear. Swelling upon inner side of joint nearly gone. No tenderness.

October 1st.—Injunction of absolute rest violated. Return of swelling, with slight tenderness, but no pain. Cutaneous veins reappeared.

October 10th.—*In statu quo* September 10th.

October 20th.—Same. Patient still under treatment.

Lymphadenitis. Case I.—Indolent bubo of the right groin, of two months' duration and size of a small hen's egg. Consistence very hard. No history of chancre.

With the cathode, electrode 1.77 sq. in., on the bubo, a galvanic current of three milliampères was passed daily for five minutes. At the end of three weeks the patient was discharged to duty without a trace of the bubo remaining.

Case II.—Bubo in left Scarpa's triangle, consisting of several glands, from the size of a cherry to that of an almond, embedded in an inflammatory deposit. No explanatory history except a gonorrhœa present. Duration seventeen days; consistence of glands rather soft.

January 27th.—Galvanization of bubo, two milliampères for five minutes. cathode on enlarged glands, electrode 1.77 sq. in. Daily treatment.

January 31st.—Bubo subsiding rapidly.

February 4th. Bubo nearly absorbed.

February 11th.—Bubo has disappeared.

Case III. Monoganglionic bubo in right groin of the size of a small hen's egg; tender and somewhat soft, but without positive evidence of suppuration. Duration three weeks.

August 6th.—Applied the anode, electrode 1.77 sq. in., to the gland, and passed a galvanic current of two milliampères for five minutes. Daily treatment.

August 9th. Bubo somewhat red and more tender, as if it might suppurate, but a little smaller. Treatment continued, together with calomel vapor bath for constitutional syphilis, just manifest.

August 12th.—Signs of suppuration, but swelling abated about one-half. Galvanism suspended, mercury continued.

August 17th.—Redness, tenderness, and swelling diminished. Mercury continued.

August 26th.—All signs of suppuration have disappeared. Bubo considerably smaller.

August 31st.—Gland has returned to normal size.

Case IV.—Bubo in left groin, all the glands with inflammatory deposit forming a tumor as large as a hen's egg. Consistence doughy, with one small point of tenderness. Duration four weeks. No history of recent venereal sore.

September 24th.—Galvanization of bubo, cathode, electrode 1.77 sq. in., on the swelling, two milliampères for five minutes daily.

October 1st.—Glandular swelling diminished about one-half, the glands being now easily counted.

October 9th. Continued abatement of swelling.

October 13th.—Bubo reduced to three almond-shaped glands without intervening inflammatory deposit.

October 16th.—Two glands remain.

October 19th.—Two glands in right groin have become slightly enlarged. Patient complains of suspicious nocturnal headache. Galvanization continued, with the addition of Hydrarg. iodid. virid., gr. $\frac{1}{6}$ t.i.d.

October 23d.—Headache gone. Glandular swelling abating.

October 27th.—Glands in each groin about the size of cherries. Still under treatment.

CASE V.—October 12th.—Egg-shaped bubo in right groin, hard, except at one point, which is suppurating. Two olive-shaped glands in left groin. Glands began to swell about three weeks ago, two days after venereal exposure. No history of a sore. General health impaired. To have tinct. ferri chlorid. internally, galvanism locally, cathode on right groin, anode on the left, one milliampere for three minutes daily. Aspirated the suppurating point and injected solution of mercuric chloride (1 to 3,000) into the cavity.

October 16th.—Swelling in both groins diminished about one-fifth. Treatment continued.

October 20th.—Swelling reduced one-half in right groin, one-fourth in the left.

October 23d.—Suppuration has ceased. Right bubo about the size of a pigeon's egg, the left but little changed.

October 28th.—Right bubo almond-sized, the glands in the left groin are cherry-shaped. Still under treatment.

OPACITY OF THE CORNEA.—The treatment and progress of these cases were so nearly uniform that a brief abstract of each will suffice for the present purpose, which is to show that in the galvanic current there is a prospect of restoration of useful vision to many eyes hitherto regarded as hopelessly blind.

CASE I.—Macula, three by six millimetres in dimensions, over the right pupil, and a smaller nebula similarly situated upon the left cornea, both interstitial apparently. Duration two years. Treatment begun February 21, 1888, with a galvanic current of two milliampères for ten minutes, cathode on the closed eyelid, anode in the palm of the hand. At the end of a week the macula had become smaller and thinner, and the nebula not readily visible without oblique illumination. One week later the macula had become nebular, the nebula less changed, but both eyes showed conjunctival injection, and were painful; the treatment was therefore suspended for two weeks and then resumed, but with the poles changed, the anode being on the eye. The duration of the sitting also was shortened to three minutes. No further irritation was manifested. At the expiration of two months, the opacity of the right cornea could be seen only upon close scrutiny by direct light, that of the left only upon oblique illumination. Two months later the original macula had become two filmy fragments, while the nebula was scarcely visible with oblique illumination. Shortly after this the patient ceased to return.

CASE II.—Interstitial macula covering pupillary area of each cornea, due to recent trachoma of seven years' duration. Vision greatly impaired, patient barely able to find her way. Treatment begun March 1st with three milliampères for ten minutes, cathode on the closed eyelid, anode in the hand. Application made every other day without evidence of irritation.

June 3d.—Present condition: R. E., several very faintly seen scattered fragments of the opacity; vision satisfactory; L. E., cornea clear, except upon oblique illumination, which shows a small nebular spot; vision excellent. Patient seen no more.

CASE III.—Interstitial macula, two by five mm. over left pupil, the remains of a recent severe catarrhal ophthalmia with strumous diathesis. Vision greatly disabled. Treatment begun February 28th, with cathode on the closed lid, anode in the hand, three milliampères for ten minutes on alternate days.

March 12th.—Macula one half original size. Reads print easily.

April 1st.—Improvement progressive but less rapid. Daily treatment, two milliampères three minutes.

May 1st.—Macula very thin, one by two mm. in size.

July 1st.—No material change. Patient's visits very irregular.

September 1st.—Macula seen only upon close inspection. Patient departed for the country.

October 1st.—Macula unseen by anyone ignorant of its presence. Treatment resumed.

October 17th.—A tiny nebular spot remains. Patient departed for the United States.

CASE IV.—Dense leucoma below right pupil, four mm. in diameter. Duration fifty-eight years. Irregular treatment as above for two months effected a reduction to three millimetres, but patient ceased attendance.

CASE V.—Millet-seed leucoma below right pupil. Duration twenty-four years. Regular treatment as above for thirty days made no appreciable change.

CASE VI.—Interstitial macula of small size over each pupil. Duration two years. Treatment, one pole upon each eyelid, three milliampères for three minutes, daily. At the end of three months the opacities are now tiny nebulæ. Still under treatment.

CASE VII.—Nebula two by three mm. over left pupil, and occlusion of right pupil from presence of lymph. Duration one and a half year. Treatment, cathode on right, anode on left, eyelid, three milliampères for three minutes. After fifteen days the nebula was but a fraction of its original size, and is now, after four months, discovered only upon close inspection. The right pupil is slowly increasing in diameter, being now egg-shaped instead of linear, as at first. Patient still under treatment.

CASE VIII.—Leucoma, 4 mm., over right pupil, and connected by a bridge with a considerable deposit of lymph in the anterior chamber, which in turn is continuous with a similar deposit in the posterior chamber. Remains of ophthalmia one year ago. Resemblance to hypopion so strong that paracentesis of the cornea had been done twice before patient came for treatment. Treatment begun June 28th, with cathode, three milliampères three minutes, anode on the neck, daily.

August 1st.—Leucoma thinner; deposit in anterior chamber less dense.

September 1st.—Leucoma has become macular; bridge nearly gone. Deposit in the anterior chamber broken up and wholly gone in places. No appreciable change in posterior chamber.

October 1st.—Leucoma nebular; bridge wholly gone; iris merely dotted with the deposit in the anterior chamber. Deposit in anterior chamber appears smaller and less milky.

October 28th.—Steady improvement. Patient still under treatment.

CASE IX.—Interstitial leucoma, 5 mm. in diameter; dense grayish-white over right pupil. Cornea slightly conical. Duration eleven years. First treatment June 15th, cathode on closed eyelid, anode on the neck, three milliampères three minutes. Present condition, October 28th: Size of leucoma but little reduced; its opaqueness, however, is so far diminished that the iris can be seen dimly through it. Its complete disappearance appears to be only a matter of time and persistence with the treatment.

CASE X.—Leucoma and conical cornea of both eyes, permitting only qualitative perception of light, the whole of each cornea around the leucoma being clouded. Treatment begun March 4th; two milliampères for ten minutes; cathode on the closed eyelids.

March 10th.—Corneæ clearing. Patient comes alone.

March 12th.—Corneæ quite clear, except at the site of the leucomata. These are smaller, and the conical condition is diminished.

May 1st.—Leucomata have become macular, and the conical condition has quite disappeared.

June 1st.—Opacities are very thin and but a fraction of the original size. Patient failed to return.

In addition to the above, two cases each of incipient cataract and of deafness due to dry middle-ear catarrh, have been treated by galvanism with gratifying results.

THE CINCINNATI POLYCLINIC is the latest addition to the post-graduate schools of the country. It was organized on October 31st, and the trustees are about to purchase premises for the school, which will be ready for students about January 1, 1889. The dean of the faculty is Dr. Charles A. L. Reed.

CONVICTIONS REGARDING THE NOSTRILS IN RESPIRATION.

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THE intent of this article is a plea for the universal consideration of the nose as the beginning of the respiratory apparatus.

The arbitrary division of the respiratory apparatus into the "upper" and "lower" air-passages is the dictum of anatomists and physiologists; and this opinion is borne away by every alumnus of a medical school.

In "Gray's Anatomy," page 769, the chapter on "Voice and Respiration" begins thus: "The larynx is the organ of the voice, placed at the upper part of the air-passages."

On page 273 of Dalton's "Physiology" we read: "The respiratory apparatus in man commences with the larynx, which communicates with the pharynx at the upper part of the neck."

Again, "specialism" has, in the past, done much to divorce the "upper" from the "lower" air-passages, although recent writers on pulmonary diseases have, apparently, just stopped short of differing from the authorities on anatomy and physiology. In other words, the "professor" of thoracic diseases does not, as a rule, treat the naso-pharynx, and *vice versa*.

Dr. Loomis' lectures are introduced thus: "We are about to commence the study of the respiratory organs, and, most naturally, diseases of the larynx will first engage our attention." Strangely enough, the great Mackenzie, in Reynolds's "System of Medicine," opens the consideration of diseases of the respiratory system with the larynx.

All writers conform to the established custom of describing the nose as the organ of olfaction; and, in a stereotyped manner, accord it the credit of being a catch-all for atmospheric impurities, a vague auxiliary in the respiratory act, and the home of prolific catarrh.

Sustained by such statements, many celebrated instructors in vocalism, elocution, athletics, and in the use of wind-instruments teach, regardless of the dangers to which this fallacy surely leads, that the nose is incapable of meeting the demands of these occupations.

Yet more, these premises, once fixed in the mind of the practitioner, are frequently the occasion of unfortunate neglect. What greater obstacle to the recovery of inflamed lower air-passages can be conceived than superinduced mouth-breathing? And, pray, what author on the practice of medicine devotes a single line to the subject. No; the nostril and its diseases belong to the specialist.

There is no more reason for regarding the nose as a mere auxiliary to the lungs than there is in trying to believe that the external auditory canal is an auxiliary to the labyrinth. Though there are three channels by which sound-waves reach the labyrinth and three channels by which nutriment can reach the circulation, we have no doubt as to the normal channel. So while the mouth, with its various important organs, affords an easy access of air to the lungs, yet the nostrils can, the writer believes, be proved to be the normal channel for all inspiratory purposes.

The earliest history as to respiration occurs in the account of the creation: "And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul" (Gen. ii. 7). The Hebrew "Aph" being the singular for nose, "Appai" is used, a so-called dual, meaning the two nostrils. This is significant. More than one thousand years later, we find the Greek philosopher Aristotle at work on the subject of respiration (see "Respir.," chaps. iii. to vi.). The details as stated by him, though somewhat lurid, are so minute as to lead Agassiz to repeatedly say that not only had Aristotle anticipated many points in natural history which are regarded as modern discoveries, but he had reported facts of observation which could not be translated until new observations explained his meaning. The influence of respiration, he states, not only produces heat but gives life, since ceasing to breath produces death; while he manifestly indicates that in breathing through the nose there is an action of air (nitrogen?) on the sensorium at the base of the brain which promotes in some way the intelligence of the higher animals, and is especially promotive in man of energetic and clear mental action. Aristotle did not, of course, know the properties of the air, as made up of oxygen and nitrogen; the action of the former of which is now known to produce heat, while the latter, in plants, has been proved to be the direct source of life. The question that occurs to me is this: Was nitrogen, which constitutes four-fifths of the atmosphere everywhere, simply designed by the Creator as a diluent of oxygen?

The more I consider the peculiar structure of the nasal chambers, the spongy nature of the thinly covered turbinated bones, the large expanse of actual surface, guarded by mucous membrane so delicately constructed as to afford but slight protection to the extensive circulation, and varying in cell-formation at different points, the more I am convinced of their office in appropriating nitrogen from inspired air in the same manner as oxygen is appropriated by the lungs.

The idiotic facial expression observed in mouth-breathers is not due to the fact that the mouth is open so much as it is due to coexistent partial or complete deafness, to eyes as dull and expressionless as a fish's, and to the lack of mental vivacity; and those of us who have seen cured mouth-breathers will recall the total change, not only in the countenance but in the improved mental manifestations of such patients.

Dr. Roosa ("Diseases of the Ear," p. 203) refers to an article by Koppe in which the latter relates the history of two cases wherein treatment of the nose, throat, and ears restored the patients to sound mental condition.

Perhaps the most convincing argument for constant nose-breathing was written by Dr. Cassels, who chose the somewhat startling subject, "Shut your Mouth and Save your Life" (Reprint. Edinburgh: Oliver & Boyd. 1877.) Dr. Cassels quotes Mr. George Catlin, distinguished for his investigations among the American Indians, thus: "If I were to endeavor to bequeath to posterity the most important motto which human knowledge can convey, it should be in three words, 'Shut your mouth.'"

An interesting article on "Hatters' Consumption," by my friend Dr. J. W. Stickler (*New York Medical Journal*, May 29, 1886), well illustrates a point I desire to bring out. He concludes his valuable investigation as follows: 1. That pulmonary phthisis is the most common and fatal disease among hatters. 2. That this particular type of phthisis is due to a mechanical irritation of the lungs by the fur and dust which pervade the air of the "finishing" and "pouncing" room. 3. That the inhalation of fine fur hastens the progress of inherited or acquired pulmonary consumption. 4. That removal of the exciting cause is the only rational means of preventing or interrupting the disease.

In a letter dated July 6, 1886, Dr. Stickler sent the following notes, replying to inquiries in the line of my own observations, as to the existence of naso-pharyngeal diseases among the hat-makers.

"They (the hat-makers) inhale large quantities of the fine fur which pervades the air of the rooms; this fine fur lodges upon the mucous membrane of the nose and vault of the pharynx. In many cases the membrane becomes sufficiently thickened to interfere, perceptibly, with easy respiration. In such cases the membrane lining the nasal cavities is the seat of the greatest structural changes; it will not only show congestion and thickening but, very often, ulcerations which are sometimes superficial, sometimes quite deep. There is one more point, with reference to the character of respiration as practised by the hatters, they perform respiration in a very imperfect manner; *i.e.*. it is shallow, causing an expansion of that portion of the lungs at just about the first division of the bronchi upon either side. I am now speaking of respiration as performed in the shops while the men are at work. I have been told by hatters that they have blown black dust from their nostrils and hawked it from their throats, two and three weeks after leaving the hatshops."

These statements point unmistakably to the adoption of abnormal respiration, with two causes upon which its continuance is dependent, viz.: 1, Nasal obstruction; 2, habit—the former demanding surgical interference; the latter, proper breathing exercises, etc., each of which will be considered farther on.

This serves to indicate the danger to which upholsterers, bakers, stone-cutters, tailors, seamstresses, tobacco-workers, barbers, vocalists, athletes, performers on wind instruments, *et al.* are subjected; and my own investigations among those who are for any considerable period of time thus employed show: 1, That they usually have marked swelling or true hypertrophic changes in the upper air-tract, with ulceration as an occasional complication; 2, that they acquire an accompanying progressive middle-ear catarrh; and, 3, that mouth-breathing becomes inevitable.

The only objection to Dr. Stickler's able article is the title. What he has chosen to call "Hatters' Consumption" is but a synonym for the disease induced by an inorganic matter inhaled; and I am opposed to the further taxing of our already overstocked nosology.

We are frequently asked the question: Does nasal catarrh result in consumption? My answer to patients is always in the affirmative; and I tell them something like this: When the nostrils are at all obstructed respiration is carried on (abnormally), for the most part, through the mouth, especially during sleep, exercise, and in the use of the voice. Impurities are inhaled which collect on the mucous lining of the bronchial tubes and, ultimately, cause ulceration of the same.

I do not believe dust can reach the bronchus by way of the nose, nor that solid foreign matter of any description ever extends to the true pulmonary tissue. I believe that in all cases where the history of tuberculosis is not obtained the lesion causing cough, night-sweats, fever, emaciation, and hemorrhage will be found in the trachea or in the ramifications of the bronchial tube. Hemorrhage, in these cases, is nature's own admirable cure; for in this way alone can the deposit of foreign matter be removed, and in the treatment of such patients the fact should never be forgotten.

The structure and position of the nasal chambers are such as to meet the very purposes for which they were designed: 1. The structure of these passages provides for the tempering of inspired air; for the exclusion from the lower air-tract of irritants as well as infectious and contagious poisons; for the perception, to the best advantage, of odors; and for the maintenance of the necessary moisture for *unconscious* respiration. I use the word in italics, because consciousness of this function implies more or less disturbance. Yet more, the arrangement of the nasal chambers is such as to make provision for the lodgement of extraneous substance until nature, or instinct, or art removes them.

2. The position of the nostrils is significant. They are the portals to the lungs' highway. This is shown (1) by the continuity of the mucous lining; (2) by the physiological impossibility of breathing through the nose and performing, at the same time, the act of deglutition; (3) by the more direct anatomical plane, whereby (normally) air finds readier access to the lungs; (4) by the distribution of the pneumogastric nerve. Aside from this, the air-pressure in the tympanic cavities is dependent upon a normal condition of the beginning of the respiratory tract.

The child who cries violently becomes hoarse because the natural method of respiration is reversed; so the orator's voice becomes husky during excited bursts of eloquence or rage; the vocalist pauses to "clear the throat" after the execution of prolonged musical passages; the athlete "loses his wind" when pressed the hardest in strife, only to "get it back again" after studied nose-breathing.

Leaving this, perhaps unnecessary, digression, let us look at the practical issues.

For more than three years past this subject has been my chief thought. My interest in it has led to inquiries which plainly demonstrate a prevailing error, founded on statements of medical authors and which remain to be corrected. A large number of reputed vocal instructors, impressed with the idea that "the respiratory apparatus begins with the larynx," calmly advise their pupils "to breathe through the mouth or nostrils, according to the demands of their performance;" or, as one of them expressed it, "whichever comes the easiest."

A broken-down cornet-player, at forty, told me he had been taught by a foreign celebrity "to take in his wind by the mouth."

One of the noted runners of the day boasted that he "always runs with his mouth open." I shall watch the young man with interest. It is easy to foresee his destiny. More than a year ago I made the acquaintance of Professor Max Bendheim, of the Grand Conservatory of Music. Professor Bendheim, who is a good observer, had for some time been looking askance at the "breathing methods" as taught by the vast army of aspirants for fame in musical circles. He wondered at the disparity existing between the "methods" of several leading instructors in vocalism. That one man taught his pupils to retract the abdomen as a prerequisite to perfect inspiration, and that another taught thoracic gymnastics, with the mouth kept wide open, seemed to him mere jugglery of a trade. He had made himself familiar with all the arts and devices of his craft, and, though successful as the best of his rivals, his efforts were frequently disappointing. He came to the writer for an explanation regarding the improvement in the voices of several pupils who had been under his care.

These particular pupils, of both sexes, had been under instruction for a long time and all had excellent vocal "gifts." The general subjective symptoms were irritation in the larynx, dry throat, and difficulty in singing sustained notes. The general objective symptoms were collapsed nostrils, mouth-breathing, pharyngitis, and hyperæmia of the larynx.

The treatment consisted: 1. In suspending vocal instruction. 2. In dilating the nostrils with graduated cotton-plugs, medicated as occasion required. 3. Massage applied to the nasal wings. 4. Breathing exercises carried on exclusively through the nose, allowing about three seconds for inspirations and from ten to twenty seconds for expirations. One of these cases required the removal of hypertrophic tissue from the distal end of the inferior turbinated bones; in one other case the tonsils needed reduction. As nasal inspiration became easier the pupils were allowed to renew their vocal instruction, but they were permitted to sing only simple scales; and their studies were not advanced until their increasing dexterity in unvaried nasal inspiration became apparent.

Professor Bendheim agrees with the writer in believing that the larynx is not the beginning of the respiratory apparatus, except on artificial anatomical grounds. In rapid musical passages, where the singer has scarcely time to close the lips for an inspiratory act, the professor teaches a method whereby the base of the tongue is deftly raised against the soft palate and the inspiration is still taken through the nostrils.

During the past year I have enjoyed the honor of a most interesting correspondence with Dr. Feldbausch, of Wiesbaden, who has for a long time taken a lively interest in treating the "lower air-passages" by vapor-inhalations. He has presented in Europe a most unique device which deserves more than a mere passing notice. His "inspirator," as he calls it, consists of two flattened metallic tubes, each having a double roll of blotting-paper, to be saturated with any desired medication for inhalation. These tubes, made in three sizes, are introduced into the nostrils and kept *in situ* for any discretionary length of time. Dr. Feldbausch's claims for their efficiency are not at all unreasonable, and he believes that their extended use will prove all his premises. I have employed already over thirty of these "inhalers," and can commend their utility highly. The result of the doctor's investigations point clearly to the doctrine of the "beginning of the respiratory apparatus" herein set forth.

It is a self-evident fact that children, for instance, who are mouth-breathers, become the ready victims of the acute infectious diseases, and that those who have normal "upper air-passages" are comparatively exempt. Does this not explain why the lesion in so-called cases of "diphtheria" appears, as it always does (when the lining of the fauces is not rendered too insensible by hyperplasia, etc.), on the tonsils or the back wall of the pharynx? This question I can but consider in the affirmative.

In that supposed distinctive disease, "true croup," the tonsils and the lining of the fauces are usually the seat of hypertrophic changes which render those surfaces less susceptible to the production of pseudo-membranous deposit; hence the readiness with which the larynx and trachea take on the characteristic exudation and symptoms.

The necessity for free nasal respiration in health becomes an imperative demand in all conditions of ill-health. Especially is this true where we deal with the uncertain problems of bronchial and pulmonary inflammation. Imagine, if you can, a greater obstacle to the subsidence of inflammatory action in and below the larynx than the constant evaporation of moisture and the inhalation of a bedroom atmosphere, occasioned by mouth-breathing. Yet how often do practitioners think of this as an element in the nice management of cases like scarlatina, measles, whooping-cough, and the fevers in general, in all of which diseases the drainage and the ventilation of the nasal passages are likely to be bad?

This point is not touched upon by any work on "Practice" with which I am familiar; and I believe that, when this subject receives general consideration, we shall hear less frequently of laryngeal and pulmonary disease as the sequel of eruptive and other fevers.

In those rare and painful cases of faucial and laryngeal sloughing due to cancer, syphilis, and other causes, mouth-breathing is usually pronounced; yet in the reports concerning such patients as General Grant and the Crown Prince we read little or nothing as to this contributing cause of distress and *local irritation*.

Incident to the growing popularity of post-graduate instruction and the ever-increasing competition for a "living" in these times of medical oversufficiency, diseases of the nose, throat, and ear are treated extensively by the general practitioner, for whose especial benefit the following is written. In view of the prevalence of these affections, those gentlemen who are most familiar with the subject agree in pronouncing a normal nose, ear, and throat to be almost objects of curiosity. Hence the greater importance of recognizing the indications for interference and the most appropriate means of securing the best results.[1]

In concluding this necessarily disjointed article, let us remember that the physiology, the pathology, and even the anatomy, of these highly organized cavities (the nostrils) are still in the infancy of our comprehension. The history of the treatment of naso-pharyngeal disease, during the past eight or ten years, reads like a fairy-tale of science, and makes us wish for the "long results of time." Since the destructive plan of treatment has been made bearable by the new anæsthetic, galvano-cautery has become the rage of to-day; and it is to be feared that this novelty is playing sad havoc with an organ the physiology of which is but meagrely comprehended. By extended study of this subject we may hope to explain away many scant physiological observations as to respiration; more than this, in the possession of a complete and generally appreciated knowledge of these organs, we will do our fellow-creatures better service by preventing or limiting progressive nasal disease than by blindly following out the stereotyped system of "cure."

The importance of recognizing the nostrils as the beginning of the respiratory tract is thus imperfectly presented. The writer believes that the excessive devotion to authority is just as great a stumbling-block in the way of progress as too littte respect for it. Hence the hope is expressed that all future editions of text-books will accord the nose, with all its connections, both in health and disease, the place it should hold; because the impartial observer of its construction and offices cannot fail of assenting to the irresistible evidences of harmony and design.

13 West Twenty-sixth Street.

URINARY EXAMINATION IN LOCALIZING GONORRHŒA.

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It is only within this decennium that the treatment of urinary diseases, especially gonorrhœa, a disease so widespread and so long known, has been established upon a firm scientific basis.

This was made possible through the improvements in diagnostic methods, and because it was seen that a proper treatment could only be pursued by an accurate determination of the exact localization of the affection.

The endoscope is the most important aid for this purpose. Although this instrument has been vastly improved within recent years, yet it will be a long time before it comes into general use. The busy practitioner has neither sufficient time in his office nor the requisite practice in the use of the instrument; a diagnostic method is necessary which will consume the least possible time for localizing the disease.

We have such a resource in the test known as Sir Henry Thompson's, consisting in the collection of the urine (voided once) in two portions.

As we are unable to find any mention of this important test in any American treatise, and as we are well assured of the practical worth of the same, we shall endeavor, in the following pages, to set forth its value as briefly as possible.

This test is based upon the separation of the canal in two portions, namely, the anterior and posterior urethra, separated from each other by the muscularis compressor partis membranaceæ ("cut-off muscle"). Through our experiments, the results of which we have given in an article in the *New York Medical Press*, June, 1888, we are able to confirm the fact that the separation is not arbitrary, but natural and practically important. Moreover, we state, in opposition to certain adherents of the Vienna school, who claim a division of the urethra, that the boundary line between the posterior part of the latter and the bladder is given in the muscularis sphincter internus, of which the resistance is less than that of the muscular compressor, but nevertheless adequate to prevent the penetration of a not excessive quantity of fluid into the bladder.

According to this division, then, of the urethra into an anterior and posterior part, we differentiate a urethritis anterior and posterior depending on whether the affection extends to the bulb of the urethra or the pars membranacea and prostatica.

Guyon has positively determined, and practical experience daily confirms this view, that the urethritis can be wholly limited to the anterior part without affecting the posterior parts, just as much so as an affection of the cervix may be limited to that without involving the rest of the uterus.

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[1] This will be considered in a separate paper.

Before entering upon the discussion of Thompson's test we will consider what change the urine undergoes in gonorrhœa. It differs in different stages of the urethritis, depending upon the nature and amount of the secretion, no matter originating in the anterior or posterior urethra. In the acute stage of gonorrhœa we find a cloudiness of the urine, depending upon the amount of the discharge, composed of pus and mucus, which settles on the bottom of the beaker in two layers, the layer of the pus being below that of the mucus. This cloudiness is not to be confounded with that due to phosphaturia, which is frequently found in urethral affections.

In a subacute and chronic course of the disease the layer of pus diminishes, and in place of it we find peculiar formations, the so-called "Tripperfaeden" (gonorrheic filaments). Macroscopically they are seen as shreds or flakes, either short and thick, or long and thin. Microscopically they are found to be composed of pus-cells and epithelium, embedded in mucus. They are sometimes falsely regarded as a sign of beginning recovery, or, as happened in a case that came under my observation, as originating from stomach trouble. On the contrary, they always accompany, or rather are caused by, the slight morning discharge, indicating that the process—no matter how old—has not yet healed.

The Thompson test is performed by causing the patient to urinate in two beakers, each containing about two ounces. Practically there is but a single alternative: either the urine in the first glass is cloudy, with or without the above-mentioned filaments, according as the process is acute or chronic; the urine in the second glass being clear; or the urine in both glasses exhibits the preceding lterations.

What conclusions may be drawn from the foregoing? The cloudiness or filaments in the first glass is generally held to show that the forward portion of the urethra is alone affected, the posterior urethra and bladder being normal. The urine in both glasses being cloudy, there is, with or without a urethritis anterior, a urethritis posterior or cystitis; in the case of urethritis posterior the first glass being cloudiest, in a case of cystitis the two glasses equally cloudy, or the second one the cloudier.

Are we entitled to draw the foregoing conclusions, and upon what line of argument may they be based?

Our opinion is that the first query should be replied to in the negative. For if the urine in the first glass is cloudy or has filaments, the second one being normal, we can only conclude that there is no cystitis; since in a case of cystitis the entire urine would show alteration. The test as laid down gives no hint as to whether the anterior or posterior urethra, or both, are the seat of gonorrhœa, for the first urine, in its passage through the urethra, washes out the back no less than the front part of the canal. This fact is, of course, not unknown to the authors who advocate the Thompson test, but they maintain that the discharge in a case of urethritis posterior enters the bladder, having no room in the urethra posterior itself, and being prevented from running outward by the cut-off muscle already mentioned. This being the case, they conclude that in a case of urethritis posterior, the second urine would be also changed. We are convinced, in opposition to this opinion, that several cubic centimetres, a not inconsiderable quantity of secretion, can remain in the posterior urethra without entering the bladder, and therefore the urine in the bladder is changed only if the discharge from the urethritis posterior is considerable. But we know that in cases of gleet there is very often but a slight discharge; so slight, in fact, that if the patient passes a large amount of urine (which is the more likely to occur from the diuretic action of the internal remedies most in vogue), the first urine cleanses the whole of the canal. Suppose that in accordance with the conclusions from the current teaching we have the patient urinate for the examination early in the morning, as recommended, on the ground that during the night the discharge has accumulated in the posterior urethra and may have had the opportunity to run back into the bladder. We admit that this may be plausible in certain cases, but there are many instances where patients are obliged to urinate during the night, and other cases where the discharge is so little that even if no urine is voided at night the discharge will not leave the posterior urethra: hence the test has no absolute value.

Having paid special attention to this subject I found the examination of the urine to be of great value, if the anterior part of the urethra was washed out before urination. I will explain this method and its value as briefly as possible:

A patient suffers from a gonorrhœa. If he has a quite recent urethral discharge, the first point of the treatment will be to do locally as little as possible. As a rule, the process is confined to the urethra anterior for the first two or three weeks; too early examination of the diseased urethra will do more harm than good. In the beginning of the inflammatory stage there is only a hygienic and dietetic treatment indicated, no difference what part of the urethra is affected.

As soon as the acute pain has passed, our duty will be to localize the disease by means of the examination of the urine. The best time will be in the morning, for reasons mentioned before.

The irrigation is accomplished by throwing a stream of hot water (110° to 120° F.) through a soft rubber catheter, put into the urethra as far as the bulbus, by means of a fountain-syringe. By this procedure, besides cleansing the urethra anterior for diagnostic purposes, we also gain a therapeutic aim. (Hot water retrojections, as recommended by Dr. Holbrook Curtis, of New York.) Applied carefully, this method can do no harm, the injected fluid cannot penetrate into the deep part of the urethra on account of the muscular compressor, and to render this closing still more complete the pressure in the perineum will be advisable.

The water used in the irrigation will reveal to us whether there is a secretion in the anterior urethra or not, and its nature.

Then we get the patient to pass his water into two beakers. It is certain that any clouding found in the beakers must emanate from the posterior urethra or bladder. If from the former the first urine will be cloudy; if the bladder is affected, both. If both are involved the cloudiness in the first beaker will be greater than that in the second, because to the sediment of cystitis will be added the gonorrheic filaments, etc. The test is of still greater value in subacute and chronic gonorrhœa, because the objective symptoms are less than in the acute, and the only symptom we find is very often only an alteration of the urine.

In conclusion, the advantage of this method is amply shown inasmuch as we are thus enabled to localize more accurately the affected portion of the urethra, whereas formerly in doubtful cases we could only differentiate the affection as located in the urethra in general or in the bladder.

107 East Fifty-ninth Street.

A Noble Fee.—Sergeant-Major Freyer, M.D., I.M.S., has received a fee of one lac of rupees (£10,000 sterling) from H. H. the Nawab of Rampur, as a token of esteem as well as an acknowledgment of his valuable services in the successful treatment of himself and General Azimuddin Khan, the popular head of the Administrative Agency of the State, who had suffered for nearly three months from a malignant rheumatic fever; his recovery has been the occasion of great rejoicing at Rampur. This is said to be the largest fee ever received by a medical practitioner in India, and probably has never been exceeded in any country.—*British Medical Journal*, October 6, 1888.

AN INTERESTING CASE OF STRANGULATION OF A PORTION OF THE ILEUM THROUGH AN OPENING IN THE MESO-RECTUM, PROBABLY OF A CONGENITAL NATURE.

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In the present state of advanced scientific researches in surgery we have become bolder in our operations and undertake such as, ten or fifteen years ago would have been considered entirely hopeless. Especially is this the case in abdominal surgery. There is no doubt that many lives could have been saved were it not for the lamentable fact that surgeons were not yet well acquainted with the surgical treatment of the abdominal organs. They hesitated to perform laparotomy, fearing the almost certain peritonitis which they thought would necessarily follow such procedure. Only since they have become more enlightened in the methods for avoiding this dreaded consequence by strict antiseptic precautions, and become better acquainted with the details for performing operations in this region, have they overcome their antipathy to opening the abdominal cavity. We are not perfected to that degree as will warrant the indiscriminate use of the knife in all cases, but certain it is that an early laparotomy may save life in many cases.

We need but examine our post-mortem records for confirmation of this assertion. No case could better exemplify this than the following, which came under my observation on the evening of March 2, 1886:

I was asked to call on Mr. J. S——, a barber, who had been sick several days, and had been treated for obstinate constipation. When first seen the patient was perfectly conscious, had stercoraceous vomiting, rapid pulse, almost normal temperature, and face and body covered with a profuse perspiration. He told me he had been constipated for the six or seven days preceding, and that he had been taking various cathartics, which did not have the slightest effect. His abdomen was slightly distended and tympanitic. No tumefaction could be felt, and only slight pain in the left inguinal region could be elicited on percussion. A diagnosis of intestinal obstruction, either of internal hernia or volvulus, was made. Notwithstanding the collapsed condition, I gave large enemas of soapwater (the patient having been placed in the hand-and-knee position) without any satisfactory effect.

Opiates and stimulants were administered. The patient gradually sank, and died twenty-four hours after I first saw him, perfectly conscious to the last.

Post-mortem, twelve hours after death.—Body well nourished, moderately fat; chest large, well formed; abdomen slightly distended, considerable fat. Diaphragm on right side on a level with fourth rib; on left side, with fifth. Thorax: Lungs moderately collapsed; on incision œdematous and congested. Heart normal. Abdomen: Liver reached to free border of ribs. On lifting up the omentum, it was found slightly attached at its lower end by old adhesions. The small intestines were markedly distended. The transverse colon collapsed. On raising the distended intestine, a small coil, contracted and empty, was found lying against the spinal column. Below this a small loop was found deeply congested and strangulated, which seemed to have slipped through an opening in the meso-rectum. This loop was a continuation of the coil of ileum which was found contracted and empty. The strangulated portion of the gut was about a foot long, and was situated about six feet from the ileo-cæcal valve. The large intestine was empty and collapsed. The stomach and small intestine above the constriction contained a greenish fluid. Kidneys and bladder normal.

Whether this peculiar deformity was congenital, or the loop of ileum slipped through the opening in the meso-rectum and became gradually constricted during the time of the attack was not easily to be determined. The presumption is that it was a congenital malformation, and through an attack of constipation became constricted. There did not seem to be any indications of its being of a recent origin. The loop of intestine was easily withdrawn from the opening, which was round, and about the size of a silver quarter. The constricted gut had not yet become gangrenous, but was of a dark, deeply congested color. The ring pressing on the walls of the intestine interfered with the return circulation in this portion, and thus contributed to the strangulation. The patient gave no history of violent exercise, such as jumping or a fall, which possibly could have caused the propulsion of the intestine into the ring. He merely stated before his death that he was frequently constipated, and thought that this was only a bilious attack of more than an ordinary character.

This case is instructive in more than one way.

1st. As regards diagnosis. Intestinal obstruction there was, but could the character have been made out? Its locality in the small intestine was also diagnosed from the rapid setting in of feculent vomiting and tympanitis, besides the collapsed condition in the region of cæcum and colon. Had the constriction been in the large intestine the colon and cæcum would have been distended. Intussusception is rare in old persons, and besides patient gave hardly any evidence of pain and none of tumefaction. The rectum was perfectly clear, as evidenced by the copious injections of water. A careful examination of the pelvic and abdominal apertures, for external hernia, was made with negative results. The diagnosis of either internal hernia or twisting of the gut was therefore made by exclusion, judging from the sudden onset of the symptoms.

2d. Was it advisable to have recourse to operative interference? Medical treatment had been tried without any effect, and even though the direct cause could not have been ascertained, this would have been a proper case for operation, as the post-mortem afterward showed.

At the present time the surgeon is not confronted with the dangers following such operations as often as he was ten or fifteen years ago.

The obscurity in diagnosing the case as one of ileus, or obstruction from mechanical cause, should not deter the surgeon in the present state of antiseptic surgery from making an exploratory incision in the abdomen.

In the above case the patient had the best of chances had laparotomy been performed before he fell into a state of collapse. It required but the slightest effort to withdraw the congested loop from the constricting ring. The gut had not yet become gangrenous, but was merely in a state of deep congestion; it in all probability would have regained its vitality after prompt reduction.

Even though patients should succumb after a laparotomy, the surgeon feels that he has fulfilled a moral obligation and has given his patient the full benefits not only of his skill but also of the present advanced state of scientific surgery.

Treatment of Ascites by Faradization.—The treatment of ascites by faradization was recommended by Tripier in 1861, but Solfanelli, in 1866, was the first to report a favorable result from such treatment. The case was one of cirrhosis of the liver, and every means had been tried in vain to effect the removal of the fluid by increased diuresis. An increased excretion of urine was noted after the first application of electricity, and after four séances the ascites had entirely disappeared. As the causal hepatic condition remained unchanged, however, the fluid quickly reaccumulated. Dr. Muret has recently reported two cases of ascites, one following tubercular peritonitis and the other an enlarged spleen. In both cases a complete, though temporary, disappearance of the ascites was obtained by faradization.—*Der Fortschritt*, No. XX., 1888.

Clinical Department.

A PECULIAR SUBSTANCE FOUND IN THE HEART AND AORTA.

By BURT J. MAYCOCK, M.D.,

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Mrs. R——, aged eighty-two; no history of rheumatism, diphtheria, scarlet fever, or any severe strain. About two years ago she had an apoplectic attack, which, passing off, left no paralysis, but a great amount of general weakness from which she never recovered. At intervals since that time she has had similar attacks, always leaving her with headache, mostly on the left side, and more or less amnesia. When I saw her after an attack of this kind, about six months ago, she presented the following symptoms: Complete loss of memory of words, but her understanding was not much impaired. Tongue, when projected, inclined toward the left. On the left edge of the tongue near the tip was a purpuric spot about five centimetres in diameter. The heart's action was weak and irregular. Physical examination showed the heart to be in a condition of dilated hypertrophy. Over the mitral area, and carried around into the axilla, but not heard behind, was a short, high-pitched bruit, commencing just after the beginning of the first sound and terminating either with the sound or, usually, a little before. That is to say, it was a post-systolic mitral murmur, through which the normal first sound could be distinctly made out. The second sound over the pulmonary valves was not accentuated. Over the aortic area nothing abnormal was noticeable, except that the sounds were not perfectly clear and well defined. The lungs were somewhat œdematous. On November 5th she had an attack more severe than usual, followed by heart failure and death.

As I had never been able to satisfy myself as to the cause of the murmur, a post-mortem was obtained, and the following condition of things was found. The heart was much enlarged, weighing fourteen ounces. The left lung was greatly shrunken, and the bases of both lungs were in a condition of brown induration. The liver was somewhat contracted, dense, and on section presented a "nutmeg" appearance, and contained one or two small infarcts. The kidneys were enlarged and also contained infarctions, the left one in addition having three small cysts.

On opening the heart the ventricular walls were found to be thin and the cavity large. On the posterior wall of the ventricular cavity there were no columnæ carneæ, but the surface presented a ragged appearance, with what looked to be broken muscular fibres projecting from it. The mitral valves were perfectly competent. Attached to the infero-posterior portion of the cavity was a thin, tough, membranous substance about one-half inch in width at its point of attachment, then becoming narrower as it extended upward, floating freely in the cavity, passing in front of the mitral orifice and reaching to the aortic valves. Here it became very narrow and twisted as it passed through the centre of the aortic orifice, the attenuated neck offering no obstacle to the closure of the valves. Attached to this "neck," immediately above the valves and floating perfectly loose and free in the aorta, was a white, perfectly smooth and shining, fibrous, cylindrical body, about one and a half inch long and one-fourth of an inch in diameter. The brain was not examined.

All the symptoms found during life were now easily explained. The apoplectic attacks and the hemorrhagic infarctions were no doubt caused by small clots of blood (emboli) or, possibly, by pieces of the structure itself being washed away. The membranous mass in the left ventricle in the course of the blood-current caused the bruit, but the round smooth portion in the aorta gave no sign.

The question is, what was this substance? Was it a ruptured columna carnea? Or was it a clot which had become organized? Or was it a congenital condition? Whatever may have been the origin of the growth, the case is worth reporting if only to add emphasis to the fact that all endocardial murmurs do not necessarily imply valvular disease.

THE LOCAL TREATMENT OF DIPHTHERIA BY VLEMINCK'S SOLUTION OR SULPHURET OF CALCIUM.

By GEORGE E. HUBBARD, M.D.,

NEW YORK.

It would seem as though the time for discussion as to the constitutional or local inception of diphtheria had passed. The pathogenic bacteria of this disease have been discovered, and it is evident that it is their development and multiplication upon a mucous surface and extension to deeper parts and consequent blood-poisoning, or strangulation, which endangers the life of the patient.

The local inception appears to be so satisfactorily proven that the question at present is, What is the safest and most effective application for the destruction of the germs, or to arrest their development?

We know that good results have been obtained by the use of bichloride of mercury solution, peroxide of hydrogen, hyposulphite of soda, etc., but the one which I have to suggest, although not a new preparation, is, I believe, new in the treatment of diphtheria, and in my practice has given most satisfactory results. I refer to Vleminck's solution, or sulphuret of calcium, a preparation which has been used for years in the treatment of itch and certain skin diseases.

It occurred to me nearly two years ago that, if it is so effective in destroying the itch-mite, it would serve a good purpose in diphtheria, and I therefore tried it, at first carefully, with a camel's-hair brush, on my next case, to my great satisfaction. I now use the clear solution undiluted, by means of a spray, every half hour until the disease is under control, and then at longer intervals. In cases of very young children it may be best to add a little water to the solution at first until we are satisfied that it does not irritate the tender mucous membrane, but I have almost invariably used it pure, and have met with such marked success that I use no other local application.

In certain cases, every member of a family has been afflicted at about the same time, which would indicate that the diagnosis was correct.

It is not to be understood that this is all I do in the treatment of diphtheria, although in many cases I think this would suffice. I always make a practice of thoroughly fumigating the apartments with sulphur, and use such medicines as my judgment dictates. The principal thing to do is to destroy the disease-germs as early as possible.

The solution is prepared as follows:

Take, of lime, one part; sulphur, two parts; water, twenty parts. Slake the lime with some of the water, then add the remainder and the sulphur; boil to twelve parts and filter.

Under the use of this solution in spray, even sparingly applied, the diphtheritic patches undergo a change in a few hours. The temperature soon subsides, and a general improvement in the condition takes place almost from the first application. In some cases the patches disappear entirely in a day. If the false membrane has developed rapidly before the physician has seen the patient, under the influence of the spray it will be effectual even then in arresting systemic poisoning, and sooner or later the tough membrane will detach itself. Do not by any means allow the patient to swallow any portion of the false membrane. By gentle manipulation it can sometimes be removed without causing any irritation.

I have no doubt that the solution under consideration does much toward preventing constitutional infection as it is taken into the patient's stomach. Its stimulant, laxative, and somewhat diaphoretic and diuretic action are quite marked.

ABSCESS OF THE LEFT LOBE OF THE LIVER —EVACUATION BY INCISION INTO THE ABDOMINAL WALL—RECOVERY

By HAMILTON WILLIAMS, L.K.Q.C.P.I.,
BROOKLYN, N. Y.

THE patient, John D——, was seen by me for the first time on October 14th of this year. He was a native of Ireland, resident in this country for over forty years, had never been South, was fifty-four years of age, rather under the middle size, robust and hardy of aspect. He was never sick before, save an attack of pleurisy twenty-eight years ago, and was fairly abstemious in that he rarely drank spirits, although apt to indulge at times in ale. He was a carter by occupation, and up to a week or so previous to his sickness had lived in a one-story frame-house which had a privy in the yard. He complained of a hard lump in the abdomen, somewhat larger than the closed fist, occupying the lower half of the epigastric and the upper part of the umbilical region. Two-thirds of its bulk was to the left of the median line. There was but little bulging or protrusion. To the touch it was doughy, but of considerably more consistence, and non-nodular. Slight but deep-seated fluctuation was just appreciable on palpation over its centre. No discoloration of the skin, no infection of the superficial abdominal veins, no jaundice, no splenic enlargement; pulse, 78; temperature in axilla, 98° F.; no history of rigors. Painless under ordinary handling, the swelling, nevertheless, developed, under steady pressure, deep-seated, dull pain, non-lancinating. A considerable meteorism veiled most of the normal, and all of a possible abnormal hepatic dulness. There was no irregularity of the femorals at Poupart's ligament, and no pulsation in the tumor. According to the statement of the patient, his bowels had not moved for over nine weeks, and the swelling was noticed by him for the first time some two weeks after the stoppage of his motions. While the best working diagnosis appeared to be abscess of the left lobe, there was room for that of fecal impaction in the transverse colon—perhaps of the coexistence of both conditions. I advised an incision into the tumor to give vent to the pus externally, and forestall a fatal bursting into the cavity of the peritoneum. The patient's family failed to accede to the proposal, and I thereupon withdrew from the case. Three days subsequently I was asked to revisit the sufferer, and meet Dr. J. H. Ripley, of New York. By this time the swelling was much increased, and protruded as to its centre, but the continued absence of discoloration left it a matter of doubt whether the pus of itself would secure an exit within or without. The general characteristics of the tumor and of its surroundings remained. An exploring needle, plunged by Dr. Ripley into the swelling, well on either side, brought forth a quantity of not bad-smelling chocolate-colored pus. With his concurrence I then made a free incision of two and a half inches length into the most prominent portion, and we were treated to over two quarts of the pus described. The opening was protected with a wide covering of lint, wet indifferently with carbolized oil, or corrosive sublimate solution, outside which was a wider and larger layer of marine lint. The discharge, copious at first, gradually decreased, ceasing altogether with the final cicatrization of the incision in three weeks' time. Its characteristic color was retained to within a few days of its cessation. No hectic at any time. Brandy and quinine were rather generously administered at first, but the former was soon discontinued, and the latter reduced considerably. To meet any surviving hepatis inunction of the red iodide of mercury ointment over the liver, and a general sponging of the body with a solution of nitro-hydrochloric acid in water were resorted to. With the same object nitro-hydrochloric acid and taraxacum were exhibited, to be thrown aside later for a ferruginous tonic. The bowels were kept open by sufficient morning doses of Carlsbader salts. The patient is to-day in admirable health, and fully able to follow his former avocation. There are, in conclusion, some few points to notice of decided interest. A movement of the bowels following a dose of Carlsbader salts, administered on the third morning after the incision, brought away an enormous quantity of fæces mixed with pus and blood. The amount of the fæces would seem to indicate that it was one of the factors in the abdominal enlargement, which indeed did not altogether disappear until after this evacuation, whilst the pus and blood point to a perforation of the colon. It will be remembered that the patient stated that his bowels had been constipated for over nine weeks. This he invariably reiterated. One day, however, toward the close of my attendance, when I was thinking of writing up the case, I again put the question, adding: "You don't mean to say that all this time you never went once to the water-closet, if it was only to try and strain to bring on a motion?" The answer came quickly: "Oh! doctor, I used to go to the water-closet eighteen or nineteen times a day, but I never could pass anything. All that used to come away was a little blood and slime." Further questioning, which followed on this startling answer, developed the fact that he had passed unaided through an attack of dysentery, which numbered among its sequelæ the hepatic abscess I have just described. The only traces left of the attack over and above the cicatrix of the incision are found in wide adhesions to the abdominal wall evidenced on percussion

IMPERFORATE HYMEN.

DR. BLAKE BIGELOW, of Malone, N. Y., reports the following case of a young girl who was suffering great pain: "Two physicians had been called, but had discovered only a case of retention of urine. After several hours spent in attempting to introduce a catheter, they went away and I was sent for. I found the girl, who was fifteen years of age, in great pain, and in imminent danger of rupture of the bladder. The other doctors had told her that she was not a woman but an hermaphrodite. On separating the labia majora, I found a wall or septum in no way resembling a hymen, but strong and muscular in formation, and beginning at the lower portion of the fourchette, extending around the inner margin of the labia minora on both sides, up to where the clitoris should naturally have been. Every part of the cavity could be plainly seen. There was no appearance of the meatus urinarius, but at the upper juncture of the septum with the wall of the vagina there was a dimple-like opening much smaller than a small-sized pea. I took a No. 5 catheter, and using considerable force, passed it through this opening into the bladder and relieved the retention. The pain ceased at once; but there was a large movable tumor in the abdomen still. On palpation I found the septum yielded to pressure, with some sense of fluctuation, and that it was outwardly convex. I decided that the girl had been menstruating for several months, but as there was no outlet for the flow, the vagina and uterus had become filled with fluid. The latter was the size of a gravid uterus at the fifth month. I proved this diagnosis with a hypodermic syringe. On making an incision I took away three quarts of a brown, inky fluid. The uterus contracted to its normal size at once, and there was no further difficulty of any kind. The wall through which the incision was made was fully five-eighths of an inch in thickness. The vagina and uterus were normal, and the girl has since menstruated without difficulty."

THE CHICAGO POST-GRADUATE SCHOOL has recently been organized and incorporated, and will soon be ready for the reception of students.

Progress of Medical Science.

The Mortality of Abdominal Section.—At the recent meeting of the Royal Medical and Chirurgical Society (*The Lancet*), Mr. W. A. Meredith read a paper entitled, "Remarks on some Points Affecting the Mortality of Abdominal Section, with Tables of Cases," of which the following is an abstract. The purpose of the paper was to draw attention to certain points affecting the present death-rate after abdominal section, and with this view operations for ovarian growths were chosen as being to some extent representative of the entire subject under consideration. As a basis for the inquiry, the results of the author's own work in this connection, amounting to 126 operations, were examined with regard to the chief causes influencing the mortality, special reference being made to the ten deaths which occurred in the series of 104 completed ovariotomies. All the operations were performed with strict antiseptic precautions, including the use of the carbolized spray. He was now less inclined than formerly to look upon the latter as an absolute essential to the safeguards of antiseptic abdominal surgery, but he still considered it valuable as the most convenient and effectual means of antiseptic irrigation at our disposal when dealing with the peritoneal cavity. Both ovaries were removed in seventeen cases, two of which terminated fatally, but in neither instance was the result in any way attributable to the removal of the second ovary. Complete enucleation was performed in five cases, all successful, the resulting rent in the broad ligament being closed by means of a continuous silk suture. He advocated the use of the drainage-tube in all cases of ruptured or inflamed cysts, in any case where irritating or septic fluid had escaped into the peritoneum, in all operations complicated by serious injury to bowel or urinary bladder, in every instance where washing out had been resorted to, and in all cases of severe operation in middle-aged or elderly women. For washing out the peritoneum, where necessary, he advocated the use of plain, recently boiled water, cooled as required by the addition of a saturated solution of boric acid. Discussing the mortality, he was inclined to believe that in large series of cases the average death-rate would never be less than 5 or 6 per cent. Of the ten deaths in his series two were from septicæmia, one from intestinal obstruction, one from hemorrhage, one from dysenteric diarrhœa, two from chest complications, and three from exhaustion; three of these deaths were from preventable causes. Twelve successful operations for the removal of diseased uterine appendages were next reviewed. In seven patients, in whom both appendages were removed, complete arrest of menstruation followed. He had found that in cases of chronic ovarian mischief about 90 per cent. were the subjects of obstinate constipation, and in them tonic purgative treatment, by lessening pelvic congestion and preventing the formation of scybala, was followed by marked relief of symptoms. Included in a series of ten exploratory operations were two incomplete ovariotomies. Both patients had been tapped, and the death of one was directly due to the difficulties encountered in the attempt to separate universal adhesions which had resulted from this treatment. In conclusion, it was shown that the increased success of abdominal section for ovarian disease during the past ten years was chiefly attributable to the diminution in the number of deaths from septicæmia. For purposes of comparison he took three successive groups of operations, which represented three separate periods during the last twelve years, and gave their average death-rate from septicæmia alone. In 100 consecutive cases taken from Sir Spencer Wells's work, when the clamp was used and before the employment of antiseptics, the mortality was ten, or one to every ten patients. In 150 cases recorded by Mr. Thornton, in the sixty-fourth volume of the Medical and Chirurgical Transactions, which were treated antiseptically and with intra-peritoneal ligature of the pedicle, there were five deaths, or one to every thirty patients. In his own series of 104 cases there were two deaths, or one to every fifty-two patients. The chief factors which had contributed to this increased success, he thought, were as follows. (1) The general adoption of the intra-peritoneal treatment of the ovarian pedicle; (2) the application of the antiseptic system to abdominal surgery; (3) the gradual abandonment of the practice of tapping abdominal cysts; (4) the increase in our knowledge respecting the proper use and management of the drainage-tube; (5) the recent introduction of the plan of freely washing out the peritoneal cavity in cases complicated by the extravasation of blood or other fluid.

Case of Deficient Œsophagus.—Dr. Steele has recently observed a case of deficient œsophagus, and gives the following report of it in *The Lancet.* It concerned an infant twenty-four hours old, who, shortly after being given nourishment, a little of which was taken readily, became very livid, had difficulty in breathing, and then returned the food and appeared no worse. The gentleman in attendance introduced a sound, and found that it passed about five inches and encountered an impassable obstruction. He then asked Dr. Steele to see the child, and he repeated the sounding with the same conclusion. They diagnosed that there was either a membrane across the œsophagus, or that it ended in blind terminations; and he advised that through the night enemata of dessert-spoonfuls of peptonized milk should be given every two hours, and that by daylight the stomach should be opened and the œsophagus explored; if a membrane could be made out across a continuous canal, that it should be perforated in order to give a hope of life; and that, if we found any distance existed between the extremities, we could do no more; the parents, however, might feel that every possible endeavor had been made to save their child's life. This was agreed upon, and the father willingly acceded. On the following afternoon Dr. Steele was asked to perform the operation. The infant took chloroform well. He opened the abdomen above the umbilicus in the middle line, exposed the stomach, and stitched it at four points to the skin, having some difficulty to keep the liver from protruding. The stomach was then opened, which was perfectly healthy, and of course empty. A bougie was passed down the œsophagus as before, and another upwards from the stomach for a short distance; but they did not approach each other by what we judged to be an inch and a half. He then cut a gum-elastic catheter in half, and passed it from below, introduced up it a long slender steel probe, and pressed it upward as much as was justifiable, in case the lower part of the tube might be twisted or narrowed, and capable of being rendered pervious. All was of no avail, however; so the stomach wound was closed with sutures, also the abdominal wound, and we felt sure that the œsophagus was deficient for about an inch and a half. The infant slept for some time, and died twenty four hours afterward. The next afternoon they made an examination, and found that the œsophagus terminated above and below in blind rounded ends an inch and a half apart, and there was no cord or connection between the parts. All the wounded portions were quite healthy, and the appearances led to the conclusion that had there been only a membranous occlusion a happy result might well have been hoped for.

Electric Prostration.—Several cases of this peculiar malady are reported from France. It affects workers under electric light. The light exceeds 100,000 candle-power, and it would appear that it is this excess of light, and not the heat, which produces the nervous symptoms. A painful sensation in the throat, face, and temples is first noticed, then the skin becomes coppery red, and irritation is felt about the eyes; much lachrymation ensues, and these symptoms then disappear, while the skin peels off in five days. The effects are comparable to those produced by walking over fresh snow in the sunlight.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, December 15, 1888.

INGUINAL COLOTOMY FOR MALIGNANT DISEASE OF THE RECTUM.

In those cases of cancer of the rectum which come under the surgeon's care too late to justify any attempt at excision, the question of palliative treatment becomes an urgent one, for there are few diseases which entail a greater amount of horrible suffering than the one we are speaking of. Until recently, lumbar colotomy was the operation selected by most surgeons to afford the "temporary relief" which is all that our actual resources can hope to accomplish in this fatal malady. At the present time, however, inguinal colotomy is preferred by many to the lumbar method.

Mr. Harrison Criffs is the latest prominent advocate of the inguinal operation; he bases his views on a series of nine successful cases, which he has reported in the *British Medical Journal*, October 6, 1888.

Speaking of colotomy in general, the author says that it completely relieves all symptoms arising from the contracted state of the bowel, while it serves as a permanent safety-valve against the risk of complete obstruction. The influence of the operation in retarding the growth is a debatable question. His own impression, founded upon considerable experience, is a strong one, that the progress of the growth becomes much slower after the bowel is set at rest by the operation. The return of strength and the gain of flesh are often well marked after colotomy, no doubt due to the increased appetite, the relief from pain, and the quiet nights following the operation.

To suppose that a patient after colotomy is in a miserable condition, with fæces constantly running away from the opening, is a delusion. If, as sometimes occurs, the opening is made too small, or allowed unduly to contract, the advantage of the operation is, in great measure, lost. and constant dribbling occurs from the wound. If, however, care be taken to make the opening valvular and of sufficient size, a motion generally passes but once a day, and there is a fair amount of control over the new anus.

The time at which the operation should be performed is a matter of some importance. Dr. Criffs advises it without delay in cases where symptoms of stricture are present. If deferred, not only does the patient lose the advantage of the operation, but it may have eventually to be performed for complete obstruction under most dangerous and unfavorable circumstances. Colotomy on an empty bowel, when the patient is not reduced to death's door by unrelieved suffering, involves but slight risk to life.

It is known that the death-rate at a later period, when the bowel is already quite occluded, is very high, running up to fifty per cent.

The chief objection to lumbar colotomy is the difficulty at times found in certainly recognizing the colon, many good surgeons having opened the small intestine with evil results. Variations in the course of the descending colon may also lead the surgeon astray. "Slight variations in the course of the bowel generally mean nothing worse than a somewhat prolonged search; but not infrequently the operator altogether fails to find the bowel. The cause of this failure, as pointed out by Mr. Lockwood, arises from the bowel taking a totally abnormal course, so that practically there is no descending colon on the left side. To send the patient back to bed unrelieved, with a deep and dangerous wound, is a most unfortunate circumstance, but one which, nevertheless, is sure to occur in a certain proportion of cases."

Mr. Criffs points out that "inguinal colotomy meets both of the objections referred to. Owing to there being plenty of space, there is no difficulty in finding the bowel; for, should it run an abnormal course, and not present itself when the peritoneum is opened, the operator has only to pass his finger down toward the pelvis and feel for the upper part of the rectum, when the bowel can be easily traced upward, and a portion of the sigmoid flexure hooked out. Moreover, there can be no possibility of mistaking the small intestine for the large, the three longitudinal bands, together with the glandulæ epiploicæ, being so clearly marked and easily recognizable as to render a mistake impossible. From the operator's point of view there can, therefore, be no possible question of the superiority of the inguinal over the lumbar operation, especially if it can be shown that there is no disadvantage in the position of the outlet, nor that opening the abdominal cavity increases the risk of life."

The author states further that, as regards the risk of the operation, it is probably less than in lumbar colotomy. The bowel is found with ease and certainty; a clean incision can be made through the abdominal parietes without the bruising or damage of the subperitoneal fat so frequently unavoidable in Amussat's operation. The parts thus unite by first intention, with scarcely a trace of constitutional disturbance.

Dr. Criffs describes his method of operating as follows: "The abdomen having been thoroughly well washed with soap and water, antiseptic treatment as regards sponges, instruments, hands, etc., is carried out. An incision two inches and three-fourths in length is made one inch and a fourth from the anterior superior spine, one-third of the incision being above and two-thirds below an imaginary line drawn from the anterior superior spine to the umbilicus. In making this incision the skin should be drawn a little inward, so that the opening through the transversalis fascia and the peritoneum is on a different level, when the skin is again relaxed, thus making the opening valvular, and rendering its subsequent closure with a pad easier. The peritoneum being reached, it is pinched up and a small opening made, which is subsequently enlarged to nearly the length of the cutaneous incision. The small intestine generally first presents, but.

on pushing it back, the colon often shows itself; if it does not, it can be readily found by passing the finger downward into the pelvis, and following the rectum upward till the sigmoid flexure is reached, which can be hooked out with the tip of the finger. With moderate care there can be no possibility of mistaking the small intestine for the colon. The three longitudinal bands are very conspicuous, which, together with the glandulæ epiploicæ and the regular convoluted surface, establishes unmistakably its identity; not infrequently, moreover, hard, scybalous masses can be felt within it. A loop of bowel being drawn into the wound, two provisional silk ligatures are passed through a portion of the peritoneal coat opposite the mesenteric attachment. These provisional ligatures, the ends of which are six inches long, help to steady the bowel during subsequent stitching to the skin, and eventually serve as guides when the bowel has to be opened. They should be two inches apart. The bowel is now temporarily returned into the cavity. The parietal peritoneum is then picked up with forceps, and attached to the skin on each side of the incision, one inch and a half apart, by a couple of sutures of fine silk. The bowel is again drawn out by means of the provisional ligatures, and fixed to the skin and peritoneum by six fine ligatures on each side. These sutures are best passed by fine, partly curved needles, the needle passing first through the skin an eighth of an inch from the margin, then through the parietal layer of the peritoneum, and lastly through the peritoneal and muscular coat of the bowel. great care being taken to avoid perforation of its mucous membrane. It is easier to pass all the sutures before tying them up. The wound being perfectly cleaned by gentle sponging, the threads can all be tied with moderate tightness. A suture should now be passed through the skin at each end of the wound, including a portion of the peritoneal layer of the bowel."

The ligatures should be passed not far from the mesenteric attachment of the gut, so that about two-thirds of the circumference of the bowel is external to the wound. The author regards it as "waste of time stitching the parietal layer of the peritoneum all the way round to the skin before drawing out the bowel; the four stitches mentioned are all that are really necessary at first to fix it, for it is subsequently included in the ligatures attaching the bowel to the skin. A piece of green protective is put over the exposed bowel, and the whole covered with a firm antiseptic dressing. Unless the protective is used, it will be found that the lymph thrown out from the bowel has attached the dressings with surprising firmness." He dresses the case the next day "to make sure that nothing has been displaced by vomiting, etc., the dressings being reapplied and kept on till the sixth day, when the bowel can be opened. By this time it is found firmly attached to the skin, and covered by a remarkably thick layer of organized lymph. In opening the bowel the provisional threads which have been left in afford a valuable guide. They are gently drawn upon, and the bowel opened between them with a sharp knife. The cut margins of the bowel can be pared off with scissors to the level of its attachment to the skin. No anæsthetic is necessary, the bowel being quite insensitive. The patient is convalescent in about three weeks."

We have closely followed Mr. Criffs in his descriptions, because we regard his report of nine successful cases as a strong argument in favor of the inguinal method. Perhaps he goes too far when he says that in a few years lumbar colotomy will be a mere matter of history. But he has certainly put forward a plea in behalf of the inguinal method which no modern surgeon can afford to disregard.

IS THE PRACTICE OF MEDICINE A FAILURE?

This question might well seem superfluous, and even absurd, in the face of the fact that practitioners of medicine are increasing yearly at a tremendous rate, that new medical colleges are every year being organized, new drugs discovered, and innumerable new drug-stores getting upon a solid business basis.

Nevertheless, the inquiry is not an irrational or useless one, and it has a twofold significance; viz., in its relation to the physician and in relation to the public. Statistical investigations show, with regard to the first point, that a large minority of those who set out to practise medicine fail to make a living, and drop into some less learned but more lucrative pursuit. A fair proportion gain just a livelihood, a very few obtain some degree of honor and pecuniary reward. Now, the practice of medicine is a failure, relatively speaking, if those who set out fail to a degree out of proportion to the failures in other pursuits requiring equal time and expenditure of capital; as, for example, the law, engineering, artistic professions, and business. It is a failure also if the wear and tear of professional work are excessive in proportion to the pecuniary, intellectual, and moral returns.

To this question we offer no positive answer. We are inclined to take the optimistic view of life as nearer the truth; but we may remind our readers that the limit of life of medical men is lower than that of most other professional classes; and that medical men, with few exceptions, die poor.

What can be said as to the success of our art in its application to the relief of disease? We exclude, of course, surgery and hygiene, and assume only that the question, "Is medicine a failure?" relates to the application of drugs and other remedial measures to actual disease. We have lessened the number of infective and septic disorders; but, when they attack an individual, are they any more perfectly under control? We refer our readers to the discussion on the mortality from pneumonia, which is asserted to be greater now than it was half a century ago. The mortality from diphtheria, scarlet fever, typhoid, phthisis, is somewhat lower than it used to be, and a vigorous defence of modern therapeutics might be made in connection with these and a number of other common diseases. We must bear in mind, however, that the question is one that must be answered with reference to society in general rather than to the individual. And though we pull many weakly patients through attacks of illness by aid of modern therapeutics, is not the result an increase of invalidism which tends to propagate itself, producing in succeeding generations an oversickly race?

It is quite safe to discuss the question, "Is the practice of medicine a failure?" for, however plainly its inutility may be shown, people will continue to seek relief from bodily ills. Civilized man is bound to marry and bound to be doctored for a very long time to come. All the same, the exact economical value of matrimony and medicine may be the legitimate object of impartial inquiry.

THE AMERICAN SURGEON ABROAD.

We regret to learn that some of our medical countrymen who go abroad for instruction and amusement have been found to exhibit an extraordinary lack of good taste and good manners. The evidences are, unfortunately, but too plainly given in the form of published letters to their local journals. It seems as though it should be obvious to every one that when a physician is invited to the wards or clinics of a surgeon, any after-criticisms made, if made at all, should be of the most general and non-personal character. One does not expect his dinner-guest to go home and babble of hitches in the domestic arrangements that may have come to his notice. Just as much should be expected of the guest of a hospital surgeon.

We are led to write the foregoing after the perusal of a not very edifying controversy between Mr. Lawson Tait and a Chicago surgeon, who was denied admission to Mr. Tait's clinics. The Chicago surgeon in question comes out in an article entitled, "Why I did not see the Birmingham Spayer," and claims that he did not receive courteous treatment from the said ovarian artist. Whether or not our countryman was rightly treated we cannot say; but judging from comments made by him upon the surgical work of others to whose clinics he was invited, we should say that Mr. Tait was somewhat lucky in escaping his critical presence. Here are some of his "impressions," as printed in the *Western Medical Reporter*:

Of Mr. Treves he says: "He is rather a careless antiseptician." Of Mr. Christopher Heath: "Rather given to profanity if matters don't go to suit him." Still another: "I saw Mr. Knowsley Thornton operate upon a unique case in rather a bungling manner." Yet another: "At my final visit I saw a most interesting case of hemorrhagic cyst of the pancreas. Stephen McKenzie regarded it as an abdominal lipoma. Treves thought it to be a sarcoma, and I made bold to suggest to him in the ward . . . the strong probability of its being a pancreatic cyst. . . To my delight, it proved to be, as I predicted, a cyst of the pancreas. At his next clinical lecture Treves gave a very complete review of the literature of pancreatic cysts, omitting to mention, however, the recent American cases of Bull, Fenger, and my own. . . . He was of the impression that a correct diagnosis had never been made prior to the operation. I took occasion to supply the omissions and correct his misapprehensions on the subject in a personal letter."

SNOW-BLINDNESS.

The symptoms of snow-blindness are not unknown to those practising in rural districts in the extreme northern parts of this country. They consist of a certain degree of conjunctivitis, or conjunctival irritation—as if there were a foreign body in the eye—blepharospasm, and photophobia. In the later stages there is not infrequently a certain degree of chemosis. The condition is usually regarded as the result of the combined influences of the intense sun-light reflected from the surface of the snow, irritating the retina, and of the cold, and often rarefied, air striking upon the conjunctiva.

Dr. August Berlin, of Stockholm, writing in the *Nordiskt Medicinskt Arkiv*, vol. xx., No. 3, 1888, proposes a new theory in explanation of this condition. The author accompanied Nordenskjöld in his expedition to Greenland in 1883, during which he had frequent opportunity to observe the affection. The geographical distribution of the affection is very characteristic, as it follows closely the isothermal lines in the three continents bordering on the north pole, coming farther south in America and Asia than it does in Europe. The disease is also met with in very elevated regions, even down to the tropics. When occasionally seen in temperate regions, it is usually milder in degree. The time of the year in which it is most common in northern latitudes, according to the author, is the spring, although it may occur also during the summer. It usually affects but one eye, and that eye is the one which has been most exposed to the direct rays of the sun. It is upon this fact chiefly that Dr. Berlin bases his theory of the causation of the disease.

The regions in which the affection occurs are characterized by an intensely cold air and a low degree of humidity. As it is the humidity of the atmosphere that absorbs the heat of the sun's rays, they ought to exert a more intense action here than in lower latitudes. And that this is the case is evident by the fact that the exposed skin suffers more from the action of the sun than in other regions, a very painful dermatitis being frequently caused by even a short exposure to the sun. Now, snow-blindness, according to the author, is due to the same cause, and the process in the two cases is the same, viz., hyperæmia and then exudation, accompanied by an intense burning sensation. Erythema of the conjunctiva is the name given by Dr. Berlin to the condition known as snow-blindness, and that it is primarily an affection of the conjunctiva rather than of the retina, is shown, he thinks, by the fact that it is caused by the irritation from the fine particles of snow during a blizzard as well as by the sun's rays.

The prophylactic treatment which the author proposes is simply a modification of the "snow eyes" used by the Esquimaux. Instead of a disk of thin wood with a minute transverse slit in its centre, he recommends goggles made of a moderately fine wire network without glass.

A PLEA FOR INDIGESTIBLE FOOD.

Sir William Roberts, we believe, is responsible for saying that one function of alcohol in digestion was to slow the process so that food would not be too quickly absorbed. In a recent issue of the *Dietetic Gazette* Dr. Sara E. Port advances the ingenious theory that digestibility is not the sole, or even the best, test of food in making up a diet. Easily digestible food taken in considerable amount floods the blood and tissues with excrementitious matter. The excess of peptones taken in a meal appears in the urine within an hour (Voit), and evidently can have done little benefit to the economy. Dr. Port cites the case of a patient who travelled extensively, and who always became hungry before noon on an ordinary breakfast of chops or steak. So that when setting out on a journey she depended on ham, hard-boiled eggs, and other food usually considered indigestible.

The writer adds: "The laboring man acts upon a similar plan. In spite of recommendations in regard to soft-boiled eggs, broiled steaks, farinaceous puddings, and rare roasts, the workingman prefers and demands what he calls hearty food. ' This means usually hard-boiled eggs; fried steak—the harder and crisper the better; beef roasts, well-boiled ham; corned beef; pork; baked beans, not too well done; potatoes with a core; suet puddings, and pies."

One might detect an admirable socio-economic arrangement on the part of Providence in the poor man's dietary as thus described. Hearty food is cheaper, and, as it seems, it is also better for him. The attempt to eliminate the frying-pan and introduce high art into cookery is really, therefore, a subtile assault upon the health and happiness of the working-classes.

Dr. Port writes: "The body is an engine for which the stomach is the coal-box. He would be a bad fireman who would empty his coal-box into his furnace all at one time. He would get up a rousing fire undoubtedly, but if he had to wait six hours before replenishing his coal-box his engine would probably come to a stand-still on the road. The wise fireman puts in a little coal at a time and replenishes often. If one has six hours between meals, and continuous effort to provide for, it would be poor policy to put into the stomach food which would digest completely in two hours' time. The laboring man will never agree to such a reform. His present diet is suited to his needs. Even the frying process cannot be logically objected to."

The author concludes:

1. Digestibility is not a complete test of food-value.
2. Proteids are of the most value when limited in quantity and of the less easily digested forms.
3. Limitation of proteid food is particularly indicated in Bright's disease.
4. The sphygmograph furnishes important evidence in the prealbuminuric stage of this condition.

Finally, "predigested foods" and "easily digested foods" should be reserved for cases in which the digestion is in fault. The value of such foods in the management of the pathological conditions of the digestive tract is beyond question.

A STUDY OF LONGEVITY IN NEW ENGLAND.

Mr. Clement Milton Hammond has made an interesting contribution to the subject of longevity in a recent issue of the *Popular Science Monthly*. Mr. Hammond, as an associate editor of the Boston *Globe*, had peculiarly good opportunities for making a collective investigation regarding the old people of New England. He sent out 5,000 blanks to all parts of the section in question. These blanks contained a variety of questions concerning age, sex, nationality, social condition, habits, temperament, occupation, etc. He had the unusual good fortune to get over 3,500 blanks filled out and returned. The answers were from every county in Massachusetts, and nearly every county in New England.

Mr. Hammond has analyzed these returns, and for the most part has shown care and judgment in so doing. He does not seem to be aware, however, of the similar work done, much more thoroughly, by the British Collective Investigation Committee, and his own labors would no doubt have been helped by a wider knowledge of previous work in this line.

We present some of the data which were obtained.

As to social condition, over ninety-five per cent. had been or were married.

The number of women slightly exceeded the men.

The marriages had generally been fruitful, the average number of children being five.

Five out of six of the old people had light complexions, with blue or brown eyes and abundant brown hair; being probably of the nervous-sanguine temperament. The men were "mostly tall." (Mr. Hammond is uncommonly vague in many of his statements.) They were thin, bony, and muscular, while the women were plump. The men varied in weight from 100 to 160 pounds, and the women from 100 to 120 pounds. The men could not be so very tall, therefore, or the women very fat.

As to habits, the rule was almost universal that the old people had gone to bed early and got up early. This was also found to be the case by the British committee. Their meals had been eaten regularly, the dinner hour having been usually at noon.

As to occupation, out of 1,000 men over eighty years of age, 461 were farmers, 92 carpenters, 61 mariners, 49 laborers, 42 shoemakers, 41 manufacturers, 23 clergymen, 12 physicians, 12 lawyers, 23 masons, 16 blacksmiths, 16 bankers.

This list, however, signifies nothing, except that nearly half the answers to the blanks were from farmers.

Eight hundred out of 1,200 women were farmers' wives. The diet has been the ordinary New England fare, of pork, beef, fish, vegetables, "almost always poorly cooked,' with pies, doughnuts, and cakes.

Two-thirds of the number drank tea and coffee habitually, and nearly all drank tea.

"Very few" used alcohol, but a large proportion of the men used tobacco.

About one-third of the men, and nearly the same proportion of women, had never been ill since childhood.

About one-fourth of the children of the old people were still living.

Mr. Hammond notes the fact that most of his returns showed that the old people were employers rather than employees, and he draws the conclusion that a certain amount of responsibility tends to prolong life. He is disposed to lay some stress on the value of the nervous-sanguine temperament as a factor in longevity.

Hypnotism at Berlin.—A certain Dr. Feldmann, who is not, we believe, a qualified medical man at all, has been exhibiting his attainments as a hypnotizer and mind-reader before the Berlin Medical Society. He showed all the familiar performances of "subjects." It is interesting to note the progress of medical opinion. Dr. Feldmann could not get before a reputable medical society when in this city last winter; but in Berlin he has appeared before the leading medical society, presided over by Professor Virchow.

News of the Week.

UNFORTUNATE ISSUE OF AN ATTEMPT TO TRANSPLANT A RABBIT'S CORNEA.—Miss Mary Fisher has sued Dr. L. W. Fox for malpractice in transplanting a rabbit's cornea to her eye. She lost what sight had previously existed in that eye. She claims that she was not informed as to all the possible results of the operation.—*Medical Standard.*

THE UNIVERSITY OF MARYLAND MEDICAL MUSEUM ASSOCIATION has been formed, with the following officers: *President,* Professor J. Edwin Michael; *Vice-Presidents,* Dr. Herbert Harlan, Dr. R. B. Warfield; *Pathologist,* Dr. C. W. Mitchell; *Curators,* J. G. Van Marter, Jr., R. A. White.—*Maryland Med. Journal.*

TO INVESTIGATE DISEASES OF SWINE.—The Commissioner of Agriculture has appointed a commission, consisting of Professor William H. Welch, of Johns Hopkins University, Dr. E. O. Shakespeare, of Philadelphia, and Professor T. J. Burrill, of the University of Illinois, to investigate the subject of swine diseases in the United States and the methods of their treatment and prevention.

DISINFECTION AFTER INFECTIOUS DISEASES.—The city of Berlin has a provision by which persons who wish their houses, rooms, or clothing disinfected after the occurrence of infectious diseases can have it done at a moderate cost. The number of applications for disinfection increases yearly, and in 1887 amounted to nearly two thousand.

JUVENILE SMOKING.—Owing to the increase of juvenile smoking in this country, the Society against the Use of Tobacco has taken steps to obtain a law to prevent children from smoking. It founds its arguments on a series of observations which have recently been made. Of thirty-eight young smokers, aged from nine to fifteen years, it was found that twenty-seven experienced a certain degree of malaise, and twelve, seriously affected, had contracted the germs of grave maladies.

IS THE RACE DEGENERATING?—An English lay journal has been making a collective investigation regarding the questions given below: "1. Does your experience suggest to you that the race of Englishmen is degenerating physically? 2. Do you think that the great advance in the healing art is responsible for keeping alive much weak life that will in time affect the whole race injuriously? 3. Do you think that the increased indulgence in physical sports has, on the whole, a good influence on health? 4. Has it ever struck you that probably the great attention paid to health in these days may be producing an anxiety about bodily ailments which is a disease in itself?" Answers have been received from a long array of practitioners, among whom are the names of eminent London physicians. The general view taken is that Englishmen are not degenerating, but that, on the whole, the race is improving in vigor.

NAVAL SURGEONS AND LOCAL PRACTITIONERS.—Washington despatches state that a petition was sent recently to Secretary Whitney, signed by fourteen of the practising physicians of Pensacola, which complained against Surgeon J. W. Ross, attached to the Pensacola Navy Yard. The petition charged that Surgeon Ross was guilty of unprofessional and unofficer-like conduct; that although he was receiving a large salary from the Government, and was living in quarters furnished by the Government, he was actively engaged in prescribing for numerous civilian patients at the Government dispensary, where he had the free use of medicines and instruments, and that he assisted other patients at Government expense and accepted less than the schedule rate of fees charged by his professional brethren, thus diminishing their practice and revenue therefrom. The petition was referred to Surgeon Ross, who, while denying the right of the petitioners to meddle with his affairs, admitted that he treated and prescribed for patients from distant points, took fees from those who were able to pay, and gave his services and medicine free to those unable to pay, especially to those on the Naval Reservation. He denied the allegations that he used Government time, appliances, or medicines for those not entitled to them, and upon the testimony of others that Surgeon Ross had simply given his services out of sympathy for the poor, and had done much good, the Secretary refused to interfere.—*Boston Medical and Surgical Journal.*

AN ESTEEMED Western contemporary gives the following useful and phonetic advice: "A minute potion of striknia is recommended to cure flatulend dispepsia."

DR. MAURICE NORTON MILLER, a well-known physician in this city, died on Saturday, December 8th, at his home, in the fiftieth year of his age. He graduated from the University Medical College in this city, practised for a number of years in Philadelphia, and sixteen years ago returned to this city. He accepted a position as lecturer in the college from which he graduated, and has recently been connected with the Loomis Laboratory, lecturing upon microscopy. He was also special pathologist to the Ward's and Blackwell's Island institutions. He was a member of the County Medical Society, and at one time Secretary of the Medico-legal Society. He had recently written a valuable work on histology.

A HOSPITAL CONSECRATED.—St. Joseph's Hospital for Incurables, One Hundred and Forty-third and One Hundred and Forty-fourth Streets, was consecrated by Archbishop Corrigan, Wednesday morning. The hospital will probably be open for the reception of patients in about two weeks. The building was begun about a year ago last spring and has cost about two hundred and seventy-five thousand dollars, the money being raised by contributions ranging from ten cents to one thousand dollars or more. Consumptives are expected to be the especial patients of the institution, though there is no rigid discrimination against patients of other sorts, and none whatever on account of creed, sect, or religion.

COLLEGE OF MEDICINE FOR THE CHINESE, HONG KONG.—The first professional examination of the College of Medicine for the Chinese, Hong Kong, was held during the second week in August. The subjects of examination were botany, chemistry, physics, elementary anatomy, elementary physiology, materia medica (first examination), and clinical observations. The written examination extended over four days; and the *vivâ voce* examination, held in the City Hall, was open to the public. Twelve students presented themselves for examination, of whom seven passed. Two scholarships, of the value of sixty dollars a year, were awarded to the first students on the list.

Pneumonia-mortality in Massachusetts Almshouses.—As a slight contribution to the further study of mortality from pneumonia, a consideration of some figures derived from the reports of the three State almshouses in Massachusetts may prove of interest. In the Monson Workhouse the death-rate for the decade 1856 to 1865 was 21.09 per cent., while for the decade 1866 to 1875 it had fallen to 16.43 per cent. Since 1872, when the institution was converted into a State primary school, the adult paupers being sent to the State almshouses at Bridgewater and Tewksbury, pneumonia has been so infrequent among the children as practically to be absent. At any rate, no comparison is possible with the data of the previous decades.

Of the Bridgewater Workhouse we have data at our disposal since 1861. For the five years from 1861 to 1865 the death-rate from pneumonia in this almshouse was 27.44 per cent; for the decade 1866 to 1875, 28.12 per cent., and for the decade 1876 to 1885, 36.58 per cent., showing a small though steady increase. From the Tewksbury State Almshouse the reports are more complete, showing for the decade 1856 to 1865 the very low rate of 13.95 per cent., for 1866 to 1875 the large rate of 36.25 per cent., and for 1876 to 1885 the still larger rate of forty per cent. Eliminating, however, as years of exceptional mortality, the year 1874, when of twenty-six patients fourteen died; the year 1875, when out of thirty twenty died; and the year 1885, when of eleven patients all died, we get a death-rate for the three decades of 13.95 per cent., 23.07 per cent., and 34.67 per cent.—*Boston Medical and Surgical Journal.*

"The Doctor's Wife."—A correspondent writes to the *British Medical Journal:* "Dr. A's wife is requested by mutual friends to call upon some new residents in the neighborhood in which she lives. She does so, and a pleasant acquaintanceship ensues. Dr. B is offended, and when asked why, declares that A is guilty of a breach of medical etiquette, inasmuch as his wife, who represents himself, has called upon people other than her husband's patients. Is Dr. B justified in his opinion, and are all professional men's wives debarred from increasing and renewing their social circle for fear of being considered guilty of touting?" In response to "Cosmopolitan's" question of etiquette in the above case, the *Journal* quotes the following foot-note from the "Code of Medical Ethics" as an apposite reply, saying that from it he could readily deduce the medico-ethical moral it inculcated in relation thereto: "Closely akin to solicitation is that of calling upon new residents in the neighhorhood and leaving their card, ostensibly as a mark of respect, but in reality to seek for practice. It cannot, therefore, be too deeply impressed upon such that the true dignified practice, and the most consistent with a due respect for self and the faculty, is to wait until their professional or social acquaintance is sought; in such case, moreover, it is far more likely to be appreciated."—*British Medical Journal.*

Our Brilliant and Poetic Contemporary, the *Weekly Medical Review*, places us under obligations by the following annotation: "As these notes, which have been jotted down at odd intervals, are being closed, the New York Medical Record, of November 17th arrives, along with other exchanges, and it is among the first read, as it certainly ranks among the first of the medical journals of America; and I am prompted to say that if its able, enterprising, and erudite editor will attend, during the coming year, one session of the McDowell Medical Society in Kentucky, or the Mississippi Valley Medical Association, either in St. Louis or Evansville, in the side pocket of Indiana, I promise him that he will be more disposed to feel that life is worth living, his gray matter will be as active, his perceptions as keen, and the shining disks of blood which go coursing through his arteries and veins will carry a more perfect grade of hœmoglobin, and be permeated with the glow of sunshine and good cheer, and his scientific acumen will be not in the least impaired." We cannot but think that our esteemed contemporary circulates six million blood-corpuscles to the cubic millimetre instead of a paltry five; but he should spell his hæmoglobin with "ae."

Women and the Study of Medicine.—Professor Waldeyer, of Berlin, read a paper recently before the Assembly of German Naturalists and Physicians at Cologne, in which he exhaustively reviews the rôle of women in the study and practice of medicine, going back to antiquity, and bringing forward a curious array of historical facts through the Middle Ages down to the present time. His conclusions are not favorable to the "women doctors." Among the objections which he raises are the following: "The profession, and especially 'the faculties' will be overcharged; men capable of doing great things will keep out of medicine. This will be an enormous loss to science, for women are good for nothing as experimenters or original workers. In the laboratories they are awkward, careless, and unskilful." He emphasizes the usual stock arguments as to the "separate spheres" of the sexes, and concludes: "We should take care how we encourage the tendency of women to enter upon the study of medicine. It is not the way which will lead to the amelioration of their lot. If the medical profession is open to them, the other learned professions must follow in their turn. Hence there is sure to result a fierce and bitter struggle, in which our entire humanity will succumb."—*Boston Medical and Surgical Journal.*

The Inhabitants of New York One Hundred Years ago and their Doctors.—From some recently published records of New York City history, one hundred years ago, we gather the following interesting statement: "The inhabitants of this colony are in general healthy and robust; taller, but shorter-lived than Europeans; and, both with respect to their minds and bodies, arrive sooner to an age of maturity. Breathing a serene, dry air, they are more sprightly in their natural tempers than the people of England; and hence instances of suicide are here very uncommon. Few physicians among us are eminent for their skill. Quacks abound like locusts in Egypt, and too many have recommended themselves to a full practice and profitable subsistence. This is less to be wondered at, as the profession is under no kind of regulation."

Treatment of Erysipelas.—Nussbaum recommends the application of a pomade of equal parts of lanolin and ichthyol as a very speedy and simple method of cure in erysipelas. He covers the parts with salicylated cotton, and obtains a painless cure usually in two or three days.

Dr. Atlee on Lacerations of the Cervix.—Dr. Walter F. Atlee has recently written the following to the *Pittsburg Medical Review:* "Some thirty years ago my old master, Nélaton, told me that certain diseases of the neck of the womb were *le paturage des charlatans.* Since then this pasture ground has become much more extensive; it extends to the womb itself and to all its appendages, and many grow fat therefrom, to whom we dare not apply the epithet of charlatan. In medical journals a few weeks ago I read that Noeggerath recommends that tears in the neck of the womb should be left alone. He says that they have no influence on the development of uterine disease, either as to intensity or frequency, and that diseases of the tissues of the cervix are not more frequent in lacerated than in uninjured cervices. My father. Dr. Atlee, of Lancaster, practised medicine some sixty-five years; he attended himself 3,264 women in childbirth, and had a very extended practice as a consultant in affections of the female genital organs. Shortly before his death, after I had been in practice some thirty-five years, he asked me if I had ever found it advisable to sew up the neck of the womb for a tear. My answer was, No. 'Nor have I,' said my father. Sixty-five years and thirty-five, or a whole century of active professional work, and not one case where it was thought advisable to perform this operation. And, more than that, not one case where there was any reason to regret its not having been performed. Mankind are, indeed, fearfully at the mercy of practitioners of medicine. How necessary it is that those who become such should recognize that they are undertaking high responsibilities and difficult duties. A celebrated author wrote many years ago that the physician without a conscience was as much to be dreaded as a highway robber. It may be that he is more to be dreaded; the highway robber says, 'Your money or your life,' and the other may take both."

The Secret of a Laparotomist's Success.—Mr. Tait does not adore the Germans, and avers that the time he has spent in learning German has been a dead loss. Some time ago a celebrated German surgeon visited him and asked Mr. Tait the secret of his surgical success, Mr. Tait looked at his German visitor's hands and hesitated at first to answer. Finally he replied, "It is because I give the greatest attention to the care of my nails." The German looked at his own nails and turned away. He never called again.

Sir Morell Mackenzie and Professor Virchow.—The *Freisinnige Zeitung* of Berlin recently stated that Professor Virchow has received numerous requests from various quarters to give a judicial summing-up of the case of the late Emperor Frederick, embodying his opinion on the whole subject, as presented both by the German physicians and surgeons and by Sir Morell Mackenzie. Virchow has quite recently shown his impartiality in the matter by declaring certain of Sir M. Mackenzie's statements to be incorrect, and also some of Professors Gerhardt and Bergmann to be either incorrect or not proven. Herr Eugen Richter, the editor of the *Freisinnige Zeitung*, remarks that Professor Virchow's observations to the representative of a journal who recently "interviewed" him were made entirely on the basis of extracts published by that journal. These extracts, adds Herr Richter, were, however, recognized by Professor Virchow to be misleading when he saw Sir Morell Mackenzie's book. According to the *Vossische Zeitung*, Professor Virchow has made a further statement, regretting that more care and time had not been given to the drawing-up of the protocol of the *post-mortem* examination, and saying that he and Dr. Waldeyer had afterward wished to give it a more perfect form, but could not get permission to do so from the Royal Haus-Ministerium.

Menthol in Laryngeal Phthisis.—Dr. A. Rosenberg reports the results of twenty cases of laryngeal phthisis treated by menthol. All of these twenty, however, improved under treatment. In nine, actual recovery took place, *i.e.*, the infiltrations disappeared, the ulcerations cicatrized, and existing subjective troubles vanished. In all the cases the diagnosis was confirmed by the presence of bacilli. The most rapid in healing are the ulcerations, but of these the most obstinate are those on the posterior laryngeal wall. Infiltrations are more resistant, but they often diminish gradually. Commencing perichondritis on the arytenoid cartilages often disappears entirely. The duration of the treatment is from four weeks to four months. A comparative test of the action of menthol and of lactic acid was made in a case of tubercular ulceration of the velum palati, one-half of the palate being painted with either drug. The menthol side healed more rapidly, and was much less painful than where lactic acid was applied. In phthisis pulmonalis Rosenberg recommends tracheal injections of a ten per cent. solution of menthol in olive-oil, combined with frequent inhalation of the drug, by means of a special inhaler, which vaporizes the menthol, and allows it to be inhaled at a temperature between 40° and 50° C. He cautions against the use of any but Asiatic menthol, and considers that this drug is as efficacious as lactic acid, while at the same time it is more easily applied. One hears with some incredulity of the cure of over forty per cent. of cases of a disease that has generally been thought almost incurable.

The Therapy of Alcoholism.—Professor Forel, of Zurich, favors decidedly the total abstinence movement, and thinks that temperance societies are of great help in keeping many alcoholics from relapse. Forel believes in treating alcoholics by removal from all temptation to drink, the use of hypnotism (suggestion), and he would not ignore the helps of religion. Of 34 cases treated in the past two years 10 were intractable; 5 relapsed after improvement, 1 became insane, in 8 the result was unknown, 10 had continued well up to the time of reporting. Hypnotism was tried in 12 cases. Dr. Forel's record bears evidence of being an honest one, and shows about the percentage of cases that may be expected under the best treatment.

The Opening of the Hoagland Laboratory, Brooklyn, N. Y.—The Hoagland Laboratory will be opened on Saturday evening, December 15th, by Professor H. Newell Martin, M.D., of the Johns Hopkins University, who will deliver an address at eight o'clock, after which the Laboratory will be open for inspection. The profession and friends are invited to be present. Cornelius N. Hoagland, Charles H. Hall, Joshua M. Van Cott, Charles E. West, Joseph H. Raymond, Trustees.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 6, 1888.

Abraham Jacobi, M.D., President, in the Chair.

Nominations being in order, the President remarked that during his four years of service he had earned the credit, he believed, of not interfering in the business of the Academy more than the presiding officer should do. His deep interest in the welfare of the institution was the only apology he had to offer in exercising his right as a member on this occasion to nominate Dr. Alfred L. Loomis for the office of President.

Dr. Jacobi declined a re-nomination.

For the office of *Vice-President* the following nominations were made: Drs. E. G. Janeway, Francis Delafield, and D. B. St. John Roosa. For *Recording Secretary*, Drs. A. M. Jacobus, N. J. Hepburn, and Richard Kalish, who declined. *Corresponding Secretary*, Drs. M. A. Starr, F. P. Kinnicutt, and H. J. Garrigues. For *Treasurer*, Drs. O. B. Douglas, Daniel Lewis, and W. F. Cushman. For *Trustee*, Drs. A. Jacobi, Laurence Johnson, J. E. Janvrin, H. D. Noyes, and Hermann Knapp. For *Member of Committee on Library*, Drs. E. H. Grandin, M. A. Starr, and E. S. Peck. For *Member of Committee on Admissions*, Drs. T. R. French, of Brooklyn, Robert Abbe, Charles Jewett of Brooklyn, and T. H. Burchard. *Delegates to the State Medical Society* (six to be elected), Drs. C. A. Powers, F. H Bosworth, R. C. M. Page, F. N. Otis, R. F. Weir, A. Caill·, S. Baruch, F. P. Kinnicutt, J. Fruitknight, William Stevens, A. Seibert Westbrook, of Brooklyn, J. E. Weeks, and H. C. Coe. For *Treasurer of the Board of Trustees*, Dr. F. A. Castle.

Dr. J. R. Leaming then read a paper entitled,

ACOUSTICS APPLIED TO THE HUMAN CHEST, IN PHYSICAL DIAGNOSIS.

Since the application of the laws of light to the study of the eye ophthalmology had become the one branch of medicine entitled to the distinction of being scientific and consequently certain. Optics and acoustics were twin-sister sciences; the laws of one which were familiar had ever been used in the elucidation of the obscure in the other. Yet while optics had been successfully applied in diagnosis of diseases of the eye, acoustics had hardly been thought of as a sure solution of the problems of diagnosis in diseases of the chest. The author believed the reason for this was the fact that until lately acoustics had been an unapplied science in medicine. Laënnec, who discovered the means of diagnosis by auscultation and the stethoscope, and Louis, who did so much to make them practical, were not learned in acoustics. The brilliancy of the discovery of Laënnec and its great possibilities blinded the eyes of the profession then and since, so that auscultation had just missed being perfect by not being based upon eternal law. Skoda made a step toward this consummation when he discovered the principle of consonation.

In this practical age of the application of the laws of sound to the telegraph, telephone, phonograph, and microphone, it became easy to apply acoustic law to the diagnosis of diseases of the chest.

All sound originates in vibrations which pass through the air in waves, the same as light. The rapidity of the vibrations gave pitch, and were limited in recognition by the human ear practically to between 32 and 1,700 in a second. Less than 32 vibrations in a second, gave the idea of distinct sounds, while more than about 1,700 resulted in silence. These two fundamental principles in acoustics were essential in studying the physical conditions of the chest.

The chest was a chamber encompassed by walls, the inside of which was lined with a dense elastic smooth membrane, the costal pleura. The chamber had but little movement in the upper part where there was but little cartilage, but expanded largely at the base where cartilages were attached to the ribs. The cavity was closed in at the base by a diaphragm of muscle and tendinous expansion, which had great power of expansion and contraction, while ever continuing a perfect acoustic chamber in mathematical form, it could be enlarged or contracted; and consequently its power be augmented or diminished with the speed of thought. The upper and unyielding part of the chamber was a cone, and above it in the trachea was the sound box, the larynx, where the vibrations were primarily formed and conducted through tubes in every direction to the chest-wall, where they were reflected again and consonated into harmonious sound, and coming back were emitted through the larynx and mouth into the open air as music. The acoustic chamber of the chest in health was a perfect instrument for the formation and reflection of sound-waves, but it was liable to be altered in shape, and its acoustic perfection destroyed by changes of form from intrapleural adhesions, pressure of tumors, disease of the spine, etc.

The chamber was also filled with the lungs, heart, and their appendages, which interfered with sound-waves. The membranes in which the capillaries were spread out in sacs and minute tubes filled with alveoli were thin, diaphanous, and distensible to a wonderful degree, and yet it contracted down upon the contained air with force in alternate movements in which the air itself was an active factor. The acts of the heart and lungs were rhythmic, and were accomplished with sound, the heart-beat, and respiratory murmur. The auscultator had to give to each its due importance. The arrangement of the tubes and sacs in the lungs also constituted an acoustic instrument, but of a different kind from that of the chest-chamber. Each sac was a resonator distended by air constantly rarified by heat, upon which it constantly contracted, causing vibrations which helped to make up the vibrations of the true respiratory murmur. Each sac was connected through a bronchus with the outside air, and consequently sound-waves in the open air passed in and were consonated in each sac, as were also the friction vibrations of the tidal air rushing in and out through the open bronchi.

There were three sources of vibrations going to make up the respiratory murmur, and each one could be distinguished by the ear. When the chamber, or its contained system of tubes and consonating sacs, lost acoustic perfection it pointed to disease. The lungs could originate sound-vibrations in the air-sacs only when in perfect condition, or when the walls of the sacs contracted upon the contained air with muscular sound-vibrations, called muscular sussurrus, which was consonated in the compressed air of all the sacs into a body of sound. They might also receive vibrations from without, or from friction of the moving air within the tidal space of the connective system down to the fourth division of the bronchi. The tidal air-space, where the bronchial tubes had cartilaginous rings to keep them open, was the location of friction sound. This friction sound and the sound-waves in the open air were consonated in the air-sacs. The distance between the tidal air-space and the air-sacs was filled with compressed air, confined in distensible tubes connected with the air-sacs, but the air-waves from above were not consonated in them, but passed through and were consonated in the sacs. This was an acoustic fact of importance, for where unusual sounds came from the true respiratory system it was caused by conduction of pathological products.

The author then considered acoustic laws as related to the heart. The heart's action from the first was rhythmical. The lungs pressed against the inner wall of the chest during full inspiration everywhere except at the apex-beat area, which was occupied exclusively by the heart in health. The lungs constituted a perfect conductor of sound in the direction of their columns of air in tubes, but were non conductive in any other direction. They shut off all sound coming from the heart, except by natural direct conduction through the mediastinum, in all parts covered by them. If the cardiac sounds were heard otherwise through the lung substance it was acoustic evidence of compression, consolidation, or adhesion of the lung.

After further consideration of the anatomy of the heart the author went on to say that the auricle and ventricle in action were one. If it were not for the closure of the semilunar valves by the return shock of blood in the arteries there would be no mystery in the sounds and intervals of silence in the cardiac cycle. There would simply be contraction and relaxation—one sound and one interval of silence. The study of the heart's rhythm was entirely acoustic, and its right apprehension was of far more importance than all the other signs together, for there could be no alteration of the rhythm without pathological cause, whereas murmurs might mean little or nothing. Regarding the origin of the second sound of the heart there was no dispute. Not so regarding the first. Dr. Leaming was now more convinced even than twenty years ago of the correctness of the following explanation which he then gave. The curtains of the semilunar valves were floated up to the closure of the auriculo-ventricular system, but without force, for as yet there was no contraction; then, like a flash of lightning, contraction commenced in the auricle, instantly passed down into the ventricle, and the valves were forcibly closed. The stretched and vibrating membrane of the valve gave a drum-like sound of low note, the chordæ tendinæ were also thrown into vibrations in harmony with the valve, but of higher pitch. As the contraction of the heart went on the valve-note grew less, and the higher note of the chordæ increased until the apex struck the chest-wall and relaxation commenced. Repeating, he said, the first sound was formed by the vibrations of the tense mitral valve, by the tense chordæ, the sound of muscular contraction, and the friction of the blood. If it lost the valve sound, the low drum-like note, we knew that the vibrating power of the valve was affected. If it lost the higher note of the vibrating chordæ we knew that they were affected pathologically. What was left of the first sound was of blood friction and muscular contraction.

Dr. Leaming then gave a brief description of the organ of hearing as it concerned the auscultator; the binaural stethoscope of Camman was in mechanism the most perfect instrument for artificial auscultation, but for accuracy, delicacy, and freedom from acoustic imperfection or injury from outside sources nothing equalled the temporal bone placed against the sonorous object The whole side of the head was sensitive to vibration delivered directly from a sonorous body, but the most sensitive part was in front of and just above the external ear.

Dr. A. L. Loomis, being asked to open the discussion, said the paper was certainly a finished production as far as it went. While he had listened attentively and thought he comprehended its full significance, yet it was one which was suggestive and required study. The author had carried his auditors down to the practical application of acoustics in diagnosis of diseases of the chest.

He first obtained definite ideas regarding the laws of acoustics during his junior year at college under Professor Jackson, who stated that there were fourteen elements of sounds which could be appreciated by the aided ear. But of these Dr. Loomis had found only a few of practical value in auscultation; they were, pitch, quality, duration, and rhythm. These four qualities of sound could be easily appreciated and carried into every-day work. Of these he regarded pitch and quality as most important in diagnosis, and yet most difficult to fully grasp. He had long been familiar with Dr. Leaming's views regarding the part taken by the air-sacs in the production of the respiratory sound, through consonation, but he had been unable to distinguish this from the other elements of the respiratory murmur.

He could emphasize what the author had said regarding the importance of the cardiac rhythm. The more he studied diseases of the heart the more firmly he became convinced that it was the slight changes in the rhythm that pointed to pathological conditions rather than murmurs alone.

Dr. Leaming stated that it would have unduly lengthened his paper to have given the practical applications of the acoustic principles discussed.

SECTION IN GYNECOLOGY AND OBSTETRICS.

Stated Meeting, November 22, 1888.

Dr. J. E. Janvrin, Chairman.

AN INEXPENSIVE CELL FOR ELECTROLYSIS.

Dr. E. J. Buckmaster exhibited the cell, which consisted of a glass fruit-jar; a cover of six layers of pasteboard tacked together, with two perforations, one for the carbon, the other for the zinc plate; the zinc was six inches long, and pierced at one end; the exciting fluid, two or three ounces for each cell; wire for making the necessary attachment. If made at home it cost about twenty-five cents. An instrument for use by the gynecologist should possess the following characters: 1. The electro-motor force should be fairly constant. 2. It should not work on an open circuit. 3. It should be simple in mechanism, so that the operator could provide for any irregularity in its working. By employing two carbons his instrument would be found equal to almost any cell in use.

Dr. R. G. Wiener read the

REPORT OF A CASE OF PLACENTA PRÆVIA, WITH SPECIMEN.

The placenta was not lacerated on the side, but showed simply the rent through which the child was brought into the world. He had attended the woman in normal labor twice before. October 7th he was called and found her in bed, bleeding profusely. She had been pregnant about seven and a half months, and had felt quite well until seized with hemorrhage while at stool. The os was found closed, but the cervix felt boggy. He administered some morphine, tamponed; the hemorrhage ceased. He reintroduced a tampon twice daily for a week, during which time she had no hemorrhage. On the 17th she began to flow again, profusely. The os was somewhat dilated, the placenta adherent centrally. He could discover no presenting part of the child. The woman was etherized, and he tried to dilate the cervix with the finger and remove the placenta laterally, but failed. He then plunged through the placenta, and extracted the child by the feet after version. The woman was nearly exsanguinated, but the ether acted as a stimulant, and also caused vomiting, and thereby favored contraction of the uterus. The child and mother had done well since. He used ether in preference to chloroform for the reasons just suggested.

Dr. Malcolm McLean remarked that he had only one way of managing such cases, namely, to dilate the os, which he did with an india-rubber dilator of his own construction, then plunge through the placenta, if necessary, and deliver. Such a case would be a poor one in which to follow the method of Braxton Hicks, viz., to turn, bring down one leg, and wait for delivery.

Dr. Wiener stated that he did not wait at all after dilating.

Dr. J. R. Goffe then read the

REPORT OF A CASE OF HYSTERECTOMY FOR FIBROID TUMOR, WITH SPECIMEN.

He reported the case more especially to bring out the method of disposing of the pedicle. The patient was forty-one years of age, never pregnant. For six years she had had distress in the pelvis, more aggravated the past three years, but without hemorrhage. It being a multiple fibroid, Dr. Goffe advised an operation in preference to electrolysis. The tumor was firmly wedged in the pelvis, but he was finally enabled to throw an elastic ligature around it, dissected the bladder off its anterior face, pulled down the broad ligaments, transfixed the cervix, tied on either side as he would the pedicle of an ovarian tumor, using silk. He then used the bladder, which he had dissected off the face of the tumor, as a flap, carrying it over the stump as far down in Douglas' pouch as it would reach, laying it over smoothly and also so as to make pressure on the stump, sewing it across the back with catgut. He hoped to get primary union, but if not, there would be the cervix to fall back upon for drainage. After three or four days there was some elevation of the temperature. Suspecting suppuration under the flap, he dilated the cervix, when about an ounce of pus was made to escape. In order to keep the cervix open for drainage he inserted a tube employed by Peaslee for making applications to the interior of the uterus. By attaching a soft rubber tube to the rim of this the discharges were conducted outside the vulva. Through this the cavity was syringed out. The discharge continued six weeks, when it ceased entirely, and the patient had since remained well.

Dr. Goffe also presented a specimen of

PROBABLE ECTOPIC GESTATION AND PYOSALPINX,

removed that morning from a patient who had been under treatment by another physician during three months. A tumor on the left side of the uterus was removed, and contained pus, and was shown to be a pyosalpinx. From the right of the uterus a round mass the size of an orange was removed, and the inside contained what appeared to be a fœtus and placenta. A microscopic examination would be made to determine its character.

Discussion on the cases being invited, Dr. Goffe added that Dr. Emmet had informed him of having disposed of the stump in a similar way in hysterectomy some years ago, but he did not think to drain as Dr. Goffe had done; an abscess developed, and caused the patient's death.

Dr. A. P. Dudley spoke with fervor in behalf of treating the pedicle as Dr. Goffe had done. Each operator was likely to have a strong preference for some particular method, but he had tried the extraperitoneal method of treating the stump so highly recommended by Bantock, with much less favorable results than by dropping it. It was especially objectionable in causing the patient so much suffering during the healing process. As to covering the stump, five weeks ago he did this, stripped the external layer off the fibroid growth and around the uterus, ligated the stump with catgut, cut it short, then stitched the peritoneum or outer covering of the fibroid growth over the stump with catgut. On the fourth day there was a rise of temperature, and he dilated the cervix, but only sufficiently (the patient being a primipara) to introduce a soft-rubber drainage-tube, and conducted the pus which afterward formed beyond the vulvar outlet. She recovered.

The Chairman remarked that the tube used for drainage by Dr. Goffe was employed by Dr. Peaslee for making applications to the interior of the uterus as many as twenty years ago, and he had himself found it fulfil the purpose well. He suggested that in cases like Dr. Goffe's and Dr. Dudley's, if suppuration was expected, it might be well to introduce this tube during the operation and avoid the necessity for subsequent dilatation of the cervix. It could be readily withdrawn when danger of suppuration had passed.

SPECIMENS OF UTERINE APPENDAGES.

Dr. A. P. Dudley presented the specimens which had been removed that day in a case in which he had expected to do simply hysterorrhaphy for a displaced and adherent uterus, but the enlarged and diseased condition of the uterine appendages made it necessary to remove them. The specimens were of interest in showing so well the veil-like inflammatory products covering the tubes and ovaries, and adhesive bands which had extended to the rectum, and also a peculiar shape of one ovary, it being like that of a horseshoe. There was a uterine fibroid.

Dr. A. P. Dudley then read the paper of the evening.

A NEW METHOD OF OPERATION FOR RESTORATION OF LACERATED PERINEUM.

When the author entered the Woman's Hospital as interne, Dr. Emmet was employing his new operation for restoring the perineum. Dr. Dudley adopted the procedure, but since, after five years' experience, it continued to give unsatisfactory results, he concluded that it could not be founded on a correct anatomical and physiological basis. Aside from this fact, the operation was difficult to describe and hard for the general practitioner to perform. To devise a successful method of restoring the lacerated perineum required a thorough study of the anatomy of the parts. The text-books in general were very faulty in this regard. He knew of but one, that of Dr. Ranney, on the topographical relations of the female pelvic organs, published in 1883, which was at all satisfactory.

Two questions arose which should be settled before undertaking a new operation: (1) What is the structure of the tissues involved in laceration of the perineum during childbirth, and what are they designed by nature to do? (2) What is the true nature of the injury done the parts, and which is its most important element? Both of these were disputed questions, and according to the answer given would be the method of repair.

Dr. Emmet held that it was usually the pelvic fascia at the sulci which was torn away from the posterior vaginal wall.

Dr. Dudley thought there was no doubt this fascia was frequently injured, but that it was of secondary importance, the real damage consisting in the extent to which the perineum proper was lacerated. He presented diagrams showing the anatomy of the female perineum, which he described at length. On removing the skin and superficial fascia the first muscle seen was the transversus perinei, and just beneath it were two larger muscles, the constrictor vaginæ and erector clitoris. Between these and the levator ani (the most important muscle in the pelvic floor) were two layers of deep perineal fascia, dense fibro-elastic fascia stretching across the anterior half of the pelvic outlet. The levator ani constituted the diaphragmatic muscle of the pelvis. It was with the anterior and middle fibres of this muscle that we had to deal in ordinary cases of lacerated perineum.

It would be seen that there were three sets of muscles in the floor of the pelvis, each surrounded by distinct layers of fascia; that all took their origin from the inner walls of the pelvis, and converged to enter a tendinous centre in the median line of the perineum. It must be clear that if the central tendinous union were severed the opposing muscles would contract and leave a gap. The fascia covering these muscles was of a fibro-elastic nature, capable of stretching, but not of itself capable of contracting. Therefore when it was lacerated it changed its position only as the muscles changed their position. The most important of this fascia was the deep perineal, or tranverse, ligament, which served a threefold purpose, that of giving extra support to the muscles of the anterior half of the pelvic floor, of protecting and supporting the blood-vessels, and of acting through some of its elastic fibres, extending from the side of the pelvic outlet, like the string of a purse.

It was usual for the laceration to take place in an antero-posterior direction, and in such cases the floor of the pelvis gave way; but in some it was in a transverse direction, and here no prolapsus of the vagina or rectocele would result. When the laceration was in the second degree, according to the common classification, involving the entire perineal body down to the sphincter ani, the condition was much more serious than when only in the first degree. The central tendinous tissue being torn through the muscles contracted to either side, destroyed the support of the vagina and rectum, and the efforts at stool soon brought on rectocele, then followed prolapsus of the posterior wall of the vagina, then of the uterus and of the bladder. In order to thicken that portion of the perineal wall which had to resist the greatest strain during lifting and defecation, and to throw the rectocele back into the vagina, where it belonged, he began his operation by denuding a semicircular surface, exposing the muscular aponeurosis from the vaginal angle down to the hymen, and from here denuding a triangular portion to the central posterior vaginal wall, sometimes a distance of two inches. The surface denuded was somewhat like that in Martin's operation. The novel feature of his operation was more particularly the direction of introducing the suture, and it was this which thickened the posterior wall and restored the sphincter action of the perineum, and gave support to the parts above.

He employed catgut, made the suture continuous, and instead of introducing it in a direct line across the pared surface, or curved upward as was customary with operators, he curved it downward. When the operation was completed the line of sutures was in the centre of the perineum and posterior wall of the vagina. The puckering was on the under surface, leaving the line of suture outwardly smooth.

Dr. Goelet described an operation which he had been doing for lacerated perineum the past eight years, an account of which he published in the *Medical News* five years ago. This, he thought, was similar to the operation done by Dr. Dudley, but admitted his error, especially as to the direction of the suture, when he better understood the latter.

Dr. Malcolm McLean had been unable to obtain satisfactory results from Dr. Emmet's operation. He considered it essential to restore the raphe in the line of separation of the muscles of the perineum. For an hour or two after laceration the parts lay in their natural relation, but soon the muscles regained their tone and retracted.

Dr. A. F. Currier thought Dr. Dudley's elaborate argument would prove a credit to the transactions of the section. It seemed to him that any success in restoring fascia to fascia and muscle to muscle would prove largely imaginary. After the lapse of time such retraction and atrophy took place in the injured parts that he could not convince himself of his ability to restore them as they were originally arranged by nature. But he understood the principle which Dr. Dudley wished to carry out to be the introduction of the sutures in such a way as to cause the opposing parts to so counterbalance each other as to make a sufficiently resisting structure. With that view he coincided, and in so far as Dr. Emmet's last operation fell short in this respect, it was faulty. Nothing had been more impressed upon his mind the past year than the value of the perineum as a barrier to prolapsus of the vagina and uterus. There were other operations which he thought would prove as valuable as the one described by Dr. Dudley, for instance that of Martin. He had himself the last year or two done an operation somewhat like that of Dr. Dudley's, but perhaps less effective. The sutures were not directed as much downward.

Dr. J. R. Nilson thought the operation described by Dr. Dudley was a combination of that of Hegar's and another, except that the sutures were passed downward instead of directly through. It was his impression that Dr. Dudley's method of passing the sutures would not draw the tissues up, as he intended, but rather draw the softer vaginal tissues from above down. He had tried earnestly to follow Dr. Emmet's last method, but failing to get satisfactory results, was obliged to abandon it. He had found since adopting the method of burying the sutures that he obtained better results. Having drawn the two rows of buried sutures together, and feeling the tension becoming great, he put in two or three silk-worm sutures to give extra support during the operation.

Dr. Dudley said that all he claimed as absolutely novel about his operation was the manner of introducing the sutures. Heretofore operators had directed them either upward or across in a right line. After his operation patients had sphincter action, and were able to close the vagina.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting held Tuesday Evening, November 6th.

The President, Dr. George W. Jacoby, in the Chair.

Dr. W. H. Thomsen read a paper entitled,

PARENCHYMATOUS NEURITIS,

including the history of a number of cases.

Case I. was that of a man fifty-six years of age, formerly engaged in the lumber business and obliged to stand in water containing floating ice for hours at a time. This patient's symptoms had first pointed to central spinal trouble, but later had been those of a multiple neuritis. They had, however, been gradual in their onset and there had been no evidences of pressure. There had been no shooting nor lancinating pains. The actual cautery had been applied over the spine, and the hot glass-rod over the sensitive nerve-trunks. Nitro-glycerine had given the greatest relief from pain in this case.

Case II. was that of a man thirty-five years of age, convalescing from diphtheria. There was no pain, but the laryngeal and pharyngeal paralysis was so profound that the general health suffered.

Case III. was that of a boy convalescing from typhoid fever. There were pains in the legs and feet with dropping of the feet.

Case IV. was that of a woman confined to her bed for three months in the course of phthisis. There were pains in this case in the feet extending to the knees, and in the hands with drooping of the ankles and wrists, which progressed steadily till death, when extensive nerve degeneration was found without any evidences of inflammatory action. The case was presented as a typical example of a wide-spread non-inflammatory degeneration of the nerves. It was a parenchymatous neuritis analogous to that which could be produced by a ligature. The origin and history differed from that of an inflammatory neuritis, however much it might resemble this condition in its ultimate results. In the case of typhoid fever and phthisis the degeneration may have been due to a mechanical cause—pressure from the loss of the surrounding fat. The fact that the vagus was implicated in the latter disease did not disprove the theory, as no statement had been advanced in regard to the condition of the bronchial glands.

The theory of a non-inflammatory parenchymatous nerve degeneration was important, as the treatment of such cases would differ from that of cases of inflammatory origin. In the latter antiphlogistic and soothing treatment was indicated, while in the former stimulating applications were required.

It was questionable whether the term neuritis could be correctly applied to this type of the disease.

Dr. L. C. Gray had not heard the commencement of the paper, and did not understand why Dr. Thomsen objected to the term neuritis. He thought that the symptoms could be scarcely classed under any other name. There had been, as he understood, downright pain in the course of the nerves, and eventually paralysis and atrophy. These were the clinical symptoms of neuritis, and measured the severity of the neuritic lesion.

The treatment of neuritis was, he believed, excepting traumatic neuritis, still *sub judice*. Since attention had been called to the disease all had probably met with cases in which no local measures seemed to do any good. Quinine, the salicylates, and iron had been most beneficial in his own cases. Change of air was to be recommended. Even in the paralytic stage it was his custom to move the patient to another part of the city, or even from a lower floor to a higher floor in the house. Change of location was especially indicated in the cases arising in our somewhat malarial suburbs.

Dr. Starr applied powdered menthol diluted with starch under a flannel bandage for the relief of the pains of neuritis.

Dr. Jacoby did not find the diagnosis of neuritis so easy as Dr. Thomsen had represented it, especially in typhoid fever. Myositis was a more probable lesion in typhoid fever. Zenker had even stated that neuritis was never found in this disease. As to the distinction made between the inflammatory and degenerative process, both might be found in the same case. Which process was primary and which secondary was still a question.

Dr. Thomsen closed the discussion. He had intended to call attention to only a single point and necessarily had neglected many others touched upon by the gentlemen in the discussion. He had intended to call attention simply to the impropriety of the term neuritis as applied to the process in the cases which he had described. There was no reason to suppose that the process in the case of phthisis had been inflammatory. The inflammatory process had certain definite characteristics. These were vascular disturbances, infiltration with serum and leucocytes or living matter. In the neuritis of alcoholism, both in private and in hospital practice, he had observed circulatory and nutritive changes, and there had been the same tendency as in the inflammatory processes in other parts of the body. There was evidently inflammation of the sheath of Schwann and constriction of the nerve. These conditions contrasted with those in the cases which he had described. In the treatment of true neuritis he had used an application of equal parts of the oil of peppermint and olive oil, a preparation similar in action to that which Dr. Starr had recommended.

Dr. Gray inquired whether Dr. Thomsen recognized no inflammatory process within the sheath of Schwann.

Dr. Thomsen replied that he knew of no changes within the sheath of Schwann which could be called inflammatory.

Hypodermic Medications.—The following precautions are worth remembering: Solutions of the alkaloids soon decompose and should therefore be freshly prepared. The smallest size of each tabloid given is the one generally preferred. The dose, hypodermically, is always less (the proportion varies) than by the stomach Great care should be taken not to throw a medicament into a vein, and so produce a sudden overwhelming effect. Fatal collapse might ensue from injecting air into a vein. Absorption of an injection over the temple or chest is twice as rapid as elsewhere. The prick of the hypodermic needle in the chest has been followed by instant death. Syncope may follow an injection, if the patient do not remain quiet and lying down. For safety and freedom from pain, an injection should be made in the outside of the arms or thighs, or in the abdomen or back. Injections should not be made over bony prominences, or into inflamed or tense tissues. Mercury, ergot, etc., are best injected into the muscles, as in the nates. It is not usually considered safe to repeat an injection (as of morphine) for twenty or thirty minutes.—*Hospital Gazette.*

Small-pox in France and England.—In the last annual report of the "Bureau de l'Hygiène Publique" a comparison is made, in regard to the mortality from small-pox, between France and England, much to the disparagement of the former. In the larger cities of France the number of deaths from small-pox, during the year 1887, was 1,956, or 0.31 per thousand of the living population. In the larger cities of England, during the same period, the number of deaths was 332, or 0.04 per thousand of the living population. Thus the fatality from small-pox was nearly eight times greater in France than in England. Vaccination is compulsory in England.

Correspondence.

OUR PARIS LETTER.

(From our Own Correspondent.)

THE PASTEUR INSTITUTE—INTRAVENOUS INOCULATION OF RABIC POISON—ANOTHER STUDY OF TETANUS; IS IT INOCULABLE?

Paris, November 23, 1888.

The new Pasteur Institute, of which I gave a brief description in The Medical Record of October 28th, was opened on Wednesday, November 14th, in the presence of a large assembly, presided over by the President of the Republic. Several distinguished persons were also present, represented by some of the ministers, the presidents of the two Chambers, and a large number of members of the Institute; but it may be remarked that neither the Academy of Sciences nor the Academy of Medicine was officially represented at the ceremony, and the Municipal Council of Paris was conspicuous by its absence. The proceedings were opened by M. Bertrand, Permanent Secretary of the Academy of Sciences, who made a eulogistic speech on M. Pasteur and his numerous scientific researches. Dr. Grancher, M. Pasteur's principal assistant, then read a report of the work done in antirabic inoculations since the middle of 1885, when the first two human beings were inoculated. He stated that the number of persons treated at Paris in the Rue d'Ulm and the Rue Vauquelin during the years 1886-1887 to July 31, 1888, was 5,384. The rate of mortality had been 1.34 per cent. for 1886, for 1887 it was 1.12, and for 1888 it was 0.77 per cent. This rate of mortality comprises the deaths of persons who were affected with rabies the day after inoculation; but, remarked Dr. Grancher, even these figures are very striking, as the estimated mortality previous to the discovery of this method of treatment was 15.90 per cent. as given by the Reporter of the Council of Hygiene of Paris. Dr. Grancher informed his hearers that twenty laboratories for antirabic inoculations have been established in different parts of the world: Seven in Russia, five in Italy, and one each in Roumania, Austria, Brazil, Cuba, and the Argentine Republic, while two more will shortly be opened at Chicago and Malta. The staff of the new Institute are disposed of as follows: Dr. Grancher, with the assistance of Drs. Chantemesse, Charrin, and Terrillon, will attend to the department of the treatment of rabies. M. Duclaux, one of M. Pasteur's most ancient pupils and now Professor of Biological Chemistry at the Faculty of Sciences, will direct the laboratory of general microbiology. M. Chamberland is charged with microbiology in its relations with hygiene. Dr. Roux will teach the microbian methods in their applications to medicine. Drs. Metchnikoff and Gamaleia, of Russia, will study the morphology of inferior organisms and comparative microbia. The new Institute will thus, as expressed by M. Pasteur, serve as a dispensary for the treatment of rabies, and will at the same time constitute a centre of researches for infectious maladies as well as a centre of instruction for the study of microbiology, and will be open to medical men of all nationalities.

M. Chauveau, Professor of Veterinary Medicine, recently read a paper at the Academy of Sciences, on behalf of M. Galtier, on certain experiments tending to demonstrate the efficacy of the intravenous injections with rabic virus in view of preserving from rabies animals bitten by rabid dogs. After having, since 1880, established, by experiments on the sheep and the goat, that immunity against rabies, by means of these injections, M. Galtier has, in recent communications, demonstrated that, by this means, herbivorous animals may be preserved, even after the lapse of a certain time after the bite. These results have been fully confirmed by recent experiments of MM. Nocard and Roux. The method is applicable to ruminating animals and to pigs; it presents no serious difficulty in its application. The matter to be inoculated may be taken from the dog which had inflicted the bite, and it is sufficient, to obtain it, to dissolve in water the nervous substance, then to decant it after sufficient rest, or to filter it, to remove the solid particles which might cause accidents in the blood-vessels. The injection may be practised without having any mental preoccupation about the contamination of the perivenous tissue, for, even should the latter be contaminated, the success of the operation is none the less sure. By still more recent experience, M. Galtier has been led to conclude that one can with certainty preserve, by means of these intravenous injections, herbivorous and omnivorous animals which had been bitten by mad dogs. It is, moreover, permitted to presume that the immunity conferred has for effect not only to preserve against the consequences of bites already received but that it also guarantees against ulterior bites.

The subject of tetanus every now and then surges up at the Academy of Medicine, and a commission has been formed to investigate its true nature, of which Professor Verneuil, so well known in connection with this subject, has been appointed permanent Reporter. Dr. Alphonse Guerin, who, it will be remembered, was the first who had the idea of sheltering wounds against the germs of the air, to carry out which he invented the cotton-wool dressing which bears his name—like M. Verneuil, M. Guérin thinks that tetanus is inoculable, transmissible, and that there cannot be any contestation on this first point, which is very important. It is therefore certain that there is a virus in tetanus; but, adds M. Guérin, one does not know exactly what this virus is. According to some authors it is a microbe; but, if this be the case, one should be able, in protecting wounds against the contact of the air, to prevent the production of tetanus in the same way that one can, by this means, prevent purulent infection, erysipelas, etc. This, however, is not the case, as, M. Guérin observes, tetanus frequently occurs even under the cotton-wool dressing. Another objection against the microbian nature of the malady is that the antiseptics—Lister's dressing—do not prevent the production of tetanus. Therefore, if it were due to a microbe, all the antiseptic theory would be completely overthrown. This is why M. Guérin considers as much more probable the intervention of a poison analogous to strychnine, or to that of a ptomaine or a poison manufactured by the organism. This poison is localized in the spinal marrow and there produces a partial acute inflammation, with ramollissement, which, M. Guerin says, he had frequently met with at necropsies.

ORGANIC UNION OF THE MEDICAL SCHOOLS AND UNIVERSITIES.

To the Editor of The Medical Record.

SIR: The editorial notice, in THE MEDICAL RECORD for October 13th, of Professor Welch's address on the above subject recalls to mind a paper read by myself before the Westchester County Medical Society in the spring of 1887. The paper was mostly taken up with a discussion of preliminary medical education. After an examination of the claims of various branches of study and their relative merits in a scheme of general as well as special education, the following course was suggested, it being understood that the student had already taken the usual course preparatory to entering college, Greek only being omitted:

"First year—Latin, Algebra, and Geometry, Elementary Chemistry, with lectures once or twice per week in History or English Literature. Second year—French, Trigonometry, Mechanics, and Optics, Analytical Chemistry, and lectures as in first year. Third year—French finished, German begun, Physiological Chemistry, Anatomy, and lectures on Logic. Fourth year—German, Physiology, Materia Medica, and Theory and Practice of Medicine. At the close of this year the student to be admitted ad gradum Med. et A.B. The fifth year should be given to lectures on Obstetrics and Surgery, and clinical lectures in all departments, together with study of the microscope and instruments of diagnosis, leading to the degrees of A.M. and M.D."

In the course outlined it was contemplated that the four years' study leading to the degree of Med. et A.B. should be pursued in some university, while the last year, leading to the degrees of A.M. and M.D., should be taken in the hospitals and a medical school of a large city. The A.M. to be conferred by the university and the M.D. by the medical school. If in addition to this the candidates should be required to pass an examination before an impartial board, in no way connected with any medical school, in order to obtain a license to practise, the profession and public would be reasonably well protected against the turning loose of half qualified or wholly unqualified practitioners to prey upon the community.

One of the incidental advantages which might accrue, in case some such system should be generally adopted, would be the effect upon the legions of supernumerary schools whose only *raison d'être* is the advertisement of their faculties. These *might* quietly efface themselves lest they be ground to powder between the nether millstone of the university and the upper millstone of the great clinical school. Another advantage is the partial separation of the theoretical from the clinical courses. Clinical advantages are simply wasted upon the student who is just beginning his foundation studies in anatomy, physiology, and chemistry. Much better that he should be at the same time attending to his general culture and broadening his mind in the atmosphere of the university, taking advantage of all of its privileges. When the foundation is properly laid he is ready to profit by the clinical wealth of our large cities, where the clinical lectures illustrate the didactic, and the didactic explain the clinical; these being further supplemented by studies in the dissecting-room and dead-house, and in the use of the microscope and various instruments of diagnosis. Coming to his practical studies with such a foundation as would be laid in the first four years, the student would accomplish more in one year than he could do in three years starting with the preparation of the average medical student. On the other hand, the five years' course, compared with the usual college course with the three years' medical course added, would be attended with a saving of two years while giving at least as good, probably better, results.

This course is not offered as being ideally complete either from a literary or professional point of view, but it is sufficiently complete for practical purposes, and the gaps may be filled up in that time of leisure before referred to (the time between hanging out the shingle and getting fairly into business); for the student who has faithfully pursued this course has become a master in the art of study, and henceforth is capable of both choosing and directing his own studies; and this after all is the main consideration.

J. H. CHURCHILL, M.D.

"CIRCUMCISION BY MATERNAL IMPRESSION."

To the Editor of The Medical Record.

SIR: In THE MEDICAL RECORD, page 535, November 3, 1888, Dr. J. G. Harvey relates a phenomenon which, if accurately reported, should receive attention sufficient from the profession to establish the fact beyond question.

Suffice it that most physicians will deem a mere statement of a phenomenon so much at variance with the best scientific conclusions worthy of credence only on indisputable evidence.

The points at issue are somewhat as follows: According to Dr. Harvey, the malformation must have taken place about the fortieth day of intra-uterine life.

At that period in gestation the fœtus "is a minute, gelatinous, and semi-transparent mass," about one *line* and one-half in length—we might say, "without form and void."

That circumcision could have taken place from any physical or muscular action seems scarcely a scientific or possible view. A surgical operation posited in so minute a protoplastic mass is an absurdity.

Further, science does not yet account for intra-uterine malformations by "maternal impressions" of this character.

Obstructions of circulation that arrest normal development of the fœtus cover most cases. The rest are accounted for by an abnormal condition of the generative material in one or both parents.

It is very true that the mental emotions of the mother may obstruct the circulation, but the action is upon the whole system of the mother and fœtus, and not through the blood upon a particular organ of the fœtus.

To hold any such doctrine as specific impression would jeopardize every child born into the world. Malformations and monstrosities would be in the majority and subject to the caprice of the parent.

It is scarcely necessary for the medical profession to countenance the fading superstition of "maternal impression," kept alive by tradition and gossip, and made a source of mental anxiety to many pregnant women.

Until there is stronger proof and more uniformity of results, is it not the office of the true physician to relieve our prospective mothers of a tension of mind most productive of the very disorders we so much deprecate?

M. G. Lowrey, M.D.

Boulder, Col., November 15, 1888.

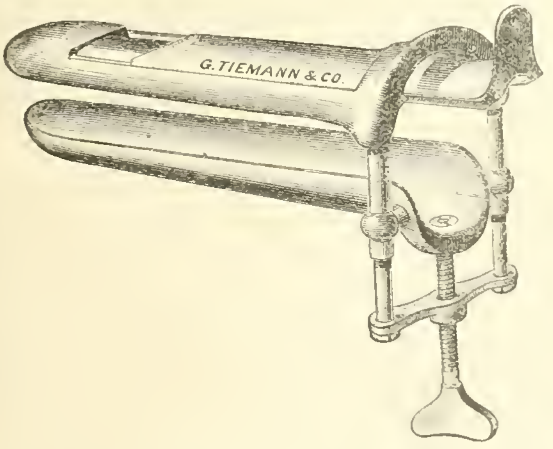
New Instruments.

AN IMPROVED RECTAL SPECULUM.

By J. B. POUNCEY, M.D.,

BIRMINGHAM, ALA.

The points of superiority are: 1st. The instrument, as shown in the cut, has two blades, the lower blade fitting into the upper, making it small and compact. 2d. The facility and ease of introducing. 3d. After the introduction of the instrument the rectum can be dilated to any desired extent by running up the screw attached to the blades. 4th. If this is done, any tumors, fistulous tracts, ulcers, etc., are in plain view for treatment. 5th. The blades dilate equally at both the internal and external openings. 6th. There is a wide slot in the upper blade, covered by a slide, which, when withdrawn, exposes the diseased parts fully to view.



"A Possible Revolution in Medicine" is the title of an article in *The Forum*, by Dr. Austin Flint. The author takes a very roseate view of the possibilities of medicine through the aid of bacteriology.

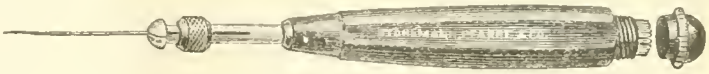
A NEW VACCINATOR.

By CYRUS EDSON, M.D.,

NEW YORK.

The little instrument shown in the cut has been in the hands of members of the vaccinating corps of the Health Department during the past year, and has proved very useful. It consists of a needle-holder, similar to those used by microscopists, having two jaws that are approximated by means of a sliding ring. These jaws are funnel-shaped at their extremity in order to facilitate the introduction of the needle, which is inserted to the depth of three-fourths of its length.

The handle is of hard rubber, with hollow space sufficiently large to hold twenty-five No. 5 needles. To use the instrument the operator unscrews the cap, selects a needle, fixes it in the jaws, and proceeds to scarify. Having performed the operation, the needle is removed and thrown away.



The scarification made by the needle will be found to be better for the purpose in question than that made by the lancet—the skin and vessels being torn, and not cleanly cut. The result is that a larger absorbing surface is exposed and just sufficient blood and serum exuded to dissolve the virus from the quill.

The instrument can be used more rapidly than the lancet, if time is taken to cleanse the latter after each vaccination is performed.

The cost of needles is only five or six cents per paper of twenty-five.

The device was contrived partly to meet the objections to vaccination made by parents of children attending school, on the ground that in the use of the lancet disease was liable to be transmitted from child to child. Indeed, one case of skin disease was alleged to have been caused in this manner; investigation, however, disproved it.

The popular prejudice against the lancet is deeply rooted and is best and easiest overcome by the new vaccinator. It is manufactured by Stohlmann, Pfarre & Co.

Health Department, City of New York.
November 19, 1888.

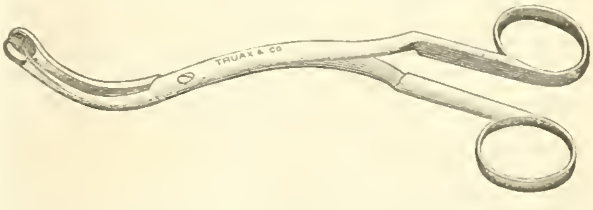
POST-NASAL PUNCH FORCEPS.

By MOREAU ROBERTS BROWN, M.D.,

PROFESSOR OF LARYNGOLOGY AT THE CHICAGO (ILL.) POLICLINIC.

The accompanying cut illustrates a pair of punch forceps which I have used for the past two years to remove adenoid growths from the naso-pharynx.

The advantages claimed for the instrument are, ease of introduction into, and ability to reach, any portion of the post-nasal space, while elevated growths only can be seized and these readily removed by being cut entirely through. The blades are one and a half inch long, and at an angle of fifty degrees (not so appearing in the figure) with the body of the instrument; one terminates in a ring-shaped knife, the other is solid, with a flat, soft, copper-faced surface.



The upper part of the blades will not separate, however firm the handles may be pressed toward one another.

It was suggested to me by Mr. Haussman, the maker of the original instrument, that the solid blade be also made a ring; but not being satisfied with other forceps so constructed, that I had used, I preferred them as here described. Messrs. Truax & Co., of this city, are now making them according to both patterns.

126 State Street, Chicago, Ill.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department. United States Army, from December 2, 1888, to December 8, 1888.

Williams, John W., Major and Surgeon. Is hereby relieved from further duty with the battalion of the Second Artillery at Fort Wadsworth, New York Harbor, and will proceed to join his permanent station, Jackson Barracks, La. Par. 3, S. O. 256, Headquarters Division of the Atlantic, Governor's Island, New York City, December 5, 1888.

Ball, Robert R., First Lieutenant and Assistant Surgeon. By direction of the Secretary of War the leave of absence granted in Special Orders No. 129, October 18, 1888, Department of the Missouri, is extended one month. Par. 11, S. O. 279, A. G. O., Washington, November 30, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending December 8, 1888.

Bransford, J. F., Surgeon. Detached from Smithsonian Institution and granted six months' leave, with permission to go abroad.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 8, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	23	9
Scarlet fever	158	26
Cerebro-spinal meningitis	0	0
Measles	299	21
Diphtheria	140	35
Small-pox	1	0
Yellow fever	0	0
Cholera	0	0

The Late Dr. Henry B. Sands.—At a special meeting of the Medical Board of "The Roosevelt Hospital," held on Tuesday, November 20, 1888, the following entry was made in the minutes:

(Signed) J. West Roosevelt,
Secretary.

"The death of Dr. Henry B. Sands removes from among us one who, as Chief Surgeon of this Hospital, not only faithfully performed every duty but elevated the character of the whole institution.

"An Attending Surgeon to the Hospital from the date of its opening, November 2, 1871, his time and his great talents were freely given to its service. Careful and thorough in his work, skilful as an operator, clear and accurate in his judgment, truly and unselfishly considerate of the patients committed to his charge—his resignation upon March 31, 1888, was a most serious loss. Yet so thorough had been his work, so complete his method of organization, that his influence has remained a permanent good.

"On May 30, 1882, he was appointed the sole Attending Surgeon to the Hospital. He had long advocated the plan of organization with a single responsible head to each department, a plan till then untried in any large hospital in the United States. His strength of purpose and determination overcame all obstacles. This appointment was a great compliment to his professional reputation and personal character, and he showed himself worthy of the trust reposed in him.

"Such was his energy and such his devotion to work that he left the hospital with a surgical department second to none in the country. The chief ambition of his professional life was realized, and he had the satisfaction of seeing the system, for which he had done so much, firmly established.

"The Members of the Medical Board inscribe in their minutes their high appreciation of the services rendered to the hospital by Dr. Sands; their recognition of his extraordinary ability; and their deep sorrow for the loss to themselves and the entire community of so great a surgeon and so good a man."

A New Operation for Syndactylism.—Dr. E. Engdahl, writing in *Hygeia* for October, 1888, proposes a new operation for the correction of syndactylism. He makes longitudinal incisions along the palmar surface of the united fingers, starting from just above the metacarpophalangeal articulation and terminating at the end of the connecting web. A transverse incision at the extremity of the web connects these two, care being taken to divide the integument only. The strip so formed is dissected back. Then the dorsal surface of the connecting web is divided between the fingers. The palmar flap is now turned over so as to form a commissure between the fingers, and is stitched to the dorsum. The raw surfaces at the sides of the fingers are allowed to heal by granulation, being kept from coming in contact by pledgets of lint. The author has used this method in two cases, one of congenital syndactylism, the other resulting from a burn, and with complete success.

"La Gazette Médicale de Liège," is a new medical journal, published at Liege, the first number of which appeared in October. The journal will appear weekly, and is under the editorial management of Dr. Brasseur.

Empedocles as a Bacteriologist.—The favorite theory of Empedocles, the famous philosopher of Agrigentum, was that the blood of man contained an infinite number of demons. Now, allowing for the state of medical science in the period at which Empedocles lived, we must not be too severe upon him; less so, because at the present day we have a revival of his theory, with this slight difference, that the microbe has taken the place of the demon.—*The Provincial Medical Journal.*

Why Albinos do not See Well.—According to Dr. A. D. Williams the white flaxen hair of albinos shows that there is a deficiency of coloring material in their bodies. Further proof of this fact is found in the absence of the necessary amount of pigment in their eyes. Such persons have pink eyes because there is not pigment enough in the iris and upon its posterior surface to prevent the red reflex of the fundus from shining through the iris. Such persons are always greatly annoyed by strong light, because there is not sufficient color to prevent the ingress of a flood of it. It enters not only through the pupil, but through the substance of the iris as well. The choroid being likewise deficient in pigment, the excessive amount of light dazzles and greatly confuses vision. Furthermore, the deficiency of pigment in the choroid prevents the light, after it has properly acted on the retina, from being absorbed, that being the main function of the choroidal pigment. Albinism is an unfortunate condition, as there is no way to supply the deficient pigment to the iris and choroid. The annoyance is somewhat palliated by the use of properly-colored glasses. These supply the place of the natural pigment to a slight extent.—*St. Louis Medical and Surgical Journal.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 25 New York, December 22, 1888 Whole No. 946

Original Articles.

A CONTRIBUTION TO THE TREATMENT OF FRACTURES AT THE LOWER END OF THE HUMERUS, BASED ON THE ANALYSIS OF FIFTY CONSECUTIVE CASES.[1]

By CHARLES A. POWERS, M.D.,

SURGEON TO THE OUT-PATIENT DEPARTMENT, CHAMBERS STREET HOSPITAL, NEW YORK.

Among the minor injuries which fall to the care of the general practitioner there are, perhaps, none which give him more concern than this to which your attention is invited. And I venture to say that few experienced surgeons undertake the treatment of one of these fractures without confessing to themselves a decided doubt as to whether the result in the given case is to be all that they can desire.

The importance of the theme, then, rather than the presentation of new methods of treatment, must be my apology for bringing it before you.

I will not occupy your time with a literary history of the subject, but briefly place before you an accurate picture of the cases which have been under my care in the out-patient department of the Chambers Street Hospital during the past eighteen months.

These have been fifty-six in number, six of which passed from observation shortly after they were hurt and which are excluded from the list, leaving fifty cases, classified as follows: Ten of the internal epicondyle; 12 of the internal condyle entering the joint-surface; 15 of the external condyle; 6 through the base of the condyles; 2 through the transverse epiphyseal line; 4 T-shaped or comminuted; 1 separation of the trochlear epiphysis. Nine of the patients were over twenty years of age, and 41 were under. Of the 41, 13 were under five; 12, between five and ten; 13, between ten and fifteen; 3, between fifteen and twenty. The age of the youngest was two years; that of the oldest, forty-three. Forty were in males, ten in females; forty-nine were simple fractures, one was compound.

Class A. *Fractures of the internal epicondyle.*—Of this lesion there were ten cases, of which the following is a fair illustration: P. B——, a boy, eight years of age, fell three feet, striking on the inner aspect of the left elbow, some half-hour before applying at the hospital. Examination revealed tenderness over the inner condyle, together with moderate swelling. Active movements at the elbow were feeble and painful. The internal epicondyle was freely movable, and on moving it crepitus was elicited. In full extension of the forearm it slipped a little downward, but on flexing the elbow to a right angle it was easily replaced.

The forearm was placed, midway between pronation and supination, at an angle of ninety degrees with the arm, and a plaster-of-Paris splint applied with equable, moderate pressure from the wrist to the upper third of the arm. This splint gave rise to no inconvenience, and was left in place ten days, at the expiration of which time it was removed and the joint inspected. The swelling had nearly disappeared and there were no untoward evidences. A fresh plaster splint was applied, and left in place until the twenty-eighth day, when it was removed. Firm union was now found to obtain. The joint was free from pain and swelling. The epicondyle was in place, moderately thickened.

The patient could flex the forearm to seventy-five degrees, and could extend it to one hundred and thirty-five degrees. Pronation and supination were nearly perfect. The parents were directed to bathe the elbow morning and night in water as warm as he could comfortably use, to follow the bath with inunction of neat's-foot oil, and to apply a large flaxseed poultice when he went to bed, removing it in the morning. They were advised to confine his opposite arm to the side, beneath the clothing, and thus force him to use the affected limb in eating, playing, and his other daily habits.

The functions quickly improved, and on the sixtieth day they were completely restored. You will see that the elbow is now like its fellow, except for the moderate thickening which still persists at the seat of the fracture.[1]

Of the 10 cases—8 in children and 2 in adults—9 regained the functions perfectly; the other was lost sight of at the end of the second month, but at that time motions were nearly complete. In none was there resulting deformity, nor should we expect it in this class of cases, despite the assertion of Gross,[2] who says of fracture through the internal epicondyle: "Few cases recover without a certain degree of deformity, or even anchylosis." I know of no reason why there should be either, unless, perchance, the forearm flexors draw the fragment so far down that even complete flexion fails to permit its replacement.

I cannot insist too strongly on the importance of careful and systematic employment of the emollient measures, together with active motion after removal of the splint. On its removal the average range of motion found was thirty-five degrees, and this generally improved in direct proportion to the intelligence and faithfulness with which the patient followed directions.

Class B. *Fractures through the internal condyles entering the joint*—Twelve cases, of which the following may serve as an example:

T. D——, a boy, nine years of age, fell forcibly on the sidewalk, striking on the left elbow. Examination revealed all evidences of fracture through the humeral trochlea. There was a tendency to posterior displacement of the condyle, but when the forearm was in extension it made the normal angle with the arm. The elbow was placed at ninety degrees, midway between pronation and supination, and the condyle drawn a little forward to correct its displacement. Plaster splint was applied, and left in place twelve days; then removed; the condition found good and the splint reapplied. The second dressing was left on until the twenty-eighth day, at which time it was taken off and the following condition noted:

The elbow was painless, and but slightly enlarged; range of motion from eighty to one hundred and fifteen degrees; pronation and supination all but perfect; no apparent deformity. (It is well known that one cannot accurately judge of deformity at the elbow when the joint is flexed. It is only when in a nearly extended position that we can assure ourselves as to its presence or absence.) He was given the general directions as to massage, etc., and rapidly regained the functions. On the thirty-sixth day he could flex to sixty degrees, and extend to one hundred and thirty-five degrees. On the forty-second day flexion was perfect, and extension was to one hundred and fifty-seven degrees, while at the end of the third month the functions were completely restored. There was moderate thickening at the site of the fracture, but no real deformity.

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[1] Read before the Surgical Section of the New York Academy of Medicine, May 14, 1888.

[1] Twelve cases, illustrating the various classes, were exhibited before the Section.

[2] System of Surgery, vol. i., p. 979.

That this form of treatment—confinement for four or five weeks without passive motion—is adapted to cases occurring in adults as well as in children is shown by this man,[1] forty-two years of age, who suffered a fracture through the internal condyle some fifteen months ago. It was accompanied by all of the usual evidences, and he was treated as were the cases whose histories I have just related. The splint was removed for good on the thirtieth day, at which time there obtained flexion to eighty degrees, with extension to one hundred and fifteen degrees. On the sixty-fifth day he had so far improved that he could flex to fifty degrees and extend to one hundred and fifty degrees. The functions are now all complete except extension. which is five degrees short.

When this man first applied for treatment his joint was the seat of extreme swelling, and it is especially in these cases that I have found the plaster splint most admirable. I know of no dressing under which the effusion will so rapidly subside. It exerts an equable pressure and it keeps the parts absolutely at rest. It remains where it is placed. I apply it to all cases as soon as seen. If the injury is very recent and one expects further swelling, especially if he has subjected the joint to much of manipulation in arriving at his diagnosis, he naturally applies the splint rather more loosely. And I know of no dressing which affords the patients as much of comfort as this; they very rarely experience pain after the first twelve or twenty-four hours. And in but one case has the splint required removal; this was in a child who had a T-fracture. The dressing was put on rather too tightly and had to be taken off the following day; it had occasioned considerable swelling of the hand.

These cases went through a prolonged examination before a permanent dressing was put on. Most of them, before reaching me, were examined by the surgeon in charge of another class and by one or two of his assistants. After applying to me they were subjected to further handling by my assistant and myself. I do not know that any of them were the worse for this manipulation, and it assures me that diagnosis was as accurate as possible; for if we failed to agree in diagnosis the patient was given an anæsthetic, and we then conferred until we did agree.

To recapitulate the twelve cases of internal condyle: Nine perfectly recovered their functions; in one all motions became complete except extension, this being five degrees short; one is *said*[2] to be perfect, though he has not been seen, and one is yet under treatment. In none is there deformity; one cannot consider the normal callous thickening which follows any fracture as true deformity.

CLASS C. *Fractures through the external condyle entering the articular surface.*—These may run from the outer border downward and inward to the capitellum, or farther in, reaching the trochlea. It is, however, most difficult to determine just the extent of the line, especially if there be much of swelling, and I have been content with putting them in one general class. Extra-articular fracture in this region I have not seen.

The general treatment has been as in the preceding classes. Of late, when first seen, the forearm has been placed in extension, and its angle with the arm compared with that of the opposite side; if no difference be noted, the elbow is incased in plaster at the angle of ninety degrees, but if there be a loss of the "carrying point" it is abducted to its proper position and put up at about one hundred and thirty-five degrees for a couple of weeks, at the end of which time it is brought up to the right angle.

CASE.—S. M——, a boy, five years of age, applied at the hospital, August 11, 1887, with a history of having fallen on the left elbow twenty-four hours previously. The distance of his fall was not known. He was found to have a fracture of the external condyle extending to the trochlear surface, with all regular evidences and slight posterior displacement. It was reduced, and put up in plaster at a right angle. Examined on the tenth day, and position found to be excellent. Splint taken off on the twenty-second day, at which time there was union with thickening and broadening of the condyles; flexion to eighty degrees, extension to one hundred and thirty degrees, pronation and supination all but perfect. General advice. On the twenty-sixth day (this was four days later) there was flexion to seventy-five degrees, extension to one hundred and fifty degrees. On the fortieth day flexion was perfect; extension, a few degrees short. Now all motions are complete, but you find the forearm more nearly in a straight line with the arm than on the opposite side.

I show you also a boy who was injured on May 13, 1887, just one year ago. He was treated in the same way, but did not escape deformity. The external condyle is very prominent externally and a trifle displaced backward. It simulates the "gunstock" deformity, yet, if you carefully compare the inner contour of the extended limb with that on the opposite side, you will see that there is no difference. The deformity is due to bony prominence, not to a changed axis of the forearm.

The results in these 15 cases of external condyle are not all that I could desire. I have noted 8 of them as perfect both in position and functions; 2 present no deformity, but the functions are a little short of complete; 2 have perfect functions, but a moderate degree of deformity; in 2 there is both deformity and limited motion, the latter, however, amounting to but a few degrees; 1 case is yet under treatment.[1] I have no doubt that in each the function will be completely restored, as its limitation does not in any case seem to be mechanical.

In each case the deformity is due to a marked prominence of the condyle and its slight backward displacement; in none is there a reversal of the normal elbow obliquity—the "gunstock" deformity.

CLASS D. *Fracture through the base of the condyle.*—Six cases—4 in children, 2 in adults; 3 were transverse, 3 oblique, the line of fracture in the latter running from a point somewhat above the internal condyle downward and outward to the external condyle. In all, the lower fragment was strongly drawn backward, occasioning the classic similarity to a posteriorly dislocated forearm. All were put up at a right angle, the forearm, which controls the lower fragment, strongly drawn forward until the epicondyles very fully regained their relation to the long axis of the shaft. Of the transverse fractures two recovered perfectly, and the other is, as you see, in perfect condition except that complete flexion is short, this being prevented by the coronoid process impinging on a considerable anterior callus. The oblique fractures occasioned more of trouble; one, in a child, resulted in extreme gunstock deformity.

CASE.—M. C——, a girl, aged three, injury not known; very much of swelling; lower fragment strongly drawn up. Placed at right angle, thinking that the deformity was well corrected, and plaster splint applied. The parents did not return with her until the thirty-ninth day, when the splint was removed. The external condyle was found to be very prominent, with bony fulness at the flexure of the elbow. Motion from eighty degrees to one hundred and ten. Six weeks later she had regained the complete use of the joint, with the exception of extreme flexion. The lower fragment was displaced upward and inward, and there was marked gunstock deformity. Had the patient returned as directed, the splint would have been removed at the end of ten days or two weeks, when deformity could, I think, have been corrected. In support of this I will ask you to contrast the following case :

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[1] Patient exhibited.

[2] I have since examined this patient and found the joint free from deformity and the functions completely restored.

[1] This patient has since been discharged, with a perfect result.

B. C——, a man, aged twenty-nine, fell, three hours before his admission to the hospital, a distance of six feet, striking on the postero-external aspect of the left elbow. Oblique fracture through the condylar base, the lower fragment being strongly drawn backward, upward, and inward. The deformity was thought to be reduced, and the elbow put up at an angle a little greater than that of a square. The splint was removed on the fourteenth day, and the fragment found to have slipped a little inward. The forearm was now abducted to correct the deformity, and fixed at an angle of one hundred and thirty degrees. Splint removed on thirty-second day ; union ; motion through an arc of fifty degrees. Six weeks later the functions were fully restored. I show him to you now ; you see that there is much thickening, but no true deformity, the extended elbow having practically the same obliquity as its fellow.

These oblique fractures did not enter the joint, for the external condyle moved with the lower fragment.

CLASS E. *Separation of the lower epiphysis.*—Two children, one two and the other six years of age, presented themselves with this lesion, and in each a perfect result was attained by simple confinement at a right angle, the lower fragment being drawn well forward as in the fractures through the base.

CLASS F. *Comminuted fractures*—Four cases, of which the following are brief histories :

CASE I.—M. G——, three and a half years of age, girl ; one-half hour before admission slipped to the floor from a bed, striking on the right elbow. T-shaped fracture, with all of its evidences. Plaster splint applied at once, but it was put on rather tightly, and swelling necessitated its reapplication the following day. On the twenty-fifth day there was union ; functions, ninety and one hundred and fifteen degrees ; elbow much thickened. The functions gradually returned, and are now complete. There is no deformity.

CASE II.—E. V. E——, a man, thirty-six years of age, applied for treatment December 31, 1887, with a history of having sustained an injury to the left elbow, while in a state of intoxication, some twelve hours previously. The patient was a very fat man ; he was grossly addicted to alcohol, and during his treatment was frequently under its influence. The lower end of the humerus was found to be the seat of a comminuted fracture, the precise lesions in which could not be determined. It felt almost like the "bag of beans." and I judged that there must be several fragments. There was great deformity, and the joint was freely movable in all directions. The parts were moulded into shape as best one could, and a plaster splint applied with the elbow at a right angle. It was frequently examined. There was no union until the fortieth day, and even then it was not firm. Despite all efforts it became anchylosed, and at the request of the patient the angle was fixed at one hundred and fifteen degrees (he is a telegraph-operator and this is the most convenient position for him). He is now in a Christian home for the cure of his alcoholism.

CASE III.—F. R——, a boy, sixteen years of age, sought treatment at the hospital January 31, 1888, suffering from a typical T-shaped fracture of the left humerus. It was compound posteriorly, the lower end of the upper fragment having come down through the skin, making a wound a trifle smaller than the end of the little finger. The wound was very carefully dressed by Dr. Kimball, of the house-staff, who applied a right-angled splint, and advised the patient to seek house or hospital treatment. This, however, he refused to do, and insisted upon returning as an out-patient. I did not disturb the dressing until the seventh day, when it was removed under ether. The wound was found to be occluded; the position apparently good, though there was very much of swelling. Plaster applied with the elbow at a right angle ; union on the thirty first day ; flexion to seventy-five degrees ; extension to one hundred and ten degrees ; very much thickened. The patient was given careful advice as to baths, massage, use, and the like, but he never followed them and did not return to the hospital. I saw him a few days ago, and found the functions limited. There was flexion to eighty-five degrees and extension to one hundred and twenty-five degrees. Pronation and supination were about one-half. I could not judge well regarding the deformity, for the limb could not be sufficiently extended, but it seemed to be limited to a broadening of the condyles.

CASE IV.—J. W——, a boy, seven years of age, sought treatment for an injured elbow May 11, 1887. He was carefully examined under ether, and the left humerus found to be the seat of an epiphyseal separation through the condyles, the internal epicondyle being also broken off and the fissures apparently communicating. He was treated as were the preceding cases, and recovered without deformity. The function of extension, however, did not return, and at the end of the fourth month it was limited to one hundred and sixty-five degrees. The other motions were, however, perfect.

Of these four comminuted fractures one was discharged with a perfect result, one is perfect except that extension is fifteen degrees short, one is anchylosed, and one has but very limited functions ; still, I feel that you will agree with me that the latter two cases were very difficult ones. The anchylosed joint (the only one out of fifty, by the way, in which this result occurred) could not have been brought out differently, I think, by any method of treatment. The boy with the compound fracture paid no attention, after removal of the splint, to the functions, but simply carried the arm in the fixed position. He will neither move it nor allow others to do so.

The fiftieth case of my series, one which I judged as a separation of the trochlear epiphysis, has already been presented to this Section, and an account of it may be found in THE MEDICAL RECORD for March 17, 1888.

To recapitulate the results in the following fifty cases : Thirty-three completely regained the functions and present no deformity ; in seven the functions are a few degrees short of full ; in one they are very limited ; in two there is moderate deformity with a slight loss of function ; in one there is extreme gunstock deformity with complete use of the limb ; one is anchylosed, and three are yet in the second month of treatment.

If you will allow me to subtract the three [1] which are progressing favorably under present treatment, and to predict, as I think we honestly can, a full restoration of functions in the seven which are now a few degrees short, we shall have forty cures out of forty-seven cases, four fair results, and three distinctly bad. I must claim, however, that in two of these last three cases the result was unavoidable.

In most of the foregoing cases the injury was ascribed to a fall on the elbow, this varying from a slip on the sidewalk or a fall from a chair to a descent of ten feet ; in two to a fall on the hand, in one to the passage of a wagon-wheel, in one to a violent wrench to the elbow ; in several the nature of the accident was not known.

I do not think that, from a diagnostic point of view, very much real importance attaches to the nature of the injury ; our diagnosis must be based on the evidence gotten by physical examination of the affected part, and, as accurate diagnosis is indispensable to intelligent treatment, you will pardon me if I briefly allude to its more salient points.

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[1] These are noted in the table as now completely cured (November 1, 1888).

No. of case.	Age.	Sex.	Date when first seen.	Lesion.	Results.		Remarks.
					a. Functional.	b. As to deformity.	
1..	11 yrs.	M.	Nov. 3, 1886....	Fracture through the internal epicondyle.	Perfect	None.	
2..	14 yrs..	M.	Dec. 15, 1886...	Fracture through the internal epicondyle.	Perfect	None.	
3..	11 yrs..	M.	Jan. 10, 1887...	Fracture through the internal epicondyle.	Perfect	None.	
4.	3 yrs..	F.	Feb. 21. 1887...	Fracture through the internal epicondyle.	Perfect	None.	
5..	17 yrs..	M.	March 12, 1887.	Fracture through the internal epicondyle.	Extension to 170 degrees	None.	
6..	45 yrs..	M.	June 1, 1887...	Fracture through the internal epicondyle.	Perfect	None.	
7..	31 yrs..	F.	June 11, 1887 ..	Fracture through the internal epicondyle	Perfect	None.	
8..	8 yrs..	M.	Nov. 15, 1887...	Fracture through the internal epicondyle.	Perfect	None.	
9..	14 yrs..	M.	Nov. 27, 1887...	Fracture through the internal epicondyle.	At end of 3d month: flexion to 75 degrees, extension to 145 degrees, then lost sight of.	None	This patient received no care at home, and could not be made to follow advice as to active motion, massage, etc.
10..	14 yrs..	M.	March 30, 1888.	Fracture through the internal epicondyle.	Perfect	None.	
11..	26 yrs..	M.	Nov. 13, 1886...	Fracture through the internal condyle entering joint.	Perfect	None.	
12..	10 yrs..	M.	Nov. 14, 1886...	Fracture through the internal condyle entering joint.	Perfect	None.	
13..	13 yrs..	M.	Feb. 2, 1887....	Fracture through the internal condyle entering joint.	Perfect	None.	
14..	41 yrs..	M.	Feb. 12, 1887 ..	Fracture through the internal condyle entering joint.	Extension about 5 degrees short of complete, otherwise perfect.	None	The functions were perfectly restored, Oct. 10, 1888.
15..	15 yrs..	M.	March 30, 1887.	Fracture through the internal condyle entering joint.	Perfect	None.	
16..	14 yrs.	M.	April 17, 1887 .	Fracture through the internal condyle entering joint.	Perfect	None	This boy was sent to a reformatory when the functions were yet a few degrees short of complete. I was told by his parents, however, that he regained them perfectly, and so note.
17..	12 yrs..	M.	April 27, 1887..	Fracture through the internal condyle entering joint.	Perfect	None.	
18..	9 yrs..	M.	Sept. 17, 1887	Fracture through the internal condyle entering joint.	Perfect	None.	
19..	12 yrs	M.	Nov. 4, 1887 ...	Fracture through the internal condyle entering joint.	Perfect, except extension; this 10 degrees short.	None.	
20..	2 yrs	F.	Nov 10, 1887...	Fracture through the internal condyle entering joint.	Perfect	None.	
21..	13 yrs.	M.	Feb. 13, 1888...	Fracture through the internal condyle entering joint.	Extension 10 degrees short	None.	
22..	32 yrs.	M.	April 10, 1888..	Fracture through the internal condyle entering joint.			Patient was under treatment when paper was read; result now noted as perfect in every way (Nov. 1, 1888).
23..	7 yrs..	M.	Oct. 8, 1886..	Fracture through the external condyle into joint.	Perfect	None.	
24..	3 yrs.	M.	Jan. 22, 1887...	Fracture through the external condyle into joint.	Perfect	External condyle prominent, externally displaced a trifle backward.	
25..	6 yrs	M.	Feb. 10, 1887.	Fracture through the external condyle into joint.	Extension 10 degrees short	External condyle much thickened and prominent.	
26..	3 yrs..	M.	March 13, 1887.	Fracture through the external condyle into joint.	Functions nearly perfect on fortieth day.	None	Patient sought with a view to ascertaining present condition, but cannot be found.
27..	6 yrs..	M.	May 15, 1887...	Fracture through the external condyle into joint.	Perfect	External condyle much thickened and very prominent.	
28..	7 yrs.	M.	June 13, 1887...	Fracture through the external condyle into joint.	Perfect	None.	
29..	11 yrs..	M.	July 27, 1887...	Fracture through the external condyle into joint.	Perfect	None.	
30..	5 yrs..	M.	Aug. 11, 1887 ..	Fracture through the external condyle into joint.	Perfect	None.	
31..	8 yrs..	M.	Oct. 15, 1887...	Fracture through the external condyle into joint.	Perfect	None.	
32..	4 yrs.	F.	Dec. 2. 1887....	Fracture through the external condyle into joint.	Flexion and extension both a little short of complete.	None.	
33..	6 yrs.	M.	Jan. 2, 1888....	Fracture through the external condyle into joint.	Perfect	None.	
34..	3 yrs..	M.	Jan. 8, 1888....	Fracture through the external condyle into joint.	Perfect	None.	
35..	3 yrs..	M.	Jan., 1888......	Fracture through the external condyle into joint.	Perfect	None.	
36..	7 yrs.	M.	March 9, 1888..	Fracture through the external condyle into joint.	Flexion to 80 degrees, extension to 145 degrees.	External condyle displaced backward, and prominent externally.	
37..	30 yrs..	F.	April 3, 1888...	Fracture through the external condyle into joint.	Under treatment when paper was read, but since discharged with a perfect result.		
38..	4 yrs..	F.	May 9, 1887...	Fracture through the base of the condyles, transverse.	Flexion 12 degrees short of complete, other functions normal.	None.	
39..	3 yrs..	F.	Sept. 13, 1887..	Fracture through the base of the condyles; transverse.	Perfect	None.	
40..	4 yrs..	M.	Oct. 9, 1887....	Fracture through the base of the condyles, transverse.	Perfect	None.	
41..	3 yrs..	F.	Sept. 13, 1887..	Fracture through condylar base: *oblique*.	Flexion 15 degrees short, otherwise complete.	Extreme gunstock deformity..	Patient was not brought back by parents unti thirty-five days after application of first splint (see previous history).
42..	29 yrs..	M.	Feb. 3, 1888....	Fracture through condylar base; *oblique*.	Perfect	None.	
43..	32 yrs..	M.	March 21, 1888.	Fracture through condylar base: *oblique*.	Patient under treatment when paper was read, has since perfectly recovered.		
44..	2 yrs..	F.	Jan. 22, 1887...	Diastasis through condyles	Perfect	None.	
45..	6 yrs..	M.	Sept. 2, 1887...	Diastasis through condyles	Extension to 157 degrees	None.	
46..	3 yrs..	F.	Oct. 14. 1887...	"T"-shaped	Perfect	None.	
47..	7 yrs..	M.	May 11, 1887...	Separation of epiphysis; meeting fracture through internal condyle.	Extension to 165 degrees	None.	
48..	36 yrs..	M.	Dec. 31, 1887...	Extreme comminution; simple	Anchylosis		See previous history.
49..	16 yrs..	M.	Jan. 31, 1888...	"T"-shaped; compound	Flexion to 85 degrees, extension to 125 degrees.		See previous history.
50..	8 yrs..	M.	....	Separation of trochlear epiphysis	Perfect	None.	

These I think to be the presence of bony crepitus and abnormal mobility. Disability, local pain, and tenderness, ecchymosis, and swelling are common to contusions and sprains as well as to fractures, though present, as a rule, to a greater degree in the latter. We are told to see that the bony prominences, the olecranon, head of the radius, and epicondyles bear their normal relation one to the other. This is good as far as it goes: it bars out dislocation, but there is frequently fracture without appreciable displacement.

Well-localized bony crepitus and a false point of motion are the evidences on which our diagnosis must be based.

By firmly grasping the humeral shaft with one hand and seizing the condyles transversely, "rocking" the lower part strongly on the upper will determine whether the condylar portion is attached or detached. Each epicondyle and condyle may in turn be subjected to a like manipulation. Should the base be broken off, one condyle must be rocked upon the other to determine the presence of three or more fragments. If much swelling be present it is not easy to grasp the condyles, yet I have found that steady, firm pressure will sink the fingers until they reach and hold the bony points.

Swelling obscures the outer condyle to a much greater extent than the inner. Even though the effusion be great, I have never had difficulty in grasping the latter. The manipulation should be gentle yet firm, and one should apply all due force to the bony parts. He who handles a traumatic elbow as lightly as he would if it contained eggs which he feared to break, will not, in all cases, arrive at the most accurate diagnosis.

Nor am I in sympathy with those who await a subsidence of the swelling before completing the diagnosis. It is better to work in the light than in the dark, and we can direct our remedial measures much more intelligently after learning of the integrity or lesion of the bony parts.

The examination is always more satisfactory when made under an anæsthetic, and it should be administered in all cases of doubtful diagnosis, or in those in which it does not seem advisable to subject the patient to the necessary pain. Joint-crepitus at the elbow is very misleading; when there is a moderate plastic exudation one articular surface grates upon the other in a most deceptive way. This can sometimes be obviated by having assistants hold the bones apart, but even then the force necessarily used in "rocking" the bony parts jars the joint. In these cases an anæsthetic is indispensable, and, even with its aid, diagnosis may be obscure. I have of late seen several such elbow-cases which presented themselves without luxation, yet in which, under ether, the bones of the forearm were very easily thrown backward, leaving the lower end of the humerus to project anteriorly and capable of thorough and satisfactory examination.

Treatment seeks to accomplish two prime ends. First, complete restoration of the joint-function; second, the avoidance of deformity.

Regarding the best way in which the elbow-motions may be regained, surgeons differ. The dictum was formerly laid down that passive motion should be begun early and repeated frequently, and the rule was thought to be a cardinal one.

The late Dr. Hamilton said of fractures through the base of the condyles: "Gentle passive motion should be applied as early as the seventh or eighth day and repeated every second or third day," while in fractures through the internal condyle he advised that passive motion be begun at the end of the first week, and that the splints be then left off. I think I am correct in supposing that this teaching is believed and followed by the larger number of practitioners to-day, and, although my observation has necessarily been limited, I do not hesitate to place myself with those who think such practice radically wrong.[1]

Do not the cases which I have shown and cited to you prove it safe to keep this joint still until such time as union is complete? In most of them the functions were practically perfect at the end of the third month, in some of them they were perfect at the middle of the second, and it is principally to demonstrate this that I have brought the subject before you.

Are like results gotten by the advocates of passive motion? It is said that the passive motion should be so slight as not to cause pain, but in each of the cases which have come to me with stiffened joint after the employment of this, the patient has averred that the surgeon's movements were painful.

Stimson[2] says: "I do not think early passive motion is necessary to prevent stiffness of the joint, and when it is painful, the pain lasting for some time, I believe it to be actually harmful by increasing and prolonging the inflammation." He also says: "The records of cases are filled with instances in which the joint has become almost or entirely rigid under treatment by passive motion, and then after the tenderness had ceased mobility has returned gradually under ordinary daily use of the limb." We have all seen such cases. Allis[1] says: "The sequel to these injuries is so much dreaded that authors and surgeons are most earnest in pointing out the necessity of early, and, if necessary, persistent passive motion. Some recommend that this feature be instituted even during the first week, others in the second, but all agree that it is never to be lost sight of. Upon this subject I desire only to state my own practice, not to recommend it. . . . I believe that it cannot hasten, but may greatly retard the cure."

Again, how can displacement be prevented if the parts are daily moved before there is union? The forearm bones are powerful levers through their attachment to the lower fragment, and must effect changes in its position. It was said that deformity was of no importance as long as the functions were restored. That the functions are of the greater value no one will deny, but if we can restore them without deformity it is surely our duty to do so.

The callus must be greater when the parts have been kept in motion, and this excessive deposit may of itself act as a mechanical impediment to flexion and extension.

Assuming, then, as I think we may, that deformity is more certainly avoided by keeping the parts at rest, in which position is this best effected? That a separated epicondyle is best replaced under flexion within a right angle I think nobody will deny, and I am equally sure that it is the best attitude in which to treat the transverse fracture through the epiphyseal line or through the base, traction on the forearm carefully drawing the lower fragment very well forward, as all tendency is toward its backward displacement. To be sure, this puts the triceps tendon on the stretch, but if the parts are held in place until the plaster dressing becomes firm they are well fixed and can hardly slip.

Dr. Allis, in the paper to which I have previously alluded, very strongly urges the position of full extension in the treatment of all of the classes, and he says that in his practice it has never resulted in what might be called deformity.

Dr. Allis adduces very ingenious arguments to show that when made splints or even roller bandages are applied in the flexed position, the broken outer condyle is sure to be drawn downward or the fractured inner condyle pushed upward, either case resulting in "gunstock" deformity.

The cases which are noted in this paper go to show that this is not always so, for nearly all were treated in the flexed position, and in but one was there the "gunstock."

And my own observation has tended to show that in fractures through the inner condyle extension favors anterior displacement of the lesser fragment, it being pushed forward by the olecranon, which strongly impinges upon it from behind.

That the gunstock deformity may be avoided by the extended position I quite admit, for then one may make the elbow-obliquity just what he desires—in short, cause it to correspond with that of the opposite limb; but this correction may, in some cases, be made at the expense of anterior or posterior displacement. I feel, however, that we are greatly indebted to Dr. Allis for showing us that extension will correct the gunstock, which is of much greater import than a slight anterior or posterior displacement; and if any given position would correct but one, I would make that one the former, always considering that the chosen angle did not hazard functional loss.

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[1] The reader is referred to a paper by Dr. V. P. Gibney on "Immobilization in Articular Disease," published in the New York Medical Journal, vol. xlviii., p. 457.

[2] Treatise on Fractures, p. 403.

[1] Annals of the Anatomical and Surgical Society, vol. ii., No. 8.

Stimson says, of the treatment of fractures through the outer condyle: "It will be found in practice that in some cases the flexed position, and in others the extended position, favors displacement of the radius, and the treatment must be varied accordingly." I think that the rule will apply equally to the internal condyle.[1] In fracture of either I would compare the extended limb with its fellow, and, if there was a loss of elbow obliquity, correct it by abduction and immobilize in a position of semiflexion.

In conclusion, I beg to express my thanks to Dr. W. T. Bull for kindly placing this material at my disposal, as well as for his frequent and wise counsel; also to Drs. P. E. Tieman, E. B. Dench, L. L. von Wedekind, and G. K. Swinburne, house-surgeons to the Chambers Street Hospital, for their careful and efficient assistance in the treatment of the cases.

18 EAST TWENTY-FOURTH STREET.

ASEPTIC CLIMATES WITHOUT ALTITUDE.

BY W. H. GEDDINGS, M.D.,

AIKEN, S. C.

AT the recent meeting of the American Climatological Association in Washington, opinion was divided as to whether altitude is an essential factor in the treatment of pulmonary phthisis, a large number of those present claiming that an aseptic atmosphere, with little or no elevation, was fully as efficacious as one at a higher altitude, many of them contending that dryness was even more important than elevation. One speaker, Dr. E. T. Bruen, of Philadelphia, maintained that instead of being an advantage altitude was undesirable, as it necessitated continuous residence, and in the event of recovery the patient could not return to his former home at sea-level. In this connection Dr. Vincent Y. Bowditch, in a very interesting paper, "The Relative Importance of Different Climatic Elements in the Treatment of Phthisis," cited Aiken, S. C., as a resort where, owing to great dryness of the atmosphere and soil, and at an insignificant elevation of only a few hundred feet, most excellent results had been obtained in the treatment of pulmonary phthisis, basing his assertion upon cases published by the writer in THE MEDICAL RECORD[2] several years ago, and upon his own experience with cases he had sent there. After hearing Dr. Bowditch's remarks I concluded that it would be opportune to present a brief paper on the subject; the more so because, in my previous articles on Aiken, published several years ago, I contented myself, as was then the custom, with simply giving an account of the meteorological phenomena of its climate. The modern medical climatologist, while acknowledging the necessity for accurate observations of temperature, rainfall, etc., is more especially desirous of information in regard to the purity of the atmosphere and its freedom from micro-organisms, and the physician in search of a health-resort for his phthisical patients wishes to know, above all things, the extent to which the air of the place proposed is aseptic. The meteorological factor most common to aseptic climates is a low degree of humidity. Warmth and moisture promote putrefaction, while dryness prevents it. It is a well-known fact that the carcasses of animals exposed to the dry air of Buenos Ayres, instead of becoming decomposed, are simply dried up, a method of preservation of which we have another example in the mummification of corpses on the dry plains of New Mexico; but the most remarkable instance of this nature was the desiccation of human remains in ancient Peru, where, according to Garcilaso, the bodies of the Incas were preserved, "perfect as in life, without so much as a hair or an eyebrow wanting." "In the great Temple of the Sun at Cuzco, their bodies, ranged on one side, and those of their queens on the other, sat clothed in their former princely attire upon chairs of gold, their heads inclined downward, covered with raven black or silver white hair, and their hands placidly crossed over their bosoms."[1]

Some twenty or thirty years ago warmth and equability of temperature were considered essential for pulmonary invalids, and as the latter is always associated with moisture the hapless victims of consumption were sent to semitropical insular resorts—the English to Madeira, and the Americans to Havana. A few were doubtlessly benefited, as the consumptive often is, even when the change of residence is to a climate worse than that in which he had previously lived; but these were the exceptions to the general rule, and most of them died, some of them even sooner than they would have done had they remained at home. But in those days consumption was regarded as an incurable disease, and as the balmy air of the South mitigated the severity of the cough, which was at that time considered one of the most important symptoms, the physician felt that he had done his best for his patient by placing him in an atmosphere where he could end his days in comparative comfort.

In the Roman Catholic Church there is a congregation of females known as the "Ladies of the Sacred Heart," with convents scattered over Europe and America. As is always the case with cloistered nuns, consumption is quite frequent among these ladies. Formerly, when an inmate of one of the houses in the United States showed symptoms of phthisis, she was immediately transferred to the convent in Havana, but as no benefit was derived from the change, some of them, who happened to be Canadians, pleaded to be allowed to end their days in their native land. The request was granted, and it was noticed that some of them, instead of dying, were improved by the change, and eventually recovered. Then came the Minnesota craze, and even in that extremely cold but comparatively dry climate the results were far better than in the moist, relaxing air of the South. A few still send patients to insular climates like Nassau or Bermuda, but most of the places which at present enjoy any reputation as resorts for phthisical patients are more or less dry, and, within reasonable limits, the dryer they are the better are the results. At the head of the list stand Colorado and New Mexico, with a mean annual relative humidity of forty-nine to sixty-one per cent.; next is Aiken with fifty-eight per cent., and then the Riviera with from sixty-four to sixty-eight per cent. That the ever-increasing popularity of dry, aseptic resorts is not the result of the bacterial hobby is proved by the fact that they came into vogue before Pasteur had published the results of his classic experiments, or Lister had immortalized his name, and revolutionized surgery, by the application of antiseptic principles to the treatment of wounds.

The investigations of the elder Bowditch, in the United States, and of Buchanan and Simon, in England, had established the coincidence of pulmonary consumption with soil moisture. "It is shown," says the latter, "to be a disease which develops itself in proportion as men are dwellers upon a humid soil." A glance at any geographical chart of the distribution of phthisis shows that it is most frequent on the sea-coast, on the shores of great lakes, and on the banks of large rivers, and that it diminishes in frequency as we leave these large bodies of water and approach the interior of the continent. Thus it is quite frequent in Lower Egypt, less so in Middle

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[1] Dr. G. W. Gay (Boston Medical and Surgical Journal, vol. cviii., p. 492) recommends that in fractures through the external condyle the elbow be acutely flexed, in order to prevent anterior displacement of the head of the radius or of the fragment itself. While I have never treated the fracture by this position I have, since reading Dr. Gay's article, in two instances temporarily placed the broken elbow at an acute angle, and in each case the fragment was markedly thrown backward by the pressure of the radial head. I have not yet met with a case of broken outer condyle in which the head of the radius had become displaced in front of the fragment.

[2] THE MEDICAL RECORD, New York, November 15, 1879; October 30 and November 6, 1880; October 3 and 10, 1885.

[1] New American Cyclopedia, 1859, article, Embalming.

Egypt, and quite rare in Upper Egypt. There are doubtless many other agencies at work in the production of the tubercle bacillus, but no one familiar with pulmonary consumption can deny that moisture is the most essential of all the climatic factors in its development. Without moisture the bacillus appears to become inert and, for the time being, harmless. Making all due allowances for the protection afforded by a strong, healthy organism, and granting that Metschnikoff's phagocytes really possess the power of devouring and assimilating the invading bacilli, it still remains a remarkable fact that, inhaling constantly, as many of us do, especially physicians and nurses, these poisonous micro-organisms, there are so few cases of contagion. At the Brompton and Victoria Hospitals for Consumption we are told that pulmonary phthisis is not more common among the physicians and attendants than it is among the same class of persons in other institutions in London, and yet bacilli were found by Williams in large numbers in the air of the former hospital. With a view to determining the extent to which pulmonary phthisis is contagious I made it a practice, for a number of years, when examining married consumptives, to question them as to the possibility or probability of the husband having been infected by the wife or the wife by the husband, and in only two or three cases out of six hundred, one-half of whom were, or had been married, was this alleged to have been the case, and even in these the evidence was far from conclusive. Thus it appears that consumption is rarely contagious when the bacilli are conveyed through the medium of the air; but it is well known that the virus may be readily inoculated, as has been demonstrated by numerous experiments upon animals, and that it is frequently transmitted from parents to their children. Furthermore, cases of direct contagion are not uncommon. Of the latter we have an interesting example in the case described by Reich.[1] "A consumptive midwife was in the habit of removing by aspiration the mucous products which obstruct the primæ viæ of newly born infants, and, if the slightest asphyxia appeared, of insufflating the lungs with her own breath. Ten of these children, in whose family no predisposition existed, died of tuberculous meningitis, there being no epidemic of the kind in the district. The other midwife in the same neighborhood, who was healthy, had no cases of meningitis."

For a number of years I have resided near a large hotel which, during the winter, is frequented by a number of consumptives in every stage of their disease. These people, in expectorating, not infrequently miss the spittoon, and the muco-purulent sputa reach the carpet-covered floor. Others, again, use their pocket-handkerchiefs as cuspidors, or, as I have seen them do, they spread over the bed a large newspaper for that purpose, preserving it until the physician makes his visit in order that he may see the amount and character of the expectoration. Thus, even when not deposited upon the floor in the first instance, the sputa dries and portions of it, after being diffused through the atmosphere of the rooms, eventually settles upon the carpet. There, mixed with dust, the bacilli are frequently stirred up by sweeping, but, in obedience to the laws of gravity, soon return to their resting-place on the carpet. This goes on for months; day after day, week after week, the process is repeated, and it would be difficult to devise a better method of making a wholesale collection of tubercle bacilli.

After the close of the season these carpets are carted out to the lawn where, suspended between trees, they are beaten by eight or ten stalwart negroes. This operation, seldom completed in less than a week, evolves clouds of dust which these creatures inhale continually for eight or ten hours a day. The hard labor of itself necessitates deep inspiration, during which the bacilli-laden dust is drawn into the lungs, but this is made even more effective by the loud singing and yelling with which they keep time to the beating of the carpet. If infection of the lungs through the medium of dry air laden with bacilli were possible, it would certainly occur under conditions like the above; and yet, although I have made it my business to observe these men for six years, not a single case of phthisis has occurred among them, nor have they themselves the slightest fear of contracting the disease. This, however, is not the case with the washerwomen who wash the filthy pocket-handkerchiefs saturated with consumptive sputa. Among these several have succumbed to pulmonary phthisis, and many of them claim that their health has been seriously impaired by the work. They realize fully the danger to which they are exposed and have threatened to demand extra pay for this class of wash.

Here we have two classes of work-people of the same race, and some of them doubtless belonging to the same family, both inhaling large numbers of bacilli. Why do the carpet-beaters escape and why do the laundresses become infected? I believe that the reply to this question is that the carpet-beaters work in a dry atmosphere and the washerwomen in one saturated with steam and moisture. The dirty linen, covered with dry, decomposed sputa, all full of bacilli, are subjected to boiling. During the earlier stages of the process, and before the temperature becomes so high as to be incompatible with the vitality of the microbes, a cloud of ill-smelling, sickening vapor is evolved, and it is to this that those who become ill attribute their disease. Fortunately the climate is so mild that the work is done in the open air, otherwise the number of those infected would be much greater. In the case of the carpet-beaters, owing to the comparatively small amount of moisture in the atmosphere, the bacilli probably reach the air-passages either in a state of inactivity or so enfeebled that their entrance into the system is readily prevented by the means which nature has provided for that purpose, be they the phagocytes of Metschnikoff or some other agency. The ubiquity of the tubercle bacillus forces us to admit the existence of some such protecting power, for, were it otherwise, the greater proportion of mankind would sooner or later become tuberculous. The washerwomen, on the other hand, work in a warm, moist atmosphere, the conditions most favorable to bacterial life; the bacilli are stronger, and with increased vitality they become more dangerous—the safeguards provided by nature are less able to resist their attack, and, unless favored by an unusually strong constitution on the part of the person exposed, the bacilli gain the victory and the individual succumbs to the disease.

At the commencement of this article allusion was made to the almost complete abandonment of what was formerly regarded as the ideal climate for the consumptive. Nowhere, perhaps, in the domain of medicine has the profession been so completely swayed by the fashion of the hour as in the climatic treatment of pulmonary diseases.

Reviewing the past thirty years, we find the warm, moist climates of the tropics abandoned for the frigid air of Minnesota and Canada, but, these being found too severe, a healthy reaction took place and dry, temperate resorts, like those in the interior of South Carolina and Georgia, became deservedly popular. But, of all the pet theories of climato-therapy, none has proved so seductive, or excited more enthusiasm than that which is based upon altitude. Relying upon the statements of Jourdanet, Archibald Smith, and other travellers, it was claimed that the inhabitants of certain elevated regions were exempt from consumption.

A little later, at a time when the medical mind was deeply interested in the germ-theory, came the painstaking investigations of Miquel, showing that while the air of Paris contained 55,000 to every ten cubic metres, these steadily decreased with altitude until at a height of 13,122 feet they disappeared entirely. These facts and the wonderful success of Lister in the antiseptic treatment of wounds, suggested the application of the same theory to the climatic treatment of disease, and the climate of a place was no longer rated by its temperature, humidity, and other meteorological factors, but according to its freedom from micro-organisms. Aseptic climates became at once immensely popular, and as those of high mountains were alone supposed to be possessed of antiseptic properties, altitude at once became the grand factor in climatic therapeutics. For a number of years the opinions of the advocates of the altitude-theory were received with almost universal acceptation. Mountain-resorts were the only places where consumption could be cured; some few cases might improve elsewhere for a time, but permanent cure could only be achieved in these favored regions. Of late, however, it has occurred to many that the advocates of elevated climates were claiming too much, and that there might be aseptic regions nearer sea-level. On examining the grounds upon which the advocates of altitude base their claim to superiority in the treatment of consumption, we find that one of their chief arguments is the supposed immunity of the inhabitants of certain elevated districts from pulmonary phthisis, but we all know that it is equally rare in Madras, which is a seaport town, and in the Kirghiz steppes, which are actually below the level of the sea. We know, too, from the investigations of Küchenmeister, that the immunity of the mountaineer ceases as soon as he abandons stock-raising and farming and engages in factory work, as has been observed in the Erz and Riesen Gebirge. According to Germain Sée: "The best proof that altitude exercises only a questionable influence is that the inhabitants of elevated regions, when crowded together in confined localities, as is the case in workshops like those at Joux and Chaux-de-Fond, in the Swiss Jura, where, at an elevation of 1,100 mètres (3,609 feet), one finds as many consumptives as in the city of Berlin."[1]

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[1] C. T. Williams: Pulmonary Consumption, p. 88. Philadelphia, 887.

Owing to the diminished pressure the air of high altitudes is more rarefied and contains less oxygen than at the level of the sea, and it is claimed that the diminution of this gas, by necessitating deeper and more frequent inspirations, tends to enlargement of the thorax and to better ventilation of the lungs, and thus acts as a prophylactic and curative agent in pulmonary consumption. This, however, does not accord with the fact just stated, that the mountaineer loses his immunity as soon as he ceases to live in the open air. The barometric pressure is the same in the factory as out of doors, and if he is exempt from the disease in the one instance and liable to it in the other the immunity must be due to some cause other than altitude. There is, as has been suggested by Schreiber,[2] a still stronger objection to the theory that the immunity is due to the diminished pressure of the atmosphere at high altitudes in the fact that the elevation at which immunity is said to occur varies with the latitude, ranging from 1,500 feet in the mountains of Silesia, and from 2,000 to 4,000 feet in the Alps, to from 6,000 to 10,000 feet in the Andes, and yet the rate at which the pressure diminishes is the same in every degree of latitude.

Referring to the immunity of the agricultural population of Switzerland, Jaccoud,[3] a warm defender of the altitude-theory, states, on the authority of Müller's statistics, that the degree of immunity is as great at 900 mètres as it is at 1,300 mètres and beyond that height. It is difficult to reconcile this statement with Miquel's observations, for, if the micro-organisms diminish with altitude, ought not the immunity to decrease in the same proportion?

The altitude-theory numbers among its supporters many of the most eminent specialists in Europe and America. Jaccoud and Herman Weber are among its champions abroad, while in this country Denison has devoted the best years of his life to its study; but, on the other hand, there are many no less distinguished who believe that altitude is not the factor to which are due the good results obtained at many of our mountain sanatoria. According to Nothnagel:[1] "The first essential for the well-being of the consumptive is *pure air*,[2] free from dust, atmospheric air free from all admixture with deleterious substances; to be at Davos in the Engadine, on the sea-coast, or on board of a ship, is immaterial, the determining element is *good, pure atmospheric air*." Herman Weber, the ablest, perhaps, of all the advocates of altitude, is no less emphatic: "All the climatic factors, elevation, temperature, etc., are all far less important for the consumptive patient than *purity of the atmosphere*." Rossbach[3] says: "In every variety of climate, and of climatic factors at the various climatic resorts—be they in the South or in the North—in the interior or on the coast, or on the sea itself—be they high or low—they have all one thing in common, sought for alike by the physician and layman, viz., *pure air, free from dust and smoke*. Dr. Loomis,[4] commenting upon a paper on mountain resorts, remarks that "it was not necessary to go to Colorado to find pure air; and besides, he did not believe that high altitude of itself was of the slightest importance. The great desideratum was *purity of the atmosphere*." "The air," says Oertel,[5] "must be rich in oxygen, dry, and free from dust."

Many pages might be filled with quotations like the above, but the repetition would be wearisome. I cannot, however, refrain from adding the opinion of that genial writer on medical climatology, Dr. Burnay Yeo.[6] "Wherever such air is found—pure dry air in unlimited amount—on the high table-lands of Mexico, in the elevated valleys of Switzerland, in the Kirghiz steppes of Asiatic Russia, in the pine-forests of Central Germany, and on the open sea—wherever men live a life in the open air, away from the emanations of cities, and from too close contact with humanity—in all such places we hear of consumption becoming arrested and cured. The bacillus tuberculosis seems to love hot moist air, and air freely charged with the exhalations of humanity; warmth and moisture seem to provoke it into special activity, while *dry air* at a comparatively low temperature seems to be inimical to it."

From the foregoing observations it appears to be quite evident that altitude is not of itself an essential factor in the climatic treatment of pulmonary consumption, and there is no reason why equally good aseptic climates may not be found at lower levels. I will now endeavor to prove that we have at Aiken, S. C., such an aseptic climate. The air there, like that of Colorado, is exceedingly dry, and has at times been even dryer than that of Denver, as was the case during the first four months of 1886, when the mean relative humidity of Denver was 61.09 per cent., and that of Aiken only 56.22 per cent. The dryness of Aiken is all the more remarkable when we compare it with other places in the same section of country. Thus the mean annual relative humidity at Aiken is fifty-eight per cent., while at Augusta, Ga., which is only seventeen miles distant, it is seventy per cent. At Charleston, one hundred and twenty miles eastward, it is seventy-four per cent., and at Thomasville, Ga., one hundred miles south, it is sixty five per cent. Other places may be equally dry, but if they are the humidity-figures have not been published, and up to the present time Aiken ranks as the dryest health-resort in the world outside of the protected region between the Rocky Mountains and the Sierras. This remarkable absence of moisture is due to topographical conditions, and especially to the dryness of its soil. Its elevation of less than

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[1] Germain Sée: La Phthisie bacillaire, p. 89. Paris, 1884.

[2] Schreiber: Ueber das Wesen Klimatischer Kuren, p. 20. Wien, 1376.

[3] Jaccoud: Curabilité et Traitement de la Phthisie pulmonaire, p. 349. Paris, 1881.

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[1] Nothnagel: Allg. med. Zeitung, p. 233, 1885, quoted from Brehmer; Die Therapie d. Chron. Lungenschwindsucht, p. 132. Wiesbaden, 1887.

[2] Here and elswhere, in the following quotations, the italics are my own.—W. H. G.

[3] Rossbach: Lehrbuch d. Physikalischen Heilmethoden, p. 55. Berlin 1882.

[4] Journal of the American Medical Association, p. 670, November 19, 1882.

[5] Oertel: Terrain-Curorte, p. 14, Leipzig, 1884.

[6] Burney Yeo, London Lancet, p. 606, October 14, 1882.

six hundred feet is comparatively insignificant, but, being much higher than the surrounding country and sloping down in every direction, water does not remain upon the surface, but is immediately drained off or is quickly absorbed by the porous soil. Being open on all sides the air circulates freely over the surface of the ground, promoting evaporation, and thus adding to the dryness of the air. The soil consists of porous sand, with a very slight amount of clay, and some idea of its dryness may be formed from the fact that there is no water nearer to the surface than eighty feet, the average depth of the wells being about one hundred and ten feet. The dryness of the air is also attested by the total absence of the gray moss which grows all over the South Atlantic States wherever there is sufficient moisture to sustain it. Guns and instruments seldom rust, nor does mould form readily on unused articles of leather. The chapping of the hands from dryness, observed in Colorado, occurs also in Aiken, but not to the same extent as in that excessively dry region.

I have dwelt upon the subject of dryness at some length, partly because it is the chief characteristic of the Aiken climate, but more especially because moisture is essential to bacterial life, and in the absence of a microscopical examination of the air there is no better test of its purity than that afforded by the psychrometer—the lower the relative humidity the more antiseptic the climate.

Let us now see to what extent this applies to Aiken. We know from the hygrometric records that its climate is very dry; have we any proof to show that it is equally aseptic? An extensive practice in that place, covering a period of twenty years, enables the writer to give an affirmative reply to this question. He has not only thoroughly studied every phase of its climate, but has also carefully noted its effects upon those in health as well as upon the sick, and upon the strength of these observations he will endeavor to prove that in this case, at least, purity of air is synonymous with its dryness.

During the civil war, and consequently long before tuberculosis was declared to be a parasitic infectious disease, Dr. E. S. Gaillard, then a medical director in the Southern Army, but later more widely known as the editor of the journal which bears his name, was directed by the Confederate War Department to select the best possible site for a convalescent hospital for sick and wounded soldiers. He chose Aiken, and afterward summed up its climatic advantages as follows: "Its peculiar dryness of atmosphere, its temperate and equable temperature, its freedom from sudden and violent changes, and the general prevalence of soft southerly and southwesterly breezes." His suggestion was never acted upon, nor am I prepared to indorse all that he says, but, on the whole, it is a fair estimate of the Aiken climate. Surgical cases are rare in Aiken, but every physician who has practised there has had occasion to remark the rapid healing of contused and lacerated wounds, usually with little or no suppuration. During the last season a gentleman while playing polo received a severe laceration of the scalp. The hemorrhage was quite free, and a groom standing by, with more zeal than discretion, and believing that the bleeding should be stopped at all hazards, covered the wound with a handful of earth and sand. Notwithstanding this rough treatment the wound healed rapidly, union taking place without any suppuration whatsoever.

Some years ago a stalwart negro accidentally discharged his pistol, the thirty-two-calibre ball passing through the second phalanx of the middle finger, shattering the bone, but leaving the integument and subjacent structures on either side in fair condition. Under simple dressings of carbolic acid the wound quickly healed without deformity, and leaving the finger as serviceable as it was prior to the accident.

Last summer a boy, a patient of Dr. A. H. Ashley, while attempting to clear the nipple of his gun by blowing through the muzzle, carelessly touched the trigger with his foot and discharged the piece. Fortunately the charge hung fire for an instant, and thus enabled him to partially withdraw his head. The load of small shot passed along the side of the face and inflicted a severe wound of the scalp, severing the auricle almost completely from its attachments, leaving it hanging by a small band of integument in front of the lobule. As the gun was only six inches from the face, the wound was not only contused and lacerated but also considerably burned by the powder. The temperature rose to 102.3° F., on the evening of the accident, but was normal the next morning and did not rise again during the time he was under treatment. The auricle was replaced and held in position by means of sutures, the whole being covered with a dressing of dry iodoform. There was no suppuration until the seventh day, when a very small amount of pus was observed. The patient did well and was discharged on the twentieth day.

I will give one more case, which occurred in my own practice several years ago, the details of which were published in the New York MEDICAL RECORD in 1875. A negro man, thirty-four years of age, fell across a wheelbarrow, breaking a porcelain cup which he had placed in the loose folds of his shirt. A fragment of the cup was driven through the abdominal walls, inflicting a wound through which a foot of small intestine protruded. After the accident he walked half a mile to the nearest drugstore, where I saw him about three quarters of an hour later. He was lying on the floor, cold and pulseless, and bleeding freely from the mesenteric veins. The protruding intestine, which was covered with dirt and fragments of china, was cleansed and replaced. Within fourteen days the wound was firmly united, and the patient returned to work. There was no suppuration and at no time did the temperature rise above 98.50° F. In obstetrical practice the results have been equally good. Puerperal fever is rare, and during the past twenty years, although I have had many difficult cases, necessitating the use of instruments and version, I can recall only two cases that terminated fatally, and in one of these death was caused by convulsions.

For the results in pulmonary phthisis I refer the reader to a series of articles published by me in this journal.[1] The tabulated results of these cases were as follows: Total number of cases, 69; in 13 of these the disease was arrested[1]—that is, the cough had ceased, the temperature was normal, the patients had increased in weight, and their general appearance indicated that for the time being, at least, they were restored to health; 29 were improved; 7 remained unchanged; 17 grew worse; and 3 died.[2] Adding the "arrests" to the "improved," we find that forty-two (or nearly two-thirds) of the cases derived more or less benefit from their residence in Aiken. This was at a time when physicians gave little attention to climato-therapy and its indications. If a patient had consumption, and had means sufficient to pay for the journey, he was forthwith ordered South. The consequence was that for a time the Southern resorts were crowded with cases too far advanced to derive benefit from climatic, or any other method of treatment. Year by year, however, there has been in this respect a marked improvement. Practitioners, realizing the folly and cruelty of sending patients to die among strangers, now exercise a sounder discrimination in the selection of their cases. The evil still exists, but is trifling compared to what it was when the above cases were published. Of late I have not had time to collect statistics, but I am safe in saying that, with the improvement in the character of the cases now sent South, the percentage of "arrests" and "improvements" at Aiken would be much greater than ten years ago.

In 1885 I published in this journal the histories of thirty-five successful cases of phthisis, all of which, except one, were treated at Aiken.[1] As three years have elapsed, it may interest the reader of that paper to know the further history of those cases. Of the thirty-five cases, four were lost sight of and have not been heard from; two committed suicide, after having remained well respectively five and eight years; one died last spring of tubercular meningitis, after having been apparently well for several years. This was the young "architect" from Pittsburg, one of the four selected cases published by Professor Charteris,[2] of Glasgow, as having recovered in Colorado, but who was never in that State except, perhaps, for a few months in summer. He always wintered at Aiken, and his "cure," if cure it can be called, was achieved at that place. After deducting the above, there remain twenty-seven cases to be accounted for, and these all, with one exception, were well when last seen or heard from. Of these, two were heard from eighteen years later, one after eleven years, one after nine years, three after eight years, two after seven years, five after six years, four after five years, three after four years, three after three years, two after two years, and one after one year. But one has relapsed, a little girl who, after remaining at her home in Portsmouth, N. H., for several years, contracted a pleuritis which was followed by a recrudescence of the tubercular affection. She is, however, still alive, and doing fairly well. In estimating the statistical results at a health-resort, it should be remembered that the cases are all private patients, whose attendance is, as a rule, too irregular to admit of the keeping of a complete record of the course of the disease. The cases I have published, although not selected, constitute less than one-fifteenth of the whole number treated, but these latter were necessarily excluded on account of the incompleteness of their case-histories. And as those which are continuously under the physician's care are usually the worst cases, it is fair to infer that, had the others been included, the percentage in which arrest or improvement took place would have been much higher. Many of the cases of incipient phthisis do so well after their arrival that they never consult the local physician, and no record is kept of their recovery.

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[1] New York MEDICAL RECORD.

[2] Brehmer, in his excellent sanatorium at Gobersdorf, with every convenience and with absolute control over the movements and mode of life of his patients, claims to have cured thirteen per cent.

As previously stated, all modern writers on the climatic treatment of phthisis are unanimous that an aseptic air is the first essential in the management of that disease, and most of them agree with Burney Yeo[3] that pure air—pure, cool, dry air, in unlimited amount—is such an antiseptic agent. Dr. E. T. Bruen, in his paper on "The Climatic Treatment of Phthisis," read before the recent Congress of American Physicians and Surgeons, is no less emphatic in his recommendation of pure dry air. "The greatest benefit can be secured in the locality which possesses the purest air. A large percentage of ozone, the best-drained soil, atmospheric dryness without dust, and the greatest proportion of sunshiny days, and especially where these results are attainable at a moderate altitude. This latter feature should be considered important, because, should recovery occur, it may be possible to return to ordinary avocations with safety to health."

These, then, are the requirements of a health-resort for consumptives—pure, dry air at a moderate temperature, a dry and well-drained soil, and an abundance of sunshine. To what extent does Aiken meet these requirements? For the reply I refer the reader to the foregoing article, in which I have endeavored to show that the characteristics of the climate of Aiken are great purity and dryness of the air at a moderate temperature (the winter and spring mean being 58° F.), extreme dryness of the soil with complete absence of water to a depth of over one hundred feet, with a large preponderance of bright, clear weather. I would add that Dr. Bruen's last requirement is also met. The patient after recovery is not obliged to remain in Aiken, most of those who have regained their health there having been able to return home and resume their former avocations. My object in presenting this paper is not to underrate the usefulness of other resorts, but to prove that within thirty-six hours' ride of New York we have an antiseptic climate where consumption can be cured, its accessibility being not the least of its many advantages.

PEPSIN IN SURGERY.

By HENRY B. DOUGLASS, M.D.,

NEW YORK.

THE digestive ferments have only recently attained that state of perfection which enables the physician to use them successfully in the various derangements of the digestive tract, and as a solvent by local application to the diphtheritic membrane. This last use of the ferments suggested to me their use in surgical cases, and for some months past I have been using pepsin in surgical work. Pepsin is best applied in the form known as "pepsin in scales," or as an ointment with lanolin as a base:

℞ Pepsin.................................gr. 50
Lanolin.................................℥ ss
M.

The cases cited below well illustrate some of its applications.

1. In ulcerations.

CASE I.—Mrs. T—— had a varicose ulcer of leg covered with thin adherent membrane, beneath which were weak granulations. Around the ulcer for an area of two inches was an acute eczema. The ulcer was foul smelling. Pepsin ointment with cotton dressing was applied. In five days the dressing was removed. The eczematous patch was less inflamed, the discharges not offensive, and the membrane was entirely dissolved. The granulations were healthy. Bismuth was now applied and the ulcer was soon healed.

CASE II.—Mrs. M. D—— presented upon the middle of the tibial crest a varicose ulcer. The base of the ulcer was covered with a thick yellowish membrane. "Pepsin in scales" was applied to this ulcer. In one week the membrane had entirely disappeared and the ulcer was in a healthy condition.

CASE III.—M. D—— has a large epitheliomatous ulcer (rose cancer) of the neck. The centre of the ulcer is sloughing rapidly. The whole surface of granulations is covered with a membrane. The secretion from the ulcer is abundant and very foul. Pepsin ointment was applied daily to ulcer. In two days the surface of granulations was free from membrane and they looked smaller and red. Wherever the ointment was applied the sloughing ceased, but from the deeper parts of ulceration the discharge was unchanged.

2. In cicatricial contractions.

CASE I.—D. H. J—— two weeks ago had a periostitis of first phalanx of middle finger with cellulitis of palm of hand. The resulting abscess was lanced in two places. When he came under my observation the suppurative process had left much inflammatory induration in the palm of the hand, extending to the second phalanx. There was a small sinus leading to bare bone on the first phalanx. The patient was unable to flex the finger because the flexor tendon was adherent to its sheath, and could not extend it on account of the cicatricial contraction following the abscess. Pepsin ointment was applied to the palm, and the whole covered with a cotton dressing. In three days the sinus had closed and the cicatrix was much softer. After six days the palm was markedly less indurated, and the patient could flex the second phalanx completely. In ten days the patient was able to resume his employment as a cutter, and was fully able to hold the knife steadily in his hand.

CASE II.—Mrs. M. W—— had a parotid abscess complicating pyæmia. The abscess opened spontaneously and soon healed. There resulted much induration and considerable thickened cicatricial tissue, extending from the angle of the lower jaw to the zygoma, and from the sterno-mastoid muscle to the border of the masseter muscle. This cicatricial tissue produced anchylosis of the lower jaw on the affected side, so that the patient was unable to open her mouth enough to admit solid food. Pepsin ointment was applied twice daily. In one week there was marked improvement in opening and closing the mouth, and the tumor had nearly disappeared. In two weeks there was no trace of the swelling, and movements of the jaw were perfect.

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[1] New York MEDICAL RECORD, October 3, 1885, p. 309, and October 10th, p. 394.

[2] London Lancet, November 26, 1887.

[3] Ibid., p. 606, October 14, 1882.

Remarks: 1. In all ulcerations covered with a slough, or having a membranous base, pepsin is of use to digest this slough and bring about a healthy condition. 2. The efficiency of pepsin ceases when the slough has dissolved. 3. In cicatricial tissue causing anchylosis pepsin is of use by dissolving the cellular element. In this condition pepsin may act similarly to mercury and the iodides, or as a digestive.

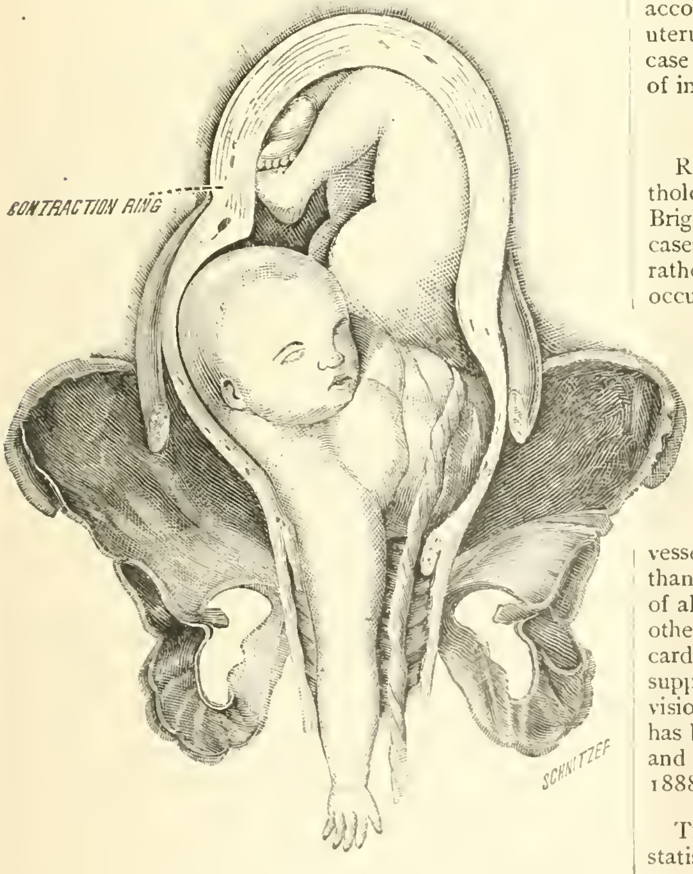
440 West Twenty-Third Street.

A CASE OF EMBRYOTOMY WITH BRAUN'S HOOK.[1]

By RICHARD STEIN, M.D.,

VISITING PHYSICIAN TO THE GERMAN DISPENSARY, NEW YORK.

Mrs. B——, multipara, aged thirty-two; previous labors normal; is now at full term. She had engaged a midwife for this confinement, for whom she sent as soon as labor set in. The midwife stayed with her about twenty hours, during which time patient had vigorous pains. Further particulars cannot be ascertained. I saw her in consultation with Dr. J. Metzger, about thirty hours after labor had begun. She was a well-built, middle sized woman, with normal pelvis. The labor-pains were very severe. The right arm of the fœtus and the severed umbilical cord hung out of the vagina. The head could be felt in the right iliac fossa. The ring of contraction (Bandl's ring) extended about two inches above the navel. The uterus was drawn tightly around the fœtus, and the right shoulder was deeply impacted in the small pelvis. After some difficulty the neck of the fœtus could be reached, and from there the examining finger passed over the chin into the mouth. The diagnosis was made of neglected transverse presentation. Rupture of the uterus was imminent. The child was dead.



The woman was placed in the dorsal position and ether administered. After emptying the bladder the left hand was passed into the vagina, gliding gently by the shoulder and reaching the neck of the fœtus after some difficulty. The index-finger and thumb encircled the neck, the palm of the operator's hand looking upward. Braun's hook, with the button turned down, was then inserted and applied around the neck, under the guidance of the left hand; it could play freely in the left palm. The head was severed within two or three minutes by means of one vigorous turn of the hook, which broke the spinal column and passed through the other soft parts of the fœtus without any trouble. The body was delivered by pulling gently on the protruding arm; the head was then easily extracted by inserting two fingers in the mouth and drawing gently, assisted by pressure from above. No post-partum hemorrhage. The patient made an excellent recovery.

This case shows that the decapitation-hook of Carl Braun can be employed with advantage, even in those cases where the neck of the fœtus can only be reached with some difficulty. It was not thought advisable to pull on the protruding arm to bring the neck down, on account of the great danger of additional strain to the uterus. The "cut" surface the instrument made in this case was surprisingly smooth, thus eliminating the danger of injury to the maternal parts.

Retinal Changes in Bright's Disease.—The pathology of the white patches in the retina occurring in Bright's disease is by no means clear. In the majority of cases the condition of the lesion is one of degeneration rather than that of inflammation. The white spots usually occur at some distance from the blood-vessels, and they are most common in cases of granular kidney. Dr. Maguire has found high arterial tension common to all cases of so-called albuminuric retinitis, and he is inclined to think that the degeneration is directly due to this tension. In Bright's disease the vessels become much contracted, consequently parts at a distance from the vessels suffer from lack of nutrition. It is well known that high arterial tension causes a diminished circulation through the smaller vessels, and consequently the retina becomes more than ever deprived of its blood supply. The rarity of albuminuric retinitis in cases of amyloid kidney, and other forms of Bright's disease where it is unusual to find cardiac hypertrophy or increased arterial tension, lends support to the theory advanced. The author has found vision improve in many of his cases where high tension has been combated by rest in bed and the use of calomel and salines.—*Birmingham Medical Review*, November, 1888.

The Proportion of the Sexes in Germany.—Recent statistics show that the number of men in Germany is constantly decreasing relatively to that of women, indeed there is an absolute decrease in the male population and an absolute increase in the female. The women outnumber the men in the proportion of 104.3 to 100, although there are more boys than girls. The disproportion is to be accounted for, therefore, by a greater mortality among boys, and by emigration. In Berlin, taking all ages together, there are 108 women to 100 men, of those between 60 and 70 years there are 150 women to 100 men, and between 70 and 80 the numbers are 196 to 100.

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[1] Abstract of a paper read before the Medico-chirurgical Society of German Physicians.

Clinical Department.

INTRACAPSULAR FRACTURE OF THE NECK OF THE FEMUR—PATIENT ABLE TO WALK WITH LITTLE DEFORMITY OR LAMENESS FOR THREE YEARS—NEW DISEASE THEN SETTING UP, WITH GREAT APPARENT SHORTENING AND DEFORMITY—DEATH.

By C. WINDSOR, M.D.,

BLOSSURG, PA.

The patient, a woman, aged seventy-four, had always enjoyed good general health, and was the mother of a large family of children. About March 25, 1885, while walking from church to her home, she fell upon the icy walk, was taken into a neighbor's house, and examined by Dr. Crandal and myself. Great pain was experienced on motion of the hip-joint, but nothing was found to justify opinion of anything other than bruise and sprain to hip-joint. She was removed to her home, where she remained in bed six weeks, at the end of which time she was able to move with some difficulty and the aid of canes to a chair or couch. At the end of ten weeks she was able to leave the house, and was more or less lame for about six months from date of injury. There was no change at *any* time in the relative position of the foot, no shortening nor deformity, or fulness at hip-joint at any time after six weeks from date of injury. She continued as well as ever during the succeeding three years.

About the middle of June, 1888, the patient began to experience a feeling of lameness in her back, as described by her, which increased to the extent of causing much inconvenience and suffering until July 6th, when she first consulted a physician, who attributed it to kidney disease, and gave remedies to relieve it on that hypothesis. The pain was felt over lower part of back, between hips, and more or less throughout the lumbar region. About July 8th or 9th she began to spend most of her time on the couch or bed, and continued suffering more or less in the same way, occasionally able to attend church, until about September 1st. I was called to see her September 7th, and found her complaining as described, and attributed her pains and her condition to rheumatism. Did not see her again until October 2d. Dr. Argue saw her September 25th, and corroborated opinion of lumbar rheumatism, and remedies were given for that disease, as had been given by myself. The patient continued in about the same condition, with exception of extension of pain to the right hip-joint during first week in October, suffering severely except when under opiates.

There was no change in the appearance of hip whatever until the night of October 18th, when her daughter undertook to relieve her sufferings by rubbing the joint with an anodyne liniment, and was startled to find the joint swollen and deformed, and sent hurriedly for me. I found the hip deformed, swollen, hot, and very painful. The greatest deformity was in the region of the great trochanter, the foot slightly *inverted*, and the limb shortened about two and a half inches. The condition in which I found the limb was a great puzzle to me, as it occurred so suddenly, without previous displacement at any time during life, or other similar injury to joint, but there was unmistakably a partial dislocation of the head of the femur on to dorsum of ilium. The pain was described as atrocious, prohibiting any handling of the limb. Hot fomentations were applied and anodynes pushed. The deformity and shortening increased until October 26th, when Dr. T. H. Squires was called in consultation. The shortening of limb had increased to seven and a half inches; there was almost *complete* inversion of the foot from the normal line, and the pelvis was tilted upward at an angle of about forty-five degrees in relation to the spinal column.

Firm but careful extension was made, and the foot slowly everted, and we were gratified to find the limb yielding until, after about fifteen minutes of continued effort, it was restored to within an inch, or one and a half inch of its normal length. Much relief was experienced after reduction, and, in fact, but little of the former severe pain returned again. The following day the patient was removed to a cot bed; and the second day extension was procured by weights attached to the foot over a pulley, and about five pounds was well borne until a day or two before death. During the last three weeks of her illness the most of her suffering was occasioned by a bed-sore over the sacral region, which was quite impossible to prevent, from the helplessness of the patient, and the necessity of continuing upon her back throughout the entire illness. There was no considerable alteration of temperature at any time, and the pulse varied from 100° F. to 110° F. during greater part of illness. As an autopsy could not be obtained the real condition of the hip-joint could not be ascertained, but from such manipulation as could be made after death I am convinced that it was due to a separation of the head of the femur at its surgical neck, and the drawing up of the bone on to the dorsum of the ilium, as in a dislocation at that site and in that direction. The only symptom that I have not mentioned that was marked during the early part of her illness was described as a sensation of numbness, a sort of dead feeling in the limb, that was spoken of by the patient during the early part of her disease. What significance it had in connection with the condition of the limb, as afterward developed, I cannot say.

Progress of Medical Science.

Real and False Anæmias.—There is no greater fault, according to Dr. Germain Sée, than that of giving iron to every pale patient one sees. If by anæmia we mean a deficiency of red blood-corpuscles, then there are very few real anæmias. In fact the real anæmias are but three in number. 1. Total anæmia, when from some great hemorrhage there is a diminution *en bloc* of all the elements of the blood. 2. Chlorosis, which is characterized by a functional defect in the hæmoglobine, which, according to Dr. Sée, does not mean that there is a diminished number of the globules, but a malady of the hæmoglobine itself while the number of the globules may remain the same. 3. The anæmia called spontaneous, where, without hemorrhage, there is a diminution of the hæmatics. Outside of these three types there is no real anæmia, but an immense number of false anæmias which Professor Sée divides into classes. First is the class of those patients who suffer from inanition from a number of causes, most prominent of which is insufficient nourishment; and just here iron will certainly do no good, while a good beefsteak will work wonders. Not only, however, does this class of poor, pale people consist of the really indigent classes, but also of the so-called anæmics who live according to a badly combined regimen. Another class of this form is the apnœics, or those who get pale from insufficient respiratory alimentation; these are the room-workers in a close atmosphere, and whose blood is quite rich in globules; all the same they are pale, since it is air they want and not iron. A further class is the worn-out or fatigued cases, who are pale and tired from hard work, be it muscular or mental, or again from too much alcoholic or sexual stimulation. Still one more class of false anæmias is the worn-out class from disease, albuminuria, diarrhœas, fevers, dropsy, etc.; but none of this lot are really anæmic, and if their blood-globules are counted they will be found as great in number as in healthy persons. Still another group is the poisoned class, who are cooks and workmen in noxious vapors, whose blood is charged with carbonic oxide, or carbonic acid gas, or lead-poisoning; they are also pale, but they have nothing to do with real anæmia. Finally, there is what Dr. Sée calls the virulent class of false anæmias, which includes scrofula, tuberculosis, syphilis, rheumatism, malaria, cancer, and other maladies which all produce paleness of the tissues, and a weakness which recalls the classic symptoms of anæmia, but the hæmatoscopic characters are quite different in all these cases from real anæmia, and the alteration of the blood is here of a virulent kind quite different from anæmia. This study of Dr. Sée's is of practical merit in a therapeutic point of view, because it teaches that iron is useless in a great number of these false anæmias, and it should not be given in a careless way to all pale patients, as it will only provoke digestive disorders that are worse than the patient's illness itself. In the present scientific era iron should be given where the indication is clearly shown by hæmatoscopic examination, and not distributed to all this mass of pale people, who should have the real cause of the pallid appearance carefully sought for, and the real remedy applied; whether it be suppression of the cause, as in inanition cases, where good food properly given will cure; or in the class of intoxication of the blood again, suppress the poisonous gases or the lead, etc.; while for the paleness resulting from diseases, it need not be told to an intelligent physician that he is at fault if he misses the real disease, and calls a false anæmia a real one, and gives iron in place of a disease medicine.—Paris Correspondence, *Philadelphia Medical Times*, November 5, 1888.

The Functions and Significance of the Faucial, Lingual, Pharyngeal, and Discrete Tonsils.—Dr. Spicer says in an article on the tonsils and their relation to affections of the throat and nose (*The Lancet*, October 27, 1888), that "it has long been known that lymphoid tissue, especially in the form of lymph-follicles, is very extensively massed together in the naso-pharynx and pharynx. The most conspicuous of these masses, the faucial tonsils, are very familiar pathologically. Likewise is that mass known as the pharyngeal or Luschka's tonsil, situated in the vault of the naso-pharynx, and which, when hypertrophied, forms post-nasal growths. To a less extent is appreciated that aggregation of crypts and follicles, called the lingual or fourth tonsil, situated at the base of the tongue between the circumvallate papillæ and the epiglottis, although its pathological conditions are among the most fruitful causes of many of the paræsthesiæ and dysæsthesiæ of the throat. To the above must be added those discrete patches of follicles on the pharyngeal walls which form the anatomical lesion in chronic granular pharyngitis; and an enumeration has been made of the principal groups concerned in morbid states of this area." Regarding the significance of these structures, he states that "the prevailing view appears to be that the faucial tonsils are essentially organs for the secretion of a lubricating fluid to aid in moistening the bolus of food before deglutition. Now, as the faucial tonsils are developmentally portions of the mucous membrane, there is no reason why they should not be provided with mucous glands to the same extent as the rest of the mucosa, and so secrete a little lubricating fluid, though insignificant in amount compared with that from the salivary glands. But that this secretion is quite a subsidiary and unimportant function of the faucial tonsils is palpable from the facts that in any tonsil, healthy or diseased, infantile or adult, the component tissue is lymphoid, arranged in follicles, with more or less fibrous tissue; and that the secreting mucous glands are very scanty, and, indeed, in the ordinary excised tonsil not demonstrable. No doubt, when these organs have been excised for hypertrophy, the fibroid changes have caused atrophy of whatever gland-tubes there might have been. Such fanciful theories as that the faucial tonsils are developed as compensatory organs for warming the inspired air when there is nasal obstruction, that they are reservoirs of nutriment like adipose tissue, and that their function is to keep the liquor amnii from passing into the fœtal pharynx, require no refutation. It is to Dr. Hingston Fox that we are chiefly indebted for a lucid exposition as to some of the main functions of the faucial tonsils. His conclusions are, firstly, that the faucial tonsils act in the prevention of fluid waste in the economy by reabsorbing the buccal secretions to a large extent after their work is done, and especially in the intervals of the deglutition acts; secondly, that they absorb certain of the elements of the food bolus as it is squeezed past them in deglutition; and, thirdly, that they form part of the blood-manufacturing system, and use up any nutriment remaining in the spent buccal secretions, acting, as he poetically expresses it, as 'nurseries for young leucocytes, planted by the waterside, and drawing their sustenance from the nutrient stream.'" He says further, that "there can be little doubt that the tonsils are the sites where the poison of scarlatina, measles, and diphtheria usually enters the system, since they are the parts first and most constantly, and often alone, visibly affected; and the lymphatic glands in direct communication with them most markedly, soonest, and most frequently involved. Faulty voice production and excessive use of the voice are very important causes of affections of all the tonsils. Excessive use demands excessive lubrication, and the latter implies excessive absorption on the part of all the lymphoid follicles. Hence the diffusiveness, chronicity, and obstinacy of the changes met with in the throats of clergymen, actors, and school teachers." The author finally submits these conclusions: "1. The significance of the various tonsils is in their palpable relation to the blood-manufacturing system and to the outpour of copious secretions. The relations of the tonsils to the rest of the organism can be well appreciated by comparing them with the relations of the sewage farm to the town whose refuse it makes use of, and to which it returns its elaborated products. 2. If any of the secretions delivered to the tonsils become contaminated in any way with irritating matters, whether generated in the system or introduced from without, those tonsils in physiological correlation with the affected secretion show irritative changes varying in degree. 3. The functions and affections of the various tonsils afford the key to the comprehension and scientific treatment—and the prevention—of many of the most intractable and recurrent disorders of the nose and throat."

Fluorescine in the Diagnosis of Corneal Lesions.—Dr. Straub recommends the instillation into the eye of a saturated solution of fluorescine, rendered slightly alkaline by the addition of 0.5 per cent. of soda, as a means of diagnosing corneal ulcers. Any portion of the cornea which is deprived of its epithelial investment will thereby be colored a bright green, while the sound portion is unaffected. The solution, he asserts, is perfectly innocuous.—*Weekblad van het Nederlandsch Tijdschrift vor Geneeskunde*, No. 16, 1888.

Resorcin in the Treatment of Keloid.—Dr. Justus Andeer, writing in *Der Fortschritt* of October 10, 1888, reports the case of a woman who was incapacitated for work on account of a large keloid on the right foot. A one-per cent. ointment of resorcin was applied, and in a short time all the painful symptoms disappeared, and the patient expressed herself as cured. Von Nussbaum has also recommended resorcin as a very efficient remedy for keloid. As the disease is usually regarded as practically incurable, a trial of resorcin would seem to recommend itself as worthy of being made. It is advisable to begin with a weak ointment and gradually to increase the strength according to the indications.

Patent Medicines.—In the United States there are said to be 563 manufactories of these goods, capital of $10,620,880, annual product valued at $14,682,492. New York State has 108 manufactories, employing capital of $4,513,430, putting out annually medicines valued at $3,339,178.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, December 22, 1888.

SCARLATINA DURING PREGNANCY AND IN THE PUERPERAL STAGE.

DR. ROBERT BOXALL has contributed to "The Transactions of the Obstetrical Society of London" a very long and elaborate paper "On Scarlatina during Pregnancy and in the Puerperal State." He presents a tabulated record of sixteen cases, and gives a bibliographical review of the subject. The conjunction of scarlatina with pregnancy and the puerperal state is fortunately not of frequent occurrence; when it does happen, however, serious complications may arise, and the conclusions of Dr. Boxall are therefore of much practical importance. The writer states distinctly at the outset that by puerperal scarlatina he means a true scarlet-fever infection, and not a septic fever with scarlatinous rash. He states in the beginning that—

"Infection by the poison of scarlet fever, either during pregnancy, during labor, or during the lying-in period is followed in the puerpera—

"1. By scarlatina, presenting for the most part the usual symptoms, *e.g.*, rash, sore-throat, and running the ordinary course of the disease.

"2. By scarlatina, presenting for the most part the usual symptoms and running the ordinary course of the disease, but associated with local and general lesions, *e.g.*, metritis, cellulitis, peritonitis, pyæmia, such as are produced by ordinary septic poison.

"3. By scarlatina, in which all the usual symptoms of the disease are absent, but in which local and general lesions, such as are produced by ordinary septic poison, are present; in a word, infection by the poison of scarlet fever is followed by a disease clinically undistinguishable from puerperal septicæmia, or from puerperal fever (as above defined)."

From an analysis of his cases he draws the following inferences:

1. As regards the time, with reference to labor, at which the disease shows itself—

a. That scarlatina almost invariably occurs within the first week of the puerperium, and its occurrence at a later period is extremely rare; and—

b. That in exceptional instances scarlatina may show itself during pregnancy, shortly before the onset of labor.

2. As regards the liability of pregnant and parturient women to scarlatinal infection, and the reciprocal influence existing between the latter and parturition—

a. That a woman exposed to the disease may become infected with scarlatina during pregnancy, during or after labor.

b. That the liability to infection is especially marked shortly before, and during the first few days after, delivery, but does not extend far into the puerperium.

c. That if infection occur during pregnancy, the onset of labor may be thereby precipitated.

d. That when infection takes place during or shortly after labor, the incubation period may be shortened; and, finally—

e. That the foregoing considerations are in themselves sufficient to explain the frequent onset of scarlatina during the first week of the puerperium, without the necessity of ascribing to scarlatina in pregnancy an incubation period exceeding that of ordinary scarlatina.

As regards symptoms he finds—

1. That during pregnancy the throat symptoms are unmodified, but that after delivery angina is rare.

2. That in scarlatina after delivery, *a.* subjective soreness is usually absent at the outset, and, even at a later stage, rarely causes much distress; *b*, signs of slight inflammation, though generally absent at the outset, may usually be observed on the second or third day of the attack; *c*, the cervical glands are usually affected, whether any change has been apparent in the throat or not.

As regards the labor he states that—

1. When labor occurs during the incubation period of scarlatina it runs for the most part its usual course, but the pains may exert a greater influence than usual on the mental condition of the patient; inertia, if induced, sets in late in the course of labor, and a peculiar and almost characteristic odor may be present.

2. When labor occurs during an attack of scarlatina, the pains are apt to be feeble throughout, inertia sets in early, and post-partum hemorrhage is liable to occur. The same peculiar odor may be present.

Some final observations are made as to the effect of the scarlatinal poison on the patient during the puerperium. Dr. Boxall thinks—

1. That involution of the uterus is not much, if at all, retarded.

2. That the slight and evanescent tenderness over the fundus, occasionally present at the very outset of the attack, is often due to exalted sensibility of the pelvic organs, and is rarely an indication of pelvic inflammation.

3. That, provided antiseptic precautions be taken, lacerations heal without difficulty, and the lochia, as a rule, do not become offensive.

4. That in some cases a peculiar, unpleasant odor may be observed.

5. That the lochia usually proceed naturally and cease about the usual time, but in many cases become red and free at the onset of the attack.

6. That the mammary secretion is frequently diminished, and sometimes arrested, as the result of the illness.

7. That infants kept at the breast are especially prone to scarlatina, probably from the mere fact of contact with the affected parent.

8. That when scarlatina shows itself in the mother during pregnancy the fœtus may or may not be affected *in utero.*

9. That when the mother receives infection shortly before delivery, the infant more frequently escapes, though it may be subsequently infected.

Some of Dr. Boxall's observations are trite, and some are trivial, but, taken altogether, his paper is a valuable one and deserves a more extended analysis than we can afford to give to it.

THE NAVAL MEDICAL SERVICE.

THE Annual Report of Surgeon-General Browne in 1888 shows that the condition of the Naval Medical Service is most creditable to its officers, despite the fact that many improvements, which have been long urgently desired, are still denied it. The subject of filling vacancies in the service is still in an unsatisfactory state. Medical Director Gorgas, President of the Board of Examiners, wrote in May last: "I have been greatly disappointed at the results of our work this year; seven of the twelve applicants were rejected physically, and but one of the others has passed professionally." There are at present eleven vacancies. The changes asked of Congress for the purpose of making the service more attractive are reasonable and just, and it is most unfortunate that the Surgeon-General still has to write that the bill providing such improvements "has no near prospect of a successful issue."

The morbidity and mortality statistics during 1887 show no marked changes from those of previous years. Our Navy contains 1,368 officers and 8,250 men, giving a total of 9,618. There were 11,473 cases of sickness reported, with 99 deaths, giving a mortality ratio per 1,000 of 10.29. As only 4 of these deaths are credited to *vulnus* and 10 to *submersio*, one may consider the sailor's life quite a healthy one in the present state of our international relations.

One of the most interesting features of naval medical work is the Museum of Hygiene. Under the efficient care of Surgeon Wells and his predecessors this museum has already become a centre for practical hygienic work and study, and it is destined, we trust, to become an institution having a widely beneficial influence. It should receive the generous support of our national Government.

THE DIGESTION OF CARBO-HYDRATES.

THE extensive use of artificial ferments as aids in digestion lends a practical interest to certain elaborate experiments recently conducted by Drs. A. Stutzer and A. Isbert upon the action of diastase and the peptic and pancreatic ferments upon digestible carbo-hydrates exclusive of fats (*Zeitschrift für physiologische Chemie*, xii., 1 and 2 hft.). The object of these experimenters was to see by what series of fermentative actions the greatest amount of carbohydrates could be digested. The substances used for experiment were hay, meal, and bread. A certain amount of these substances was mixed with solutions of ptyalin, pepsin, pancreatic ferments, and diastase.

We may say at once that the observers discovered the interesting fact that, by treating the above substances first with ptyalin solutions, then with pepsin solutions, and, finally, with pancreatic solutions, the largest amount of digestive action was obtained. It was found also that ptyalin, contrary to the usual belief, acted to a slight extent upon albuminous food. They also found that neutral ptyalin solutions acted even more strongly than feebly-alkaline solutions, and that diastase solutions produced nearly as good an effect as those of ptyalin. This is an important fact, clinically, for ptyalin is an expensive ferment, while malt diastase is comparatively cheap. Ptyalin solutions, alone, are more active than diastase, but when followed by a pepsin solution the digestive power of the two is just the same.

Pancreas solutions were found to act more feebly on carbo-hydrates than either ptyalin or malt diastase. The malt diastase, followed by a pancreas solution, digested less actively than did the ptyalin and pancreas series.

The general results of the experiments go to show that the saliva has an important rôle in digestion, and that, when it is not secreted properly, malt diastase can supply its place. It would also seem that the best time to take the malt is either just before or just after meals.

STATE MEDICAL EXAMINERS AND MEDICAL EDUCATION.

THE recently published report of the Virginia State Medical Examining Board contains some very interesting facts which will serve as valuable data for the continuance of the discussion in our own State. That this reform must come sooner or later very few doubt. It has a claim upon the professional mind analogous to the position occupied in the political world by high license and ballot reform. Instead of having to contend against the veto power of an obdurate governor, it finds its stumbling-blocks in the legislative hinderances placed before it by the medical colleges.

The report above alluded to covers the time from November, 1884, to October, 1888. During this time the Board examined 240 candidates, rejecting 54, or 22.5 per cent. Of the rejected men 25 made a second application, and 10 ran the gauntlet successfully. Of our own local institutions the College of Physicians and Surgeons sent up 3, all of whom passed; Bellevue, 6, with 1 rejection, and the University, 7, with 2 rejections. From Philadelphia, Jefferson sent 12, with 3 rejections; University of Pennsylvania, 2, both successful, while the 3 candidates from the Medico-Chirurgical College all succumbed. The largest number naturally came from the University of Virginia, 33, with only 1 rejection; a most creditable showing, and yet one which the history of this institution would lead us to expect.

It is pleasant to note the loyalty of the profession to the State Board. One institution demurred against its authority, and asked for its own graduates exemption from the provisions of the law. The request was most properly denied. In contrast to this is the college element of our own State, which opposes privately and corporately attempts to establish a State Board. It is but fair to the representatives of some of the larger institutions to exclude them from this category; this spirit of opposition is more rife in the smaller institutions. But some of the colleges, both large and small, are graduating men on the basis of the science of medicine of twenty-five years ago. As a Chicago journal well remarks: "Every new medical examining board created is a nail in the coffin of some unnecessary low-class medical college. The colleges that hope to survive must begin the work of reformation now."

The discussion of this question in conventions on social topics and similar gatherings shows the inevitable trend of public opinion. The bill outlined by Mr. Purington, and alluded to in The Record of November 24, shows this most conclusively. An impartial observer of the progress of medical education in this State, and particularly in this city, must admit that it has been retarded by the financial plan on which our colleges have been managed. This plan may have been a necessity, but nevertheless it has existed. The colleges are essentially stock companies, and the didactic faculties the stockholders. The receipts come from students' fees. Deduct the running expenses and we have left the dividends, and a very little calculation will show that some professors are paid very nearly fifty dollars a lecture, and all of them are not "spell binders" by any means. The minute they are willing to content themselves with smaller dividends the standard of medical education can be raised. The laborer is worthy of his hire indeed. But the whole matter of raising the standard of medical education is in the hands of a small minority of the profession, and this minority must be influenced by public opinion.

THE SURGICAL TREATMENT OF LUNG ABSCESS AND BRONCHIECTASIS.

The above subjects are treated of in a number of articles published in a recent issue of the *British Medical Journal.*

Mr. T. Pridgin Teale reports four cases of abscess of the lung treated by free incision and drainage; of these two recovered and two died. With regard to lung surgery Mr. Teale draws the following conclusions:

1. We are losing our fear of exposing the pleura and the lung, just as we have learnt, step by step, how to deal boldly and safely with the peritoneum.

2. The evil of admission of air into the pleural cavity is not the mere exposure of the pleural surface to the air, is not that the lung collapses by the mere admission of the air, but that where there is a fairly healthy lung and pleura the inrush of air reduces to a serious extent the mechanical power of the thoracic wall over the function of inspiration.

3. That in cases in which this mechanical difficulty threatens the life or impedes the recovery of the patient, surgery must decide upon the best method of closing the wound to the inrush of air, while allowing adequate drainage of any pus cavity to be carried on.

4. That the region of the diaphragm is a situation in which abscess amenable to surgical treatment frequently occurs, such abscesses often commencing below the diaphragm, and tending to discharge through the diaphragm and through the lung.

5. It seems probable that such abscesses can be more safely attacked through the lower angle of the thorax, provided there be dulness at the seat of puncture, than through the abdominal wall.

6. As to washing out the cavity of a large pleural or pulmonary or hepatic abscess, it is probable that antiseptic washing is of value in the early period, while the cavity is offensive; but that as soon as the secretion has become sweet, washing is not only unnecessary, but tends to disturb the comfort of the patient and retard his progress. If drainage be effective, so that fluid does not lodge, the fluid, which is sweet when secreted, should escape from the cavity before it has time to deteriorate.

7. As to the question of excision of portions of rib in treating empyema, on this point I am unable to speak from personal experience. The tendency of surgical opinion seems to be rather to reserve it for special and exceptional cases than to make it a general rule of practice.

Dr. David W. Finlay reported a case of bronchiectasis, in a boy of ten, treated by incision and drainage. The patient died about one month after the operation.

Dr. Finlay says, with regard to the surgical treatment of bronchiectasis: "Some cases have been undoubtedly benefited, a few have been cured; and with regard to others which have been reported, it may be said that some have been admittedly complicated with localized empyema, and that in the case of others the same complication may be reasonably suspected. In the latter class of cases it is not to be wondered at that cure resulted, inasmuch as the bronchiectatic condition was probably secondary to the empyema; and when the pus was drained by external opening the bronchial dilatations contracted and ceased to secrete pus. Of those which have been thought to be genuine cases of uncomplicated bronchiectasis, and in which incision of the lung had been practised, Dr. Finlay found records of twenty-two cases, inclusive of the present, and the results have been the following: Four appear to have been completely cured, three have been relieved or partially cured, and fifteen have died within varying periods after the operation. Of the fatal cases, no fewer than three have died from cerebral abscess."

The results, as may be seen, are not very brilliant. Still, in bad cases with copious fetid expectoration, and evidences of involvement of lung tissue, our operation offers the only possible means of saving the patient's life.

THE INFLUENCE OF THE DISCOVERY OF COCAINE UPON OPHTHALMIC SURGERY.

Since the discovery of the anæsthetic action of cocaine upon the conjunctiva so much has been written concerning its virtues, real and assumed, both as a local anæsthetic and as an internal remedy, that the subject would seem to be fairly well exhausted. It is of some interest, however, now that the experimental stage is past and cocaine has taken its place as one of the really valuable drugs that we possess, to see what effect it has had in modifying the treatment of affections of the eye.

At the last annual meeting of the Medical and Chirurgical Faculty of Maryland, Dr. Samuel Theobold presented a paper on this subject of which the following is a brief *résumé.* The action of the drug in causing anæmia of the conjunctiva and hardening of the cornea has had the effect of increasing the difficulty of subconjunctival tenotomy for the cure of strabismus. Not only is it less easy to pinch up a fold of the conjunctiva, but the muscle itself is in a state of tension. The difference is readily appreciated, the author says, when one has an opportunity to operate under chloroform anæsthesia after having performed a number of tenotomies under cocaine. One very noticeable change, and in many cases a matter of great convenience to the operator, is that the services of assistants can often be dispensed with, the patient himself, if old enough, being able to render all the aid that the surgeon requires.

There is a tendency at the present day for surgeons to return to the simpler operation of cataract extraction without iridectomy, and this is the direct result of the employment of cocaine. When the extraction is performed according to v. Graefe's method the only part of the operation, as a rule, that is painful is the excision of the iris, and, as the danger of prolapse of the iris is reduced to a minimum with the doing away of the risk of vomiting after chloroform or ether, ophthalmic surgeons are beginning to leave the iridectomy unperformed. Although the corneal section is more difficult under cocaine, by reason of the drying of this tissue, the disadvantage is compensated for by the fact that the patient is conscious and vision can therefore be tested.

Another modification in ophthalmic practice, which has come about as a result of the general employment of cocaine, is seen in the method of after-dressing. The former practice of applying compresses and bandages after operations, such as cataract extraction and iridectomy, is now being abandoned, and the eye is closed by simple strips of adhesive plaster, a method the advantages of which are obvious. This change is due to the fact that the necessity no longer exists for protecting the eye from the effects of vomiting and other accidents liable to occur when the patient is recovering from chloroform or ether anæsthesia.

Finally, in the treatment of granular lids the surgeon feels much less hesitation in using a remedy such as sulphate of copper, since the use of cocaine renders the application of this substance painless. The patient has no dread of the applications, and the surgeon is not deterred from making them as often as he thinks necessary because of the distress which they may cause.

IODISM.

THE action of iodine, and its compounds the iodides and iodoform, is naturally a subject of great interest, since few drugs are more extensively used in medicine and surgery. In a recent doctorate thesis, entitled "L'Iodisme," Dr. Elizabeth N. Bradley has gone over the subject most thoroughly, and collected pretty nearly all that is known upon it.

The history of the use of iodine is first given, and the mode of absorption, mode of action, and toxicity of iodine and the iodides discussed. Another chapter describes the action of the salts of iodine upon the various systems of the body. This includes, therefore, an account of iodism in all its forms.

The writer formulates fifteen conclusions regarding iodism.

Iodine itself, she says, is absorbed by the skin and mucous and serous membranes. It is carried to every part of the body by the circulation, and is eliminated by all the glands.

The different compounds of iodine cannot be absorbed by the skin and mucous or serous membranes without being first decomposed.

In certain conditions of lowered vitality, and especially in cardiac and renal disorders, with a morbid nervous irritability, there may be an augmentation of the physiological effects of iodine with symptoms of intoxication.

The phenomena of intoxication may develop rapidly or slowly, at the beginning or later on in the course of the medication.

The most common phenomenon of intoxication is a weak and rapid pulse, without any rise of temperature. The circulatory disorders in iodism are further characterized by œdema, which may be slight and effect only the face, or may involve the whole body, the glottis, the lungs, and even the brain.

These circulatory disorders may be followed by modifications in the renal excretion, viz., albuminuria, or even hæmaturia and anuria.

The nervous symptoms are such as pertain to cerebral anæmia or congestion. Hypochondriasis, general paralysis (?), uræmic convulsions, and coma are among the special disorders mentioned. On the part of the lungs, besides the symptoms of congestion and œdema, there may occur dyspnœa, irregular respiration, and apnœa.

The stomach and intestines show their revolt against iodine by nausea, vomiting, gastralgia, diarrhœa, or constipation. The most familar symptoms are those developed in the skin. Here we find the usual papular eruptions most often, but there have been also observed erythema, urticaria, and purpura. The joints may swell and become painful.

The general picture of iodine-poisoning is in a good many ways like that of the troubles for which iodine is prescribed, and the preachers of *similia similibus* will draw some comfort from Dr. Bradley's monograph.

News of the Week.

THE MONTEFIORE HOME FOR CHRONIC INVALIDS.—The new and beautiful building of this charity was opened and dedicated on the 18th inst. The Home can accommodate 180 patients, and is non-sectarian, though built and supported by Jews.

A MEMORIAL TRAINING-SCHOOL FOR NURSES has just been established at Pittsfield, Mass., by Mr. Henry W. Bishop, of Chicago, as an evidence of his appreciation of the value of the services rendered by trained nurses to his son during his fatal illness at Pittsfield, and also with a desire to aid in extending the widening field of usefulness of trained nurses.

TWO PHYSICIANS OF THIS CITY, Dr. Frank B. Carpenter and Dr. W. J. Martin, are lying ill in the New York Hospital. We are glad to learn that up to the time of writing they were both doing well.

AN IMPETUS TO OTOLOGY has been given by the illness of the present Emperor of Germany. It is said that twenty-five pamphlets on ear troubles have been published in Germany in the past five weeks.

DR. CHARCOT ON MEDICAL WOMEN.—Charcot is reported to have recently expressed the opinion that he could admit the use of women in a medical sense, but only for their own sex and for children. He was emphatic that this was the extent of their possibility in the profession.

DEATH FROM NOSEBLEED.—An item appears in the *Western Medical Reporter* to the effect that a young man recently died at the Presbyterian Hospital as the result of an uncontrollable nosebleed. This rare casualty was due to the fact that the patient had the hemorrhagic diathesis.

An Army Medical Board will be in session in New York City, N. Y., from May 1 to 31, 1889, for the examination of candidates for appointment in the Medical Corps of the United States Army, to fill existing vacancies. Persons desiring to present themselves for examination by the Board will make application for the necessary invitation to the Secretary of War before April 1, 1889, stating the place of birth, place and State of permanent residence, and enclosing certificates based on personal knowledge from at least two persons of repute, as to American citizenship, character, and moral habits. Testimonials as to professional standing, from professors of the medical college from which the applicant graduated, and of service in hospital from the authorities thereof, are also desirable. The candidate must be between twenty-one and twenty-eight years of age, and a graduate from a regular medical college, evidence of which, his diploma, must be submitted to the Board. Further information regarding the examinations and their nature may be obtained by addressing the Surgeon-General United States Army, Washington, D. C. Jno. Moore, Surgeon-General United States Army. Surgeon-General's Office, Washington, D. C., December 1, 1888.

Government and Sanitation.—Some comment has naturally been made upon the fact that the President's Message contained no reference to the yellow-fever epidemic, or the subject of national quarantine. It is to be hoped that, despite this, Congress will pay some attention to the matter of public health before it adjourns. It is, to be sure, looking quite actively after the health of its hogs, and a corps of eminent scientists is to investigate, or reinvestigate, the poor pig's bowels. No doubt the West will be more solidly Republican or Democratic if its pigs have less enteritis as a result of Republican or Democratic legislation. We should, however, like to see sanitary measures carried out on a somewhat broader and more systematic plan than is just now being adopted.

Increased Donations to the Cancer Hospital.—It was announced by the managers of the New York Cancer Hospital, yesterday, that Mr. John Jacob Astor had signified a desire to supplement his already munificent gifts to the institution by erecting a pavilion to be devoted exclusively to the use of men suffering from cancer. The present accommodations provide for women alone. The new building will cost, it is estimated, not far from $150,000. The entire amount of Mr. Astor's gifts to the hospital exceed $300,000.

The wife of General Cullum, another of the founders of the institution, left by her will certain properties in San Francisco, which, when available, will be devoted to the erection of a chapel in connection with the hospital. This money, some $50,000, is now in the hands of the trustees. Work on the Cullum Chapel and the new pavilion, which Mr. Astor desires to be a memorial of his wife, will soon be begun.

The Rights of a Consultant to Compensation.—The Orphans' Court of Philadelphia have recently (*Medical News*) decided the point that a consultant called in by the attending physician to a patient, separated from his family and mentally disabled, is entitled to just compensation. In the case in question the consultant, who was also the ordinary medical attendant, was absent from town, and his advice was given by letter. Against the claim for compensation it was objected that the consultant could not show contract with the patient, who did not personally summon him, nor was he called by a relative acting for the patient. The Orphans' Court, however, affirmed the contract on the ground of public policy, and awarded the claim; and further affirmed the right of the attending physician, under the circumstances, to summon counsel, if he deemed it desirable.

New York's Twenty-seven Private Hospitals involve an annual cost of $765,781.44. Of this amount $440,884.65 has to be raised by private subscription. The city hospitals, over eight in number, cost about $355,000 annually. The hospitals of New York, therefore, cost the people over a million of dollars annually.

Artificial Pupil through the Sclerotic Coat of the Eyeball.—Dr. George Strawbridge, of Philadelphia, describes in the *Medical News* an operation for trephining the sclerotic coat of the eyeball, near the cornea, and stitching a flap of the cornea over it, thus forming an artificial pupil. He first tried it with some success on six rabbits, and lately upon a man and a child with opaque corneæ. Dr. Strawbridge could not wait to see how the operations resulted before reporting his cases; he thinks, however, that the formation of a scleral pupil has a field of much usefulness.

The Training-school for Male Nurses at Bellevue Hospital was formally opened on December 17th. The building has accommodations for fifty persons. Out of one hundred and ten applicants twenty-two were selected. They will be given a two years' training similar to that of the female nurses.

The Hospital Saturday and Sunday Association has accepted the resignation of the Presbyterian Hospital, which institution proposes to work for itself alone. The Association adopted, among other resolutions, the following: "That this Association deeply deplores as unwise any division of general hospital funds under denominational direction, believing that such action would tend to deprive many other hospitals of this Association, partly under Presbyterian management, of their share of the moneys contributed by the general public to the general hospital fund of the city, and also tend to break up the most desirable spirit of unity which this Association seeks to establish."

Deer-horns as Medicine.—Quon Lun Wah has appealed to the Treasury Department from the decision of the Collector of Customs at New York, assessing duty at the rate of twenty-five per cent. *ad valorem* on certain so-called young deer-horns under the provision for medicinal preparations. It appears from a special report of the appraiser, that the so-called deer-horns are specially prepared as a medicine and are sold and used as such by the Chinese.

Fashions for the Dead.—A Glasgow paper has the following advertisement: "James Hodges continues to sell burying crapes ready made, and his wife's niece dresses dead corpses at as cheap a rate as was formerly done by her aunt, having not only been educated by her, but perfected in Edinburgh, from whence she has lately arrived with all the newest and best fashions for the dead."

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

MILK AS A VEHICLE FOR SCARLATINA—THE MORTON LECTURE ON CANCER—THE BRITISH MEDICAL ASSOCIATION—A UNIQUE CASE OF GOITRE—THE ETIOLOGY OF PUERPERAL FEVER—ACETONURIA AND ITS RELATION TO DIABETIC COMA.

London, December 1, 1888.

It is now about a year since the important debate at the Pathological Society on the relation between cow-disease and human scarlatina. The subject came to the front in the first instance in connection with an epidemic of scarlet fever in which the distribution of the disease was found to correspond closely with the distribution of milk from a particular dairy. An inquiry on behalf of the Local Government Board was carried on by Mr. W. H. Power and Dr. Klein. They reported that in this particular epidemic human sources of contagion might be excluded, and advanced the theory that the epidemic of scarlatina was due to the infection of the milk from the cows, who were found to be suffering from an eruptive disease on the teats and udders. Dr. George Buchanan, Medical Officer of the Local Government Board, regarded this disease as a modified form of scarlatina occurring in the cow, and Dr. Klein found the same micrococcus present as in human scarlatina. This opinion, however, did not find ready acceptance, and the subject was hotly debated at the Pathological Society, at which Professor Crookshank advanced the view that the eruptive disease in question was really cow-pox. Another aspect of the question is now presented by the publication as a blue-book of a "Report on Eruptive Diseases of the Teats and Udders of Cows in Relation to Scarlet Fever in Man," by Professor Brown, C.B., the veterinary surgeon attached to the Agricultural Department of the Privy Council Office. In this report Professor Brown combats the theory that the cow-disease in question was a form of scarlatina. He points out that it was not an isolated outbreak, and that though in one district an epidemic of scarlatina was apparently coincident in distribution with the area supplied from a particular dairy, yet that milk from other dairies containing cows similarly affected failed to produce scarlatina. He also thinks there was some evidence in favor of a possible human source of contagion whence the milk became infected. Although extremely valuable in itself, the mass of evidence collected by Professor Brown will probably not be regarded as conclusive. An important contribution to the question, and one which tells in favor of the opposite view, has recently been made by Dr. Hime, late Medical Officer of Health for Bradford. The occurrence of scarlatina in the immediate neighborhood of a dairy has frequently led to its epidemic spread through the agency of the milk. Dr. Hime, however, reported a case lately in which the occurrence of scarlatina in connection with a dairy was not followed by any spread of the disease among the customers supplied with milk from the dairy, although no special precautions were taken to prevent infection.

The "Morton Lecture" at the College of Surgeons, on cancer and cancerous diseases, was delivered on Thursday last by Sir Spencer Wells. The lecturer dwelt at some length on the important fact that for several years there has been a steady increase in the number of deaths from cancer, and that for many years past this increase has been greater than the proportional increase of population. He showed by means of tabulated statistics that this increase was more marked in England and Scotland than in Ireland. The mortality had also increased in recent years in the United States, and Sir Spencer Wells quoted Dr. Fordyce Barker's statement that the mortality from cancer in the city of New York had risen from four hundred to the million in 1875 to five hundred and thirty to the million. He also referred to what he termed the "remarkable fact" that at Frankfort-on-the-Main there had been a considerable decrease in the number of deaths (in proportion to the population) from mammary and uterine cancer during the twenty one years from 1863–83. The lecturer referred with regret to the reply of the Registrar-General to a memorial from the British Medical Association in which the desirability of tabulating separately cancers of each part of the body had been urged. The Registrar-General had not acceded to this, and as one reason for not doing so had pointed out the lack of precision with which many members of the profession stated causes of death in their certificates. Sir Spencer Wells admitted that the latter plea was not altogether unfounded, and said that we must all do our share of the work. The pathology of the disease was then briefly discussed, and the alleged microbic origin of cancerous growths was referred to. Scheurlen believed that he had found a specific microbe or bacillus, but this had been almost proved by Senger to be nothing more than a potato bacillus. So far as inoculation-experiments had gone, they were certainly against the microbic doctrine. We could, said Sir Spencer Wells, only admit that any disease was caused by a micro-organism when the latter had been isolated, cultivated outside the human body, and when the introduction of the cultured organism had led to an identical form of disease or growth. Coming to the practical aspects of the question, the lecturer discussed treatment. The latter should be thorough. In the case of mammary cancer his own experience was in favor of removing the entire gland in every case, except where the growths were small and close to the margin of the gland, or only affected outlying portions of it. When such growths were found, not in the mamma but in the axilla, he opposed removal of the breast, believing that many such tumors were neither connected with the breast nor with the lymphatic glands, but with the sweat-glands, as pointed out by Dr. Charles Creighton.

The recent publication in the *British Medical Journal* of a fac-simile of a few words written by the late Emperor of Germany, in which he complained of being ill-treated by one of his German medical attendants, has caused considerable comments in professional circles. It was felt by many that some steps should be taken in the name of British medicine to disavow the proceeding as unprofessional. With this object a memorial has just been presented to the Council of the British Medical Association, signed by some of the most eminent members of the profession. The Council have just had a meeting in which, after hearing Mr. Hart's explanation of the matter, they passed a unanimous resolution in which they expressed their regret that, under any circumstances, the document was published. They also strongly deprecate the publication of any details in violation of professional confidence. Sir William Jenner did not join in the memorial, but has taken the opportunity to resign his membership of the Association, and it is a significant fact that within the last few days Sir Morell Mackenzie has resigned his membership of the College of Physicians.

A somewhat remarkable case was shown by Dr. Stoker at the last meeting of the Medical Society of London. It was that of a patient who had suffered from goitre, but in whom repeated applications of the galvano-cautery to the nasal passages had resulted in a complete disappearance of the growth. The patient first came under his care in April last. Various modes of treatment afforded no relief. In June there were symptoms of rhinitis, and considerable thickening of the turbinated bones was found. The hypertrophied tissues were punctured and scarified with the galvanic wire. After the second or third application the goitre began to diminish, and it had now disappeared. The cauterizations had been continued up to the present time, at fortnightly intervals, other treatment being suspended. Dr. Stoker suggested that the nasal treatment had produced reflex irritation of the vaso-motor nerves, causing constriction of the blood-vessels in the gland and diminution of the hypertrophy, illustrating the intimate connection between the functions of the thyroid body and the vaso-motor system.

At the Medical and Chirurgical Society Dr. W. R. Smith read a paper on "The Etiology of Puerperal Fever," based on some researches carried on at the Brown Institution. Blood was obtained from the heart of a patient who had died from puerperal fever, and cultivations made on gelatine in the usual way. Blood was also obtained from the finger of a woman suffering from puerperal fever, and similar cultivation-experiments made. As the result of numerous observations, Dr. Smith had found that a micro-organism occurred in the blood of persons affected with puerperal septicæmia in considerable numbers in the form of streptococci. Culturally there were marked differences between it and other streptococci. Its action on mice was distinct and definite, and it could be distinctly distinguished from the erysipelas streptococcus of Fehleisen, and from the streptococcus pyogenes of Rosenbach. An animated discussion followed the reading of the paper.

At the same meeting of the Society a paper by Dr. Samuel West, on "Acetonuria and its Relation to Diabetic Coma," was read. He concluded that acetonuria was common in diabetes without coma, and that it was not constantly present in cases of diabetic coma. When present, it varied greatly from day to day without definite cause and independently of variations in the amount of sugar, and in the specific gravity. It might even disappear when coma developed. The iron reaction showed no relation either to coma or acetone. Both experiment and clinical observation therefore went to show that acetone could not be the cause of diabetic coma. Acetonuria, however, had a clinical value as indicating that the patient was in a more critical condition than when it was absent.

THE ASSOCIATION OF ACTING ASSISTANT SURGEONS.

To the Editor of The Medical Record.

Sir: As one of the members of the Association of Acting Assistant Surgeons of the United States Army, I wish to thank you for your very kindly given use of the columns of The Medical Record. We have a hard work before us, and many obstacles to overcome. In the first place, we are trying to obtain the names of the first appointments as Acting Assistant Surgeons United States Army, and as complete a list as possible from that date to this. We desire, so far as possible, to give the complete medical history of each Acting Assistant Surgeon, and we especially desire to obtain the names of those who have died from wounds and disease contracted while in the service, and also of those who have been killed in battle, either in the War of the Rebellion or in the Indian wars. All this information we intend to publish in book form, with some pages relating to the general history of the corps, etc.

You will readily understand what a difficult task this is, and how much we need the aid of medical men generally. Besides the publication of this book, we are trying to collect funds to place a suitable memorial tablet in the Post Chapel at Fort Leavenworth, Kan. The tablet is to be of brass, in the shape of a large Geneva cross with a background of *oak*-wood. The inscription is: "In memory of the Acting Assistant Surgeons of the United States Army who have fallen in the line of duty in the service of their country. R. I. P."

This will cost sixty dollars, and subscriptions will be gratefully received, from any who are interested in this memorial, by the Recorder of the Association of Acting Assistant Surgeons, Dr. W. Thornton Parker, Newport, R. I.

Many prominent surgeons and physicians in active practice to-day have been Acting Assistant Surgeons, and the list of names is in itself an honorable record for the Association. A deep interest and ready aid are shown in every direction, and the future success and usefulness of the Association seem to be beyond a doubt. All past and present Acting Assistant Surgeons of the United States Army are cordially invited to become members. Application blanks, etc., will be furnished by the Recorder.

W. Thornton Parker, M.D.

Newport, R. I., December 2, 1888.

THE ORGANIZATION OF THE ROOSEVELT HOSPITAL.

To the Editor of The Medical Record.

Sir: Will you not yield me space to correct a serious error of statement made by the Medical Board of the Roosevelt Hospital in the tribute paid—and entered on the minutes—to their late distinguished colleague, Dr. Sands?

"On May 30, 1882, he was appointed the sole attending surgeon to the Hospital. He had long advocated the plan of organization with a single responsible head to each department—a plan till then untried in any large hospital in the United States."

I held the same relative position, that of chief surgeon, having sole control of the surgical division of the State Emigrant Hospital, at Ward's Island, from 1873 to the end of the year 1880. The Hospital had 800 beds, with a capacity for 1,200. At no time—during my term of eight years' attendance—had I less than double the number of patients that the Roosevelt Hospital had at the time of Dr. Sands' service. Morris H. Henry, M.D.

581 Fifth Avenue, New York.

INGROWING TOE-NAIL.

To the Editor of The Medical Record.

Sir: An article on page 621 of The Medical Record for November 24, on methods of treating ingrowing toe-nail, leads me to remark that I have seen a number of cases which seem to warrant an opinion that the starting-point of many of these cases is a *corn*, caused by friction of the edge of the nail against its sulcus, and the retention of desquamated epithelium, which serves to increase the pressure. Once formed the corn gives rise to pain and to inflammation, which obliterates the first stage of the process.

Cutting the edge of the nail either on the side or the end, and allowing the granulations to grow up in advance of the protruding nail only makes a bad matter worse. It is often done by patients before consulting a physician, and, also, too often by physicians. The advice by a writer in the *Boston Medical and Surgical Journal*, not long since, that the soft tissues at the side of the nail, and not the nail, should be removed by operation, is far more rational, and produces a much more satisfactory result.

A sore toe is a small matter compared with much that is spoken of in medical journals; but the amount of suffering that this variety can cause entitles it to more consideration than it generally receives.

F. A. Castle, M.D.

New York, December 11, 1888.

ARE OPERATIONS FOR LACERATED CERVIX UTERI JUSTIFIABLE?

To the Editor of The Medical Record.

Sir: In your issue of December 15, 1888, the views of Dr. Walter F. Atlee on the subject of laceration of the cervix are republished from the *Pittsburg Medical Review*. Permit me a word in reply.

I know not whether you republished this tirade against the men "to whom we dare not apply the epithet of charlatan," as one of the curiosities of medical literature or not. Be that as it may, the article bears such a semblance of high authority, coming from one of that family which has given to the world one of its earliest, most courageous, and skilful ovariotomists, and offering the centennial experience of the brother and nephew of this justly eminent man, that I desire to investigate it.

These eminent obstetricians tell us that in one hundred years' experience they have never "found it advisable to sew up the neck of the womb for a tear." "And more than that, not in one case was there any reason to regret its not having been performed." "Mankind are indeed fearfully at the mercy of practitioners of medicine," is the sage deduction from the enormous "experience." Let us sift the enormous experience. The first intimation given to the world that laceration of the cervix may require surgical treatment appeared in Dr. Emmet's paper in *Am. Jour. of Obstet.*, ii., 1869. But the first paper which really bore fruit and aroused practical attention to the necessity for this operation was published in 1874 (*Am. Jour. of Obstet.*, vii., "Lacerations of the Cervix Uteri as a Frequent and Unrecognized Cause of Disease," Thomas A. Emmet, M.D.). It is therefore to be presumed that, since Dr. Atlee's father died in 1881, the conversation referred to was held just seven years after the laceration of the cervix began to be looked for as cause of uterine disease. Thus dwindles the experience of one hundred years, and with it the significance of its argumentative value.

Has any individual, be he ever so eminent, the right to decide upon an operation when he acknowledges that he has not once performed this operation, despite the fact that a host of justly eminent gynecologists are daily recognizing it as a radical remedy for the removal of chronic uterine catarrh, "ulcerations," erosions, etc.? To quote Dr. Noeggerath in this cause may sustain it with those who are unacquainted with that eminent gentleman's record in this city. As the discoverer of gonorrhœa as an important factor in diseases of the uterus and its appendages, Dr. Noeggerath has won for himself deserved fame as an original investigator. He stood alone, in opposition to Emmet's operation, in the staff of the Woman's Hospital, against men like Marion Sims, Emmet, Thomas, Hunter, Lee, and a host of others who have since that time made American gynecology famous. Failing in his efforts to dislodge Emmet's operation from the high esteem which its marvellous results have won for it, this pertinacious gentleman is now fighting it in Germany. Whether he will be as successful in this quixotic undertaking as he was in convincing his German confrères that sixteen per cent. of the women in New York city suffer from gonorrhœa remains to be seen. Dr. Atlee says:

"Some thirty years ago my old master, Nélaton, told me that certain diseases of the neck of the womb were *le pâturage des charlatans*. Since then the pasture-ground has become more extensive; it extends to the womb itself, and all its appendages, and many grow fat thereon to whom we dare not apply the epithet of charlatan."

The truth of this statement (barring the innuendo) proves the fallacy of Dr. Atlee's deduction. Judging from my personal experience, which unhappily is only a trifle over one-fourth of a hundred years, and from the observation of the extensive practice of others, but chiefly from a careful study of this subject, the results of which I have published ("The Therapeutic Significance of the Cervical Follicles," New York *Medical Journal*, June 27 and July 4, 1885), physicians no longer "grow fat" from the diseases of the neck of the uterus, but their work is now more often directed to the womb itself and its appendages. Many practitioners who have kept abreast of the advances in gynecology may testify how, in former years, women were wont to visit the office twice or three times a week for the purpose of having the uterus cauterized, leeched, brushed with iodine, tannin, and other astringents, or to have pessaries adjusted, and how greatly this number has diminished since they have removed the diseased structures by Emmet's operation. The aim of the latter is not to "sew up" the laceration, as Dr. Atlee puts it, but the removal of the diseased tissues which invariably surround many, though not all, existing lacerations. The erosions, ulcerations, leucorrhœas are radically removed, and the cervix is restored to its pristine shape and functions. Moreover, the size of the uterus is diminished, the congestions of the pelvic vessels removed, and the consequent abolition of the backaches, leucorrhœa, and retroversions due to the latter has vastly diminished the number of those office-patients who formerly came to have the "neck of the womb treated." Thus Emmet's operation for lacerated cervix, so far from causing us to "grow fat," has made decided inroads upon the income of the practitioner. And if Dr. Atlee would only be persuaded to become even a moderate follower of this corypheus, he will discover that *he* will more fully "recognize the high responsibilities and duties" on which he so admirably reads us a homily.

In the essay referred to above I have fully entered into the objects and results of the operation for lacerated cervix, and I have shown that the same results are aimed at by the Germans in the operations for excising the diseased mucosa, devised by Carl Schroeder, Hegar, Simon, and Martin. Dr. Emmet's position has been so misunderstood that he has really become discouraged; and I have heard him inveigh bitterly against the practice of superficial denudation, saying that he believed his operation is doing more harm than good because of its not being understood. Let me quote a description from Hegar and Kaltenbach (1881, p. 139), the great German textbook for gynecological operations: "While the assistant holds the lips of the os uteri on a stretch, the edges of the tear are freshened smoothly and thoroughly by knife or scissors; the freshened surfaces are brought together by needles," etc. Again, the following description of an operation for lacerated cervix I find in *The Chironian* (November 9, 1888): "Operation was made as follows by Dr. Helmuth: The lips of the laceration were denuded of membrane and then silver sutures introduced on each side," etc.

What caricatures on Emmet's operation these are, anyone who has seen Dr. Emmet labor from half an hour to an hour over a lacerated cervix, digging and snipping away diseased structures, glands, and "cicatricial tissue," will readily appreciate. Dr. Emmet never operates for lacerated cervix unless there are symptoms demanding it. Having followed his operations in the Woman's Hospital for many years, I feel authorized to make these statements.

In conclusion, I beg to say that until the profession obtains, from unbiassed sources, the information that the operation for lacerated cervix has failed, in a reasonably large number of cases, to remove the diseases for whose subdual it was devised, we must remain its adherents and advocates.

SIMON BARUCH, M.D.

47 EAST SIXTIETH STREET, December 17, 1888.

AN UNUSUAL RESULT OF A COMMON ACCIDENT.—In Vienna, recently, a man was buried under a mass of earth falling from the side of a deep ditch which he was digging. The earth covered his entire body, the head only being free. He died from the results of the injury, and at the autopsy a large swelling, the size of a man's head was found on the neck. Examination showed this to be the lungs and heart which had been forced up out of the thorax. The intestines had been forced up through a rupture in the diaphragm into the chest cavity, and the liver and spleen were extensively lacerated.

PROPHYLAXIS OF BERIBERI.—Drs. MacGillavry, Pekelharing, and Van Leest have been appointed by the Dutch government a commission to study the cause of beriberi and to search for some means for its prevention

DR. AGNEW AND THE NEW YORK PATHOLOGICAL SOCIETY — A BIOGRAPHICAL SKETCH.

By JOHN C. PETERS, M.D.,

NEW YORK.

Dr. Cornelius Rea Agnew joined this Society in 1853, when he was only twenty-three years of age, and remained a most worthy, although generally a non-active member, almost all the rest of his useful life, or for the long period of thirty-three years.

Few of our members, except the treasurer and those officers who are obliged to study the records of membership, even yet know that he was so long one of our colleagues, for he had scarcely attended any of our meetings for twenty years or more. He remained a member doubtless because he was fully impressed not only with the great usefulness of this Society, but of its absolute necessity as a great training and finishing school for all scientific physicians and surgeons. He was probably proud of its record, for I think he knew that it is the oldest pathological society in the world, and the original upon which the London, Dublin, Philadelphia and others had been modelled. I also believe he was grateful for the benefits he had received from it in his earlier years, and anxious to secure similar ones to all his successors.

He belonged to that small class of broad-minded and generous men, who, having labored long and earnestly in a great medical society like ours, do not lose their interest in it when they are no longer able to take part in its proceedings They know without prompting that they can always help to maintain its usefulness and dignity with very little material aid. They know that the outgoes of all scientific bodies are necessarily always large, and the incomes are usually comparatively small, and that it is vitally important that old friends and members should not fall off except by death or disability. This Society has been reasonably fortunate in such friends. Thomas M. Markoe, Gustavus A. Sabine, and Isaac E. Taylor have been our friends and benefactors since 1844, or for forty-four years, yet none but some of our oldest members have ever seen them here. The same may be said of Dr. George A. Peters, from 1847; Fordyce Barker, from 1850; John C. Dalton, William Detmold, Thomas Addis Emmet, and Cornelius Agnew, from 1853; Elsworth Eliot, T. Gaillard Thomas, and Henry B. Sands, from 1855; James R. Leaming, since 1856; William H. Draper and George F. Shrady, from 1858; Abraham Jacobi and Alfred L. Loomis, since 1860; Edward G. Janeway, from 1867; and many others for shorter periods. All these are comparatively non-active members, but most useful silent partners. The only active original members now left are Lewis A. Sayre and John C. Peters.

Dr. Agnew was nominated for membership by Drs. John T. Metcalfe and Thomas M. Markoe. He was well prepared, as he had passed through Columbia College; had studied under that great and brilliant surgeon John Kearney Rogers; had graduated from the College of Physicians and Surgeons in 1852, and had finally completed a full three years' term of service in the New York Hospital. The first specimens which he presented was a staphylomatous eye, a stomach corroded by sulphuric acid, an amputated arm, fractures of the ribs, rupture of the spleen, ulcerations of the small intestines, and typhoid fever without diarrhœa, fatty degeneration of the kidneys and the like.

He came to us when Alonzo Clark had already been engaged for ten years in those brilliant and almost unrivalled presentations and descriptions of disease which he was spared twenty years more to instruct and delight us with.

In Dr. Agnew's first year Dr. Clark presented and graphically described 49 specimens; for he often brought 3 or 4 at one meeting, and once came with 10. Dr. Markoe exhibited 16; Dr. Metcalfe, 14; Dr. Sayre, 18; Willard Parker, 10; John A. Swett, 9; Dr. Lidell and Alfred C. Post, each 8; Dr. Peaslee, 7; and Dr. Van Buren, 5.

Dr. Clark was Olympian in size and symmetry, cast in the largest and most beautiful mould, and seemingly more than one man in body and mind. Dr. Peaslee was equally tall, but far more slender, as white as a ghost, but lithe in body and mind, accurate in knowledge, and always ready and even brilliant in discourse, but he had a very sharp nose. Dr. Parker was also very tall, but truly elegant in face and figure, with the sunniest expression of general kindliness, yet capable of immense and quick physical and mental work. Dr. Van Buren was large in every way, heavy and sturdy in body, honest and precise, with a head rather less Websterian than Dr. Clark's, and often tip tilted back as if by an extra joint in his neck. Dr. Swett was delicately built, like the late Dr. Robert Watts, had the quaintest and most curious, but pleasant and intelligent expression and actions, and was one of the most scientific pathologists and diagnosticians that has ever appeared in New York. He was the first chairman and transient President of this Society. Dr. Post was short and strong, like Dr. Agnew, an equally devout Christian, an excellent and devoted surgeon, a most accurate linguist, and a very scientific man.

Dr. Agnew and all others must have been deeply impressed by the discussions between these able men. But soon he went to Dublin, London, and Paris to study diseases of the eye and ear. On his return he resumed his connection with this Society, and as he had been appointed Surgeon to the New York Eye and Ear Infirmary, he began to bring extirpated eyes for our instruction, and to propose new members, and to present their papers and specimens. The average attendance then was from twenty to thirty up to forty-five and forty-eight.

His private practice quickly became enormous, and his religious, patriotic, and philanthropic tendencies led him into many almost gigantic enterprises.

He came of French Huguenot and Scotch Presbyterian blood, and

"Early heard the voice of God,
And Angels to his sight appeared,
Crowning the glorious hills of Paradise."

He soon became a Director of the New York Tract Society and of the Young Men's Christian Association; an Elder and Trustee of the Fifth Avenue Presbyterian Church, and of various mission chapels.

He was active in all the State, County, and City medical societies, especially the Surgical, Ophthalmological, and Otological.

At the outbreak of the civil war he became Surgeon General of the State of New York under Governor Morgan. He decided, as far as one man could, that

"Our troops should lift their banners up
And our navies spread their flags abroad."

He sounded the alarm to Christian soldiers:

"Soldiers of Christ arise
And put your armor on,
Strong is the strength which God supplies,
And from strength to strength goes on."

He earnestly believed, like a true Puritan,

"'Tis God that guards me with His might
And gives me His holy sword to wield."

But Dr. Agnew was a truly humane Christian soldier. He was one of the organizers and most active members of the United States Sanitary Commission. He cheerfully helped sick and wounded Confederates, miserable negroes, Indians, scouts, tramps, and gypsies. He made great sacrifices of time, money, and his practice, in doing all this, but it all came back to him.

Then he helped to found the Union League Club, became a trustee of the public schools, also of Columbia College and the School of Mines, and occupied almost scores of other public positions, professional and non-professional, including those of the Presidency of the

Medical Society of the State of New York, down to the Governorship of the Women's Hospital and of the Poughkeepsie Insane Asylum. Yet, wonderful to relate, he never lost his private practice, his skillin operating, or his leadership in his specialty.

Dr. Agnew was below the average height, barely five feet six inches tall. When he joined this Society he weighed not more than one hundred and twenty pounds, but he had a perfectly formed, symmetrical, and active frame, capable of bearing great and prolonged mental and physical efforts. His face was very speaking, frank, and handsome; his forehead unusually broad; his eyes calm, clear, bright, and hazel, but often twinkling with pleasure; his mouth was expressive of great decision and firmness; and his whole bearing that of wisdom and integrity. His manners were wonderfully winning, so that he attracted attention and made friends everywhere. All recognized him as the sternest and purest of moralists, yet the most pleasant and helpful of friends. He was a man possessed with deep religious fervor, yet free from self-righteousness and intolerance. His love to his neighbor was proportionately as great as his love to his God, and that was very great.

In his latter years his figure only grew more firm and well set; his back flatter and more straight; his shoulders more square and soldierly. There was not the least suggestion of a slouch anywhere. He had enjoyed uninterrupted good health up to his last short sickness; the reward of a splendid constitution and a life of purity, simplicity, and frugality almost without a parallel.

He and those other great Christian physicians and surgeons, Post, Peaslee, Parker, and Sands, made religion pleasant and attractive to all. His death was magnificent in its courage, calmness, and resignation. He seemed to say:

> "Bright King of Glory: mighty God!
> My spirit bows before Thy mercy seat:
> To Thee I lift my humble thoughts
> And simply worship at Thy feet."

A Mind-reading Tale.—A certain M. Zamora, of Nantes, who has been giving public exhibitions of hypnotism and mind-reading in that city, has recently turned his canny faculties to practical use, if we may believe an account published in *Le Bulletin Médical* of October 7, 1888. He had been giving an exhibition in the town of Paimbœuf, and it occurred to the authorities of the place to put him to a practical test. There was at that time in the station-house a man accused of the theft of a sum of money from his master, who strenuously denied his guilt, and against whom there was nothing but circumstantial evidence, as the money had not been found upon him or about his effects. M. Zamora, his eyes bandaged, was brought into the presence of the suspected thief and held his hand for a few moments. He then left him and started off at a brisk pace through the streets of Paimbœuf, with which he was not acquainted, until he arrived at a place near the railroad station, where he halted at the base of an old wall, saying that the money was buried there. A little digging soon brought to light a sum of money equal to that lost by the accuser, and composed of pieces of the denomination previously indicated by him. So the story is told. We have not heard whether the accused was convicted on the strength of the evidence furnished by the mind-reader.

Caprices of Nature.—The Surgeon-in Chief at the Maternity, in Brussels, has published the notes of the following two cases: The first was that of a woman, aged twenty-one, a primipara, who continued to menstruate regularly throughout the course of her pregnancy. The second was that of a woman, aged twenty-four, who had never menstruated, but who nevertheless became pregnant and gave birth to a well formed, healthy infant.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from December 9, 1888, *to December* 15, 1888.

Baxter, Jedediah H., Colonel and Chief Medical Purveyor. By direction of the Secretary of War will proceed to St. Louis, Mo., and Hot Springs, Ark., on public business connected with the Medical Department, on completion thereof to return to his proper station. Par. 13, S. O. 289, A. G. O., Washington, December 12, 1888.

Town, Francis L., Major and Surgeon. Is relieved from duty at the post of San Antonio, Tex., and will report in person to the commanding officer, Presidio of San Francisco, Cal., for duty at that station, relieving Major Henry R. Tilton, surgeon, and by letter to the commanding general, Department of California. Par. 19, S. O. 286, A. G. O., Washington, D. C., December 8, 1888.

Tilton, Major. Upon being relieved by Major Town, will proceed to West Point, N. Y., and report in person to the superintendent of the United States Military Academy for duty at that station, relieving Major Charles F. Heizmann, surgeon. Par. 19, S. O. 286, A. G. O., Washington, December 8, 1888.

Heizmann, Major. Upon being relieved by Major Tilton, will proceed to San Antonio, Tex., and report in person to the commanding officer of that post for duty, and by letter to the commanding general, Department of Texas. Par. 19, S. O. 286, A. G. O., Washington, December 8, 1888.

Finley, James A., Captain and Assiatant Surgeon. Is relieved from duty at Fort Buford, Dak. Ter., to take effect upon the expiration of his present sick leave of absence, and will report in person to the commanding officer at Fort Assiniboine, Mon., for duty at that post. Par. 19, S. O. 286 A. G. O., Washington, December 18, 1888.

Chapin, Alonzo R., Assistant Surgeon. Leave of absence for fourteen days to commence on or about December 24, 1888, is granted. Par. 1. S. O. 261, Headquarters Division of the Atlantic. Governor's Island, New York City, December 11, 1888.

La Garde, Louis A., Captain and Assistant Surgeon. Leave of absence for one month, with permission to apply for an extension of three months, is granted. Par. 15, S. O. 290, A. G. O., Washington, December 13, 1888.

Jarvis, Nathan S., First Lieutenant and Assistant Surgeon. By direction of the Secretary of War is relieved from duty at Fort Leavenworth, Kan., and will report to commanding officer at Fort Lewis, Col., for duty. Par. 14, S. O. 290, A. G. O., Washington, December 13, 1888.

Johnson, Richard W., Captain and Assistant Surgeon. Is relieved from duty at Fort Adams, R. I., and will report in person to the superintendent of the United States Military Academy, West Point, N. Y., for temporary duty at that station. Par. 19, S. O. 286, A. G. O., Washington, December 8, 1888.

Official List of Changes in the Medical Corps of the United States Navy for the week ending December 15, 1888.

Penrose, Thomas N., Surgeon. Ordered for examination preliminary to promotion.

Oberly, A. S., Medical Inspector. Ordered before the Retiring Board.

Dickson, S. H., Past Assistant Surgeon. Detached from the Richmond and to the Pensacola.

Ashbridge, Richard, Past Assistant Surgeon. Detached from the St. Louis and to the Richmond.

Auzal, Ernest W., Assistant Surgeon. Promoted to Passed Assistant Surgeon.

Wieber, F. W. F., Assistant Surgeon. Promoted to Passed Assistant Surgeon.

Medical Items.

Contagious Diseases—Weekly Statement. — Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 15, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	21	8
Scarlet fever	210	31
Cerebro-spinal meningitis	1	1
Measles	334	20
Diphtheria	133	23
Small-pox	0	0
Yellow fever	0	0
Cholera	0	0

The Happiest of Nations.—It has been said that the happiest nation is that in which the proportion of men and women is most nearly equal, in which the number of illegitimate births is least, which contains the greatest number of healthy adults, in which the average life is longest, and in which the proportion of people beyond sixty years of age is the highest. According to the Paris *Temps*, France is the country in which all these conditions are most fully met. While in Great Britain there are 750,000, and in Germany 1,000,000 more women than men, in France the excess is only 92,000. Between the years 1825 and 1867 the illegitimate births varied in the different countries of the continent from 8.2 to 25 per cent., but in France they were only 7.2 per cent. The mortality in England is 31, in Germany 38, and in France 23.8. The proportion of inhabitants between fifteen and sixty years of age is greater in France than in any other country, and the same favorable showing is made for the average duration of life and for the number of vigorous old people. Nevertheless the population of the country is stationary, or even decreasing, and this in spite of the fact that emigration is small as compared with that from other countries.

Some Popular Medical Superstitions.—In a book entitled "A Bird's-eye View of France in the Middle Ages," M. Challemel refers to a number of superstitions which were current at that time, many of which have not yet died out. There were several means of warding off fevers. One was to eat neither meat nor eggs at Easter and on other solemn festivals; another to carry about on the person a piece of a human bone; and still another to pluck and eat the first daisy found in the field. In order to cure a fever the sufferer would rise early in the morning and go out into the field, walking backward all the time, pluck a handful of herbs, and without looking at it, throw it behind him, and then return quickly to the house. The fever then forsook him and fastened itself upon the devil. The Bretons preserved their children from all evils by putting on them a damp shirt. A knife with a white handle was a sure preservative against colic. The toothache was quickly relieved by touching the painful part with a dead man's tooth. Running here and there, without particular aim, through a church, was sufficient to ward off pleurisy. The formation of gall-stones was rendered impossible by rolling one's self naked in a field of oats. Spitting in the mouth of a live frog was a very efficacious remedy for a cough. Earache was cured by touching the ear with the hand of a skeleton, and headache was quickly relieved by binding the temples with a cord by which some one had been hung.—*Journal de Médecine et de Chirurgie Pratiques*, October, 1888.

"Odium Medicum."—In the course of an address having this title, Dr. L. S. Pilcher (*The Brooklyn Medical Journal*) says: "How little is the spirit of professional enthusiasm which animates the true physician appreciated, or even understood, by the people among whom he works. We hear much of the *odium medicum;* the personal difficulties, jealousies, and rivalries of medical men are exaggerated and commented upon freely; the amiable and sometimes transparent attempts upon the part of ambitious men to secure notoriety and practice are never underestimated; the more striking and positive achievements of particular men are fully acknowledged, and usually greatly distorted and exaggerated by partial friends; but the undercurrent of self-denying enthusiasm, upon which all these men are being equally swept along in their work, is rarely thought of, is doubtless often not even appreciated by the men themselves. But it is this alone which makes their work tolerable. How often do laymen, when they stop to consider even the most ordinary duties of the physician, exclaim in wonder that such duties can be accepted by any man. The tedious waiting by the obstetric bed, and the duties which the culmination of the parturient agony devolve upon the accoucheur; the personal services of the most repulsive character which the surgeon is continually being called upon to render; the often ingratitude of those for whom the most has been done and borne; the responsibility of acts and advice upon which the issues of life depend; the wear and tear of mind and body; these are the things, the enduring of which it may well seem strange that refined and sensitive minds should deliberately undertake. If the spirit of trade alone animated those pursuing such a calling, what grovelling and menial tendencies of mind, what callousness of heart, would it argue in them. But it is not so. The controlling, dominating spirit which sustains a physician in the most trying and in the most undesirable duties of his profession, whether he stops to recognize it or not, is a divinely sent enthusiasm of labor for the relief of men. Nearly all human beings have this feeling in some degree; he who is devoid of it is a moral monster; but in the physician it is cultivated to its highest degree. It is that which sustains him in all his work, and that which is his only solace in many hours of disappointment and misrepresentation."

Dr. Bogdanovski, a well-known surgeon in St. Petersburg, died recently while engaged in an operation. He was about to amputate the arm of a patient, and had already begun the operation, when he was angered by the awkwardness of a student who was assisting him, spoke to him sharply, and suddenly fell fainting to the floor. He soon recovered consciousness and was about to proceed with the operation when he fell again and died in a few minutes. The cause of death was heart-failure.

Cholera Inoculations.—Dr. Gamaleya, a physician of Odessa, has laid claim to the Bréant prize of 200,000 francs for the discovery of a method of preventing cholera. His right to the prize is vehemently disputed, however, by Dr. Ferrán, who maintains that his method of inoculation affords a safe and certain means of preventing the disease.

Ouabaïne is the name given to an alkaloidal substance extracted from a plant growing in Eastern Africa. It is said to resemble strophanthus in its physiological action on animals.

The Universal Language.—The lovers of Volapük are beginning to raise their voices for the adoption of that language by medical societies, especially those of an international character, in order that their proceedings may be understood of all men. They ask now only that the proceedings be printed in parallel columns, one the language of the country and the other Volapük. Why, may we ask, does not some enthusiast establish a Volapük medical journal, *Volapükik medinik gased*, or words to that effect?

One more Effect of Cigarette-Smoking.—Dr. Fenn, of San Diego, Cal., reports a case of dyslalia from cigarette-smoking, occurring in a young miner. The stammering was quickly relieved by abstinence from tobacco and the use of bromides and valerian.—*The Medical Age*, November 10, 1888.

A Physician's Account of Ptomaïne Poisoning from Septic Meat.—Dr. Anderson, of Norfolk, gives the following picturesque account of what a layman would call a bilious attack: "I received into my stomach, while empty, a small morsel of septic meat. In a short time a sickening, sinking sensation was experienced, with copious secretion of hot frothy mucus, swimming in the head, and great nervous prostration. Placed under circumstances which rendered it impossible to use emetics or any other medicaments, I rode for fifteen miles in great torture. Procuring a draught of fine domestic wine, I was enabled to complete my ride, reaching home late at night, after a ride of more than twenty miles, since eating the poisoned meat. Not having eaten anything since early morning, I ate supper and retired. My night was one of great trouble, oppression, and anxiety—frightful dreams tormenting me through all its dreary hours. I arose next morning, weak, sick, tremulous, feeble, and with a frightful vertigo. I ate a light breakfast and hastened to visit some ill patients. I returned about midday, with a sense of sinking which seemed to me to be the prelude to death. I drank a large draught of water and soda, threw up a quantity of nauseating, foaming fluid, and felt as if every support were gone, and I could survive but a few moments. Seeing a mixture of salicylic acid and bicarb. soda on the mantel, I called for it and took a dose, repeating it every fifteen minutes. I distinctly felt it pervade my whole economy, giving force to the heart, clearing up the brain, throwing off the incubus, and affording the most delightful relief. It soon began to operate on my kidneys, and a very copious flow of urine followed. It was evident the medicine had neutralized the septic agent and caused its rapid discharge by the kidneys. Here was a ptomaine, exceedingly minute, which in twenty hours had so transformed and poisoned all the fluids as to place me in imminent peril."—*The American Lancet*.

The Heredity of the Morphine Habit.—Erlenmeyer says that children born of women addicted to the morphine habit are practically morphine-eaters at birth. During the first few days of life, unless morphine is given to them, they are very apt to suffer collapse, and this condition may end in death, the child being too weak to withstand the violent symptoms which are similar to those which follow the sudden withdrawal of the drug in adult opium *habitués*.

Hayap, a New Local Anæsthetic.—At a recent meeting of the Berlin Medical Society, a substance brought from Africa, and known there by the name of hayap, was presented as a local anæsthetic of considerable power. The substance is in the form of a reddish mass. An aqueous solution instilled into the eye of an animal caused, within fifteen minutes, complete anæsthesia, which was maintained in several instances for from ten to twenty-four hours. The roughest treatment of the conjunctiva gave rise to no evidences of pain on the part of the animal.

The Value of Medicine.—A contemporary, in an obituary notice of Dr. David Robinson, an eccentric physician, of Paterson, N. J., says: "He was fond of trying medicines on himself before giving them to his patients, which practice caused him much suffering and ill-health."

Different Therapeutic Methods.—In a paper entitled "Therapeutic Nihilism" (*The Boston Medical and Surgical Journal*) Dr. M. Clarke speaks as follows in regard to therapeutic methods: Some men are naturally disposed to look at disease from the stand-point of preventive medicine; some from that of hygiene; some with a reverence for the *vis medicatrix naturæ*; some with a belief in active medication. The latter position is certainly the most attractive to the average medical man, and, in the presence of any serious illness, it is the most acceptable to the laity, in spite of the popularity of that therapeutic *opéra bouffe*, homœopathy. Again, some men incline to run after new fashions, treating all diseases impartially and indefatigably with the newest discoverable drugs, and endeavoring to keep up with the samples of the manufacturing chemist; this is the experimental therapeutist. Others, too inert perhaps to shift for themselves, leave to these the practice of experiment, but borrow from them the suggestions their results afford; this may be called vicarious therapeutics. Others, again, settle back into the comfortable habit of always giving the same thing for the same disease, and thus, having once been in travail and delivered of a diagnosis, have nothing left to do but consult their books or their memories for the indicated remedy; this method of practice, I suppose by far the most common and certainly the most degrading of all, is routine therapeutics. There are a few physicians, however, who look upon each case as to a certain extent *sui generis*, and who bring to its relief not only the results of the experience of the past and the experiments of the present, but also a personal opinion of the needs of a particular case, and who, so far as they are allowed, endeavor to do what a sound training, an impartial judgment, and an active conscience command, and this seems to me rational therapeutics.

Statistics of Medical Students in Paris.—The statistics of the Paris Faculty of Medicine, published for the year 1887–88, show 373 graduates, of whom 321 were French. Fifty were foreigners and two were women. One of the latter was a French subject, Mme. Sollier, a colored lady of Martinique origin, and the other was a Roumanian lady. The list of male graduates comprises those of all nationalities. Thirty-six were Russians. Americans stand next in order of numbers, but almost all of them were Spanish students from the South American States; only one was from the United States. At present the number of students enrolled on the books of the faculty is 3,782. Of these 114 are women. Only one of them comes from the United States, and only two men come from there. Twelve of the women are French, 90 are Russian, and there are a few English, Greeks, and Austrians. The male foreigners number more than 560, including 140 Russians and Poles, 130 Spaniards and Spanish Americans, 19 Greeks, 56 Turks, and the others from various European states, there being 34 Englishmen.—*New York Medical Journal*.

Electro-therapeutics Run Mad.—A Texas physician writes to the *Kansas Medical Index*, that he is using electricity in typhoid fever, and finds that it is antipyretic and antiphlogistic, and superior to any other agent he ever used.

The Bacteria of Sea-phosphorescence.—Professors Pflüger and Tilanus have discovered the bacteria that produce the phosphorescence of sea-fish, and have cultivated them by Koch's method. In the dark the glass slide containing them is seen to be thickly strewn with luminous points.

Senile Rheumatic Gout.—Dr. William Bruce contends that there is a class or kind of acute senile arthritis which belongs to a different category from gout and rheumatism on the one hand, and rheumatoid arthritis on the other, and is remarkable in its severity and complete curability, even at a very advanced time of life. The following are notes of a case of this form of disease: An inn-keeper of seventy, imbibing stimulants rather freely but enjoying very good health, had complained of some "rheumatic" pains for a day or two. He was then exposed to cold and wet for some hours, came home very ill, and took to bed. He became completely crippled with "rheumatic gout," affecting his hands and feet as well as his wrists and ankles. He was treated with salicylates, alkalies, and iodide of potassium, which gave relief, but when he arrived at Strathpeffer, three months after his first seizure, he was completely helpless, and could not even turn himself in bed, or feed or dress himself. He took the sulphur waters internally, had frequent baths, and thorough massage. He was perfectly cured, and left Strathpeffer, walking about briskly, in three weeks. Next year he returned, but was merely suffering from slight twinges, and had been particularly well since his first visit. He had never had any urinary trouble, and there is no rheumatic history in his family. The jaws were not affected. The whole aspect of his case leaned to the side of polyarticular gout, and yet the obstinacy of the attack, his age and history, point more to rheumatoid arthritis.—*The Practitioner*, November, 1888.

Hare-lip and Maternal Impression.—Dr. E. H. Wakelee, of Big Flats, N. Y., writes: "On November 16, 1888, I was called to attend Mrs. N——, in her fourth confinement. She was successfully delivered of a male child which had a double hare-lip, with cleft palate of the right side. Her first child (a girl) had a single hare-lip, which was operated upon about May 1, 1888, by Dr. Henry Flood, of Elmira. The mother was present at the time, and says the sight of the blood, cries of the child, and other details of the operation disturbed her very much. During the remaining period of her gestation the mother, to use her own words, 'worried continually for fear the child would be marked.' On inquiring carefully into the family history I found, with the exception of the sister above referred to, no one in the family, for generations back, had anything of the kind. Was the deformity due to maternal impression?"

Rickets and the Weather.—Dr. Rudolf Fischl, of Munich, has been studying the influence of the season upon rachitis, and states that the severest cases begin about New Year, while from April to October, when the children are much in the open air, and even the poorest can ventilate their houses by opening the windows, the frequency of the disease diminishes. This favorable influence of fresh air is felt up to the end of the year. The decrease in rickets during the summer is due also to the fact that many mild cases, which never come under the physician's eye are cured spontaneously at this season. The greater number of cases of rickets are seen in the Munich clinic in May, November being the month in which the smallest number of cases present themselves. —*Deutsche Medizinal Zeitung*, November 5, 1888.

Counter-prescribing is said to be the rule rather than the exception in Kansas City, no one thinking of calling on a physician unless he finds himself seriously ill. As a retaliatory measure, many physicians are dispensing their own medicines.

The Constant Presence of Spirilla in a Case of Relapsing Fever.—Hitherto it has always been found that Obermeier's spirochetæ were present during the fever, but absent in the internals in relapsing fever. In a few exceptional cases the spirilla have been found at periods varying from two to twenty-four hours after defervescence had occurred. Dr. B. Naunyn reports a case, however, occurring in a man, fifty years of age, and terminating fatally in the sixth week, in which the spirochetæ were present in the blood constantly for a period of two weeks. They were more numerous during the height of the fever, and scarce during the intervals, but never disappeared entirely, even in the absence of all fever.—*La Riforma Medica*, November 7, 1888.

Ear Disease and Rickets.—Dr. Eitelberg has found, in aural examinations made on one hundred rachitic children, pathological changes in the drum-membrane in over ninety per cent., while in healthy children such changes were found in only a small proportion of cases. On account of the softened condition of the temporal bones in rachitic children, the author believes that diseases of the ear are likely to be much more serious in their consequences in them than in healthy children.—*Deutsche Medizinal Zeitung*, November 5, 1888.

False Cinchona.—In some parts of Bolivia and in the Northern provinces of the Argentine Republic there is found a tree, the *Cascarilla morada*, the bark of which is reputed to possess therapeutical properties identical with those of cinchona. Drs. Arata and Canzoneri have recently examined this bark (*Revista Argentina de Ciencias Médicas*, November 5, 1888), and have extracted from it two principles which they call *moradina* and *moradeina*. The former occurs as fine colorless needles or coarser prisms, which, after exposure for some time to the air, acquire a pale-yellow tint. It possesses the properties of an acid, the solution reddening litmus-paper, but does not form stable compounds with alkalies. Moradeina is an alkaloid, very slightly soluble in water but freely soluble in alcohol, ether, and chloroform. The hydrochlorate crystallizes in the form of a mass of interlacing needles.

A Curious Verdict.—A young woman in Lancashire died while under the influence of chloroform administered before the extraction of teeth. The jury returned a verdict of "death from misadventure."

Ptomaïnes and Gastric Vertigo.—Vertigo a stomacho læso is the result, according to M. Gaube and others, of autochthonous poisoning, the poison being a base belonging to the group of cadaveric alkaloids or the ptomaïnes of M. Gautier. The fæces and the urine of individuals suffering from digestive derangements accompanied by dilatation of the stomach contain the poison. The dilatation may be a symptom of the presence of the poison, which is an uncrystallizable base having alkaloidal qualities, and forming soluble crystalline salts with muriatic acid. It is absorbed into the circulation, and determines giddiness by its effect on the brain, just as is imagined to be the case in uræmia. Injected under the skin of young rabbits, half a milligramme of the hydrochlorate of this ptomaïne caused coldness of the ears, extremities, and surface of the body within the first hour, and much urine was passed; in twelve hours appetite was lost, the fæces became soft, and the urine scanty; death occurred in from thirty to thirty-six hours after the injection, the head of the animal being held in such a manner as to suggest giddiness.—*The Lancet*, November 3, 1888.

Double Placenta with Single Pregnancy.—At a recent meeting of the Paris Academy of Medicine, Dr. Guéniot exhibited a double placenta which he found in a case of single pregnancy. Each placenta represented the volume of that of a pregnancy of seven or eight months. The umbilical cord, at first apparently single, was divided into two cords just before reaching the placenta, the blood-vessels being apportioned between them. There are only a few examples of this kind recorded in obstetrical works, which may have very grave importance from a medico-legal point of view: for instance, in cases of alleged infanticide, where a woman delivered of only one child with a double placenta might be charged with having had twins, one of which she might be accused of having destroyed.—*The Lancet*.

Saccharin not a Substitute for Sugar.—A report by a Medical Commission, appointed by the Minister of Commerce, to examine into the properties and effects of saccharin as a food, expresses the opinion that materials which are antiseptic or capable of fermentation should not be introduced into food. It should be borne in mind, the report continues, that a substance is only a food on condition of its being able to undergo in the economy all the series of changes which render it assimilable. Not only is saccharin not a food, but by its antiseptic properties it renders entirely unalterable the substances with which it may be mixed. To substitute saccharin for sugar, therefore, is to suppress an article of food in order to replace it by an inert body; it is to check or retard the physiological actions which produce the change into sugar of the amylaceous materials; it is, in short, to expose the organism to a double deficit. The delay effected in the change of the fibrin of the albumen is not clearly shown. Hence the commission concludes that saccharin should not be introduced into food; that it is not a food and cannot replace sugar; that its use, or that of its preparations, seriously disturbs the digestive functions and increases the affections known under the name of dyspepsia, and that it should be prohibited as an article of food. It is said that the Portuguese Government has prohibited the introduction of saccharin into that country.—*British Medical Journal.*

Unsuccessful Inoculations in Rabies.—A patient, bitten by a mad cat on June 16th, was treated at Pasteur's Institute from June 20th to July 7th. The course of inoculations having been completed, he was discharged and returned to work. He died with the characteristic symptoms of hydrophobia on July 18th.—*Polyclinic.*

Anæsthetics in Labor.—The ethical question, How far is it pusillanimous and even irreligious to profit by the annihilation of pain which anæsthesia affords under surgical operation, and in parturition? has recently undergone discussion anew in some of the French papers. The discussion is antiquated and out of date in this country, and many of the stories told would hardly bear repetition in this serious country. Sir James Simpson long ago disposed of the argument now revivified, which charges the woman who accepts anæsthesia in childbirth with evading the biblical injunction of pain. An indignant Frenchwoman has revived an old argument with some flippancy, but not without a reckless wit. "You quote," she says, "some verses of the Bible against us; but let me remind you that the only one of your sex who took his part in the act of giving birth profited by anæsthesia; for when Adam gave up a rib toward the creation of Eve, he was first thrown into the deep sleep of insensibility."—*British Medical Journal.*

The Smell of Meat.—The examination of the flesh of animals from which the viscera have been removed necessitates the analysis of all the tissues, the inspection of the fat, muscular tissue, fasciæ, pleura, and peritoneum, spinal cord, glands, vessels, blood, etc., before the meat can be accepted. In the normal state the flesh of every animal has its own characteristic odor. Beef has a special, insipid kind of smell, modified by the different modes in which the animals have been fed. Thus it is stated that the flesh and milk of cattle in the polar regions have a fishy odor, because the absence of pasturage obliges the inhabitants to feed their oxen and cows on fish. Veal smells of milk, mutton of wool and sometimes grease. The normal odor of pork is insipid and inoffensive, but when the pigs are fed on offal the flesh has a pale cachectic hue, and an offensive smell and taste. The odor of poultry fed on corn differs from that of poultry artificially fattened. In a diseased state, meat emits a typical odor resembling the breath of feverish patients. This odor is particularly noticeable beneath the shoulder and in the muscles of the inner side of the leg. The odor should be carefully noted immediately after the incision is made. This should be done by the inspector himself. When diseased meat is roasted it emits a strong and offensive smell. The fever odor is particularly marked in the case of animals which have suffered from peritonitis, charbon, morbid symptoms following parturition, or with ordinary acute disease. In such cases the smell is recognizable at once, and it is unnecessary to make any incision. "Feverish" meat is always unfit for consumption, on account of the leucomaines which it may contain. Moreover, there always exist pathological lesions which denote clearly that the animal was diseased before being killed.—Paris Correspondence of *The British Medical Journal.*

The Sex of Infants.—Dr. Dupuy advances a new theory concerning the sex of infants, which is, according to him, merely a question of mathematics. If the first child has been conceived in a certain menstrual period, which may be called No. 1, all the subsequent children conceived in the odd periods, such as the 25th, 61st, etc., will be of the same sex, while those of the even periods. 24th, 60th, etc., will be of the opposite sex. The mathematician seems, however, to be the male parent, for if the father dies and the woman marries again, the series begins over again, according to the author, and the count must begin with the first child of the new union.

Dangers of Blistering in Cardiac Disease.—Professor Jaccoud, of Paris, calls the special attention of practitioners to the contra-indications to the employment of flying blisters in certain cases of disease of the heart. The important point, according to this distinguished authority, is to ascertain the state of the kidneys in these subjects. In case there be discovered in the urine even the smallest trace of albumen, the use of blisters to the præcordium ought to be rigorously proscribed. Neglect of this rule has led to the unwitting aggravation of the patient in many instances. Sometimes ignorance has been the cause, sometimes imperfect testing, at other times culpable temerity—which has made light of the presence of albumen while a blister was being prescribed. It is easy to substitute iodine paint to the præcordium if cantharides be contra-indicated.—*The Practitioner*, November, 1888.

The Hour of Death.—It has been said that the greatest number of deaths occur between four and six o'clock in the morning. As a matter of curiosity, and to ascertain whether there is any truth in this statement, Dr. Charles Féré has tabulated the hour of death of all the patients dying in two of the hospitals in Paris for the past ten years. He found that there was no preponderance of mortality at any particular hour, although there were somewhat fewer deaths between seven and eleven o'clock in the evening than at other periods of the day.

Medical Men in England.—According to a recent report of the General Medical Council, the number of physicians and surgeons in England is constantly increasing. In 1881 the proportion was 1 to 1,747 inhabitants, and in 1887 it had risen to 1 in 1,662. In Salford there is 1 physician to 977 inhabitants, in London, 1 to 929, and in Brighton, 1 to 727.

Diabetes and Malaria.—At a recent meeting of the Paris Academy of Medicine, M. Mossé read a paper in which he made the assertion a temporary glycosuria of no practical importance was occasionally seen in those suffering from malarial affections. To this statement M. Verneuil took exception, and cited a number of observations made by practitioners in the East, showing that diabetes mellitus was a very frequent and serious sequel of malarial infection. In countries where hepatitis is endemic, he said, an attack of intermittent fever was very frequently followed by permanent glycosuria.

In France the average life of a generation is but 31 years, and the number of infertile marriages is thirty-four out of a hundred.

Dysmenorrhœa.—Dr. J. Shaw recommends, in *The Lancet* of September 22, 1888, a mixture of belladonna and hyoscyamus for the relief of dysmenorrhœa. It is particularly in the so-called neuralgic or spasmodic form of the affection that this mixture seems to afford the greatest amount of relief.

Female Drug Clerks in Russia.—A recent imperial ukase authorizes Russian women to practise pharmacy, provided that they have obtained a diploma. Pharmacists who have young men as clerks are forbidden, however, to have any female clerks or students. The Czar's government is nothing if not paternal.

Restricting the Sale of Diplomas.—According to a recent order of the Minister of the Interior of the Ottoman Empire, upon the death of a physician or pharmacist, the diploma of the deceased must be returned to the college which granted it. This decree was rendered necessary by the fact that many quacks had bought the diplomas of deceased physicians and were practising on the strength of the authority so obtained.

The First Insane Asylum in Greece has been recently established in Attica. Hitherto the insane in that country have been cared for in the convents.

Suicides in the Italian Army.—In the Italian army, between the years 1874 and 1880, the number of suicides rose from 40 to 110, or from 20 to 52 in 100,000, but from 1881 to 1886 the number decreased to 50, or 24 in 100,000 soldiers. The ratio of suicides in the army to those in civil life varied during this period from 4 to 1 to 2 to 1.

The International Society for the Prevention of the Defilement of Rivers held its annual meeting in Cologne on September 17th, the day preceding the meeting of the Society of German Naturalists and Physicians. The preservation of the purity of the soil and air is equally, with the object expressed in its name, an aim of the Society.

Ice-cream Poisoning.—Dr. C. N. Jones sends an account of the poisoning of a social party by ice-cream. In seeking for an explanation of the occurrence he found that the freezer was made of tin and was soldered on the inside. To cause the solder to adhere to the tin the tinsmith used zinc and muriatic acid. The writer asks whether the presence of the acid and zinc may not be the cause of poisoning in many cases of this nature, especially where particular care has not been taken to thoroughly rinse out the freezer with hot water before using.

A CHRISTMAS-EVE DISASTER.

By GOUVERNEUR M. SMITH, M.D

Good Santa Claus, in happy glee,
One Christmas-eve, his jubilee,
Set out the world to oversee,
With agile deer;
Loaded as he, and only he,
Knew how to cheer.

The night half gone, when stockings still,
Both near and far, were yet to fill,
A homestead old, on lofty hill,
Now met his sight;
He dash'd with will, and reach'd with skill,
The chimney's height.

Bricks loose and dry, and smoky stuff,
Made journeying slow, and footing rough,
But down he hied, without rebuff,
He knew the way,
For years he'd found, same chimney tough;
Duty was play!

He tripped his toe, and down he fell,
'Mid dust and stones, a sad pell-mell,
Ah! sorry plight, and hard to tell,
Gray hairs were red;
His head though cut, limbs torn as well,
No tears he shed.

The inmates woke, most dead with fright,
The babe had fits, the dog showed fight,
The snarling cat sought peace in flight,
Striving to scratch;
Such chimney spright, at dead of night,
Had had no match.

Brave Santa spoke, his words were frank,
"Your friend am I, not mountebank,
St. Nicholas, I churchly rank.
'Tis not a spree,
Nor drunken prank, though torn and lark,
As you may see.

"Void stockings hang, by mantel side,
O'er half the earth, and 'tis my pride,
All, all to fill, for each provide:
I must away,
Or friends will chide, and laughter hide,
On Christmas-day."

Though rather shy, they all agreed,
'Twas kindly act, their guest to speed,
To dress his wounds, not let him bleed:
So one and all,
Began good deed, in his sore need,
On friendly call.

A doctor young, of sprightly mien,
On visit home, in Physic, green,
Hearing the noise had joined the scene,
And played a part;
Now, calm, serene, with wits all keen,
He tried his art.

Bichloride wash, he made with care,
Bacterial germs, might lay a snare,
To operate, he would not dare,
(With Lister's skill),
'Till he could swear no microbes there
A Saint to kill.

He stitched his brow, his cheek, his lip,
Plastered his nose, with good broad strip,
Placed on his ear, a caustic tip,
Working with will,
Sewing each rip, for his cold trip,
With gentle skill.

Splintered one leg, and oiled each limb,
Elbow reset, put hair in trim:—
With all good care, he still was slim,
But full of vim,
Words were not grim, heart full to brim,
Of Christmas hymn.

Santa to each, gave thanks with mirth,
"Stockings are full, no Christmas dearth,
I wish you joy, in Heaven, on earth,
God bless your speed,
Both old and young, seek saintly birth,
And learn my creed."

Though weak and limp, he dashed with zeal,
Scarce half night left, to scatter weal,
And did his work, with jingling peal,
'Till his eve's close,
Reaching his home, in time to kneel,
As sun arose.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 34, No. 26 NEW YORK, DECEMBER 29, 1888 **Whole No. 947**

Original Articles.

WAS IT METASTATIC RHEUMATIC PERITONITIS?

BY CHARLES W. PACKARD, M.D.,

NEW YORK.

WITHOUT entering upon the disputed question as to whether or not there is such a condition as idiopathic peritonitis, I present the following history of a case that, during part of its course, seemed to compel a diagnosis of peritonitis from some unexplained cause, and to fairly raise the question of the expediency of an explorative laparotomy:

On the evening of November 19th I was called to see R. B——, a boy, twelve years of age, who had for two days been suffering from severe abdominal pain, with frequent vomiting, that the usual household remedies had failed to relieve. I learned that for several years he had been subject to occasional attacks of chorea of a mild grade, for which arsenic had been given him, and that at the time of his present seizure he had been taking ten drops of Fowler's solution three times a day. At first it was thought possible that his condition might be due to arsenical poisoning, but this view was dispelled in the after-history of the case. The existence of former rheumatism was denied, although subsequent inquiries revealed the fact that he had often complained of lameness after play, and of such tenderness in the soles of his feet as to make him limp in walking. He had been to school as usual on Monday, November 19th, but on coming home was taken with a chill, followed by vomiting and severe pain in the right iliac region, that soon became general over the whole abdomen, although as the focal point of the pain he constantly referred to the right iliac region throughout the course of his disease. There had been three loose movements of the bowels on that day, and a daily natural movement for several preceding days. Upon examination the abdomen was found retracted and of board-like hardness, the recti muscles standing out tense and prominent, and the whole abdomen so sensitive to touch that only the most superficial percussion and palpation could be attempted. There was an equal resonance on light percussion over the whole abdomen, while the muscular tension seemed greater over the right iliac region than elsewhere. The decubitus was dorsal; the knees drawn up; respiration thoracic, shallow, and thirty in the minute. Temperature 102°, pulse 120. The stomach instantly rejected food or drink, and even fragments of pounded ice were as often vomited as retained. Urine about normal in amount, and passed without pain. The tongue was coated, expression of face anxious. There was a slight systolic endocardiac murmur, to account for which I could get no history of antecedent rheumatism. Ordered suppositories of morphine and belladonna, and to apply oiled silk and cotton wadding sprinkled with ol. turpentine to abdomen.

November 22d.—The general condition of the patient is about the same, except that the pain has lessened under the influence of the morphine. Patient has had no sleep. The abdomen remains hard, and is beginning to swell. The stomach retains nothing, but the vomiting is less frequent, and nothing is brought up but a mouthful or two of colorless and watery mucus that seems to be regurgitated rather than vomited. The pain is still constant, and severe in paroxysms, which are at times accompanied by expulsion of a little flatus. Bowels not moved. Temperature 101½°, pulse 118, respiration 34 in the minute.

To take ten grains quinine in suppository, in addition to morphine and belladonna before ordered.

November 23d.—Passed another sleepless night. Tympanites much increased. Liver dulness pushed up. Stomach rejects everything, and there is still occasional vomiting of colorless mucus. Temperature 101° F., pulse 118, respiration 38.

November 24th, morning.—Symptoms unchanged. A little milk and lime-water has been retained. Bowels moved, motion formed, and passed with flatus. About a pint of high-colored urine passed during last twenty-four hours, and without pain. Still no sleep. Temperature 102½° F., pulse 116, respiration 40.

November 24th, evening.—Aspect of patient is worse. Tympanites increased. Skin of abdomen shining and tense, and showing enlarged veins. As patient lies on his back, the level of abdominal wall is crowned up considerably above the chest level. The respiration is shallow, costal, and forty in the minute. Pulse 130, temperature 103½° F. Abdominal pain is general, but greatest in right iliac region, which he guards against any touch. He has for several days past been taking morphine, ⅙ grain, with belladonna, ⅛ grain, in suppository, every two or three hours, as the pain might indicate, and this amount has kept the pupils moderately contracted and the pain within tolerable limits, but he has had no sleep. Ordered morphine to be increased to ¼ grain, to be used as before.

Up to this point the case has presented some favorable aspects. The occasional movement of the bowels; the passing of flatus; the free secretion of urine; the absence of green vomit, and of signs of profound nervous shock, such as we expect to find in peritonitis resulting from perforations. The pulse, too, has shown less tension than is usual in this disease.

On the other hand, there is a distinct history of chill, followed by severe and persistent pain in a most suspicious locality—especially in a child—and rapidly spreading from this point until the whole peritoneal area is involved; persistent vomiting and fever, steadily increasing tympanites, going on until the belly has reached a high stage of distention; and now, after five days of this history, there comes a decided increase in the temperature, the pulse grows more frequent, the face more anxious, and the general expression of the disease decidedly worse.

Thus far the tenderness and rigidity of the abdominal wall have been so great as to render deep percussion or palpation impossible, and it has not been determined whether there is a small typhlitic tumor or not. Considering the history of the case, it seems not unlikely that the inflammatory process now going on began as a typhlitis, and the patient's condition is evidently going "from bad to worse."

Is there peritonitis? and if so, is the patient's condition such as to justify an explorative laparotomy?

The first question could be answered in the affirmative with little hesitation, but it was deemed safer for the patient to take the possible risk of waiting too long, rather than to invoke the certain danger involved in the surgical operation. The question of operation was therefore postponed.

November 25th.—An early visit found the boy complainr ing bitterly of pain in the *knee-joints*, which during the night had become inflamed with acute rheumatism. The pain in the belly had disappeared so far as to give him no trouble unless he moved, vomiting had stopped, the countenance was better, and the whole aspect of the case had changed as if by magic. The slight heart murmur heard at my first visit had become much intensified by a fresh endocarditis.

Under the administration of salicylate of soda the new rheumatic symptoms quickly disappeared, and in a few days the boy felt well enough to leave his room.

Within twenty-four hours after the metastasis from the abdomen to the joints and heart, the tympanites had largely abated, and the abdomen had become so tolerant of pressure, and so relaxed, that for the first time it was possible to make a thorough exploration. There was no typhlitic tumor, and no fluid discoverable in the peritoneal cavity. From the rapid disappearance of all symptoms, it would seem doubtful if there was an exudate of any kind upon the peritoneum, such, for instance, as we find in rheumatic pericarditis.

I have been unable to find any description of the pathological changes to be found in rheumatic peritonitis, perhaps because there are no fatal cases; and yet the rheumatic poison so constantly elects tissues analogous in structure to the peritoneum, and at times works so great havoc among them, as in pericarditis, that it would seem possible enough to meet with a purely rheumatic and fatal peritonitis.

ERGOT IN OBSTETRIC PRACTICE.[1]

By J. T. DEEMER, M.D.,

KITTANNING, PA.

At the last meeting of our Society I propounded some questions in regard to the use of ergot in labor. I recited the following cases from my practice:

Case I.—Multipara. I had confined her in a previous labor, which was normal, but in this case she had every indication of uterine inertia; the parts were all dilated and membranes ruptured, and instruments being objected to, I gave ergot in what I considered safe doses. The pains increased, became continuous, and the child was born, but it was dead, although I had every reason to believe it had been living until the pains became violent. The mother insisted on having ergot, as she, being an Englishwoman, claimed the English doctors always gave it, and I understood she had a number of still-born children by ergot under the same circumstances. I could find no other reason then, and I can see no other reason to-day, for the death of that child than ergot.

Case II.—This case was almost identical with the first case. The pelvis was roomy; multipara; everything dilated, but the pains were insufficient. I gave ergot, the pains became strong and continuous, and the child was soon delivered, but life seemed extinct; but by persistent effort, inversion, friction, hot and cold water, and inflating the lungs the child revived.

Case III.—This case was seen in consultation and was much the same.

In regard to how ergot causes death to the child, I will endeavor to show that it is in two ways:

1. The more probable is by disturbing the placental circulation, or by cutting off uterine oxidation of the fœtal blood; and another, or 2, is by the action of the ergot on the fœtal heart. The first I consider the most tenable. I will now cite some authorities that I have examined on the subject of ergot in obstetric practice, and we will see what may be said for and against its use, and I feel certain that the weight of evidence is against its use in every case as a means of delivery.

Bartholow says that it is no longer a matter of doubt that ergot produces uterine contractions; that it originates them without previous effort of the womb is questionable. The contractions due to ergot differ from the spontaneous natural contractions in being less rhythmical and more tetanic. When large doses of ergot are used a continuous expulsive effort may be produced. He says ergot is indicated in labor when there is uterine inertia, the first stage being completed and no obstruction existing at the outlet. If given before dilatation is completed, the perineum rigid, and the ostium vaginæ not relaxed, disastrous consequences may ensue to both mother and child. On the part of the mother, the violent and continuous pains, with the resistance in front, may cause rupture of the womb or laceration of the perineum. On the part of the child hæmatosis, partly by direct action on the placental blood, and partly by the continuous compression of the body, but the chief danger is paralysis of the fœtal heart.

Playfair says: "There can be no doubt that ergot causes uterine contractions. The risk to the child is, however, quite as great as when the membranes are punctured; for not only is it subject to injurious pressure from the tumultuous and irregular contractions which the ergot produces, but the drug itself, when given in large doses, seems to produce a poisonous influence on the fœtus."

For these reasons ergot may properly be excluded from the available means of inducing labor. He also says ergot stimulates uterine pains powerfully, and says it cuts off the fœtal circulation. In Dublin, in the Bethesda Hospital, the use of ergot has been prohibited by the trustees.

Ramsbotham at one time advocated ergot, but finally dropped it as a means of inducing abortion.

Professor H. C. Wood: "Ergot was at first called the pulvis parturiens, from the fact of its being able to intensify labor pains." He says: "If ergot be given in small doses during labor, the pains are simply intensified; but if the dose be large enough the character of the pains becomes much altered, *i.e.*, they become long and continuous. The danger to the mother is twofold: rupture of the uterus and laceration of the perineum. Rupture of uterus from this cause is not often met with. The danger to the child is cutting off the placental circulation, thereby not allowing the fœtal blood to be properly aerated, for the fœtal blood is oxygenated during the interim of uterine pains. The child soon dies if delivery does not take place soon after the administration of large doses of ergot, when the pains have become severe." He adds: "Never give ergot in uterine inertia unless there is no resistance. Even under the most favorable conditions ergot should be used with caution. Instrumental delivery is better, if used skilfully."

After all that can be said for ergot, and the much that can be said against it, is it justifiable for the obstetrician to resort to ergot as a means of promoting the delivery of the child? May not what is considered a small and safe dose act with frightful effect? May we not have some obstruction from some fault after the head has engaged, which before we were unable to see? How many of us, when there seemed to be no obstruction to delivery, and when we have assured the woman and her friends that she would soon be delivered, have had to wait, be disappointed, disappoint the woman and all who are interested in her welfare, and then had to extract the head, which had unexpectedly impinged on the bony outlet. I have suffered such humiliation, but I have in all cases come to consider instrumental delivery preferable to ergot. I am not in favor of using forceps until we have given nature a fair chance, for by a little time, change in position of the woman, and if she be much exhausted a little brandy, a binder, and some rotating of the fœtal head if needed, and by encouragement, which of itself is a great stimulant, we may facilitate to a natural termination a tedious labor in which we had about concluded to resort to instrumental delivery.

The uses of ergot after delivery are important. Some good obstetricians recommend a dose to be given just when the head is emerging in every case, but the more conservative recommend a dose only in cases where we are to fear post-partum hemorrhage from the previous history of the case.

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[1] Read before the Armstrong (Pa.) County Medical Society, November 27, 1888.

I almost concur in the opinion of Professor T. G. Thomas, of New York, that labor is, as a rule, and in the great majority of cases, a normal physiological process and requires no treatment whatever by drugs.

In a case where I feared post-partum hemorrhage I would use ergot in every case, and if a previous history of post-partum hemorrhage existed I would anticipate by giving ergot as the head emerged from the vagina. I have never seen a case of post-partum hemorrhage that demanded ergot hypodermically.

The use of ergot is recommended by Playfair to diminish after-pains. The action of the ergot in expelling the coagula must be the *mode medendi.*

I have thought ergot indicated after tedious labors, and if such cases are observed I think it will be seen that they are likely to be troubled with after-pains and coagular gathering in the uterus, and ergot, by stimulating the contractions, is very beneficial in all such cases. In cases of subinvolution there can be no question of the efficacy of ergot combined with the bromides, and if we conclude to abandon ergot as dangerous before labor, let us consider it an invaluable drug in the hands of the obstetrician to promote the welfare of the woman in certain cases after delivery.

A CASE OF DYSPHAGIA WITH DILATATION OF THE ŒSOPHAGUS.[1]

By MAX EINHORN, M.D.,

NEW YORK.

I TAKE the liberty of presenting a case of dysphagia combined with dilatation of the œsophagus. Œsophageal dilatations may be divided into two groups:

1. Those in which the dilatation originates from a stenosis, whether this stenosis be caused by a carcinomatous infiltration, a cicatricial stricture, or a tumor growing on the inner wall of the œsophagus and occluding its lumen, or by any external tumors pressing on the œsophagus.

2. Those in which no material stenosis of the œsophagus can be found.

This latter group includes the cases very seldom met with. There are only seventeen cases mentioned in the literature,[2] nearly all of which were recognized and described only at the autopsy. Until lately they have generally been considered as cases of primary dilatation of the œsophagus.

In the beginning of this year Meltzer,[3] for the first time, published a case of dysphagia with dilatation of the œsophagus during the life of the patient. There was no anatomical stenosis present. The cause of the dysphagia in his patient was attributed by Meltzer to the existence of a spastic contraction of the cardia, which, in his opinion, resulted in dilatation of the œsophagus. Meltzer doubts the existence of a primary dilatation of the œsophagus, and thinks that most of the cases described must have been due to some other cause, as, for instance, spastic contraction of the cardia.

My case, likewise, may be classed in the group of dilatation of the œsophagus, without any anatomical stenosis. Hitherto it would have been classified as primary dilatation of the œsophagus, but, like Meltzer, I am inclined to look upon the dilatation in my case only as a consequence of some other primary disturbance.

Before entering deeper into the subject I will present a full history of the patient.

J. W——, forty-five years of age, janitor, had typhoid fever twenty-five years ago, since which time he has enjoyed perfect health. In the beginning of March, this year, the patient fell down in the street, striking his back against a small projection. He arose unaided, and resumed his work without any annoyance. On the following day he had a pain in the upper part of the body, especially in his arms; this lasted but a few days and disappeared.

About fourteen days later the patient began to have a feeling of fulness after eating, and had a pressing sensation above the regio gastrica. Two or three weeks later he noticed some difficulty in taking his food, and tried to assist it by drinking warm water several times during the meal; only in this way did he succeed in enjoying a whole meal.

In May, on account of this pressing sensation, the patient was compelled to leave the table in the middle of a meal and walk up and down the room, making deep inspirations and expirations; he used to press with his hands upon the front of the lower part of his thorax after having made a deep inspiration and closed the glottis. The patient says that these attacks during a meal resembled very much a suffocating condition. The described manipulation usually brought him relief, allowing him to eat again, but then the process repeated itself. In the morning he could eat more easily than at noon-time.

Since June last the patient has been sleeping very badly (at most three hours during the night). When in bed he had often a sensation as if something would go up and down in the interior of his chest, and when this sensation came on he was forced to cough quite often. From time to time it happened that he awoke, his mouth being full of fluid; also while awake some fluid at times came up into his throat and mouth, this only happening when in the recumbent position. When standing, he was never compelled to empty his throat.

The patient became thin, felt weak and miserable, and soon could partake only of fluids. The sight of solid food enraged him to such a degree that he threw it away with disgust. Even fluid substances were taken only with great difficulty; he used to throw his arms backward, and, standing straight, his head leaning toward the back, after a deep inspiration and with closed glottis he pressed firmly. The condition of the patient became worse and worse; he lost forty-one pounds during these few months, and went for aid to the German Dispensary on October 23, 1888. *Status præsens*, October 23, 1888: Patient tall in stature and lean; looks pale. The integument can be lifted in large folds. The physical examination of the thorax and the abdomen cannot detect anything abnormal. The heart-sounds are normal. Pulse, 70; respiration, 20; temperature, judging from sensation upon the chest, not increased. The patellar reflex is present, and the patient is able to stand with eyes closed. The urine does not contain any sugar or albumen. The patient complains of not being able to eat any solid food, and of difficulty in taking even fluids, as he cannot get them down. Besides this, he has nearly always a pressing sensation around the chest, coughs very much, and is not able to sleep well.

Examinations of the stomach and the œsophagus.—1. October 25, 1888, at 8 A.M. Patient drank coffee one hour before. As soon as a part of the stomach-tube was pushed into the œsophagus a coffee-brown liquid was ejected, in which there were some remnants of food and many epithelial cells present. Thereupon the patient drank 100 c.c. water. At the processus ensiformis I did not hear any swallowing sound during the time that the patient drank. On introducing a part of the tube into the œsophagus, water of a neutral reaction came out. Thereupon the tube was pushed farther into the stomach, without any resistance, and the patient ejected from his stomach through the tube about 70 c.c. of a coffee-brown liquid. Reaction acid, hydrochloric acid present (phloroglucin-vanillin test), the degree of acidity being 40 (*i.e.*, 40 c.c. of $\frac{1}{10}$ normal sodium-hydrate solution neutralized 100 c.c. of the examined fluid).

2. November 5th, at 9 A.M.—On account of loss of

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[1] Read before the meeting of German Physicians of New York, on November 23, 1888.

[2] Ziemssen: Handbuch, vii., i., p. 49.

[3] Berlin. klin. Wochenschr., No. viii., 1888.

appetite the patient had not eaten anything since 2 P.M. of the previous day. The tube was introduced for a length of 46 ctm. from the teeth; a pulpy mass (150 c. c.) came out, in which were present small particles of bread; reaction acid, lactic acid, no hydrochloric acid; acidity, =4. The patient drank 100 c. c. water, the tube was introduced 45 ctm., the water came out somewhat turbid by the admixture of mucus and food-remnants; microscopically there were many epithelial cells and micrococci. After the water had come out, the tube was pushed, without being taken out, farther and with but a slight resistance it passed into the stomach; the patient was told to empty his stomach, but only a few drops of a clear fluid was obtained. This proved that the stomach was empty.

3. November 8th. The patient partook of breakfast and then drank water; he was examined an hour later. The tube was introduced for a distance of 36 ctm., when there appeared a fluid containing no hydrochloric acid; thereupon the tube was pushed, without any further resistance, into the stomach, and by expression a fine chyme was obtained containing hydrochloric acid and peptone.

4. November 13th. The patient took eggs, coffee, and a little softened white bread, then he administered his method of bringing the food down into the stomach by means of pressing (bringing the muscles of expiration into play, after having made a deep inspiration, with closed glottis). An hour later, shortly before the examination, the patient was told to press several times again. The tube was introduced to a distance of 48 ctm., and during expiration only 8 c. c. of a turbid fluid were obtained; there were present very minute pieces of bread and many epithelial cells, but no hydrochloric acid; thereupon the tube was pushed, without any resistance, into the stomach; now there came out a chymous fluid with hydrochloric acid. The patient drank 200 c. c. water; the tube was introduced about 40 ctm., and the water came out with a gush.

5. November 16th. Patient took breakfast at home and administered his method of forcing down his food. The œsophagus was examined an hour later, and found empty. The pharynx-vault was tickled with the finger to induce vomiting, but without success. Thereupon the tube was introduced into the stomach, and a fine chymous fluid, containing hydrochloric acid, was obtained. The stomach was then filled with air by means of a tube and bulb; the air did not emerge, striking the outside wall of the tube. By keeping the tube open the stomach was emptied of the air; afterward the lower part of the œsophagus was blown up. A considerable quantity of air could be blown into it without returning, but upon increasing it still more the air began to escape upward through the upper part of the œsophagus, striking the outside of the tube-wall. During the inflation of the œsophagus there was observed, at both sides of the vertebræ below the inferior margin of the scapulæ, a somewhat more tympanitic resonance, but that was not very decided.

It is evident, from the history of this patient, that the difficulty in bringing the food into the stomach slowly developed a few days after the fall and finally led to a complete dysphagia. The examinations showed that the contents of the stomach were normal. The examinations with the stomach-tube (a thick Nélaton was used for this purpose) show, firstly, that the passage through the œsophagus to the stomach is perfectly free, for the thick tube passed into the stomach without any resistance; secondly, that the œsophagus, in its lower third, must be saccularly dilated, as the distance from the teeth to the cardia (measured with the tube) is 48 ctm., whereas, in the case of this patient, even taking into consideration his large frame, it ought normally to be not more than 40-41 ctm. In this cavity the tube, leaning on the wall of the œsophagus, was compelled to assume with its lower end the form of a semicircle, and thus produced this high figure. That the patient is really unable, in swallowing, to bring even liquids down to his stomach, except by the pressing action, is proven by the fact that swallowed water could always be taken out from the œsophagus by means of the tube, whereas immediately afterward the tube, pushed into the stomach, brought up part of the stomach-contents, containing hydrochloric acid.

The best way to perform this experiment is with two differently colored fluids, and I take the liberty of demonstrating to you, gentlemen, the experiment, which I have so often done at my residence.

The patient, about an hour before, took a cup of coffee and some softened crackers; thereafter he administered his pressing actions. Now I insert the tube into the œsophagus of the patient as far as the cardia, in order to see whether the œsophagus is empty. As you see, a coffee-brown liquid (about 40 c.c.) comes out, in which there are small particles of bread. Congo-paper retains its red color in this liquid. The œsophagus consequently was not empty. Now, after having emptied the œsophagus by means of the tube, I will ask the patient to drink a glass of water (250 c.c.). Should the water, by simply swallowing it, not arrive at the stomach, I shall be able to obtain the same from the œsophagus by means of the tube. I therefore introduce the tube again, and you see how the water comes back unchanged; a few flocculi are floating in it, some bread, and epithelia; but otherwise the water returned unchanged and in the same quantity; congo-paper does not change its color in same. Now I push the tube farther through the cardia into the stomach, and have the patient press a little. You see now a coffee-brown liquid coming out, with very small pieces of bread; the congo-paper turns dark blue. This is the coffee which the patient drank at home, and brought into his stomach by his spontaneous pressing action.

The water—which the patient drank just a little while before and which was obtained without any discoloration from coffee—clearly proves that it has not been in contact with the coffee contained in the stomach; it remained above the stomach, in the œsophagus. This proves, therefore, that by swallowing this patient does not accomplish the passage of anything into the stomach, but that all accumulates in the œsophagus and remains above the cardia.

As the œsophagus can hold quite a considerable quantity of liquid in its inferior part, it must be dilated. In order to ascertain approximately to what distance the dilatation of the œsophagus extends, I tried to determine at what length of the introduced tube the water of the quite filled œsophagus began to come out, when the patient made an expiratory effort; the lowest figure I obtained was 36 ctm. When there was only a small amount of fluid above the cardia, the tube had to be introduced 46-48 ctm. in order to allow the fluid to come out. Thus the utmost dilatation must be situated at the lowest part of the œsophagus. Further, I tried, to fill the inferior part of the œsophagus with air, and examined the back of the patient in order to find out whether the resonance had undergone any change; but the variations were so slight and so doubtful that I would not take them into consideration.

Following Meltzer, I investigated the fact whether in my patient was preserved the faculty of vomiting. By tickling the posterior wall of the pharynx with the finger I could not bring on vomiting. When the stomach had been filled with air, the latter did not return by striking the outside wall of the tube. Both these circumstances would prove, according to Meltzer, that the path from the stomach to the œsophagus is occluded.

I conclude therefore, from a consideration of the above-ascertained facts, that we have to deal with a case of dilatation of the œsophagus unaccompanied by any anatomical stenosis. Formerly this case would have been considered as a primary dilatation of the œsophagus. But, as it is very difficult to assume a primary dilatation of the œsophagus, Silvius Stern[1] attributed, as a cause of the so-called primary dilatations, either a previous œsophagitis or a paralysis of the œsophagus. Likewise, Meltzer[1] was in doubt as to the existence of a primary dilatation of the œsophagus, and deduced that in his case the spastic contraction of the cardia was the cause of the dilatation. I, like Meltzer, would not consider my case as a primary dilatation of the œsophagus, but am inclined to look for the cause of dilatation in another previous disturbance.

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[1] Silvius Stern: Archiv der Heilkunde, Bd. xii., p. 434.

There are three possible explanations of this difficulty in bringing down the food from the œsophagus into the stomach without any anatomical stenosis being present :

1. Paralysis of the œsophagus ; the swallowed particles would remain above the cardia, which is normally easily closed, as the œsophagus is lacking in its contractile power.

2. Spastic contracture of the cardia, which, Meltzer suggests in his case, the contractions of the œsophagus cannot open.

3. A lack in the reflex relaxation or opening of the cardia during the act of swallowing. It was shown by Meltzer[2] that every act of swallowing easily opens the cardia by reflex action. Supposing that the centre or the circuit of this reflex action is in any way disturbed, so that the cardia does not relax when swallowing, there will necessarily result a slight difficulty in transferring the food from the œsophagus into the stomach.

Should you ask which of these three disturbances exists in my case, I would have to confess that it is very difficult to decide with certainty, but that the third disturbance is here most probable.

In my patient the dysphagia, as can be seen in the history, was developed slowly after a fall. During the first two weeks the patient experienced no difficulty whatever when eating, but later on he observed that he had to drink warm water in order to effect the passage of the food. After a while the warm water had no effect, and the patient instinctively began to exercise the pressing motions which helped him.

Now, had the œsophagus (by some trauma or contusion) become paralyzed after the fall, or had the cardia spastically contracted—a dysphagia would, naturally, have appeared immediately after the fall; for the paralyzed œsophagus could not bring the food into the stomach; nor could the spastically contracted cardia give free passage to the food into the stomach.

But it would be quite different with the third class of disturbance, viz., lack of the reflex relaxation of the cardia when swallowing. This disturbance, being the slightest, would hardly appear at first ; the contractions of the œsophagus would succeed in opening the cardia and enable the passage of the food forward. Notwithstanding, the œsophagus would have more work to do than necessary for the normal relaxation of the cardia when swallowing. With the lapse of time the œsophagus would tire, and some food-remnants would remain above the cardia. But these remnants, meanwhile, would dilate the inferior part of the œsophagus ; the dilated œsophagus naturally would contract with difficulty. In this way there would gradually—after a certain degree of dilatation had taken place—appear that difficult dysphagial condition where, upon swallowing, nothing enters the stomach by the natural way.

Only once did I feel a slight resistance at the cardia on introducing the tube into the stomach ; usually I found no resistance whatever. This would speak against the spastic contracture and favorably for our conjecture. [illegible] I could not make the patient vomit, nor did the air —blown into the stomach through the tube—return, striking the outside wall of the tube. According to Meltzer both these facts would speak in favor of a spastic contracture of the cardia. The question arises, Are these two signs indeed conclusive? The failure of the faculty of vomiting in the beginning of the illness would tend to prove that the cardia is contracted and that the stomach, therefore, is not able to open the occlusion. But in an advanced state of the disease, where there already exists a large dilatation of the œsophagus and the latter either does not contract at all or contracts without effect—we could very well imagine that, as soon as the stomach, at the beginning of the act of vomiting, throws up a part of its contents through the cardia into the œsophagus, these contents are not ejected because the œsophagus does not contract itself ; and, besides, the ejected matters, if they did not immediately return through the opened cardia into the stomach, would find room enough to stay in the dilated œsophagus. Thus may be explained the absence of the faculty of vomiting, though the cardia be not spastically contracted.

With regard to the second point, viz., that the air did not strike the tube—we sometimes find, even in healthly people, when the stomach is filled with air to a certain degree of tension that the air passes rather through the pylorus than through the cardia, so that the air does not strike the tube.

Though we must more or less resort to hypothesis as to the original disturbance of the patient, notwithstanding this the anatomical and clinical conditions are apparent. There is a dilatation of the inferior part of the œsophagus without any material stenosis (for any anatomical stenosis could not be overlooked with the thick tube), and all swallowed matters remain at first in the inferior part of the œsophagus above the cardia. By spontaneously diminishing the size of the thorax after a deep inspiration with closed glottis (pressing), the patient is able to drive the gathered food-substances—by means of the pressure he exerts on the filled œsophagus—into the stomach.

To Meltzer[1] belongs the credit of having described particularly in his article these conditions of bringing down the food spontaneously.

In order to prove that the food remains above the cardia, Strümpell[2] and Meltzer examined the vomited (from the œsophagus) matters, and always found a neutral[3] reaction, whereas the contents of the tube pushed into the stomach had an acid reaction.

This condition is better shown by the coffee and water experiment, as I have fully described it above.

In reference to the therapeutics in such cases, it would always be best to feed the patients for a long time only by means of the tube. It would be possible, perhaps, to partly diminish the dilatation of the œsophagus. My patient would not be fed in this way, and I had to content myself with the following treatment :

1. The patient is allowed to take only fluid or semifluid things.

2. After every meal the patient must perform his pressing action for a long time.

3. Every evening, before going to bed, the œsophagus is emptied and washed by means of the tube (the patient is now able to do it all alone).

4. The patient introduces the tube into his stomach once every day, in order to relax the cardia.

In the ten days during which the patient has lived according to these rules, he has gained one pound in weight, slept well, never coughed, and has been able to eat more and much easier. He now looks much better, is more encouraged, and contented.

122 East Fifty-ninth Street.

Chloride of Gold and Sodium receives every now and then a new therapeutic impetus. Just now it is recommended by Dr. George W. Rachel for whooping-cough. It is given in doses of ♏ ij. of the two per cent. solution, every two hours.

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[1] Berl. klin. Wochenschr., No. xvii., 1888.

[2] Kronecker und Meltzer: Verhandlung. d. Physiolog. Gesellschaft, Du Bois Reymond's Arch. f. Physiolog., 1880.

[1] Meltzer: Berl. klin. Wochenschr., l. c.

[2] Strümpell: Deutsch. Arch. f. klin. Med., Bd. xxix., p. 211.

[3] The food-matters above the cardia not having been in the stomach can have also an acid reaction by organic acids, as can be seen from the above-described tests, but they *never* do contain hydrochloric acid.

SOME DERMATOLOGICAL DON'TS.

By GEORGE THOMAS JACKSON, M.D.,

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Don't make your diagnosis from the history of a case, because if you do you will often be led astray. Make it from the eruption that you see, and then substantiate or destroy this by the history of the case, if you will.

Don't fail to think of the possibility of every case being either syphilis or eczema; and

Don't fail to master these two diseases as thoroughly as possible; because, if you learn to recognize these two, you will have gone a long way in diagnosis. If they can be excluded, then the field of possible "might be's" is considerably narrowed.

Don't make the diagnosis of syphilis on account of a syphilitic history, because you can often get a history of syphilis in a non-syphilitic case.

Don't expect much, if any, history of syphilis in a woman, because you very frequently will not get it. This is not because they are "gay deceivers," but because in them the early symptoms of the disease are often so slight that they are not observed by them.

Don't throw out the diagnosis of syphilis on account of an eruption itching, because some syphilides, especially the papular variety, do itch at times. The *not* itching of an eruption is better presumptive evidence of syphilis than is itching positive evidence against it.

Don't make the diagnosis of lichen planus from the presence of flat angular papules with depressed centres alone, because identical lesions will at times be met with in eczema, syphilis, and psoriasis.

Don't depend upon getting the bleeding points springing out of the delicate pellicle after carefully scraping off the scales for your diagnosis of psoriasis, because you can produce the same thing in other diseases. In fact,

Don't depend upon any one symptom, but make your diagnosis from the general make-up of the disease as a whole.

Don't forget that many diseases of the skin are dependent upon disturbances in the general health of the patient. Therefore,

Don't fail to inquire into the performance of the functions of the various organs of the patient, and to put him into as good a physical condition as possible.

Don't tell your patient that it is dangerous to cure his skin disease rapidly, because it is not. If you

Don't know how to treat the case, ask advice of someone who does.

Don't encourage the popular notion that there is danger of an eruption striking in, because it never does.

Don't give arsenic for every skin disease, and, especially,

Don't give it in acute eruptions. Its sphere is in the chronic scaly eruptions, such as chronic psoriasis.

Don't forget that most cases of pruritus are due to internal causes, and that in them external treatment is wasted; and

Don't forget the bed-bug and the pediculus as possible causes of the trouble.

Don't forget that the greatest secret in the treatment of eczema, and many other skin diseases, is not what particular drug or formula is "good for" the disease, but a knowledge of the great principle that acute diseases need soothing remedies, and subacute and chronic diseases need stimulation.

Don't expect to cure an inveterate eczema with thickened skin by means of a soothing ointment, such as that of the oxide of zinc, because you will only waste your time, and the patient's money.

Don't use tar in an acute eczema, because it is a stimulant, and what we want at this time is to soothe the inflamed skin. It is appropriate to a subacute or chronic case.

Don't allow water to touch any form of eczema, because it always irritates in such a case.

Don't use a thick ointment on the hairy scalp, because it makes a disagreeable mess of the hair, and will not be "popular" with your patient. Even lard is not a pleasant vehicle for such applications. Vaseline and the oils are more elegant excipients.

Don't order the hair to be cut from the head of a young or old woman in any disease of the scalp, because, except in the case of a peculiarly stupid or careless patient, it is never necessary, and always disagreeable to the woman.

Don't allow a patient with ringworm to go to school, because if you do you will be responsible for the spread of the disease.

Don't pronounce a ringworm case well and incapable of spreading the contagion until you are sure that it is well; and

Don't be sure about it until there are no more "stumps" on the scalp, and you can find no more of the fungus in the hair.

Don't use the name "barber's itch" for anything but trichophytosis barbæ, because it is well not to use terms loosely to cover several different diseases.

Don't use chrysarobin on the face or scalp, because it is very apt to cause a good deal of dermatitis with œdema, and to stain the skin a deep mahogany-red.

Don't forget to caution a patient to whom you have given chrysarobin, not to touch his face with his hands after applying the drug, because if you do you will have either a mad or a frightened patient in your office.

Don't pronounce a patient addicted to the excessive use of alcoholic beverages on account of his having rosacea, because there are lots of other things besides alcohol that will cause it.

Don't use the positive pole of the battery for the needle in destroying hair by electrolysis, because if you do you will leave more or less permanent marks in the skin.

Don't apply a sulphur preparation after using a mercurial upon the face, or *vice versa*, because if you do you will raise a fine crop of comedones.

Don't use a camel's hair brush for making applications of corrosive sublimate, because if you do some of the salt will be left on the brush each time it is used, and you will soon have a stronger solution than you bargained for. Always use a little cotton on a wooden toothpick, or a splinter of wood.

Don't allow a fine-toothed comb to be used on the scalp, because it scratches and irritates the scalp.

Don't encourage or advise the use of pomades on the healthy scalp, because they are prone to become rancid, and inflame the scalp. They are also unnecessary if the hygiene of the scalp is properly looked after.

Don't forget that dandruff is the most frequent cause of premature baldness, because, if you remember this, you may be able to prevent the fall of someone's hair for some time. Therefore,

Don't fail to treat every case of dandruff.

14 East Thirty-first Street.

The Therapeutic Action of Borneol.—Experiments as to the comparative therapeutical value of Borneo camphor, Ngai camphor, and borneol prepared artificially from oil of turpentine, have been made and published by Dr. Stockman. It appears that the action of borneol, whether in the form of Ngai camphor, Borneo camphor, or artificial borneol, is similar to that of laurel-camphor, but that the borneol has the advantage of being less poisonous, so far as the heart is concerned. Borneol, laurel-camphor, and menthol are closely related to the alcohol group in their physiological action, menthol approaching it most nearly. Bornoel is less irritating locally than laurel-camphor, and can be given in much larger doses than the latter without causing untoward cerebral symptoms. Both borneol and menthol differ from ordinary alcohol in powerfully dilating the peripheral vessels.—*Journal of Physiology.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, December 29, 1888.

PROTECTION FOR AMERICAN PHYSICIANS.

THERE is a growing feeling, among physicians in this city at least, that if the principle of protection be applied to some classes of workers it might with equal justice be applied to the doctor.

The law against importing contract labor, for example, is intended to protect the so-called laboring classes. But it is hard to see why this class alone should be protected.

There are, we are told, numbers of physicians, so called, coming over from Germany by every steamer, who are not legally qualified to practise even in their own country, and so they turn their adventurous steps to a new land where medical laws are less severe.

In Germany no one can practise medicine without passing the state examination. Even a university diploma of M.D. is of no value as giving legal status to the physician. The men who are found incapable of practising the profession of medicine in Germany come over here, therefore, settle down among the German districts, put out a sign, and pay visits for twenty-five or fifty cents.

Some of the older German physicians of this city have of late had their practice seriously curtailed by these adventurous interlopers. The injustice of the thing is still more flagrant from the fact that American physicians, however well qualified, cannot go over to Germany and engage in practice there.

We do not assert that these unqualified and disqualified immigrants all come from Germany. A certain number probably come from France, Italy, and England. But, at any rate, the evil is a decided one and deserves some attention from the profession. It would be possible to check it in a measure if a law separating the licensing from the diploma-giving power were enacted. Until that is done we see no special remedy. But the condition here referred to furnishes an additional argument to the many already existing for the enactment of a law creating in this State an independent board of medical examiners.

HYSTERIA IN ITS SURGICAL RELATIONS.

IN a recent critical review covering the subject indicated above (*Revue de Médecine*) Dr. Georges Guinon discusses the subject of traumatism and hysteria. Much of what he says is only the presentation in a systematic way of what has long been known; and the assumption that French science has been chiefly concerned in formulating our knowledge of hysteria and traumatism is characteristic of the intellectual isolation not infrequently to be noted in our esteemed Latinic colleagues.

The fact that hysteria may develop from nervous shocks and traumatism, and may show itself in manifold ways, cannot be too strongly insisted upon; and it is true that most valuable contributions have been made to the semeiology of the hysterical condition by Charcot and his pupils.

The importance to the surgeon of recognizing hysterical from organic affections is well illustrated by Guinon in the following hypothetical case: Two men fall and break the collar-bone in the same way. They are treated by a surgeon, who applies a bandage in the most approved and skilful manner. Fifteen or twenty days later both return with paralysis of the arm. In the one case, however, the paralysis is due to an exuberant bony callus at the seat of fracture, compressing the brachial nerves, in the other the paralysis is hysterical.

The various forms of nervous disturbance following sudden injuries, with or without great emotional excitements, are familiar through the works of Erichsen, Page, and others, and are described by Guinon, who shows that among them are true examples of hysteria and neurasthenia.

Among special traumatisms which may give rise to hysterical symptoms are those of the cranium. Here Ballet has shown that there may be veritable partial convulsive attacks which simulate those of Jacksonian epilepsy, and which may lead to the belief in a focal lesion of the brain, but which are in reality only hysterical.

Monoplegias of various types, but especially of the arms, hysterical coxalgia, hysterical affections of the knee and other large joints, hysterical affections of the small joints simulating rheumatism, pseudo mal de Pott hystérique, hysterical contractures from the application of surgical apparatus, and hysterical disorders resulting directly from traumatism of surgical operations, are all discussed by our author. Of all these types, however, the hysterical knee is the most frequent. Among seventy cases observed by Charcot, thirty-eight were of the knee, eight of the wrist, four of the shoulder, and two of the ankle.

Especial importance attaches itself to the collection of signs and symptoms which inform us of the presence of the hysterical state. These are both of a positive and negative character. The positive signs lie almost entirely in the domain of disturbances of general and special sensation. Anæsthesia in various degrees and forms is a thing which is, perhaps, most frequently seen. When cutaneous it may take the form of patches or bracelets, or it may be diffused over the whole arm and hand, forming anæsthesia *en manche de veste*, or if of the lower extremity, anæsthesia *en gigot*. If it is a joint which is affected, there may be anæsthesia of adjacent parts with local cutaneous hyperæsthesia in the neighborhood of the affected joint. This sensitiveness of the skin, together with lack of pain on deep pressure, is known as "Brodie's sign," and is often of great importance.

The pharynx sometimes shows anæsthesia. Hemianæsthesia, though not pathognomonic of hysteria, is an especially characteristic symptom, particularly if it is not stable but can be transferred by suggestion, the action of magnets, etc. Cutaneous anæsthesia of hysterical origin involves all the cutaneous sensations, and often even the muscles.

The eyes may also show hysterical signs in the shape of concentric contraction of the visual field, dyschromatopsia, with reversal of the visual field of colors, monocular polyopia, micropsy, and macropsy. Taste, odor, and smell may be abolished on one side or both.

If the patient has contractures or rigidity of the limb, the use of chloroform or gas will soon disclose whether the symptom is organic or functional.

If paralysis exist, atrophy may occur even in hysteria, but the wasting is slower and less marked; electrical examination never shows any degenerative reaction; and hence this test is of extreme value in paralytic cases. It must, however, be most carefully made.

It is always difficult to tell to what extent the pains so often felt are hysterical. The reaction of the patient to drugs and to suggestions may, however, throw much light upon this point.

It is never to be forgotten that true hysteria may exist in connection with real organic disease. This fact complicates many cases and renders the diagnosis of traumatic, neurasthenic, and hysterical states a task that calls for all the ingenuity and acuteness of the surgeon.

In this country, too, it is comparatively rare to see the peculiar stigmata of hysteria so well marked as they are in France. In particular, traumatisms such as railway accidents, falls, nervous shocks, etc., are much more liable to cause neurasthenic than hysterical states.

ARTHRECTOMY, OR EROSION OF JOINTS.

At a late meeting of the Royal Medical and Chirurgical Society (*The British Medical Journal*, November 17, 1888), Mr. Edmund Owen read a paper having this title. Though the operation of scraping a diseased tissue was not a new procedure, yet its adoption in the treatment of pulpy or of chronic suppurative disease of a joint was of comparatively recent adoption. The first account of it, and the success which attended it, was by Mr. Wright, Surgeon to the Children's Hospital, Manchester. It appeared in *The Lancet* of 1881. This he supplemented by a review of sixteen cases of arthrectomy in the *Medical Chronicle* of July, 1885. The construction of the hip-joint rendered it unsuited for treatment by arthrectomy in chronic disease, but as a supplementary measure to resection of the head of the femur it was likely to prove of great value. The epiphyses might often escape mutilation while the whole of the pulpy synovial membrane and all other diseased tissue were cleared out of the articulation. The cartilage joining the epiphysis with the shaft was neither disturbed nor trenched upon, and thus the risk of the patient recovering with a greatly shortened limb was obviated. Indeed, it was even possible that the patient might recover not only with a limb of normal length, but with a joint in which the movements were but little if at all interfered with. Such a result, however, was neither to be expected nor aimed at. After the operation the limb was to be kept absolutely stiff and fixed in splints for many months, and if at the end of that time a certain range of movement were discovered, the joint might be left to shake itself free, no manipulations being resorted to. In all probability the knee would be synostosed and straight. In the case of pulpy or chronic suppurative disease of the knee-joint the operation was admirably adapted, provided that the disease was not too far advanced, so that the bones were extensively implicated, and that the patient was the subject neither of general tuberculosis nor of albuminoid degeneration. In short, arthrectomy was the proper operation in most of those cases in which resection had hitherto been performed. Over resection it held this great advantage, that it took away from the articular surfaces only such tissues as were actually diseased. On several occasions it had been noticed that after the joint had been thus thoroughly cleared of elements which were of a diseased or suspicious nature the health of the patient had shown an immediate and marked improvement, appetite and general health altering for the better, and permanent convalescence being at once established. Speculations were made upon the possible influence of the bacilli tuberculosis. The improvement which followed upon the clearing out of all the diseased tissues was as notable as that which often followed the amputation of a sarcomatous limb or a scirrhous mamma.

It is to be regretted that Mr. Owen should have selected so unfortunate a name as arthrectomy for the operation of scraping joint surfaces. Arthrectomy, if it has a meaning, denotes excision, the very operation which Mr. Owen would have us avoid. The principle on which erosion is based is not a new one. The idea of removing only what is diseased and useless, and saving all that is healthy, applies to all conservative surgery in its broadest sense. Indeed, so far as the joints are concerned, Volkmann and his pupils have for years been prominent advocates of precisely the same thing that Mr. Owen now brings to the notice of his British *confrères* as something rather new.

HYSTERORRHAPHY, THE NEW OPERATION FOR DISPLACEMENTS OF THE UTERUS.

The cervix uteri having been subjected to an incalculable amount of more or less harmless stitching, both by the experts and those willing to become so, it is now proposed to devote a stitch or two to the hitherto strangely neglected fundus uteri. We may as well confess *à priori* our feeling in favor of hysterorrhaphy, as Dr. Howard A. Kelly, of Philadelphia, has called this new operation, with which his name has become justly and prominently associated.

The fame of this gynecologist has too long grown, *pari passu*, with the number of his cervical stitches. It is time that the trachelorrhaphist should be told that the cervix is not the universe, even in a strictly uterine sense. He should learn that there may be complete cervical happiness, although the fundus still weeps way down in the hollow of the sacrum, on account of a prior attachment. The hysterorrhaphist is, of all persons, the one best qualified to restore the just equipoise of things uterine by placing his beneficent stitches where they really belong, and, no longer truckling to that arrogant gynecic monopolist, the cervix uteri, in spite of all its amiable accessibility. Of course, sewing the fundus is an innovation of a somewhat revolutionary kind. If there needs must follow division in the serried ranks of the conquering hystero-stitchologists, let the new party lines be drawn on this local issue of cervix or fundus. For, that both parties will continue to stitch to the end of all time, nobody can reasonably doubt.

Seriously speaking, however, the new operation of attaching the uterus to the abdominal parietes is a rational procedure in otherwise unmanageable cases of displacement. The operation itself is neither very difficult nor specially dangerous. It extends a just hope of relief to those whose sufferings are not likely to be overestimated.

From a recent discussion of the subject, which followed the reading of a paper by Dr. C. C. Lee (MEDICAL RECORD, November 10, 1888), it appears that primary hysterorrhaphy has now been done about one hundred times, with but a single death attributable to the surgical interference. For a new operation, that always presupposes laparotomy, this is certainly an encouraging exhibit, especially when it is remembered that only in a few instances failure to relieve was noticed.

The technique of the operation is fully set forth in a paper by Dr. Kelly (*The American Journal of Obstetrics*, January, 1877), and the article of Dr. Lee already referred to, as well as the recent discussion of it before the New York Academy of Medicine. In Germany the operation goes by the name of ventro fixatio uteri, which would give it a more restricted meaning than the term hysterorrhaphy implies.

The precise indications for suturing the uterus in order to correct a malposition have not yet been found. A conservative surgeon will certainly not rashly undertake the operation before all other means to secure respite from suffering have been tried. With the claims now made in behalf of electricity, of uterine massage by the method of Brandt, with Alexander's operation for those cases in which the uterus is still freely movable, hysterorrhaphy can have but a limited field of applicability. A distinction should be made between primary and secondary hysterorrhaply. The former is the operation we have been speaking of. It is a laparotomy performed for no other reason than that of securing fixation of the uterus by suture. Secondary hysterorrhaphy means that, in the course of an abdominal section undertaken for some other purpose, it is found expedient to also attach the uterus to the abdominal wall for the correction of any malposition that happens to exist. It is apparent, therefore, that the primary operation will be called for far less frequently than the secondary.

EUTHANASIA as applied to criminals and dogs is speedily becoming a high science in this city. It being settled that an alternating 3,000-volt current passed from brow to nucha is a pleasurable and facile mode of descent to Avernus, the problem of making felicitous the last hours of dogs is taken up. The way has been to put impounded dogs in a crate and submerge them. The Board of Health has had constructed an immense air-tight box into which illuminating gas can be poured. Ninety dogs placed in this box and submitted to the gas died within four minutes. Seventy-eight ounces of chloroform killed twenty dogs in two minutes, but with more struggling than when the gas was used.

News of the Week.

DR. CASPER WISTER, of Philadelphia, died on December 20th, aged seventy-one years.

DR. JOSEPH LOVING, a prominent young physician, died at the Central Insane Asylum of Columbus, O., on December 20th, of brain trouble.

DR. C. N. CAMPBELL, one of the oldest physicians of Dutchess County, N. Y., died on December 20th. He was a graduate of the New York Medical University, and was widely known. He was surgeon in the One Hundred and Fiftieth New York Volunteers, and served through the war. He was President of the Poughkeepsie Civil Service Board, a member of the Board of Pension Examiners, and a leading member of the Dutchess County Medical Society.

NEW YORK POST-GRADUATE HOSPITAL.—The New York Post-graduate Medical School and Hospital gave an informal reception to its friends on December 21st, at the hospital building, 226 East Twentieth Street. The guests of the institution were conducted through the various well-filled wards.

During the past year 382 new patients, including 100 infants, have been treated in the wards, and 5,756 new patients have in that time been treated in the dispensary. It is the present aim of the Faculty to purchase the building the institute now occupies, and its members have already agreed to furnish $20,000 of the $60,000 required to accomplish this purpose. The Board of Directors is anxious to secure funds for the foundation of a lying-in ward. The medical school supports itself, but the hospital is constantly, as are all charitable institutions, in need of funds. This is especially true with regard to its current expenses. During the last year 282 operations were performed on the house-patients of the general hospital; 100 babies were treated—60 were cured, 24 died. Over 29,000 visits were made to the dispensary, which was an increase of 5,823 over the previous year.

POLITICS AND INSANE ASYLUMS.—A despatch from Yankton, Dak., says that the Trustees of the Insane Asylum in that place have removed the Superintendent, Dr. R. Buchanan, by a vote of the majority of the board, and appointed Dr. James Roane, of Yankton. Buchanan was appointed by the present board as soon as it was granted full powers by the courts. Combinations in the board are responsible for his removal, and not anything he has done to merit discharge.

CREMATION IN PHILADELPHIA is not thriving. The new crematory near Philadelphia has recently been obliged to reduce the price of incineration from $50 to $20. Since May twenty bodies have been cremated—barely enough to pay expenses. The Philadelphia crematory is the biggest in the world, but the stockholders lament "the multitude of cheerful fires, the glorious host of light," that indicates rational disposal of the body and prompt payment of dividends.

DR. IRA RUSSELL, of Winchendon, Mass., died on December 19th, after a week's illness, of pneumonia, aged seventy-four. He was a native of Rindge, N. H., and a graduate of Dartmouth College and of the New York University, Medical Department. He entered the army as surgeon of the Eleventh Massachusetts Regiment, and subsequently served in many positions on the general medical staff and in the field. At the close of the war he was honorably discharged with the rank of brevet Lieutenant-Colonel. In 1875 he established a home for nervous invalids at Winchendon. He was the author of a number of practical articles relating to his specialty. He was Vice-President of the New York Medico-Legal Society, a past Vice-President of the Massachusetts Medical Society, and a member of the Masonic order and of the Loyal Legion.

JAMAICA-GINGER INEBRIATES.—One hears occasional stories of Jamaica-ginger inebriates, and recently it is stated that a Boston grocer was arraigned for selling Jamaica ginger as an intoxicant without a license. Jamaica ginger contains, we are told, sixty-nine per cent. of alcohol and three per cent. of ginger. It would soon cause too much gastric disturbance to be long and continuously used as an intoxicant.

THE CHRONIC INSANE OF NEW YORK COUNTY who have heretofore been confined on Ward's and Blackwell's Islands are to be removed, in part at least, to the pavilions recently built on the County Farm at Central Islip, L. I. The Commissioners have spent $200,000; they have bought 1,000 acres of land, and put up pavilion accommodations for 300 patients—a sufficiently modest result. They now want a quarter of a million more to continue the beneficent work.

WE ADMIRE the optimistic patriotism of an esteemed Western contemporary, the *Journal of the National Association of Railway Surgeons*, which concludes an editorial upon American Medical Colleges as follows: "We are purely American in every sense of the term, and have no sympathy with the chronic cranks for the European methods of education. America is far in advance now, and will continue to be.

"'My country, 'tis of thee,
Sweet land of liberty,
Of thee I sing.'"

WHAT IS TO BECOME OF THEM? was the question first asked of medical graduates. Now the question is applied to the immense number of specialists cropping up in every department. Regarding this subject, Sir Morell Mackenzie said some wise things in his address before the British Laryngological Society, November 14th: "Throat specialism," he said, "appears to be even in danger of becoming fashionable; at any rate the number of its votaries has lately been increasing and multiplying with a rapidity which makes one inclined to wonder, with Abernethy, 'What is to become of them all?'" Sir Morell gives some good advice to those intending to become specialists (*Provincial Medical Journal*). He recommends all throat specialists to practise general medicine or surgery for the first ten years of their professional career, while devoting themselves at the same time to their specialty. "In my opinion," he says, "only those who have acted as general practitioners for some years, or who have held appointments as physicians or surgeons to general hospitals, are thoroughly equipped for practising as specialists."

The next piece of advice is equally worthy of consideration. He continues: "Give your attention mainly to pathology and therapeutics, seeking to enlighten darkness and eradicate error in these important matters rather than to the invention of apparatus. One may earn some cheap renown, no doubt, by modifying the mechanism of a snare, or applying the electric light in some slightly novel fashion to laryngoscopy, but an ambition that is satisfied with such triumphs can hardly be called 'an infirmity of noble minds.'" The last advice is perhaps the best, it is the great gospel of work. "Work steadfastly," he concluded, "whether the subject be recondite or apparently trival; observe and test everything, and bring your results here to be criticised by your fellow-workers."

THE SMALL-POX HOSPITAL AT SYRACUSE has been the subject of considerable discussion during the past week. The Health Officer of the city charged that there was the grossest incompetency in its management, the nurses being ignorant, untrustworthy, and insubordinate.

DEMONSTRATION IN FAVOR OF A POPULAR PROFESSOR.—During the past week the students of the University Medical College have been much exercised over the resignation of Professor Faneuil D. Weisse, the well-known author and the popular professor of practical and surgical anatomy in that institution. The causes can be briefly stated. The chair of surgery became vacant by the resignation of Professor Wright, and Professor Stimson, succeeding to the same, left the chair of anatomy empty. Professor Weisse offered to fill the chair of anatomy for the remainder of the term free of charge, but the new professor of surgery consented to occupy both chairs of surgery and anatomy, and obtained the permission of the faculty to appoint a substitute of his own selection. The resignation of Professor Weisse very properly followed, as after a service of a quarter of a century in teaching the higher branches of anatomy, the ignoring of his voluntary service was a blow at his self-respect. The students became indignant at the course pursued by the faculty, and not only requested the withdrawal of the resignation but the unconditional appointment of Professor Weisse to the full chair of anatomy. Of course the faculty will do as it pleases. Students must not rule. But if the vote were taken outside the faculty and by the profession at large, there would be no doubts concerning the qualification of Professor Weisse for the place.

THE HOG AHEAD.—It is stated that the United States Government has paid more money in the investigation of the disease of hogs than it has for all the diseases affecting the human race.

FEMALE PHYSICIANS IN TURKESTAN.—There are a number of female physicians in Turkestan, but they have little to do on account of the prejudice of the Mohammedan population. The only way in which they can secure any patients at all is by reversing the accepted order of things and paying them a fee. The same disinclination to accept the services of female physicians exists among the women in certain parts of Siberia. At Omsk every woman who consents to enter the lying-in hospital receives a present of two or three rubles.

CREMATION IN SWEDEN.—The Swedish Cremation Society, which was founded in Stockholm in 1882, now numbers 3,000 members and subscribers. A provisional crematorium has been established in one of the cemeteries. The system employed is that of Mr. Klingsenstierna, the president of the society, and is said to be very cheap.

Society Reports.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting held Tuesday, December 4, 1888.

The President, Dr. Geo W. Jacoby, in the Chair.

Dr. M. P. Jacobi presented a case of supposed

TUMOR OF THE PONS.

The case was that of a child, ten years of age, the illness dating from a fright three years before. The immediate symptoms had been trembling, lasting two weeks. A little later the child had commenced to walk as if intoxicated, and to have difficulty in using the hands. About three months after the seizure headache had been complained of for a number of weeks. The child had also commenced to grow fat, and the head had increased in size. During the past summer the circumference of the head had increased one-third of an inch. At the present time the child was very fat, the chest and abdomen being particularly large. There was no actual paralysis. All of the muscles would respond to faradism, the peroneal muscles only requiring a current particularly strong. There was, however, a progressive paresis. The child could not sit upright, and the head fell to the right side. She could walk only if supported, and all of the finer movements of the hands had been lost. There was intermittent external strabismus in the right eye, and choked disk in both eyes, referred to a descending degeneration. The appetite was abnormally increased. There had been no pain throughout, excepting the headache referred to, and no sensory disturbances.

The case of tumor of the pons reported by Dr. Hun, of Albany, had presented strikingly similar symptoms. In this case the pons had been uniformly enlarged by a slowly infiltrating gliomatous growth.

Dr. Sachs felt especially indebted to the author of the paper for the opportunity of renewing an old acquaintance with this interesting case, which he had seen and lectured upon at the Polyclinic, in April. At that time the size of the head had been about as at present. The general condition was as now, but the patient had been able to walk better. She had been able to walk across the floor with the assistance of her father, moral, rather than physical, support being required. The gait, however, had been uncertain, and the patient had reeled, he had thought, to the right side. He had also found the paresis greater upon the right than upon the left, and had noted an apparent paralysis of the right abducens. The changes which he remarked were a progressive paresis of the arms and legs, and slight increase in the size of the head. In the spring the speaker's diagnosis had been tumor of the cerebellum favored by the paralysis of the abducens, which had a long course along the ventral aspect of the cerebellum and might be affected by pressure from the growth. Such a fact would also explain the intermittent character of the symptoms noted by Dr. Jacobi. He had not appreciated the objections to this diagnosis, toward which the reeling and the vomiting certainly pointed. The knee-jerk was more marked upon the right. The ankle clonus had been obtained upon the left, and not upon the right at all. Dr. Hun's had been a very rare case. The majority of cases of tumor of the pons had presented different symptoms. He made these remarks simply to justify his diagnosis. Dr. Jacobi had gone more fully into the case and possibly had developed further evidence.

Dr. W. A. Hammond asked why a multiple lesion was excluded.

Dr. Sachs suggested that if one lesion could not be definitely located, the indications for a multiple lesion must be even more obscure.

Dr. Hammond inquired as to the condition of the intelligence.

Dr. Jacobi thought that the intelligence was normal. The child could relate the circumstances of the initial fright very clearly, and had made inquiries in regard to the prognosis in her case.

Dr. Hammond noted a tendency to staccato speech. He had seen a number of cases of tumor of the cerebellum. He referred especially to the case reported by Dr. Gibney. The distinctive symptom of tumor of the cerebellum, when uncomplicated with pressure upon the pons, was inco-ordination without paralysis, while that of pons lesions was a gradually increasing paresis. He had seen also a good many cases of injury to the cerebellum by arrow wounds, bullet wounds, etc., perhaps twenty cases in all. These were more likely to furnish indications in regard to the functions of the cerebellum than cases of tumor where the effects of pressure complicated those of the destructive lesion. He had never seen a case of either tumor or injury of the cerebellum without vertigo and nystagmus.

Dr. Jacobi closed the discussion. The diagnosis had been studied between an intra-cranial tumor and a diffuse hypertrophic sclerosis of the brain with a generalized lipomatosis. The latter was excluded by the absence of the more distinctive symptoms of pseudo-muscular hypertrophy, and by the existence of the choked disk, the latter pointing positively to intra-cranial disease. Diffuse sclerosis was, among other symptoms, invariably attended by convulsions, which had been entirely absent in this case. Intra-cranial tumor was diagnosed therefore, by exclusion as well as by the positive symptoms and by further analysis, located in the pons.

The speaker had not known that the case had been previously seen by Dr. Sachs, or that a clinical lecture had been delivered upon it. The later stage of the affection accounted for the main differences between the symptoms reported by her and those noted by Dr. Sachs. She had not, however, referred to a paralysis of the external rectus, but to an intermittent spasm. The muscle could at all times be readily exercised. The history of vomiting, too, was limited to two occasions in May, and was not more marked than might have been accounted for by some digestive disturbance. Further, there was not only inco-ordination in this case, but complete incapacity. In lesions confined to the cerebellum standing was simply difficult. In this case standing was impossible.

Dr. W. A. Hammond followed with a paper entitled

WEAK HEART AND ITS TREATMENT.

The paper referred simply to weakness of the muscular structure of the heart, uncomplicated by dilatation or valvular disease. The affection was very common, and while it might be fatal in its results, it might also be entirely relieved by treatment, which could be resolved into medicinal, gymnastic, and dietetic.

Digitalis was the main medicinal remedy. The author had never observed the so-called cumulative effect of this drug. He thought, on the contrary, that it required increasing doses. He administered the infusion in two drachm doses for two weeks, when he increased the dose one-fourth, repeating the increase at the end of the second fortnight. Convallaria he considered uncertain and unreliable. Strophanthus he thought of more value. Where there was intolerance to digitalis this drug might be given. Strychnine was a valuable remedy in weak heart. He prescribed one grain in one ounce of dilute phosphoric acid, ten drops three times a day. Cocaine was a valuable remedy, one-fifth grain being given three times a day. It had been his custom to add two grains to one pint of Malaga wine, a wineglassful being used at a time.

Inhalations and hypodermic injections were required often in the weak heart of disease. Hypodermically he had used brandy, digitalin in a one to twenty grain dose, and nitrite of amyl, two drops diluted with thirty drops of glycerine.

Glonoin was useful in a one to one hundred grain dose.

Medication was, however, only temporarily useful. Exercise was required for the permanent relief of this condition. Mounting stairs was mentioned as a convenient form of exercise. People living in the country might mount hills. The physician should, however, be in attendance, and the exercise should be suspended when the action of the heart had accelerated fifteen beats per minute, to be resumed upon its tranquillization. The author's sanatorium in Washington would contain a modified treadmill in which such exercises could be taken.

The dietetic treatment of weak heart referred particularly to ingested liquids, the quantity of which should be limited. By lessening the amount of liquids ingested the total amount of blood in the body was diminished and the work of the heart lightened. In some cases he had reduced the daily quantity to twelve ounces, with marked improvement within forty-eight hours. The diet was further modified so as to reduce the amount of fat where this was excessive. The author made no claim of originality in this treatment. He was aware of the work of Oertel and others. He presented the matter, however, as approved by his own experience and observation.

Dr. Leale referred to the numbers of recently enlisted soldiers who fell in the grand review in Washington, their previous occupations having been largely sedentary and predisposing to weak heart, which failed them in response to the demands of the unusual exertion of this occasion. In five hours ten ambulances had been filled, the speaker having been detailed to pick up those who thus fell by the way. The weak heart of typhoid fever and diphtheria were briefly alluded to. This was a condition often seen in children from close school attendance or other sedentary habits having failed to develop heart-muscle sufficient to accommodate the growing frame.

Dr. Heinemann had been very much interested in Dr. Hammond's paper. He was interested to know of the sanatorium referred to. He had, during the past year, visited a number of these institutions in Europe, and thought it to be regretted that in this country we had so generally failed to avail ourselves of the peculiar advantages which they afforded.

Weak heart was one of the most common conditions met with in medicine—it was almost as common as dyspepsia. While actual disease of the heart might not be detected in connection with the condition, the sounds would be found not what they should be, and the radial artery would be found never more than half filled with blood. The causes for weak heart were often dyspepsia, lithiasis, and excesses of various kinds—alcoholism, tobacco, and excessive coitus. The treatment should be directed first toward the removal of the cause—bad hygienic surroundings, anæmia, or whatever it might be. Iron or the oxygen treatment were often efficacious.

In regard to digitalis, he could say that he had seen the cumulative effect, although not perhaps the cumulative effect of the materia medica, which he thought was exaggerated. He had seen the pulse, under the influence of digitalis, one day eighty or ninety, and the next day forty or fifty, as strong or stronger than before. Convallaria was, he thought, useful combined with digitalis in the cases of heart failure in children and in cardiac dilatation. Cocaine was valuable in curing anæmia, as well as for its direct action upon the heart. In a recent case he had prescribed the wine of cocaine, intending to combine it with iron; but at the end of a week had found the anæmia so much improved that the iron was considered unnecessary.

In the diagnosis of the weak heart of adolescence alluded to by Dr. Leale, it was well to bear in mind the condition of congenital narrowing of the aorta, to which attention had been directed by Fraenzel. This was not infrequently a cause of sudden death in young people. The speaker would not pretend to diagnose the condition, except by exclusion.

In regard to the question of exercise, he hoped that treatment would not be systematized upon the plans in vogue in Europe. In the Black Forest there were paths specially designated for pulmonary diseases, and other paths for other complaints. He had seen a sign on one of these paths reading, "This is the end of the Oertel treatment." There was a rule, too, that a sanatorium for pulmonary affections should be built at the foot of a hill, so that the patient, having taken his exercise in climbing the hill, can easily get back. There was also conflicting evidence as to the value of these "cures." The Oertel treatment was antagonized by the brothers Schott, who substituted a system of resisted movements, a species of wrestling with the nurse under the supervision of the physician. Cardiac calisthenics was the appropriate title of these exercises.

Dr. Hammond closed the discussion. He was pleased to have called out so many interesting remarks. One interesting point in etiology had, however, he thought, failed of recognition. This was that a normal heart, under ordinary circumstances, might become a weak heart by simple increase in the general body-weight. He had a personal experience upon this point. His ordinary weight was two hundred and forty pounds. When it increased to two hundred and sixty pounds, which it did about twice a year, he was troubled with weak heart. He was then accustomed to apply his own prescriptions as to diet and exercise. In this way he could reduce his weight thirty pounds in thirty days. He then again ate and drank what he pleased. When he went up to Mackinaw this summer he had been suffering from weak heart. When he returned he could climb anywhere, and was perfectly comfortable.

It might not be out of place to add that the eminent surgeon recently deceased in this city had lost his life from this cause. The case had been at first reported as one of cerebral hemorrhage, but hemorrhage, except into the medulla, does not instantly destroy life, and subsequently the conclusion of heart failure had been reached.

The meeting adjourned.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 15, 1888:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	21	8
Scarlet fever	210	31
Cerebro-spinal meningitis	1	1
Measles	334	20
Diphtheria	133	23
Small-pox	0	0
Yellow fever	0	0
Cholera	0	0

An Epidemic of Jaundice at Glasgow.—Dr. Russell reports a number of cases of icterus occurring in June and July last, in five families living in the poorer quarters of Glasgow. A man, aged thirty-six, died on July 8th, with jaundice supposed to be due to yellow atrophy of the liver. The day before his death his son was taken down with the same symptoms, and died in a short time. Another child died a week later, and still another the day following the last. In another family, six children suffered at the same time from jaundice. The author attributed the outbreak to the defective sewerage and insanitary condition of the neighborhood.

A Chapter in Etiology.—A correspondent sends the following quotation from a letter received by him in relation to a case: "I am sure the etiology of the sequelæ was anti, and not propter, the operation."

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